Quality of Surface Waters of the United States, 1968

Part 11. Pacific Slope Basins in California

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Prepared in cooperation with the State of California, and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

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PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of California and other agencies, by personnel of the Water Resources Division, E. L. Hendricks, chief hydrologist, G. W. Whetstone, assistant chief hydrologist for Scientific Publications and Data Management, under the general direction of G. A. Billingsley, chief, Reports Section, and B. A. Anderson, chief, Data Reports Unit.

The data were collected under the supervision of district chiefs of the Water Resources Division, as follows:

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QUALITY OF SURFACE WATERS OF THE UNITED STATES, 1968

PART 11

INTRODUCTION

The water-quality investigations of the United States Geological Survey are concerned with chemical and physical characteristics of surface- and ground-water supplies of the Nation. The data herein deal with the amounts of matter in solution and in suspension in streams, and represent that portion of the National Water Data System collected by the U.S. Geological Survey in cooperation with State, municipal, and other Federal agencies.

The records of chemical analysis, water temperature, and suspended sediment of surface waters given in this volume serve as a basis for determining the suitability of waters for various uses. The flow and water quality of a stream are related to variations in rainfall and other forms of precipitation. In general, lower concentrations of dissolved solids may be expected during periods of high flow than during periods of low flow. Conversely, the suspended solids in some streams may change materially with relatively small variations in flow, whereas for other streams the quality of the water may remain relatively uniform throughout large ranges in discharge.

The Geological Survey has published annual records of chemical quality, water temperature, and suspended sediment since 1941. The records prior to 1948 were published each year in a single volume for the entire country, and in two volumes in 1948 and in 1949. From 1950 to 1958, the records were published in 4 volumes; from 1959 to 1963 in 5 volumes; from 1964 to 1967 in 6 volumes; and since 1968 in 10 volumes. The drainage basins covered by the 10 volumes are shown in Figure 1. The shaded area in Figure 1 represents the section of the country covered in this volume for the water year 1968 (October 1, 1967 to September 30, 1968).

To meet interim requirements, water-quality records have been released by the Geological Survey in annual reports, beginning with the 1964 water year, by State. These reports are entitled, "Water Resources Data for (State), Part 2. Water Quality Records." Distribution of these reports is limited and primarily for local needs. Any revisions or corrections found necessary to the records published in these annual State reports have been made and published in this volume without reference.

The records herein are listed by drainage basins in a downstream direction along the main stream. All stations on a tributary entering above a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. In the list of water-quality stations in the front of this volume, the rank of the tributaries is indicated by an indention. Each indention represents one rank.

As an added means of identification, a station number has been assigned for each stream location where regular measurements of water quantity or quality have been made. The numbers have been assigned to conform with the standard downstream order of listing gaging stations. The numbering system consists of an 8-digit number, such as 01127500. The first 2 digits, "01" identifies the Part or hydrologic region used by the Geological Survey for reporting hydrologic data. The next 6 digits is the

station number which represents the location of the station in the standard downstream order within each of the 16 parts (Fig. 1). The complete number (01127500) appears just to the left of the station name. The assigned numbers are in numerical order but are not consecutive. Gaps are left in the numbers to allow for new stations that may be established.

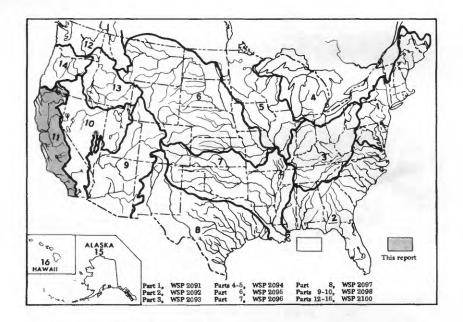


Figure 1.--Map of the United States showing basins covered by the 10 water-supply papers on quality of surface waters in 1968. The shaded part represents the section of the country covered by this volume; the unshaded part represents the section of the country covered by other water-supply papers.

Descriptive statements are given for each sampling station where chemical analyses, temperature measurements, or sediment determinations have been made. These statements include location of the station, drainage area, periods of records available, extremes of dissolved solids, hardness, specific conductance, temperature, sediment loads, and other pertinent data. Records of discharge of the streams at or near the sampling station are included in most tables of analyses.

During the water year ending September 30, 1968, the Geological Survey maintained 184 stations on 123 streams for the study of chemical and physical characteristics of surface water. Samples were collected daily and monthly at 62 of these locations for chemical-quality studies. Samples also were collected less frequently at many other points. Water temperatures were measured continuously at 115 and daily at 29 stations. All surface water samples collected and analyzed during the year have not been included. Single analyses made of daily samples before compositing have not been reported. Specific conductance is determined and reported for almost all daily samples.

At chemical-quality stations where data are continuously recorded at the stream site (monitors), the records consist of daily maximum, minimum, and mean values for each constituent measured. More detailed records (hourly values) may be obtained by writing the district office listed under Division of Work on page 21.

Quantities of suspended sediment are reported for 57 stations during the year ending September 30, 1968. Sediment samples were collected one or more times daily at most stations, depending on the rate of flow and changes in stage of the stream. Particle-size distributions of sediments were determined at 54 stations.

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

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped 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 United States, IHD Stations provide indices of runoff and the general distribution of water in the principal river basins of the conterminous United States and Alaska.

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 waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, these data were published in the annual water-supply paper series, "Quality of Surface Water for Irrigation, Western States."

Pesticide program is a network of 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.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

COLLECTION AND EXAMINATION OF DATA

Quality of water stations usually are located at or near points on streams where streamflow is measured by the U.S. Geological Survey. The concentration of solutes and sediments at different locations in the stream-cross section may vary widely with different rates of water discharge depending on the source of the material and the turbulence and mixing of the stream. In general, the distribution of sediment in a stream section is much more variable than the distribution of solutes. It is necessary to sample some streams at several verticals across the channel and especially for sediment, to uniformly traverse the depth of flow. These measurements require special sampling equipment to adequately integrate the vertical and lateral variability of the concentration in the section. These procedures yield a velocity-weighted mean concentration for the section.

The near uniformly dispersed ions of the solute load move with the velocity of the transporting water. Accordingly, the mean section concentration of solutes determined from samples is a precise measure of the total solute load. The mean section concentration obtained from suspended sediment samples is a less precise measure of the total sediment load, because the sediment samplers do not traverse the bottom 0.3 foot of the sampling vertical where the concentration of suspended sediment is greatest and because a significant part of the coarser particles in many streams move in essentially continuous contact with the bed and are not represented in the suspended sediment sample. Hence, the computed sediment loads presented

in this report are usually less than the total sediment loads. For most streams the difference between the computed and total sediment loads will be small, in the order of a few percent.

CHEMICAL QUALITY

The methods of collecting and compositing water samples for chemical analysis are described by Rainwater and Thatcher (1960) and by Brown, Skougstad, and Fishman (1970). No single method of compositing samples is applicable to all problems related to the study of water quality. Composites are made on the basis of dissolved-solids content as indicated by measurements of conductivity of daily samples, supplemented by other information such as chloride content, river stage, weather conditions and other background information of the stream.

TEMPERATURE

Daily water temperatures were measured at most of the stations at the time samples were collected for chemical quality or sediment content. So far as practicable, the water temperatures were taken at about the same time each day. Large streams have a small diurnal temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day, and the monthly averages.

SEDIMENT

In general, suspended-sediment samples were collected daily with depth-integrating samplers (U.S. Inter-Agency, 1963). At some stations, samples were collected at a fixed sampling point at one vertical in the cross section. Depth-integrated samples were collected periodically at three or more verticals in the cross section to determine the cross-sectional distribution of the concentration of suspended sediment with respect to that at the daily sampling vertical. In streams where transverse distribution of sediment concentration ranged widely, samples were taken at two or more verticals to define more accurately the average concentration of the cross section. During periods of high or rapidly changing flow, samples generally were taken several times a day and, in some instances, hourly.

Sediment concentrations were determined by filtration-evaporation method. At many stations the daily mean concentration for some days was obtained by plotting the velocity-weighted instantaneous concentrations on the gage-height chart. The plotted concentrations, adjusted if necessary, for cross-sectional distribution were connected or averaged by continuous curves to obtain a concentration graph. This graph represented the estimated velocity-weighted concentration at any time, and for most periods daily mean concentrations were determined from the graph. The days were divided into shorter intervals when the concentration or water discharge were changing rapidly. During some periods of minor variation in concentration, the average concentration of the samples was used as the daily mean concentration. During extended periods of relatively uniform concentration and flow, samples for a number of days were composited to obtain average concentrations and average daily loads for each period. (See Expression of Results, p. 5.)

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. The estimates were further guided by precipitation records and sediment discharge at other stations in the same or adjacent basins.

In many instances where there were no observations for several days, the suspended-sediment loads for individual days were not estimated, because numerous factors influencing the quantities of transported sediment made it very difficult to make accurate estimates for individual days. However, estimated loads of suspended sediment for missing days in an otherwise continuous period of sampling have been included in monthly and annual totals in order to provide a complete record. For some streams, samples were collected weekly, monthly, or less frequently, and only rates of sediment discharge at the time of sampling are shown.

In addition to the records of quantities of suspended sediment transported, records of particle sizes of sediment are included. The particle sizes of suspended sediment for many of the stations, and the particle sizes of the bed material for some of the stations were determined intermittently.

The size of particles carried in suspension by streams commonly ranges from colloids (finer than about 0.24 microns) to coarse sand (2.0 mm). The common methods of particle-size analysis cannot accommodate such a wide range. Hence, it was necessary to separate most samples into two parts, that part coarser than 0.062 mm and that part finer than 0.062 mm. The separations were made by sieve or by fall velocity technique. The coarse fractions were classified by sieve separation or by visual-accumulation tube (U.S. Inter-Agency, 1957). The fine fractions were classified by the piper method (Kilmer and Alexander, 1949) or the bottom withdrawal tube method (U.S. Inter-Agency, 1943).

EXPRESSION OF RESULTS

The quantities of solute concentrations analyzed in the laboratory are measured in milligrams per liter. Milligrams per liter (mg/l, MG/L) is a unit which represents the weight of solute per unit volume of water.

Milliequivalents per liter are not reported but they can be converted easily from milligrams per liter data. A milliequivalent per liter (me/l) is one thousandth of a gram equivalent weight of a constituent. Chemical equivalence in milliequivalents per liter can be obtained by (a) dividing the concentration in milligrams per liter by the combining weight of that ion, or (b) by multiplying the concentration (in mg/l) by the reciprocals of the combining weights. Table 1 below, lists the reciprocals of the combining atomic weights based on carbon-12 (International Union of Pure and Applied Chemistry, 1961).

Table 1.--Factors for conversion of chemical constituents in milligrams per liter to milliequivalents per liter

Ion	Multi- ply by	lon	Multi- ply by
Aluminum (Al+3)	0.11119	lodide (I^{-1})	0.00788
Ammonia as NH+1	.05544	Iron (Fe^{+3})	.05372
Arsenic (As+3)	.04004	Lead (Pb+2)	.00965
Barium (Ba+2)	.01456	Lithium (Li+1)	.14411
Bicarbonate (IICO ₃ ⁻¹)	.01639	Magnesium (Mg+2)	.08226
Bromide (Br^{-1})	.01251	Manganese (Mn+2)	.03640
Cadmium (Cd $^{+2}$)	.01779	Mercury (Hg+2)	.00997
Calcium (Ca $^{+2}$)	.04990	Nickel (Ni ⁺²)	.03406
Carbonate (CO_3^{-2})	.03333	Nitrate (NO $_3^{-1}$)	.01613
Chloride (Cl^{-1})	.02821	Nitrite (NO_2^{-1})	.02174
Chromium (Cr+6)	.11539	Phosphate (PO_4^{-3})	.03159
Cobalt (Co+2)	.03394	Potassium (K+1)	.02557
Copper (Cu+2)	.03148	Sodium (Na ⁺¹)	.04350
Cyanide (CN $^{-1}$)	.03844	Strontium (Sr+2)	.02283
Fluoride (F^{-1})	.05264	Sulfate (SO_4^{-2})	.02082
Hydrogen (H^{+1})	.99209	Sulfide $(S^{-\frac{1}{2}})$.06238
Hydroxide (OH^{-1})	.05880	Zinc (Zn^{+2})	.03060

The hardness of water is conventionally expressed in all water analyses in terms of an equivalent quantity of calcium carbonate. Such a procedure is required because hardness is caused by several different cations, present in variable proportions, it should be remembered that hardness is an expression in conventional terms of a property of water. The actual presence of calcium carbonate in the concentration given is not to be assumed. The hardness caused by calcium and magnesium (and other cations if significant) equivalent to the carbonate and bicarbonate is called carbonate hardness; the hardness in excess of this quantity is called noncarbonate hardness. Hardness or alkalinity values expressed in milligrams per liter as calcium carbonate may be converted to milliequivalents per liter by dividing by 50.

The value usually reported as dissolved solids is the residue on evaporation after drying at 180°C for 1 hour. For some waters, 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. In the analyses of most waters used for irrigation, the quantity of dissolved solids is given in tons per acre-foot as well as in milligrams per liter.

Specific conductance is given for most analyses and was determined by means of a conductance bridge and using a standard potassium chloride solution as reference. Specific conductance values are expressed in micromhos per centimeter at 25°C. Specific conductance in micromhos is 1 million times the reciprocal of specific resistance at 25°C. Specific resistance is the resistance in ohms of a column of water 1 centimeter long and 1 square centimeter in cross section.

The discharge of the streams is reported in cubic feet per second (see Streamflow, p. 19) and the temperature in degrees Celsius (°C). Color is expressed in units of the platinum-cobalt scale proposed by Hazen (1892). A unit of color is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Hydrogenion concentration is expressed in terms of pH units. By definition the pH value of a solution is the negative logarithm of the concentration of gram ions of hydrogen.

An average of analyses for the water year is given for most daily sampling stations. Most of these averages are arithmetical, time-weighted, or discharge-weighted; when analyses during a year are all on 10-day composites of daily samples with no missing days, the arithmetical and time-weighted averages are equivalent. 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 river each day for the water year. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all of the water passing a given station during the year. A discharge-weighted average is computed by multiplying the discharge for the 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. For most streams, discharge-weighted averages are lower than arithmetical averages because at times of high discharge the rivers generally have low concentrations of dissolved solids.

A program for computing these averages by digital computer was instituted in the 1962 water year. This program extended computations to include averages for pH values expressed in terms of hydrogen ion and averages for the concentration of individual constituents expressed in tons per day. Concentrations in tons per day are computed the same as daily sediment loads.

The concentration of sediment in milligrams per liter is computed as 1,000,000 times the ratio of the weight of sediment to the weight of water-sediment mixture. Daily sediment loads are expressed in tons per day and except for subdivided days, are usually obtained by multiplying daily mean sediment concentrations in mg/l by the daily mean discharge in cubic feet per second, and the conversion factor, normally 0.0027.

For those days when the published sediment discharge value differs from the value computed, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method.

Particle-size analyses are expressed in percentages of material finer than classified sizes (in millimeters). The size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The 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 are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis of the silt and clay.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. (See table 2 on page 8.) To convert temperature in degrees Celsius to degrees Fahrenheit see table 3 on page 8.

COMPOSITION OF SURFACE WATERS

All natural waters contain dissolved mineral matter. The quantity of dissolved mineral matter in a natural water depends primarily on the type of rocks or soils with which the water has been in contact and the length of time of contact. Ground water is generally more highly mineralized than surface runoff because it remains in contact with the rocks and soils for much longer periods. Some streams are fed by both surface runoff and ground water from springs or seeps. Such streams reflect the chemical character of their concentrated underground sources during dry periods and are more dilute during periods of heavy rainfall. The dissolved-solids content in a river is frequently increased by drainage from mines or oil fields, by the addition of industrial or municipal wastes, or--in irrigated regions--by drainage from irrigated lands.

The mineral constituents and physical properties of natural waters reported in the tables of analyses include those that have a practical bearing on water use. The results of analyses generally include silica, iron, calcium, magnesium, sodium, potassium (or sodium and potassium together calculated as sodium), carbonate, bicarbonate, sulfate, chloride, fluoride, nitrate, boron, pH, dissolved solids, and specific conductance. Aluminum, manganese, color, acidity, dissolved oxygen, and other dissolved constituents and physical properties are reported for certain streams. Microbiologic (coliforms) and organic components (pesticides, total organic carbon) and minor elements (arsenic, cobalt, cadmium, copper, lead, mercury, nickel, strontium, zinc, etc.) are determined occasionally for some streams in connection with specific problems and the results are reported. The source and significance of the different constituents and properties of natural waters are discussed in the following paragraphs. The constituents are arranged in the order that they appear in the tables.

MINERAL CONSTITUENTS IN SOLUTION

Silica (SiO₂)

Silica is dissolved from practically all rocks. Some natural surface waters contain less than 5 milligrams per liter of silica and few contain more than 50 mg/l, but the more common range is from 10 to 30 mg/l. Silica affects the usefulness of a water because it contributes to the formation of boiler scale; it usually is removed from

Table 2.-- Factors for conversion of sediment concentration in parts per million to milligrams per liter *

[All values calculated to three significant figures]

Range of Range of concentration Multiconcentration Multi-(ppm) ply by (ppm) 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 - 133,000 400,000 - 416,000 1.08 1.34 417,000 - 434,000 134,000 - 159,000 1.10 1.36 160,000 - 185,000 1.12 435,000 - 451,000 1.38 186,000 - 210,000 1.14 452,000 - 467,000 1.40 468,000 - 483,000 211,000 - 233,000 1.16 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

Table 3,--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	2 1.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2,5	36	12.5	5 4	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43. 0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	16.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	3 5.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	1 2 0
9.5	49	19.5	67	29.5	85	39,5	103	49.5	121
,	-/								

^{*}C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

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

feed water for high-pressure boilers. Silica also forms troublesome deposits on the blades of steam turbines. However, it is not physiologically significant to humans, livestock, or fish, nor is it of importance in irrigation water.

Aluminum (Al)

Aluminum is usually present only in negligible quantities in natural waters except in areas where the waters have been in contact with the more soluble rocks of high aluminum content such as bauxite and certain shales. Acid waters often contain large amounts of aluminum. It may be troublesome in feed waters where it tends to be deposited as a scale on boiler tubes.

Iron (Fe)

Iron is dissolved from many rocks and soils. On exposure to air, normal basic waters that contain more than 1 mg/l of iron soon become turbid with the insoluble reddish ferric compounds produced by oxidation. Surface waters, therefore, seldom contain as much as 1 mg/l of dissolved iron, although some acid waters carry large quantities of iron in solution. Iron causes reddish-brown stains on porcelain or enameled ware and fixtures and on fabrics washed in the water. Concentrations of more than 0.3 mg/l are not acceptable for drinking and culinary use. (U.S. Public Health Service, 1962).

Manganese is dissolved in appreciable quantities from rocks in some sections of the country. It resembles iron in its chemical behavior and in its occurrence in natural waters. However, manganese in rocks is less abundant than iron. As a result the concentration of manganese is much less than that of iron and is not regularly determined in many areas. It is especially objectionable in water used in laundry work and in textile processing. Concentrations as low as 0.2 mg/l may cause a dark-brown or black stain on fabrics and porcelain fixtures. Appreciable quantities of manganese are often found in waters containing objectionable quantities of iron.

Calcium (Ca)

Manganese (Mn)

Calcium is dissolved from almost all rocks and soils, but the highest concentrations are usually found in waters that have been in contact with limestone, dolomite, and gypsum. Calcium and magnesium make water hard and are largely responsible for the formation of boiler scale. Most waters associated with granite or silicious sands contain less than 10 mg/l of calcium; waters in areas where rocks are composed of dolomite and limestone contain from 30 to 100 mg/l; and waters that have come in contact with deposits of gypsum may contain several hundred mg/l.

Magnesium (Mg)

Magnesium is dissolved from many rocks, particularly from dolomitic rocks. Its effect in water is similar to that of calcium. The magnesium in soft waters may amount to only 1 or 2 mg/l, but water in areas that contain large quantities of dolomite or other magnesium-bearing rocks may contain from 20 to 100 mg/l or more of magnesium.

Sodium and potassium (Na and K)

Sodium and potassium are dissolved from practically all rocks. Sodium is the predominant cation in some of the more highly mineralized waters found in the western United States. Natural waters that contain only 3 or 4 mg/l of the two together are likely to carry almost as much potassium as sodium. As the total quantity of these constituents increases, the proportion of sodium becomes much greater. Moderate quantities of sodium and potassium have little effect on the usefulness of the water for most purposes, but waters that carry more than 50 to 100 mg/l of the two may require careful operation of steam boilers to prevent foaming. More highly mineralized waters that contain a large proportion of sodium salts may be unsatisfactory for irrigation.

Bicarbonate, carbonate and hydroxide (HCO₂, CO₂, OH)

Bicarbonate, carbonate, or hydroxide is sometimes reported as alkalinity. The alkalinity of a water is produced by anions or molecular species of weak acids which

are not fully dissociated above a pH of 4.5. Since the major causes of alkalinity in most natural waters are carbonate and bicarbonate ions dissolved from carbonate rocks, the results are usually reported in terms of these constituents. Although alkalinity may suggest the presence of definite amounts of carbonate, bicarbonate or hydroxide, there are other ions that contribute to alkalinity such as silicates, phosphates, borates, possibly fluoride, and certain organic anions which may occur in colored waters. The significance of alkalinity to the domestic, agricultural, and industrial user is usually dependent upon the nature of the cations (Ca, Mg, Na, K) associated with it. Alkalinity in moderate amounts does not adversely affect most users.

Hydroxide may occur in water that has been softened by the lime process. Its presence in streams usually can be taken as an indication of contamination and does not represent the natural chemical character of the water.

Sulfide (S)

Sulfide occurs in water as a result of bacterial and chemical processes. It usually is present as hydrogen sulfide. Variable amounts may be found in waters receiving sewage and (or) industrial wastes, such as from tanneries, papermills, chemical plants, and gas manufacturing work (California State Water Quality Control Board, 1963).

Waters containing sulfides, especially hydrogen sulfide, may be considered undesirable because of their odor. The U.S. Public Health Service (1962) states that water on carriers subject to Federal quarantine regulations shall have no objectionable taste or odor. The toxicity to aquatic organisms differs significantly with the species and the nature of associated ions.

Sulfate (SO₄)

Sulfate is dissolved from most sedimentary rocks. Large quantities may be derived from beds of gypsum, sodium sulfate deposits, and some types of shale. Organic material containing sulfur adds sulfate to the water as a phase of the sulfur cycle. In natural waters, concentrations range from a few mg/l to several thousand mg/l.

The U.S. Public Health Service (1962) recommends that the sulfate concentration not exceed $250\,$ mg/1 in drinking and culinary water on carriers subject to Federal quarantine regulations.

Sulfates are less toxic to crops than chlorides.

Chloride (C1)

Chloride is dissolved from rock materials in all parts of the country. Surface waters in the humid regions are usually low in chloride, whereas streams in arid or semiarid regions may contain several hundred mg/l of chloride leached from soils and rocks, especially where the streams receive return drainage from irrigated lands or are affected by ground-water-inflow carrying appreciable quantities of chloride. Large quantities of chloride in water that contains a high content of calcium and magnesium increases the water's corrosiveness. The presence of abnormal concentrations of chloride and nitrogenous material together in water supplies indicates possible pollution by human or animal wastes.

Fluoride (F)

Fluoride has been reported as being present in some rocks to about the same extent as chloride. However, the quantity of fluoride in natural surface waters is ordinarily very small compared to that of chloride. Investigations have proved that fluoride concentrations of about 0.6 to 1.7 mg/l reduced the incidence of dental caries and that concentrations greater than 1.7 mg/l also protect the teeth from cavities but cause an undesirable black stain (Durfor and Becker, 1964, p. 20). Public Health Service, 1962, states, "When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper control limit (0.6 to 1.7 mg/l). Presence of fluoride in average concentration greater than two times the optimum values shall constitute grounds for rejection of the supply." Concentration fluorosis, and skeletal effects.

Bromide (Br)

Bromine is a very minor element in the earth's crust and is normally present in surface waters in only minute quantities. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It resembles chloride in that it tends to be concentrated in sea water. Iodide (I)

Iodide is considerably less abundant both in rocks and water than bromine. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It occurs in sea water to the extent of less than 1 mg/l. Rankama and Sahama (1950) report iodide present in rainwater to the extent of 0.001 to 0.003 mg/l and in river water in about the same amount. Few waters will contain over 2.0 mg/l.

Nitrogen, organic (N)

Organic nitrogen includes all nitrogenous organic compounds, such as amino acid, polypeptides, and proteins. It is present naturally in all surface waters as the result of inflow of nitrogenous products from the watershed and the normal biological life of the stream.

Organic nitrogen is not pathologically significant but is sometimes an indication of pollution.

Nitrogen, ammonia (NH4, as N)

Ammonia nitrogen includes nitrogen in the forms of NH_3 and NH_4^{+1} . As a component of the nitrogen cycle, it is often present in water, but usually in only small amounts. More than 0.1 mg/l usually indicates organic pollution (Rudolph, 1931).

There is no evidence that ammonia nitrogen in water is physiologically significant to man or livestock. Fish, however, cannot tolerate large quantities.

Nitrite (NO2)

Nitrite is unstable in the presence of oxygen and is, therefore, absent or present in only minute quantities in most natural waters under aerobic condition. The presence of nitrite in water is sometimes an indication of organic pollution.

Recommended tolerances of nitrite in domestic water supplies differ widely. A generally accepted limit is 2 mg/l, but as little as 0.1 mg/l has been proposed (California State Water Quality Control Board, 1963).

Nitrate (NO₃)

Nitrate in water is considered a final oxidation product of nitrogenous material and may indicate contamination by sewage or other organic matter, such as agricultural runoff, or industrial waste. The quantities of nitrate present in surface waters are generally less than 5 mg/l (as NO_3) and have no effect on the value of the water for ordinary uses.

It has been reported that as much as 2 mg/l of nitrate in boiler water tends to decrease intercrystalline cracking of boiler steel. Studies made by Faucett and Miller (1946), Waring (1949) and by the National Research Council (Maxcy, 1950) concluded that drinking water containing nitrates in excess of 44 mg/l (as NO_3) should be regarded as unsafe for infant feeding. U.S. Public Health Service (1962) sets 45 mg/l as the upper limit.

Phosphorus (P)

Phosphorus is an essential element in the growth of plants and animals. It occurs in water as organically bound phosphorus or as phosphate (PO_4) . Some sources that contribute nitrate, such a sorganic wastes are also important sources of phosphorus. The addition of phosphates in water treatment constitutes a possible source although the dosage is usually small. In some areas phosphate fertilizers may yield some phosphorus to water. Another important source is the use of phosphates in detergents.

Domestic and industrial sewage effluents often contain considerable amounts of phosphorus. Concentrations of phosphorus found in water are not reported to be toxic to man, animal, or fish. However, the element can stimulate the growth of algae, which may cause taste and odor problems in public water treatment and esthetic problems in recreation areas.

Boron (B)

Boron in small quantities has been found essential for plant growth, but irrigation water containing more than 1 mg/l boron is detrimental to citrus and other boron-sensitive crops. Boron is reported in Survey analyses of surface waters in arid and semiarid regions of the Southwest and West where irrigation is practiced or contemplated, but few of the surface waters analyzed have harmful concentrations of boron.

Dissolved solids

The reported quantity of dissolved solids--the residue on evaporation--consists mainly of the dissolved mineral constituents in the water. It may also contain some organic matter and water of crystallization. Waters with less than 500 mg/l of dissolved solids are usually satisfactory for domestic and some industrial uses. Water containing several thousand mg/l of dissolved solids are sometimes successfully used for irrigation where practices permit the removal of soluble salts through the application of large volumes of water on well-drained lands, but generally water containing more than about 2,000 mg/l is considered to be unsuitable for long-term irrigation under average conditions.

Arsenic (As)

Arsenic compounds are present naturally in some waters, but the occurrence of quantities detrimental to health is rare. Weed killers, insecticides and many industrial effluents contain arsenic and are potential sources of water pollution. The U.S. Public Health Service (1962) states that the concentration of arsenic in drinking water on carriers subject to Federal quarantine regulations should not exceed 0.01 mg/l and concentrations in excess of 0.05 mg/l are grounds for rejection of the supply. Concentrations of 2-4 mg of arsenic per liter are reported not to interfere with the self-purification of streams (Rudolfs and others, 1944) but concentrations in excess of 15 mg/l may be harmful to some fish.

Barium (Ba)

Barium may replace potassium in some of the igneous rock minerals, especially feldspar, and barium sulfate (barite) is a common barium mineral of secondary origin. Only traces of barium are present in surface water and sea water. Because natural water contains sulfate, barium will dissolve only in trace amounts. Barium sometimes occurs in brines from oil-well wastes.

The U.S. Public Health Service (1962) states that water containing concentrations of barium in excess of 1.0 mg/l is not suitable for drinking and culinary use because of the serious toxic effects of barium on heart, blood vessels, and nerves.

Cadmium (Cd)

This element is found in nature largely in the form of the sulfide, and as an impurity in zinc-lead ores. The carbonate and hydroxide are not very soluble in water and will precipitate at high pH values; the chloride, nitrate, and sulfate are soluble and remain in solution under most pH conditions.

The extensive use of the element and its salts in metallurgy, electroplating, ceramics, and photography make it a frequent component of industrial wastes.

The U.S. Public Health Service (1962) established as grounds for rejection any water containing more than 0.01 mg/l of cadmium.

Chromium (Cr)

Few if any waters contain chromium from natural sources. Natural waters can probably contain only traces of chromium as a cation unless the pH is very low. When

chromium is present in water, it is usually the result of pollution by industrial wastes. Concentrations of more than 0.05 mg/l of chromium in the hexavalent form constitute grounds for rejection of a water for domestic use on the basis of the standards of the U.S. Public Health Service (1962).

Cobalt (Co)

Cobalt occurs in nature in the minerals smaltite, (Co,Ni)As₂, and cobaltite, CoAsS. Alluvial deposits and soils derived from shales often contain cobalt in the form of phosphate or sulfate, but other soil types may be markedly deficient in cobalt in any form (Bear, 1955). Ruminant animals may be adversely affected by grazing on land deficient in cobalt.

For domestic water supplies, no maximum safe concentration has been established. Copper (Cu)

Copper is a fairly common trace constituent of natural water. Small amounts may be introduced into water by solution of copper and brass water pipes and other copperbearing equipment in contact with the water, or from copper salts added to control algae in open reservoirs. Copper salts such as the sulfate and chloride are highly soluble in waters with a low pH but in water of normal alkalinity the salts hydrolyze and the copper may be precipitated. In the normal pH range of natural water containing carbon dioxide, the copper might be precipitated as carbonate. The oxidized portions of sulfide-copper ore bodies contain other copper compounds. The presence of copper in mine water is common.

Copper imparts a disagreeable metallic taste to water. As little as 1.5 mg/l can usually be detected, and 5 mg/l can render the water unpalatable. Copper is not considered to be a cumulative systemic poison like lead and mercury; most copper ingested is excreted by the body and very little is retained. The pathological effects of copper are controversial, but it is generally believed very unlikely that humans could unknowingly ingest toxic quantities from palatable drinking water. The U.S. Public Health Service (1962) recommends that copper should not exceed 1.0 mg/l in drinking and culinary water.

Lead (Pb)

Lead seldom occurs in most natural waters, but industrial mine and smelter effluents may contain relatively large amounts of lead which contaminates the streams. Also, atmospheric contamination which is produced from several types of engine exhausts has considerably increased the availability of this element for solution in rainfall, resulting in contamination of lead in streams (Hem, 1970).

Lead in the form of sulfate is reported to be soluble in water to the extent of 31 mg/l (Seidell, 1940) at 25°C. In natural water this concentration would not be approached, however, since a pH of less than 4.5 would probably be required to prevent formation of lead hydroxide and carbonate. It is reported (Pleissner, 1907) that at 18°C water free of carbon dioxide will dissolve the equivalent of 1.4 mg/l of lead and the solubility is increased nearly four fold by the presence of 2.8 mg/l of carbon dioxide in the solution. Presence of other ions may increase the solubility of lead. Reports on human tolerance of lead vary widely, but the U.S. Public Health Service (1962) states that lead shall not exceed 0.05 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations.

Lithium (Li)

Lithium is present in some minerals but is not abundant in nature. From available information, most fresh waters rarely contain lithium of concentrations exceeding 10 mg/l, but larger quantities may be present in brines and thermal waters. Lithium is used in metallurgy, medicinal water, and some types of glass and storage batteries. Waste from such industries may contain lithium.

Mercury (Hg)

Mercury is the only common metal which is liquid at ordinary temperatures. It occurs free in nature but its chief source is cinnabar (HgS). Mercury compounds are virulent culminative poisons which are readily absorbed through the respiratory and gastrointestinal tracts or through unbroken skin (Weast and Selby, 1967).

The main source of high concentrations of dissolved mercury in water, in the form of highly toxic methyl mercury, Hg(CH₃)₂, comes from waste discharges from industrial users of mercury and from mercurial pesticides.

Fish from streams and lakes subject to mercury contamination have been found to contain amounts of mercury above the safe limits for food consumption. The U.S. Public Health Service has proposed that the upper limits of dissolved mercury in water for domestic use should not exceed 5 micrograms per liter (0.005 mg/l). Nickel (Ni)

Elemental nickel seldom occurs in nature, but its compounds are found in many ores and minerals. Many nickel salts are quite soluble and may contribute to water pollution, especially when discharged from metal-plating industries.

The U.S. Public Health Service (1962) has not placed a limit on nickel concentration in public water supplies.

Strontium (Sr)

Strontium is a typical alkaline-earth element and is similar chemically to calcium. Strontium may be present in natural water in amounts up to a few mg/l much more frequently than the available data indicate. In most surface water the amount of strontium is small in proportion to calcium. However, in sea water the ratio of strontium to calcium is 1:30.

Zinc (Zn)

Zinc is abundant in rocks and ores but is only a minor constituent in natural water because the free metal and its oxides are only sparingly soluble. In most alkaline surface waters it is present only in trace quantities, but more may be present in acid water. Chlorides and sulfates of zinc are highly soluble. Zinc is used in many commercial products, and industrial wastes may contain large amounts.

Zinc in water does not cause serious effects on health, but produces undesirable esthetic effects. The U.S. Public Health Service (1962, p. 55) recommends that the zinc content not exceed 5 mg/l in drinking and culinary water.

PROPERTIES AND CHARACTERISTICS OF WATER

Dissolved solids

Theoretically, dissolved solids are anhydrous residues of the dissolved substances in water.

All solutes affect the chemical and physical properties of the water and result in an osmotic pressure. Water with several thousand mg/lof dissolved solids is generally not palatable, although those accustomed to highly mineralized water may complain that less concentrated water tastes flat. The U.S. Public Health Service (1962) recommends that the maximum concentration of dissolved solids not exceed 500 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations, but permits 1,000 mg/l if no better water is available. Reported livestock tolerances range from 3,000 mg/l (Colorado Agricultural Experiment Station, 1943) to 15,000 mg/l (Heller, 1933).

Industrial tolerances for dissolved solids differ widely, but few industrial processes will permit more than 1,000 mg/l. The Geological Survey classifies the degree of salinity of these more mineralized bodies of water as follows (Swenson and Baldwin, 1965):

Dissolved solids (mg/l) Degree of salinity

Less than 1,000 Nonsaline.

1,000 to 3,000 Slightly saline.

3,000 to 10,000 Moderately saline.

10,000 to 35,000 Very saline.

Hardness

Hardness is the characteristic of water that receives the most attention in industrial and domestic use. It is commonly recognized by the increased quantity of soap required to produce lather. The use of hard water is also objectionable because it contributes to the formation of scale in boilers, water heaters, radiators, and pipes, with the resultant decrease in rate of heat transfer, possibility of boiler failure, and loss of flow.

Hardness is caused almost entirely by compounds of calcium and magnesium. Other constituents--such as iron, manganese, aluminum, barium, strontium, and free acid--also cause hardness, although they usually are not present in quantities large enough to have any appreciable effect.

Generally, bicarbonate and carbonate determine the proportions of "carbonate" hardness of water. Carbonate hardness is the amount of hardness chemically equivalent to the amount of bicarbonate and carbonate in solution. Carbonate hardness is approximately equal to the amount of hardness that is removed from water by boiling.

Noncarbonate hardness is the difference between the hardness calculated from the total amount of calcium and magnesium in solution and the carbonate hardness. The scale formed at high temperatures by the evaporation of water containing noncarbonate hardness commonly is tough, heat resistant, and difficult to remove.

Although many people talk about soft water and hard water, there has been no firm line of demarcation. Water that seems hard to an easterner may seem soft to a westerner. In this report hardness of water is classified as follows:

Hardness range	
(calcium carbonate in mg/l)	Hardness description
0-60	Soft
61-120	Moderately hard
121-180	Hard
More than 180	Very hard

Durfor and Becker, 1964, p. 23-27.

Acidity (H⁺¹)

The use of the terms acidity and alkalinity is widespread in the literature of water analysis and is a cause of confusion to those who are more accustomed to seeing a pH of 7.0 used as a neutral point. Acidity of a natural water represents the content of free carbon dioxide and other uncombined gases, organic acids and salts of strong acids and weak bases that hydrolyze to give hydrogen ions. Sulfates of iron and aluminum in mine and industrial wastes are common sources of acidity.

Sodium adsorption ratio (SAR)

The term "sodium adsorption ratio (SAR)" was introduced by the U.S. Salinity Laboratory Staff (1954). It is a ratio expressing the relative activity of sodium ions in exchange reaction with soil and is an index of the sodium or alkali hazard to the soil. Sodium adsorption ratio is expressed by the equation:

$$SAR = \frac{Na^{+}}{\sqrt{\frac{Ca^{++}+Mg^{++}}{2}}}$$

where the concentrations of the ions are expressed in milliequivalents per liter.

Waters are divided into four classes with respect to sodium or alkali hazard: low, medium, high, and very high, depending upon the SAR and the specific conductance. At a conductance of 100 micromhos per centimeter the dividing points are at SAR values of 10, 18, and 26, but at 5,000 micromhos the corresponding dividing points are SAR values of approximately 2.5, 6.5, and 11. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Specific conductance (micromhos per centimeter at 25°C)

Specific conductance is a convenient, rapid determination used to estimate the amount of dissolved solids in water. It is a measure of the ability of water to transmit a small electrical current (see p. 6). The more dissolved solids in water that can transmit electricity the greater the specific conductance of the water. Commonly, the amount of dissolved solids (in mg/l) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well and it may even vary in the same source with changes in the composition of the water (Durfor and Becker, 1964 p. 27-29).

Specific conductance of most waters in the eastern United States is less than 1,000 micromhos, but in the arid western parts of the country, a specific conductance of more than 1,000 micromhos is common.

Hydrogen-ion concentration (pH)

Hydrogen-ion concentration is expressed in terms of pH units (see p. 6). The values of pH often are used as a measure of the solvent power of water or as an indicator of the chemical behavior certain solutions may have toward rock minerals.

The degree of acidity or alkalinity of water, as indicated by the hydrogen-ion concentration, expressed as pH, is related to the corrosive properties of water and is useful in determining the proper treatment for coagulation that may be necessary at water-treatment plants. A pH of 7.0 indicates that the water is neither acid nor alkaline. pH readings progressively lower than 7.0 denote increasing acidity and those progressively higher than 7.0 denote increasing alkalinity. The pH of most natural surface waters ranges between 6 and 8. Some alkaline surface waters have pH values greater than 8.0 and waters containing free mineral acid or organic matter usually have pH values less than 4.5.

The investigator who utilizes pH data in his interpretations of water analyses should be careful to place pH values in their proper perspective.

Temperature

Temperature is an important factor in properly determining the quality of water. This is very evident for such a direct use as an industrial coolant. Temperature is also important, but perhaps not so evident, for its indirect influence upon aquatic biota, concentrations of dissolved gases, and distribution of chemical solutes in lakes and reservoirs as a consequence of thermal stratification and variation.

Surface water temperatures tend to change seasonally and daily with air temperatures, except for the outflow of large springs. Superimposed upon the annual temperature cycle is a daily fluctuation of temperature which is greater in warm seasons than in cold and greater in sunny periods than with a cloud cover. Natural warming is due mainly to absorption of a solar radiation by the water and secondarily to transfer of heat from the air. Condensation of water vapor at the water surface is reported to furnish measurable quantities of heat. Heat loss takes place largely through radiation, with further losses through evaporation and conduction to the air and to the streambed. Thus the temperature of a small stream generally reaches a maximum in mid- to late afternoon due to solar heating and reaches a minimum from early to mid-morning after nocturnal radiation.

Color

In water analysis the term "color" refers to the appearance of water that is free from suspended solids. Many turbid waters that appear yellow, red, or brown when viewed in the stream show very little color after the suspended matter has been removed. The yellow-to-brown color of some waters is usually caused by organic matter extracted from leaves, roots, and other organic substances in the ground. In some areas objectionable color in water results from industrial wastes and sewage. Clear deep water may appear blue as the result of a scattering of sunlight by the water molecules. Water for domestic use and some industrial uses should be free from any perceptible color. A color less than 15 units generally passes unnoticed (U.S. Public Health Service, 1962). Some swamp waters have natural color in excess of 300 units.

The extent to which a water is colored by material in solution is commonly reported as a part of a water analysis because a significant color in water may indicate the presence of organic material that may have some bearing on the dissolved solids content. Color in water is expressed in terms of units between 0 and 500 or more based on the above standard (see p. 6).

Turbidity

Turbidity is the optical property of a suspension with reference to the extent to which the penetration of light is inhibited by the presence of insoluble material. Turbidity is a function of both the concentration and particle size of the suspended material. It is reported in terms of mg/l of silica or Jackson turbidity units (JTU).

Turbid water is abrasive in pipes, pumps, and turbine blades. Although turbidity does not directly measure the safety of drinking water, it is related to the consumer's acceptance of the water. A level of 5 JTU of turbidity becomes objectionable to a considerable number of people (U.S. Public Health, 1962).

Density at 20°C

Density is the mass of any substance per unit volume at a designated standard temperature. Density should not be confused with specific gravity, which is a mass-to-mass relation.

The density value has some use in industries that utilize brines and whose basic unit of concentration of dissolved material is density. Density is used primarily by the chemist in the computation of milligrams per liter for highly mineralized waters. Dissolved oxygen (DO)

Oxygen dissolved in water is derived from the air and from the oxygen given off in the process of photosynthesis by aquatic plants.

Dissolved oxygen in water has no adverse physiological effect and actually increases the palatability of the water. No minimum concentration of dissolved oxygen required to support fish life has been listed because the oxygen requirements of fish vary with the species and age, with temperature, and with concentration of other substances in the water.

Dissolved oxygen is responsible for many of the corrosion problems in industry. Chemical Oxygen demand (COD)

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

Biochemical oxygen demand (BOD)

Biochemical oxygen demand is a measure of the oxygen required to oxidize the organic material usable as a source of food by aerobic organisms.

Biological and microbiological information

Biological and microbiological information is an important aspect in the evaluation of water quality. The kinds and amount of aquatic biota in a stream or lake can be useful "indicators" of environmental conditions and particularly of the degree of pollution of water with organic wastes (Doudoroff and Warren, 1957). Biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphus matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

Chlorophyll (plant pigment).--The concentrations of photosynthetic pigments in natural waters vary with time and changing aquatic conditions. Concentrations of chlorophyll a, b, and c (spectrophotometric determination) are used to estimate the biomass and photosynthetic capacity of phytoplankton (blue-green algae). Ratios between the different forms of chlorophyll are thought to indicate the taxonomic composition or the physiological state of the algae community (Slack, 1970).

Plankton.--Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting, chiefly of minute plants (as diatomes and blue-green algae) and of minute animals (as protozoan, entomostracans and various larvae). Algae are known to cause tastes and odor in water supply.

Plankton population in water is obtained by count level (the number of organisms per milliliter).

Coliform bacteria.--Coliform organisms have long been used as indicators of sewage pollution, although the group includes bacteria from diverse natural sources and habitats. For example, members of the coliform group are indigenous to soil and vegetation as well as feces. Standards for drinking-water quality provide definite minimums as to number of samples examined and the maximum number of coliform organisms allowable per 100 milliliters (ml) of finished water (Slack, 1970). The coliform population of water is determined either by the most probable number (MPN), or by the incubation membrane filter method, a direct count of coliform colonies per plate.

Fecal coliform bacteria.--Fecal coliform is that portion of the coliform group that is present in the intestinal tract of warm-blooded animals and is capable of producing gas from lactos in suitable culture medium at 44.5°C. Organisms from other sources generally cannot produce gas in this manner. (American Public Health Assoc. and others, 1965). Thus, in general, the presence of fecal coliform organisms indicates recent pollution (Slack, 1970).

Organics

Phenols.--Phenolic material in water resources is invariably the result of pollution. Phenols are widely used as disinfectants and in the synthesis of many organic compounds. Waste products from oil refineries, coke areas, and chemical plants may contain high concentrations. Fortunately, phenols decompose in the presence of oxygen and microorganisms, and their persistence downstream from point of entry is relatively short lived. The rate of decomposition is dependent on the environment.

Very low concentrations impart such a disagreeable taste to water that it is highly improbable that harmful amounts could be consumed unknowingly. Reported thresholds of detection of taste and odor range from 0.001 to 0.01 mg/l,

Cyanide (CN).--Cyanides are not found free in nature, but may become contaminants of water supplies by means of effluents from gasworks, coke ovens, steel mills, electroplating processes, and chemical industries. In natural streams and organic soils, simple cyanides are decomposed by bacterial action, whereas the metal-cyanide complexes are often quite stable and more resistant to degradation. The U.S. Public Health Service (1962) set a recommended limit of 0.01 mg cyanide per liter and a mandatory limit of 0.2 mg/1 for waters subject to interstate regulations.

Detergents (methylene blue active substance, MBAS).--Anionic surfactants in detergents resist chemical oxidation and biological breakdown. Soap is an example of this class and the synthetic members are sodium salts of organic sulfonates or sulfates (Rose, 1966). Their persistence in water over long periods of time contributes to pollution of both ground water and surface water. Some of the effects produced from detergent pollution are unpleasant taste, odor, and foaming (Wayman, and others, 1962). Although the physiological implications of MBAS to human beings is unknown, prolonged ingestion of this material by rats is believed to be nontoxic (Paynter, 1960). The U.S. Public Health Service (1962) recommends that MBAS should not exceed 0.5 mg/1 in drinking and culinary waters.

Total Organic Carbon (TOC).--Total organic carbon is a measure of the organically related carbonaceous content of water. It includes all natural and manmade organic compounds which are combustable at a temperature of 950° C.

Sediment

Fluvial sediment generally is regarded as that material which is transported by, suspended in, or deposited by water. Suspended sediment is that part which remains in suspension in water owing to the upward components of turbulent currents or by

colloidal suspension. Much fluvial sediment results from the natural process of erosion, which in turn is part of the geologic cycle of rock transformation. This natural process may be accelerated by agricultural practices. Sediment also is contributed by a number of industrial and construction activities. In certain sections, waste materials from mining, logging, oil-field, and other industrial operations introduce large quantities of suspended material.

The quantity of sediment, transported or available for transportation, is affected by climatic conditions, form or nature of precipitation, character of the solid mantle, plant cover, topography, and land use. The mode and rate of sediment erosion, transport, and deposition is determined largely by the size distribution of the particles or more precisely by the fall velocities of the particles in water. Sediment particles in the sand size range (larger than 0.062 mm) do not appear to be affected by flocculation or dispersion resulting from the mineral constituents in solution. In contrast, the sedimentation diameter of clay and silt particles in suspension may vary considerably from point to point in a stream or reservoir, depending on the mineral matter in solution and in suspension and the degree of turbulence present. The size of sediment particles in transport at any point depends on the type of erodible and soluble material in the drainage area, the degree of flocculation present, time in transport, and characteristics of the transporting flow. The flow characteristics include velocity of water, turbulence, and the depth, width, and roughness of the channel. As a result of these variable characteristics, the size of particles transported, as well as the total sediment load, is in constant adjustment with the characteristics and physical features of the stream and drainage area.

STREAMFLOW

Most of the records of stream discharge, used in conjunction with the chemical analyses and in the computation of sediment loads in this volume, are published in the Geological Survey water-supply paper series, "Surface Water Supply of the United States, 1966-70." The discharge reported for a composite sample is usually the average of daily mean discharges for the composite period. The discharges reported in the tables of single analyses are either daily mean discharges or discharges obtained at the time samples were collected and computed from a stage-discharge relation or from a discharge measurement.

PUBLICATIONS

Reports giving records of chemical quality and temperatures of surface waters and suspended-sediment loads of streams in the area covered by this volume for the water years 1961-68, are listed below:

Year	WSP	Year	WSP	Year	WSP	Year	WSP
1941	942	1948	1133	1955	1403	1962	1945
1942	950	1949	1163	1956	1453	1963	1951
1943	970	1950	1189	1957	1523	1964	1958
1944	1022	1951	1200	1958	1574	1965	1965
1945	1030	1952	1253	1959	1645	1966	1995
1946	1050	1953	1293	1960	17 4 5	1967	2015
1947	1102	1954	1353	1961	1885	1968	2099

Geological Survey reports containing chemical quality, temperature, and sediment data obtained before 1941 are listed on next page. Publications dealing largely with the quality of ground-water supplies and only incidentally covering the chemical composition of surface waters are not included. Publications that are out of print are preceded by an asterisk.

PROFESSIONAL PAPER

*135. Composition of river and lake waters of the United States, 1924.

BULLETINS

- *479. The geochemical interpretation of water analyses, 1911.
- 770. The data of geochemistry, 1924.

WATER-SUPPLY PAPERS

- *108. Quality of water in the Susquehanna River drainage basin, with an introductory chapter on physiographic features, 1904.
- *161. Quality of water in the upper Ohio River basin and at Erie, Pa., 1906.
- *193. The quality of surface waters in Minnesota, 1907.
- *236. The quality of surface waters in the United States, Part 1, Analyses of waters east of the one hundredth meridian, 1909.
- *237. The quality of the surface waters of California, 1910.
- *239. The quality of surface waters of Illinois, 1910.
- *273. Quality of the water supplies of Kansas, with a preliminary report on stream pollution by mine waters in southeastern Kansas, 1911.
- *274. Some stream waters of the western United States, with chapters on sediment carried by the Rio Grande and the industrial application of water analyses,
- *339. Quality of the surface waters of Washington, 1914.
- *363. Quality of the surface waters of Oregon, 1914.
- *418. Mineral springs of Alaska, with a chapter on the chemical character of some surface waters of Alaska, 1917.
- *596-B. Quality of water of Colorado River in 1925-26, 1928.
- *596-D. Quality of water of Pecos River in Texas, 1928.
- *596-E. Quality of the surface waters of New Jersey, 1928.
- *636-A. Quality of water of the Colorado River in 1926-28, 1930.
- *636-B. Suspended matter in the Colorado River in 1925-28, 1930.
- *638-D. Quality of water of the Colorado River in 1928-30, 1932.
- *839. Quality of water of the Rio Grande basin above Fort Quitman, Tex., 1938.
- *889-E. Chemical character of surface water of Georgia, 1944.
- *998. Suspended sediment in the Colorado River, 1925-41, 1947.
 - 1048. Discharge and sediment loads in the Boise River drainage basin, Idaho, 1939-40, 1948.
 - 1110-C Quality of water of Conchas Reservoir, New Mexico, 1939-49, 1952.

Many of the reports listed are available for consultation in the larger public and institutional libraries. Copies of Geological Survey publications still in print may be purchased at a nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, who will, upon request, furnish lists giving prices.

COOPERATION

The records given in this report were obtained through the cooperation and support of the State of California, with local and Federal agencies and with funds appropriated directly to the U.S. Geological Survey. The State, local and Federal agencies that shared in the collection of these records are as follows:

California Department of Water Resources; California Water Quality Control Board; Bolinas Harbor District; Monterey County Flood Control and Water District; Orange County Water District; San Luis Obespo 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; Alemeda County Water District; Metropolitan Water District of Southern California;

Kings River Water Association; Sierra Pacific Power Company; Bureau of Reclamation, U.S. Department of the Interior; Corps of Engineers, U.S. Army; Forest Service and Soil Conservation Service, U.S. Department of Agriculture,

DIVISION OF WORK

The quality-of-water work was performed by the Water Resources Division of the Geological Survey, E. L. Hendricks, chief hydrologist, and under the direction of the district chiefs listed in the preface.

Correspondence regarding the records in this report or any additional information should be directed to the district chief of the appropriate Geological Survey-Water Resources Division district office as indicated in the following table.

State	District Office	Address
California	Menlo Park 94025	713 Santa Cruz Ave.
Oregon	Portland 97208	830 N. E. Holladay St. P. O. Box 3202

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WATER-QUALITY STATIONS IN DOWNSTREAM ORDER

SANTA MARGARITA RIVER BASIN

11044 500 SANTA MARGARITA RIVER NEAR FALLBROOK, CALIF.

LOCATION.—Lat 33°23'54", long 117°15'44", in NETSETNET 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 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAP OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- GIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATF (CO3)	SULFATE (SO4)	CHLO- RIOF (CL)	FLU0- R [D E (F)	NITRATE (NO3)	BORON (B)
NOV.	1.4	100	35	132	4.0	364	0	157	158	•5	•6	. 20
JAN.	1	100	,,	1 ,2	4.0	304	•		170	• •	•0	
25 MAR.	4.0	104	36	130	3.0	332	0	181	165	.5	.6	.14
07 MAY	3.7	102	35	122	3.0	340	0	160	160	• 5	•6	.13
09 SEPT.	1.8	101	36	121	3.0	348	0	154	1 54		40	.20
07	1.3	87	28	114	3.0	310	0	122	147	•6	•0	.16
DATE	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	OIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOL VED SOL IDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD~ SORP~ TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- Ture (DEG C)	DIS- SOLVED OXYGEN
NOV. 01	805	765	394	95	1.09	42	2.9	299	1290	8.2	14	9.0
JAN. 25	824	783	408	136	1.12	41	2.8	272	1310	8.2	10	10.0
MAR. C7 May	816	749	399	120	1.11	40	2.7	279	1300	8.2	14	9.6
09 SEPT.	782	780	400	115	1.06	39	2.6	285	1330	8.2	17	8.2
C7	675	653	332	78	•92	42	2.7	254	1120	8.0	20	6.6

11046 000 SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.--Lat 33°14'38", long 117°22'56", in NE[SE]SE] sec.3, T.11 S., R.5 W., at gaging station on right bank, 1 mile downstream from Ysidora, and about 2.5 miles upstream from mouth.

DRAINAGE AREA, -- 739 sq m1.

PERIOD OF RECORD, -- Sediment records: October 1967 to September 1968.

REMARKS, -- No flow during entire water year.

11046500 SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF,

LOCATION. -- Lat 33°31'08", long 117°37'27", in NE | NE | SE | sec. 32, T.7 S., R.7 W., Orange County, at gaging station on right pier of bridge on State Highway 74, and 2.5 miles northeast of San Juan Capistrano.

DRAINAGE AREA -- 106 sq mt.

PERIOD OF RECORD, --Water temperatures: October 1966 to September 1968 (discontinued). Sediment records: October 1966 to September 1968 (discontinued).

EXTREMES . -- 1967-68:

Sediment concentrations: Maximum daily, 2,350 mg/l Mar. 8; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 1,270 tons Mar. 8; minimum daily, 0 ton on many days.

Period of record:

Sediment concentrations: Maximum daily, 10,600 mg/l Dec. 6, 1966; minimum daily, no flow on many days in each Sediment discharge: Maximum daily, 110,000 tons Dec. 6, 1966; minimum daily, 0 ton on many days each year.

REMARKS .-- No flow May 30 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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 NOVEMBER.																			17	16	16	13	14	13		18		17		15			
JANUARY		14						6							В							7							14				
FEBRUARY. MARCH	19																														18		
APRIL MAY JUNE												==																				==	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B. ROTTOM MITHORAWAL TUBE: C. CHEMICALLY DISPERSED: N. IN NATIVE MATER; P. PIPET; S. SIEVE: V. VISUAL ACCUMULATION TORE: N. IN DISTILLED MATER)

			WATER								PART	ICLE S	SIZE					
			TEM- PERA- TURE	DISCHARGE	CONCEN- TRATION	SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	IZE (N MII	LLIMET	rers)	INDI	CATED	METHOD OF ANALY-
DA	ΤE	TIME	(c)	(CFS)	(MG/L)	(TONS/DAY)	.002	-004	•008	.016	.031	.062	•125	•250	•5DO	1.00	2.00	SIS
NOV 19	9 1967	1030	17	23	2790	173	72	85	95	98	98	99	99	99	100			SPW
NOV 20	0	0645	16	80	1810	391	55	77	89	93	94	95	95	96	98	99	100	SPW
NOV 2	1	1055	17	14	112	4.2						41	42	48	88	100		S
NOV 21	1	1325		106	8000	2290	63	68	78	92	95	97	97	98	100			VPW
	1		17	94	8130	5060	67	71	78	88	90	92	93	95	97	100		VPW
DEC 1	8	1400	12	9.0	1810	44	35	44	58	70	83	98	100					VPWC
DFC 19	9	1050	12	29	392	31	49	57	64	66	67	70	70	75	96	100		SCBW
DFC 1	9	1345	13	27	258	19	68	80	85	88	89	92	94	95	98	100		SCBW
MAR	8 1968	1215		20	1090	59	78	85	93	96	97	99	99	100				SCBW
MAR	8	1450	19	326	6940	6110	35	44	58	66	71	74	82	95	100			SPW
APR	2	0615	13	9.9	286	7.6	43	59	71	77	82	91	94	98	100			SC8W

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

		WATER TEM-	NUMBER OF						PART	ICLE S	IZE					
		PERA-	SAM- PLING	DISCHARGE		PERCENT	FINER	THAN	THE S	SIZE (I	N MILL	IMETER	S) INC	ICATED		METHOD DF ANALY-
DATE	TIME	(C)	POINTS		•062	.125	.250	.500	1.00	5.00	4.00	8.00	16.0	32.0	64.0	SIS
NOV 21 1967		17	2	15			1	15	61	92	98	100				s
NOV 21	1330		2	106			1	10	51	83	92	97	100			Š
DEC 19	0945	11	3	26			1	23	70	94	99	100				Š
DEC 19	1045		2	25				18	67	92	98	100				s

11046500 SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		OCTOBER			NOVE MBER			DECEMBER	
		MEAN		WE A 40	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	OI SCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	1.7		•01	1.2		0	15 9.0	23 9 16	S 7.5
2	1.5 1.4		0	1.3 1.4		0	7.6	7	.14
4 5	1.5		0	1.8		•01 •01	6.5 5.8	7	•12 •09
-								_	
6 7	1.4 1.3		0	2•4 2•8		.01 .02	5.B 6.2	-5 	•08 •12
8	1.4		0	3.0 3.0		•02	6.7 5.6		•13 •11
10	1.4 1.1		ő	3. i		.02	5.6		.11
11	1.2		0	3.1		•02	5.4		•10
12 13	1.1 1.1		0	3 • 2 3 • 0		•02	5.3 5.5		• 10 • 10
14	1.1		Ó	2.9		• 02	5, 2		-10
15	1.1		0	2.7		•02	5.0		•09
16	.97		0	2 • 5 2 • 4		•01 •01	5.3 5.8		•10 •09
17 18	.89 .83		ō	2•4		• 01	17	835	S 77
19 20	.78 .85		0	33 48	2200 854	S 227 S 152	32 26	711 35	S 86 2.4
							15	14	•57
21 22	•91 •96		0	38 29	1880 300	S 361 S 35	9.9	8	•21
23	•99		0	12 8•2	30 16	• 97 • 35	8.1 7.7	6	•13 •08
24 25	1.1 1.1		ŏ	7.1	10	.19	6.B		•07
26	1.2		0	7.0	9	.17	6.4		•05
27	1.3		0	6.4	8 8	•14 •15	5.9 5.9		•05 •05
2B 29	1.3 1.4		ō	6 • B 6 • 9	7	.13	5.9		.05
30 31	1.3		0	10	B8	S 3.0	6.4 6.4	2	•03 •03
			-	24.2		780.34	270.7		176-19
TOTAL	36.78		0.01	256 B		100.54	21001	_	1.0017
		IANIIADY			ECODIMON			MARCH	
		JANUARY			FEBRUARY			MARCH	
	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	ME AN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	OI SCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
DAY	DISCHARGE (CFS)	MEAN CONCEN-	DISCHARGE (TONS/DAY)	OISCHARGE (CFS)	ME AN CONCEN-	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN-	DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION	DISCHARGE (TDNS/DAY)
1 2 3	DISCHARGE (CFS) 6.4 5.4 5.7	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) •03 •03	01 SCHARGE (CFS) 3.9 4.1 4.5	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) •03 •03 •04	DISCHARGE (CFS) 2.6 2.6 2.9	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) •01 •01 •01
1 2 3 4	01SCHARGE (CFS) 6.4 5.4 5.7 5.1	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -03 -03	01SCHARGE (CFS) 3.9 4.1 4.5 4.4	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) • 03 • 03 • 04 • 02	DISCHARGE (CFS) 2.6 2.6 2.9 2.9	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) •01 •01 •01
1 2 3 4 5	01SCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -03 -03	01 SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -04 -02 -02	2.6 2.6 2.9 2.9 2.6	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01
1 2 3 4 5	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03	01SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .04 .02 .02	2.6 2.6 2.9 2.9 2.9 2.6 2.9	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -03 -03 -03 -04 -04	01SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -04 -02 -02 -02 -02	2.6 2.6 2.9 2.9 2.6 2.9 2.6 2.6	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -0
1 2 3 4 5	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03	01SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .04 .02 .02	2.6 2.6 2.9 2.9 2.9 2.6 2.9	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6 6.3 6.1 5.8	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .04 .03 .03	01 SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 3.9 3.6 3.7	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -04 -02 -02 -02 -02 -02 -02 -02 -02	DISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.6 2.9 3.12 7.6	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 6-4 5-7 5-1 5-2 6-3 6-6 6-3 6-1 5-8 5-4	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .04 .04 .03 .03 .03 .03 .03	01 SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 3.9 3.6 3.7	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.6 2.7 43 12 7.6 6.3	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -0
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 6.4 5.7 5.1 5.2 6.3 6.6 6.3 6.1 5.8 5.4 9 5.1	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -03 -03 -03 -03 -03 -04 -03 -03 -03 -03 -01 -01 -01	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 4.2 3.9 3.6 3.7 3.7 3.7 3.7 4.8	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -04 -02 -02 -02 -02 -02 -02 -02 -03 -03 -03 -03	DISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.6 2.9 3.12 7.6 6.3 6.5 5.7	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) - 01 - 01 - 01 - 01 - 01 - 01 - 01 - 01
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 6.4 5.7 5.1 5.2 6.3 6.6 6.3 6.1 5.8 5.4 4.9 5.1	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .03 .03 .03 .03	01 SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 3.9 3.6 3.7 3.6 3.7	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -03 -04 -02 -02 -02 -02 -02 -02 -02 -03 -03 -03 -03 -03	DISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.9 2.6 2.6 2.6 2.6 6.3 12 7.6 6.3 6.5	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.6 6.3 6.1 5.8 5.4 4.9 5.1 5.5 4.8	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .04 .05 .05 .07 .07 .07 .07 .07 .07 .07 .07 .07 .07	OISCHARGE (CFS) 3-9 4-1 4-5 4-6 4-3 4-2 3-9 3-6 3-7 3-7 3-4 8-8	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) 2-6 2-9 2-9 2-6 2-6 2-9 87 43 12 7-6 6-3 6-5 5-7 4-8	MEAN CONCENT OF THE PROPERTY O	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.6 6.3 6.1 5.6 5.4 4.9 5.5 4.8 4.9	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .04 .05 .05 .07 .07 .07 .07 .07 .07 .07 .07 .07 .07	01 SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 4.2 3.9 3.6 3.7 3.7 3.4 5.2 4.8 4.5 4.7	MEAN CONCENTRATION (MG/L) 3	DISCHARGE (TONS/DAY) -03 -03 -03 -04 -04 -02 -02 -02 -02 -02 -02 -02 -02 -02 -02	OISCHARGE (CFS) 2.6 2.9 2.9 2.9 2.6 2.9 2.7 43 12 7.6 6.3 6.5 5.7 4.8 4.8 5.5 5.1	MEAN CONCENT OF THE PROPERTY O	DISCHARGE (TONS/DAY) + 01 + 01 + 01 + 01 + 01 + 01 S 1270 S 56 -71 + 14 + 07 + 05 + 05 + 04 + 12 + 06
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6 5.6 5.6 5.6 4.9 4.9 4.8 4.7	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .04 .05 .05 .06 .07 .07 .07 .08 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 5.2 4.2 4.2 3.9 3.6 7 3.7 3.7 4.8 4.7 4.8	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2-6 2-9 2-9 2-9 2-6 2-6 2-9 87 43 12 7-6 6-3 6-5 5-7 4-8 4-8	MEAN CONCENT OF THE PROPERTY O	DISCHARGE (TONS/DAY)
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6 5.4 4.9 4.9 4.8	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .04 .05 .07 .07 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 4.2 3.9 3.6 7 3.7 3.7 4.8 4.8 4.7 4.8	MEAN CONCENTRATION (MG/L) 3	DISCHARGE (TONS/DAY) .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2-6 2-6 2-9 2-9 2-6 2-6 2-9 87 43 12 7-6 6-3 6-5 5-7 4-8 4-8 5-5 5-1 4-0 3-4	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6 5.6 5.4 4.9 4.8 4.7 4.9	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .04 .05 .07 .07 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.2 4.2 4.2 3.9 3.6 7 3.7 4.8 4.8 4.7 4.8 4.7 4.8	MEAN CONCENT (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.8 87 43 12 7.6 6.3 6.5 5.7 4.8 4.8 5.5 5.1 4.0 3.4	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.3 6.1 5.8 5.4 4.9 5.5 5.2 4.8 4.9 4.9	MEAN CONCENT AT 11 ON (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .05 .07 .07 .07 .07 .07 .07 .07 .07 .07 .07	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 3.9 3.6 3.7 3.7 3.4 4.8 4.5 4.7 4.8 4.5 4.7 4.8 3.7	MEAN CONCENT (MG/L) - 3 2 2 2	DISCHARGE (TONS/DAY) .03 .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.9 2.9 2.9 2.6 2.9 2.7 43 12 7.6 6.3 6.5 5.7 4.8 5.5 1.4.0 3.4 2.9 2.0 2.1	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.6 5.6 5.4 4.9 4.8 4.7 4.9	MEAN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .04 .05 .07 .07 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.2 4.2 4.2 3.9 3.6 7 3.7 4.8 4.8 4.7 4.8 4.7 4.8	MEAN CONCENT AT 10 MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.8 87 43 12 7.6 6.3 6.5 5.7 4.8 4.8 5.5 5.1 4.0 3.4	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.63 6.1 5.6 5.4 4.9 4.8 4.7 4.9 5.2 4.8 4.7 4.9 4.8 4.7 4.9	MEAN CONCENT AT 11 ON (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .04 .03 .03 .01 .01 .01 .01 .01 .01 .01 .01 .03 .03 .04 .04 .03 .03 .04 .04 .05 .05 .06 .07 .07 .08 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OI SCHARGE (CFS) 3-9 4-1 4-5 4-4 5 4-6 3-9 3-6 3-7 3-7 3-7 3-4 4-8 4-7 4-8 4-7 4-8 3-7 3-7 3-7 3-6 3-4	MEAN CONCENT AT 10 MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OTSCHARGE (CFS) 2.6 2.6 2.9 2.9 2.6 2.6 2.9 87 43 12 7.6 6.3 6.5 5.7 4.8 4.8 4.8 5.5 5.1 4.0 3.4 2.9 2.0 2.1 2.4	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 12 0 21 12 22 23 24 25 26 26 7	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 6.3 6.63 6.1 5.6 5.4 4.9 4.8 4.9 4.8 4.9 5.2 4.8 4.9 4.9 4.2 3.8	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .04 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01	OI SCHARGE (CFS) 3-9 4-15 4-4 4-3 4-2 4-2 3-9 3-6 3-7 3-7 3-4 8 4-5 4-7 4-8 3-7 3-6 3-4 3-7 3-6 3-7 3-6 3-7 3-6 3-7 3-7 3-7 3-6 3-7 3-7 3-7 3-7 3-7 3-7 3-7 3-7 3-7 3-7	MEAN CONCENT ATTOM (MG/L) 3	DISCHARGE (TONS/DAY) .03 .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.9 2.6 2.6 2.9 87 43 12 7.66 6.35 5.10 4.0 4.8 4.8 5.5.1 4.0 2.9 2.1 2.4 2.5	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 5 26 7 28 29	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.3 6.3 6.1 5.6 4.9 5.1 5.5 5.2 4.8 4.9 4.9 4.8 4.7 4.9 4.8 4.7 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.9 4.8 4.8 4.8 4.8 4.9 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 4.2 3.9 3.6 3.7 3.7 3.4 5.2 4.8 4.5 4.7 4.8 4.5 4.7 4.3 3.4 3.7 3.6 3.4	MEAN CONCENT (MG/L) 3	DISCHARGE (TONS/DAY) .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.9 2.6 2.6 2.9 87 43 12 7.6 6.3 5.7 4.8 4.8 5.5 5.1 4.0 2.9 2.0 2.1 2.4 2.5	MEAN CONCENT ATTOM (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30	DISCHARGE (CFS) 6.4 5.4 5.7 5.1 5.2 6.3 6.3 6.3 6.1 5.6 4.9 5.1 5.5 4.9 4.9 4.9 4.9 4.9 4.9 4.9 4.9 4.9 4.9	MEAN CONCENT AT 11 ON (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .05 .07 .07 .07 .07 .07 .07 .07 .07 .07 .07	OI SCHARGE (CFS) 3.9 4.1 4.5 4.4 4.3 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2	MEAN CONCENT ATTOM (MG/L) 3	DISCHARGE (TONS/DAY) .03 .03 .04 .04 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	OISCHARGE (CFS) 2.6 2.9 2.9 2.9 2.6 2.9 2.7 43 12 7.6 6.3 6.5 5.7 4.8 5.5 1.4 0.0 3.4 2.9 2.0 2.1 2.4 2.5 2.1 2.0 2.2 2.2 2.2	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 5 26 7 28 29	DISCHARGE (CFS) 6.4 5.47 5.12 6.3 6.63 6.16 5.6 5.4 4.9 4.8 4.9 5.2 4.8 4.9 4.8 4.9 4.8 4.9 4.8 4.9 4.8 4.9	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .04 .03 .03 .03 .03 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01	OI SCHARGE (CFS) 3-9 4-15 4-4 4-3 4-2 4-2 3-9 3-6 3-7 3-7 3-4 8 4-7 4-8 3-7 3-6 3-4 3-7 3-6 3-4 3-7 3-7 3-6 3-7 3-7 3-7 3-7 3-8 3-9 2-9	MEAN CONCENT ATTOM (MG/L) 3	DISCHARGE (TONS/DAY) .03 .03 .03 .04 .02 .02 .02 .02 .02 .02 .02 .02 .03 .03 .03 .03 .03 .03 .03 .03 .03	OISCHARGE (CFS) 2.6 2.6 2.9 2.9 2.9 2.6 2.6 2.9 87 43 12 7.6 6.3 5.7 4.8 4.8 5.5 5.1 4.0 2.9 2.0 2.1 2.4 2.5	MEAN CONCENT ATTOM (MG/L)	DISCHARGE (TONS/DAY)

S Computed by subdividing day.

11046500 SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF .-- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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)
Ļ	3.2		•02	- 81					
2	7.0	50	•95	. 79					
3	3.4	20	•17 •15	.82 .81					
4 5	2.7	20	.10	.73					
,	2.1		•10	• 13					
6	1.9		.08	.68					
7	1.9		-07	• 65					
8	2.2		.10	. 61					
9	2.7		•13	• 53					
10	1.4		•05	•49					
11	1.2	12	.04	.45					
12	1.3		.04	.47					
13	1.5		•05	•46					
14	1.9		• 06	• 42					
15	1.9		•06	• 42					
16	1.9		•06	.36					
17	1.5		.05	•30					
18	1.1	12	•04	.28					
19	1.2		• 04	• 26					
20	1.5		•05	•22					
21	1.6		.05	•22					
22	1.2		.03	. 19					
23	•93		•02	.18					
24	. 84		•01	.18					
25	.81	2	٥	.15					
26	•74		٥	.10					
27	.83		ō	.09					
28	.80		٥	.06					
29	•79		٥	• 02					
30	.80		٥	0					
31				0					
TOTAL	52.84		2.42	11.75		0	٥		0

		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									*******
2									
4 5									
. 6									
. 6 7 8 9									
9 10									
11 12									
13									
14 15									
16									
17									
18 19									
20									
21									
22 23									
24									
25									
26									
27 28									
29									
30 31									
TOTAL	0		0	0		٥	٥		0
TOTAL DISCHA	ARGE FOR YE FOR YEAR (T	AR (CFS-D Ons)	AYSI						1129.97 2287.93

27

11047000 ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CALIF.

LCCATION. --Lat 33°31'36", long 117°40'08", in NE4NE4NW4 sec.36, T.7 S., R.8 W., Orange County, at gaging station on downstream side of right pier of county road bridge, and 1.8 miles north of San Juan Capistramo.

DRAINAGE AREA. -- 35.7 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1966 to September 1968 (discontinued). Sediment records: October 1966 to September 1968 (discontinued).

EXTREMES . -- 1967-68:

Sediment concentrations: Maximum daily, 7,710 mg/1 Dec. 18; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 38 tons Nov. 21; minimum daily, 0 ton on many days.

Period of record:

Sediment concentrations: Maximum daily, 9,360 mg/l Dec. 7, 1966; minimum daily, no flow on many days each

year. Sediment discharge: Maximum daily, 30,700 tons Dec. 7, 1966; minimum daily, 0 ton on many days each year.

REMARKS.--No flow Oct. 26 to Nov. 9, Nov. 15-18, Feh. 26, 27, Mar. 12-31, Apr. 3 to May 9, May 12, 14-17, 20-27, May 30 to June 4, June 8-25, 27, June 29 to July 2, July 7-10, 13-18, July 20 to Aug. 2, Aug. 9-16, Aug. 20 to Sept. 8, Sept. 15-24, 28-30. Records of discharge furnished by Orange County Flood Control District.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	٩Y																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																																	
NOVEMBER.																				17	16	14	14	13		18				13			
DECEMBER.	10	8	8				9								6			11	14	7	6			11							14		
JANUARY								6							8							8							13				
FEBRUARY.																																	
MARCH				19				13	13	11	10																						
APRIL		12																															
MAY																																	
JUNE ••••																																	
JULY																																	
AUGUST																																	
SEPTEMBER																																	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: 8. ROTTOM WITHDRAWAL TUBE: C. CHEMICALLY DISPERSED: N. IN MATIVE WATER: P. PIPET; S. SIEVE:
V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED WATER)

		WATER								PART	ICLE	SIZE					
		TEM- PERA- TURE	DISCHARGE	CONCEN- TRATION	SUSPENDED SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN '	THE S	IZE (IN MII	LLIMET	TERS)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.008	•016	.031	•062	.125	•250	.500	1.00	2.00	SIS
NOV 21 1967	1230	18	16	4670	202	59	61	71	84	92	97	100					VPWC
DEC 18	1415	11	9.6	2270	59	67	79	91	96	98	100						SPWC
DEC 19	1225	14	4.2	841	9.5	84	87	95	96	98	100						SPWC
DEC 19	1400	14	3.3	236	2.1	91	100										SC8W
MAR 8 1968	1750	17	8.2	852	19	70	76	81	86	93	98	100					SPWC
APR 2	0630	12	.34	391	.36	70	80	84	89	92	98	99	100				SCBW

PARTICLE SIZF OF RED MATERIAL. WATER YEAR OCTORER 1967 TO SEPTEMBER 1968 (METHOO OF ANALYSIS: H. HYDROMETER: O. OPTICAL ANALYZER: S. SIFVE: V. VISUAL ACCUMULATION TUBE)

WATER NUMBER

		TEM- PERA- TURE		DISCHARGE		PERCENT	FINE	R THAN		IZE (I		IMETER	S) INC	ICATED		METHOD OF ANALY-
DATE	TIME	(C)	POINTS		•062	.125	.250	•500	1:00	2.00	4.00	8.00	16.0	32.0	64.0	515
NOV 21 1967 JAN 19 1968	. 1600	18	2 1	7.4 D1.0	1	2		10	18	25 	34	84 7	92 36	100 69	100	s o

D Daily mean discharge.

11047000 ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CALIF. -- Continued
SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(Where no concentrations are reported, loads are estimated)

OCTOBER NOVEMBER DECEMBER MEAN CONCEN-TRATION (MG/L) MEAN CONCEN-TRATION (MG/L) MEAN CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) SEDIMENT SEDIMENT DISCHARGE (TONS/DAY) DISCHARGE (TONS/DAY) DAY .01 .01 .01 0 4.2 2.0 1.6 2.0 1.8 .60 00000 62 51 46 0.70 00000 12345 .60 .60 .40 .28 .20 .23 1.7 1.8 1.8 •40 •40 •40 •50 •18 •19 •19 •10 •12 67 000 0000 00000 40 . 9 10 .01 .01 . 20 .60 .60 .60 .70 .01 .01 .01 .30 .20 .20 .10 1.6 1.6 1.4 11 12 13 14 15 •22 00000 .22 .19 .23 280 1110 .60 .60 .60 .01 .01 .01 1.8 1.1 4.6 3.8 2.4 7710 16 17 18 19 20 000 0 0 8. 8 . 48 • 10 4• 4 S 680 93 •60 •60 •60 •60 .01 .01 .01 7.7 7.4 3.3 3.2 2.1 1140 296 47 13 2.2 2.2 1.4 1.4 .28 .19 .11 29 21 22 23 24 25 5.2 .42 .11 .04 .05 .03 .04 2.7 1.9 2.7 1.7 2.4 3.3 1.8 1.8 1.8 1.8 1.2 . 10 26 27 28 29 30 31 000000 777 000000 .09 .07 .06 .03 168 34. 31 TOTAL 13.50 . 19 41.20 61.95 58.70

		UMITOMIT			CONGANI			rian Gi	
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	1.2		•03	•40		.03	30		D
ž	1.6		.09	•40	28	.03	-30		ŏ
3	1.8		•12	•40		.03	.20		ŏ
4	1.7		.13	40		•02	•20	4	ŏ
5	1.7		•13	• 40	18	• 02	•30	4	ŏ
6	1.8		.14	•40		•02	•40	4	٥
7	1.2		.09	•40		• 02	•50	50	S +11
В	1.7		.13	• 40		• 01	4.6	638	S 10
9	1.8		•14	• 50		•01	4.0	145	S 2.0
10	1.8		•14	•40		•01	1.4	42	.16
11	1.8		•13	•40		•01	2.0	30	• 16
12	1.0		•11	.50	10	.01	0		0
13	1.6		•09	• 50		•01	o		0
14	1.1		•04	• 50		•01	o		0
15	1.6	15	.06	• 50		•01	0		0
16	1. l		.04	•50		.01	0		D
17	1.1		•04	• 50		• 01	0		0
18	1.1		•04	•50		•01	0		0
19	1.0		.04	•50	6	•01	o	-	0
20	1.0		.04	• 60		•01	c		0
21	.90		.03	• 60		•01	0		0
22	.80		•03	•70		• 02	o		0
23	•70		•02	•70		•02	0		o o
24	•60		• 02	•70		•02	0		0
25	•50		•01	• 30	10	•01	0		0
26	•40		•01	0		0	0		0
27	•40		•01	0		0	0		0
28	•40		•01	•20	4	ō	ō		o o
29	•40	10	• 01	•30	4	0	o		0
30	•40		-02				0		o o
31	•40		•02				0		•
TOTAL	35.40		1.96	12.60		.38	14.20		12.43

FEBRUARY

MARCH

JANUARY

S Computed by subdividing day.

SAN JUAN CREEK BASIN

11047000 ARROYO TRABUCO MEAR SAN JUAN CAPISTRANO, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	.10		.01	0		0	0		0
2	.10	50	•01	0		0	0		0
3	0		0	0		0	0		0
4	0		0	0		0	0		0
5	0		0	0		0	•40		•05
6	0		0	0		0	0		0
7	Ó		0	0		0	0		0
8	ō		Ô	ò		Ò	0		0
g	ŏ		Ó	ō		Ó	Ö		ò
10	ō		ō	• 30		• 04	0		0
11	o		0	.30		•02	0		0
12	ō		0	0		0	0		0
13	ō		ō	.30		•04	Ò		ō
14	ŏ		ō	0		0	ō		ŏ
15	ŏ		ŏ	ŏ		ŏ	ŏ		ŏ
16	0		0	0		0	0		0
17	ō		ō	ō		ō	Ō		ō
18	ō		ō	•40		•05	Ò		ō
19	ŏ		ŏ	•40		•03	ō		ō
20	ŏ		ō	0		0	ō		ō
21	0		0	0		0	0		0
22	ŏ		ŏ	ŏ		ō	ō		ŏ
23	ō		ŏ	ō		ō	Ò		ō
24	ŏ		ŏ	ŏ		ŏ	ō		ŏ
25	ŏ		ŏ	ŏ		ŏ	ŏ		ŏ
26	0		0	0		0	•30		.04
27	ŏ		ŏ	ŏ		ŏ	0		٥٠٠
28	ŏ		ŏ	• 20		• 03	• 20		. 03
29	ŏ		ŏ	.10		•01	0 20		0
30	ŏ		ŏ	0		۰	ŏ		ŏ
31				ŏ		ŏ			
TOTAL	•20		•02	2.00		• 22	•90		•12

		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	0		0	0		0	0		0
2	0		0	0		0	0		0
3	.50		•07	.10		• 01	0		0
4	.60		.05	• 10		.01	0		0
5	•50		.01	. 20		-01	0		0
6 7	.20		•01	- 20		•01	0		0
7	0		0	.20		•01	0		0
8	0		0	. 10		0	0		0
9	0		0	0		0	•10		.01
10	0		0	0		0	• 20		•01
11	.40		•05	0		0	•20		•01
12	.40		•02	0		0	•30		•01
13	0		0	0		0	• 30		.01
14	0		0	0		0	.20		.01
15	ó		ō	o		ō	0		0
16	0		0	0		0	0		0
17	0		0	.10		•01	0		0
18	0		0	.10		0	0		C C
19	.40		•05	.10		0	0		0
20	0		0	0		0	0		0
21	o		0	0		0	0		o
22	Ó		0	0		0	0		0
23	Ö		ō	0		0	0		0
24	ŏ		ŏ	ŏ		ō	Ó		ò
25	ō		ō	Ó		0	•20		• 03
26	0		0	0		0	•40		• 01
27	ŏ		ŏ	ŏ		ō	-20		•01
28	ŏ		ŏ	ō		ŏ	0		0
29	ŏ		ŏ	ŏ		ŏ	ō		ŏ
30	ŏ		ŏ	ŏ		ō	ō		ō
31	ŏ		ŏ	ŏ		ō			
TOTAL	3.00		•26	1 • 20		•06	2.10		•11

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

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'05", long 117°17'36", in San Bernardino Grant, San Bernardino County, 0.6 mile downstream from San Timoteo Creek, 1 mile upstream from Warm Creek, and 3 miles south of San Bernardino.

DRAINAGE AREA, -- 528 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1967 to September 1968.

TEMPERATURE	(°C)	OF WATER,	WATER	YEAR	OCTOBER	1967	TO	SEPTEMBER 1968
-------------	------	-----------	-------	------	---------	------	----	----------------

															D.	AY																
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																																
MUMIXAM																					25	25	26	27	26	26	27	25	23	24	24	
MINIMUM																					17	16	11	16	19	20	19	18	16	15	17	
NOVEMBER																					_		-	-	-		-			•		
MAXIMUM								22																								
MINIMUM	18	15	13	15	16	15	14	13	14	13	12																					
DECEMBER																																
MUMIXAM																																
MENIMUM									16	16	16	17	17	17	11	12	12	10		В	5	11	6	9	11	10	9	8	13		8	
JANUARY																																
MUMIXAM																																
MINIMUM	7		10	7	7															~-												
FEBRUARY																																
MUP IXAM		-																														
MINIMUM					••							~-	~-																			
MARCH																																
MUMIXAM																																
MINIMUM								~																								
APRIL																																
MUMIXAM																																
MUMINIM																																
MAY																																
MUPIXAM																																
MINIMUM			-,-																													
JUNE																																
MUMIXAM																																
MINIMUM																																
JULY																																
MAXENUM																																
MINIMUM																																
AUGUST																																
MUMIXAM								31																								
MUMINIM						27	25	23	21	22	26	26	27	27															28	25	26	
SEPTEMBER																																
MAXIMUM								30																								29
MINIMUM	27	27	27	26	25	25	26	26	26	26	28	26	26	26	27	26	25	24	23	24	25	23	24	24	24	24	24	25	26	25		25

11066050 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 1968.

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

11066050 SANTA ANA RIVER AT COLTON, CALIF .-- Continued

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CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MEAN DIS- CAL- CHARGE CIUM DATE (CFS) (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUN- RIDE (F)	NITRATE (NO3)	BORON (B)
OCT. 05 2.0 59	14	100	12	215	0	71	112	.9	60	.46
NCV.		_								
C9 30 47 DEC.	20	108	13	229	0	72	106	1.3	64	.48
14 60 43 JAN.	23	122	13	220	0	83	139	1.3	52	.44
C9 40 35	28	119	14	304	0	82	129	1.2	11	•52
FEB. C8 15 50	27	166	14	223	0	89	211	1.3	63	.46
MAR. 13 15 54	23	112	13	253	0	80	120	1.1	56	.33
APR. 03 4.0 49	21	125	13	149	0	68	158	1.3	84	.45
MAY 02 15 46	25	130	13	199	0	76	159	.9	32	.60
JUNE										
17 20 45 JULY	23	93	12	231	0	66	101	1.2	55	.26
25 15 32 ALG.	31	121	13	233	O	80	136	1.4	35	.61
15 25 39 SEPT.	27	121	10	264	0	76	124	1.2	24	.48
17 30 33	29	110	17	295	0	82	115	1.2	16	.58
DIS- DIS- SJLVFD SQLVED SQLIDS SQLIDS (RESI- (SUM OF DUE AT CONSTI- DATE 180 C) TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOD LUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCF (MICRO- MHOS)	РН	TEM- PERA- Ture (Deg C)	DIS- SOLVED OXYGEN
OCT. 05 590 534	205	29	.80	50	3.0	176	936	7.4	27	8.2
NCV. 09 600 543	200	12	.82	52	3.3	188	948	7.5	21	7.3
DEC. 14 648 583	202	22	.88	55	3.7	180	1060	7.3	15	10.0
JAN. C9 602 567	203	0	.82	54	3.6	249	1090	7.2	17	9.3
FEB. 08 815 729	236	53	1.11	59	4.7	183	1370	7.6	15	10.1
MAR. 13 634 582	229	21	.86	50	3.2	208	1060	7.6	17	9.3
APR. 03 656 591	209	87	.89	55	3.8	122	1080	7.1	13	9.6
MAY 02 696 579										
JUNE 17 586 508	218	55	.95	55	3.8	163	1200	7.6	21	8.1
	218 207			55 48		163 189	1200	7.6	21 29	
JULY	207	18	.80	48	2.8	189	035	7.4	29	8.3
JULY										

11066500 SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF.

LOCATION. --Lat 33°57'53", long 117°27'55", in Swinkiswi sec.25, T.2 S., R.6 W., Riverside County, at gaging station at downstream side of bridge on Pedley Road, 1.8 miles downstream from Union Pacific Railroad bridge, 3.3 miles northwest of Arlington, and 12 miles upstream from Temescal Creek.

DRAINAGE AREA. -- 850 sq mi.

PERIOD OF RECORD, -- Water temperatures: November 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAT	OIS- CHARGE E (CFS)	SILICA (S1D2)		ED CAL- N CIUM	STUM				BONAT	E SULFATE (SO4)	CHLO RIDE (CL)	- FLUN- RIDE (F)
MAR 1 08		15	.01	75	13	33	5.7	256	0	61	32	.7
CATE	NITRATE (NO3)	80R()N (8)	DIS- SOLVED SOLIDS (AESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD— NESS [CA,MG}	NON- CAR- BONATE HARO- NESS	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO		SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	РН	TEMP- ERATURE (DEG C)
PAR., 1		- 10	378	364	240	30	22	-9	210	596	7.5	17

11086500 SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF .-- CONTINUED

TEMPERATURE (°C) OF WATER, NOVEMBER 1967 TO SEPTEMBER 1968

															D	AY																
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- AGF
OCTOBER																																
MUNIXAM																																
MINIMUM																																
NOVEMBER																																
MUMIXAM							26	26	26	26															24	22	24	21	22	20		
MINIMUM							17	18	17	17															14	16	17	17	11	12		
DECEMBER																																
MUMIXAM																																
MUPINIM																																
JANUARY																																
MUMIXAM																																
MINIMUM FEBRUARY																																
PEDKUAKY MAXIMUM																																
MUMINIM	_																															
MARCH																																
MUMIXAN																																
MINIMUM																																
APRIL																																
MAXIMUM																																
MUNIMUM																																
MAY																																
MUM 1X AM																																
MINIMUM																																
JUNE																																
MUMIXAM																																
MINIMUM																																
JULY																																
MUNIXAN																																
MINIMUM			•-																													
AUGUST																																
MUMIXAM							32																									
MINIMUM			18	19	18	18	20	20	20	21	21	21	Ζl	23	20	21	21	19														
SEPTEMBER MAXIMUM																																
MAXIMUM																			27 19													
WINIMOW												19	17	20	19	19	12	18	19	10	14	13	17	14	14							

11068000 SANTA ANA RIVER AT AUBURNDALE BRIDGE, NEAR CORONA, CALIF.

COCATION. -- Lat 33°55'25", long 117°35'50", in La Sierra (Yorba) Grant, Riverside County, at gaging station at Auburndale bridge on River Road, 1.7 miles upstream from Temescal Creek, and 3.8 miles northwest of Corona. TRAINAGE AREA, -- 1,003 sq mi.

TRIOD OF RECORD, -- Water temperatures: October 1967 to September 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY AVFR-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 MONTH OCTOBER MAXIMUM MINIMUM NOVEMBER MINIMUM DECEMBER NUMIXAM 3 6 8 8 1 2 5 6 7 8 12 11 12 11 10 5 6 6 7 8 8 8 6 ---MINIMUM JANUARY MAXIMUM MINIMUM FEBRUARY MUMIXAP MUMINIM MARCH MAXIMUM MINIMUM APRIL MAXIMUM MINIMUM YAF MUPIXAN MUMINIM MAYTHISM MINIMUM YJULY MUMIXAM MUMININ AUGUST MAXIMUM MINIMUM SEPTEMBER MUMIXAM MUMININ

11074000 SANTA ANA RIVER BELOW PRADO DAM, CALIF.

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 above Elsinore Lake.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968. Water temperatures: February to September 1968. Sediment records: October 1966 to September 1967 (periodic).

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR CCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- Clum (CA)	MAG- NE- Sium (MG)	SCO IUM (NA)	PO- TAS- S IUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CØ3)	SULFATE (SC4)	CHL(- RIDE (CL)	FLUC- FIDE (F)
OCT.												
05 NOV.	32			103	27	120	7.0	310	0	134	152	1.0
09	5 C			103	27	118	8.0	312	0	142	141	1.3
DEC. 02	70	14	.02	75	17	64	26	198	0	1 (1	8.8	.6
14	53	•		109	30	118	9.0	320	ŏ	151	152	1.0
JAN.						117	9.0	242	0	142	156	•8
09 FEB.	67			107	31	117	9.0	342	U	172	136	•8
08	58			105	30	118	8.0	323	0	143	145	-8
13	70	25	.01	105	26	117	8.0	305	0	136	141	.9
MAR. 08	680		.01	44	7.3	18	13	114	0	54	21	.5
09	942	8.3	.03	42	8.4	33	10	117	0	51	3 8	.5
11	846	12	• C3	64	15	62	23	173	o	93	87	. 6
13 APR.	106			121	34	130	17	354	0	1 84	157	1.1
03	101			58	27	108	12	295	0	137	132	. 8
MAY 02	53			104	30	117	7.0	308	8	124	147	. 7
JULY 25	21			113	29	121	5.0	340	0	145	149	.9
AUG.												
15 SEPT.	22			106	30	127	6.0	328	0	144	140	. 9
17	25			103	29	106	7.0	319	0	127	146	. 9
DATE	NITRATE (NO3)	EORON (B)	DIS- SOL VEO SOL ICS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD— NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SCDIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FH	TEM- PERA- TURE (CEG C)	DIS- SOLVED DXYGEN
DCT.												
C5	35	•46	800	730	368	114	2.7	254	1220	7.5	22	7.7
09 DEC.	32	.65	770	724	368	112	2.7	256	1220	7.5	20	8.3
02	24	. 10	548	508	257	95	1.7	162	850	7.1	7	
14 JAN.	39	.36	820	766	396	133	2.6	262	1330	7.2	8	10.0
09 FEB.	8.1	.52	774	738	395	114	2.6	281	1300	7.1	12	8.8
08	36	.46	818	744	386	121	2.6	265	1270	7.2	12	9.0
13	38	.38	772	747	369	119	2 • 6	250	1220	7.3	17	
MAR. 08	14	.02	248	234	140	47	.7	93	388	7.3	12	
09	17	.07	282	266	140	44	1.2	96	454	7.0	14	
11	17	.28	496	459	221	79	1.8	142	768	7.2	14	
13	32			849	442	152	2.7	290	1430	7.3	ii	8.8
APR. 03		.42	905	077	442	192	641					
	27									7.6		8.3
MAY		.30	740	686	356	114	2.5	242	1180	7.6	17	8.3
MAY 02 July	27 35	.30	740 780	686 733	356 383	114 117	2.5	242 266	1180 1300	8.4	17 20	7.8
MAY 02 July 25 Aug.	27 35 24	.30 .40 .50	740 780 788	686 733 753	356 383 401	114 117 122	2.5 2.6 2.6	242 266 279	1180 1300 1290	8.4 £.2	17 20 26	7. E 8. 2
MAY 02 JULY 25	27 35	.30	740 780	686 733	356 383	114 117	2.5	242 266	1180 1300	8.4	17 20	7.8

11074000 SANTA ANA RIVER BELOW PRADO DAM, CALIF .-- Continued TEMPERATURE (C°) OF WATER, FEBRUARY TO SEPTEMBER 1968

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 2	AVER- 1 AGE
OCTOBER	
MAXIMUM	
MINIMUM	
MOVEMBER	
MAXIMUM	
MINIMUM	
DECEMBER	
MAXINUM	
MINIMUM	
JANUARY	
MAXIMUM	
73.11.707	
FEBRUARY	
MAXIMUM 19 19 19 18 19 18 17 14 19 15 17 16 16 21 20 20 24 23 18 20 23 24 25 25 23 18 23 24	
MINIMUM 13 10 10 9 10 9 10 13 13 10 11 13 12 12 13 15 15 14 16 16 15 14 14 15 16 15 14 11	- 13
MARCH	
MAXIMUM 22 24 24 25 23 19 17 14 14 14 17 21 19 22 21 21 21 24 22 23 25 25 25 25	
MINIMUM 11 14 12 12 12 14 12 14 14 13 13 11 10 10 12 13 9 9 9 11 9 10 13 11 15	5 12
APRIL MAXIMUM 19 16 20 25 25 25 26 28 24 29 27 25 22 25 25 23 26 27 26 27 27 25 26 27 27	- 25
MINIMUM 14 12 11 12 13 14 12 13 11 13 11 13 16 9 9 13 12 10 9 10 11 13 16 16 14 12 14	
MAY MAY	- 12
MAXIMUM 25 25 22 25 23 26 24 23 26 26 24 23 24 25	
JUNE	
MAXIMUM 28 27 28 29 29 27 28 28 27 28 27 29 27 28 29 29 29 30	
MINIMUM	
.1017	
MAXIMUM 29 30 28 28 25 30 28 31 30 29 30 33 33 34 33 32 32 33 32 32	
MINIMUM 17 18 16 19 20 20 19 21 21 21 20 21 23 22 21 21 22 21 22 23	
AUGUST	
MAXIMUM 31 33 29 33 30 31 34 31 29 29 24 30 28 34 29 33 31 22 22 24 25 27	4
MINIMUM 20 20 18 17 17 20 21 16 16 18 18 16 17 19 20 18 13 15 15 16 16 17	7
SEPTEMBER	
MAXINUM 24 24 24 24 27 28 26 27 25 26 26 29	
MINIMUM 17 18 16 16 17 19 20 21 20 18 18 18	

11078000 SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.--Lat 33°44'56", long 117°54'30", in NW{SW\SE\frac{1}{2}} 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 Elsinore Lake).

PERIOD OF RECORD, -- Water temperatures: October 1967 to September 1966, Sediment records: October 1967 to September 1968,

EXTREMES, --1967-68:
Sediment concentrations: Maximum daily, 7,640 mg/l Mar. 8; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 17,900 tons Mar. 8; minimum daily, 0 ton on many days.

REMARKS.--No flow Oct. 1-31, Dec. 2-7, 9-17, 24, 26-30, Jan. 2-26, 28-30, Feb. 1-8, 10-12, Feb. 15 to Mar. 6, Mar. 18-28, May 24 to Aug. 4, Aug. 7 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 D4 V

															0	A T																
MONTH	ı	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																																
NOVEMBER.																			18											13		
DECEMBER.	18																	12	8												••	
JANUARY																																
FEBRUARY.																																
MARCH							13	19		18	19	14	18	17				20														
APRIL																																
MAY		•-																			23						••	23				
JUNE																																
JULY																																
AUGUST																																
SEPTEMBER																																

35

11078000 SANTA ANA RIVER AT SANTA ANA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5				•10 •10 •10 •10 •10	=======================================	0 0 0 0	0 0 0 0	=======================================	.05 0 0
6 7 8 9				•10 •10 •20 •20 •10	=======================================	0 0 0	0 0 • 10 0	=======================================	0 0 0 0
11 12 13 14 15				•10 •10 •10 •10	=======================================	0 0 0 0	0 0 0 0	=======================================	0 0 0 0
16 17 18 19 20				10 10 10 315 22	4460	0 0 0 5310 30	0 0 73 89 123	1960 3140	0 0 1510 949 842
21 22 23 24 25				240 40 58 2•9 •70	=======================================	5700 108 467 16 •19	82 •20 •20 0 •30	1790 	950 0 0 0
26 27 28 29 30 31				•50 •50 •70 •40	900	.14 .06 .09 .05	0 0 0 0	=======================================	0
TOTAL	e		0	711.70		11701.53	368.00		4251.05
		J ANU ARY			FE8RUARY			MAR CH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	0 0 0 0		0 0 0 0	0 0 0 0		0 0 0 0	0 0 0 0	=======================================	0 0 0 0
6 7 8 9	0 0 0 0		0 0 0 0	0 0 0 •10		0 0 0 0	0 8.0 805 464 426	7640 4800	0 3.0 17900 6500 5510
11 12 13 14 15	0 0 0 0		0 0 0	0 0 1•1 14 0		0 0 1-1 42 0	237 333 193 23 •30	1810 2520 400	2640 2600 1580 25 • 08
16 17 18 19 20	0 0 0 0		0 0 0	0 0 0 0		0 0 0 0	•20 •10 0 0		0 0 0 0
21 22 23 24 25	0 0 0 0		0 0 0	0 0 0 0		0 0 0	0 0 0 0	=======================================	0 0 0
26 27 28 29 30 31	0 0 0 0		0 135 0 0 0	0		0	0 0 0 •50 •10 •30	== == == ==	0 0 0 0

TOTAL 50.60 -- 135 15.20 -- 43.1 2490.50 -- 36758.08

11078000 SANTA ANA RIVER AT SANTA ANA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MEAN CONCEN-TRATION (MG/L) MEAN CONCEN-TRATION (MG/L) MEAN CONCEN-TRATION (MG/L) MEAN DISCHARGE (CFS) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) SEDIMENT DISCHARGE (TONS/DAY) DAY 801 010 010 010 •10 •10 •10 •10 1 2 3 4 5 6 7 8 9 10 • 10 • 10 • 10 • 10 .10 .10 .10 .10 .10 .10 .10 11 12 13 14 15 •10 •10 •10 •10 . 10 . 10 . 10 . 10 16 17 18 19 20 •10 •10 •10 •10 21 22 23 24 25 26 27 28 29 30 31 •10 •10 •10 •10 •10 •10 •10 0 .10 .10 .10 000000

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	NEAN 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				0 0 0 •10					
6 7 8 9				•10 0 0 0					
11 12 13 14 15				0 0 0 0					
16 17 18 19 20				0 0 0 0					
21 22 23 24 25				0 0 0 0					
26 27 28 29 30 31				0 0 0 0					
TOTAL	0		0	•20		0	0		0

2.30

0

0

357

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

TOTAL

49.90

3688.40 53245.76

0

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

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B. BOTTOM MITHORAMAL TUBE: C. CHEMICALLY DISPERSED: N. IN ANTIVE MATER; P. PIPET; S. SIEVE:
V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED MATER)

				• • • • • • • • • • • • • • • • • • • •	******				•••									
			WATER								PART	ICLE :	SIZE					
			TEM-			SUSPENDED												METHOD
			PERA-		CONCEN-	SEDIMENT	PERC	ENT F	INER	THAN	THE 5	IZE (IN MI	LLIME	TERS)	INDI	CATED	OF
			TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
	DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	•004	.008	.016	.031	.062	.125	•250	•500	1.00	2.00	SIS
NOV	19 1967	1050	18	478	4130	5330	21	24	30	37	42	52	69	93	100			VPWC
NOV	19	1610		50	2030	274	35	42	46	55	59	65	73	85	93	100		VPWC
DEC	18	1330	12	576	13800	21500	9	11	13	17	22	28	37	49	67	94	99	SPWC
DEC	18	1530		225	4610	2800	34	34	43	52	61	71	83	97	100			VPWC
DEC	21	0800		165	2340	1040	35	42	48	53	60	70	83	97	100			VPWC
MAR	8 1968	0145	13	1000	9780	26400	15	17	22	28	33	38	- 46	74	91	100		VPWC
MAR	8	1005	19	1210	7850	25600	28	36	43	50	58	65	79	97	100			VPWC
MAR		1915		306	20900	17300	32	47	60	71	76	79	84	94	99	100		VPWC
MAR	10	1550	18	457	4370	5390	30	35	43	49	55	60	76	96	100			VPWC
MAR	12	1555	14	195	2190	1150	18	24	27	30	33	36	41	54	72	99	100	VPWC

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

	WATER Tem-	NUMBER						PART	TICLE S	126					
	PERA-		DISCHARGE		PERCENT	FINER	THAN	THE S	512E (1	N MILL	IMETER	S) IND	ICATED		METHOD OF ANALY-
TIP	E (C)	PO 1 NT 5	(CFS)	.062	.125	•250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	SIS
NOV 19 1967 101		2	447	1	4	24	60	84	90	92	95	96	100		s
NOV 19 110	0 18	2	354		1	13	57	94	98	99	100				S
NOV 19 162	5	3	182		2	22	64	91	97	98	99	100			5
DEC 18 140	0 12	3	576	2	7	30	64	88	96	98	100				ś
MAR 10 1968 161	5	4	461		1	13	55	84	95	98	99	100			Š

SAN GABRIEL RIVER SASIN

11082800 SAN GABRIEL RIVER AT AZUSA POWERHOUSE, AT AZUSA, CALIF.

LOCATION.--Lat 34°09'18" (revised), long 117°54'26", in NE₄SE₄ 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 1968.

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

SAN GABRIEL RIVER BASIN

11082800 SAN GABRIKI RIVER AT AZUSA POWERHOUSR, AT AZUSA, CALIF.--Continued Chemical analyses in Milligrams per liter, water year october 1967 to september 1966

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUP (CA)	MAG- NE- S IUP (PG)	SODIUM (NA)	PC- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SQ4)	CHLO- RIDE (CL)	FLUC- RIOE (F)	NITRATE (NO2)	ECRGN (B)
0CT- 06	28	35	18	9.0	4.0	185	0	22	6.0	.4	2.C	.04
NOV.	cu	10	10	7.0	7.0	103	v	22	0.0	••	2.0	•••
08 DEC.	50	45	15	10	3.0	205	0	18	5. 0	-4	.5	.06
15 JAN.	100	40	13	10	3.0	1 83	0	24	4.0	.5	2.3	.07
08	80	44	14	10	4.0	194	0	24	4.0	.4	2.0	.67
FER. 07 Mar.	80	48	12	9.0	4.0	193	0	24	5.0	.4	2.3	.03
12	90	45	11	8.0	3.0	180	0	22	4.0	.4	2.3	.00
MAY 02	70	41	10	9.0	3.0	163	4		5.0	.3	1.6	.cc
26	70	41	13	8.0	2.0	148	13	25	e.0	. 5	1.5	.07
AUG. 15	70	42	13	10	3.0	183	c	24	8.0	.4	.0	-04
SEPT. 16	70	41	13	9.0	5.0	181	0	27	8.0	.4	.c	.04
DATE	OIS- SCLVEC SOLIDS (RESI- DUE AT 180 C)	CIS- SCLVEC SOLIDS (SUM OF CCNSTI- TUENTS)	HARD- NESS (CA+MG)	NCN- CAR- BONATE HARC- NESS	DIS- SOLVEC SCLIDS (TONS PER AC-FT)	PERCENT SCOIUM	SODIUM AC- SORP- TION PATIC	ALKA- LINITY AS CACO3	SPECI- FIC ' COND- UCTANCE (MICRO- MHOS)	PH	TEM- PERA- Ture (CEG C)	DIS- SOLVED OXYGEN
oc t.												
06 NOV .	210	187	161	9	•29	11	.3	152	320	7.9	21	7.6
08	210	197	174	6	•29	11	.3	168	362	€.0	16	11.1
15	223	186	153	3	.30	12	.4	150	342	7.9	10	11.9
JAN. 08	210	198	167	e	.29	11	.3	159	358	7.9	7	12.C
FE9.	228	199	169	11	.31	10	.3	158	367	£.2	10	12.1
MAR. 12 May	203	184	158	10	•58	10	.3	148	345	8.1	12	11.1
OZ	176		143	3	. 24	12	.3	140	356	8.4	15	10.6
26	153	184	156	13	.21	10	•3	143	333	€.3	24	
AUG. 15 SEPT.	146	190	158	8	•20	12	.3	150	341	£.1	23	8.2
16	197	192	156	e	• 27	11	.3	148	341	8.1	22	8.1

11087040 SAN GABRIEL RIVER AT WHITTIER HARROWS, CALIF.

I.CCATION, --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 Marrows Dam, and 2.5 miles northeast of Montebello.

I'TRIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968.

F WARKS. -- Records furnished by California Department of Water Resources and reviewed by Geological Survey,

SAN GABRIEL RIVER BASIN

11087040 SAN GABRIEL RIVER AT WHITTIER NARROWS, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAP OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (1G)	MUIDO2	PO- TAS- SIUM (K)	BICAR- BCNATE (HCN3)	CAR- BONATE (CO3)	SULFATF (SD4)	CHLO- RIDE (CL)	FLUO- RIDF (F)	NTTRATE (NO3)	80RON (8)
GCT. C6	6.0	94	26	103	11	232	0	161	108	• 6	54	.56
NCV.	0.,	, -	2.0	103						••		• > 0
Ca DEC.	9.0	74	3?	110	19	234	n	165	119	.8	36	.52
15	16	71	25	79	8.0	215	0	133	79	•9	37	.30
JAN. 10 FEB.	1.1	90	27	97	14	235	0	178	102	. 7	42	. 39
07 APR.	9.0	88	27	94	10	232	0	171	98	•6	47	•30
03	16	43	22	74	8.0	194	0	153	83	• 6	40	•27
JLLY 26 AUG.	84	64	22	59	5.0	196	0	139	55	•6	5.3	.16
15 SEPT.	87	70	27	82	5.0	188	0	189	74	•6	7.0	. 16
16	87	75	30	90	7.0	168	0	243	8.8	• 6	7.0	- 14
CATE	DIS- SOLVED SOLIOS (RESI- UUF AT 140 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HAKD- NESS [CA, MG]	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOD IUM	SODIUM AD- SORP- TIOM RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHDS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
UCT.												
06 NCV.	710	661	317	127	.97	40	2.5	190	1020	7.4	16	8.2
Oa	730	570	316	124	•99	41	2.7	192	1150	7.4	17	12.7
15	607	537	280	104	.93	37	2.0	176	936	7.5	9	11.2
JAN. 10 FER.	696	566	336	143	.95	37	2.3	193	1100	7.3	11	11.5
07	703	549	331	141	.96	37	2.7	190	1070	7.2	17	8.3
APR. 03	582	558	298	139	.79	34	1.9	159	953	7.5	22	7.3
JLLY ?6 AUG.	502	446	250	89	.68	33	1.6	161	738	7.9	24	7.6
15 SEPT.	607	547	286	132	.83	38	2.1	154	870	7.6	21	8.1
16	670	523	311	173	•91	38	2.2	138	1100	7.5	22	9.4

LOS ANGELES RIVER BASIN

11097500 LOS ANGELES RIVER AT LOS ANGELES, CALIF.

LOCATION.--Lat 34°04'52", long 118°13'36" (unsurveyed), 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 1968.

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

LOS ANGELES RIVER BASIN

11097500 LOS ANGELES RIVER AT LOS ANGELES, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- S IUM (MG)	SODIUM (AA)	PO- TAS- S IUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CQ3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIOE (F)	NITRATE (NO3)	SORON (6)
OCT.												
04 NDV.	6.2	94	26	152		217	0	221	116		16	
Ol	5.8	90	29	160		202	D	256	123		16	
06	21	82	23	94		173	0	172	77		36	
JAN. 03	15	86	24	108		194	0	210	93	-	10	
FE8. 07	12	98	26	124		192	0	244	104		18	
MAR. 06	44	90	29	138		206	0	245	118		19	
APR. 03	15	78	15	82		137	0	168	75		12	
MAY 01	7.7	85	27	150		159	0	269	120		18	
JUNE 05	10	84	29	137		172	0	242	115		22	
JULY	8.7	84	29	156		146	0	307	122		6.9	
AUG. 15	7.7	79	27	148		46	0	278	199		17	
SEPT.												
03	6.2	82	31	160		177	0	292	139		14	
12	6.7	80	28	144	7.0	194	0	280	120	1.0	19	.65

OA TE	DIS- SOLVED SOLIDS (RESI- DUE A7 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TDNS PER AC-FT)	PERCENT SDDIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACD3	SPECI- FIC CGND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
DCT .											
04 NOV.	827	342	164	1.12	49	3.6	178		8.2	22	14.0
01	877	344	178	1.19	50	3.8	166		8.2	16	11.0
DEC.											
06 Jan.	660	299	157	.90	41	2.4	142		8.2	13	9, 1
03	725	313	154	.99	43	2.7	159		8.1	10	16.0
FEB.											
07	814	352	194	1.11	43	2.9	157		8.0	14	13.0
MAR. 06		344	175	1.13	47	3.2	169		8.1	15	16.D
APR.	829	377	179	1.13	71	***	107		0.11	15	10.0
03	575	256	144	.78	41	2.2	112		7.6	21	9.4
MAY											
01	860	323	193	1.17	50	3.6	1 30		7.6		9.1
JUNE 05	835	329	188	1.14	48	3.3	1 41		8.2	18	11.0
JULY	633	,,,,	100		40				***		****
03	865	329	209	1.18	51	3.7	1 20		7.8	24	18.0
AUG.											
15 SEPT.	910	308	270	1.24	51	3.7	38		7.4	22	14.0
03	930	332	187	1.26	51	3.6	145		7.7	20	16.0
12	815	315	1 56	1.11	49	3.5	159	1230	7.3	19	5.2

11102250 MISSION CREEK BELOW WHITTIER MARROWS DAM, CALIF.

LOCATION .-- Let 34°01'15", long 118°04'15" (unsurveyed), Los Angeles County, at gaging station mean north boundary of Pago de Bartolo Grant, approximately 500 ft downstream from axis of Whittier Marrows Dam, and 1.4 miles north of Pico.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968.

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

LOS ANGELES RIVER BASIN

11102250 MISSION CREEK BELOW WHITTIER NARROWS DAM, CALIF .-- Continued

CHEMICAL AMALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEM- PERA- TURE (DEG C)	CAL- CIUM (CA)	NAG- NE- SIUM (MG)	SODIUM (AN)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BOMATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.											
06	1.6	17	128	31	29	5.0	276	0	209	42	-4
NOV.			120		24		300	0	210	28	
08 DEC.	1.8	17	128	32	24	3.0	300	U	210	20	•6
15	.30	20	101	38	24	3.0	258	0	202	26	.6
JAN.								o	199	25	.5
10 FEB.	.50	14	120	33	22	4.0	283	U	197	.,	••
07	.10	15	126	31	23	3.0	281	0	196	29	.5
MAR.			112	25	20	4.0	251	0	170	27	.5
12 APR.	.30	16	112	25	20	4.0	231	U	170	21	••
03	.05	18	92	28	22	4.0	187	0	178	28	.5
MAY 02	•05	18	119	25	25	3.0	263	0	186	29	.3
JUNE	•05		,								
17	. 05	21	110	28	24	2.0	271	0	172	27	.9
JUL Y 26	2.3	21	99	29	23	2.0	235	0	173	35	.5
AUG.								_			_
15 SEPT.	1.9	18	101	26	23	2.0	252	0	159	31	.5
16	1.5	19	107	29	22	4.0	279	0	163	29	.5
			OIS- SOLVED SOLIDS	DIS- SOLVED	DIS- SOLVED SOLIDS	DIS- SOLVED SOLIDS		SDOIUM	SPECI- FIC		
DATE	NITRATE (NO3)	BORDN (B)	(RESI- DUE AT 180 C)	SOLIDS (SUM OF CONSTI- TUENTS)	(TONS PER AC-FT)	(TONS PER DAY)	HARD- NESS (CA,MG)	AD- SORP- TION RATID	COND- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED OXYGEN
			(RESI-	(SUM OF CONSTI-	(TONS PER	PER	NESS	SORP-	UCTANCE (MICRO-	PH	SOLVED
OCT. 06			(RESI-	(SUM OF CONSTI-	(TONS PER	PER	NESS	SORP-	UCTANCE (MICRO-	PH 7.9	SOLVED
OCT. 06 NOV.	(NO3)	.08	(RESI- DUE AT 180 C)	(SUM OF CONSTI- TUENTS)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA, MG)	SORP- TION RATID	UCTANCE (MICRO- MHOS) 876	7.9	SOLVED OXYGEN 7.2
06 06 NOV. 08 DEC.	(NG3) 15 8.8	.08	(RESI- DUE AT 180 C) 665	(SUM OF CONSTI- TUENTS) 595 581	(TONS PER AC-FT) •90	(TONS PER Day)	NESS (CA.MG) 447 451	SORP- TION RATID	UCTANCE (MICRO- MHOS) 876 909	7.9 8.1	SOLVED OXYGEN
OCT. 06 NOV. 08 DEC.	(NO3)	.08	(RESI- DUE AT 180 C)	(SUM OF CONSTI- TUENTS)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA, MG)	SORP- TION RATID	UCTANCE (MICRO- MHOS) 876	7.9	SOLVED OXYGEN 7.2
OCT. 06 NOV. 08 DEC. 15 JAN. 10	(NG3) 15 8.8	.08	(RESI- DUE AT 180 C) 665	(SUM OF CONSTI- TUENTS) 595 581	(TONS PER AC-FT) •90	(TONS PER DAY) 2.87 3.21	NESS (CA.MG) 447 451	SORP- TION RATID	UCTANCE (MICRO- MHOS) 876 909	7.9 8.1	SOLVED OXYGEN 7.2 10.0
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEB.	(NO3) 15 8.8 9.0	.08 .10 .12	(RES1- DUE AT 180 C) 665 661 594	(SUM OF CONSTI- TUENTS) 595 581 530	(TONS PER AC-FT) .90 .90 .72	(TONS PER DAY) 2.87 3.21 .43	NESS (GA,MG) 447 451 408 435	SORP- TION RATID	UCTANCE (MTCRO- MHOS) 876 909 854 869	7.9 8.1 7.5 7.5	SOLVED OXYGEN 7.2 10.0 7.2 9.3
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEQ. 07	(NO3) 15 8.8 9.0	.08 .10	(RESI- DUE AT 180 C) 665 661	(SUM OF CONSTI- TUENTS) 595 581 530	(TONS PER AC-FT) .90 .90	(TONS PER DAY) 2.87 3.21	NESS (CA, MG) 447 451 408	SORP- TION RATID	UCTANCE (MICRO- MHOS) 876 909 854	7.9 8.1 7.5	SOLVED OXYGEN 7.2 10.0 7.2
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEB. 07 MAR. 12	(NO3) 15 8.8 9.0	.08 .10 .12	(RES1- DUE AT 180 C) 665 661 594	(SUM OF CONSTI- TUENTS) 595 581 530	(TONS PER AC-FT) .90 .90 .72	(TONS PER DAY) 2.87 3.21 .43	NESS (GA,MG) 447 451 408 435	SORP- TION RATID	UCTANCE (MTCRO- MHOS) 876 909 854 869	7.9 8.1 7.5 7.5	SOLVED OXYGEN 7.2 10.0 7.2 9.3
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEQ. 07 MAR. 12 APR.	15 8.8 9.0 11 13	.08 .10 .12 .10	(RESI- DUE AT 180 C) 665 661 594 615	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493	.90 .90 .72 .81	(TONS PER DAY) 2.87 3.21 .43 .80 .17	NESS (CA, MG) 447 451 408 435 442 382	**SORP	UCTANCE (MTCRO- MHOS) 876 909 854 869 887	7.9 8.1 7.5 7.5 7.9	\$0LVED 0XYGEN 7.2 10.0 7.2 9.3 6.5
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEQ. 07 MAR. 03 MAY	(NO3) 15 8.8 9.0 11 13 12	.08 .10 .12 .10 .08	(RESI- DUE AT 180 C) 665 661 594 615 551	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493	(TONS PER AC-FT) .90 .90 .72 .81 .84 .75	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45	NESS (CA, MG) 447 451 408 435 442	**SORP- TION RATID *** *** *** *** *** *** *** *** *** *	UCTANCE (MTCRO- MHOS) 876 909 854 869	7.9 8.1 7.5 7.5 7.9 7.7	7.2 10.0 7.2 9.3
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEQ. MAR. 12 APR. 03 MAY. 02	15 8.8 9.0 11 13	.08 .10 .12 .10	(RESI- DUE AT 180 C) 665 661 594 615	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493	.90 .90 .72 .81	(TONS PER DAY) 2.87 3.21 .43 .80 .17	NESS (CA, MG) 447 451 408 435 442 382	**SORP	UCTANCE (MTCRO- MHOS) 876 909 854 869 887	7.9 8.1 7.5 7.5 7.9	\$0LVED 0XYGEN 7.2 10.0 7.2 9.3 6.5
OCT. 06 NOV. 08 DEC. 15 JAN. 10 FEQ. 07 MAR. 03 MAY	(NO3) 15 8.8 9.0 11 13 12	.08 .10 .12 .10 .08	(RESI- DUE AT 180 C) 665 661 594 615 551	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493	(TONS PER AC-FT) .90 .90 .72 .81 .84 .75	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45	NESS (CA, MG) 447 451 408 435 442 382 345	SORP- TION RATID .6 .5 .5 .5 .5 .5 .5 .5 .5 .6	UCTANCE (MICRO- MHOS) 876 909 854 869 887 798	7.9 8.1 7.5 7.5 7.9 7.7	7.2 10.0 7.2 9.3 6.5 6.0 7.1
OCT. O6 NOV. O8 DEC. 15 JAN. 10 FEQ. O7 MAR. 12 APR. O3 MAY O2 JUNE 17 JULY	(NO3) 15 8.8 9.0 11 13 12 12 10 9.9	.08 .10 .12 .10 .08 .06 .11	(RES1- DUE AT 180 C) 665 661 594 615 551 607 526	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493 456 526 506	(TONS PER AC-FT) -90 -90 -72 -81 -84 -75 -83 -72 -81	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45 .08 .07	NESS (CA.MG) 447 451 408 435 442 382 345 400 390	SORP— TION RATIO -6 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	UCTANCE (MICRO-MHOS) 876 909 854 869 887 798 841 860 821	7.9 8.1 7.5 7.5 7.9 7.7 7.8 8.1	7.2 10.0 7.2 9.3 6.5 6.0 7.1 8.1
OCT- 06 NOV. 08 DEC. 15 JAN. 10 FEB. 07 MAR. 12 APR. 03 MAY 02 JUNE 17 JULY	(NO3) 15 8.8 9.0 11 13 12 12	.08 .10 .12 .10 .08 .06	(RESI- DUE AT 180 C) 665 661 594 615 551 607	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493 456	(TONS PER AC-FT) .90 .90 .72 .81 .84 .75 .83	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45 .08	NESS (CA, MG) 447 451 408 435 442 382 345 400	SORP- TION RATID .6 .5 .5 .5 .5 .5 .5 .5 .5 .6	UCTANCE (MICRO- MHOS) 876 909 854 869 887 798 841	7.9 8.1 7.5 7.5 7.9 7.7 7.8	7.2 10.0 7.2 9.3 6.5 6.0 7.1
OCT. O6 NOV. O8 OEC. 12 JAN. 10 FEB. O7 MAR. 12 APR. O3 MAY 02 JUNE 17 JULY 26 AUG.	(NO3) 15 8.8 9.0 11 13 12 12 10 9.9	.08 .10 .12 .10 .08 .06 .11	(RES1- DUE AT 180 C) 665 661 594 615 551 607 526	(SUM OF CONSTI- TUENTS) 595 581 530 553 559 493 456 526 506	(TONS PER AC-FT) -90 -90 -72 -81 -84 -75 -83 -72 -81	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45 .08 .07	NESS (CA.MG) 447 451 408 435 442 382 345 400 390	SORP— TION RATIO -6 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	UCTANCE (MICRO-MHOS) 876 909 854 869 887 798 841 860 821	7.9 8.1 7.5 7.5 7.9 7.7 7.8 8.1	7.2 10.0 7.2 9.3 6.5 6.0 7.1 8.1
OCT. O6 NOV. O8 PEC. 15 15 12 APR. 03 MAY 02 JUNE 17 JULY 26 AUG.	(NO3) 15 8.8 9.0 11 13 12 12 10 9.9	(8) .08 .10 .12 .10 .08 .06 .11 .10 .09	(RES1- DUE AT 180 C) 665 661 594 615 551 607 526 592	(SUM OF CONSTITUTION OF STATE	(TONS PER AC-FT) .90 .90 .72 .81 .84 .75 .83 .72 .81	(TONS PER DAY) 2.87 3.21 .43 .80 .17 .45 .08 .07 .08	NESS (CA, MG) 447 451 408 435 442 382 345 400 390 366	SORP— TION RATIO *** **6** **5** *** *** *** *** *** *** *** *** *** *	UCTANCE (MICRO) 876 909 854 869 887 798 841 860 821	7.9 8.1 7.5 7.5 7.9 7.7 7.8 8.1 7.5	SOLVED OXYGEN 7.2 10.0 7.2 9.3 6.5 6.0 7.1 8.1 9.4

SANTA CLARA RIVER BASIN

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CALIF.

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

DRAINAGE AREA, -- 49.5 sq ni.

PERIOD OF RECORD, -- Water temperatures: February 1962 to September 1968.

EXTREMES.---1967-68:
Water temperatures: Maximum, 28.0°C July 20-23, Aug 1; ninimum, 2.0°C Jan. 7, 13-15.

Period of record: Water temperatures: Maximum, 29.0°C Aug. 11, 1964; minimum (1962-64, 1965-66, 1967-68), 2.0°C Mar. 16, 1963, Jan. 7, 13-15, 1968.

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11111500 SESPE CREEK NEAR WHEELER SPRINGS, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															Di	LY.																
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	2D	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTD8ER										_																						
MUMIXAM																	13															15
MINIMUM	14	14	13	13	12	11	11	11	12	12	13	13	13	14	12	10	11	11	11	11	11	13	14	13	13	13	13	14	14	12	13	12
NOVEMBER																																
MUMIXAM																	14															12
MINIMUM DECEMBER	14	12	11	10	11	11	10	10	9	11	10	11	11	12	12	13	13	13	12	11	10	,	9	8	8	В	В	•		8		10
MAXIMUM		-	-				-	-		-	-	-		•																		6
MUNINIM		6	7			6	6	- 1	6	7	7	7	2	3	•	?	4	2	?	7	•	- ;	2	5	- :	- 1	2	2	2		3	å
JANUARY	•	۰	۰	0		۰	۰		,	۰	•	,	-	,	,	•	•	•	•	•	,	•	•	,	۰	۰	۰	۰	۰	•	•	-
MUMIXAM			4	4	4	4	4	5	6	6	5	4	3	4	6	6	6	6	6	6	7	7	8	7	7	7	7	5	4	6	6	5
MINIMUM	3	č	4						ŭ										4		4			ė	6	5	Ś	í	ă		6	á
FEBRUARY	•	۰	•	•	•	-	-	-	•	•	-	_	-	-	-	•	•	-	•	•	•	٠	•	٠	•	-	-	٠	•	•	•	-
MUN1 XAM	7	8	9	8	8	8	8	9	10	10	9	8	9	9	11	11	11	12	13	13	13	13	14	14	15	13	14	14	13			10
MINIMUM	5	7	7	7	7	6	6	7	9	7	7	7	8	8	8	9	9	- 9	9	11	11	10	12	11	11	11	11	11	9			8
MARCH																																
MUMIXAM																	13															14
MINIMUM	9	11	10	9	10	11	9	10	10	8	8	10	10	9	9	11	9	9	9	9	9	11	11	12	14	13	12	8	9	11	12	10
APRIL																																
MUMIXAM																	13															14
MINIMUM	9	8	8	8	11	9	9	9	9	11	11	11	10	12	11	11	9	7	7	9	8	8	- 6	6	11	12	12	12	11	11		9
MAY																																
MAXIMUM																	17															16
MINIMUM	13	1.4	12	13	13	11	11	11	11	12	12	12	11	4	11	11	13	14	12	10	14	12	12	13	14	1.4	1.4	14	14	14	13	12
JUNE			• •		٠.		٠.						٠.		٠.	••	21	••											22			20
MAXIMUM																	16															15
JULY	13	13	12	10	1.4	12	12	12	12	13	13		14		10	10	10	.,	.,	10	.,		T.O.	10	.,	1,	.,	1,	15	14		15
MAXIMUM	21	21	22	24	24	22	10	20	24	25	24	24	24	25	24	24	26	24	24	24	24	24	24	24	24	27	27	22	25	24	27	24
MUNIMUM																	18															17
AUGUST	••	- 4	.,	- 1	••	-,	.,	10	- 1	-0		.,	. 7	•0	••	- 0	-0		-0	.,	. 7	• 7	• 0	• '	• '		• •		.,	-0	٠,	• '
MAXIMUM	28	27	27	27	27	27	27	27	27	27	27	27	25	26	26	26	23	26	27	26	24	22	21	20	1 9	20	23	23	26	24	24	24
MINIMUM																	15															15
SEPTEMBER								- •																					٠.			
MUMI XAM	26	26	24	24	24	24	24	24	24	24	23	24	23	23	22	23	22	21	21	19	18	19	19	20	21	21	21	21	19	18		22
MINIMUM																	15															15

11113000 SESPE CREEK NEAR FILLMORE, CALIF.

LOCATION. -- Lat 34°27'03", long 118°55'30", in NEINWINE; 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 1968. Water temperatures: October 1966 to September 1968. Sediment records: October 1966 to September 1968.

EXTREMES, -- 1967-68:

Sediment concentrations: Maximum daily, 2,650 mg/l Nov. 20; minimum daily, 0 mg/l on many days during June to September.

Sediment discharge: Maximum daily, 8,170 tons Nov. 21; minimum daily, 0 ton on many days during June to September.

Period of record:

Sediment concentrations: Maximum daily, 12,300 mg/l Dec. 6, 1966; minimum daily, 0 mg/l on many days, 1968. Sediment discharge: Maximum daily, 385,000 tons Dec. 6, 1966; minimum daily, 0 ton on many days, 1968.

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

11113000 SESPE CREEK MEAR FILLMORE, CALIF. -- Continued

CHEMICAL MALYSES IN MILLIGRAMS PER LITER, MATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODI UM (NA)	PO- TAS- S TUM (K)	BI CAR- BONA TE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- R IDE (CĻ)	FLUO- RTDE (F)	NITRATE (NO3)	BORON (B)
CCT.	5.5	83	29	80	3.0	144	0	288	56	.5	1.3	1.5
NOV.	5.0	98	27	82	3.0	193	o	279	62	.0	1.4	. 80
DEC. 12	41	103	32	58	2.0	217	0	289	30	•0	1.2	.86
JAN. 11	35	108	32	61	3.0	217	0	295	32	•0	1.3	.94
FEB.												
13 Mar.	67	63	17	34	2.0	129	0	163	17	.5	.7	-42
14 APR.	125	106	27	42	2.0	204	0	260	17	•0	.8	.46
CS	35	94	30	51	2.0	171	0	283	72	•0	1.0	.66
C3	14	79	28	68	3.0	140	0	276	36	• 5	1.2	1.2
11	•90	68	31	78	3.0	76	7	308	57	-0	1.4	1.2
22	-20	119	35	94	4.0	1 10	5	445	55	.0	1-4	1.1
DATE	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOL VED SOL IDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA, MG)	NCN- CAR- B CNATE HARD- NESS	DIS- SOL VED S CL IDS (TONS PER AC-FT)	PERCENT SOD IUM	SDD IUM AD- SOR P- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
ccr.					_							
04 NCV.	660	611	326	208	.90	35	1.9	118	883	7.7	22	8.7
C6 DEC.	698	646	356	198	. 95	33	1.9	158	1020	8.2	16	18.0
12 JAN.	665	621	389	211	.90	24	1.3	178	964	8.0	12	12.2
11 FE8-	700	638	401	223	. 95	25	1.3	178	989	7.9	11	11.9
13 MAR.	3 91	360	2 27	121	.53	24	1 -0	1 06	591	7.9	11	12.1
14	584	554	376	209	.79	19	.9	167	854	8.1	9	11.3
APR. 05	616	566	358	218	.84	24	1.2	140	895	8.1	17	8.1
MAY 03	576	560	312	197	.78	32	1.7	115	895	8.2	20	8.5
JUNE 11	615	588	297	223	.84	36	2.0	74	933	8.6	26	8.1
JULY 22	914	8 14	441	342	1. 24	31	1.9	98	1190	8.4	28	19.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

															D	AY																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		
OCTOBER		20							17				21				21							16						14	15		
NOVEMBER.							14						16						16	13	13	13	11		11		11	••		11			
DECEMBER.	8			7					8		11							7	7	6						12	11	16		-			
JANUARY																																	
FEBRUARY.					11				12			10	11	11	10	12					15					13			13				
MARCH							13	12	10	10	10	13	11		10					11							10	13					
APRIL	14	12			13							16												17			18						
MAY																											22	••					
JUNE			-										25											53									
JULY																																	
AUGUS T																																	
SEPTEMBER																										18							

11113000 SESPE CREEK NEAR FILLMORE, CALIF .-- Continued

SUSPENDED-SEDIMENT, DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		OCTOBER			NOVEMBER	,		DECEMBER	
		MEAN CONCEN-	SEDIMENT		MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	6.4		•09	5.D		•07	129		42
2	6. l 5. 5	5	.08 .07	5.0 5.0		.07 .05	81 66		8•7 6•2
4	5.5		•07	5.0		.05	58	30	4.7
5	5.5		•07	5.0		.05	54		3. 6
6 7	5.5 5.5		•07 •07	5 • 0 5 • 0	3	•04 •04	51 49		2.8 2.0
8	5.5 5.5		•09	5.0		• 04	48		1.3
9 10	5.8 5.5		•09 •09	5.0 5.0		•04 •04	46 44	10	1.2 1.2
11	4.8		.09	4.8		•04	41	10	1+1
12 13	4.8 4.8		.09 .10	5.2 6.1		•14 •13	41 40		1.1 1.1
14	4.8		•10	6.1		•12	39		1.1
15	4. B		•13	5.5		.10	40		1.1
16 17	4.5 4.5	12	•13 •15	5 • 5 5 • 0		•09 •08	40 41		1.1 1.1
18	4.8		• 16	6.1 97	195	S 11	41 67	650	S 130
19 20	4. 8 4. 8		•16 •16	401	2120 2650	S 593 S 4090	62 53	62 21	9.6 3.0
21	4.5		•15	966	2440	S 8170	46		1.5
22	4.5		•13	345 116	544 210	S 592 66	44 43	=	1.2 1.2
23 24	4.5 4.5	11	•13 •13	74	210	22	42		1.1
25	4.5		•13	59	65	11	41		1.1
26 27	4.5 4.6		•12 •12	50 43	28	6.1 3.3	41 39	-,	1.0 .95
28	4.8		.10	43		3, 3	39		•95
29 30	5.0 5.3		.09	42 338	1720	3-2 S 2880	39 37		• 95 • 90
31	5.0	5	.07			5 2000	37		.80
TOTAL	156.1		3, 32	2668.3		16452.09	1538		235.65
		JANUARY			F F D D 11 4 D 14				
		JANUART			FEBRUARY			MARCH	
	.=				MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	ME AN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN OISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TDNS/DAY)
1	DISCHARGE (CFS)	ME AN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY)	MEAN OISCHARGE (CFS)	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY)	DISCHARGE	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 37 37	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) -80 -80	MEAN OISCHARGE (CFS) 36 36	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 1.2	DISCHARGE (CFS) 36 36	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4	DI SCHARGE (CFS) 37 37 37 35	ME AN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66	MEAN OISCHARGE (CFS)	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 1.2 .78	DISCHARGE (CFS) 36 36 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .62 .49
1 2 3	DISCHARGE (CFS) 37 37 37	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -80 -80	MEAN OISCHARGE (CFS) 36 36	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 1.2	DISCHARGE (CFS) 36 36	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5	DISCHARGE (CFS) 37 37 37 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY)	MEAN 0 I S,CHARGE (CFS) 36 36 36 35 34	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 .78 .49 .28 .09	DISCHARGE (CFS) 36 36 35 34 34	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) • 62 • 49 • 47 • 37 • 28
1 2 3 4 5	DISCHARGE (CFS) 37 37 37 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66 -57	MEAN 01SCHARGE (CFS) 36 36 36 35 34 34	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 .78 .49 .28 .09	DISCHARGE (CFS) 36 35 35 34 34 34	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 37 37 37 35 35 35 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66 -57 -47 -38 -28	MEAN OISCHARGE (CFS) 36 36 35 34 34 34 34	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 1-2 -78 -49 -28 -09 -09 -09 -09 -09	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 .28 \$1200 \$2160 \$104
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 37 37 37 35 35 35 35 35 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66 -57 -47 -38 -28 -28 -38	MEAN OISCHARGE (CFS) 36 36 35 34 34 34 34 36 36	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 1-2 -78 -49 -28 -09 -09 -09 -09 S 20 S 3-4	DISCHARGE (CFS) 36 36 35 34 34 34 39 191 127	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 .28 \$ 1200 \$ 2160 \$ 104 .26
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 37 37 37 35 35 35 35 35 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66 -57 -47 -38 -28 -28 -38	MEAN OISCHARGE (CFS) 36 36 35 34 34 34 34 36 36 35	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1. 2 .78 .49 .28 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	DISCHARGE (CFS) 36 36 35 34 34 103 530 191 127	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -62 -49 -47 -37 -28 S 1200 S 2160 S 104 26
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 37 37 35 35 35 35 35 35 35 35 35 35 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -70 -66 -57 -47 -38 -28 -28 -38	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 36 35 36	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 .78 .49 .28 .09 .09 .09 .09 S 20 S 3.4 .28 .10 S 49	DISCHARGE (CFS) 36 36 35 34 34 103 530 191 127 110 106 133	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 37 37 37 35 35 35 35 35 35 35	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) -80 -80 -70 -66 -57 -47 -38 -28 -28 -38	MEAN OISCHARGE (CFS) 36 36 35 34 34 34 34 36 36 35	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1. 2 .78 .49 .28 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	DISCHARGE (CFS) 36 36 35 34 34 103 530 191 127	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 S1200 S2160 S160 S104 S63
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 37 37 37 35 35 35 35 35 35 35 35 35 35 35 35 35	MEAN CONCENTRATION (MG/L) 3 3	DISCHARGE (TONS/DAY)	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 36 36 36 36 36 56 7 54 44 42	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 1.78 1.49 2.28 0.09 0.09 0.09 2.00 S 3.4 2.8 1.10 S 49 S 19 3.6 1.7	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 133 125 112	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 \$1200 \$2160 \$104 .26 .12 .8,3 \$47 .70 .7,6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 35 35 35 35	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .800 .800 .700 .666 .577 .388 .28 .28 .28 .28 .28 .29 .28 .38	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 36 67 57 54 44	MEAN CONCEN-TRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 1.7 4.49 2.8 0.9 0.09 0.09 0.09 0.09 0.09 0.09 0.0	DISCHARGE (CFS) 36 36 35 34 34 103 530 101 127 110 106 133 125 112	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 \$1200 \$2160 \$104 .26 .12 .8,3 \$47 .70 .7,6
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 114 15 16 17 18 19	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 35 35 35 35	MEAN CONCENT TRATION (MG/L) 3 111	DISCHARGE (TONS/DAY) .800 .800 .700 .666 .577 .477 .388 .28 .28 .28 .28 .38	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 36 67 54 44	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 1.4 4.49 2.8 0.9 0.09 0.09 0.09 0.09 0.09 0.09 0.0	DISCHARGE (CFS) 36 36 36 35 34 34 103 530 191 127 110 106 133 125 104 96 89 79	MEAN CONCENT AT 10N (MG/L) 1740 1130 75 40 29 127 25	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 \$1200 \$2160 \$104 26 12 6.3 \$47 20 7.6 6.7 6.2 5.7 5.1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 35 30 30 30	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .80 .80 .70 .66 .57 .47 .38 .28 .29 .29 .29 .28 .29 .29 .29 .29 .29 .29 .29 .29 .29 .29	MEAN DISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 67 54 44 42 66 66 58 51	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1.2 1.7 4.49 2.8 0.9 0.09 0.09 0.09 0.09 8.3 3.4 2.8 1.7 8.22 2.3 1.4	DISCHARGE (CFS) 36 36 36 35 34 34 103 530 191 127 110 106 133 125 112 104 96 89 79 71	MEAN CONCENT AT 10N (MG/L) 1130 1130 127 25	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 \$1200 \$104 26 12 .63 \$47 20 7.66 6.7 6.2 5.7 5.1
1 2 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 30 30 30 30	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .80 .80 .70 .66 .57 .47 .38 .28 .28 .28 .38 .47 .57 .66 .76 .83 .86 .97 .97	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 67 54 44 42 66 68 51	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 133 125 112 104 96 89 79 71 63	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 35 35 35 35	ME AN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -80 -70 -66 -57 -47 -38 -28 -28 -38 -47 -57 -66 -76 -83 -86 -97 -97	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 6 67 54 44 42 66 66 58 51 48 47 46	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 36 36 35 34 34 103 3500 191 127 110 106 133 125 112 104 96 89 79 71 63 55	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 30 30 30 30	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .80 .80 .70 .66 .57 .47 .38 .28 .29 .29 .29 .29 .29 .29 .29 .29 .29 .29	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 67 54 44 42 66 68 51	MEAN CONCENT AT 10 MEAN CONCENT AT 11 MEAN CONCENT	DISCHARGE (TONS/DAY) 1 2 12 14 14 14 14 14 14 14 14 14 14 14 14 14	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 133 125 112 104 96 89 79 71 63	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 \$1200 \$2160 \$104 26 12 6.3 \$47 20 7.6 6.7 6.2 5.7 5.1 4.6
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 25 26 26 27 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 35 35 30 30 30 30 30 30	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -80 -70 -66 -57 -47 -38 -28 -28 -38 -47 -57 -66 -76 -83 -86 -97 -97	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 36 67 54 44 42 66 66 58 51 48 47 46 43 42 42	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 36 36 35 34 34 103 3500 191 127 110 106 133 125 112 104 96 89 79 71 63 55 50 46 41	MEAN CONCENT AT 10N (MG/L) 1740 1130 75 40 29 127 25	DISCHARGE (TONS/DAY)
1 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10 11 12 2 13 3 14 4 15 15 16 17 7 18 8 19 20 22 23 24 25 26 27	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 30 30 30 30 30 30 30 30 30 30	ME AN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) .800 .800 .800 .700 .666 .770 .888 .288 .288 .288 .298 .299 .97 .97 .11 .11 .13 .13 .12	MEAN OISCHARGE (CFS) 36 36 36 36 37 34 34 34 34 34 34 34 36 36 57 54 44 42 66 68 51 48 47 46 43 42 42 41	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 193 125 104 96 89 71 63 55 50 46 41	HEAN CONCENT AT 10N (MG/L) 1740 11740 27 27 27 27 27 24	DISCHARGE (TONS/DAY)
1 2 3 3 4 4 5 5 6 7 7 8 8 9 9 10 11 12 2 13 3 14 4 15 15 16 17 7 18 8 19 20 22 23 24 25 26 27 28 8 29	DISCHARGE (CFS) 37 37 37 37 35 35 35 35 35 35 35 35 30 30 30 30 30 30 30 30 30 30 30 30 30	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -80 -70 -66 -57 -47 -38 -28 -28 -28 -28 -67 -66 -76 -76 -78 -89 -97 -97 -91 -11 -11 -13 -12 -11 -7 -0	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 36 36 67 54 44 42 66 66 58 51 48 47 46 43 42 42	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 36 36 36 35 34 34 103 530 191 127 110 106 193 125 104 96 99 77 1 63 55 50 46 41 37 36 36	MEAN CONCENT AT 10N (MG/L) 1740 1130 75 40 29 127 25	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 37 37 37 37 37 35 35 35 35 35 35 35 35 35 36 30 30 30 30 30 30 30 30 30 30 30 30 30	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -80 -80 -70 -647 -38 -28 -28 -38 -47 -57 -66 -76 -83 -86 -97 -97 -97 -97 -91 -11 -1-1 -1-1 -1-1	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 37 56 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 1. 2	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 133 125 112 104 96 89 79 71 63 55 50 46 41 37 37 36 36 36	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 S.1200 S.100 S.104 .26 .26 .27 .20 .7.6 .7.6 .7.6 .7.6 .7.6 .7.6 .7.6 .7.
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 37 37 37 37 37 35 35 35 35 35 35 35 35 36 30 30 30 30 30 30 30 30 30 30 30 30 30	ME AN CONCENT OF TRATION (MG/L)	DISCHARGE (TONS/DAY) -80 -80 -80 -80 -70 -65 -77 -38 -28 -28 -28 -38 -47 -57 -66 -76 -83 -86 -95 -97 -97 -11 -11 -13 -3 -12 -11 -0 -3-11 -6	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 34 36 36 37 57 44 42 41 42 41 40 38	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY) 1. 2	DISCHARGE (CFS) 36 36 36 35 34 34 34 103 5300 191 127 110 106 133 125 112 104 96 89 79 71 63 55 50 46 41 37 37 36 36 36 35	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 S 1200 S 100 S 10
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 7 18 19 20 22 23 4 25 26 27 28 9 30 1 TOTAL	DISCHARGE (CFS) 37 37 37 37 37 35 35 35 35 35 35 35 35 30 30 30 30 30 30 30 30 30 30 30 30 30	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .80 .80 .80 .70 .66 .57 .47 .38 .28 .28 .28 .28 .28 .28 .29 .29 .29 .20 .20 .20 .20 .20 .20 .20 .20 .20 .20	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 36 36 37 56 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY) 1. 2	DISCHARGE (CFS) 36 36 35 34 34 34 103 530 191 127 110 106 133 125 112 104 96 89 79 71 63 55 50 46 41 37 37 36 36 36	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 S.1200 S.100 S.104 .26 .26 .27 .20 .7.6 .7.6 .7.6 .7.6 .7.6 .7.6 .7.6 .7.
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 7 18 19 20 22 23 4 25 26 27 28 9 30 1 TOTAL	DISCHARGE (CFS) 37 37 37 37 37 35 35 35 35 35 35 35 35 36 30 30 30 30 30 30 30 30 30 30 30 30 30	MEAN CONCENT AT 10 N (MG/L)	DISCHARGE (TONS/DAY) .80 .80 .80 .70 .66 .57 .47 .38 .28 .28 .28 .28 .28 .28 .29 .29 .29 .20 .20 .20 .20 .20 .20 .20 .20 .20 .20	MEAN OISCHARGE (CFS) 36 36 36 35 34 34 34 34 34 36 36 37 57 44 42 41 42 41 40 38	MEAN CONCENT AT 10 M (MG/L) 1 1	DISCHARGE (TONS/DAY) 1. 2	DISCHARGE (CFS) 36 36 36 35 34 34 34 103 5300 191 127 110 106 133 125 112 104 96 89 79 71 63 55 50 46 41 37 37 36 36 36 35	MEAN CONCENT AT 10N (MG/L)	DISCHARGE (TONS/DAY) .62 .49 .47 .37 .28 S 1200 S 100 S 10

11113000 SESPE CREEK NEAR FILLMORE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	53	153	S 32	14	3	•11	2.2		•01
2	49	109	S 15	14		•11	1.8		0
2	40		3.3	14		• 11	2.3		-01
4	35		2.7	14		•11	1.2		0
5	35	27	2.6	14		+11	1.2		Ö
6	34		2,3	14		•11	• 90		0
7	33		2.0	12		•10	•90		0
8	32		1.8	12		•10	.90		0
9	31		1.6	12		.10	•90		0
10	28		1.3	12		-10	1.0		0
11	28		1.1	12		•10	.90		0
12	28	13	1.0	12		•10	.80		0
13	28		.83	12		• 10	.80		Ó
14	27		.66	12		•10	.80		Ö
15	26		.56	12		•10	-80		ō
16	26		•48	11		•06	.80		٥
17	26		• 42	11		• 06	•60		0
18	26		•35	9.8		• 05	•50		0
19	26		.28	9.4		•05	•50		0
20	26		•21	9.4		.05	•40		0
21	26		•21	8.2		•02	•40		0
22	23		•19	8.2		• 02	•40		0
23	21		•17	8.2		• 02	•40		0
24	20		•16	6.8		•02	•40		0
25	18		•15	6.4		.02	•40		0
26	18		• 15	6.4		•02	•40		0
27	17	3	.14	5. 8		•02	•40		0
28	16		•13	5.0		•01	•40		0
29	15		• 12	4.8		•01	•40		0
30	14		•11	4.8		• 01	•40		0
31				5.0		•01			
TOTAL	825		72.02	312.2		2,01	24-20		•02

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DI SCHARGE (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)	MEAM CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	•40			-10			.10		
2 3	•40			•10			•10		
3	• 40			•10			.10		
•	• 40			• 10			-10		
5	•30			•10			•10		
6	•30			•10			•10		
7	• 30			•10			•10		
8	• 30			•10			•10		
9	• 20			. •10			•10		
10	•20			•10			•10		
11	•20			•10			.10		
12	•20			. 10			-10		
13	•20			•10			•10		
14	• 20			• 10			•10		
15	•20			•10			•10		
16	•20			.10			•10		
17	- 20			• 10			• 10		
1.6	•20			•10			.10		
19	• 20			•10			•10		
20	•20			•10			•10		
21	•20			-10			•10		
22	• 20			-10			•10		
23	•20			•10			•10		
24 25	• 20 • 20			•10			•10		
				•10			•10		
26 27	•20 •20			•10			•10		
				-10			-10		
28 29	-20			.10			-10		
30	•20 •20			•10			•10		
31	•20			•10			•10		
	•20			•10					
TOTAL	7.40		0	3.10		0	3.00		0

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

10500.30

S Computed by subdividing day.

11113300 SANTA CLARA RIVER NEAR SANTA PAULA, CALIF.

LOCATION.--Lat 34°21'14" (revised), 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 1968.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Water discharge given is difference between stations 11113500 Santa Paula Creek near Santa Paula, and 11113910 Saticoy Diversion near Saticoy (unpublished).

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS+ CHAPGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SOD I UM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SUL FATE (SO4)	CHLO- RIDE (CL)	FLLC- RIDE (F)	NITRATE (NC3)
OCT. 04	54	166	57	112	5.0	276	0	562	53	1.1	13
NOV. 06	25	161	64	125	5.0	256	0	608	58	.9	5.0
DEC. 12	109	167	60	114	5.0	301	0	568	55	1.2	12
JAN. 11	98	123	45	92	4 • G	239	0	407	42	•8	7.5
MAR. 14	158	147	52	96	4.0	261	0	480	43	•6	11
APR. 05	89	147	57	108	4.0	231	0	541	51	1.C	10
MAY 03	52	162	53	107	6.0	17C	C	612	58	. 8	13
JUNE 11	21	174	75	146	6.0	270	0	709	69	1.0	12
JULY 22	10	178	72	142	6.0	281	0	677	64	1.0	12
		D15-	DIS-	DI S-				SPECI-			
DATE	BOREN (B)	SOLVED SCLIDS (RESI- CUE AT 180 C)	SOLVED SCLICS (SUM OF CONSTI- TUENTS)	SOL VED SOL IOS I TONS PER AC-FT I	PERCENT SDDIUP	SOOIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCT ANCE (MI CRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
сст.	(8)	SOLVED SCLIDS (RESI- CUE AT 180 C)	SOLVED SCLICS (SUM OF CONSTI- TUENTS)	SOL VED SOL IOS (TONS PER AC-FT)	SDDIUF	SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCT ANCE (MI CRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
CCT. 04 NOV.	.92	SOLVED SCLIDS (RESI- CUE AT 180 C)	SOLVED SCLICS (SUM OF CONSTI- TUENTS)	SOL VED SOL IOS (TONS PER AC-FT)	SDDIUF 27	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCT ANCE (MI CRO- MHOS)	7.7	PERA- TURE (DEG C)	SOLVED OXYGEN 8.3
CCT. 04 NOV. 06 DEC.	.92 .92	SOLVED SCLIDS (RESI- CUE AT 180 C)	SOLVED SCLICS (SUM OF CONSTI- TUENTS) 1100 1160	SOL VED SOLIOS (TONS PER AC-FT)	27 29	AD- SORP- TION RATIO	LINITY AS CACO3 226 210	FIC COND- UCT ANCE (MI CRO- MHOS) 1460	7.7 7.6	PERA- TURE (DEG C) 23	SOLVED OXYGEN 8.3 7.3
CCT. 04 NGV. 06 DEC. 12 JAN.	.92 .92 .92	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280	SOLVED SCLICS (SUM OF CONSTI- TUENTS) 1100 1160 1130	SOL VED SOLIOS (TONS PER AC-FT) 1.63 1.74	27 29 27	AD- SORP- TION RATIO 1.9 2.1	226 210 247	FIC COMD- UCT ANCE (MICRC- MHOS) 1460 1640	7.7 7.6 7.9	PERA- TURE (DEG C) 23 18	SOLVED OXYGEN 8.3 7.3 10.6
CCT. 04 NGV. 06 DEC. 12 JAN. 11 MAR.	.92 .92 .88	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280 1220 923	SOLVED SCLICS (SUM OF CONSTI- TUEKTS) 1100 1160 1130 838	SOL VED SOL IOS (TONS PER AC-FT) 1.63 1.74 1.66	27 29 27 29	AD- SORP- TION RATIO 1.9 2.1 1.9	LINITY AS CACO3 226 210 247 196	FIC COND- UCT ANCE (MI CRC- MHOS) 1460 1640 1600	7•7 7•6 7•9 8•0	PERA- TURE (DEG C) 23 18 15	SOLVED OXYGEN 8.3 7.3 1C.6 1C.1
CCT. 04 NGV. 06 DEC. 12 JAN. 11 MAR.	.92 .92 .88 .64	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280 1220 923 1050	SOLVED SCLICS (SUM OF CONSTI- TUENTS) 1100 1160 1130 838 961	SOL VED SOL 10S (TONS PER AC-FT) 1.63 1.74 1.66 1.26	27 29 27 29 27 29 26	AD- SORP- TION RATIO 1.9 2.1 1.9 1.8	LINITY AS CAGO3 226 210 247 196 214	FIC COND- UCT ANCE (MICRO- MHOS) 1460 1640 1600 1250	7.7 7.6 7.9 8.0	PERA- TURE (DEG C) 23 18 15 16	8.3 7.3 10.6 10.1
CCT. 04 NOV. 06 DEC. 12 JAN. 11 MAR.	.92 .92 .88	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280 1220 923	SOLVED SCLICS (SUM OF CONSTI- TUEKTS) 1100 1160 1130 838	SOL VED SOL IOS (TONS PER AC-FT) 1.63 1.74 1.66	27 29 27 29	AD- SORP- TION RATIO 1.9 2.1 1.9	LINITY AS CACO3 226 210 247 196	FIC COND- UCT ANCE (MI CRC- MHOS) 1460 1640 1600	7.7 7.6 7.9 8.0 8.1	PERA- TURE (DEG C) 23 18 15 16 11	SOLVED OXYGEN 8.3 7.3 1C.6 1C.1
CCT. 04 NOV. 06 DEC. 12 JAN. 11 MAR. 14 APR. 05 MAY.	.92 .92 .88 .64	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280 1220 923 1050	SOLVED SCLICS (SUM OF CONSTI- TUENTS) 1100 1160 1130 838 961	SOL VED SOL 10S (TONS PER AC-FT) 1.63 1.74 1.66 1.26	27 29 27 29 27 29 26	AD- SORP- TION RATIO 1.9 2.1 1.9 1.8	LINITY AS CAGO3 226 210 247 196 214	FIC COND- UCT ANCE (MICRO- MHOS) 1460 1640 1600 1250	7.7 7.6 7.9 8.0	PERA- TURE (DEG C) 23 18 15 16	8.3 7.3 10.6 10.1
CCT. 04 NGV. 06 DEC. 12 JAN. 11 MAR. 14 APR. 05	.92 .92 .88 .64 .70	SOLVED SCLIDS (RESI- CUE AT 180 C) 1200 1280 1220 923 1050	SOLVED SCLICS SCLICS (SUM OF CONSTI- TUEKTS) 1100 1160 1130 838 961 1030	SOL VED SOL 10S (TONS PER AC-FT) 1.63 1.74 1.66 1.26 1.43	27 29 27 27 29 26 28	AD- SORP- TION RATIO 1.9 2.1 1.9 1.8 1.7	226 210 247 196 214	FIC COND- UCT ANCE (MICRO- MHOS) 1460 1640 1600 1250 1280	7.7 7.6 7.9 8.0 8.1	PERA- TURE (DEG C) 23 18 15 16 11	8.3 7.3 10.6 10.1 10.2

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.

DRAINAGE AREA, -- 40.0 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968.

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

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CALIF .-- Continued CHEMICAL AVALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	PEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PO~ TAS- SI UM (K)	BICAR- BONATE (HC 03)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	BORON (B)
CCT. 04	9.3	75	26	€0	2,0	181	D	225	32	.5	1.0	.30
NOV.	7.5	13	20	Eu	2.0	191	U	227	32	• >	1.0	.50
06 DEC.	6.0	83	21	59	2.0	207	D	228	33	•5	-0	- 20
12 JAN.	10	98	27	54	2.0	249	0	218	29	• 5	1.4	-23
11 FEE.	9.4	87	26	54	2.0	215	0	213	29	. 5	.9	.25
13 Mar.	16	87	26	54	2.0	228	0	200	29	.5	1.0	.23
14 APR.	37	93	20	39	1.0	205	a	169	20	.4	.9	.12
05 May	13	74	22	44	1.0	176	C	1 8R	22	• 5	.0	- 19
C3	10	86	21	58	2.0	212	5	196	30	.4	•0	. 30
11 JULY	4.7	74	24	61	2.0	195	0	201	34	• 5	.5	.33
22	2.3	64	27	89	2.0	168	5	235	52	•6	1.3	.46
CATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DES- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	OIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SDDIUM	SOCIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	РН	TEM- PERA- TURE (DEG C)	OXYGEN SOFAEL DI2-
	100 07	105.4131	(CA) HO	4533	AC	30010H	KA110	CACOS	ritio 37		1000 07	OX. GE.
C4	56D	510	294	146	.76	31	1.5	148	756	7.B	22	11.9
NOV. CE CEC.	581	534	318	148	. 79	29	1.4	170	841	8.1	16	13.0
12 JAN.	583	552	356	152	•79	25	1.2	204	867	8.1	11	12. 2
11 FEB.	559	518	324	148	.76	26	1.3	176	832	R.D	14	12.1
13 MAR.	559	511	324	137	. 76	26	1.3	187	814	8.2	13	12.3
14 APR.	454	434	289	121	•62	23	1.0	168	706	A. 1	10	11.9
05	485	438	275	131	-66	26	1.2	144	720	8.2	20	9.6
03 JLNF	534	502	301	119	.73	29	1.5	182	837	8.4	17	10.6
11 JLLY	51 7	492	283	123	.70	32	1.6	160	8D7	8.1	26	9.7
22	62 C	558	271	125	.84	41	2.4	146	886	8.4	28	13.R

11113920 SANTA CLARA RIVER AT SATICOY, CALIF.

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

DRAINAGE AREA. -- 1,595 sq mi.

PERIOD OF RECORD, --- Water temperatures: October 1967 to September 1968. Sediment records: October 1967 to September 1968.

EXTREMES, -- 1967-68:

Sediment concentrations: Maximum daily, not determined; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 34,300 tons Mar. 8; minimum daily, 0 ton on many days.

REMARKS.--No flow Oct. 1 to Nov. 18, Mar. 18 to Apr. 1, Apr. 3-9, 29, 30, May 4-7, 27, May 31 to June 4, June 10, 13, 14, 16-21, 24-26, July 5 to Sept. 30. Water discharges and sediment concentrations are estimated for the period Nov. 19 to Jan. 23.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	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-
OCTOBER																																
NOVEMBER.																																
DECEMBER.																•-		~-														
JANUARY																										11						
FEBRUARY.																																
MARCH																																
APRIL																																
MAY																																
JUNE																																
JULY																																
AUGUST																																
SEPTEMBER																																

11113920 SANTA CLARA RIVER AT SATICOY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		OCTOBER			NOVEMBER			DEC EMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5				0 0 0		0 0 0 0	3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6
6 7 8 9 10				0 0 0		0 0 0	3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6
11 12 13 14 15				0 0 0		0 0 0	3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6
16 17 18 19 20				0 0 200 400		0 0 0 1080 3240	3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6
21 22 23 24 25				1500 500 150 10 5•0		32400 2700 324 14 4 ₀ 0	3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6
26 27 28 29 30 31				4.0 3.0 3.0 3.0 5.0		2.1 1.6 1.6 1.6 2.7	3.0 3.0 3.0 3.0 3.0 3.0		1.6 1.6 1.6 1.6 1.6
TOTAL	0		o	2783.0		39771.6	93.0		49.6
		JANUARY			FEBRUARY			MAR CH	
DAY	MEAN DISCHARGE (CFS)	JANUARY MEAN CONCENTRATION (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)
DAY 1 2 3 4	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	01SCHARGE (CFS) 3.0 3.0 3.0 3.0	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 4.9 5.2 2.4 2.1	MEAN CONCEN- TRATION (MG/L) 100 100 90 90	DISCHARGE (TONS/DAY) 1.3 1.4 .58	01SCHARGE (CFS) .60 .60 .40 .30	MEAN CONCEN- TRATION (MG/L) 100 100 100	DISCHARGE (TONS/DAY) •16 •16 •11 •08
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 3-0 3-0 3-0 3-0 3-0 3-0 3-0 3-0 3-0 3-	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 4.9 5.2 2.4 2.1 1.9 1.6 2.1 2.1 1.9 2.2 2.1 2.9 8.0 8.0	MEAN CONCEN- TRATION (MG/L) 100 100 90 90 86 80 70 70	DISCHARGE (TONS/DAY) 1.3 1.4 .58 .51 .41 .35 .40 .40	DISCHARGE (CFS) -60 -60 -40 -30 -30 -30 141 1390 168 3-9 1-6 2-0 3-4 1-0 -60	MEAN CONCEN- TRATION (NG/L) 100 100 100 100 100 1360 7510 1050	DISCHARGE (TONS/DAY) -1611
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 4.9 5.2 2.4 2.1 1.9 1.6 2.1 2.1 2.1 1.99 2.2 2.9 20	MEAN CONCENTATION (MG/L) 100 100 90 86 80 70 70 60 60 60 64 1000 500	DISCHARGE (TONS/DAY) 1.3 1.4 5.58 5.51 4.41 3.55 40 40 34 31 36 6.38	DISCHARGE (CFS) .60 .60 .40 .30 .30 .30 141 1390 168 3.9 1.6 2.0 3.4	MEAN CONCENTRATION (MG/L) 100 100 100 100 100 100 100 100 100 10	DISCHARGE (TONS/DAY) -161611
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MEAN CONCENT TRATION (MG/L)	DISCHARGE (TONS/DAY) -81 -81 -81 -81 -81 -81 -81 -81 -81 -8	MEAN DISCHARGE (CFS) 499 5-2 2-4 2-1 1-9 1-6 2-1 2-1 1-19 2-2 2-2 2-2 2-0 80 -70 4-6 2-1 1-1 1-1	MEAN CONCENT OF TABLE	DISCHARGE (TONS/DAY) 1-3 1-4 -58 -51 -41 -35 -40 -40 -34 -31 -36 -38 267 27 -76 -38 6-2 1-1 -65	DISCHARGE (CFS) .60 .60 .40 .30 .30 .31 1390 168 2.0 3.4 1.0 0.0 0.0	MEAN CONCENT (MG/L) 100 100 100 100 100 100 100 100 100 10	DISCHARGE (TONS/DAY) -10 -11 -08 -08 -08 -286 34300 -11 -43 -81 -18 -40 -10 -11 -05 0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	ME AN CONCENT OF THE PROPERTY	DISCHARGE (TONS/DAY) -81 -81 -81 -81 -81 -81 -81 -81 -81 -8	MEAN DISCHARGE (CFS) 4-9 5-2 2-4 2-1 1-9 1-6 2-1 2-1 1-19 2-2 2-2 2-2 2-2 2-1 1-7 0 -60 -40 -40 -40	MEAN CONCENT OF TABLE	DISCHARGE (TONS/DAY) 1.3 1.4 58 51 41 35 40 60 60 62 1.1 65 65 1.1 65 65 62 1.1 65 65 62 1.1 65 65 62 1.1 65 65 62 1.1 65 65 62 66 61 61 61	DISCHARGE (CFS) .60 .60 .40 .30 .30 .31 1390 168 2.0 3.4 1.0 0 0 0 0 0 0	MEAN CONCENT (MG/L) 100 100 100 100 100 1050 1050 100 100	DISCHARGE (TONS/DAY) -10 -11 -08 -08 -08 -08 -34300 -3430

11113920 SANTA CLARA RIVER AT SATICOY, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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 (NG/L)	SEDIMENT Discharge (Tons/Day)
1	0		0	.40	100	•11	0		0
2	60	500	81	.10	100	.03	ō		Ò
3	0		0	• 10	100	• 03	0		0
•	Ō		· ō	0		0	0		0
5	0		0	0		0	•50	30	•04
6	0		٥	0		0	•40	30	•03
7	0		0	0		0	• 20	30	• 02
8	0		9	-80	100	•22	+20	30 30	•02
10	•10	160	D.04	.40 .30	90	•10 •07	.40	30	03
10	•10	100	•04		70	•••	•		-
11	-10	100	.03	• 20	80	.04	•20	30	•02
12	.10	100	• 03	• 20	70	•04	-50	30	. 04
13	•10	150	•04	•60	70	•11	0		0
14 15	•10 •10	150 100	•04 •03	1.0 .60	60 50	•16 •08	0.10	30	0 •01
15	•10	100	•03	• • • •	50	•08	•10	30	•01
16	-10	140	•04	1.3	50	.18	0		0
17	-10	100	.03	.80	40	.09	0		0
18	•10	130	•04	• 60	40	.06	0		o o
19	•10	100	•03	• 30	30	•02	0		0
20	. 10	100	• 03	•10	30	•01	U		U
21	.10	120	•03	•60	30	•05	0		0
22	•10	120	.03	•70	30	.06	.20	30	•02
23	•10	110	•03	• 60	30	. 05	.20	30	•02
24	•20	110	•06	•70	30	•06	0		ō
25	•10	110	.03	•40	30	•03	0		0
26	.10	110	.03	•40	30	.03	0		0
27	•30	100	.08	0		0	•40	30	•03
28 29	o* 20	100	0.05	- 20	30 30	• 02	-10	30 30	•01 •04
30	ŏ		ŏ	•60 •50	30	•05 •04	•50 •10	30	.01
31				,•~		0			
TOTAL	62.30		81.72	12.50		1.74	4.00		• 34
		JULY			AUGUST			SEPTEMBER	
OAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	ME AN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	HEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	• 10	30	•01						
2	•70	30	•06						
3 4	•50 •60	30 30	•04 •05						
š	0		0.03						
6	0		Q						
7 8	0		0						
ş	ŏ		ö						
10	ŏ		ŏ						
	٥								
11 12	Ö		0						
13	ŏ		ŏ						
14	٥		0						
15	0		ō						

14 0 --- 0
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
25 0 --- 0
26 0 --- 0
27 0 --- 0
28 0 --- 0
29 0 --- 0
30 0 --- 0
31 0 --- 0
31 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

TOTAL 1.90 --- 0.16 0 --- 0 0 --- 0

11114500 MATILIJA CREEK ABOVE RESERVOIR, NEAR MATILIJA HOT SPRINGS, CALIF.

LOCATION.--Lat 34°29'39", long 119°19'46" (revised), in SW\se\sets\u00e4

DRAINAGE AREA, -- 50.7 sq m1.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	NEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PD- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATF (SD4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	PORON (B)
DCT. 04	8.2	103	34	54	2.0	200	0	299	30	.8	•0	1.1
NCV. C6	6.5	112	32	59	3.0	242	0	278	37	1.0	•0	1.2
DEC.				-			-					
12 JAN.	10	116	35	50	2.0	237	0	299	27	.8	•0	.75
11	10	L19	33	49	2.0	249	0	278	28	•B	.0	.82
FEB. 14	10	112	32	49	2.0	230	0	276	28	.8	• n	.82
APR. U5	14	102	34	45	2.0	207	D	277	22	.8	•0	.72
MAY 03	8.1	103	29	47	3.0	122	0	281	34	.7	6.0	1.1
JUNE 11 JULY	4.2	106	32	59	3.0	550	0	270	42	1.0	• •	1-1
23	2.5	105	30	72	3.0	214	0	260	68	1.4	•0	2.1
	DIS- SOLVED	DIS-		NDN-	DIS- SOLVED		SODIUM		SPECI-			
CATE	SOLIDS (RESI- DUE AT 180 C)	SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	CAR BDNATE HARD NESS	SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	AD- SORP- TION RATIO	ALKA- LINITY AS CACD3	COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
DCT. 04	SOLIDS (RESI- DUE AT	SOLIDS (SUM OF CONSTI-	NESS	CAR BDNATE HARD-	SOLIDS (TONS PER		AD- SORP- TION	L INTTY AS	COND- UCTANCE (MICRO-	PH 7.7	PERA- TURE	SOLVED
DCT. 04 NGV. C6	SOLIDS IRESI- DUE AT 180 C1	SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR BDNATE HARD NESS	SOLIDS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	L INITY AS CACD3	COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
DCT. 04 NGV. C6 DEC.	SOLIDS (RESI- DUE AT 180 C)	SOLIDS (SUM OF CONSTI- TUENTS)	VESS (CA,MG)	CAR- BDNATE HARD- NESS	SOLIDS (TONS PER AC-FT)	23	AD- SORP- TION RATIO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.7	PERA- TURE (DEG C)	SOLVED OXYGEN 9.1
DCT. 04 NGV. C6 DEC. 12 JAN.	SOLIDS (RESI- DUE AT 180 C) 700	SOLIDS (SUM OF CONSTI- TUENTS) 619 640	NESS (CA, MG) 397 411	CAR-BDNATE HARD-NESS 233 212	SOLIDS (TONS PER AC-FT) •95	23 24	AD- SORP- TION RATIO 1.2	LINITY AS CACO3 164	COND- UCTANCE (MICRO- MHOS) A79	7.7 8.2	PERA- TURE (DEG C)	SOLVED OXYGEN 9.1 9.4
OCT. 04 NGV. C6 DEC. 12 JAN. 11 FEB.	SOLIDS (RESI- DUE AT 180 C) 700 695 706	SOLIDS (SUM OF CONSTI- TUENTS) 619 640 646	NESS (CA, HG) 397 411 434	CAR- BDNATE HARD- NESS 233 212 240	SOLIDS (TONS PER AC-FT) .95 .95	23 24 20	AD- SORP- TION RATIO 1.2 1.3	LINITY AS CACO3 164 198	COND- UCTANCE (MICRO- MHOS) A79 983	7.7 8.2 8.0	PERA- TURE (DEG C) 21 20	SOLVED OXYGEN 9.1 9.4 10.5
OCT. 04 NOV. C6 DEC. 12 JAN. FE8. 14 APR.	SOLIDS (RESI- DUE AT 180 C) 700 695 706 679	SOLIDS (SUM OF CONSTITUENTS) 619 640 646 631	YESS (CA, HG) 397 411 434 433	CAR-BDNATE HARD-NESS 233 212 240 229	SOLIDS (TONS PER AC-FT) .95 .95	23 24 20 20	AD- SORP- TION RATIO 1.2 1.3 1.0	LINITY AS CACD3 164 198 194 204	COND- UCTANCE (MICRO- MHOS) 879 983 998	7.7 8.2 8.0 8.2	PERA- TURE (DEG C) 21 20 11	9.1 9.4 10.5
OCT. 04 NOV. C6 DEC. 12 JAN. 11 FEB. 14 APR. 05 MAY 03	SOLIDS (RESI- DUE AT 180 C) 700 695 706 679 688	SOLIDS (SUM OF CONSTITUENTS) 619 640 646 631 612	NESS (CA,MG) 397 411 434 433 411	CAR-BDNATE HARD-NESS 233 212 240 229 222	SOLIDS (TONS PER AC-FT) .95 .95 .96 .92	23 24 20 20	AD- SORP- TION RATIO 1.2 1.3 1.0 1.0	LINITY AS CACD3 164 198 194 204	COND- UCTANCE (MICRO- MHOS) A79 983 998 965	7.7 8.2 8.0 8.2 7.8	PERA- TURE (DEG C) 21 20 11 12	9.1 9.4 10.5 10.7
DCT. 04 NDV. C6 DEC. 12 JAN. 11 FEB. 14 APR. 05 MAY	SOLIDS (RESI- DUE AT 180 C) 700 695 706 679 688 660	SOLIOS (SUM OF CONSTI- TUENTS) 619 640 646 631 612	NESS (CA,MG) 397 411 434 433 411 394	CAR- BDNATE HARD- NESS 233 212 240 229 222 224	SOLIDS (TONS PER AC-FT) .95 .95 .96 .92 .94	23 24 20 20 20 20	AD- SORP- TIOM RATIO 1.2 1.3 1.0 1.0	LINITY AS CACD3 164 198 194 204 189	COND- UCTANCE (MICRO- MHOS) A79 983 998 965 950	7.7 8.2 8.0 8.2 7.8	PERA- TURE (DEG C) 21 20 11 12 13	9.1 9.4 10.5 10.7 11.4

11118500 VENTURA RIVER NEAR VENTURA, CALIF.

LOCATION. -- Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, Ventura County, at gaging station 500 ft downstream from county highway bridge at Foster Memorial Park, 0.2 mile downstream from Coyote Creek, and 5 miles north of Ventura.

DRAINAGE AREA .-- 188 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1968.

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

11118500 VENTURA RIVER NEAR VENTURA, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOMER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SI UM (K)	BIÇAR- BONATE (HC 03)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (ND3)	BORON (B)
CCT.	6.0	130	37	68	2.0	290	0	294	52	.6	12	.60
NCV.							_		48	.6	11	.53
06 DEC.	5.6	127	36	64	2.0	295	0	277	-0	•0	••	•
12 JAN.	7.1	123	36	58	2.0	289	0	266	44	.6	9.3	.44
11 FEP.	8.4	124	36	61	3.0	273	0	2 74	51	. 6	11	.48
14	7.6	117	35	58	2.0	259	0	263	48	.6	12	.41
15	20	133	38	61	2.0	299	0	280	52	.6	12	• 4 2
APR. 05	16	125	36	59	5.0	270	o	275	48	.6	10	. 47
YAM 03	11	1 32	35	68	2.0	284	11	285	52	.5	10	• 50
JUNE 11	3.0	132	40	64	3.0	311	0	288	52	.7	7.4	-51
JULY 22***	.50	131	34	65	3.0	293	0	279	49	.7	1.5	.48
CATE	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HAR O- NESS (CA, MG)	NUN- CAR- BUNATE HARD- NESS	DIS- SOLVED SOLIDS (TDNS PER AC-FT)	PERCENT SOD I UM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- Ture (DEG C)	DIS- SOLVED OXYGEN
GC1. G4	800	7 38	477	239	1.09	24	1.4	238	1060	7.9	20	10.7
NCV. C6	778	710	465	223	1.06	23	1.3	242	1100	8.1	16	
15	727	680	455	218	.99	22	1.2	237	1060	7.7	12	11.0
JAN. 11	754	694	458	234	1.03	22	1.2	224	1090	8.0	14	11.3
FEB. 14	794	662	436	224	1.08	22	1.2	212	1060	8.1	14	11-1
15	781	725	488	243	1.06	21	1.2	245	1130	B. 0	16	10.0
AFR. 05	739	688	460	239	1.01	22	1.2	221	1 090	7.8	18	9.7
PAY 03	787	735	474	223	1.07	24	1.4	251	1160	8.5	17	10.8
JUAE 11	81.8	739	494	239	1.11	22	1.3	255	1150	7.7	20	7.9
JLLY 22	809	707	467	227	1.10	23	1.3	240	1070	7.8	22	9.9

SANTA MARIA RIVER BASIN

111381DO CUYANA RIVER BELOW TWITCHELL DAM, CALIF.

LOCATION.--Lat 34°86'40", long 120°17'30", T.10 N., R.32 W., Santa Barbara County, at gaging station in Suey Grant, 3.5 miles upstream from mouth, 4 miles northeast of Garey, and 4.4 miles downstream from Twitchell Dam. DRAINAGE AREA.--1,133 sq mi.

PERIOD OF RECORD .-- Chemical analyses: October 1966 to September 1968.

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

11138100 CUYAMA RIVER BELOW TWITCHELL DAM, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAP OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SI UM (MG)	SODI UM (NA)	PO- TAS- S IUM (K)	BI CAR- BON A TE (HCO 3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NI TRATE (NO3)	BDRDN (8)
0C7. 04	82	87	33	53	4-0	229	٥	226	33	.6	6.5	-22
NCV.											2.5	.22
07 DEC.	163	81	31	4B	5.0	205	0	220	33	.6	2.5	
11	127	89	34	50	5.0	222	0	239	34	.6	1.5	.20
JAN. 11	125	95	36	50	5.0	234	0	241	34	•6	2.5	.19
MAR. 15	2.7	128	62	88	4.0	278	0	438	59	•7	.5	.12
AFR.	2.1	128	62	60	4.0	210						
05	14	143	68	99	5-0	295	0	490	64	.7	•6	.27
03	1.9	149	74	122	6.0	290	10	571	77	.6	.4	•30
DATE	DIS- SOL VED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIOS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BON ATE HARD- NE SS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOD IUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
067. 04 NCV.	600	555	353	165	.82	24	1.2	188	803	8.0	17	10.0
07	600	521	330	162	.82	24	1.2	168	824	8.1	17	10.1
11	600	562	362	180	. 82	23	1.1	182	886	7.8	13	10.5
11	629	579	385	193	.86	22	1.1	192	914	8.0	8	11.8
MAR. 15	1010	916	575	347	1.37	25	1.6	228	1360	8.0	15	15.7
APR. 05	1100	1020	637	395	1.50	25	1.7	242	1520	8+2	21	8.6
MAY C3	1230	1150	676	421	1.67	28	2.0	254	1680	8.5	14	8.9

ARROYO GRANDE BASIN

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF.

LCCATION, --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 1968.
Sediment records: October 1968 to September 1967 (periodic), October 1967 to September 1968 (daily).

EXTREMES, --1967-68:
Sediment concentrations: Maximum daily, 1,070 mg/l Feb. 17; minimum daily, 1 mg/l on several days.
Sediment discharge: Maximum daily, 22 tons Feb. 17; minimum daily, 0 ton on many days.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY AVER-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 MONTH OCTUBER. . -- 19 -- -- 13 -- -- -- 14 -- 19 -- -- -- 17 -- -- -- 17 -- -- 17 -- 16 -- NOVEMBER. -1 16 -- 12 16 -- -- 16 -- 16 -- 15 13 13 13 9 -- -- 13 12 12 13 15 -- -- 10 7 JANUARY... -- 16 -- 9 -- -- 11 11 12 -- -- -- 10 -- -- 8 -- -- 8 7 -- 8 -- -- 12 FEBRUARY. -- 9 -- -- -- 12 -- 9 -- -- 15 -- 14 -- -- 19 18 -- -- 13 -- -- 19 -- -- 18 -- 18 -- 1 JULY.... - 21 -- -- 19 -- -- 22 -- 16 -- -- -- 15 -- 22 -- -- -- 15 -- 21 -- -- -- 21 AUGUST... -- 21 -- -- 21 -- -- -- 21 -- -- -- 21 -- -- -- 21 -- 19 -- -- -- 21 -- 19 -- -- -- 17 17 -- -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 -- -- 19 -- 17 --

ARROYO GRANDE BASIN

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF. -- Continued

TOTAL SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1	1.2	3	.01	1.0	8	•02	2.1	12	.07
2	1.2	3	.01	1.2	12	.04	2.0	4	• 02
3	1.2	3	.01	1.3	8	.03	2.0	6	.03
4	1.2	2	.01	1.3	4	.01	2.0	8	• 04
5	1.2	2	.01	1.4	3	.01	3.0	58	.55
6	1.2	1	0	1.4	2	•01	2.4	5	.03
7	1.2	1	0	1.4	2	.01	2.5	10	• D7
8	1.1	2	.01	1.5	1	0	2.2	8	.05
9	1.1	5	.01	1.5	3	-01	1.8	8	• 04
10	1.1	7	•02	1.4	3	•01	1.6	В	.04
11	1.1	9	.03	1.5	3	.01	1.8	8	•04
12	1.1	12	.04	1.5	2	.01	1.8	15	•07
13	1.1	5	.01	1.5	2	.01	1.8	20	•10
14	1.1	1	0	1.6	4	• 02	1.7	30	- 14
15	1.1	2	.01	1.6	6	.03	1.8	35	-17
16	1.1	2	.01	1.8	8	.04	1.8	35	•17
17	1.2	4	.01	1.6	9	•04	1.8	30	• 15
18	1.1	6	•02	2.0	10	.05	3.3	242	2.3
19	1.2	8	.03	2.3	13	-OB	3.7	237	2.7
20	1.2	6	.02	2.0	7	.04	2 • 1	50	.28
21	1.3	6	•02	2.2	12	.07	2.0	50	.27
22	1.2	4	.01	2.0	7	•04	1.8	50	• 24
23	1.1	3	.01	1.8	10	•05	1.8	50	.24
24	1.1	3	•01	1.8	8	•04	1.8	50	. 24
25	1.1	3	.01	1.8	6	.03	1.8	50	.24
26	1.1	3	.01	1.8	4	•02	1.8	50	.24
27	1.1	3	.01	1.8	4	.02	1.8	50	• 24
28	1.1	3	•D1	1.9	5	•03	1.8	60	•29
29	.99	3	•01	2.0	2	.01	1.8	100	.49
30	1.0	2	.01	3.2	74	.83	1.8	235	1.1
31	1.0	4	•01				1.8	130	. 63
TOTAL	35.09		.39	51.3		1.62	63.4		11.28

		JANUARY			FERRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1	1.7	80	.37	1.9	30	-15	1.7	90	-41
ž	1.7	60	.28	2.0	30	.16	1.5	76	.31
3	1.6	48	.21	2.0	27	•15	1.4	80	.30
4	1.7	40	.18	2.0	25	.14	1.4	80	.30
5	1.6	38	.16	2.0	25	.14	1.4	80	.30
6	1.7	40	.18	1.9	25	.13	1.3	80	.28
7	1.7	50	.23	2.2	25	.15	3.1	666	11
8	1.7	60	.28	2.2	24	-14	4.5	675	15
9	1.7	69	. 32	2.2	35	.21	1.8	45	•22
10	3.6	711	11	2.1	49	.28	1.8	40	.19
11	2.6	55	.39	2.0	40	-22	1.8	40	.19
12	1.9	25	.13	2.1	30	-17	2.0	37	•20
13	1.8	25	-12	2.7	20	.15	5.5	318	7.5
14	1.8	25	.12	2.4	13	.08	2.4	45	• 29
15	2.6	25	.18	2.2	60	-36	2.2	45	.27
16	1.8	25	.12	2.3	99	.61	2.4	60	.39
17	1.8	28	.14	5.6	1070	22	2.2	50	•30
18	1.8	25	.12	2.8	300	2.3	1.8	48	.23
19	1.8	25	.12	2.3	80	-50	1.8	45	•22
20	1.8	26	.13	2.1	48	.27	1.8	40	•19
21	1.8	25	.12	2.1	117	.66	1.7	40	.18
22	1.8	25	.12	2.0	120	.65	1.7	38	-17
23	1.8	25	.12	1.8	100	.49	1.7	40	-18
24	1.8	30	.15	1.8	88	.43	1.7	50	.23
25	1.8	52	.25	1.8	80	.39	1.7	55	.25
26	1.8	45	.22	1.8	80	.39	1.6	60	-26
27	2.3	27	.17	1.7	80	.37	1.6	63	•27
28	2.0	30	.16	1.7	80	.37	1.6	60	.26
29	1.8	30	- 15	1.7	105	.48	1.4	60	.23
30	1.9	30	.15				1.4	60	.23
31	2.4	30	.19				1.5	60	.24
TOTAL	59.6		16.58	63.4		32.54	61.4		40.59

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CALIF.--Continued TOTAL SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
						(IUNS/DAT)			
1	3.3	740	11	1.2	10	•03	.77	3	-01
2	2.7	47	.48	1.3	20	•07	.77	3	•01
3	1.6	24	•10	1.4	30	-11	.76	3	•01
4	1.5	24	-10	1.3	33	•12	-82	3	-01
5	1.5	24	.10	1.4	30	•11	.88	3	.01
6	1.5	24	.10	1.2	25	.08	.80	3	•01
7	1.5	22	•09	1.2	25	.08	-81	3	•01
8	1.4	20	.08	1.2	23	•07	.85	3	•01
9	1.3	17	.06	1.2	25	.08	.91	3	•01
10	1.3	20	•07	1.2	26	•08	.83	3	-01
11	1.3	25	.09	1.2	20	•06	.82	3	.01
12	1.4	29	.11	1.3	10	.04	.82	3	-01
13	1.4	25	•09	1.3	8	•03	.77	3	.01
14	1.4	25	.09	1.3	10	• 04	•75	3	•01
15	1.4	25	•09	1.1	15	-04	.73	3	•01
16	1.4	21	.08	1.1	25	•07	.63	3	-01
17	1.4	25	•09	1.0	30	• 08	.68	2	0
18	1.3	25	•09	1.0	36	•10	.69	2	0
19	1.3	25	•09	1.0	25	.07	.66	2	0
20	1.2	32	.10	.99	15	•04	.62	3	•01
21	1.2	25	.08	1.0	7	•02	.65	3	.01
22	1.2	25	.08	• 98	9	•02	-69	3	• 01
23	1.2	22	•07	.97	10	.03	.67	2	0
24	1.2	53	.17	.93	10	•03	.74	2	0
25	1.2	50	.16	•92	10	•02	.82	2	0
26	1.2	45	.15	.88	15	•04	.83	2	0
27	1.3	42	•15	.77	10	.02	.83	2	0
28	1.3	35	.12	.76	10	•02	.88	2	0
29	1.2	25	•08	•77	5	•01	.85	2	0
30	1.2	15	•05	.80	5	•01	.83	2	0
31				.80	5	•01			
TOTAL	43.3		14.21	33.47		1.63	23.16		•19

		JULY			AUGUST			SEPTEMBER	Į.
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1	.84	3	.01	•60	9	.01	.71	4	.01
2	• 79	3	•01	.61	11	• 02	.74	5	•01
3	•70	5	•01	.61	12.	•02	.82	5	-01
4	.68	5	-01	•62	10	• 02	.84	5	• 01
5	.61	5	•01	.62	8	.01	.89	6	•01
6	.52	7	.01	.62	6	.01	.86	7	-02
7	.43	5	.01	.61	5	.01	.87	8	• 02
8	-61	3	0	•62	5	.01	.88	8	•02
9	-64	2	0	.62	5	.01	.75	9	•02
10	-57	1	0	.64	5	•01	.77	10	•02
11	-55	1	0	•66	5	-01	.80	11	•02
12	•54	2	0	.69	5	.01	.80	12	•03
13	•58	2	0	.71	5	.01	.81	12	•03
14	-61	2	0	•70	5	•01	.81	11	• 02
15	-62	3	.01	•69	5	•01	.71	11	•02
16	.59	3	0	.70	4	.01	.71	11	•02
17	.56	5	-01	-71	4	.01	.73	11	• 02
18	•56	10	.02	.70	4	•01	.75	10	-02
19	• 56	11	.02	.72	5	•01	.80	10	•02
20	•56	11	•02	•74	5	•01	.80	10	•02
21	-57	10	•02	.71	6	•01	-68	6	.01
22	-57	9	.01	•66	6	.01	.63	8	-01
23	.57	8	.01	.66	5	.01	.65	10	.02
24	-57	8	•01	•67	5	.01	•66	12	• 02
25	.58	7	•01	.67	5	•01	.65	14	•02
26	.58	6	-01	-67	5	•01	.68	15	-03
27	-58	6	.01	.67	4	•01	.65	11	•02
28 29	•60 •61	6	.01 .01	.66	:	•01	•70 •78	7	•01
30	•60	7	•01	.69	4	.01 .01	•/8 •80	· '7	•01 •02
31	•60	,	•01	•71	*		.80		•02
		,			4	•01			
TOTAL	18.55		.27	20.62		.34	22.73		.54

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

496.02 120.18

11141150 ARROYO GRANDE ABOVE PROMNIK CREEK, WEAR ARROYO GRANDE, CALIF. -- Continued

TOTAL SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

IMETHODS OF ANALYSIS: 8, BOTTOM WITHORAMAL TUBE: C. CHEMICALLY DISPERSED: N. IN MATIVE WATER: P. PIPET: S. SIEVE: Y. VISUAL-ACCUMULATION TUBE: W. IN DISTILLED WATER)

		HATER								PART	ICLE :	SIZE					
		TEM-		CONCEN- TRATION	SUSPENDED- SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	ZE (IN MI	LLIME'	TERS)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	DISCHARGE (CFS)	(MG/L)	(TONS/DAY)	•002	•004	•008	.016	-031	•062	-125	.250	•500	1.00	2.00	SIS
NOV 30 1967	0645	11	3.6	182	1.8	27	31	36	38	40		54	-83	95	99	100	SBWC
DEC 18		10	4.5	663	8.1	16	19	21	22	23	35	41	72	92	100		VBWC
FEB 20 1968		19	2.2	34	.20	38	40	50	57	58	72	85	97	99	99	100	ABMC
MAR 7		13	5.0	505	6.8	30	39	45	47	49	72	83	98	99	100		VBWC
MAR 12			1.8	37	-18	9	11	18	23	27	38	50	81	90	100		ABMC
MAR 13	0620	12	9.7	595	16	6	10	15	19	22	29	41	91	99	100		VBWC
MAR 13			15	963	39	20	27	33	36	39	50	63	92	98	100		ABAC

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°13'48", long 120°28'22", in SEAME 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 1968. Sediment records: October 1967 to September 1968.

EXTREMES, -- 1967-68:

Sediment concentrations: Maximum daily, 200 mg/l Mar. 8; minimum daily, 1 mg/l on many days. Sediment discharge: Maximum daily, 15 tons Mar. 8; minimum daily, 0 ton Sept. 16-20.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TOTAL SECIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: 8. BOTTOM MITHORAWAL TUBE; C. CHEMICALLY DISPERSED: N. IBN MAITYE WATER; P. PIPET; S. SIEYE; V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED MATER)

					PART	ICLE :	SIZE										
		TEM- PERA TURE		CONCEN- TRATION	SUSPENDEO - SEDIMENT DISCHARGE		ENT F	INER	THAN	THE S	IZE (IN MI	LLIME	rers)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/OAY)	.002	• 004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
NOV 18 1967		14	7.0	206	3.9	29	47	61	70	74	91	100					VBWC
MAR 8 1968		13	28	291	22	43		69	79	83	95	97	99	100			SBWC
MAR 8			30	648	52	46	63	76	82	84	99	100					SBWC
MAR 8			30	720	58	34	49			81	84	90	100				VPHC
MAR 8	1320	14	29	445	35	48	60	75	89	95	98	99	100				SPWC
MAR 8	1445	13	27	97	7.1	31	36	59	69	77	94	96	98	100			SBWC

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CALIF .-- Continued

TOTAL SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

			AL SEDIMENT,	WAIDE IDA		1901 10 8871			
		NCTORER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1 2	4.7	1	.01	3.9	5 4	•05	6.4 5.8	2	.03 .03
3	4.7 4.8	1 1	.01 .01	4.1 4.2	3	•D4 •03	5.5	2 2	•03
4 5	4.T 4.3	1 1	•01 •01	4.2 4.4	3	.03 .04	5.5 6.7	2 11	•03 •21
6 7	4.2 4.1	1	.D1	4.5 4.5	?	•02 •02	6.1 6.1	3 2	.05 .03
R	4.2	1 2	•02	4.5	2	•02	6.1	2	.03
10	4.1 4.0	2	•02	4.5 4.7	2	.02	5.8 5.2	2	.03 .03
11	4.0	I	.01	4.5	2	•02	5.2	1	•01
12	4.1	1	•01	4.7	2	-03	5.1	1	.01 .01
13 14	3.9 3.8	2	.02	4.7 4.5	3	•D4 •D4	5.0 5.0	2	•03
15	3.8	3	.03	4.7	2	.03	5.0	2	•03
16	3.9	4	-04	4.7	!	•DI	4.8	3 3	•04
17 18	3.9 3.8	4	.04 .03	4.7 5.4	1 31	.01 .56	4.8 6.4	6	•04 •12
19	3.8	2	•02	6.4	10	-17	6.6	3 3	•05 •05
20	3.9		•0?	5.7	3	-05	6.0		
21 22	4.0 4.1	2	.0? .02	5.7 5.3	3 1	•05 •01	5.6 5.3	2 2	.03 .03
23	3.7	2	•02	5.1	1	•D1	5.2	2	•03
24 25	3.7 3.8	2	•02	5.0 5.0	1 1	•01 •D1	5.1 5.0	2	•03 •03
24	3.7	I	.01	5.D	1	•01	5.D	2	.03
26 27	3.7	1	•01	5.3	2	•03	4.9	3	- 04
28 29	3.7 3.8	1 2	.01 .02	5.3 5.3	2 2	.03 .03	4.8 4.8	6	•05 •08
30	3.8	3	.03	8.0	13	•35	4.8	5	•06
31	3 • 8	4	.04				4.8	4	.05
TOTAL	124.5		.59	148.5		1.80	168.4		1.35
		JAMIIARY			FERRUARY			MARCH	
		MEAN	7074		MEAN			MEAN	
DAY	MEAN DISCHARGE {CFS}		TOTAL SEDIMENT (TONS/DAY)	MEAN OISCHARGE (CFS)		TOTAL SEDIMENT (TONS/DAY)	MEAN Discharge (CFS)		TOTAL SEDIMENT (TONS/DAY)
1	DISCHARGE (CFS) 4.8	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY)	OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY)
1 2 3	DISCHARGE (CFS) 4.8 4.7 4.5	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY) .04 .04	0ISCHARGE (CFS) 6.0 5.6 5.5	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY) .18 .15 .15	DISCHARGE (CFS) 5.0 4.9 4.7	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY) .05 .05 .05
1 2 3 4	DISCHARGE (CFS) 4.8 4.7 4.5 4.5	MEAN CONCEN- TRATION (MG/L)	SEDIMENT (TONS/DAY) .04 .04 .05 .07	01SCHARGE (CFS) 6.0 5.6 5.5 5.4	MEAN CONCEN- TRATION (MG/L) 11 10 10	SEDIMENT (TONS/DAY) -18 -15 -15 -13	DISCHARGE (CFS) 5.0 4.9 4.7 4.7	MEAN CONCEN- TRATION (MG/L) 4 4 4 4	SEDIMENT (TONS/DAY) .05 .05 .05
1 2 3 4 5	DISCHARGE (CFS) 4.8 4.7 4.5 4.5	MEAN CONCEN- TRATION (MG/L) 3 3 4 6	SEDIMENT (TONS/DAY) .04 .04 .05 .07	01SCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3	MEAN CONCEN- TRATION (MG/L) 11 10 9 8	SEDIMENT (TONS/DAY) .18 .15 .15 .13	5.0 4.9 4.7 4.7 4.5	MEAN CONCEN- TRATION (MG/L) 4 4 4 3 3	SEDIMENT (TONS/DAY) .05 .05 .05 .04
1 2 3 4	DISCHARGE (CFS) 4.8 4.7 4.5 4.5	MEAN CONCENTRATION (MG/L)	SEDIMENT (TONS/DAY) - 04 - 05 - 07 - 07	0ISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3	MEAN CONCEN- TRATION (MG/L) 11 10 9 8	SEDIMENT (TONS/DAY) -18 -15 -15 -13 -11	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5	MEAN CONCENTRATION (MG/L) 4 4 4 3 3	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5	MEAN CONCEN- TRATION (MG/L) 3 3 4 6 6	SEDIMENT (TONS/DAY) -04 -04 -05 -07 -07 -07	0ISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.3 5.0 5.0	MEAN CONCEN- TRATION (MG/L) 11 10 9 8	SEDIMENT (TONS/DAY) -18 -15 -13 -11 -10 -08	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25	MEAN CONCEN- TRATION (MG/L) 4 4 4 3 3 3 18 200	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04
1 2 3 4 5	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5	MEAN CONCEN- TRATION (MG/L) 3 4 6 6	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07	01SCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3	MEAN CONCEN- TRATION (MG/L) 11 10 9 8	SEDIMENT (TONS/DAY) -18 -15 -15 -13 -11	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9	MEAN CONCEN- TRATION (MG/L) 4 4 3 3 3	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 4.5	MEAN CONCEN- TRATION (MG/L) 3 4 6 6 6 6	SEDIMENT (TONS/DAY) -04 -05 -07 -07 -07 -06 -05 -05 -15	0ISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0	MEAN CONCEN- TRATION (MG/L) 11 10 9 8	SEDIMENT (TONS/DAY) -18 -15 -13 -11 -10 -08 -08 -07 -07	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 4.5 5.9 25 14 9.8	MEAN CONCEN- TRATION (MG/L) 4 4 4 3 3 3 18 200	SEDIMENT (TONS/DAY) .05 .05 .04 .04 .36 15 .38 .21
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6	MEAN CONCEN- TRATION (MG/L) 3 3 4 6 6 6 6 5 4 4 9	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .07 .06 .05 .15	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0	MEAN CONCEN- TRATION (MG/L) 11 10 10 9 8 7 6 6 5 5	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 15 .38 .21 .14
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2	MEAN CONCEN- TRATION (MG/L) 3 3 4 6 6 6 6 5 4 4 9	SEDIMENT (TONS/DAY)	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.2 5.2	MEAN CONCENTRATION (MG/L) 11 10 9 8 7 6 6 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .08 .08 .07 .07	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8	MEAN CONCEN- TRATION (MG/L) 4 4 4 3 3 18 200 10 8	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .38 .21 .14 .10 3.4 .38
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2	MEAN CONCEN- TRATION (MG/L) 3 3 4 6 6 6 6 5 4 4 9	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .07 .06 .05 .05 .05 .05 .03	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0	MEAN CONCEN- TRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5	SEDIMENT (TONS/DAY) .18 .15 .15 .15 .13 .11 .10 .08 .08 .07 .07	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6	MEAN CONCEN- TRATION (MG/L) 4 4 4 3 3 18 200 10 8	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .36 15 .38 .21 .14 .10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 5.0	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 5 4 4 9 9 3 2 2 2 3 3 3 3 3 3 3 3 3	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .06 .05 .07 .07 .06 .05 .05 .05 .05 .05 .05 .06 .06 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 5.0 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.1	MEAN CONCENTRATION (MG/L) 11 10 9 8 7 6 6 5 5 5 6 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6 19 14 11	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 8 200 10 8 6 5 8 10 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .36 15 .38 .21 .14 .10 3.4 .38 .24
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 6.9 4.8	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 5 5 4 4 9 9 3 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .06 .05 .07 .07 .06 .05 .05 .05 .05 .05 .03 .04 .04	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.1 7.8	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 8 7 6 6 6 7 7 7 7 7 7 22 8	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .10 .10 .10 .10 .10 .10	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6 19 10 10 9.0	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 8 200 10 8 6 5 8 10 8 6 6 4 3 3 6 6 4 4 3 3 8 6 6 4 4 3 5 6 6 6 4 4 3 5 6 6 6 6 4 4 3 6 6 6 6 6 4 4 3 6 6 6 6 6	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .36 15 .38 .21 .14 .10 .3.4 .38 .24 .16 .11 .07
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 5.9 6.3 5.6 4.7 4.8 4.8 4.8	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 7 9 9 9 9 9 9 9 9 9 9 9	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.1 7.8 8.4 6.9	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5 5 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .00 .08 .09 .07 .08 .09 .10 .10 .10 .10 .10 .10	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 9.0 8.3	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 3 3 4 4 3 4	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .38 .21 .14 .10 .10 .14 .10 .11 .17 .07
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.0 4.9 4.8 4.8 4.7 4.6	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 5 4 4 9 9 3 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.1 7.8 8.4 6.9 6.1	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5 5 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .09 .07 .07 .08 .09 .10 .10 .10 .10 .10 .10 .10	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9	MEAN CONCENTRATION (MG/L) 4	SEDIMENT (TONS/DAY) .05 .05 .05 .06 .04 .04 .36 .38 .21 .14 .10 .3.9 .24 .16 .10 .07 .09 .11
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 6.9 4.9 4.8 4.7 4.6	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 6 6 7 1 1 1 1 1 1 1 1 1	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .07 .06 .05 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.1 7.8 6.9 6.1 5.8	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .10 .10 .10 .10 .10 .10	DISCHARGE (CFS) 5.0 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 3 4 5 5 6 8 8	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .15 .38 .21 .14 .10 .34 .34 .38 .24 .16 .11 .07 .09 .11 .13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 5.0 4.8 4.7 4.6 4.7 4.6 4.5 4.5 4.5 4.5 4.7 4.6	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 5 4 4 4 9 9 3 2 2 2 3 3 3 3 3 3 3 3 3 3 4 6 6 6 6 6 6 6 6 6	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .07 .06 .05 .05 .05 .05 .03 .04 .04 .04 .04 .04 .04 .04 .05 .05 .05 .05	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.1 7.8 8.4 6.9 6.1 5.8 5.5 5.3	MEAN CONCENTRATION (MG/L) 11 10 9 8 7 6 6 6 5 5 5 6 6 7 7 7 7 7 7 22 8 8 6 4 4 4 4 4 4 4 4	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .10 .47 .18 .11 .11 .07	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6 19 14 11 10 10 8.3 7.9 7.8 7.3 7.2	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 18 200 10 8 6 6 5 5 5 6 6 8 7 7	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .36 15 .38 .21 .14 .10 .30 .24 .16 .11 .07 .09 .11 .13 .16 .14
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 6.9 4.9 4.8 4.7 4.6	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 6 6 7 1 1 1 1 1 1 1 1 1	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .07 .06 .05 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.1 7.8 6.9 6.1 5.8	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .10 .10 .10 .10 .10 .10	DISCHARGE (CFS) 5.0 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 3 4 5 5 6 8 8	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .15 .38 .21 .14 .10 .34 .34 .38 .24 .16 .11 .07 .09 .11 .13
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 23 24 25 26	DISCHARGE (CFS) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 6.9 4.8 4.7 6.5 4.5 4.5 4.5 4.5 4.5 4.5 4.7 4.6 4.7 4.6 4.7 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 7 9 9 3 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .06 .05 .05 .05 .05 .05 .04 .04 .04 .04 .04 .05 .06 .07 .06 .07 .07 .07 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.1 7.8 8.4 6.9 6.1 5.8 5.3 5.3 5.3	MEAN CONCENTRATION (MG/L) 11 10 9 8 7 6 6 6 5 5 5 6 6 7 7 7 7 7 7 22 8 8 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .07 .08 .09 .10 .10 .10 .10 .47 .18 .11 .07 .06 .06 .06 .06 .06	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8 7.3 6.9 6.8	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 18 200 10 8 6 6 6 4 3 3 4 5 5 6 6 8 7 7 5 5 4 3 3 3	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .04 .36 15 .38 .21 .14 .10 .30 .24 .16 .11 .07 .09 .11 .13 .16 .14 .09 .07
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24 25 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.7 5.1 6.8 4.8 4.7 4.6 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .07 .06 .05 .09 .09 .04 .04 .04 .04 .04 .04 .04 .04 .04 .04	OISCHARGE (CFS) 5.0 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.1 7.8 6.9 6.1 5.8 5.3 5.3 5.1 5.8 5.9 6.7 6.7	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .10 .47 .18 .11 .11 .07 .06 .06 .06 .06 .06 .06 .06	DISCHARGE (CFS) 5.0 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8 7.2 6.9 6.8	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 3 3 4 5 5 6 6 8 7 7 5 5 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .38 .21 .14 .10 .34 .38 .24 .16 .11 .17 .09 .09 .07
1 2 3 4 5 6 7 7 8 9 10 11 12 3 14 5 15 16 7 17 8 19 20 21 22 3 24 5 26 7 28 9 29 29 29 29 29 29 29 29 29 29 29 29 2	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 4.9 4.5 4.5 4.5 4.5 4.5 4.5 4.5	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .07 .06 .05 .09 .09 .04 .04 .04 .04 .04 .04 .04 .04 .04 .04	OISCHARGE (CFS) 6.0 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.1 7.8 8.4 6.9 6.1 5.8 5.3 5.3 5.3	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .47 .18 .11 .11 .07 .06 .06 .06 .06 .06 .06 .06 .06 .06	DISCHARGE (CFS) 5.0 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8 7.2 6.9 6.6 6.5	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 4 5 5 6 6 8 7 7 5 5 4 4 3 3 3 2 2 2 2 2	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .38 .21 .14 .10 .34 .38 .24 .16 .11 .07 .09 .07 .06 .05 .04 .09
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 6.9 4.8 4.7 6.5 4.5 4.5 4.5 4.5 4.5 4.6 5.1 6.5 6.5 6.5 6.6 6.7 6.6 6.7 6.7 6.7 6.7 6.7 6.7 6.7	MEAN CONCENTRATION (MG/L) 3	SEDIMENT (TONS/DAY) .04 .05 .07 .07 .06 .05 .05 .05 .05 .03 .04 .04 .04 .04 .04 .04 .05 .05 .05 .05 .07 .07 .08 .09 .09 .09 .09 .09 .09 .09 .09 .09 .09	OISCHARGE (CFS) 6.0 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.0	MEAN CONCENTRATION (MG/L) 11 10 9 8 7 6 6 6 5 5 5 6 7 7 7 7 7 7 22 2 8 8 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SEDIMENT (TONS/DAY) .18 .15 .13 .11 .10 .08 .08 .07 .07 .07 .08 .09 .10 .10 .10 .10 .47 .18 .11 .11 .07 .06 .06 .06 .06 .06 .06 .06 .06 .06	DISCHARGE (CFS) 5.0 4.9 4.7 4.7 4.5 5.9 25 14 9.8 8.5 7.6 19 11 10 10 9.0 8.3 7.9 7.8 7.3 6.9 6.6 6.5 6.3 6.1	MEAN CONCENTRATION (MG/L) 4	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .15 .38 .21 .14 .10 .3.4 .38 .24 .16 .11 .07 .09 .11 .13 .16 .14 .09 .07
1 2 3 4 5 6 7 7 8 9 10 11 12 3 14 5 15 16 7 17 8 19 20 21 22 3 24 5 26 7 28 9 29 29 29 29 29 29 29 29 29 29 29 29 2	DISCHARGE (CES) 4.8 4.7 4.5 4.5 4.5 4.5 4.5 5.9 6.3 5.6 5.2 5.1 4.9 4.5 4.5 4.5 4.5 4.5 4.5 4.5	MEAN CONCENTRATION (MG/L) 3 3 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	SEDIMENT (TONS/DAY) .04 .04 .05 .07 .07 .06 .05 .07 .06 .05 .09 .09 .04 .04 .04 .04 .04 .04 .04 .04 .04 .04	OISCHARGE (CFS) 6.0 5.6 5.5 5.4 5.3 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	MEAN CONCENTRATION (MG/L) 11 10 10 9 8 7 6 6 6 5 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7	SEDIMENT (TONS/DAY) .18 .15 .15 .13 .11 .10 .08 .08 .07 .07 .08 .09 .10 .10 .10 .10 .47 .18 .11 .11 .10 .06 .06 .06 .06 .06 .06 .06 .06 .06 .0	DISCHARGE (CFS) 5.0 4.7 4.7 4.5 5.9 25 14 8.5 7.6 19 10 10 9.0 8.3 7.9 7.8 7.2 6.9 6.6 6.5	MEAN CONCENTRATION (MG/L) 4 4 4 3 3 3 18 200 10 8 6 5 58 10 8 6 4 4 5 5 6 6 8 7 7 5 5 4 4 3 3 3 2 2 2 2 2	SEDIMENT (TONS/DAY) .05 .05 .05 .04 .04 .36 .38 .21 .14 .10 .34 .38 .24 .16 .11 .07 .09 .07 .06 .05 .04 .09

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CALIF. -- Continued

TOTAL SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1	9.7	44	1.6	4.4	3	.04	3.3	9	•08
2	12	40	1.3	4.2	4	•05	3.2	8	•07
3	8.3	25	•56	4.3	4	•05	3.2	7	•06
4	7.2	5	.10	4.3	4	.05	3.2	7	•06
5	6.A	3	.06	4.3	4	•05	3.3	7	.06
6	6.6	4	.07	4.4	5	.06	3.2	6	•05
7	6.6	5	.09	4.3	5	.06	3.1	5	•04
8	6.3	6	-10	4.3	4	.05	3.1	8	•07
9	6.4	7	.12	4.1	4	.04	3.1	11	• 09
10	6.3	5	•09	4.0	3	.03	3.0	14	-11
11	5.9	4	•06	4.0	3	.03	3.0	17	-14
12	5.8	3	.05	4.1	3	•03	2.9	14	•11
13	5.9	3	•05	4.2	3	.03	2.8	10	.08
14	5.7	4	• 06	4.3	3	.03	2.6	7	• 05
15	5.5	4	•06	4.0	4	•04	2.6	9	•06
16	5.5	4	.06	3.9	4	.04	2.6	11	.08
17	5.3	3	.04	3.8	5	• 05	2.6	13	• 09
18	5.1	3	.04	3.9	5	•05	2.6	16	.11
19	5.4	2	.03	3.9	4	-04	2.5	20	- 14
20	5.4	?	.03	3.9	3	-03	2.3	24	.15
21	5.6	2	.03	3.8	3	•03	2.1	15	•09
72	5.4	3	.04	3.8	7	+07	2.0	6	•03
23	5.4	3	.04	3.9	8	.08	1.9	6	.03
24	5.0	3	.04	3.9	9	.09	2.0	7	•04
25	4.8	2	.03	3.8	9	•09	2.2	8	+05
26	4.7	1	-01	3.7	8	+08	2.2	8	•05
27	4.8	1	.01	3.5	8	.08	2.3	6	• 04
28	4.7	2	•03	3.4	7	.06	2.3	3	•02
29	4.6	2	.02	3.4	7	•06	2.2	4	•02
30	4.4	3	.04	3.4	8	•07	2.2	5	.03
31				3.4	9	.08			
TOTAL	181.1		4.86	122.6		1.64	79.6		2.10

		JULY			A ∪GŲS T			SEPTEMBER	
ĐAY	MFAN DISCHARGE (CFS)	MFAN CONCEN- Tration (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	TOTAL SEDIMENT (TONS/DAY)
1	2.4	6	-04	2.0	4	•02	1.6	14	•06
2	2.5	ž	.05	2.0	5	.02	1.7	17	.08
ŝ	2.3	8	•05	2.0	4	•02	1.6	20	•09
4	2.2	9	• 05	2.1	3	•02	1.7	5	•02
5	2.1	Ź	.04	2.0	ž	•01	1.8	4	•02
6	2.1	5	•03	2.0	2	.01	1.7	3	.01
7	2.3	3	• 02	2.0	3	•02	1.6	2	•01
R	2.5	2	.01	2.0	3	•02	1.6	2	•01
9	2.3	1	.01	2.0	4	•02	1.5	2	.01
3.0	2.7	ı	.01	2.0	4	•02	1.3	2	•01
11	2.1	2	.01	2.0	5	•03	1.5	2	.01
12	2.0	2	•01	2.0	6	.03	1.5	ż	.01
13	2.7	3	.02	2.0	7	.04	1.5	2	•01
14	2.3	4	.02	2.0	5	•03	1.5	ż	•01
15	2.3	4	.02	2.2	á	•02	1.3	2	•01
16	7.7	4	•02	2.1	2	•01	1.3	1	0
17	2.2	4	•02	2.0	5	•03	1.3	1	0
18	2.0	6	.03	2.0	8	.04	1.3	1	0
19	1.8	7	.03	2.0	10	• 05	1.3	1	0
50	1.8	6	.03	2.0	13	•07	1.3	1	0
21	2.0	5	.03	2.0	10	•05	1.3	2	•01
22	2.0	4	•02	1.8	6	•03	1.3	á	•01
23	2.0	2	•01	1.8	3	.01	1.3	4	•01
24	2.0	2	•01	1.7	ź	.03	1.2	5	•02
25	2.0	2	•01	1.9	11	.06	1.2	5	•02
26	2.0	2	.01	1.8	15	.07	1.2	5	•02
27	2.0	2	.01	1.8	19	•09	1.2	5	•02
28	2.0	3	•02	1.6	15	•06	1.3	4	•01
29	2.0	3	.02	1.5	12	.05	1.5	4	• 02
30	2.0	4	.02	1.7	8	.04	1.5	3	•01
31	2.0	4	•02	1.6	11	•05			
TOTAL	65.8		.70	59.6		1.08	42.9		•52

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

1566.6 41.58

11143000 BIG SUR RIVER NEAR BIG SUR, CALIF.

LOCATION.--Lat 36°14'45", long 121°46'20", in SWASWA 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 1968.

EXTREMES. -- 1967-68: Water temperatures: Miaimum, 5.0°C Dec. 15.

Period of record:

Water temperatures: Maximum (1965-67), 20.0°C Aug. 1, 5, 17, 1966; minimum (1965-66, 1967-68), 5.0°C Dec. 15, 1967.

REMARKS .-- No records available July 16 to Aug. 17.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	۱Y																
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																																
HUHIXAM								15																								14
MINIMUM	16	16	17	16	16	14	14	14	14	15	15	16	16	15	14	14	14	14	14	14	14	14	14	13	13	13	13	13	13	12	12	14
NOVEMBER																																
MUMIXAM								14																								12
MINIMUM	12	-12	12	13	13	13	13	13	13	13	13	13	13	14	13	13	13	12	13	13	13	12	12	11	11	10	10	10	9	9		12
DECEMBER																																
MUMIXAM								11													7		8	9	9	9	9	9	9	9		9
MUMINIM	9	8	9	11	10	11	11	11	9	9	8	8	6	6	5	6	7	8	8	7	7	7	8	8	9	9	9	9	9	9	8	8
JANUARY	_		_	_	_	_	_	_	_		_								_	_			_	_	_	_	_	_	_			_
MUHIXAM	8						7			10					12						10			9	9	9	9 8	8			10	9
MINIHUM	8	8	7	7	•	6	6	7	8	9	8	9	9	10	11	11	10	В	8	8	9	9	9	9	9	9	8	8	8	9	9	8
FEBRUARY																	• •			٠.												
MUMIXAM								12																								12
MUNINUM	,	10	10	10	11	12	12	11	11	11	10	11	11	IO	11	11	12	12	12	13	14	13	1.4	1.4	14	13	13	12	12	_		11
MARCH									٠.										٠.	٠.												
MAXIMUM								14																								14
MINIMUM	13	12	13	13	12	13	13	14	12	12	13	13	13	13	13	13	13	12	12	12	14	17	14	1.0	14	12	1.4	13	15	10	10	13
APRIL									٠.						٠.			. ~														
MUHIXAM								18																								16
MINIMUM	10	10	14	10	10	10	10	16	10	17	17	17	16	10	11	10	12	12	12	10	12	12	10	12	12	13	14	14	13	14		15
MAY MAXIMUM		.,		• •			• •	13	٠.			• •										14							٠.			15
MINIMUM								13																								13
JUNE	13	13	13	13	13	12	13	13	13	13	12	13	13	17	12	13	14	14	12	10	12	14	1.4	14	14	12	10	11	.,	10	10	13
									٠.										٠.			••						• •				17
MUMIXAM								17																								16
JULY	10	11	10	.,		10	13	13	13	15	10	10	13	10	T.	10	14		.,	11	10	.,	I D		.,	.,	.,	10	TO	10		10
								18				~~																				
MAX IMUM		*!	10	10	14	10	14	17	14	17	i,	20	20	17	17		_			_		_										
MINIMUM	10	10	10	11	.,	r,	.,	.,	18	79	18	10	18	18	10																	
AUGUST																									_			17	18		10	
NUMINAN																						_										
SEPTEMBER																															.,	
MAXIMUM	10	, .		17	17	17		17	17		17	, ,	17	17	17	14	17	14	14	14	16	14	14	14		14	16	, ,	14	15	, .	16
MINIMUM								16																								15
MINIMUM.			. (.,		70	.,	*0	10	*0	.0	10	10	70	•0	10	10	40	40	12					••			43	47			7.2

SALINAS RIVER BASIN

11147040 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 down-stream 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 1968. Sediment records: October 1967 to September 1968.

Sediment concentrations: Maximum daily, 416 mg/l Mar. 13; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 65 tons Mar. 13; minimum daily, 0 ton on many days.

REMARKS .-- No flow Oct. 1 to Jan. 9, Jan. 13-29, May 22 to Sept. 30.

11147040 SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

HONTH		4	د	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	36	31	AVER-
UCTUBER																																
NUVEMBER.												_																	-			
DECEMBER.																																
JANUARY																																
FEBRUARY.																																
MAKCH								13					11	10			8									14	-				12	
APKIL	Ιυ	9	13					14																	24							
MAY																																
JUNE																												_				
JULY																																
AUGUST																																
SEPTEMBER																																

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

IMETHODS OF ANALYSIS: B, BOTTOM MITHORAWAL TUBE: C, CHEMICALLY DISPERSED: N, IN NATIVE MATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE: H, IN DISTILLED MATER)

		WATER	:							PART	ICLE S	SIZE					#C#U00
		PERA-		CONCEN-	SUSPENDED- SEDIMENT		NT F	NER 1	THAN '	THE S	ize (N MIC	LIME	TERS)	INDI	CATED	METHOD OF
DATE	TIME	(C)	DISCHARGE (CFS)	(MG/L)	DISCHARGE (TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	. 250	. 500	1.00	2.00	ANALY- SIS
FEB 17 1968 FEB 17			53 66	772 1250	I10 223	61 49	74 63	88 77	93 88	96 93	98 95	99 96	99 98	100 100			SPWC SPWC

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

THE THIS OF MINE	3131 64	MIONIME IEK	OF TIPTICAL	ANAL T/EK;	5,	214AF:	A+ AIRMY	ACCUMULATION	TUBE)
WATER	NUMBER				p	ARTICLE	SIZE		
TFM-	ΩF								

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OC TORER			NOVEMBER			DECEMBER	
ΠΔΥ	MEAN DISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5									
6 7 8 9									
11 12 13 14									
16 17 18 19 20									
21 22 23 24 25									
26 27 28 29 30 31									

0

0

0

TOTAL

11147040 SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF. --Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANHARY FERRUARY MARCH MEAN CONCEN-TRATION (MG/L) MEAN MEAN SEDIMENT DISCHARGE (TONS/DAY) MEAN SEDIMENT DISCHARGE MFAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) CONCEN-TRATION (MG/L) MEAN SEDIMENT DISCHARGE (CFS) DISCHARGE (CFS) DISCHARGE (TONS/DAY) DAY (TONS/DAY) ---------86 .35 .22 .16 .13 .27 .27 .22 .21 0 0 0 .01 1 2 3 4 5 00000 000 6 4 3 3 0 0 0 0 3.1 10 2.2 1.3 0 0 0 0 4.9 0 0 0 0 2.9 .10 .08 .08 .06 0 1.1 4.0 6 7 8 9 00000 1 24 103 2 2 1 1 .12 .15 .01 0 0 .05 .05 .14 .12 .97 .88 31 5.7 3.5 15 20 416 15 10 .04 .05 65 .23 40 15 --11 12 13 14 1.4 0 0 0 0 •18 0 0 ------•09 352 35 35 10 6 0 7.9 4.4 3.0 2.2 1.7 3.4 16 17 18 19 20 0 0 0 0 0 0 0 62 5 5 5 5 29 6.4 2.5 1.5 .60 .07 .02 .06 .04 .03 0 1.2 .87 .67 .53 21 22 23 24 25 0 ------1.4 1.2 .98 .86 .02 .02 .01 0 0 0 0 •05 5 5 5 5 5 .01 .01 0 0 .01 ----53 41 .37 .33 .30 .30 .67 .60 .55 .43 .42 0 0 0 0 1.8 1.1 0000 0 0 0 26 27 28 29 30 31 .01 -01 .01 0 0 --TOTAL 10.68 5.96 46.2R 87.52 74.33

		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	3.1	45	.57	•07	1	0			
2	2.0	22	.12	•07	1	0			
3	.79	3	-01	.07	1	0			
4	-61	3	0	.08	j	0			
5	•55	3	0	•09	ı	0			
6	•47	3	0	.08	1	0			
7	•42	3	0	-07	1	0			
8	.37	2	0	•06	1	0			
9	• 32	2	0	•06	1	0			
10	.30	2	0	•06	ı	0			
11	•30	2	0	•05	1	0			
12	-30	2	0	•05	1	0			
13	•26	2	Ó	•05	1	0			
14	•23	2	0	.08	1	0			
15	•24	2	0	•05	1	0			
16	•26	2	0	.03	1	0			
17	• 25	2	0	.03	1	0			
18	•19	1	0	•02	1	0			
19	-18	1	0	.02	1	0			
50	-18	1	0	•02	1	0			
51	-18	1	0	-01	1	0			
22	-15	1	0	0	0	0			
23	•12	1	0	0	0	0			
24	-12	1	0	0	0	0			
25	•12	1	0	0	0	0			
56	-10	1	0	0	0	0			
27	• 09	1	0	0	0	0			
28	.08	1	0	0	0	0			
29	•08	1	0	0	0	0			
3D	+08	1	0	0	0	0			
31				0	0	0			
TOTAL	12.44		•70	1.12		0	0		0

SEPTEMBER

SALINAS RIVER BASIN

11147040 SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 AUGUST

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 CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1									
1 2 3 4 5									
4									
5									
6									
6 7 8									
8									
9 10									
10									
11									
12									
13									
14 15									
16									
17									
18 19									
20									
21 22									
23									
24									
25									
26									
27									
28									
29 30									
31									
TOTAL	0		0	0		0	0		0
	IARGE FOR YE FOR YEAR (T		AYS)						158.04 135.73

11147070 SANTA RITA CREEK NEAR TEMPLETON, CALIF,

LCCATION. -- 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 1968. Sediment records: October 1967 to September 1968.

Sediment concentrations: Maximum daily, 245 mg/l Feb. 17; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 61 tons Mar. 13; minimum daily. 0 ton on many days.

REMARKS .-- No flow Oct. 1-6, Oct. 15 to Nov. 23, June 13 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

11147070 SANTA RITA CREEK NEAR TEMPLETON, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTORER			NOVEMBER			DECEMBER	
	MFAN	MFAN CONCEN-	SEDIMENT	MFAN	MFAN CONCEN-	SEDIMENT	MEAN	MFAN CONCEN-	SEDIMENT
DAY	DISCHARGE (CES)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	0		n	0		n	.35	2	0
2	n		n	n		n	.27	?	0
3	0		Ð	0		0	.19	2	0
4	n		n	0		0	•19	2	n
5	n		n	0		n	1.9	5	.03
6	n		0	0		n	.41	2	0
7	.26	6	0	0		0	.54	3	n
B	.16	4	0	0		0	.35	2	0
9	.05	3	n	0		n	.26	2	0
10	•04	3	n	n		0	•20	7	0
11	.04	2	0	n		0	.17	2	n
12	.03	1	0	0		0	.16	?	0
13	• 02	1	0	0		0	.16	2	0
14	.01	1	0	0		0	.16	2	0
15	0		0	n		n	.16	2	0
16	0		n	0		0	.16	2	0
17	0		0	0		0	•19	2	0
18	0		0	0	-~	n	2.3	6	• 04
19	0		0	0		0	2.3	6	.04
20	0		0	n		n	1.3	5	• 02
21	0		n	0		0	1.0	5	.01
22	0		0	0		0	-60	4	•01
23	0		n	0		n	.47	4	• 01
24	0		0	•05	1	0	.47	4	•01
25	0		O	.04	1	n	.30	4	0
26	n		0	.05	1	0	•22	4	0
27	n		0	•05	1	0	.16	3	0
28	0		0	•08	1	0	-16	3	0
29	O		0	•09	1	0	.16	3	0
30	0		o	1.7	4	• 02	•13	3	0
31	0		0				.13	3	0
TOTAL	.61		0	2.06		•02	15.47		.17

		JANHARY			FFRRUARY		MARCH						
		MFAN			MEAN		MEAN						
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)				
1	.13	3	0	2.6	53	.37	2.3	3	• 02				
2	.11	3	ő	1.5	18	.07	2.3	3	•02				
á	.11	3	ő	1.2	ĭ	0.	2.1	ž	.01				
4	•09	á á	Ô	1.0	ž	•01	2.1	2	•01				
5	.09	3	ő	.80	ī	0	2.1	2	•01				
6	.09	3	0	.80	1	0	2.0	2	•01				
7	.09	3	0	•80	2	0	3.1	5	.04				
8	.09	3	0	.80	3	•01	23	56	4.1				
9	•09	3	0	1.0	4	.01	6.6	20	•36				
10	5.5	86	3.4	1.0	5	.01	.3.6	5	.05				
11	5.1	86	1.7	1.0	9	.02	2.7	4	•03				
12	1.2	9	.03	1.0	8	•02	2.3	2	•01				
13	•60	3	0	1.7	.6	.03	55	230	61				
14	.30	6	0	1.9	20	-10	19	10	•51				
15	•22	6	n	1.7	16	.07	11	4	•12				
16	•22	6	n	1.7	15	.07	17	48	4.1				
17	•22	6	0	36	245	44	16	7	•30				
18	.19	5	0	18	115	7.7	9.8	3	•08				
19	•19	5	0	5.2	10	-14	7.6	?	-14				
20	.19	5	0	3.2	2	•02	6.9	6	-11				
21	.19	5	0	2.6	2	.01	5.7	4	• 06				
22	-19	5	0	2.2	3	•02	5.0	3	•04				
23	.19	5	0	2.1	2	•01	4.0	2	•02				
24	•19	5	0	2.1	2	•01	3.6	2	.02				
25	.19	5	0	2.1	2	.01	3.3	2	• 02				
26	-19	5	0	2.1	2	•01	3.0	3	•02				
27	.35	3	0	2.1	2	.01	2.9	3	•02				
28	.47	1	0	2.2	3	• 02	2.8	3	• 02				
79	.47	1	0	2.3	3	•02	2.6	3	•02				
30	.47	1	0				2.3	2	• 01				
31	9.8	128	4.3				2.3	5	.01				
TOTAL	27.52		9.43	102.70		52.77	234.0		71.29				

11147070 SANTA RITA CREEK NEAR TEMPLETON, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY		JUNE						
DΔY	MEAN DISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MFAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)				
1	8.5	19	.85	•70	3	•01	•09	1	0				
2	11	24	.85	.70	3	•01	•09	1	0				
3	5.3	8	•11	.61	3	0	•08	1	0				
4	3.6	6	•06	•60	3	0	.08	1	0				
5	3.1	5	•04	•60	3	0	•06	1	0				
6	2.7	5	•04	.58	3	n	•06	1	0				
7	2.3	5	.03	.51	3	0	.05	1	0				
8	2.2	5	.03	.47	3	0	.05	1	n				
9	2.1	5	.03	.47	3	0	.04	1	0				
10	2.0	5	.03	.41	3	0	•04	1	0				
11	1.9	4	•02	.41	3	0	•03	1	n				
12	1.9	4	.02	.43	3	0	.02	1	0				
13	1.9	4	.02	.52	3	0	0		0				
14	1.9	4	•02	.65	3	.01	0		0				
15	1.8	4	.02	.50	2	0	0		0				
16	1.7	1	0	.40	2	0	0		0				
17	1.6	3	.01	.33	2	0	0		0				
18	1.3	3	•01	.29	2	0	0		0				
19	1.3	3	•01	.26	?	0	Ó		0				
50	1.3	3	•01	.26	5	n	n		0				
21	1.3	3	•01	.24	2	0	0		0				
22	1.3	3	•01	.23	2	0	0		0				
23	1.2	3	•01	.27	2	0	n		0				
24	1.2	3	•01	•26	?	0	0		0				
25	1.7	3	.01	•22	5	0	0		0				
26	1.2	3	•01	.19	3	0	n		n				
27	.91	3	•01	.16	2	0	0		0				
28	•86	3	.01	.13	ì	0	0		n				
29	.76	3	•01	.11	1	0	n		0				
30	• 70	3	•01	.11	1	0	0		n				
31				•09	1	0							
TOTAL	70.03		2.31	11.66		•03	.69		n				

		THEA			AHGUST		SEPTEMBER						
DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MFAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	SEDIMENT DISCHARGE (TONS/DAY)					
1													
2													
3 4													
5													
,													
6													
7													
8 9													
10													
11													
12													
13													
14 15													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24 25													
()													
26													
27													
28													
29 30													
31													
JATOT	0		n	0		0	0		0				

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

464.74 136.02

11147070 SANTA RITA CREEK NEAR TEMPLETON, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

WATER										PARTICLE SIZE									
		TEM- PERA- TURE	- DISCHARGE	CONCEN- TRATION	SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (1	IN MI	LLIME	rers)	INDIC	ATED	METHOD OF ANALY-		
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	•004	.00B	.016	.031	•062	.125	-250	•500	1.00	2.00	\$15		
JAN 31 1968		7	13	181	6.4	88	98	98	100								SBWC		
MAR 8	0700	14	3 3	66	5.9	81	89	96	96	96	98	99	100				SBWC		
MAR 13	0855	13	118	630	201	58	73	82	85	86	94	94	97	100			SBWC		
MAR 13	1010	13	93	451	113	61	76	86	9 D	90	95	96	98	100			SBWC		

11148800 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 1968. Sediment records: March 1958 to September 1959. October 1960 to September 1964. March 1965 to September 1968.

FYTDEWES __1087_60.

Sediment Concentrations: Maximum daily, 135 mg/l Mar. 13; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 310 tons Feb. 17; minimum daily, 0 ton on many days.

Period of record:

Sediment concentrations: Maximum daily, 6,860 mg/l Nov. 13, 1980; minimum daily, no flow on many days each year. Sediment discharge: Maximum daily, 172,000 tons Jan. 24, 1987; minimum daily, 0 ton on many days each year. REMARKS.--No flow Oct. 1 to Nov. 29, June 19 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

PARTICLE SIZE OF RED MATERIAL, MATER YEAR OCTORER 1967 TO SEPTEMBER 1968
(METHOD OF ANALYSIS: H, HYDROMETER: O, OPTICAL ANALYZER: S, SIEVE: V, VISUAL ACCUMULATION TUBE)

MATER NUMBER

TEM— OF
PERA— SAM— PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED OF
TUBE PLING DISCHARGE

DATE TIME (C) POINTS (CFS) .062 .125 .250 .500 1.00 2.00 4.00 8.00 16.0 32.0 64.0 815

OCT 11 1967 1400 7 0 1 4 21 35 41 48 54 64 77 88 100 S

11148800 NACIMIENTO RIVER NEAR BRYSON, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

			Primari Dioc	union, wat		1507 I	OFFERNAN 1968						
		OCTOBER			NOVEMBER		DECEMBER						
DAY	MEAN DISCHARGE (CFS)	MFAN 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	2.4	5	•03				
2				0		0	1.0	4	•01				
3 4				0		0	•72	3 5	-01				
5				o		0	2.6 49	19	•04 4•2				
6				0		0	28	21	1.6				
7				0		0	25	16	1.1				
8				o		0	41	15	1.7				
9 10				0		0	20	12	•65				
						•	15		.36				
11				0		0	13	6	•21				
12				0		0	11	5	-15				
13 14				0		0	9.4	4	•10				
15				0		0	8.1 7.8	3 3	•07 •06				
16				0		0	8.0	3	•06				
17				ō		ō	B.4	3	•07				
18				o		ō	82	19	6.8				
19				0		0	90	23	5.6				
20				0		0	57	21	3.2				
21 22				0		o	40	19	2.1				
22				0		0	31	17	1.4				
24				D		0	26 22	15 14	1.1 .83				
25				0		0	20	14	•76				
26				0		0	19	14	•72				
27				ō		ō	18	14	•68				
28				0		ñ	17	14	.64				
29				D		0	15	14	.57				
30				2.8	5	.04	14	14	• 53				
31							13	14	•49				
TOTAL	0		0	2 • B		•04	714.42		35.84				
		JANUARY			FFRRUARY			MARCH					
		MFAN			MEAN			MEAN	05574545				
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT				
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)				
1	13	14	.49	123	3	1.0	37	2	•20				
2	13	14	•49	81	1	•22	34	ì	•09				
3	12	13	.42	61	1	.16	31	1	• 08				
4	11	11	.33	51	1	-14	29	1	•08				
5	11	9	.27	44	1	•12	27	1	- 07				
6	11	7	.21	38	1	.10	26	1	.07				
7 8	11	5	.15	34	1	•09	33	6	•53				
9	11 11	4	.12	31 29	1	•08 •08	201 135	56 8	33				

DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	13	14	.49	123	3	1.0	37	2	•20
2	13	14	•49	81	1	•22	34	1	•09
3	12	13	.42	61	1	.16	31	1	• 08
4	11	11	.33	51	1	.14	29	1	•08
5	11	9	. 27	44	1	•12	27	1	- 07
6	11	7	.21	38	1	.10	26	1	•07
7	11	5	.15	34	1	•09	33	6	•53
8	11	4	.12	31	1	•08	201	56	33
9	11	4	.12	29	1	•08	135	8	2.9
10	151	20	21	27	I	.07	91	3	-74
11	153	11	4.5	25	1	•07	72	2	•39
12	71	5	•96	24	ı	•06	63	2	•34
13	49	5	. 66	27	1	•07	545	135	243
14	38	5	-51	27	1	•07	269	13	9.4
15	34	4	• 37	23	1	• 06	180	2	•97
16	31	4	.33	79	14	8.0	200	8	5.7
17	28	?	.15	812	119	310	210	2	1.1
18	24	1	.06	417	8	8.9	162	1	. 44
19	22	1	•06	206	2	1.1	133	1	•36
20	21	1	•D6	147	1	-40	111	1	• 30
21	20	1	.05	119	1	.32	94	2	-51
22	19	1	•05	99	1	•27	81	2	.44
23	18	2	•10	80	1	.22	71	1	• 19
24	17	2	.09	69	1	.19	65	1	-18
25	17	7	• 09	60	1	.16	58	1	-16
26	15	1	.04	54	1	.15	53	1	-14
27	16	1	•04	49	2	•26	48	1	•13
28	18	1	• 05	45	2	• 24	44	1	•12
29	18	1	•05	41	2	•2?	40	1	-11
30	27	1	.07				39	1	•11
31	309	22	23				36	1	-10
TOTAL	1220		54.89	2917		332.82	3218		301.95

11148800 NACIMIENTO RIVER NEAR BRYSON, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	86	11	6.0	14	1	.04	3.2	1	•01	
2	155	10	4.9	13	1	.04	2.8	1	•01	
3	90	2	•49	12	1	.03	2.3	1	• 01	
4	71	2	•38	12	1	.03	2.3	1	.01	
5	63	2	. 34	12	?	•06	2.0	1	.01	
6	56	2	-30	12	2	•06	2.0	1	.01	
7	50	2	•27	11	2	•06	2.0	1	.01	
8	46	2	.25	11	2	•06	Z.0	1	•01	
9	42	1	.11	11	2	.06	1.7	1	0	
10	38	1	.10	11	2	.06	1.7	1	0	
11	36	1	-10	10	1	.03	1.3	1	0	
12	34	1	•09	9.8	1	•03	1.1	1	0	
13	32	1	•09	12	1	.03	.88	1	0	
14	31	2	•17	20	1	-05	.72	1	0	
15	29	4	• 31	80	ì	.05	.53	ī	Ö	
16	27	5	. 36	15	1	.04	.35	1	0	
17	26	4	.28	12	1	•03	.16	1	0	
18	24	3	•19	11	1	-03	•03	1	0	
19	23	2	-12	10	1	.03	0		0	
20	23	1	•06	9.3	1	.03	0		0	
21	22	1	•06	8.4	1	.02	0		0	
22	21	1	•06	8.4	1	•02	0		0	
23	21	2	-11	8.4	1	.02	0		0	
24	20	2	.11	7.8	1	•02	0		0	
25	20	t	.05	7.8	ì	• 02	o		0	
26	18	1	.05	7.1	1	•02	0		0	
27	17	?	•09	5.9	1	•02	0		0	
28	17	2	•09	5.4	1	•01	0		0	
29	16	2	.09	4.4	1	•01	0		0	
30	15	2	-08	4.0	1	.01	0		0	
31				3.6	1	.01				
TOTAL	1169		15.70	319.3		1.03	27.07		• 08	

		JULY			AUGUST		SEPTEMBER			
DAY	MEAN DISCHARGE (CFS)	MFAN 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 4 5										
6 7 8 9										
11 12 13 14										
16 17 18 19 20										
21 22 23 24 25										
26 27 28 29 30 31										

0

TOTAL

0 0 ---

67

11149900 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 1968. Sediment records: October 1965 to September 1968.

EXTREMES. -- 1967-68: Sediment concentrations: Maximum daily, 257 mg/l Feb. 17; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 264 tons Feb. 17; minimum daily, 0 ton on many days.

Period of record:

Sediment concentrations: Maximum daily, 7,420 mg/l Dec. 6, 1966; minimum daily, no flow on many days each year,
Sediment discharge: Maximum daily, 181,000 tons Dec. 6, 1966; minimum daily, 0 ton on many days each year.

Sedimer	Sediment discharge: Maximum daily, 181,000 tons Dec. 6, 1966; minimum daily, 0 ton on many days each year.													
REMARKS No flow Oct. 1 to Dec. 18, June 7 to Sept. 30.														
			TEMPERATURE	(°C) OF	WATER, WA	TER YEAR	OCTOBER 1	967 TO SEE	PTEMBER 19	68				
DAY	OCT	NOV	DÉC	JAN	FÉB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1							10.0							
2							5.0							
3							4.0							
4 5						7.0								
6							17.0							
7														
8														
9 10							18.5							
10								19.0						
11						17.5								
12 13														
14						8.5	14.5							
15						4.0								
16						4.5								
17						2.5	14.5							
18					6.0	2.5								
19 20					6.0	2.5								
20														
21					7.0	4.0	15.5							
22								25.5						
23					9.0	4.5								
24								20.5						
25					10.0		24.0							
26				12.0		4.5								
27														
28						16.0								
29					8.5			26.5						
30														
31														
MONTH														
		on onex	DED SEDIMEN	T AND DAR	TTCLE SIZ	R. WATER	YEAR OCTO	OBER 1967 1	O SEPTEMB	ER 1968				
(METHODS O	F ANALY	SIS:	R. ROTTOM N	ITHORAWAL	TUBE; C.	CHEMICA	LLY DISPER	RSED: N. II	N NATIVE W	ATER; P	PIPET: S.	SIEVE;		
		ATER						PARTICLE	SIZE					
		NATER Tem-		٠.	ISPENDED							METHOD		
		PERA-	,	CONCEN- SE	DIMENT	PERCENT	FINER THAP	N THE SIZE	(IN MILLI	METERS)	INDICATED	OF		
			DICCHARCE	TOATTON DI	CCHARGE							ANALY-		
DATE	TIME ((CFS)	MG/L) (T	ONS/DAY)	.002 .00	4 .008 .0	16 .031 .00	62 •125 •2	50 •500	1.00 2.00	515		
FEB 19 1968	1215		167	62	28	6	8 14 1	L7 18 2	25 30	74 99	100	VBWC		
PED 19 1900	1317													
(451	THOO OF	PARTI	CLE SIZE OF SIS: H. HY	RED MATE	RIAL, WAT	ER YEAR Al Anaiy	OCTOBER 19 ZER: S. SI	10 SEP1 EVE; V, VI	SUAL ACCU	MULATION	TUBE)			
(112)			R NUMBER		_,			TICLE SIZE						
		TEM-	OF				7 40	5120				METHOD		
			- SAM-		PERCE	NT FINED	THAN THE	SIZE (IN M	ILLIMETER	S) INDIC	ATED	OF		
			PLING DI	SCHARGE								ANALY-		
DATE	TIME	(C)			062 .125	.250	.500 1.00	2.00 4.	00 8.00	16.0 3	2.0 64.0	515		
OCT 31 196	7 1700		7	0	1	6	26 49	69	80 88	96	100	s		
FEB 19 196			5	167		3	28 51		86 94	100		s		
MAR 11			5	63		2	23 53		88 95	98	100	S		
,,An			-			-								

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF .-- Continued

		OCTOBER			NOVEMBER		DECEMBER				
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)		
1							0		0		
2							0		0		
3 4							0		0		
5							Ģ		0		
,							0		0		
6							0		0		
7							0		0		
В							0		0		
9							0				
10							0		0		
11							0		0		
12							ō		ō		
13							0		0		
14							0		0		
15							0		0		
16							0		0		
17							ō		ō		
18							0		0		
19							3.2	3	.03		
50							16	3	.13		
21							20	4	•22		
22							20	4	• 22		
23							18	4	•19		
24							18	4	- 19		
25							16	3	•13		
26							16	3	•13		
27							15	3	•12		
28							15	3	•12		
29							15	3	-12		
30							14	3	-11		
31							12	2	-06		
TOTAL	0		0	0		0	198.2		1.77		

		JANUARY			FEBRUARY		MARCH			
		MEAN			MEAN			MEAN		
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	
1	11	2	.06	89	30	7.2	30	12	.97	
2	12	2	.06	63	20	3.4	32	11	. 95	
3	12	2	•06	48	10	1.3	27	11	.80	
4	11	2	•06	43	10	1.2	30	12	. 97	
5	12	2	•06	34	В	.73	23	13	.81	
6	11	2	•06	30	7	.57	21	14	.79	
ž	îî	ž	.06	25	6	.40	25	15	1.0	
8	11	7	•06	23	6	.37	96	30	10	
, g	12	ż	.06	21	5	.28	107	37	ii	
10	15	3	•12	21	5	.28	73	31	6.1	
		-			-					
11	63	20	3.4	18	4	•19	55	27	4.0	
12	46	10	1.2	16	4	.17	48	26	3.4	
13	32	7	.60	18	4	-19	136	186	95	
14	27	6	.44	16	4	.17	127	120	41	
15	25	6	•40	15	4	.16	92	100	25	
16	18	4	.19	21	5	.28	82	125	28	
17	16	3	•13	261	257	264	118	65	21	
18	14	3	-11	278	157	126	89	76	18	
19	14	3	-11	158	62	26	83	82	18	
20	14	3	-11	100	40	11	69	54	10	
21	14	3	.11	78	28	5.9	58	28	4.4	
22	14	3	•11	69	24	4.5	52	18	2.5	
23	14	3	•11	61	24	4.0	46	16	2.0	
24	12	ž	.06	54	28	4.1	41	16	1.8	
25	14	3	-11	48	33	4.3	37	16	1.6	
26	14	12	.45	45	28	3.4	31	17	1.4	
27	12			41						
28		2	•06		22	2.4	32	20	1.7	
29	10	2	•05	39	17	1.8	34	30	2.8	
30	14 18	4	.11	36	14	1.4	33 32	25 20	2.2 1.7	
30	1H 154	60	.19 25					20 15		
31	174	60	25				26	15	1.1	
TOTAL	677		33.71	1769		475.69	1785		319.99	

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF. -- Continued

		APRIL			MAY		JUNE			
DAY	MEAN CONCEN- SEDIMENT DISCHARGE TRATION DISCHARGE (CFS) (MG/L) (TONS/DAY)			MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN CONCEN- SEDIMENT DISCHARGE TRATION DISCHARGE (CFS) (MG/L) (TONS/DAY			
1	29	14	1.1	12		•03	3.1	•	0.2	
2	59	112	19	12	1 1	•03	2.6	2	•02 •01	
3	42	30	3.4	11	i	•03	1.8	2	•01	
4	35	20	1.9	ii	î	•03	.89	ž	0	
5	33	15	1.3	10	ī	•03	.15	5	0	
6	32	11	.95	10	2	-05	.04	2	0	
7	31	15	1.3	10	2	• 05	0		0	
8	30	20	1.6	10	2	•05	0		0	
9	28	25	1.9	9.6	2	• 05	0		0	
10	27	20	1.5	9.2	?	•05	0		0	
11	26	15	1.1	9.0	2	•05	0		0	
12	25	10	.68	9.0	2	.05	0		0	
13	24	10	.65	10	2	•05	0		0	
14	22	to	.59	11	2	•06	0		0	
15	22	5	.30	12	2	•06	0		0	
16	21	2	.11	10	ı	•03	0		0	
17	20	5	.11	9.3	1	.03	0		0	
18	19	2	.10	8.5	1	•05	0		0	
19	18	5	.24	7.7	1	• 02	0		0	
20	18	10	.49	7.1	1	•02	0		0	
21	17	12	.55	6.8	1	•02	0		0	
22	17	10	• 46	6.6	1	• 02	0		0	
23	16	5	•22	6.2	2	•03	0		0	
24	15	5	.08	5.8	3	.05	0		0	
25	15	5	.08	5.6	3	•05	0		0	
26	15	2	.08	6.5	3	•05	0		0	
27	14	2	•08	6.1	2	•03	0		0	
28	14	2	•08	5.2	2	•03	0		0	
29	13	1	.04	4.1	2	• 05	0		0	
3 D	13	1	.04	3.4	2	•02	0		0	
31				3.0	2	•05				
TOTAL	710		40.03	257 .7		1.13	8.58		.04	
		JULY			AUGUST			SEPTEMBER		
DAY	MEAN OISCHARGE (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)	

DAY	OISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)
1								
2								
2 3 4 5								
6 7								
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								
TDTAL	0		o	0		0	0	
LDISCH	ARGE FOR YE	AR (CES-D	AVSI					

11151870 ARROYO SECO NEAR GREENFIELD, CALIF.

LCCATION.--Lat 36°14'15", long 121°28'50", in NE{SE} sec.36, T.19 S., R.4 E., Monterey County, at gaging station 0.6 mile downstream from Rocky Creek, and 14.5 miles southwest of Greenfield.

DRAINAGE AREA. -- 113 sq mi.

PERIOD OF RECORD. -- Water temperatures: October 1962 to September 1968. Sediment records: October 1962 to September 1968.

Sediment concentrations: Maximum daily, 30 mg/l Jan. 30; minimum daily, no flow Aug. 17. Sediment discharge: Maximum daily, 77 tons Jan. 30; minimum daily, 0 ton on many days during July to September.

Period of record:

eriod of record:
Water temperatures (1964-66): Minimum, 4,0°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 discharge: Maximum daily, 84,800 tons Dec. 6, 1966; minimum daily, 0 ton on many days in 1966 and
1968.

REMARKS .-- No flow Aug. 17.

TEMPERATURE (°C) OF WATER, WATER TEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY																																
MONTH	À	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	36	31	AVER- AGE
OCTOBER NOVEMBER. DECEMBER.			13				13				13					13		14					12					9		9		==
JANUARY February. March				12		9	7		10		=	=			- -	8		10 8	10	8					12 8	12	12	12 12	12	=		==
APRIL MAY JUNE			18	23	=	==		19			=								==		20					_	_		_			
JULY AUGUST September																																

		OCTORER			NOVEMBER		DECEMBER			
DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
UAI	10.31	1	(TONS/DAY)	10.07						
1	10	1	.03	9.1	1	.02	37	6	• 60	
?	11	1	.03	9.1	5	.12	26	3	-21	
3	14	1	.04	9.1	12	. 29	24	2	•13	
4	16	1	.04	9.3	5	.13	24	. 2	.13	
5	15	1	.04	9.9	3	-08	87	15	5.1	
6	14	1	.04	11	2	.06	46	5	•62	
7	14	1	.04	11	?	•06	50	14	2.4	
8	12	1	.03	11	2	•06	49	8	1.3	
9	11	1	•03	12	1	.03	32	1	•09	
10	11	1	.03	13	1	•04	28	2	.15	
11	10	1	.03	14	1	•04	26	2	-14	
12	10	1	.03	13	1	•04	24	1	•06	
13	9.8	1	.03	13	1	•04	22	2	.12	
14	9.5	1	.03	15	2	-08	22	2	.12	
15	8.9	1	.02	16	2	•09	27	1	•06	
16	8.9	1	.02	16	2	.09	22	1	•06	
17	9.3	1	.03	16	1	.04	22	1	•06	
18	9.0	ı	.02	17	1	•05	81	6	1.6	
19	9.1	1	.02	19	1	•05	70	3	•57	
20	8.9	1	.02	20	1	•05	67	3	. 54	
21	9.0	1	•02	19	1	.05	39	3	.32	
22	8.7	ī	.02	19	1	.05	34	3	.28	
23	8.8	1	.02	19	1	• 05	33	3	.27	
24	8.6	1	•02	18	1	•05	32	2	.17	
25	8.3	1	.02	18	1	•05	32	1	• 09	
26	8.4	1	.02	18	2	-10	31	1	• 08	
27	8.1	1	•02	17	2	.09	30	1	.08	
28	8.3	ī	.02	17	3	-14	29	1	•08	
29	8.7	1	.02	19	4	.21	27	1	•07	
30	9.4	ī	.03	40	11	1.2	76	2	•14	
31	9.0	1	.02				26	1	•07	
TOTAL	316.7		.83	467.5		3.45	1120		15.71	

11151870 ARROYO SECO NEAR GREENFIELD, CALIF, --Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		JANUARY			FFRRUARY			MARCH	
		MFAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	26	1	.07	177	4	1.9	51	1	.14
2	25	ì	•07	119	4	1.3	49	i	.13
3	24	ĩ	.06	97	3	.79	45	í	•12
4	24	i	.06	78	2	.42	43	î	•12
5	24	ī	•06	70	i	.19	41	i	-11
6	24	1	•06	63	1	.17	40	1	•11
7	24	1	•06	58	1	.16	51	2	•28
8	24	1	•06	54	1	•15	183	16	9.5
9	24	-1	•06	50	1	.14	97	2	•52
10	119	19	12	48	1	.13	76	1	•21
11	90	18	4.8	45	1	.12	68	1	.18
12	53	6	.86	43	1	.12	65	1	-18
13	40	5	.27	42	1	-11	351	22	25
14	36	1	.10	39	1	•11	166	5	2.2
15	46	6	.75	38	1	.10	134	5	•72
16	45	6	.73	174	9	8.3	189	11	7.9
17	39	6	.63	558	27	47	183	6	3.0
18	37	5	•50	305	6	5.0	152	1	.41
19	34	?	.18	189	1	-51	131	3	1.1
20	32	1	•09	143	1	.39	114	7	•62
21	31	1	.08	120	1	•32	104	1	• 28
22	30	1	.08	101	1	•27	94	1	•25
23	29	5	.16	89	1	.24	83	1	• 27
24	27	2	.15	78	1	•21	77	1	•21
25	27	1	.07	72	1	.19	73	1	• 50
26	26	l	.07	68	1	.18	69	1	-19
27	27	1	.07	63	1	.17	64	1	•17
28	28	1	.08	59	1	.16	60	2	• 32
29	41	4	.57	55	1	•15	57	3	.46
30	450	30	77				54	3	. 44
31	530	26	55				51	5	• 28
JATOT.	2036		154.75	3095		64.00	3015		55.57

		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	71	5	1.4	23	2	-12	11	1	.03	
2	85	6	1.6	22	2	-12	10	1	•03	
3	61	3	.49	23	2	.12	9.9	1	.03	
4	55	2	.30	23	?	•12	9.5	1	.03	
5	51	7	-28	74	2	.13	9.3	1	•03	
6	49	3	.40	22	3	.18	9.7	1	•03	
7	47	5	.63	22	3	.18	11	1	•03	
R	46	5	.62	22	4	. 24	11	1	• 03	
9	45	4	.49	21	4	•23	11	1	.03	
10	44	3	.36	21	4	.23	11	1	.03	
11	42	3	.34	20	4	•55	11	1	.03	
12	40	3	.3?	21	4	•23	10	ī	•03	
13	39	3	.32	23	4	.25	9.6	i	•03	
14	38	3	.31	32	4	.35	8.8	ī	•02	
15	36	3	. 29	25	4	.27	7.7	i	• 02	
16	35	3	.28	23	4	•25	7.3	1	•02	
17	34	3	.28	71	4	•23	7.5	1	•02	
18	33	3	.27	20	4	• 22	6.9	ī	•02	
19	32	3	.26	19	4	•21	6.1	i	•02	
50	32	3	.26	19	4	•21	5.7	1	• 02	
21	31	3	.25	19	13	.67	5.1	1	•01	
22	30	3	.24	19	10	•51	4.5	1	•01	
23	29	2	.16	19	5	.26	4.6	1	•01	
24	28	2	-15	19	2	.10	4.4	1	.01	
25	27	?	.15	18	1	•05	4.3	1	-01	
26	26	2	.14	17	1	•05	3.9	1	•01	
27	25	?	.14	16	1	•04	3.5	1	.01	
28	26	2	.14	15	1	.04	3.3	i	•01	
29	25	2	.14	14	1	•04	3.0	î	•01	
30	23	2	•12	13	i	.04	2.6	î	•01	
31				12	i	•03				
TOTAL	1185		11.13	627		5.94	223.2		.63	

11151870 ARROYO SECO NEAR GREENFIELD, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		JULY			AUGUST		SEPTEMBER			
ÐĀY	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	2.5	1	•01	.04	1	0	.35	1	0	
,	2.6	1	.01	.04	1	0	•29	1	0	
3	2.6	1	.01	.03	1	0	.29	1	0	
4	2.5	1	.01	.04	1	0	.29	1	0	
5	7.2	1	.01	.03	1	0	.29	ı	0	
6	1.9	1	.01	.03	1	0	• 26	1	0	
7	1.6	1	0	.03	1	0	.23	1	0	
8	1.2	1	0	.02	1	0	.23	1	0	
9	1.2	1	0	.02	1	0	.23	1	0	
10	. 89	1	0	.02	1	0	•23	1	0	
11	•61	1	0	.02	1	0	•20	2	0	
12	•47	1	0	•01	1	0	.18	2	0	
13	. 36	1	0	•01	1	0	.18	2	0	
14	.33	1	0	.01	1	0	.17	2	0	
15	• 30	1	0	.01	1	0	.17	2	0	
16	•27	1	0	.01	1	0	.17	2	0	
17	.27	1	0	0		0	•20	2	0	
18	• 22	1	0	.01	1	0	•20	3	0	
19	.19	ī	0	.01	ī	Ō	.23	4	0	
20	•17	1	0	.01	1	0	.26	6	0	
21	.15	1	0	•02	1	0	. 26	В	•01	
22	•12	1	0	.41	1	0	.26	5	0	
23	• 09	1	0	•50	1	0	. 38	3	0	
24	.06	1	0	.41	1	Ô	.44	3	0	
25	•06	1	0	.47	1	0	.55	3	0	
26	.06	1	0	.41	1	0	.70	3	•01	
27	.06	1	0	.35	1	Ö	•70	3	•01	
28	.04	1	0	• 32	i	0	.50	3	0	
29	-04	1	Ō	.32	1	0	.44	3	0	
30	• 04	1	0	.41	1	0	.50	3	0	
31	.04	ì	0	.35	1	ō				
TOTAL	23.14		•06	4.37		0	9.38		•03	

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

12122.29 312.10

11152300 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 1968. Sediment records: December 1966 to September 1968.

EXTREMES,.-1967-68:
Sediment concentrations: Maximum daily, 210 mg/l July 9; minimum daily, no flow on several days during February and March.
Sediment discharge: Maximum daily, 36 tons Dec. 10; minimum daily, 0 ton on several days during February and

March.

Period of record:

Sediment concentrations: Maximum daily, 7,670 mg/l Dec. 8, 1986; minimum daily, no flow on several days in February and March 1988. Sediment discharge: Maximum daily, 382,000 tons Dec. 9, 1986; minimum daily, 0 ton on several days during February and March 1968.

REMARKS, --Chemical-quality data published for this station in the 1967 water year are now reported as 11152500 Salinas River near Spreckels. Records of discharge are given for 11152500 Salinas River near Spreckels. No appreciable inflow between sampling point and gaging station except during periods of heavy local flow. No flow at sampling point during period Feb. 17 to Mar. 1.

11152300 SALIMAS RIVER NEAR CHUALAR, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

AVER-											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	
OCTOBER																																
DECEMBER.																																
JANUARY																																
FEBRUAKY.	10				16				13			16		_		10																
MARCH															FO	16		18		18		18					17		21			
APRIL																																
MAY																																
JUNE			16		18		18		20		16			21					21								16					
JULY																												21				
AUGUST																																
SEPTEMBER			21		24				21		22				21		18		21		24					21				-		

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM MITHORAMAL TUBE: C. CHEMICALLY DISPERSED: N. IN NATIVE WATER: P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED MATER)

			WATER	l							PART	ICLE S	: IZE					
			TEM-		CONCEN-	SUSPENDED - SEDIMENT DISCHARGE		NT F	INER 1	THAN 1	THE S	IZE (1	N MIL	LIME	rers)	INDIC	ATED	METHDD OF ANALY-
C	DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	. 004	.008	.016	.031	.D62	.125	.250	.500	1.00	2.00	SIS
MAY	5 1968			2.2	44	.26	1	2	10	36	45	75	83	96	100			SBWC
MAY	27	1430	23	1.4	40	.15	1	1	4	48	55	78	82	90	100			SBWC

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

		WATER	NUMBER		PARTICLE SIZE											
		TEM- PERA- TURF	DF SAM- PLING	DISCHARG	E	PERCEN	T FINE	R THAN	THE	\$12 E (1	N MILL	IMETER	S) IND	ICATER		METHOD OF ANALY-
DATE	TIME	(C)	POINTS	(CFS)	.062	.125	-250	•500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	SIS
OCT 12 1967 JUN 19 1968	1400 1600		7 6	D 9.1 D 3.0	5 	6 1	20 16	71 72	96 95	99 99	99 99	100 100				S S

D Daily mean discharge.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)
1	46	15	1.9	6B	58	11	68	48	8.8
2	45	13	1.6	75	57	12	74	46	9.2
3	34	10	• 92	81	53	12	79	54	12
4	26	8	•56	B6	54	13	85	68	16
5	22	7	•42	90	57	14	89	68	16
6	17	7	• 32	95	60	15	92	65	16
7	13	8	.28	100	63	17	97	100	26
8	11	10	• 30	104	68	19	80	98	21
9	9.5	11	-28	108	70	20	68	86	16
10	9.2	10	. 25	110	67	20	121	110	36
11	8.5	7	.16	113	62	19	102	78	21
12	9.1	10	•25	116	63	20	81	51	11
13	10	10	. 27	122	72	24	66	35	6.2
14	11	11	.33	124	78	26	56	37	5.6
15	12	12	.39	122	75	25	49	41	5.4
16	12	13	•42	112	58	18	44	30	3.6
17	13	22	.77	84	42	9.5	39	23	2.4
18	14	31	1.2	64	28	4.8	40	28	3.0
19	15	35	1.4	54	22	3.2	41	25	2.8
20	16	33	1.4	45	17	2-1	34	26	2.4
21	17	32	1.5	38	13	1.3	28	33	2.5
22	19	28	1.4	32	13	1.1	24	39	2.5
23	20	22	1.2	26	12	.84	20	42	2.3
24	23	17	1.1	21	11	.62	19	37	1.9
25	24	27	1.7	16	11	. 48	17	30	1.4
26	26	46	3.2	13	9	•32	16	25	1.1
27	28	47	3.6	12	10	•32	15	28	1.1
28	31	36	3.0	23	27	1.7	14	28	1.1
29	35	33	3.1	37	42	4.2	13	20	•70
30	47	38	4.8	55	49	7.3	12	12	.39
31	59	52	8.3				11	10	.30
TOTAL	682.3		46.32	2146		322.78	1594		255.69

11152300 SALINAS RIVER NEAR CHUALAR, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		JANUARY			FERRUARY			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	10	10	•27	3.9	22	.23	2.8		0
2	9.7	14	.37	3.5	22	•21	3.2	20	-17
3	9.2	12	• 30	3.4	22	.20	3.5	25	. 24
4	8.5	12	.2R	3.2	21	.18	3.5	20	.19
5	8.1	15	.33	3.2	51	.18	3.2	20	• 17
6	7.8	15	• 32	3.2	24	•21	2.6	15	•11
7	7 • I	17	•33	3.2	30	.26	2.7	15	-11
8	6.7	18	.33	3.3	37	.33	3.1	20	-17
9	6.4	19	•33	3.3	41	.37	2.3	15	•09
10	5.9	16	. 25	3.3	36	• 32	2.1	15	.09
11	5.5	15	•22	3.2	29	•25	2.2	15	.09
12	5.1	25	- 34	3.2	23	•20	3.6	25	•24
13	4.8	31	•40	3.1	23	.19	3.8	30	•31
14	4.6	25	.31	3.0	28	.23	2.5	25	•17
15	4.4	18	.21	3.0	36	.29	2.2	20	•12
16	4.1	13	.14	3.3	43	.38	4.0	78	.84
17	3.9	9	.09	3.5		0	3.5	93	.88
18	3.7	7	.07	3.1		0	4.5	78	.95
19	3.5	9	.09	3.2		0	29	78	6.1
20	3.3	14	•12	3.2		0	61	100	16
21	3.1	18	•15	3.6		0	76	85	17
22	3.0	14	.11	3.1		0	81	97	21
23	2.9	8	• 06	3.0		0	59	82	13
24	2.7	10	.07	3.2		0	44	65	7.7
25	2.6	12	.08	3.1		0	34	50	4.6
26	2.5	13	•09	3.1		0	27	40	2.9
27	2.5	14	.09	2.7		0	21	33	1.9
28	2.5	16	-11	2.7		0	14	28	1.1
29	2.7	18	.13	2.7		0	9.4	28	.71
30	3.1	20	.17				5.4	28	.41
31	5.6	21	•32				3.3	24	-21
TOTAL	155.5		6.48	92.5		4.03	519.4		97.57

		APRIL			MAY			JUNE	
	MEAN DISCHARGE	MFAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN D1SCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	3.4	20	.18	2.5	35	.24	2.2	146	.87
2	2.7	19	.14	2.6	35	•25	2.6	140	•98
3	2.2	17	.10	2.3	40	• 25	2.8	131	.99
4	2.2	13	.08	2.2	40	.24	2.8	120	.91
5	2.2	13	.08	2.2	44	.26	3.1	104	.87
6	2.2	13	.08	2.0	50	.27	3.1	105	.88
7	2.1	13	•07	1.8	50	•24	3.0	105	•85
8	2.2	13	.08	1.7	53	.24	3.3	85	.76
9	2 • 2	13	•08	1.5	78	.32	3.3	65	.58
10	2.2	13	. OR	1.3	102	.36	3.4	70	.64
11	2.2	13	.08	1.4	90	.34	3.6	80	.78
12	2.2	13	•08	1.3	80	•28	2.6	85	•60
13	2.1	13	.07	1.1	68	.20	2.6	90	.63
14	2.1	16	.09	1.1	60	-18	2.6	101	.71
15	2.1	18	.10	.98	48	-13	3.1	100	- 84
16	2.1	22	-12	.86	49	-11	3.9	100	1.1
17	2 - 1	24	•14	.88	50	-12	4.5	95	1.2
18	2.1	22	•12	.87	49	•12	5.1	95	1.3
19	2.2	18	•11	.92	48	.12	3.0	94	-76
20	2.4	18	.12	1.1	48	•14	4.1	80	-89
21	2.3	17	•11	1.1	45	•13	4.1	68	.75
22	2.5	17	.11	.99	40	.11	4.6	78	.97
23	2.6	16	•11	1.0	40	•11	4.7	88	1.1
24	2.7	16	•12	.95	40	.10	4.4	70	-83
25	2.6	50	.14	1.0	40	.11	5.2	50	-70
26	2.5	20	.14	1.2	40	.13	6.0	60	•97
27	2.4	25	.16	1.3	78	•27	5.9	72	1.1
28	2.4	25	.16	1.5	86	- 35	6.4	90	1.6
29	2.6	30	•21	1.5	94	-38	6.2	130	2.2
30	2.7	30	•22	1.3	90	•32	6.0	170	2.8
31				1.2	86	.28			
TOTAL	70.5		3.48	43.65		6.70	118.2		30+16

11152300 SALINAS RIVER NEAR CHUALAR, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (Where no concentrations are reported, loads are estimated)

		JULY			A UGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.9	108	3.7	2.6	197	1.4	.59	67	•11
2	6.8	190	3.5	2.7	170	1.2	.59	72	•11
3	6.5	179	3.1	2.9	142	1.1	.68	76	- 14
4	6.4	190	3.3	2.7	145	1.1	.68	74	-14
5	6.7	200	3,6	2.5	145	. 98	.86	71	.16
6	6.2	190	3.2	3.3	120	1.1	.95	85	•22
7	6.3	177	3.0	3.6	98	•95	.95	100	•26
8	6.5	190	3.3	3.6	110	1.1	1.1	110	.33
9	7.0	210	4.0	3.6	132	1.3	1.4	116	.44
10	7.6	130	2.7	2.7	150	1.1	1.8	87	-42
11	7.1	54	1.0	2.5	166	1.1	2.0	79	.43
12	7.0	60	1.1	2.7	150	1.1	2.2	65	•39
13	6.4	66	1.1	2.5	130	.88	2.2	51	• 30
14	5.9	60	.96	2.5	110	.74	2.3	64	•40
15	5.8	56	.88	1.8	97	•47	2.3	78	-48
16	5.6	63	•95	1.3	98	.34	2.3	94	•58
17	5.5	70	1.0	1.3	98	.34	2.3	111	.69
18	4.7	66	.84	1.3	97	.34	2.3	90	.56
19	5.2	62	.87	2.0	96	-52	2.3	69	.43
20	4.6	80	.99	2.4	87	.56	2.3	100	-62
21	3.0	100	.81	2.5	78	.53	2.2	142	- 84
22	4.1	118	1.3	2.5	77	.52	2.2	130	•77
23	3.1	97	.81	2.7	76	.55	2.2	100	• 59
24	3.0	76	•62	2.4	88	•57	2.2	80	.48
25	3.0	87	•70	2.2	100	-59	5 • 5	55	.33
26	3.1	98	.82	2.4	84	.54	2.2	42	• 25
27	1.0	100	.27	1.1	67	-20	2 • 2	38	.23
28	1.8	111	.54	.50	66	• 09	2.2	30	-18
29	2.9	110	.86	.59	66	-11	2 • 2	25	-15
30	3.1	109	•91	.59	69	•11	2.2	68	•40
31	2.4	188	1.2	.59	72	.11			

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 5699.92
TOTAL LDAD FOR YEAR (TONS) 856.21

21.64

54.10

11.43

68.57

51.93

11152500 SALINAS RIVER NEAR SPRECKELS, CALIF.

LOCATION. -- Lat 36°37'50", long 121°40'40", in El Toro Grant, Monterey County, at gaging station at bridge on Salinas-Monterey highway, 0.5 mile upstream from El Toro Creek, 2 miles west of Spreckels, and 4 miles north of Salinas.

DRAINAGE AREA. -- 4,157 sq mi.

TOTAL

155.2

PERIOD OF RECORD, -- Chemical analyses: October 1958 to September 1968.

EEMARKS...-The 1967 water year chemical-quality data for this station were reported incorrectly as 11152300 Salinas River near Chuslar, Calif. Chemical-quality data furnished by California Department of Water Resources and reviewed by Geological Survey.

11152500 SALINAS RIVER NEAR SPRECKELS, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	S CD I UM {NA}	SIUM	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PD4)
NC V. 15	122			30		173	с		26	3.6	•05	1.1
JAN. 17	3.9			114		600	o		134	19	.29	14
PAR. 20	61			26		171	c		22	1.7	• 05	1.5
C9	1.5	60	39	133	23	345	0	86	144	11	.2B	39
JULY CS	7.0			138		241	0		116		-58	
SEFT. C4	.68	36	48	143	2.3	224	0	179	119	83	.06	
CATE	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS	NON- CAR- BONATE HAR D- NESS	DIS- SOLVED SOLIOS (TONS PER AC-FT)	PERCENT SODIUM		ALKA- LINIT AS	Y UCTANCE IMICRO	E	TEM- 1 PERA- Ture	DIS- Solve Oxyge	D
NOV. 15 JAN.		189	47		26	.9	142	521	8.	.2 14	8.	2
17		464	0		35	2.3	492	1490	8.	.2 10	7.	ı
PAR. 20 Pay		191	51		23	.8	140	517	8.	.1 13	10.	1
09	. 760	311	28	1.03	46	3.3	283	1300	8	.1 18	2.	8
JLLY C9 SEPT.		273	75		52	3.6	198	1230	7.	.7 23	4.	3
04	. 742	287	103	1.01	52	3.7	184	1230	8.	.1 23	8.	6

PAJARO RIVER BASIN

11153900 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 1968. Sediment records: October 1965 to September 1968.

EXTREMES . -- 1967-68:

RRMES,--1967-68: Sediment concentrations: Maximum daily, 1,030 mg/l Jan. 30; minimum daily, 1 mg/l on many days. Sediment discharge: Maximum daily, 3,960 tons Jan. 30; minimum daily, 0 ton on many days.

Period of record:

eriod of record: Sediment concentrations: Maximum daily, 2,400 mg/l Jan. 21, 1967; minimum daily, 1 mg/l on many days each year. Sediment discharge: Maximum daily, 22,200 tons Jan. 21, 1967; minimum daily, 0 ton on many days, 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MUNTH	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	36	31	AVER- AGE
UCTOBEK																																
NUVEMBER.																																
DECEMBER.				10			9	8			8		3		2			4		4		3			4		7		9			
JANUARY												7																				
FEBRUARY.		9						9				1C						_								14						
MARCH							12		13		11		14		9			11		12		12			13		11		15			
APKIL	12				14			10		16		16			15		12		14		16	15		15					16			
MAY																																
JUNE																																
JULY																																
AUGUST																																
SEPTEMBER			27		24															21												

PAJARO RIVER BASIN

11153900 UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.2	4	•01	.19	3	0	2.9	3	•02
2	1.5	4	•02	• 35	3	0	2.3	3	•02
3	1.8	4	•02	.80	3	.01	2.1	3	•02
4	1.5	4	•02	.93	3	•01	4.4	12	•16
5	1.7	4	•02	1.2	3	.01	18	407	42
6	1.4	4	•02	1.2	3	•01	4.5	3	.04
7	.83	4	•01	.98	3	-01	9.8	168	6.1
8	1.4	3	.01	1.1	3	•01	5.7	4	•06
9	.81	3	•01	1.3	3	.01	3.9	3	-03
10	.98	3	•01	1.2	3	-01	3.4	2	•02
11	1.0	3	.01	.77	3	•01	3.2	1	•01
12	.80	3	•01	.76	3	.01	2.9	4	•03
13	1.0	3	.01	1.1	12	•04	3.5	16	•15
14	.85	3	•01	2.0	9	•05	4.0	8.	.09
15	1.1	3	.01	1.6	7	.03	4.5	4	•05
16	1.1	3	-01	1.1	7	•02	4.6	4	•05
17	.69	3	.01	.89	6	•01	5.0	8	.11
18	1.0	3	.01	.88	6	•01	16	253	12
19	.92	3	•01	1.3	4	•01	8.6	40	•93
20	•60	3	0	1.3	3	-01	5.9	15	.24
21	.79	3	•01	1.1	4	•01	4.8	8	.10
22	• 29	3	0	1.4	4	•02	4.0	1	•01
23	.57	3	0	1.4	4	•02	3.8	2	•02
24	.33	3	0	1.2	4	•01	3.6	3	-03
25	•21	3	0	1.3	3	.01	3.5	3	•03
26	•50	3	0	1.4	3	-01	3.4	3	.03
27	.77	3	.01	1.3	3	.01	3.3	4	• D4
28	•63	3	.01	1.4	3	•01	3.2	4	•03
29	1.2	3	-01	2.6	11	•12	3.0	3	• 02
30	•91	3	•01	4.7	6	•08	3.0	3	•02
31	.55	3	0				3.0	3	•02
TOTAL	28.93		.29	38.75		.58	153.8		62.48

		JANHARY			FERRUARY			MARCH	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CRNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.9	3	•02	45	40	4.9	13	3	•11
2	3.0	6	.05	32	13	1.1	ii	4	.12
3	2.9	ī	•01	28	10	.76	io	4	•11
4	2.9	3	.02	24	8	.52	10	- 7	:11
5	2.9	4	.03	20	6	.32	9.6	4	.10
6	2.9	4	•03	18	6	•29	9.3	4	•10
7	2.9	4	•03	15	4	.16	11	6	•22
8	2.8	4	.03	12	3	.10	28	15	1.2
9	2.8	4	•03	12	3	.10	16	2	•09
10	14	250	9.5	11	3	•09	13	2	•07
		230	7.,	11	,	•09	15	2	•07
11	3.9	50	.53	10	3	.08	12	1	•03
12	3.5	24	.23	9.3	3	.08	19	9	1.4
13	3.2	8	.07	9.2	3	.07	54	41	6.5
14	3.0	4	.03	8.9	3	.07	94	309	121
15	5.0	6	.08	8.4	3	.07	53	17	2.4
16	4.0	4	-04	35	40	8.0	82	324	104
17	3.7	3	.03	56	55	8.5	54	22	3.2
18	2.8	4	•03	37	20	2.0	43	- 5	-58
19	2.7	6	.04	24	5	.32	35	6	•57
20	2.6	7	•05	38	11	1.1	28	8	•60
21	2.6	8	.06	33	5	.45	25	5	.34
22	2.5	10	.07	27	4	.29	23	2	.12
23	2.4	6	.04	24	4	•26	21	2	•11
24	2.3	3	•02	22	4	.24	19	3	•15
25	2.7	3	•02	20	4	.22	18	3	.15
26	2.7	3	•02	19	3	.15	17	3	-14
27	2.3	4	.02	18	3	.15	16	3	.13
28	2.5	5	•03	17	3	.14	14	3	•11
29	10	30	.81	15	ŝ	.12	14	3	.11
30	960	1030	3960			•12	10	3	.08
31	170	180	83				10	3	
		100	_					,	• 08
TOTAL	1232.9		4054.97	647.8		30.65	791.9		244.03

PAJARO RIVER BASIN

11153900 UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF, -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
NAY	MFAN 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	15	22	1.1	4.6	7	.09	2.4	6	.04
2	12	10	.32	4.4	6	•07	2.3	6	• 04
3	10	2	.05	4.4	6	.07	2.0	6	.03
4	9.1	4	.10	4.4	6	.07	2.1	6	• 03
5	11	6	.18	4.1	6	.07	2 • 2	6	•04
6	10	6	-16	3.7	6	.06	2.3	6	.04
7	9.8	7	.19	3.6	6	.06	2.2	6	• 04
В	9.3	7	.18	4.0	6	.06	2.1	6	•03
9	8.6	4	•09	3.8	6	.06	1.8	6	•03
10	8.2	2	.04	3.7	6	•06	1.6	6	•03
11	7.9	3	.06	3.9	6	.06	1.7	6	.03
12	7.5	4	.08	4.1	6	.07	1.6	6	•03
13	7.5	4	.08	4.3	6	.07	1.9	6	•03
14	7.0	4	.08	4.3	6	.07	1.6	7	.03
15	6.4	14	.24	3.6	6	•06	1.8	7	•03
16	6.6	8	-14	3.5	6	.06	1.6	7	.03
17	6.4	5 5	•09	3.3	6	•05	1.3	7	•02
18	5.7	5	.08	3.4	6	.06	1.2	7	•02
19	5.9	5	.08	3.4	6	.06	1.0	7	•02
20	5.9	5	.08	3.3	6	.05	-65	7	•01
21	5.7	5	.08	3.2	6	.05	.98	7	•02
22	5.3	6	•09	3.3	6	+ 05	•95	7	• 02
23	5.1	6	.08	3.2	6	.05	1.1	7	•02
24	5.3	5	.07	3.1	6	.05	1.1	7	• 02
25	5 • 1	5	.07	2.9	6	•05	•98	7	•02
26	5.0	5	.07	2.9	6	.05	•92	7	•02
27	4.6	5	.06	2.3	6	.04	•97	7	•02
28	4 • 6	5	.06	2.1	6	.03	1.1	7	.02
29	4.5	5	•06	2.3	6	•04	•53	7	-01
30	4.6	6	.07	2.4	6	•04	.45	7	-01
31				2.3	6	• 04			
TOTAL	219.6		4.13	107.8		1.77	44,43		.78

		JULY			AUGUST			SEPTEMBER	
ΠAΥ	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	•53	7	.01	.37	6	.01	.34	2	0
2	-58	7	.01	. 36	6	•01	•40	2	0
3	.74	15	.03	-28	6	0	•29	1	0
4	•53	6	.01	.42	6	•01	.28	1	Ō
5	.47	6	•01	.55	6	•01	•26	1	0
6	.38	6	.01	.42	6	•01	.25	1	0
7	• 59	6	.01	.44	6	•01	.31	1	0
В	•75	6	.01	.21	6	0	.33	1	0
9	.87	6	•01	.23	6	0	.32	1	0
10	•51	6	.01	•25	6	0	•36	1	0
11	-67	6	.01	.28	5	0	.43	1	0
12	• 75	6	.01	.38	5	•01	.33	1	0
13	•48	6	.01	•46	5	.01	•27	1	0
14	•49	6	•01	-62	5	.01	-28	1	0
15	•52	6	•01	.59	5	•01	•31	1	0
16	-85	6	•01	-62	4	•01	.37	1	0
17	•66	6	-01	. 34	4	0	• 32	1	0
18	•45	6	•01	. 36	4	0	.31	1	0
20 19	•69 •38	6	.01	•42	4	0	.27	1	O
20	• 30		.01	.93	4	.01	.26	9	-01
21	•50	6	.01	.82	4	.01	.24	8	•01
2.2	•38	6	.01	.64	4	.01	.23	8	0
23	•65	6	.01	.74	4	.01	-19	8	0
24	• 32	6	.01	.56	4	•01	.19	8	0
25	-46	6	.01	.62	4	•01	-24	8	-01
26	.49	6	.01	.45	3	0	.24	8	•01
27	. 39	6	.01	.40	3	0	.16	8	0
28	•56	6	.01	•52	3	0	-12	8	0
29	•30	6	0	.38	3	0	.20	8	0
30	-48	6	.01	.36	2	o	.25	8	•01
31	• 43	6	.01	.36	2	0			~-
TOTAL	16.85		.32	14.38		.17	8.35		•05

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

3305.49 4400.22

PAJARO RIVER BASIN 79

11153900 UVAS CREEK ABOVE UVAS RESERVOIR, MEAR MCRGAN HILL, CALIF. -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B, BOTTOM MITHORAMAL TUBE: C. CHEMICALLY OISPERSED: N, IN NATIVE MATER; P, PIPET: S. SIEVE: V, VISUAL ACCUMULATION TUBE; N, IN DISTILLED MATER)

		WATER TEM								PART	ICLE S	SIZE					METHOD
		PERA-			SUSPENDED - SEDIMENT		NT F	INER '	THAN '	THE S	1ZE (1	IN M1	LLIMET	ERS)	10010	ATED	0E
DATE	TIME	TURE (C)		(MG/L)	DISCHARGE (TONS/DAY)	.002	•004	.008	.016	•031	-062	.125	•250	.500	1.00	2.00	ANALY- SIS
DEC 5 1967	0725		50	396	21	66	81	91	94	96	99	100					SBWC

PARTICLE SIZE OF RED MATERIAL, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHOD OF AWALYSIS: H, MYDROMETER; O, OPTICAL AWALYZER: S, SIEVE; V, VISUAL ACCUMULATION TUBE)

		WATER	NUMBER						PART	ICLE S	1 Z E					
		TEM-		DISCHARGE		PERCEN	T FINE	R THAN	THE S	IZE (I	N MĪLL	IMETER	S) INO	ICATED		METHOD OF ANALY-
DATE	TIME	(C)	POINTS			.125	•250	•500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	
NOV 21 1967	1220	14	6.	1.4	1	1	3	8	16	26	38	53	73	97	100	s

11159DOO 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 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

£ AT E	ME AN DIS- CHARGE (CFS)	CAL~ CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CD3)	SULFATE (SO4)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)
NOV.											
15	15			70		367	21		23	.30	
JAN.											
17	27			95		380	12		29	.38	
PAR.							_				
20	73			69		262	5		11	•40	_
PAY											
C 9	19	89	78	110	3.1	400	29	232	31	.42	894
JULY											
09	3.1			105		423	24				
SEPT.											
04	4.1	73	80	234	7.2	501	0	360	5.1		1100

DATE	HARD— NESS (CA,MG)	VON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT Sodium	SODIUM AD— SORP— TION RATIO	ALK A- LINITY AS GACO3	SPECI- FIC COND UCTANCE (MICRD MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
NOV.										
15	509	173		23	1.4	335	1240	8.5	14	8.0
JAN.										
17	532	200		28	1.8	331	1320	8.5	12	8.9
MAR.										
20	354	131		30	1.6	223	967	8.4	13	9.8
MAY										
09	542	16 5	1.22	30	2.1	376	1410	8.6	18	8.3
JULY										
09	505	118		31	2.D	386	1360	8.7	19	8.3
SEPT.										
04	510	99	1.50	49	4.5	411	1810	8.2	23	8.3

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SOQUEL CREEK BASIN

11160000 SOQUEL CREEK AT SOQUEL, CALIF.

LOCATION.--Lat 36°59'29", long 121°57'17", in NE4 sec.10, T.11 S., R.1 W., Santa Cruz County, temperature recorder at gaging station on left bank, 0.2 mile upstream from highway bridge in town of Soquel, and 0.4 mile downstream from Bates Creek.

DRAINAGE AREA, -- 40.2 sq m1.

PERIOD OF RECORD, -- Chemical analyses: October 1953 to September 1966, Water temperatures: January 1966 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 30.5°C Aug. 29.

REMARKS .-- Recorder stopped Oct. 10 to Nov. 6, Dec. 19 to Feb. 5.

			ano innaqa			י אאמו אמ		0/ 10 586				
	oc.	TOBER	NOV	EMBER	OEC	EMBER	JAR	WARY	FEB	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	14.0			9.0	6.0					13.0	11.0
2	18.0 18.0	15.0 14.0			9.0 9.0	6.0 7.0					16.0 17.0	9.0 10.0
4	18.0	13.0			12.0	9.0					16.0	10.0
5	19.0	14.0			12.0	B. 0					15.0	11.0
6	18.0	13.0			10-0	7.0			12.5	10.0	14.0	9.0
7	18-0	13.0	13.5	11.5	11.0	8.0			13.5	9.0	13.0	11.0
8	18.0 18.0	13.0 13.0	14.5 13.5	11.5 11.0	10.0 9.0	7.0 6.0			11.5 11.5	7.0 8.5	13.0 15.0	10.0 8.0
10			12.5	10.5	10.0	6.0			12.0	7.0	15.0	8.0
11			12.5	10.5	9.0	6.0			12-0	7.0	13-0	8.0
12			12.5	11.5	8.0	5.0			13.5	8.5	12.0	8.0
13 14			13.5	12.5	6.0	3.0			14.5	7.5	13.0	10.0
15			16.0 15.0	13.5 12.0	6.0 7.0	2.0 3.0			13.5 15.0	7.5 7.5	12.0 11.0	10.0 8.0
16 17			14.5 14.5	11.5 11.5	6.0 7.0	3.0 3.0			11.0 11.5	10.0	12.0 12.0	9.0 9.0
18			14.5	12.0	7.0	6.0			13.5	10.5	12.0	9.0
19 20			14.0 13.5	12.5 11.0					12.5	10.5	12.0	9.0
				11.0					14.0	12-0	12.0	9.0
21			12.5	10.5					14.5	12.0	13.0	9.0
22			11.5 10.5	9.5 9.0					14.5 16.0	12.0 12.5	13.0 14.0	11.0 11.0
24			10.0	7.5					16.0	11.5	14-0	11.0
25			10.0	7.5					16.5	11.5	13.0	11.0
26			9.0	7.0					16.0	11.5	14.0	10.0
27			9.5	6.5					13.5	12.0	14.0	10.0
28 29			9.5 9.5	7.0 7.5					15.5 16.5	12.0 10.5	15.0 16.0	11.0 12.0
30			10.0	7.5							14.0	12.0
31											13.0	12.0
MONTH			16.0	6.5					16.5	7.0	17.0	8.0
	Al	PRIL		MAY	JI.	INE	JI	HLY	AUK	TZUST	SEP	TEMBER
		PRIL		MAY		JNE		LY		SUST		TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	HAX	MIN
1	MAX 12.0	MIN 11.0	MAX 18.0	MIN 13.0	MAX 24.5	MIN 15.0	MAX 23.0	MIN 14.0	MAX 27-0	MIN 17.5	MAX 25.5	MIN 19.0
1 2	MAX 12.0 14.0	MIN 11.0 11.5	MAX 18.0 16.0	MIN 13.0 13.0	MAX 24.5 26.5	MIN 15.0 15.5	MAX 23.0 26.0	MIN 14.0 16.0	MAX 27.0 27.5	MIN 17.5 18.5	MAX 25.5 26.5	MIN 19.0 19.5
1 2 3 4	MAX 12.0 14.0 15.5 15.0	MIN 11.0 11.5 11.5	MAX 18.0 16.0 18.0 17.0	MIN 13.0 13.0 13.0 13.0	MAX 24.5 26.5 25.0 24.5	MIN 15.0 15.5 17.0 16.0	MAX 23.0 26.0 26.0 25.0	MIN 14.0 16.0 14.0 16.0	MAX 27.0 27.5 26.5 24.5	MIN 17.5 18.5 18.5 17.5	HAX 25.5 26.5 22.5 24.5	MIN 19.0 19.5 19.0 19.0
1 2 3	MAX 12.0 14.0	MIN 11.0 11.5 11.5	MAX 18.0 16.0 18.0	MIN 13.0 13.0 13.0	MAX 24.5 26.5 25.0	MIN 15.0 15.5 17.0	MAX 23-0 26-0 26-0	MIN 14.0 16.0 14.0	MAX 27.0 27.5 26.5	MIN 17.5 18.5 18.5	MAX 25.5 26.5 22.5	MIN 19.0 19.5 19.0
1 2 3 4 5	MAX 12.0 14.0 15.5 15.0 16.5	MIN 11.0 11.5 11.5 12.5 12.5	MAX 18.0 16.0 18.0 17.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0	MAX 24.5 26.5 25.0 24.5 21.5	MIN 15.0 15.5 17.0 16.0 16.0	MAX 23.0 26.0 26.0 25.0 25.0	MIN 14.0 16.0 14.0 16.0 16.0	MAX 27.0 27.5 26.5 24.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0	HAX 25.5 26.5 22.5 24.5 25.5	MIN 19.0 19.5 19.0 19.0 17.0
1 2 3 4 5	MAX 12.0 14.0 15.5 15.0 16.5	HIN 11.0 11.5 11.5 12.5 12.5	MAX 18.0 16.0 18.0 17.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5	MIN 15.0 15.5 17.0 16.0 16.0	MAX 23.0 26.0 26.0 25.0 25.0 25.0	MIN 14.0 16.0 14.0 16.0 16.0	MAX 27.0 27.5 26.5 24.5 26.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0	#AX 25.5 26.5 22.5 24.5 25.5	MIN 19.0 19.5 19.0 19.0 17.0
1 2 3 4 5	MAX 12.0 14.0 15.5 15.0 16.5 16.0 16.5	MIN 11.0 11.5 11.5 12.5 12.5 12.5	MAX 18.0 16.0 18.0 17.0 22.0 21.0 19.0 21.0	MIN 13.0 13.0 13.0 13.0 13.0 11.0	MAX 24.5 26.5 25.0 24.5 21.5	MIN 15.0 15.5 17.0 16.0 16.0	MAX 23.0 26.0 26.0 25.0 25.0	MIN 14.0 16.0 14.0 16.0 16.0	MAX 27.0 27.5 26.5 24.5 26.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0	MAX 25.5 26.5 22.5 24.5 25.5 25.0 25.5	MIN 19.0 19.5 19.0 19.0 17.0
1 2 3 4 5 6 7 8	MAX 12.0 14.0 15.5 15.0 16.5	HIN 11.0 11.5 11.5 12.5 12.5 12.5	MAX 18.0 16.0 18.0 17.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5 23.5 20.0	MIN 15.0 15.5 17.0 16.0 16.0	MAX 23.0 26.0 26.0 25.0 25.0 25.0 25.0	MIN 14.0 16.0 14.0 16.0 16.0 17.0	MAX 27.0 27.5 26.5 24.5 26.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0	#AX 25.5 26.5 22.5 24.5 25.5	MIN 19.0 19.5 19.0 19.0 17.0
1 2 3 4 5 6 7 8	MAX 12-0 14-0 15-5 15-0 16-5 16-5 17-0 18-5 19-0	MIN 11.0 11.5 11.5 12.5 12.5 12.5	HAX 18.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5 23.5 23.5	MIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0	MAX 23.0 26.0 25.0 25.0 25.0 26.0 24.0 27.0 28.0	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0	MAX 27.0 27.5 26.5 24.5 26.5 26.5 26.5 26.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5	MAX 25-5 26-5 22-5 24-5 25-5 25-0 25-0 25-0	MIN 19.0 19.5 19.0 17.0 17.5 19.0 17.0 16.5
1 2 3 4 5 6 7 8 9 10	MAX 12.0 14.0 15.5 15.0 16.5 16.5 17.0 18.5 19.0	HIN 11.0 11.5 12.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0	MAX 18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5 20.0 23.5 20.0 23.5 24.0	MIN 15.0 17.0 16.0 16.0 15.0 15.0 15.0 15.0	MAX 23.0 26.0 25.0 25.0 25.0 25.0 26.0 27.0 28.0	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 17-0 17-0	MAX 27.0 27.5 26.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 27.5	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 16.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 26.5	MIN 19.0 19.5 19.0 17.0 17.5 19.0 17.0 19.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 12-0 14-0 15-5 15-0 16-5 17-0 18-5 19-0 17-0 15-0 16-5	MIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.5 14.0	MAX 18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 11.0 12.0 14.0 14.0 12.0 12.0	MAX 24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0	MIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0	MAX 23.0 26.0 26.0 25.0 25.0 25.0 24.0 27.0 28.0 27.0 28.0	M1N 14.0 16.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0	MAX 27.0 27.5 24.5 24.5 26.5 26.5 26.5 26.5 26.5 26.5 26.5	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 16.5 16.5 16.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 26.5 25.0 25.0 26.5	MIN 19.0 19.5 19.0 17.0 17.5 19.0 17.0 16.5
1 2 3 4 5 6 7 8 9 10	MAX 12.0 14.0 15.5 15.0 16.5 16.5 17.0 18.5 19.0	HIN 11.0 11.5 12.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0	MAX 18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5 20.0 23.5 20.0 23.5 24.0	MIN 15.0 17.0 16.0 16.0 15.0 15.0 15.0 15.0	MAX 23.0 26.0 25.0 25.0 25.0 25.0 26.0 27.0 28.0	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 17-0 17-0	MAX 27.0 27.5 26.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 27.5	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 16.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 26.5	MIN 19.0 19.5 19.0 17.0 17.5 19.0 17.0 19.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 12-0 14-0 15-5 15-0 16-5 16-5 17-0 18-5 17-0 15-0 17-0 15-5 17-5 15-5	MIN 11.0 11.5 11.5 12.5 12.5 12.0 12.5 14.0 14.0 13.5 12.5 12.5	MAX 18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 12.0 12.0 14.0 12.0 12.0 12.0 12.0	MAX 24.5 26.5 25.0 24.5 21.5 21.5 23.5 23.5 24.0 23.5 24.0 25.0 25.0	MIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 23-0 26-0 26-0 25-0 25-0 25-0 27-0 27-0 28-0 28-0 28-0	MIN 14.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 16.0	MAX 27.0 27.5 26.5 24.5 24.5 26.5 26.5 26.5 26.5 27.0 24.5 21.0 25.5 27.0	MIN 17.5 18.5 18.5 16.0 15.5 16.5 16.5 16.5 16.5 16.5 16.5 17.5	MAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 26.5 25.0 26.5	MIN 19.0 19.5 19.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 16.5 17.0 16.5
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 12-0 14-0 15-5 15-0 16-5 17-0 16-5 17-0 15-0 15-5 15-5 15-5	MIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.0 14.0 13.5 12.5 12.5 12.5	HAX 18.0 16.0 17.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 16.0 17.0 22.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 12.0 12.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 24.5 26.5 25.0 24.5 21.5 21.5 22.5 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0	MIN 15.0 15.5 17.0 16.0 16.0 14.5 15.0 15.0 15.0 15.0 14.5 14.0 12.0 14.5 14.5	MAX 23.0 26.0 25.0 25.0 25.0 25.0 26.0 24.0 27.0 29.0 28.0 28.0 28.0 28.0	MIN 14-0 16-0 16-0 16-0 17-0 17-0 17-0 18-0 16-0 18-0 16-0	MAX 27.0 27.5 26.5 24.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 24.5 21.0 25.5 27.0	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 17.5 17.5 18.5 18.5 18.5 17.5 18.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 25.0 25.0 25.5 25.5	MIN 19-0 19-5 19-0 17-0 17-0 17-0 19-0 17-0 16-5 17-0 18-5 18-5 18-5
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18	HAX 12.0 14.0 15.5 15.5 15.0 16.5 17.0 18.5 19.0 17.0 18.5 17.0 15.0 16.5 17.5 15.5	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0 14.0 14.0 14.0 12.5 12.5 12.5 12.5	18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 21.0 22.0 16.0 21.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 12.0 12.0 14.0 12.0 12.0 12.0 12.0 11.0 12.0	24.5 26.5 25.0 24.5 21.5 21.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	HIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.5 14.0 12.0 14.5	23-0 26-0 26-0 25-0 25-0 25-0 25-0 26-0 24-0 27-0 28-0 29-0 28-0 28-0 28-0 28-0 28-0 28-0 28-0	MIN 14-0 16-0 16-0 16-0 17-0 17-0 18-0 17-0 18-0 16-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.5	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 17.5 16.5 17.5 18.5 17.5 18.5 17.5 18.5 18.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 26.5 25.0 26.5 25.0 26.5 26.0 25.5 26.0 25.5 26.7 26.5	MIN 19.0 19.5 19.0 17.0 17.0 17.5 19.0 17.0 16.5 17.0 18.5 18.5 18.5 18.5 17.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12-0 14-0 15-5 15-0 16-5 17-0 16-5 17-0 15-0 15-5 15-5 15-5	MIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.0 14.0 13.5 12.5 12.5 12.5	HAX 18.0 16.0 17.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 16.0 17.0 22.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 12.0 12.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 24.5 26.5 25.0 24.5 21.5 21.5 22.5 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0	MIN 15.0 15.5 17.0 16.0 16.0 14.5 15.0 15.0 15.0 15.0 14.5 14.0 12.0 14.5 14.5	MAX 23.0 26.0 25.0 25.0 25.0 25.0 26.0 24.0 27.0 29.0 28.0 28.0 28.0 28.0	MIN 14-0 16-0 16-0 16-0 17-0 17-0 17-0 18-0 16-0 18-0 16-0	MAX 27.0 27.5 26.5 24.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 24.5 21.0 25.5 27.0	MIN 17.5 18.5 18.5 17.5 16.0 15.5 16.5 16.5 17.5 17.5 18.5 18.5 18.5 17.5 18.5	HAX 25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 25.0 25.0 25.5 25.5	MIN 19-0 19-5 19-0 17-0 17-0 17-0 19-0 17-0 16-5 17-0 18-5 18-5 18-5
1 2 3 4 4 5 6 7 8 9 9 10 11 12 2 13 14 4 15 16 17 18 19 20	MAX 12.0 14.0 15.5 15.5 16.0 16.5 17.0 18.5 19.0 17.0 15.5 15.5	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.5 14.0 13.5 12.5 12.5 12.5 12.5 12.5 12.5	18.0 16.0 18.0 17.0 22.0 21.0 21.0 21.0 22.0 22.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 13.0 12.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	24.5 26.5 25.0 24.5 21.5 22.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	HIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 23-0 26-0 26-0 25-0 25-0 25-0 26-0 27-0 28-0 28-0 28-0 28-0 28-0 28-0 28-0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 17-0 18-0 16-0 17-0 18-0 16-0 17-0 18-0 16-0 17-0 18-0 16-0	MAX 27.0 27.5 26.5 24.5 26.5 26.0 26.5 26.5 27.0 27.5 27.0 27.5 27.0 27.5 27.5	MIN 17.5 18.5 17.5 16.0 17.5 16.5 16.5 17.5 16.5 17.5 18.5 17.5 18.5 17.5 18.5 17.5 18.5 17.5 18.5	25.5 26.5 22.5 24.5 25.5 25.5 25.0 25.0 25.0 25.0 25.0 25	MIN 19.0 19.5 19.0 17.0 17.0 17.0 19.0 19.0 16.5 17.0 18.5 19.0 16.5
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	MAX 12-0 14-0 14-0 14-0 16-0 16-5 17-0 18-5 19-0 17-0 15-0 15-0 15-0 14-5 15-5 15-5 15-5 15-5 15-5	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0 13.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	HAX 18.0 16.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 16.0 21.0 22.0 22.0 22.0 24.0 19.0 22.0 22.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.0	MIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 23-0 26-0 26-0 25-0 25-0 25-0 25-0 24-0 27-0 28-0 28-0 28-0 28-0 28-0 28-0 28-0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 16-0 17-0 18-0 16-0 17-0 18-0 18-0 16-0 17-0 17-0 17-0 17-0 17-0	MAX 27.0 27.5 26.5 26.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.0 15.5 16.0 15.5 16.0 17.5 16.5 17.5 16.5 17.5 16.5 17.5	25.5 26.5 22.5 24.5 25.5 25.5 25.0 25.0 25.0 26.5 26.0 25.5 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 26.5 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 19.5 19.0 17.0 17.0 17.0 16.5 16.5 17.0 18.5 19.0 16.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 12.0 14.0 14.0 14.0 15.0 16.5 17.0 16.5 17.0 18.5 19.0 17.0 15.0 14.5 15.5 15.5 15.0 14.5 15.0 14.5 15.0	HIN 11.0 11.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0 13.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	HAX 18.0 16.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 16.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 18.0 19.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.5 26.0 27.5 26.0 27.5 27.5 27.5 28.5	MIN 15.0 15.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 23.0 26.0 26.0 25.0 25.0 25.0 24.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 16-0 16-0 17-0 17-0 18-0 18-0 16-0 17-0 18-0 18-0 18-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0	MAX 27.0 27.5 26.5 26.5 24.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.0 27.5 24.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 1	25.5 26.5 22.5 24.5 25.5 25.5 25.0 25.0 25.0 25.0 25.5 26.0 25.5 25.5 26.0 25.5 25.5 26.0 25.5 25.5 26.0 25.5 25.5 26.0 25.5 26.5 26.0 26.5 26.0 26.5 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 19.5 19.0 19.0 17.0 17.0 17.0 16.5 16.5 17.0 18.5 19.0 15.5 14.0 15.5 17.0 15.5 17.0 15.5 14.0
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 11 5 16 17 18 19 20 21 2 23 24	MAX 12.0 14.0 15.5 15.5 16.0 16.5 17.0 17.0 15.5 15.5 16.5 16.5 17.5 15.5 15.5	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 14.0 13.5 12.5 1	HAX 18.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 11.0 12.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	24.5 26.5 25.0 24.5 21.5 21.5 23.5 24.0 25.0 26.0 27.0	MIN 15.0 15.5 17.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.5 14.0 16.0 16.5 16.0 16.5 16.0	MAX 23.0 26.0 26.0 25.0 25.0 25.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.5 24.5 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.0 15.5 16.3 16.3 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5	25.5 26.5 22.5 22.5 25.5 25.0 25.0 25.0 25.0 25	MIN 19.0 19.5 19.0 17.0 17.5 19.0 17.0 16.5 16.5 17.0 16.5 15.5 15.5 15.5 16.0 12.5 12.5 12.5
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 11 5 16 17 18 19 20 21 22 23 24 25	MAX 12.0 14.0 15.5 15.5 16.0 16.5 17.0 18.5 17.0 15.5 15.5 15.5 15.5 15.6 16.5 17.0 16.5 17.0	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 13.0 14.0 13.5 12.5 1	18.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 21.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 11.0 12.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 12.0 13.0 14.0 13.0 14.0 14.0 15.0 16.0 16.0 17.0 17.0 18.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.0	MIN 15.0 15.5 17.0 16.0 15.0 15.0 15.0 15.0 15.0 12.0 14.5 14.5 15.0 16.0 16.5 16.0 16.5 16.0	MAX 23.0 26.0 26.0 25.0 25.0 25.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 27.0 26.0 26.0 26.0 26.0	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 24.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.0 15.5 16.3 16.5 17.5 16.5 17.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16	25.5 26.5 22.5 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.5 26.5 26.5 26.5 27.5 28.0 29.0	MIN 19.0 19.5 19.0 17.5 19.0 17.0 17.5 19.0 17.0 16.5 17.0 16.5 17.0 15.5 17.0 15.5 17.0 15.5 16.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	MAX 12-0 14-0 14-0 14-0 16-0 16-5 17-0 18-5 19-0 17-0 15-0 14-5 17-5 15-0 14-5 15-0 14-5 15-0 14-5 15-5 15-5 15-5 15-5 15-5 15-5 15-5	HIN 11.0 11.5 12.5 12.5 12.0 12.0 12.0 12.5 14.0 13.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	HAX 18.0 16.0 17.0 18.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 12.0 12.0 12.0 13.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 12.0 12.0 13.0 14.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.5 26.0 27.5 26.0 27.5 26.0 27.5 26.0 27.5	MIN 15.0 15.0 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 23.0 26.0 26.0 25.0 25.0 25.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 18-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 26.5 26	MIN 17.5 18.5 17.5 16.0 15.5 16.5 16.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.0 17.0 1	25.5 26.5 22.5 22.5 24.5 25.0 25.0 25.0 26.0 25.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.5 27.5 28.0 28.5 28.0 28.5 28.0 28.5 28.0 28.5 28.0 28.5 28.0 28.5 28.0 28.5 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 19.0 19.5 19.0 17.0 17.0 17.0 17.0 16.5 17.0 16.5 17.0 18.5 19.0 15.5 19.0 15.5 14.0
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1 2 3 4 4 5 6 7 7 8 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	MAX 12.0 14.0 15.5 15.0 16.5 17.0 16.5 17.0 15.5 19.0 17.0 15.5 15.5 15.6 15.7 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 14.0 13.5 12.5 13.5 1	HAX 18.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 12.0 16.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.0	MIN 15.0 15.5 17.0 16.0 15.0 15.0 15.0 15.0 15.0 12.0 14.5 14.5 15.0 16.5 16.0 16.5 16.5 16.5 16.5 16.5	MAX 23.0 26.0 26.0 25.0 25.0 25.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.5 16.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 17.5 18.5 17.5 18.5 1	25.5 26.5 22.5 24.5 25.0 26.5 27.0	MIN 19.0 19.5 19.0 17.5 19.0 17.0 17.5 19.0 17.0 16.5 17.0 16.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 16.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	MAX 12-0 14-0 14-0 14-0 16-0 16-5 17-0 18-5 19-0 17-0 15-0 14-5 17-5 15-5 15-0 14-5 17-5 15-5 16-0 16-5 17-5 16-5 16-5 16-5 16-5	HIN 11.0 11.5 12.5 12.5 12.0 12.0 12.0 14.0 13.5 12.5	HAX 18.0 16.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 16.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 13.0 14.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 17.0 18.0 19.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.5 26.0 27.5 26.0 27.5 26.0 27.5 26.0 27.5	HIN 15.0 15.5 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 23.0 26.0 26.0 25.0 25.0 25.0 24.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 14-0 16-0 17-0 17-0 18-0 17-0 18-0 16-0 17-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.5 16.5 16.5 16.5 17.0 16.5 17.0 16.5 17.0 1	25.5 26.5 22.5 24.5 25.5 25.0 25.0 25.0 25.0 25.0 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 25.5 26.0 26.5 26.0 26.5 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.0 26.5 26.5 26.0 26.5	MIN 19.0 19.5 19.0 17.0 17.0 17.0 17.0 16.5 17.0 16.5 17.0 18.5 19.0 15.5 14.0 12.5 14.5 14.5 14.5
1 2 3 4 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 30	MAX 12.0 14.0 15.5 15.0 16.5 17.0 16.5 17.0 15.5 19.0 17.0 15.5 15.5 15.6 15.7 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0	HIN 11.0 11.5 11.5 12.5 12.5 12.0 12.0 14.0 13.5 12.5 13.5 1	HAX 18.0 16.0 17.0 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 13.0 13.0 13.0 13.0 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 12.0 16.0 1	24.5 26.5 25.0 24.5 21.5 23.5 20.0 23.5 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 27.0	MIN 15.0 15.5 17.0 16.0 15.0 15.0 15.0 15.0 15.0 12.0 14.5 14.5 15.0 16.5 16.0 16.5 16.5 16.5 16.5 16.5	MAX 23.0 26.0 26.0 25.0 25.0 25.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 14-0 16-0 14-0 16-0 17-0 17-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 27.0 27.5 26.5 26.5 26.5 26.5 26.5 26.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 17.5 18.5 17.5 16.5 16.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 16.5 17.5 17.5 18.5 17.5 18.5 1	25.5 26.5 22.5 24.5 25.0 26.5 27.0	MIN 19.0 19.5 19.0 17.5 19.0 17.0 17.5 19.0 17.0 16.5 17.0 16.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 15.5 17.0 16.0

SAN LORENZO RIVER BASIN

11160500 SAN LORENZO RIVER AT BIG TREES, CALIF.

LOCATION (revised).--Lat 37°01'40", long 122°03'30", in Canada del Rincon Grant, Santa Cruz County, temperature recorder at gaging station on right bank, 0.5 mile south of Big Trees station on Southern Pacific Railroad, 1.5 miles downstream from Zayante Creek, and 4 miles north of Santa Cruz.

DRAINAGE AREA, -- 111 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1953 to September 1967. Water temperatures: May 1966 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Minimum, 2.0°C Dec. 13-16.

Period of record:
Water temperatures: Maximum (1966-67), 21.0°C on several days in July 1966; minimum, 2.0°C Dec. 13-16, 1967.

REMARKS. -- Recorder malfunction Feb. 2 to Mar. 3, Apr. 2, Sept. 6, 10-30; bulb out of water June 28 to July 10, July 20-24.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															Ð	4																
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																																
MAX [MUM]	16	14	16	14	15	14	14	14	14	17	16	16	16	14	14	14	14	13	13	13	13	15	14	14	14	14	13	14	13	12	12	14
MINIMUM	13	12	13	12	12	11	11	11	11	13	13	13	12	11	11	11	11	11	11	11	12	12	12	11	11	11	11	11	10	9	9	11
NOVEMBER																																
MUPIXAM															13													9	9	9		11
MINIMUM	9	9	9	11	12	12	11	12	11	10	10	11	12	12	12	11	11	11	11	11	10	9	9	7	7	7	6		8	8		9
DECEMBER																																
MUPIXAP			9				8	8	7	7	7	6	4	3	4	4	6	6	6	6	6	- 6	7	7		9		9	8	7	7	7
PI NI MUM	7	7	7	9	9	9	8	7	6	7	6	4	2	2	2	2	3	4	4	4	4	4	4	6	6	7	9	7	7	6	5	5
JANUARY																																
MAXIMUM		7		5	5		6	6	8						9			7				9			9	9		7	7	8	8	7
MINIMUM	6	5	4	3	3	3	3	4	۴	6	5	4	6	6	8	7	6	5	5	6	6	7	6	6	6	7	6	6	6	7	7	5
FEBRUARY																																
PAXIMUM	8																															
MINIMUM	7																									•-				~-		
MARCH																																
MAXIMUM																					10											11
PINIHUM				11	10	9	10	9	8	В	R	8	9	9	8	9	8	7	7	7	7	8	9	9	q	8	٩	9	10	11	11	8
APR IL																																
MAXIMUM	11																															13
MINIMUM	10		10	9	9	9	R	9	9	11	11	11	10	9	9	9	7	7	8	8	8	8	8	q	9	10	11	12	11	12		9
MAY																																
MAXIMUM															14																	15
MINIMUM	11	11	11	11	11	9	9	ľ	Įη	11	11	10	9	В	8	В	10	11	12	12	11	10	10	T.	17	11	13	13	12	12	12	11
JUNF																																
MAXIMUM															21																	19
MINIMUM	12	15	14	13	12	12	12	13	13	17	12	11	1,,	12	13	13	14	1.4	14	14	14	1.0	15	14	14	רו	17					1,
JULY													٠.		21				٠.							• •		.,				
MAXIMUM MUNIMUM															14																	
AUGUST											1.	1-	15	10	14	13	13	14	14						1.	. •	1,	1 4	1.4	14	1 -	
MAXIMUM			20	20	20	21	10	21	21	21	21	10	14	10	20	10		10	10	10	17	10			10	10	10	١.	20		10	19
MINIMUM															14																	13
SEPTEMBER	. 4	. 4	. •	. 4	13			. 4	.,	. 4	.,			• •	••	10		٠,	. 3		.,	11	12	1.5		• -	.,	12	. 4	. ~	17	1.5
MAXIMUM	10	20	19	21	21		14	20	10																							
MINIMUM																																
HINIMUM	1.0	12	. 4	.,	10		1 2		. 1																							

PERCADERO CREEK BASIN

11162500 PESCADERO CREEK NEAR PESCADERO, CALIF.

LOCATION, -- Lat 37°15'40", long 122°19'40", in SW\u00e4 sec.5, 7.8 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 1968.

EXTREMES . -- 1967-68:

Water temperatures: Maximum, 22.0°C July 12; minimum, 3.0°C Jan. 7.

tter temperatures: Maximum, 22.0°C Aug. 9, 1965, July 22-24, 31, 1966, July 12, 1968; minimum (1965-66, 1967-68), 20°C Dec. 19, 1965. Period of record:

REMARKS .-- Recorder malfunction Dec. 18-20, 23-25, 31, Jan. 1, 2, 12; clock stopped Jan. 18 to Feb. 6.

PESCADERO CREEK BASIN

11162500 PESCADERO CREEK NEAR PESCADERO, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 DAY

															D/	ŧΥ																
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	şc	21	22	23	24	25	26	27	28	29	3°	31	AVFR-
OCTOBER																																
MUMIXAM	17	17	16	15	16	15	15	14	16	17	16	16	16	14	14	14	14	13	14	14	14	16	15	14	14	13	14	14	13	13	12	14
MINIMUM						13																										12
NOVEMBER																																
MAXIMUM	13	13	13	13	14	14	14	14	14	13	13	13	13	14	14	13	14	14	14	13	13	12	11	10	9	9	9	9	9	9		12
MINIMUM	10	11	11	12	13	12	12	13	13	12	12	12	13	13	13	12	12	13	13	12	11	10	9	8	8	8	7	Ŗ	8	8		11
DECEMBER																																
MAXIMUM						11																										
MINIMUM	8	7	7	9	11	9	9	8	7	7	7	6	5	4	4	4	4				4	5				7	9	8	8	6		
JANUARY																																
MAXIMUM			6			6				9			8																			
MINIMUM			4	4	4	4	3	4	6	7	6		7	8	9	9	8										~-					
FEBRUARY																																
MAXIMUM							11	10	10	10	9	10	9	9	10	11	11	12	12	12	12	13	13	12	12	12	12	12	11			11
MINIMUM							10	10	9	9	9	9	9	8	9	10	10	11	12	12	12	12	12	12	11	12	11	11	10			10
MARCH		• •																														
MAXIMUM Muminim						12																										12
APRIL	7	11	LU		11	11	11	11	10	10	4	4	LU		10	11	11	9	4	4	10	11	12	L	12	11	1.,	1.,	11	15	13	10
MAXIMUM	14	12	12	12	12	12	12	12	12	٠.	14	14	12	12	12	12	12	12	12		12		12			14	١.	14	14	14		13
MINIMUM						11																										11
MAY		••	••	**			10	10	11	16	1,	.,		••	12	11	,			,	7	7	,		11		12	1,	13	12		4.1
MAXIMUM	16	16	14	13	15	15	15	16	14	13	12	12	13	14	14	16	16	17	16	16	17	17	17	17	18	19	10	21	19	18	18	16
MINIMUM						ii																										13
JUNE											•						~ -			٠.		•			• • •			•••	•	-	•	
MUMIXAM	19	20	21	16	14	14	17	16	18	18	17	16	17	18	18	19	20	20	19	21	20	20	18	20	21	19	20	20	19	19		1.8
MINIMUM	14	16	17	14	13	13	13	14	14	14	14	12	12	12	13	14	16	16	16	16	15	14	16	15	16	17	16	16	13	14		14
JULY																																
MAXIMUM	19	19	20	20	21	20	21	20	21	21	21	22	19	18	20	21	21	21	21	21	21	S٢	19	17	19	19	19	17	19	20	20	19
MINIMUM	14	16	16	16	15	16	16	16	17	16	16	16	17	17	16	16	15	14	16	16	17	16	16	16	16	16	16	16	16	16	17	16
AUGUS T																																
MAXIMUM						20																										19
MINIMUM	17	17	16	16	16	14	15	16	16	17	17	16	16	16	16	16	14	16	16	14	15	14	13	14	15	14	16	17	16	16	17	16
SEPTEMBER																																
MAXIMUM						19																										17
MINIMUM	17	17	17	16	16	17	17	16	15	14	16	17	17	17	15	14	14	15	14	13	12	11	11	12	17	12	12	12	13	13		14

COLMA CREEK BASIN

11162720 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, 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 1968.

EXTREMES, -- 1967-68:

(EMBS).--1367-66: Maximum daily, 7,950 mg/l Jan. 30; minimum daily, 12 mg/l on many days during October and November. Sediment concentrations: Maximum daily, 7,890 tons Jan. 30; minimum daily, 0 ton Nov. 11-13.

Period of record:
Sediment concentrations: Maximum daily, 19,400 mg/l Jan. 21, 1987; minimum daily, 5 mg/l on many days in 1985-86.

Sediment discharge: Maximum daily, 26,900 tons Jan. 21, 1967; minimum daily, 0 ton Nov. 11-13, 1967.

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM MITHDRAMAL TUBE: C, CHEMICALLY DISPERSED: N, IN NATIVE WATER: P, PIPET: S. SIEVE: V, VISUAL ACCUMULATION TUBE: N, IN DISTILLED WATER)

WATER										PART	ICLE	SIZE					
		TEM-		CONCEN-	SUSPENDED -		NT F	INER	THAN	THF S	17F (IN MII	LIME	rERS)	INDIC	ATED	ME THOD OF
			DISCHARGE		DISCHARGE												ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	-004	.008	.016	.031	-062	•125	-250	•500	1.00	2.00	515
DEC 5 1967	0940	12	1.4	2090	7.9	71	82	90	93	96	100						SBWC
JAN 30 1968	0945	9	27	2630	192	51	63	74	80	83	92	96	100				SBWC
JAN 3D	1045	9	362	12600	12300	14	17	7 23	29	38	47	91	100				VPWC
JAN 30	1100	9	191	10600	5470	15	19	24	31	40	52	85	98	100			VPWC
FEB 20	1035	18	11	381	11	52	64	75	80	82	94	97	100				SBWC
MAR 8	0945	13	4.0	666	7.2	92	95	5 98	100								SPWC
MAR 13	1015	13	11	1290	38	54	62	? 73	82	90	97	99	100				SPWC
APR 2	1250	20	2.5	2110	14	51	68	87	96	97	98	98	99	100			SPWC

COLMA CREEK BASIN

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11162720 COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 OCTOBER DECEMBER

		OCTOBER			MUVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	.73 22 1.1 1.0 2.3	20 1390 100 40 984	507 • 30 • 11	.32 .32 .30 .28	12 12 12 12 12	.01 .01 .01 .01	•92 •92 62 47 9•8	80 60 3970 3130 1590	•20 •15 1850 1440 116
6 7 8 9	.92 .92 .73 .73	50 30 20 15 13	.12 .07 .04 .03	.24 .22 .20 .18	12 12 12 12 12	•01 •01 •01 •01	1.4 32 1.2 1.2	140 2390 120 100 80	.53 1040 .39 .32 .26
11 12 13 14 15	.55 .53 .51 .50	12 12 12 12 12	•02 •02 •02 •02 •02	.14 .12 .10 17	12 12 12 2000 23	0 0 0 270	1.2 .92 .73 .92	70 65 65 65 64	.23 .16 .13 .16
16 17 18 19 20	• 48 • 48 • 46 • 44 • 4 4	12 12 12 12 12	•02 •02 •01 •01	.14 .13 .12 .24	20 18 16 30 25	•01 •01 •02 •02	1.2 30 18 3.3 4.8	64 1550 2760 811 487	1090 172 12 27
21 22 23 24 25	.33 .33 .44 .43	12 12 12 12 12	•01 •01 •01 •01	.33 .33 .33 .44	20 18 16 16 14	.02 .02 .01 .02	1.4 1.4 1.4 1.4	100 80 60 60	.38 .30 .23 .23
26 27 28 29 30 31	.41 .40 .40 .38 .36	12 12 20 15 12	.01 .01 .02 .02 .01	1.9 .44 26 19	14 333 30 2770 2930	•02 9•2 •04 542 246	1.2 .92 .92 .92 .92	60 40 40 40 40	.19 .10 .10 .10
TOTAL	40.13		520.03	70.60		1067.53	232.23		5751.92
		JANUARY							
		JANUAKT			FERRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-	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)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 1.2 .92 1.2 1.4	MEAN CONCEN- TRATION (MG/L) 30 30 30 30	DISCHARGE (TONS/DAY) -10 -07 -10 -11	MEAN DISCHARGE (CFS) 9.5 13 4.0 3.0	MEAN CONCEN- TRATION (MG/L) 618 1040 80 60	DISCHARGE (TONS/DAY) 34 116 .86 .49	DISCHARGE (CFS) 2.5 2.5 2.5 2.5	MEAN CONCEN- TRATION (MG/L) 30 30 30 30	DISCHARGE (TONS/DAY) -20 -20 -20 -20
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 1.2 .92 1.2 1.4 1.4 1.4 2.1 2.1 1.8 1.8	MEAN CONCEN- TRATION (MG/L) 30 30 30 30 30 30 30 30	DISCHARGE (TONS/DAY) -10 -07 -10 -11 -11 -11 -17 -15	MEAN DISCHARGE (CFS) 9.5 13 4.0 3.0 2.1 1.8 1.8	MEAN CONCENTRATION (MG/L) 618 1040 80 60 40 40 40 40	DISCHARGE (TONS/DAY) 34 116 .86 .49 .23 .19 .19 .19	D1SCHARGE (CFS) 2.5 2.5 2.5 2.5 7.0 9.7 46 7.5 2.1	MEAN CONCEN- TRATION (MG/L) 30 30 30 635 760 2590 1380 50	DISCHARGE (TONS/DAY) -20 -20 -20 -20 -20 -50 -50 -50 -50 -50 -50 -50 -50 -50 -5
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS) 1.2 .92 1.4 1.4 2.1 2.1 1.8 1.8 87 1.8 3.4 60	MEAN CONCENTRATION (AG/L) 30 30 30 30 30 30 30 30 451 3190	DĪSCHARGE (TONS/DAY) -10 -07 -10 -11 -11 -17 -15 -2980 -97 -29 11	MEAN DISCHARGE (CFS) 9.5 13 4.0 2.1 1.8 1.8 1.8 1.8 1.8	MEAN CONCENTRATION (MG/L) 618 1040 60 40 40 40 40 40 30 30 30 30 30 30 30 30	DISCHARGE (TONS/DAGE) 34 116 .86 .49 .23 .19 .19 .19 .19 .19 .15 .15 .15	DISCHARGE (CFS) 2.5 2.5 2.5 2.5 2.5 7.0 9.7 46 7.5 2.1 1.8 126 20 12	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) -20 -20 -20 -20 -20 -46 -68 958 -28 -28 -29 -19 4170 239 -64 -67 -67 -67 -37 -24
1 2 3 4 5 6 7 8 9 10 11 12 13 145 15 16 17 18	OISCHARGE (CFS) 1-2 -92 1-2 1-4 1-4 2-1 2-1 1-8 1-8 3-4 60 00 23 2-5 2-1 2-5 2-1	MEAN CONCENTRATION (#G/L) 30 30 30 30 30 30 5060 20 60 451 3190 2450 150 80 80 60 60 60 60 60 60 60 60 60 60 60 60 60	DĪSCHARGE (TONS/DAY) .10 .07 .10 .11 .11 .17 .15 .15 .2980 .97 .10 .1700 .347	MEAN DISCHARGE (CFS) 9.5 13 4.0 3.0 2-1 1.8 1.8 1.8 1.8 1.8 2.1 2.1 38 2.3 3.0 45	MEAN CONCENTRATION (MG/L) 618 1040 60 60 40 40 40 40 40 40 40 40 50 30 30 30 30 30 2590 1560 40 2230	DISCHARGE (TONS/DAY) 34 116 .86 .49 .23 .19 .19 .19 .19 .19 .15 .17 .17 .17 .15 .15 .17 .17	DISCHARGE (CFS) 2.5 2.5 2.5 2.5 7.0 9.7 46 7.5 2.1 1.8 126 20 12 4.0 71 9.7 4.6 3.4	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) -20 -20 -20 -20 -20 -46 -68 -59 -28 -23 -19 -4170 -239 -41-1 -1970 -57 -62 -37 -24 -24 -38 -73 -49 -42
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 3 24	OISCHARGE (CFS) 1.2 1.2 1.4 2.1 2.1 1.8 1.8 3.4 60 2.5 2.5 2.1 2.1 2.5 1.8 1.8	MEAN CONCENTRATION (MG/L) 30 30 30 30 30 30 30 5060 20 60 4519 3190 2450 150 60 60 60 60 60 60 60 60 60 60 60 60 60	DĪSCHARGE (TONS/DAY) -10 -07 -10 -11 -11 -17 -17 -15 -15 -2980 -97 -29 11 1700 -45 -54 -34 -41 -19 -19	MEAN DISCHARGE (CFS) 9.5 13 4.0 3.0 2-1 1.8 1.8 1.8 1.8 1.8 2.1 2.1 38 2.1 3.0 45 21 7.3 4.0	MEAN CONCENTRATION (MG/L) 618 1040 60 60 40 40 40 40 40 40 10 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY) 34 116 .86 .49 .23 .19 .19 .19 .19 .19 .19 .19 .15 .15 .17 .17 525 195 .247 541 60 5.3 .65	D1SCHARGE (CFS) 2.5 2.5 2.5 2.5 2.5 7.0 9.7 46 7.5 2.1 1.8 126 20 12 4.0 71 9.7 4.6 3.4 3.0	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) -20 -20 -20 -20 -20 -46 -68 958 -28 -28 -29 -19 4170 239 -61 -1 1970 -7 -62 -37 -24 -24 -8 -73 -49

COLMA CREEK BASIN

11162720 COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	43	2190	1280	1.4	13	.05	.92	34	•08
2	2.9	908	11	1.4	13	.05	1.2	34	•11
3	2.1	50	.28	1.4	13	• 05	•92	34	• 08
4	2.1	40	.23	1.4	13	•05	1.8	34	.17
5	2.1	30	.17	2.1	15	.09	2.1	34	•19
6	2.1	30	.17	2.1	15	•09	2.1	34	- 19
7	5.1	30	.17	1.8	15	•07	2.1	34	-19
8	2.1	30	.17	2.1	15	•09	1.8	34	•17
9	5.1	30	-17	2.1	15	-09	1.4	34	•13
10	5.1	30	.17	2.1	15	•09	•92	25	•06
11	2.1	20	-11	2.1	15	•09	1.2	25	-08
12	2.5	20	.14	2.5	20	-14	1.2	25	.08
13	2.5	20	-14	15	1440	261	1.2	25	•08
14	2.1	20	-11	1.8	60	•29	1.8	25	-12
15	1.4	20	.08	1.8	50	.24	2.1	25	.14
16	5.1	20	•11	1.4	40	-15	2.1	25	.14
17	1.8	20	•10	1.8	40	.19	1.2	20	.06
18	1.3	15	•05	1.8	40	. 19	1.8	20	•10
19	1.1	15	.04	2.1	40	.23	1.2	20	•06
20	1.1	15	.04	1.8	35	.17	1.2	20	• 06
21	1.2	15	.05	1.8	35	.17	1.8	20	-10
22	1.0	15	•04	1.2	35	.11	2.1	20	-11
23	1.0	15	• 04	•92	35	•09	•92	15	• 04
24	1.0	15	.04	1.4	35	.13	1.8	15	•07
25	1.2	15	•05	1.8	35	•17	1.8	15	•07
26	1.2	15	.05	-92	35	•09	1.8	15	•07
27	1.5	15	•06	-57	35	•05	3.0	15	•12
28	1.2	13	•04	-57	35	•05	4.0	15	•16
29	1.1	13	.04	.57	35	•05	4.6	15	.19
30	1.4	13	•05	•92	35	•09	4.6	15	.19
31				•92	35	•09			
TOTAL	92.5		1293.91	61.59		264.50	56.68		3.41

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MFAN 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	1.8	15	.07	2.5	13	.09	1.4	13	• 05
2	•92	15	.04	4.0	13	.14	1.8	13	•06
3	1.2	15	.05	5.3	13	-19	1.4	13	•05
4	1.2	15	•05	4.6	13	.16	1.4	13	•05
5	1.4	15	•06	2.5	13	.09	.73	13	.03
6	1.2	15	•05	2.1	13	.07	.92	13	•03
7	1.8	15	.07	4.0	13	.14	2.1	15	•09
8	.92	15	.04	4.0	13	.14	2.5	15	•10
9	.97	15	•04	1.8	13	•06	1.8	15	•07
10	•92	15	-04	1.8	13	•06	1.8	15	• 07
11	1.4	15	.D6	2.1	13	•07	1.8	15	.07
12	2.5	15	.10	1.8	13	•06	2.5	20	.14
13	1.8	15	.07	3.0	13	.11	1.8	20	.10
14	1.8	15	•07	4.0	13	.14	3.0	20	.16
15	1.8	15	.07	5.3	13	.19	1.4	20	•08
16	2.1	15	•09	4.0	13	-14	1.2	20	•06
17	2.5	15	•10	5.3	13	•19	1.4	20	•08
18	2.5	15	•10	4.0	13	. 14	2.1	20	-11
19	2.5	15	.10	2.5	13	.09	1.8	20	•10
20	2.5	15	.10	1.8	13	•06	.57	20	.03
21	2.5	15	.10	1.8	13	.06	.73	30	•06
22	1.4	14	.05	1.4	13	-05	.73	30	•06
23	1.2	14	•05	1.8	13	•06	.73	30	•06
24	1.4	14	.05	1.8	13	•06	.92	30	•07
25	2.5	14	•09	1.8	13	• 06	.73	30	•06
26	4.0	14	.15	1.4	13	-05	.73	30	•06
27	2.5	14	.09	1.8	13	•06	.73	30	•06
28	2.1	13	•07	1.4	13	-05	.92	40	•10
29	2.1	13	.07	1.8	13	.06	.73	40	•08
30	4.0	13	.14	1.8	13	.06	.73	40	•08
31	3.4	13	-12	1.8	13	•06			
TOTAL	60.78		2.35	85.0		2.96	41.10		2.22

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

1917.53 35741.76 COLMA CREEK BASIN 85

11162722 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. -- 1.68 sq mi.

PERIOD OF RECORD, -- Sediment records: October 1965 to September 1968.

EXTREMES. --Period of record (1965-67): Sediment concentrations: Maximum daily, 6,350 mg/l Jan. 21, 1967; minimum daily, no flow on many days in 1965-67.

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

MONTHLY AND ANNUAL SUMMARY OF SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DI SCHARGE (CFS)	SUSPENDED-SEDIMENT (TONS)
OCTOBER 1967	8.80	233
NOVEMBER	19.84	391
DECEMBER		6510
JANUARY 1968	133.13	25270
FEBRUARY	35.54	508
MARCH	74.59	5660
APRIL	10.29	598
WAY	6.91	82
JUNE	9.72	1,1
JULY	8.80	10
AUGUST	5.30	. 24
SEPTEMBER	4.59	. 21
TOTAL FOR YEAR	364.04	39263.55

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

		WATER			SUSPENDED -					PART	ICLE :	SIZE					METHDD
		PERA-	•		SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (IN M1	LLIME	TERS)	INDIC	CATED	OF ANALY-
DATE	TIME	(c)	(CFS)	(MG/L)		•002	.004	•008	.016	.031	.062	.125	•250	.500	1.00	2.00	SIS
NOV 30 1967		12	.82	4090	9.1	64	74	91	98	98	100						SPWC
JAN 30 1968		9	14	4410	167	22	23	28	38	47	64	96	100				VPWC
JAN 30	1345	8	34	13800	1270	17	18	22	32	41	61	97	100				VPWC

COYOTE CREEK BASIN

11169800 COYOTE CREEK NEAR GILROY, CALIF.

LOCATION, -- Lat 37°04'40", long 121°29'36", in ME[SE] 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 1968, Sediment records: December 1964 to September 1968.

EXTREMES . -- 1967-68:

Sediment concentrations: Maximum daily, 55 mg/l Jan. 30; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 84 tons Jan. 30; minimum daily, 0 ton on many days.

Period of record (1965-68):

Sediment concentrations: Maximum daily, 2,060 mg/l Mar. 16, 1967; minimum daily, no flow on many days each year. Sediment discharge: Maximum daily, 16,700 tons Mar. 16, 1967; minimum daily, 0 ton on many days each year.

REMARKS, -- No flow Oct. 1 to Dec. 20, Aug. 9 to Sept. 30.

11169800 COYOTE CREEK NEAR GILROY, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															IJ,	AY																	
MONTH	ı	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	
UCTUBER																																	
NOVEMBEK.																																	
DECEMBER.																																	
JANUARY																																	
FEBRUARY.																																	
MARCH									13				12		15			12				13			13								
APRIL																																	
MAY	13																		-								_	_					
JUNE			21													-																	
JULY																																	
AUGUST																																	
SEPTEMBER																												_					

PARTICLE SIZE OF RED MATERIAL, WATER YEAR OCTOMER 1967 IN SEPTEMBER 1968 (METHOD DE ANALYSIS: H. HYDROMETER: O, OPTICAL ANALYZER: S, SIEVE: V, VISUAL ACCUMULATION TUBE)

			WATER	NUMBER						PAR	TICLE S	IZE					
			PFRA-		DISCHARGE		PFRCENT	FINFH	THAN	THE	SIZE (I	N MILL	IMETER	S) IN	DICATED)	METHOD OF
	DATE	TIME		POINTS		.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	ANALY- SIS
DFC	11, 1967	1400		5	0			1	2	5	8	12	19	33	71	100	5

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1							0		0
2							ŏ		ŏ
3							Ó		0
4							0		0
5							0		0
6							0		0
7							Ö		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							0		0
18							0		0
19							0		0
20							0		0
21							.56	1	0
22							1.6	1	0
23							1.6	1	0
24							1.6	1	0
25							1.6	1	0
26							1.6	1	0
27							1.6	1	0
28							1.6	1	0
29							1.4	1	0
30							1.4	1	0
31							1.4	1	0
TOTAL	0		0	0		0	15.96		0

COYOTE CREEK BASIN

11169800 COYOTE CREEK NEAR GILROY, CALIF. -- Continued

		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.4	1	0	42	4	. 45	5.1	2	•03
2	1-4	1	o	27	3	•22	4.5	2	•02
3 4	1.2 1.2	1	0	18 12	1 1	•05 •03	3.9 3.6	2 2	•02 •02
5	1.2	i	ŏ	9.0	î	.02	3.4	2	.02
			_				٠.		
6 7	1.2 1.2	1 1	0	6.9 5.8	1 2	•02 •03	3.1 3.6	2 2	•02 •02
8	1.2	1	0	4.8	2	•03	21	5	•30
9 10	1.2 3.6	1	0 •04	4.2 3.6	2 1	.02 .01	18 11	2 2	•10 •06
11 12	7.3 4.8	6 3	•12 •04	3.4 2.8	1 1	.01 .01	7.7 7.3	2	•04 •04
13	3.4	2	•02	2.8	i	.01	33	6	•63
14	3.1	2	•02	2.B	1	.01	73	12	2.8
15	5.8	4	•06	2.6	1	-01	65	7	1.2
16	8.1	6	.13	3.9	2	.02	63	8	2.0
17 18	5.8 4.2	3 2	.05 .02	26 32	6 3	•42 •26	92 48	10 3	2.5 .39
19	3.6	2	•02	21	2	.11	31	3	•25
20	3.1	2	•02	53	8	1.2	20	3	.16
21	2.8	2	•02	50	2	•27	15	3	-12
22	2.6	2	.01	37	2	•20	11	8	.24
23 24	2.4	2	.01	26 18	2	•14	9.0 7.7	8 7	•19
25	2•2 2•2	2	•01 •01	14	2 2	.10 .08	6.9	6	•15 •11
26 27	2.2 2.2	2 2	.01 .01	9.9 8.1	2 2	.05 .04	6.5 5.8	6	•11 •09
28	2.4	2	-01	6.9	2	• 04	5.4	4	•06
29 30	2.6 146	2 55	*01 84	5.8	2	•03	5.1 5.1	4	.06 .03
31	206	44	38			==	5.1	2 2	•03
TOTAL	437.6		122.64	459.3		3.89	599.8		11.81
TOTAL	437.0		122.04	427.3		2.07	37760		11.01
		40011			MAY			UIME	
		APRIL			MAY			JUNE	
		MEAN	SEDIMENT		MEAN	SEDIMENT		MEAN	CENT MENT
	MEAN DISCHARGE	MEAN CONCEN-	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN-	SEDIMENT D1SCHARGE	MEAN DISCHARGE	MEAN CONCEN-	SEDIMENT Discharge
DAY	MEAN DISCHARGE (CFS)	MEAN		MEAN DISCHARGE (CFS)	MEAN		MEAN DISCHARGE (CFS)	MEAN	SEDIMENT Discharge (Tons/Day)
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	D1SCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 8.1 15	MEAN CONCEN- TRATION (MG/L) 2 3	DISCHARGE (TONS/DAY) .04 .12	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	D1SCHARGE (TONS/DAY) .03	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) •01
1 2 3	DISCHARGE (CFS) 8.1 15	MEAN CONCEN- TRATION (MG/L) 2 3 4	DISCHARGE (TONS/DAY) .04 .12 .11	DISCHARGE (CFS) 1.4 1.2 1.2	MEAN CONCEN- TRATION (MG/L)	D1SCHARGE (TONS/DAY) .03 .03	01SCHARGE (CFS) -42 -42	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) •01 •01
1 2 3 4	01SCHARGE (CFS) 8.1 15 10 8.1	MEAN CONCEN- TRATION (MG/L) 2 3 4 2	DISCHARGE (TONS/DAY) .04 .12 .11	DISCHARGE (CFS) 1.4 1.2 1.2	MEAN CONCEN- TRATION (MG/L)	D1SCHARGE (TONS/DAY) .03 .03 .03	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 12 12 13 13	DISCHARGE (TONS/DAY) -01 -01 -01 -01
1 2 3 4 5	DISCHARGE (CFS) 8.1 15 10 8.1 6.5	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5	DISCHARGE (TONS/DAY) .04 .12 .11 .04	DISCHARGE (CFS) 1.4 1.2 1.2 1.2	MEAN CONCEN- TRATION (MG/L) 9 9 9	D1SCHARGE (TONS/DAY) .03 .03 .03 .03	DISCHARGE (CFS) -42 -42 -42 -38 -38	MEAN CONCEN- TRATION (MG/L) 12 12 13 13	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01
1 2 3 4 5	DISCHARGE (CFS) 8-1 15 10 8-1 6-5	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1	MEAN CONCEN- TRATION (MG/L)	D1SCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03	DISCHARGE (CFS) -42 -42 -43 -38 -38	MEAN CONCEN- TRATION (MG/L) 12 12 13 13	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 8-1 15 10 8-1 6-5 5-4 4-8	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 .98	MEAN CONCENTRATION (MG/L)	D1SCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03	DISCHARGE (CFS) -42 -42 -42 -38 -38 -38	MEAN CONCEN- TRATION (MG/L) 12 13 13 13 12 12	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .08 .07	DISCHARGE (CFS) 1.4 1.2 1.2 1.1 1.1 .98 .90	MEAN CONCENTRATION (MG/L)	D1SCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -38 -38 -38 -38	MEAN CONCEN- TRATION (MG/L) 12 13 13 12 12 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 8-1 15 10 8-1 6-5 5-4 4-8 4-5 4-5	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5 6 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .08 .07	DISCHARGE (CFS) 1.4 1.2 1.2 1.1 1.1 .98 .90 .90 .82	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 12 13 13 12 12 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9	MEAN CONCEN- TRATION (MG/L) 2 3 4 25 5 6 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .08 .07 .08	DISCHARGE (CFS) 1.4 1.2 1.2 1.1 1.1 98 90 90 82	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02	DISCHARGE (CFS) -42 -42 -38 -38 -38 -38 -38 -35 -35	MEAN CONCEN- TRATION (MG/L) 12 12 13 13 12 12 12 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -0
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 8-1 15 10 8-1 6-5 5-4 4-8 4-5 3-9 3-6	MEAN CONCEN- TRATION (MG/L) 2 3 4 2 5 6 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .08 .07 .06	DISCHARGE (CFS) 1.4 1.2 1.2 1.1 1.1 .98 .90 .90 .82 .82	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) -42 -42 -43 -38 -38 -38 -35 -35	MEAN CONCEN- TRATION (MG/L) 12 13 13 13 12 12 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -0
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS) 8-1 15 10 8-1 6-5 5-4 4-8 4-5 3-9 3-6 3-4 3-1	MEAN CONCENTRATION (MG/L) 2 3 4 2 5 5 6 6 6 6 6	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 2.1 2.2 2.2 2.2 2.2	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) -42 -42 -43 -38 -38 -38 -38 -35 -35 -35 -35 -31 -31	MEAN CONCENTRATION (MG/L) 12 13 13 12 12 8 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 8-1 15 10 8-1 6-5 5-4 4-8 4-5 4-5 3-9 3-6 3-4	MEAN CONCENTRATION (MG/L) 2 3 4 2 5 6 6 6 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .08 .07 .06 .06 .06	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 98 .90 .90 .82 .82 .74	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .02 .02 .02 .02 .02	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 12 13 13 12 12 8 8 8 8 8	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 3.4 3.1 2.8	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 5 5 6 6 6 6 6 9 9 9 9 9 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .07 .06 .06 .08 .08 .08	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 2.1 2.1 2.1 2.1 2.1	MEAN CONCENTRATION (MG/L) 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -42 -43 -38 -38 -38 -38 -35 -35 -35 -35 -35 -35 -35 -35 -35 -35	MEAN CONCENTRATION (MG/L) 12 12 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8.1 15 10 6.5 5.4 4.8 4.5 3.9 3.9 3.6 3.4 2.8	MEAN CONCENTRATION (MG/L) 2 3 4 2 2 5 5 6 6 6 6 6 6	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 98 .90 .90 .82 .82 .82 .82 .64 .65 .61	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) - 03 - 03 - 03 - 03 - 03 - 03 - 02 - 02 - 02 - 02 - 02 - 02 - 01 - 01 - 01	DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) 12 12 13 13 12 18 8 8 8 8 8 8	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 3.4 3.1 2.8	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 5 5 6 6 6 6 6 9 9 9 9 9 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .07 .06 .06 .08 .08 .08	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 .98 .90 .90 .82 .74 .61 .56	MEAN CONCENTRATION (MG/L) 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .02 .01 .01 .01	DISCHARGE (CFS) -42 -42 -42 -43 -38 -38 -38 -38 -35 -35 -35 -35 -35 -35 -35 -35 -35 -35	MEAN CONCENTRATION (MG/L) 12 12 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 3.4 3.1 2.8 2.6 2.6 2.2	MEAN CONCENTRATION (MG/L) 2 3 4 2 5 5 6 6 6 6 6 9 9 9 9 9 6 6 6 5 5	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .07 .06 .06 .08 .08 .08 .07	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 98 .90 .90 .82 .82 .82 .82 .64 .65 .61	MEAN CONCENTRATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) - 03 - 03 - 03 - 03 - 03 - 03 - 02 - 02 - 02 - 02 - 02 - 02 - 01 - 01 - 01	DISCHARGE (CFS) -42 -42 -42 -438 -38 -38 -38 -38 -35 -35 -35 -35 -35 -35 -35 -35 -35 -35	MEAN CONCENTRATION (MG/L) 12 12 13 13 12 8 8 8 8 8 7 7	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 4.5 3.9 3.9 3.6 3.4 2.6 2.2 2.2	MEAN CONCENTRATION (MG/L) 2 3 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.2 1.1 1.1 -98 -90 -82 -74 -61 -61 -61 -61 -66 -56	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) - 03 - 03 - 03 - 03 - 03 - 03 - 03 - 0	DISCHARGE (CFS) -42 -42 -42 -38 -38 -38 -38 -38 -39 -35 -35 -31 -28 -25 -25 -25 -27 -15	MEAN CONCENTRATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 7 7 7 7	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 4.5 3.9 3.9 3.6 2.6 2.2 2.2 2.2 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 3 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY) -04 -12 -11 -04 -09 -07 -08 -07 -06 -06 -06 -08 -08 -07 -07 -04 -04 -04 -04 -03 -03 -03 -03 -03 -03 -02 -02	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.2 1.1 1.1 -98 -90 -90 -82 -74 -61 -61 -61 -61 -61 -56 -56 -51	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .01 .01 .01 .01 .01 .01 .01	DISCHARGE (CFS) -42 -42 -42 -38 -38 -38 -38 -38 -39 -35 -35 -31 -28 -25 -25 -25 -25 -21 -15 -13 -13	MEAN CONCENTRATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 7 7 7 7 7 7 7	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22 23	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 3.4 3.1 2.8 2.6 2.2 2.2 2.2 2.0 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .07 .06 .06 .08 .07 .07 .06 .08 .08 .07 .07 .09 .08 .08 .09 .09 .09 .00 .00 .00 .00 .00 .00 .00	DISCHARGE (CFS) 1,4 1,2 1,2 1,2 1,1 1,1 98 90 90 90 82 74 60 61 61 61 61 66 56 551	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -42 -438 -388 -388 -385 -35 -35 -35 -37 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13	MEAN CONCENTRATION (MG/L) 12 13 13 12 12 8 8 8 8 7 7 7 7 7 7	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 4.5 3.9 3.9 3.6 2.6 2.2 2.2 2.2 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 3 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY) -04 -12 -11 -04 -09 -07 -08 -07 -06 -06 -06 -08 -08 -07 -07 -04 -04 -04 -04 -03 -03 -03 -03 -03 -03 -02 -02	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.2 1.1 1.1 -98 -90 -90 -82 -74 -61 -61 -61 -61 -61 -56 -56 -51	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .01 .01 .01 .01 .01 .01 .01	DISCHARGE (CFS) -42 -42 -42 -38 -38 -38 -38 -38 -39 -35 -35 -31 -28 -25 -25 -25 -25 -21 -15 -13 -13	MEAN CONCENTATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 7 7 7 7 7 7 7	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 2.6 2.2 2.2 2.0 2.0 2.0 2.2 2.2	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5 5 5 5 5 5 5 3 3 3 3	DISCHARGE (TONS/DAY) -04 -12 -11 -04 -09 -07 -08 -07 -07 -06 -06 -06 -08 -08 -07 -07 -04 -04 -03 -03 -02 -02 -02 -02	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 -98 -90 -82 -74 -61 -61 -61 -61 -61 -61 -61 -6	MEAN CONCENTRATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01	DISCHARGE (CFS) -42 -42 -43 -38 -38 -38 -38 -35 -35 -31 -28 -25 -25 -25 -25 -21 -17 -11 -13 -13 -13 -13	MEAN CONCENTRATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 4 5 6 7 8 9 9 10 11 13 14 15 16 17 8 19 20 21 22 32 22 4 25 26 26 7	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 3.4 3.1 2.8 2.6 2.2 2.2 2.2 2.2 2.2 2.0 2.0 2.0 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5 5 5 5 5 5 3 3 3 3	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 .98 .90 .90 .82 .74 .67 .61 .61 .61 .61 .61 .61 .56 .51 .46 .51 .56 .51 .56 .51	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -43 -48 -38 -38 -38 -38 -38 -35 -35 -35 -35 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13 -13 -13 -13 -13 -13 -13 -13	MEAN CONCENTRATION (MG/L) 12	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 17 18 19 20 21 22 22 22 24 25 26 27 28	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.9 3.6 3.4 3.1 2.8 2.6 2.2 2.2 2.2 2.0 2.0 2.0 2.0 2.0 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5 5 5 5 5 3 3 3 3	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .06 .06 .08 .07 .06 .08 .08 .07 .06 .08 .08 .07 .09 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) 1,4 1,2 1,2 1,2 1,2 1,1 1,1 98 90 90 90 822 74 67 67 661 661 661 661 666 556 551 551 551	MEAN CONCENTATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -43 -48 -38 -38 -38 -38 -35 -35 -35 -35 -35 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13 -13 -13 -12 -10 -10	MEAN CONCENTRATION (MG/L) 12 13 13 13 12 12 12 8 8 8 8 8 7 7 7 7 7 7 7 7 6 6 6 6 6	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 2.6 2.2 2.2 2.0 2.0 2.0 2.0 1.7 1.6	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1.4 1.2 1.2 1.2 1.1 1.1 .98 .90 .90 .82 .74 .67 .61 .61 .61 .61 .61 .56 .56 .51 .51	MEAN CONCENTRATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .02 .02 .02 .02 .02 .02 .01 .01 .01 .01 .01 .01 .01 .01 .01 .01	DISCHARGE (CFS) -42 -42 -43 -48 -38 -38 -38 -38 -38 -35 -35 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13 -13 -13 -13 -13 -13 -13 -13	MEAN CONCENTATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DISCHARGE (TONS/DAY) .01 .01 .01 .01 .01 .01 .01 .01 .01 .0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 17 18 19 20 21 22 22 22 24 25 26 27 28	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.9 3.6 3.4 3.1 2.8 2.6 2.2 2.2 2.2 2.0 2.0 2.0 2.0 2.0 2.0 2.0	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5 5 5 5 5 3 3 3 3	DISCHARGE (TONS/DAY) .04 .12 .11 .04 .09 .07 .06 .06 .08 .07 .06 .08 .08 .07 .06 .08 .08 .07 .09 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	DISCHARGE (CFS) 1,4 1,2 1,2 1,2 1,2 1,1 1,1 98 90 90 90 822 74 67 67 661 661 661 661 666 556 551 551 551	MEAN CONCENTATION (MG/L)	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -43 -48 -38 -38 -38 -38 -35 -35 -35 -35 -35 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13 -13 -13 -12 -10 -10	MEAN CONCENTRATION (MG/L) 12 13 13 13 12 12 12 8 8 8 8 8 7 7 7 7 7 7 7 7 6 6 6 6 6	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	DISCHARGE (CFS) 8.1 15 10 8.1 6.5 5.4 4.8 4.5 3.9 3.6 2.6 2.2 2.2 2.0 2.0 2.0 2.0 1.7 1.6	MEAN CONCENTRATION (MG/L) 2 3 4 4 2 2 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 1,4 1,2 1,2 1,2 1,1 1,1 988 900 900 822 744 677 671 601 601 601 601 601 601 601 601 601 60	MEAN CONCENTATION (MG/L) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	DISCHARGE (TONS/DAY) .03 .03 .03 .03 .03 .03 .03 .03 .03 .0	DISCHARGE (CFS) -42 -42 -43 -48 -38 -38 -38 -38 -38 -35 -35 -31 -28 -25 -22 -20 -17 -15 -13 -13 -13 -13 -13 -13 -13 -13 -13 -13	MEAN CONCENTATION (MG/L) 12 12 13 13 13 12 12 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DISCHARGE (TONS/DAY) -01 -01 -01 -01 -01 -01 -01 -01 -01 -01

COYOTE CREEK BASIN

11169800 COYOTE CREEK NEAR GILROY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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)
ı	.08	6	0	.03	6	0			
2	.10	6	0	•02	7	0			
3	-11	6	0	-02	7	0			
4	-11	6	0	.02	7	0			
5	-11	6	0	•02	7	0			
6	•10	6	0	•01	7	0			
7	.10	6	0	.01	7	0			
8	.10	6	0	.01	7	0			
9	.10	6	0	0		0			
10	-10	6	0	0		0			
11	.10	6	0	0		0			
12	.10	6	0	0		0			
13	.10	6	0	0		0			
14	-10	6	0	0		0			
15	.10	6	0	0		0			
16	.10	6	0	0		0			
17	.10	6	0	0		0			
18	.10	6	0	0		0			
19	.10	6	0	0		0			
20	•10	6	0	0		0			
21	.09	6	0	0		0			
22	.10	6	0	0		0			
23	.09	6	0	0		0			
24	.08	6	0	0		0			
25	• 06	6	0	0		0			
26	.04	6	0	0		0			
27	-04	6	0	0		0			
28	.03	6	0	0		0			
29	-03	6	0	0		0			
30	.03	6	0	0		0			
31	.03	6	0	0		0			
TOTAL	2.63		0	.14		0	0		0

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

1664-03 140.47

ALAMEDA CREEK BASIN

11176500 ARROYO VALLE NEAR LIVERMORE, CALIF.

LOCATION (revised), --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 1968.
Sediment records: October 1962 to September 1967.

EXTREMES, --1967-68:
Water temperatures: Maximum, 26.0°C May 27; minimum, 4.0°C Dec. 13-15.

Period of record (1963-68):
Water temperatures: Maximum 30,5°C June 14, 1966; minimum, 4.0°C Jan. 2, Dec. 28, 1966, Dec. 13-15, 1967.

REMARKS .-- No flow Oct. 12, Oct. 14 to Nov. 28, Dec. 3, June 2 to Sept. 30.

ALAMRDA CRREK BASIN

11176500 ARROYO VALLE NEAR LIVERMORE, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

																																AVER-
MONTH	1	2	3	4	5	5	7	я	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	50	30	31	AGF
OCTOBER																																
MUMIXAM	19	19	18	18	18	18	18	19	19	21	21		20																			
MINIMUM	17	17	15	16	17	16	16	16	17	18	18		17																			
NOVEMBER																																
MAX I MUM																																
MINIMUM																													11	11		
DECEMBER																																
MAX I MUM	11	10		12	12	12	11	11	9	9	9	9	8	5	7	7	7	я	8	8	8	8	9	11	11	12	12	12	12	11	10	Q
MINIMUM	9	9		12	12	9	10	P	R	8	7	7	4	4	4	5	5	6	7	7	7	7	7	8	8	9	11	7 (٥	я	8	8
J ANUAR Y																																
MAXIMUM	9	10	9	8	8	7	7	7	8	9	8	8	10	10	11	11	10	10	10	10	10	11	12	12	11	10	9	10	11	9	Я	9
MINIMUM	7	8	6	6	6	, 5	6	6	7	8	7	- 6	7	- 8	10	9	8	9	8	7	9	8	9	9	9	8	8	7	8	8	6	7
FEBRUARY																																
MUMIXAM						11																										12
MINIMUM	7	7	9	9	10	10	11	11	11	11	9	9	11	10	9	10	11	12	13	13	14	14	15	15	15	14	14	14	13			11
MARCH																																
MAXIMUM	15																															15
MINIMUM	14	13	13	13	14	12	12	12	11	12	12	11	12	13	13	12	11	10	10	11	12	13	13	13	13	11	12	13	14	16	15	12
APRIL																																
MUM IX AM						18																										19
MINIMUM	14	13	12	13	13	12	13	13	14	15	15	15	13	13	13	11	11	11	12	12	11	11	12	13	13	14	15	15	16	16		13
YAP																																
MUMIXAM	22	22	21	21	20	21	22	20	20	21	17	17	16	20	21	22	21	22	20	20	18	20	20	19	23	23	26	25	24	23	23	21
MINIMUM	14	13	14	15	14	13	13	14	14	14	13	13	13	13	13	14	15	15	16	17	16	15	14	14	16	15	17	18	17	16	16	14
JUNE																																
PUM I X AM																																
MINIMUM	16																															
JULY																																
MUM IX AM																																
MINIMUM																																
AUGUST																																
MAX IMUM																																
MI NI MUM																																
SEPTEMBER																																
MAXIMUM																																
MINIMUM									~-																							

11179000 ALAMEDA CREEK NEAR NILES, CALIF.

LOCATION. --Lat 37°35'14", long 121°57'35", in NW 2 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 Miles.

DRAINAGE AREA. -- 633 sq mi.

PERIOD OF RECORD, --Chemical analyses: February 1952 to September 1967. Water temperatures: July 1956 to September 1968. Sediment records: January 1957 to September 1968.

Water temperatures: Maximum 25.0°C on several days during August and September; minimum, 4.0°C Dec. 4. Sediment concentrations: Maximum daily, 1,390 mg/l Jan. 30; minimum daily, 5,397 Sept. 22,30. Sediment discharge: Maximum daily, 4,120 tons Jan. 30; minimum daily, 0,11 ton Oct. 15.

Period of record:

Water temperatures: Maximum (1956-62, 1964-68), 31.0°C June 1, 1960; minimum, 3.0°C Jan. 5, 1961, Jan. 14, 1963.

Rediment concentrations: Maximum daily, 5,340 mg/l Apr. 3, 1958; minimum daily, no flow on many days in 1957, 1958-si. Sediment discharge: Maximum daily, 285,000 tons Apr. 3, 1958; minimum daily, no flow on many days in 1957, 1958-si. Sediment discharge: Maximum daily, 285,000 tons Apr. 3, 1958; minimum daily, 0 ton on many days in 1957, 1959-61.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

UAY

MUNTH	1	2	3	4	5	٥	7	8	9	10	11	12	13	14	15	16	17	18	19	۷,	21	22	۷3	24	5ء	26	27	28	29	30	31	AVER- AGE
ULTUBER																																
DECEMBER.		7	10 7	4		7	7	9	10	10	7	7	16	7	7	7	7	7	7	7	7	10	7	7	7	7	7	7	7	7	7	15 7
JANUAKY			7																													6
	7																															10
MAKLH	14	10	13	13	14	13	10	10	10	10	10	10	12	lυ	13	10	10	lυ	10	13	13	13	13	14	14	14	14	16	16	16	16	12
APKIL	14	14	16	14	16	16	16	16	16	16	10	14	16	10	lo	14	14	14	14	14	14	16	16	16	16	16	16	18	16	18		16
MAY	19	19	18	18	18	16	18	18	18	10	18	15	15	16	17	18	18	18	16	18	18	18	18	18	18	18	18	18	18	18	18	18
JUNE	18	18	18	ls	18	17	19	19	18	18	18	15	18	20	44	20	22	19	20	22	24	20	23	23	20	20	23	20	23	د 2		20
JULY																																23
AUGUST																																22
SEPTEMBER	25	25	23	21	23	23	23	23	21	23	23	23	23	23	25	25	23	23	23	23	23	20	19	20	20	2C	Źυ	20	44	20		22

ALAMEDA CREEK BASIN

11179000 ALAMEDA CREEK NEAR NILES, CALIF .-- Continued

		OCTOBER		-	NOVEMBER	100ER 1967 1		OECEMBER	
		MEAN			MEAN	SEDIMENT		MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	21 21	20 14	1.1 .79	66 53	31 23	5.5	30	69 69	5.6
3	22	10	-59	53	26	3.3 3.7	12 9.1	69 65	2•2 1•6
4 5	21 20	10 13	•57 •70	54 54	29 27	4•2 3•9	16 53	57	2.4
,		13		54	21	3.9	23	22	2.9
6 7	20 20	14 12	.76 .65	54 54	23 22	3.4	42 78	32 69	4.7 15
8	20	12	.65	53	26	3.2 3.7	107	66	19
9 10	19 20	14 14	•72 •76	45 24	22 13	2.7 .84	100 100	49 37	13 10
11 12	18 18	14 15	.68 .73	23 22	13 15	.81 .89	100 100	23 32	6.2 8.6
13	17	17	.78	23	13	.81	98	38	10
14 15	5.2 2.9	16 14	.22 .11	40 40	31 33	3.3 3.6	100 98	36 32	9.7 8.5
16 17	3.5 19	16 17	.15 .87	39 42	20	2.1 1.8	80 68	23	5.0 4.4
18	21	13	.74	41	22	2.4	78	60	12
19 20	70 78	60 72	13 15	41 42	13 11	1.4 1.2	28 18	143 133	11 6.5
21 22	80 80	70 62	15 13	64 53	37	6.7 1.3	40 53	58 30	6.3
23	76 55	53	11	68	10	1.6	53	19	4.3 2.7
24 25	55 64	50 53	7.4 9.2	47 9.9	28 18	3.3 .43	53 53	18 19	2.6 2.7
26	84	52	12	47	15	2.4	53	19	
27	78	48	10	70	28	2.4 5.3	34	22	2•7 2•1
28 29	80 80	43	9.3	71	30	5.8	47	26	3.4
30	80	38 37	8.2 8.0	75 63	34 51	6.9 9.7	53 54	15 14	2•1 2•0
31	80	38	8.2				54	14	2.0
TOTAL	1293.6		150.87	1430.9		96.38	1862.1		191.2
		JANUARY			FEBRUARY			MARCH	
	MEAN	MEAN	CERIMENT		MEAN		ME . W	MEAN	
DAY	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 305	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 3.8
	DISCHARGE (CFS) 54 58	MEAN CONCEN- TRATION (MG/L) 16 23	DISCHARGE (TONS/DAY) 2.3 3.6	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 305 61	DISCHARGE (CFS) 57 86	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4	DI SCHARGE (CFS) 54 58 66 66	MEAN CONCEN- TRATION (MG/L) 16 23 23 23	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7	MEAN DISCHARGE (CFS) 224 109 73 61	MEAN CONCEN- TRATION (MG/L) 460 189 110 81	DISCHARGE (TONS/DAY) 305 61 22 13	DISCHARGE (CFS) 57 86 78 70	MEAN CONCEN- TRATION (MG/L) 24 56 23 29	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5
1 2 3 4 5	DISCHARGE (CFS) 54 58 66 66 80	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1	MEAN DISCHARGE (CFS) 224 109 73 61 50	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64	DISCHARGE (TONS/DAY) 305 61 22 13 8.6	DISCHARGE (CFS) 57 86 78 70 60	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5
1 2 3 4 5	D1SCHARGE (CFS) 54 58 66 66 80 84	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8	MEAN DISCHARGE (CFS) 224 109 73 61 50	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64	DISCHARGE (TONS/DAY) 305 61 22 13 8.6	DISCHARGE (CFS) 57 86 78 70 60	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 54 58 66 66 80	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33 30 23 24	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8	DISCHARGE (CFS) 57 86 78 70 60 55 51 94	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5
1 2 3 4 5 6 7 8	D1SCHARGE (CFS) 54 58 66 66 80 84	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33 30 23 24 21	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3	MEAN D1SCHARGE (CFS) 224 109 73 61 50 33 26 25 23	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42 28	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22
1 2 3 4 5 6 7 8 9	D1 SCHARGE (CFS) 54 58 66 66 80 84 80 76 88	MEAN CONCEN- TRATION (MG/L) 16 23 23 23 21 33 30 23 24 21	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 23 20	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42 28 19	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230 90	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 54 58 66 66 80 84 80 80 76 88	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33 30 23 24 21 412	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63	MEAN D1SCHARGE (CFS) 224 109 73 61 50 33 26 25 23 20	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42 28 19	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27	MEAN COMCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230 90	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 54 58 66 66 80 84 80 80 76 88	MEAN CONCEN- TRATION (MG/L) 16 23 23 21 33 20 22 42 21 412 544 210	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 23 19	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 23 30 42 28 19	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230 90 60 40	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 54 58 66 66 80 84 80 76 88	MEAN CONCENTRATION (MG/L) 16 23 23 21 33 30 23 24 21 412 544 210 134 90	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5	MEAN D1SCHARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 29 19	MEAN CONCENTRATION (MG/L) 480 110 81 64 42 30 42 28 19 26 36 24 24	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230 90 60 40 445	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.1 103 22 6.6 7.0 7.9 228 39
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 54 58 66 66 80 84 80 87 76 88 39 15 20 70 94	MEAN CONCENTRATION (MG/L) 16 23 23 21 33 30 23 24 21 412 544 210 134 90 317	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 19 17 47	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42 28 19 26 36 24 24 27	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 42 8 30 90 60 40 445 175 65	DISCHARGE (TORS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 54 58 66 66 80 84 80 90 76 88 39 15 20 70	MEAN CONCENTRATION (MG/L) 16 23 23 21 33 30 23 24 21 412 544 210 134 90	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8	MEAN D1SCHARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 29 19	MEAN CONCENTRATION (MG/L) 480 110 81 64 42 30 42 28 19 26 36 24 24	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82	MEAN CONCEN- TRATION (MG/L) 24 56 23 29 34 28 30 359 230 90 60 40 445	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.1 103 22 6.6 7.0 7.9 228 39
1 2 3 4 4 5 5 6 7 8 8 9 10 11 11 12 13 14 15 16 17 18	OISCHARGE (CFS) 58 66 66 60 80 84 80 76 88 39 15 20 70 94 36 20 19	MEAN CONCENTRATION (MG/L) 16 23 23 21 33 24 21 24 12 544 210 134 90 317 270 150 60	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1	MEAN DISCHARGE (CFS) 224 109 73 61 50 25 23 20 24 23 17 47 60 78 37	MEAN COMCENTRATION (MG/L) 460 189 110 81 64 42 30 42 28 19 19 26 36 24 24 27 39 46 36 36 36	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.1 3.4 7.0 9.7	DISCHARGE (CFS) 57 86 70 60 55 51 94 36 27 43 73 187 82 54 102 154 116	MEAN CONCENTRATION (MG/L) 24 56 23 34 28 30 90 405 405 175 65 191 230 120	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 54 58 66 66 80 80 80 81 76 88 39 15 20 70 94	MEAN CONCENTRATION (MG/L) 16 23 23 21 21 21 21 21 21 21 21 21 21 21 21 21	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89	MEAN D1SCMARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 19 17 47 60 78	MEAN CONCEN- TRATION (MG/L) 460 189 110 81 64 42 30 42 28 19 26 36 24 27	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.2 1.2 1.4 7.0 9.7	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54	MEAN CONCENTRATION (MG/L) 24 56 23 23 23 24 28 30 259 20 60 40 445 175 65 191 230	DISCHARGE (TONS/DAY) 3.8 13 4.6 5.5 5.5 4.2 1.03 2.2 6.6 7.0 7.9 2.8 9.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 54 58 66 66 68 80 84 80 76 88 39 15 20 79 94 36 20 19 12 68	MEAN CONCENTRATION (MG/L) 16 23 23 21 13 33 24 24 12 24 12 210 134 90 317 270 150 60 25 35	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 85 6.4	MEAN D1SCMARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 23 19 17 47 60 78 37 70 61	MEAN CONCENTRATION (MG/L) 460 189 110 811 64 42 30 42 28 19 26 36 24 24 27 39 46 36 39 42	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.2 1.1 3.4 7.0 9.7 3.6 7.4 6.9	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 187 82 54 116 88 68	MEAN CONCENTRATION (MG/L) 24 56 23 29 34 28 300 359 230 40 445 175 65 191 230 120 236 236	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.9 228 39 9.5 79 96 38 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	DISCHARGE (CFS) 54 58 66 66 68 80 84 80 76 88 39 15 20 70 94 36 20 19 12 68 68 68	MEAN CONCENTRATION (MG/L) 16 23 23 21 13 33 24 24 12 24 12 21 21 31 34 90 317 270 150 60 25 35 30 25	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 6.8 5.0 6.4 5.5 6.4	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 19 17 47 60 78 37 70 61 63 123	MEAN CONCENTRATION (MG/L) 460 180 1110 811 64 42 30 42 28 8 19 26 66 24 24 27 39 46 36 39 42 42 42 46 57	DISCHARGE (TONS/DAY) 3	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54 116 88 68	MEAN CONCENTRATION (MG/L) 24 56 23 29 29 34 28 80 359 259 60 40 415 175 65 191 230 120 62 36	DISCHARGE (TORS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6
1 2 3 4 4 5 6 7 7 8 9 10 112 13 14 15 16 17 18 19 20 21 22 23	OISCHARGE (CFS) 58 66 66 60 80 84 80 80 76 88 39 15 20 70 94 36 20 19 12 68 68 68 68	MEAN CONCENTRATION (MG/L) 16 123 23 21 33 30 224 412 412 210 134 90 317 270 150 60 25 35 30 252 8	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 .85 6.4	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 19 17 47 60 78 37 70 61 63 123 53	MEAN CONCENTRATION (MG/L) 460 189 110 64 42 30 42 28 19 26 36 24 24 27 39 46 36 39 42 46 57 34	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.1 3.4 7.0 9.7 3.6 7.4 6.9 7.8 19 4.9	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54 102 154 116 88 68 53 45	MEAN CONCENTRATION (MG/L) 24 25 23 29 34 28 30 359 90 445 175 65 191 230 120 62 26 28 34	DISCHARGE (TONS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	DISCHARGE (CFS) 54 58 66 66 68 80 84 80 76 88 39 15 20 70 94 36 20 19 12 68 68 68	MEAN CONCENTRATION (MG/L) 16 23 23 21 13 33 24 24 12 24 12 21 21 31 34 90 317 270 150 60 25 35 30 25	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 6.8 5.0 6.4 5.5 6.4	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 19 17 47 60 78 37 70 61 63 123	MEAN CONCENTRATION (MG/L) 460 180 1110 811 64 42 30 42 28 8 19 26 66 24 24 27 39 46 36 39 42 42 42 46 57	DISCHARGE (TONS/DAY) 3	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54 116 88 68	MEAN CONCENTRATION (MG/L) 24 56 23 29 29 34 28 80 359 259 60 40 415 175 65 191 230 120 62 36	DISCHARGE (TORS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6
1 2 3 4 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 54 58 66 66 68 80 84 80 87 76 88 39 15 20 70 70 94 36 20 19 12 68 68 68 68 68 68 68 68	MEAN CONCENTRATION (MG/L) 16 23 23 21 21 33 30 24 412 412 544 210 134 90 317 270 150 60 25 35 35 30 25 28 8 25	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.7 89 26 8.1 3.1 3.6 5.0 5.2 4.3	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 20 24 23 19 17 47 60 78 37 70 61 63 123 53 82 82 84	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.2 1.2 1.2 1.2 1.7 1.0 4.7 3.6 7.0 7.8 6.9 6.0	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54 102 154 116 88 68 53 45 43 42 48	MEAN CONCENTRATION (MG/L) 24 56 23 29 29 34 28 30 359 230 90 60 40 445 175 65 191 230 120 62 36 26 28 34 38	DISCHARGE (TOMS/DAY) 3.8 13 4.6 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9 4.3
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 54 58 66 66 68 80 80 87 76 88 39 15 20 70 94 36 20 19 12 68 68 68 68 68 70 68 68	MEAN CONCENTRATION (MG/L) 16 23 23 21 21 33 3 24 412 412 544 210 134 9 317 270 150 60 25 35 35 35 25 28 28 28 29 24 8	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.7 89 26 8.1 3.1 3.6 5.0 5.2 4.3	MEAN DISCMARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 23 19 17 47 60 78 37 70 61 63 123 53 82 82 84	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 1.0 1.7 2.2 1.1 3.4 7.0 9.7 3.6 7.4 6.9 4.9 6.9 6.9 4.3 1.5	DISCHARGE (CFS) 57 86 70 60 55 51 94 36 27 43 73 187 82 102 154 116 88 68 53 45 43 42 48	MEAN CONCENT (MG/L) 24 56 23 29 34 28 359 290 60 40 445 175 65 120 62 62 83 43 83 66 26 19	DISCHARGE (TOMS/DAY) 3.8 13 4.6 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9 4.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	OISCHARGE (CFS) 58 56 66 66 60 80 84 80 76 88 39 15 20 70 94 36 20 19 12 68 68 68 68 68 68 68	MEAN CONCENTRATION (MG/L) 16 23 21 23 21 412 544 210 134 25 54 25 25 29 24 8 9	DISCHARGE (TOMS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 .85 6.4 6.5 3.3 3.8 .26 .38	MEAN DISCHARGE (CFS) 224 109 73 61 50 33 26 25 20 24 23 10 17 47 60 78 37 70 61 63 123 53 82 82 84 45	MEAN CONCENTRATION (MG/L) 460 189 181 64 42 28 19 26 36 24 27 39 46 36 39 42 46 31 27 31 27	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 1.2 1.2 1.2 1.2 1.7 1.0 1.7 2.7 2.6 6.9 6.9 6.9 6.9 6.9	DISCHARGE (CFS) 57 86 70 60 55 51 94 36 27 43 73 187 82 54 102 154 116 88 68 53 45 43 43 43 37 32	MEAN CONCENTRATION (MG/L) 24 25 29 34 28 30 359 230 90 60 440 4175 65 191 230 120 62 26 28 26 28 38 38 36	DISCHARGE (TOMS/DAY) 3.8 13 4.6 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9 4.3
1 2 3 4 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 4 25 26 27 28 29 30	DISCHARGE (CFS) 54 58 66 66 68 80 84 80 76 88 39 15 20 77 94 36 20 19 12 68 68 70 68 68 71 68 68 71 74 88	MEAN CONCENTRATION (MG/L) 16 23 23 21 33 30 23 24 412 544 210 134 90 317 270 60 255 28 25 29 24 8 9 3 1390	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 63 8.5 8.8 17 89 26 8.1 3.1 .85 6.4 5.5 4.6 5.3 3.8 .26 .328 .68	MEAN DISCMARGE (CFS) 224 109 73 61 50 33 26 25 23 20 24 23 19 17 47 60 78 37 70 61 63 123 53 82 82 84	MEAN CONCENTRATION (MG/L) (MG/	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 1.0 1.7 2.2 1.1 3.4 7.0 9.7 3.6 7.4 6.9 4.9 6.9 6.9 4.3 1.5	DISCHARGE (CFS) 57 86 78 70 60 55 51 94 36 27 43 73 187 82 54 102 154 116 88 68 53 45 43 42 48 43 37 32 20 34	MEAN CONCENTRATION (MG/L) 24 25 29 34 28 30 359 230 90 60 40 4455 191 230 120 262 36 268 348 368 369 20 191 114 48	DISCHARGE (TOMS/DAY) 3.8 13 4.6 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9 4.7 1.9 1.5 6.6 6.7
1 2 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 11 4 15 5 16 6 17 7 18 8 19 20 21 22 23 24 25 26 27 28 8 29	DISCHARGE (CFS) (CFS) 58 66 66 60 80 80 80 76 88 39 15 20 70 19 12 68 68 68 68 68 10 11 11	MEAN CONCENTRATION (MG/L) 16 23 21 21 33 3 24 412 412 544 210 134 90 317 270 150 60 25 25 29 24 8 9 9 23	DISCHARGE (TONS/DAY) 2.3 3.6 4.1 3.7 7.1 6.8 5.0 5.2 4.3 136 8.5 8.8 17 89 26 8.1 3.1 .855 6.4 5.5 4.6 5.3 3.8 3.8 5.0 6.4 5.5 6.4 6.6 6.3	MEAN DISCHARGE (CFS) 224 109 73 61 50 25 23 20 24 23 19 17 47 60 78 37 70 61 63 123 53 82 82 84 45 34 63	MEAN CONCENTRATION (MG/L) 460 189 181 64 42 28 19 26 36 24 27 39 46 36 39 42 46 31 27 31 27	DISCHARGE (TONS/DAY) 305 61 22 13 8.6 3.7 2.1 2.8 1.7 1.0 1.7 2.2 2.1 3.4 7.0 9.7 3.6 6.9 7.8 19 4.9 6.9 6.9 6.9 6.9 6.9	DISCHARGE (CFS) 57 86 70 60 55 51 94 36 27 43 73 187 82 154 116 88 68 53 45 43 42 48 43 37 32 20	MEAN CONCENTRATION (MG/L) 24 56 23 29 34 28 359 230 40 445 175 65 120 62 62 83 43 83 66 20 19 17 14	DISCHARGE (TORS/DAY) 3.8 13 4.8 5.5 5.5 4.2 4.1 103 22 6.6 7.0 7.9 228 39 9.5 79 96 38 15 6.6 3.7 3.4 3.9 4.7 2.3 1.9 1.5

11179000 ALAMEDA CREEK NEAR NILES, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

1777 TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 155.8

1782

TOTAL LOAD FOR YEAR (TONS)

TOTAL

20930.4 9197.20

1256

140.0

91

ALAMEDA CREEK BASIN

11179000 ALAMEDA CREEK NEAR NILES, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

		WATER TEM-			SUSPENDED-					PAR	TICLE	SIZE					METHOD
	1	PERA-	DISCHARGE		SEDIMENT DISCHARGE		ENT F	INER	THAN	THE S	S12E (IN MI	LLIMET	ERS)	INDIC	ATED	OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	•004	•00B	.016	.031	1 .062	.125	•250	.500	1.00	2.00	SIS
JAN 11 1968	1430	8	27	476	35	63	75	85	91	94	4 99	100					SBWC
JAN 15	1115	9	152	426	175	34	55	71	В3	89	100) -~					SBWC
JAN 30	1430	8	724	1720	3360	61	71	B2	90	93	3 100)					SBWC
JAN 31	1130	7	542	1050	1540	62	73	B6	95	99	100						SPWC
MAR 1	1015	14	55	23	3.4	44	59	72	81	В:	5 99	100					SBWC

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

WATER NUMBER PARTICLE SIZE

TIME (C) POINTS (CES) .0A2 .125 .250 .500 1.00 2.00 4.00 8.00 16.0 32.0 64.0 METHOD OF ANALY-DATE SIS 6 12 24 39 51 62 74 85 94 100 s DEC 7 1967 1115 7 68

BUENA VISTA LAKE BASIN

11185350 KERN RIVER NEAR QUAKING ASPEN CAMP, CALIF.

LOCATION. -- Lat 36°08'05", long 118°25'45", in SW\{SW\{\rmathforage sec.32, T.20 S., R.33 R., 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 1968,

EXTREMES. --1967-68:
Water temperatures: Maximum, 21,0°C July 21; minimum, 1,0°C Dec. 22, 31, Jan. 3.

Period of record:

tog of record: ther temperatures: Maximum, 21.0°C July 26, 28, 1966, July 21, 1968; minimum, freezing point on several days during January and February 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOVE	MBER	DECE	MBER	JAN	UARY	FEBR	UARY	МА	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	8.0	7.0	3.0	3.0	2.0	2.0	3.0	2.0	7.0	6-0
2	12.0	11.0	8.0	7.0	3.0	2.0	2.0	2.0	5.0	3.0	8.0	6.0
3	12.0	10.0	8.0	7.0	3.0	3.0	2.0	1.0	5.0	3.0	8.0	6.0
4	11.0	10.0	8.0	7.0	3.0	3.0	2.0	2.0	6.0	4.0	8.0	6.0
5	11.0	9.0	B. 0	7.0	3.0	3.0	3.0	2.0	5.0	4.0	8.0	7.0
6	10.0	8.0	8.0	7.0	3.0	3.0	2.0	2.0	7.0	4.0	8.0	7.0
7	10.0	8.0	8.0	7.0	3.0	3.0	2.0	2.0	6.0	4.0	7.0	4.0
8	11.0	9.0	8.0	7.0	4.0	3.0	3.0	2.0	6.0	6.0	6.0	3.0
9	11.0	9.0	8.0	7.0	4-0	3.0	4.0	3.0	6.0	6.0	7.0	4.0
10	11.0	9.0	8.0	6.0	4.0	3.0	4.0	3.0	6.0	6.0	7.0	5.0
11	11.0	9.0	8.0	6.0	4.0	3.0	3.0	3.0	6.0	4.0	7.0	5.0
12	11.0	9.0	8.0	6.0	4.0	3.0	4.0	3.0	6.0	4.0	7.0	6.0
13	12.0	10.0	8.0	7.0	3.0	2.0	4.0	4.0	5.0	4.0	7.0	5.0
14	12.0	10.0	9.0	8.0	2.0	2.0	4.0	4.0	6.0	4.0	8.0	5.0
15	11.0	9.0	9.0	8.0	2.0	2.0	6.0	4.0	5.0	4.0	7.0	6.0
16	9.0	8.0	8.0	8.0	2.0	2.0	6.0	5.0	6.0	4.0	7.0	5.0
17	9.0	8.0	8.0	8.0	3.0	2.0	5.0	3.0	6.0	6.0	7.0	4.0
18	9.0	8.0	8.0	7.0	4.0	2.0	4.0	3.0	7.0	6.0	7.0	4.0
19	9.0	8.0	8.0	6.0	2.0	2.0	4.0	3.0	7.0	6.0	7.0	4.0
20	9.0	8.0	7.0	6.0	2.0	2.0	5.0	4.0	8.0	7.0	8.0	4.0
21	9.0	8.0	6.0	6.0	2.0	2.0	5.0	4.0	8.0	7.0	8.0	4.0
22	9.0	8.0	6.0	6.0	2.0	1.0	6.0	4.0	8.0	6.0	8.0	6.0
23	11.0	8.0	6.0	6.0	2.0	2.0	5.0	4.0	8.0	7.0	9.0	6.0
24	9.0	7.0	6.0	5.0	3.0	2.0	5.0	4.0	8.0	7.0	9.0	7.0
25	9.0	7.0	6.0	5.0	3.0	3.0	5.0	4-0	8.0	6.0	10.0	7.0
26	9.0	8.0	5.0	4.0	4.0	3.0	5.0	4.0	7.0	6.0	10.0	7.0
27	9.0	7.0	4-0	4.0	4.0	3.0	4.0	3.0	8.0	6.0	10.0	7.0
28	9.0	7.0	5.0	3.0	3.0	3.0	3.0	5.0	8.0	7.0	11.0	8.0
29	8.0	7.0	4.0	3.0	3.0	3.0	2.0	2.0	8.0	6.0	11.0	8.0
30	8.0	6.0	3.0	3.0	3.0	2.0	2.0	2.0			11.0	8.0
31	8.0	7.0			2.0	1.0	3.0	2.0			11.0	9.0
MONTH	12.0	6.0	9.0	3.0	4.0	1.0	6.0	1.0	8.0	2.0	11.0	3.0

11185350 KERN RIVER NEAR QUAKING ASPEN CAMP, CALIF .-- Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968--Continued

	AF	APRIL MAN		MAY	J	UNE	J	ULY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	7.0	10.0	9.0	13.0	12.0	18.0	14.0	19.0	16.0	18.0	14.0
2	8.0	6.0	10.0	9.0	13.0	12.0	18.0	15.0	19.0	16.0	18.0	14.0
3	9.0	7.0	9.0	9.0	13.0	13.0	18.0	14.0	19.0	17.0	18.0	13.0
4	10.0	7.0	11.0	9.0	13.0	13.0	18.0	14.0	19.0	16.0	18.0	13.0
5	10.0	8.0	11.0	10.0	13.0	12.0	17.0	14.0	19.0	16.0	18.0	13.0
6	9.0	7.0	11.0	8.0	12.0	9.0	17.0	15.0	19.0	14.0	18.0	14.0
7	10.0	7.0	10.0	9.0	12.0	10.0	18.0	16.0	18.0	17.0	18.0	14.0
8	10.0	8.0	10.0	9.0	11.0	10.0	17.0	17.0	19.0	17.0	18.0	14.0
9	11.0	8.0	11.0	9.0	12.0	10.0	19.0	17.0	20.0	17.0	18.0	14.0
10	11.0	8.0	11.0	9.0	13.0	11.0	19.0	16.0	19.0	16.0	18.0	14.0
11	11.0	8.0	11.0	9.0	14.0	11.0	19.0	16.0	19.0	16.0	17.0	13.0
12	10.0	8.0	10.0	9.0	14.0	12.0	19.0	16.0	18.0	14.0	16.0	12.0
13	10.0	8.0	9.0	8.0	14.0	12.0	19-0	16-0	18.0	14.0	16.0	12.0
14	9.0	8.0	10.0	7.0	15.0	12.0	19.0	16.0	17.0	13.0	16.0	12.0
15	10.0	8.0	11.0	8.0	16.0	13.0	20.0	16.0	18.0	13.0	17.0	13.0
16	9.0	8.0	12.0	9.0	16.0	14.0	20.0	17.0	18.0	13.0	17.0	13.0
17	8.0	6.0	12.0	10.0	16.0	14.0	19.0	16.0	18.0	13.0	16.0	12.0
18	7.0	4.0	12.0	11.0	16.0	14.0	20.0	16.0	18.0	13.0	16.0	12.0
19	8.0	5.0	12.0	11.0	17.0	14.0	20.0	16.0	18.0	13.0	16.0	12.0
20	9.0	6.0	12.0	10.0	16.0	14.0	20.0	17.0	18.0	14.0	15.0	11.0
21	8.0	6.0	12.0	10.0	17.0	14.0	21.0	17.0	17.0	12.0	13.0	9.0
22	8.0	5.0	11.0	9.0	17.0	14.0	20.0	17.0	16.0	12.0	12.0	9.0
23	9.0	6.0	10.0	8.0	18.0	15.0	20.0	16.0	16.0	12.0	12.0	9.0
24	9.0	7.0	11.0	9.0	18.0	16.0	20.0	16.0	17.0	11.0	13.0	9.0
25	11.0	8.0	12.0	9.0	18.0	16.0	20.0	16.0	17.0	12.0	14.0	10.0
26	11.0	8.0	13.0	11.0	18.0	16.0	20.0	17.0	16.0	11.0	14.0	11.0
27	11.0	8.0	13.0	12.0	19.0	16.0	18.0	17.0	17.0	12.0	14.0	11.0
28	10.0	8.0	12.0	12.0	18.0	17.0	18.0	17-0	18.0	13.0	14.0	11.0
29	10.0	8.0	12.0	12.0	17.0	14.0	18.0	17.0	18.0	14.0	13.0	11.0
30	10.0	8.0	12.0	11.0	17.0	14.0	19.0	17.0	18.0	14.0	12.0	11.0
31			12.0	12.0			18.0	17.0	18.0	14-0		
MDNTH	11.0	4-0	13.0	7.0	19.0	9.0	21.0	14.0	20.0	11.0	18.0	9.0
YEAR	21.0	1.0										

11185500 KERN RIVER CANAL NO. 3 NEAR KERNVILLE, CALIF.

LOCATION.--Lat 35°54'20", long 118°28'00", in NE4 sec.25, T.23 S., R.32 E., Kern County, temperature recorder at gaging station on left bank, 4 miles downstream from intake, and 12 miles north of Kernville.

PERIOD OF RECORD, -- Water temperatures: October 1962 to September 1968.

EXTREMES, --1967-68:
Water temperatures: Maximum, 22.0°C July 22-25; minimum, freezing point on several days during December and January.

Period of record:
Water temperatures: Maximum, 22.0°C July 22-25, 1968; minimum (1962-66, 1967-68), freezing point on several days during December and January of most years.

REMARKS .-- No flow Sept. 11-30.

REMARKS	NO I	TOM	s e				-																									
				7	EMI	ER!	ATUR	E ((°C)	O	. W.	ATE	ι, 1	/AT	SR Y	EAR	OC	TOE	ER	196	7 7	O S	EPI	EMB	ER	196	8					
															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	58	29	30	31	AGE
OC TOBER																								٠.				٠.				12
MAXIMUM	14	14	15	14	13	12	12	12	12	12	12	13	13	13	13	12	11	11	11	12	11	11	11	11	11	11	11	11	-11	11	11	10
MUMINIP	13	13	13	12	11	10	10	10	11	11	11	11	12	12	11	9	9	9	9	9	9	9	4	ý	9	9	9	9	9		0	10
NOVEMBER													_						_		_	_			-	-	-		-			9
MUPIXAM	11		10									9	9	11	11	11	10	10	7	8	8	8	8	8	5	5	- :	:	'.	-		7
MUP IN 1M	8	8	8	8	8	9	8	8	8	8	8	7	- 7	9	9	9	9	8	'	,	'	,	۰	۰	,	,	4	-	-	7		•
DECEMBER							_	_	_	_	_	_	_								٠,			٠,	,	2	,	3	2	,	•	2
MUM1 X AM	5	2		4	3	4	3	3	3	3	3	3	3	3	0	1	ŗ		ū		ņ	n	ċ	Ļ			í		•	í	î	ī
MINIMUM	2	2	2	2	2	2	1	2	3	2	2	2	1	0	C	ť.	ι	0	U	U	U	0	- 13	·	•		٠	-			•	•
JANUARY							_			_		_	_	_		_	_	_	-	_	-	٠.	,	•		2	2	2	2	,		2
MUMIXAM	2	2	2	2	2	1	1	0	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	,	7	1	í	î	ī
MINIMUM	1	1	1	0	0	0	0	O	1	1	1	1		1	1	-	2	ı	-	4	-	-	٠.	-	-	-	-	•	•	•	•	•
FEBRUARY		_			_	_	_						-			4		6	7	в	8	8	8	9	9	9	9	9	•			5
MUMIXAM	2	2	2	2	2	3	3	3	- 2	7	7	4	5	5	5		5	5	,	7	8	8	Ř	Á	8	á	á					5
MINIMUM	1	1	Z	2	2	2	•	,	-	•	-	-	7	7	7	-	-	,		'		٥	۰	•	۰	٠	•	•				-
MARCH	_	8	8	8	8	8	8	5	6	6	6	6	6	6	6	6	6	6	6	6	4	6	7	A	A	9	9	9	10	1 1	11	7
MUMIXAM	9	B	7	7	7	7		4													4		6	7	7	á	Á					6
MINIMUM APRIL	В		,	•	,	,	-	•	7	7	-	,	_	-	-	۰	7	-	-	-	-	٠	٠		•							
MAXIMUM	11	•	q	9	9	9	9	q	10	10	11	11	11	11	11	11	9	7	7	8	9	9	9	9	11	11	12	12	12	12		9
MUMINIM	- 4			ŕ		Á	7	Ŕ				- 9									7	6	6	7	8	9	11	11	9	10		8
MAY	•	•	•	•	•	۰	•			•																						
MAXIMUM	12	12	12	11	10	11	10	11	11	11	11	11	9	9	10	11	12	12	12	12	12	11	11	11	12	13	13	13	14	13	14	11
MINIMUM				- 9		8				8				8	8	9	10	11	12	11	11	10	9	•	10	12	12	13	13	12	13	9
JUNE																																
MAXIMUM	14	15	15	16	16	13	13	13	13	13	14	14	15	16	16	17	17	17	18	18	18	19	19	20	19	20	21	21	21	21		16
MINIMUM	13	14	14	14	13	12	12	11	11	11	12	12	13	13	14	14	16	16	16	16	16	17	17	18	18	18	18	19	18	19		14
JULY																																
MAXIMUM	20	20	20	20	20	19	20	20	20	20	20	21	20	20	20	20	21	21	21	21	21	22	22	22	22	21	21	20	20	19	19	20
MUMINIM	18	18	18	18	19	18	19	18	18	19	19	19	19	19	18	18	19	18	19	19	20	19	19	19	19	19	19	19	18	11	17	18
AUGUST																																
MAXIMUM	21	21	21	21	20	20	20	20	20	20	21	20	20	19	19	19	19	19	19	19	18	17	16	16	17	17	17	18	19	20	20	19 17
MINIMUM	18	18	18	18	18	17	18	18	18	18	18	18	18	17	17	17	17	17	16	17	15	13	14	14	14	15	15	15	17	17	TR	11
SEPTEMBER																																
MAXIMUM	20	20	20	20	20	20	20	20	20																							
MINIMUM	18	18	18	17	17	17	17	17	17																					_		

BUENA VISTA LAKE BASIN

11187000 KERN RIVER AT KERNVILLE, CALIF.

LCCATION.--Lat 35°45'35", long 118°25'10", in NE‡NW‡ sec.15, T.25 S., R.33 E., Kern County, temperature recorder at gaging station on left bank, 0.5 mile upstream from highway bridge at Kernville, 1.7 miles upstream from Caldwell Creek, 9.5 miles upstream from Isabella Dam, and 42 miles northeast of Bakersfield.

DRAINAGE AREA. -- 1,009 sq mi.

PERIOD OF RECORD, -- Water temperatures: June 1962 to September 1968. Sediment records: October 1966 to September 1968 (periodic).

899 331 152

6 4 4

JUN 18.... 1628 19 JUL 22.... 1200 20 SEP 19.... 1300 18

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 22.0°C July 21, 26; minimum, 4.0°C on several days during December to February.

Period of record:

Water temperatures: Maximum (1962-63, 1964-68), 26,5°C Aug. 5, 6, 8, 1966; minimum 1.0°C Jan. 13, 14, 1963, Jan. 1, 1965, and on several days during January 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															Ŋ,	A Y																
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																				11												12
MINIMUM	13	13	13	13	12	12	11	12	12	12	12	12	13	13	15	11	11	11	11	11	11	11	11	12	11	11	11	11	11	10	10	12
NOVEMBER													٠.											_	_			_				
MUMIXAM				10																11			10	9	5	9	16	9	8			10 10
MUMINIM	11	10	ΙU	10	10	11	11	10	ΙU	IC	7	,	τo	11	11	11	11	11	TO	10	TO	,	,	,	۰		,		•	•		10
MECEMBER MAXIMUM	-	-		-					8	8	8	,	,	6	5	6	6	6	6	6	6	6	6	6	,			-				7
MINIMUM	· ;			- :	,		- :	7	7	7	7	ż	5	ŭ	4	4	5	4	5	4	- 4	- 4	5	5	ż	- ;		:	:	:		
JANUARY	•	٥	۰	۰	•	۰	۰	•	•	•	•	•	•	•	•	7	•	7	,	•	•	•	•	•	•	۰	۰	۰	٠	۰	۰	
MUMIXAM	6	7	6	6	6	6	6	5	6	7	7	7	7	7	8	8	7	7	7	8	A	8	8	8	7	7	7	6	6	5		7
MUNIMAM	5		š	4	4	4	4	4	5	6	ė	ė	ė	ė	7	7	7		ė	7	ž	7	7	7	ż	7	6	5	4	- 4	4	ė
FEBRUARY	-	-	_												•		•	-	-			•		•		•	_	-			•	-
MAXIMUM	6	7	8	8	7	8	8	8	8	9	8	8	8	8	8	8	8	9	9	11	10	10	10	16	16	9	10	11	9			9
MINIMUM	4	6	6	7	7	7	7	8	8	8	7	7	7	7	7	7	8	8	8	9	9	9	9	9	9	9	9	9	9			8
MARCH																																
MUMIXAM	9	9	9	9	9	9	8	8	8	8	8	8	8	9	8	9	8	8	8	9	9		10									9
MINIMUM	8	8	8	8	9	8	7	7	7	7	7	8	8	8	8	8	7	7	7	7	7	8	8	9	9	9	9	9	9	9	10	8
APRIL							_						_	_	_		_	_	_	_		_	_									
MUNIXAM	10	9	9	9	9	9	9				10		9	9	9	9	9	7	8	9					11							10
MUMINIM	8	8	7	8	9	8	8	9	9	9	9	9	9	9	8	8	7	6	7	7	8	7	8	8	9	10	11	Ħ	11	11		9
MAY								٠.			• •							٠.		13	12	12										13
MAXIMUM																				13												12
JUNE	10	10	10		**	•••	••	••	••	••	••	12	••	10	••	••	••		13	13	.,	12	••	••	**	.,					13	12
MAXIMUM	16	14	14	16	16	16	14	14	14	16	16	17	17	17	18	18	18	18	18	18	10	10	10	10	10	19	20	20	10	18		17
MUNIMUM																				17												16
JULY	• •				• •					•	•			•••		••		•••	• •							•••	•	•		•••		
MUMIXAM	19	19	19	19	20	19	20	19	۷0	20	20	21	21	21	21	21	21	21	21	21	22	21	20	21	21	2,	21	20	26	20	19	26
MINIMUM																				19												19
AUGUST	,,,		-	-		-																							-			
MUMIXAM	26	19	20	20	19	19	19	20	40	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	18	17	18	19	26	20	21	19
MUNIMUM	19	18	19	18	18	17	18	18	18	18	18	18	17	17	17	16	16	16	16	17	16	16	16	16	16	16	16	17	18	18	19	17
SEPTEMBER																																
HUMIXAM		20		20																19												2 G
MINIMUM	19	13	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17	18	16	16	15	14	15	16	16	16	16	15	15		17

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

IMETHODS OF ANALYSIS: B. HOTTOM WITHDRAMAL TURE: C. CHEMICALLY DISPFRSED: N. IN NATIVE WATER: P. PIPET: S. SIEVE: V. VISUAL ACCUMULATION TURE: W. IN DISTILLED WATER)

		WATER								PAR	TICLE	SIZE					
		TEM-			SUSPENDED -	•											METHOD
		PFRA-		CONCEN-	SEDIMENT	PERC	ENT 8	FINER	THAN	THE,	SIZE (IN MI	LLIME	(ERS	INDIC	CATED	0F
		THRE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	TIME	(()	(CFS)	(MG/L)	(TONS/DAY)	.002	•004	4 .008	.016	.03	1 .062	.125	.250	.500	1.00	2.00	818
OCT 25 1967	1440	11	381	3	3.1		_										
NOV 21	1220	10	514	16	27								~-				
JAN 23 1968	1400		412	3	3.3												
FEB 20	1245	9	631	12	20												
APR 18	1200	6	807	13	28												

BUENA VISTA LAKE BASIN

11187500 BOREL CANAL BELOW ISABELLA DAM, CALIF.

LCCATION.--Lat 35°38'30", long 118°28'10", in NEI 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 1968.

EXTREMES,--1967-68:
Water temperatures: Maximum, 26.0°C Aug. 8; minimum, 6.0°C on many days during December to February.

Period of record: Water temperatures: Maximum, 26.5°C July 31 to Aug. 1, 1959; minimum, 0.5°C Jan. 17, 18, 1960.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					-				•				•			-																
															D,	AY																
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
UCTOBER																																
MUMIXAM	20	20	20	20	20	19	19	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	19	19	18	18	18	17	18	18	18	19
MINIMUM	20	19	20	19	19	19	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	17	17	16	15	15	15	16	15	14	14	18
NOVEMBER																																
MUMIXAM																						14										15
MUMINIM	14	15	15	15	16	15	15	14	16	16	16	16	16	16	15	16	15	16	14	14	14	14	14	14	14	13	13	13	13	12		15
UELEMBER																																
MUMIXAM			12																			6					7	7	7	7	7	8
MUNINUM	12	12	12	11	11	11	11	10	9	9	9	9	8	8	В	7	7	7	7	7	6	6	6	6	6	7	7	7	7	7	6	8
JANUARY																																
MUMIXAM	6	6		6	6																	7		7	7	7	7	7	7	7	6	6
MUMINIM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	6	6	é
FEBRUARY																																
HUMIXAM																						9										9
MUMINIM	6	6	7	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	10	9	11	11	11			8
MARCH																																
MUMIXAM																						11										11
MUMINIM	12	11	11	11	10	10	10	10	10	10	10	11	11	11	10	11	11	10	10	10	11	11	11	11	11	11	10	11	12	12	12	10
APR1L																																
MAXIMUM																						13										14
	12	12	12	12	12	12	12	12	13	13	13	13	12	12	13	13	13	13	13	13	13	13	13	13	13	13	14	16	17	14		13
MAY																				٠.	٠.		٠.									
MUMIKAM																						14										15
TANE	12	14	14	14	14	13	13	17	14	14	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	15	15	10	10	10	10	14
	17	17	17	, ,	17	17	17	17	10	10	1 4	10	10	10	10	20	20	21	21	20	21	21	20	22			22	21	51	22		19
MUMINIM	16	1.	17	17	17	17	17	17	17	10	10	10	10	10	10	10	10	10	20	10	10	10	10	10	23	23	23	21	21	23		19
JULY.	10		••	٠.		• •	٠.	٠.		40	••			40		.,	.,	.,	20	.,	.,	.,	1,	.,		~~	*1		41			4.7
MAXIMUM	22	,,	24	23	22	22	22	22	23	23	22	22	22	-1	22	21	21	22	24	22	22	23	22	23	24	24	24	23	25	23	22	23
MUNIMUM																						22										22
AUGUST																																
MUMIXAM	24	24	24	24	24	24	25	26	24	24	24	23	23	23	22	22	22	22	22	22	21	21	21	22	22	21	21	22	23	24	23	23
MINIMUM																						21										22
SEPTEMBER									-•									-•		-•			-•	-•					-•			
HUMIXAM	22	۷1	21	22	24	23	23	23	23	23	23	22	23	22	21	24	23	23	22	21	22	21	21	22	22	22	22	21	21	20		22
MINIMUM																						19										20
						-	-		-									-														

TULARE LAKE BASIN

11204900 TULE RIVER BELOW SUCCESS DAM, CALIF.

LOCATION.--Lat 36°03'23", long 118°55'22", in SW4 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 1968.

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

TULARE LAKE BASIN

11204900 TULE RIVER BELOW SUCCESS DAM, CALIF, -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OCT. O.S.	DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SD4)	CHLO- RIDE (CL)	NETRATE (NO3)
NOY 09 7.2 14 141 4 5.2 05 05 131 15 167 0 6.7 05 05 131 15 167 0 6.7 05 08 105 39 6.0 14 4.1 170 0 2.8 8.4 1.0 FEB 05 65 15 162 0 8.8 05 65 15 162 0 8.8 07 94 14 161 0 7.5 APR 08 7.6 14 145 3 7.3 APR 08 7.6 14 145 3 7.3 APR 08 27 32 5.5 14 2.6 146 0 6.2 6.6 .5 JUNE 03 14 33 6.9 14 2.6 146 0 6.2 6.6 .5 SOLUDS SOL		251			9.5		114	0		3.9	
131	NOV.										
131		7+2			14		141	4		3.2	
OB. 105 39 6.0 14 4.1 170 0 2.8 8.4 1.0 1.0	05	131			15		167	0		6.7	
05 65 1- 15 162 0 1- 8.8 MAR. 07 94 1- 14 14 1- 161 0 1- 7.5 1- 7.5 1- 7.8 APR. 08 7.6 1- 1- 14 1- 165 3 1- 7.3 1- MAY 06 27 32 5.5 14 2.6 146 0 6.2 6.6 5.5 1.5 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	08	105	39	6.0	14	4.1	170	0	2.8	8.4	1.0
MAR. 07 94		65			15		162	0		8.8	
APR. 1	MAR.	04			14		161	0		7.5	
MAY 06 27 32 5.5 14 2.6 146 0 6.2 6.6 .5 JUNE 08 27 32 5.5 14 2.6 146 0 6.2 6.6 .5 JUNE 09 46 13 137 0 6.0 AMG. 12 347 15 148 0 6.3 SEPT. D3 14 33 6.9 14 4.4 160 0 3.4 6.9 1.8 OIS- SOLVED CAR- SOLIDS CAR-	APR.										
OBT SOLIDS SOLI		7.6			14		145	3		7.3	
03 46 15 137 0 6.0 AUG. 12 347 15 148 0 6.3 SEPT. D3 14 33 6.9 14 4.4 160 0 3.4 6.9 1.8	06	27	32	5.5	14	2.6	146	0	6.2	6.6	.5
12 347	03	46			13		137	0		6.0	
SEPT. 14 33 6.9 14 4.4 160 0 3.4 6.9 1.8		347			15		148	0		6.3	
DATE SOLUTION SOLUTION SOLUTION SOLUTION SOLUTION ALRA- COMD- FIC SOLUTION ALRA- COMD- FIC SOLUTION SOLUTION ALRA- COMD- FIC SOLUTION ALRA- COMD- FIC SOLUTION SOLUTIO	SEPT.		••	4.0	14	4.4	160	0	3.4	6.9	1.8
DATE SOLVED CARMS SOLVED CARMS SOLVED SOLVE	03	14	33	0.9	14	7.7		·			
03 05 81 0 20 .5 94 207 7.9 NOV. 09 06 109 0 22 .6 122 261 8.5 DEC. 0508 129 0 20 .6 137 296 8.2 JAN. 0812 175 122 0 .24 19 .6 139 307 8.2 FEB. 0500 116 0 22 .6 133 297 8.I MAR. 0701 119 0 20 .6 132 294 7.9 APR. 0800 108 0 20 .6 132 294 7.9 APR. 0800 108 0 22 .6 124 779 9.5 MAY 0608 141 103 0 .19 22 .6 120 263 8.2 JUNE 0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3											
NOV. 0906 109 0 22 .6 122 261 8.5 DEC. 0508 129 0 20 .6 137 296 8.2 JAN. 0812 175 122 0 .24 19 .6 139 307 8.2 FEB. 0500 116 0 22 .6 133 297 8.1 MAR. 0701 119 0 20 .6 132 294 7.9 APR. 0800 108 0 22 .6 122 294 7.9 APR. 0800 108 0 22 .6 124 279 9.5 MOS08 141 103 0 .19 22 .6 120 263 9.2 JUNE 0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3	DATE		SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLVED SOLIDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН
09 06 109 0 22 66 122 261 8.5 DEC. 05 08 129 0 20 6 137 296 8.2 JAN. 08 12 175 122 0 .24 19 .6 139 307 8.2 FEB. 05 00 116 0 22 6 133 297 8.I MAR. 07 01 119 0 20 6 132 294 7.9 APR. 08 00 108 0 22 6 124 779 9.5 MAY 06 08 141 103 0 .19 22 6 120 263 8.2 JUNE 03 06 98 0 22 6 112 250 8.1 AUG. 12 05 110 0 23 6 121 273 8.3	ост.		SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLVED SOLIDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН
05	OCT.	(8)	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SDD I UM	AO- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	
08	0CT. 03 NOV. 09	.05	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 81	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SDD I UM 20	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	7.9
FEB. 0500 116 0 2? .6 133 297 8.I MAR. 0701 119 0 20 .6 132 294 7.9 APR. 0800 108 0 22 .6 124 779 9.5 MAY 0608 141 103 0 .19 22 .6 120 263 8.2 JUNE 0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3	OCT. 03 NOV. 09 DEC. 05	.05 .06	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 81 109	CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	20 22	AD- SORP- TION RATIO	LINITY AS CACO3 94 122	FIC COND- UCTANCE (HICRO- MHOS) 207 261	7.9 8.5
MAR. 07 01 119 0 20 .6 132 294 7.9 APR. 08 00 108 0 22 .6 124 779 9.5 MAY 06 08 141 103 0 .19 22 .6 120 263 8.2 JUNE 03 06 98 0 22 .6 112 250 8.1 AUG. 12 05 110 0 23 .6 121 273 8.3	OCT. 03 NOV. 09 DEC. 05 JAN.	.05 .06	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 81 109 129	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	20 22 20	AD- SORP- TION RATIO	1101TY AS CACO3 94 122 137	FIC COND— UCTANCE (MICRO— MHOS) 207 261 296	7.9 8.5 8.2
APR. 0800 108 0 22 .6 124 779 9.5 MAY 0608 141 103 0 .19 22 .6 120 263 9.2 JUNE 0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3 SEPT.	OCT. 03 NOV. 09 DEC. 05 JAN. 08	.05 .06 .08	SOLVED SOLIDS RESIT- DUE AT 180 CJ	NESS (CA,MG) 81 109 129	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	20 22 20 19	AD- SORP- TION RATIO -5 -6	LINITY AS CACO3 94 122 137	FIC COND- UCTANCE (MICRO- MHOS) 207 261 296 307	7.9 8.5 8.2 8.2
08	OCT. 03 NOV. 09 DEC. 05 JAN. 08 FEB.	.05 .06 .08	SOLVED SOLIDS RESIT- DUE AT 180 CJ	NESS (CA,MG) 81 109 129	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	20 22 20 19	AD- SORP- TION RATIO -5 -6	LINITY AS CACO3 94 122 137	FIC COND- UCTANCE (MICRO- MHOS) 207 261 296 307	7.9 8.5 8.2 8.2
0608 141 103 0 .19 22 .6 120 263 8.2 JUNE 0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3 SEPT.	OCT. 03 NDV. 09 DEC. 05 JAN. 08 FEB. 05 MAR.	.05 .06 .08 .12	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 81 109 129 122 116	CAR- BONATE HARD- NESS 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	20 22 20 19 22	AD- SORP- TION RATIO -5 -6 -6	122 137 139	FIC COND— UCTANCE (MICRO— MHOS) 207 261 296 307 297	7.9 8.5 8.2 8.2
0306 98 0 22 .6 112 250 8.1 AUG. 1205 110 0 23 .6 121 273 8.3 SEPT.	OCT. 03 NOV. 09 DEC. 05 JAN. 08 FEB. 07 MAR. 07	.05 .06 .08 .12	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 81 109 129 122 116 119	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	20 22 20 19 22 20	AD- SORP- TION RATIO -5 -6 -6	122 137 139 133	FIC COND— UCTANCE (MICRO— MHOS) 207 261 296 307 297	7.9 8.5 8.2 8.2 8.1
AUG. 1205 110 0 23 .6 121 273 8.3 SEPT.	OCT. 03 NDV. 09 DEC. 05 JAN. 08 FE8. 07 MAR. 07 08 MAR. 08 MAY.	.05 .06 .08 .12 .00	SOL VED SOL 10S (RES 1- DUE AT 180 C)	NESS (CA.MG) 81 109 129 122 116 119	CAR- BONATE HARD- NESS	SOL VED SOL DOS (170NS PER AC-FT)	20 22 20 19 22 20	.5 .6 .6 .6 .6	LINITY AS CACO3 94 122 137 139 133 132	FIC COND- UCTANCE (MICRO- MHOS) 207 261 296 307 297 294	7.9 8.5 8.2 8.2 8.1 7.9
SEPT.	OCT. 03 NDV. 09 DEC. 05 JAN. 08 FEB. 07 APR. 08 MAY. 06 JUNE	.05 .06 .08 .12 .00 .01	SOL VED SOL 10S (RES 1 - DUE AT 180 C)	NESS (CA.MG) 81 109 129 122 116 119 108 103	CAR- BONATE HARD- NESS 0 0 0 0 0	SOL VED SOL IDS (TONS PER AC-FT)	20 22 20 19 22 20 22 20	.5 .6 .6 .6 .6 .6 .6	122 137 139 133 132 124	ETIC COND- UCTANCE (MICRO- MHDS) 207 261 296 307 297 294 279 263	7.9 8.5 8.2 8.2 8.1 7.9 9.5
0309 121 111 0 .16 21 .6 131 290 8.2	OCT. O3 NDV. O9 DEC. JAN. O8 FE8. O5 MAR. O7 APR. O8 JUNE O3 AUG.	.05 .06 .08 .12 .00 .01 .00	SOL VED SOL 10S (RES 1 - DUE AT 180 C) 175 141	NESS (CA, MG) 81 109 129 122 116 119 108 103 98	CAR- BONATE HARD- NESS 0 0 0 0 0 0 0 0 0	SOL VED SOL IDS (TONS PER AC-FT)	20 22 20 19 22 20 22 20 22 20	.5 .6 .6 .6 .6 .6 .6 .6	LINITY AS CACO3 94 122 137 139 133 132 124 120 112	FIG. COND- UCTANCE (MICRO- MHDS) 207 261 296 307 297 294 279 263 250	7.9 8.5 8.2 8.1 7.9 9.5 8.2

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CALIF.

LOCATION. --Lat 36°31'10", long 118°48'10", in SE¹₂ 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.

DRAINAGE AREA. -- 51.4 sq mi.

PERIOD OF RECORD, -- Water temperatures: January 1962 to September 1968.

EXTREMES. -- 1967-68: Water temperatures: Maximum, 23.5°C Aug. 3, 4, Sept. 1, 2; minimum, 1.0°C Dec. 14-16, 20, 21.

Period of record:
Water temperatures: Maximum, 23.5°C on several days during 1964, 1966, and 1968; minimum (1963-68), 1.0°C on several days during 1965 and 1967.

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CALIF .-- Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	AY																
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	10	10	10	10	14	14	14	14	14	14		16	١.	16	14	14	14	14	٠,		,,			.,								• •
MINIMUM							13																									14 13
NOVEMBER						13		13		13	13			4.7	.,	13	12	12	12	12	12	2. 2	14	12	14	12	12	12	12	*1	*1	13
MAXIMUM	13	13	13	12	12	12	13	13	12	12	12	11	12	13	12	12	12	12	12	10	10	9	9	9	8	8	8	В	7	7		11
MINIMUM							12																				7					- 5
DECEMBER												••								•	•	•	•	٠	۰	'	•	•	۰	۰		•
MAX IMUM	6	6	6	5	6	6	4	5	5	5	5	5	4	2	2	2	2	2	2	2	2	2	3	4	5	6	6	5	5	4	4	4
MINIMUM	5	4	4	4	5	4	4	4	4	4	4	4	2	ī	ï	2	2	2	2	ī	2	2	2	3	4	5	5	5	4	ė	3	3
JANUARY																			-				-	_		-	-	-		-	_	-
MUMIXAM	4	4	3	3				3		4	4	5	5					5	6	6			7	7	7	6	6	3	4	3	6	4
MINIMUM	3	3	3	2	2	2	2	2	3	4	4	4	4	4	5	5	4	3	4	4	5	6	6	6	5	5	3	2	2	3	3	3
FEBRUARY																																
MAXIMUM	7	7	7	7	7	7	7	7	7	7	7	7	6	8	7	7	7	8	8	8	8	8	9	9	9	9	9	9	9			7
MINIMUM	4	6	6	6	6	6	6	6	7	6	5	5	6	6	6	6	7	6	7	8	7	7	7	7	7	7	7	8	8			6
MARCH	_	_	_	_		_	_	_		_	_	_			_	_																
MUMIXAM	8	7	7	9	8	8	7	6	6	?	7	7	8	5	7	7	6	6	6	8			9	8	8	9			11			8
MINIMUM APRIL	7	f	•	7	7	7	٥	ь	4	4	5	6	6	5	5	6	5	4	4	4	4	6	6	7	7	7	6	8	8	7	8	6
MAXIMUM	10	6	7	9		7	_	••	••		٠.		9	9	9	9			-	-					_							_
MINIMUM	10	2		6	8			10				9 B	7			6	6	6	7	7	8		6				11					8
MAY			,	٥	•		•	'	۰	•		5	'	•		ь	•	3	•	ь	,	•	•		,	В	в	8	8	В		•
MUMIXAM	11	11	11	11	11	10	9	۰	10	11	11	10	7	7	10	11	12	12	12	12	12	۰	۰	11	12	• 4	16	10		10		11
MINIMUM		Â			•			Ŕ				•7					9					. 8					12					- 4
JUNE	•	٠	•	٠	•	•	۰	٠		,	•	•		٠		,	,	7	**	••	,	۰	٠	٥	7	11	12	12	12	11	14	,
MAXIMUM	15	16	16	16	14	11	10	11	12	14	14	15	15	15	17	17	17	18	18	18	19	19	20	21	21	21	21	20	18	18		16
MINIMUM	12	14	14	14	11	10	10	9	9	11	12	12	13	13	13	14	15	15	16	16	15	16	17	17	18	18	17	17	14	14		13
JULY																											-					•
MUMIXAM	19	19	19	21	20	19	20	19	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	21	21	21	22	22	21
MINIMUM	15	16	16	17	17	18	17	18	18	17	18	18	18	17	18	18	18	18	18	19	19	19	18	18	18	18	19	20	19	20	20	18
AUGUST																									-	-			-			
MUMIXAM	22	22	23	23	22	22	21	21	22	21	21	21	21	20	20	20	20	19	21	19	17	18	18	19	20	18	19	20	21	22	22	21
MINIMUM	19	19	19	19	19	19	19	19	19	19	19	19	19	17	17	18	17	17	18	17	16	16	16	17	17	16	17	17	18	19	20	18
SEPTEMBER																																
MAXIMUM							22																									19
MINIMUM	21	20	19	19	19	19	19	19	19	19	18	18	18	18	18	18	18	17	17	16	14	14	14	14	14	16	16	16	16	15		17

11209900 KAWEAH RIVER AT THREE RIVERS, CALIF.

LOCATION. -- Lat 36°26'38", long 118°54'09", in SW\SW\sec.13, T.17 S., R.28 E., Tulare County, temperature recorder at gaging station on right bank, opposite schoolhouse in Three Rivers, and 0.25 mile downstream from North Fork Kaweah River.

DRAINAGE AREA .-- 418 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1963 to July 1966.
Water temperatures (revised).--October 1965 to December 1966, January to September 1968.

EXTREMES, -- January to September 1968:
Water temperatures: Maximum, 27.0°C sometime during period July 9 to Aug. 25 and on Sept. 7, 8.

Period of record.--1965-66, January to September 1968: Water temperatures: Maximum, 28.5°C Aug. 18, 1966; minimum (1965-66), 4.0°C on several days during winter

months. REMARKS, -- Thermograph destroyed by flood of Dec. 6, 1966; replaced in January 1968. Recorder malfunctioned Jan. 15 to Feb. 1, Feb. 4-29, Mar. 11-31, Sept. 3, 4, 30. Clock stopped June 20 to July 1, July 9 to Aug. 26; temperature ranges, 18°C to 23°C, and 21°C to 27°C, respectively.

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

															Ð,	L Y																
MONTH	1	2	3	4	5	6	7	В	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER-
JANUARY								_	_																							
MAXIMUM				6													_											==				
MINIMUM		>	4	2	2	3	3	3	9	۰	,	4	,	4																		
FEBRUARY		_	_																													
MUMIXAN		٠.	,		_																											
MUMINIM		*	,																													
MARCH										• •	_																					
MAXIMUM	14	14	14	9	13	12	14	10	17	14			_										_				_					
MINIMUM APRIL	10	,	,	,	,	10	•	•	,	•																						
MAXIMUM	12		12	15	12	14	14	17	17	١,	17	17	16	16	17	13	12	13	14	15	15	15	16	16	17	17	17	17	17	16		15
MUMINIM	10		13	13	10	**	10	iń	11	12	12	12	11	11	11	Ř	7	- 6	-,	- 8	Ã	7	ā	- 9	16	īi	12	12	12	12		10
MAY	10	,	٠	,	10	•		10	••	**	**				••	•	•	•		•	_		_	•								
MUMIXAM	17	14	17	17	16	15	14	14	16	16	16	12	10	12	15	17	17	17	16	18	15	14	15	16	17	17	18	18	18	17	18	16
MINIMUM	12	12	10	12	12	11	ii	ii	10	li	12	- 9	-9	Ā	Ā	11	12	12	13	13	11	10	10	10	īı	12	13	14	14	13	13	11
JUNE																																
MUMIXAM	18	19	19	19	17	15	14	16	18	19	20	20	19	20	21	22	21	24	22													
MINIMUM	14	15	16	15	13	11	11	11	12	13	14	14	14	14	15	16	17	17	17								_					
JULY																																
MAX1MUM		23	23	24	44	23	24	24																			_					
MINIMUM		19	18	19	21	21	21	22																			-					
AUGUST																																
MAXIMUM																													24			
MUMINIM																											17	18	18	19	20	
SEPTEMBER																																
MUMI XAM	26	25			26	26	27	27	26	26	26	26	24	23	23	24	24	24	23	21	20	20	20	21	22	23	23	23	24			24
MINIMUM	21	19			21	21	21	21	21	21	19	19	19	18	18	18	18	17	18	17	15	14	14	14	15	16	16	16	16			18

11210950 KAWEAH RIYER BELOW TERMINUS DAM, CALIF.

LOCATION.--Lat 36°24'51", long 119°00'42", in SE\SE\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 1958.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN CIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SOD1UM (NA)	PO- TAS- SIUM (K)	BICAR+ BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLC- RIDE (CL)	NITRATE (NO3)
DCT.										
03 NOV.	631			2.7		35	0		1.4	
06 DEC.	66			4.7		9	0		2.9	
D4	239			5.7		70	0		3.5	
JAN. 09	139	16	3.6	5.9	1.7	84	0	1.0	3.5	.4
FEB. 06	243			4.7		62	o		2.9	
MAR. 14	319			3.6		47	0		2.2	
APR.	107						0			
10 May				3.2		43			1.5	
07 JUNE	216	7.7	1.0	3.2	1.0	32	0	6.1	.5	.5
JULY	945			2.3		26	0		1 -1	
08 AUG.	549			2.1		28	0		1.1	
06	317			3 .6		36	2		2.0	
SEPT. 10	37	12	1.9	3.2	2.1	48	0	1.6	3.5	1 -4
		015-			015-				SPECI-	
DATE	BCRON (B)	SCLVED SCLIOS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	SOLVED SOLIDS (TONS PER AC-FT)	P ERC ENT S CO I UM	SODIUM AQ- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC CONC- UCTANCE (MICRO- MHOS)	PH
OC T.	(B)	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR-BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SCO IUM	AO- SORP- TION RATIO	LINITY AS CACO3	FIC CONC- UCTANCE (MICRO- MHOS)	PH
		SCLVED SCLIOS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLVED SOLIDS (TONS PER		AQ- SORP- TION	LINITY AS	FIC CONC- UCTANCE (MICRO-	PH 6.8
OC T. 03 NOV. 06	(B)	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR-BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SCO IUM	AO- SORP- TION RATIO	LINITY AS CACO3	FIC CONC- UCTANCE (MICRO- MHOS)	
OC T. 03 NOV. 06 DEC. 04	.00	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SCD IUM	AO- SORP- TION RATIO	LINITY AS CACO3	FIC CONC- UCTANCE (MICRO- MHOS)	6.8
OC T. 03 NOV. 06 DEC. 04 JAN.	.00	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26 7	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SCD 1UM 18 59	AO- SORP- TION RATIO	LINITY AS CACO3 29	FIC CONC- UCTANCE (MICRO- MHOS)	6.8
OC T. 03 NOV. 06 DEC. 04 JAN. 09 FEB.	.00	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26 7 68	CAR- BONATE HARD- NESS 0 0	SOLVED SOLIDS (TONS PER AC-FT)	18 59 15	AO- SORP- TION RATIO	LINITY AS CACO3 29 7 57	FIC CONC- UCTANCE (MICRO- MHOS) 72 20	6.8 6.7 B.1
OCT. 03 NOV. 06 DEC. 04 JAN. 09 FEB. 06 MAR.	.00	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26 7 68 55	CAR- BONATE HARD- NESS 0 0	SOLVED SOLIDS (TONS PER AC-FT)	18 59 15	AO- SORP- TION RATIO	LINITY AS CACO3 29 7 57	FIC CONC- UCTANCE (MICRO- MHOS) 72 20 133	6.8 6.7 8.1
OCT. 03 NOV. 06 DEC. 04 JAN. 09 FEB. 06 MAR. 14 APR.	.00 .00 .00 .05	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26 7 68 55	CAR- BONATE HARD- NESS 0 0 11	SOL VED SOLIDS (TONS PER AC-FT)	18 59 15 18	.2 .8 .3 .3	LINITY AS CACO3 29 7 57 69	FIC CONC- UCTANCE (MICRO- MHOS) 72 20 133 120	6.8 6.7 8.1 8.C
OCT. 03 NOV. 06 DEC. 04 JAN. 09 FEB. 06 MAR. 14 APR. 10 MAY	.00 .00 .00 .05 .02	SCLVED SCLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 26 7 68 55 46 36	CAR- BONATE HARD- NESS 0 0 11 0	SOLVED SOLIDS (TONS PER AC-FT)	18 59 15 18 18	.2 .8 .3 .3	LINITY AS CACO3 29 7 57 69 51 39	FIC CONC- UCTANCE (MICRO- MHOS) 72 20 133 120 125	6.8 6.7 8.1 8.C 7.7 7.5
OC T. 03 NOV. 06 PEC. 04 JAN. 09 FEB. 06 APR. 110 APR. 10 JUNE 06	.00 .00 .00 .05 .02 .00	SCLIED SCLIOS (RESI- DUE AT 180 C1	NESS (CA,MG) 26 7 68 55 46 36 33	CAR- BONATE HARD- NESS 0 0 11 0 0	SOL VED SOLIOS (TONS PER AC-FT)11	18 59 15 18 18 18	.2 .8 .3 .3 .3 .3	LINITY AS CACO3 29 7 57 69 51 39	72 20 133 120 125 95	6.8 6.7 B.1 8.C 7.7 7.5 7.5
OC T. 03 NOV. 06 PEC. 04 JAN. 09 FEB. 06 APR. 10 APR. 10 JUNE 06 JULY 08	.00 .00 .00 .05 .02 .0D	SCLVED SCLIOS (RESI-DUE AT 180 C)	NESS (CA,MG) 26 7 68 55 46 36 33 23	CAR- BONATE HARO- NESS 0 0 0 11 0 0	SOLVED SOLIOS (TONS PER AC-FT)	SCOLUM 18 59 15 18 18 18 17 22	.2 .8 .3 .3 .3 .3 .2 .3 .2	LINITY AS CACO3 29 7 57 69 51 39 35 26	CONC- CONC-	6.8 6.7 8.1 8.C 7.7 7.5 7.6
OC T. 03 NOV. 06 PEC. 04 JAN. 09 FEB. 06 MAP. 14 APR. 10 JUNE 06 JULY 08 AUG.	.00 .00 .00 .05 .02 .00 .03	SCLVED SCLIOS (RESI-DUE AT 180 C)	NESS (CA, MG) 26 7 68 55 46 36 33 23 19 22	CAR-BONATE HARD-NESS 0 0 11 0 0 0 0 0 0	SOL VED SOL IOS (TONS PER AC-FT)	SCOTUM 18 59 15 18 18 17 22 21	.2 .8 .3 .3 .3 .2 .3 .2 .2 .2	LINITY AS CACO3 29 7 57 69 51 39 35 26 21	CONC- CONC-	6.8 6.7 8.1 8.0 7.7 7.5 7.5 7.6 7.1
OC T. 03 NOV. 06 PEC. 04 JAN. 09 FEB. 06 APR. 10 APR. 10 JUNE 06 JULY 08	.00 .00 .00 .05 .02 .00 .00	SCLIVED SCLIOS (RESI-DUE AT 180 C)	NESS (CA, MG) 26 7 68 55 46 36 33 23	CAR- BONATE HARD- NESS 0 0 11 0 0 0 0	SOL VED SOLIOS (TONS PER AC-FT)	SCOLUM 18 59 15 18 18 17 22 21	.2 .8 .3 .3 .3 .3 .2 .3 .2	LINITY AS CACO3 29 7 57 69 51 39 35 26	CONC- CONC-	6.8 6.7 8.1 8.C 7.7 7.5 7.6

TULARE LAKE BASIN 99

11213500 KINGS RIVER ABOVE NORTH FORK, NEAR TRIMMER, CALIF.

LOCATION.--Lat 36°51'45", long 119°07'25", in NE¹/₄ 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 1968.

EXTREMES . --1967-68:

Water temperatures: Maximum, 23.0°C on several days during July and August; minimum, freezing point Dec. 14, 15.

Period of record (1966-68):

tter temperatures: Maximum (1967-68), 23.0°C on several days during July and August 1968; minimum, freezing point Dec. 14, 15, 1967.

REMARKS.--Clock stopped Oct. 1 to Nov. 12, Aug. 3 to Sept. 30; temperature ranges, 11.0° C to 16.0° C, and 17.0° C to 22.0° C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					1 101	LP S	CA.I.	J.R.B.	, ,	٠, ١	JF 1	MI	м,	WA:	LEH	I E	ıĸ (CIC	JBB	к т:	70 /	10	SE	'I BI	BBI	: 1:	800					
															Ð	AY																
			_		_		_	_	_																_			_				AVER-
MONTH	1	4	3	4	5	6	,	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	36	31	AGE
OCTOBER																																
MUNIXAM																																
MINIMUM	_																-				_											
NOVEMBER																																
MUMIXAM																	13									9	в	9	8	7		
MUMINIM													12	12	12	12	12	12	11	11	11	10	9	8	8	8	7	8	6	7		
DECEMBER																																
MUMIXAM	7	5	5	6	6	6	6	6	6	6	5	6	4		2			3	2	2	2	2	3	4	4	5	6	6	5	4	4	4
MINIMUM	4	3	3	4	5	4	4	6	4	4	4	4	1	0	U	1	2	2	1	1	1	1	2	2	3	3	4	4	4	3	2	3
JANUARY																																
MAXIMUM	4	3	4	3	3	3	3	3	4	5	6	4	•	5	7	7	6	5	5	6	6	6	6	6	7	6	6	4	3	3	6	5
MINIMUM	2	د	4	1	1	2	1	2	3	4	4	3	4	3	5	6	4	3	3	4	4	5	5	5	5	5	4	2	2	2	3	3
FEBRUARY			_		_								_																			
MUMIXAM	5	7	- 7	7	7	8	8	8	8	8	8															11						9
MINIMUM	د	4	4	5	6	6	7	7	8	8	7	6	٥	6	6	7	7	8	8	9	9	9	9	9	9	8	8	9	8			7
MARCH																																
MUMIXAM			11				9	8	8	9			10													13						16
MINIMUM	8	8	8	8	8	9	8	8	٥	6	6	7	- 7	7	7	7	6	6	6	6	7	7	7	8	8	16	9	9	11	11	11	8
APRIL																	_	_														
MUMIXAM																										13						12
MUMINIM	9	8	8	9	10	,	9	10	11	11	11	11	10	10	10	9	- 1	•	•	8	8	7	,	8	9	11	11	11	10	10		9
MAY																																
MUMIXAM	12																															13
	10	10	10	10	10	4	9	9	10	10	10	10	4	8	9	11	12	12	12	12	11	11	10	10	11	13	12	13	13	12	12	11
JUNE				٠.	٠.		٠,								• •			• •	20		20	~ .		٠.								
	15																															18
MUNIMUM	13	14	14	13	12	11	12	13	13	14	14	12	13	12	10	10	11	11	18	18	11	TR	18	19	18	18	18	19	17	16		16
JULY	3.0	٠.					2.0							2.2				~ -											_	_		
MUMIXAM	20	41	21	44	22	22	22	21	10	21	10	22	10	22	22	23	23	23	23	23	23	23	23	23	23	19	23	23	23	22	23	22
MINIMUM AUGUST	11	11	11	18	18	14	10	19	14	10	1.0	14	14	To	13	19	14	19	19	19	19	19	19	19	18	19	20	21	19	19	19	19
AUGUS I MUM I KAM																																
MINIMUM																																
SEPTEMBER	.,	14																														
MUMIKAM																											_					
MINIMUM								_																								
HINTHON																																

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CALIF.

LOCATION.—Lat 36°54'10", long 119°07'15", in NW4 sec.10, T.12 S., R.26 E., Fresno County, 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 1968.

EXTREMES -- 1967-68:

Water temperatures: Maximum, 26.0°C June 22, 23, 25-27; minimum, freezing point Dec. 14-16, 21.

iRKS.--Recorder stopped Oct. 19-22, Nov. 6-8, 18-22, Jan. 25 to Feb. 26, Mar. 1-28; temperature ranges, 10.0°C to 16.0°C, 12.0°C to 16.0°C, 9.0°C to 12.0°C, 2.0°C to 13.0°C, and 6.0°C to 15.0°C, respectively.

TEMPERATURE (°C) OF WATER, SEPTEMBER 1967

															Ð	A Y																AVER-
HONTH	ı	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
SEPTEMBER MAXIMUM MINIMUM	16 12	17 14	16 12	14	16 12	16 12	16 12	16 12	15 11	15 12	16 11	17 12	17 11	16 12	17 12	17 12	16 12	14 13	17 12	17 13	16 13	17 14	17 13	17 13	17 13	18 14	17 13	16 14	18 14	17 13		16 12

100 TULARE LAKE BASIN

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

															0	••																
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	17	16	17	16	16	15	15	15	15	15	16	16	16	16	15	14	14	14					16	16	16	16	16	15	15	15	14	15
MINIMUM																							13									12
NOVEMBER																																
MAXIMUM	14	14	14	14	14				12	12	12	11	12	13	11	12	12						10	9	9	9	9	9	8	7		
MINIMUM	12	12	12	12	13				- 9	9	9	9	9	11	10	10	10						8	7	7	8	7	8	7	7		
DECEMBER			-																													
MAX I HUM	7	7	7	7	7	7	7	7	7	7	6	6	4	2	2	2	2	3	3	3	3	3	3	4	4	6	6	6	6	4	4	4
MINIMUM	- 5	4	4	5	6	5	5	6	5	4	3	4	2	0	0	0	ı	2	2	1	Ö	1	3	2	2	2	3	3	3	2	2	2
JANUARY																																
MUMIXAM	4	3	4	3	3	3	3	3	4	4	6	6	6	6	7	8	7	6	6	7	6	7	8	8								
MINIMUM	2	2	1	ı	1	ı	1	1	2	3	3	3	3	2	4	6	4	3	3	3	3	3	3	4								
FEBRUARY																																
MUMIXAM																											13	13	13			
MINIMUM																											8	8	8			
MARCH																																
MUMIXAM																													18	18	18	
MINIMUM																				~-									11	11	12	
APRIL																																
	14																															17
MINIMUM	11	10	9	10	11	10	10	11	12	12	12	12	12	12	13	11	9	8	9	10	9	9	9	11	11	12	12	13	13	13	••	10
MAY																																
MUMIXAM																							19									19
MINIMUM	14	14	14	14	14	13	13	13	13	13	13	12	11	9	11	10	13	14	14	14	13	12	12	12	14	14	16	17	17	17	16	13
JUNE																																
MAXIMUM																							26									23
MINIMUM	15	16	16	17	17	14	14	14	15	16	17	17	17	16	17	18	18	18	18	18	18	18	19	19	19	19	19	19	17	17		17
JULY																																
MUMIXAM																							25									23
MINIMUM	17	17	17	18	18	19	19	19	18	18	19	19	19	18	18	18	18	18	19	19	19	19	19	18	18	18	19	19	18	18	18	18
AUGUST																				_												
MAXIMUM																							19									21
MINIMUM	17	17	18	17	17	16	17	17	17	17	16	17	17	15	15	16	16	15	16	16	14	13	14	14	15	14	15	16	17	17	18	16
SEPTEMBER																																
MUMIXAM																							17									19
MINIMUM	18	18	17	17	16	17	17	17	17	16	16	16	16	16	16	16	15	15	14	14	12	12	12	12	13	13	13	13	14	13		15

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CALIF.

LOCATION, -- Lat 36°53'04", long 119°09'07", in NW 2 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.

DRAINAGR AREA. -- 1,342 sq mi (at gaging station).

PERIOD OF RECORD, --Chemical analyses: October 1955 to July 1963, October 1967 to September 1968. Water temperatures: October 1966 to September 1968.

EXTREMES. --Period of record (1966-67):
Water temperatures: Maximum, 20.0°C Oct. 9, 1966; 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. The thermograph is affected by air temperatures whenever the powerplant operation is discontinued. For this reason, no extremes are given for this water year. Clock stopped Apr. 3-24; temperature range, 9.0°C to 16.0°C.

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11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- Chapge (CFS)	CAL- CIUM (CA)	MAG- NE- S IUM (MG)	SDDIUM (NA)	PO- TAS- S IUM (K)	BICAR- BDNATE (HCC3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLC- RIDE {CL}	NI TRATE (NO3)
CCT. 10	1300			3.0		18	0		1.1	
NOV.	1120			3.4		55	0		1.6	
DEC. 10	450			3.4		27	0		1.6	
JAN. 08	413	6.1	1.0	3.8	.6	26	0	1.5	1.7	.1
FER. 12	710			3.1		24	0		•1	
MAR. 11	896			2.4		21	0		•0	
ΔPR. 08	1410			2.1		18	0		•0	
MAY				1.5	.5	10	0	2.1	•5	.0
13	2390	2.4	•0		• • • • • • • • • • • • • • • • • • • •	10	0			
JULY	1570			1.5					.6	
09 AUG.	1430			1.6		14	0		•0	
12 SEPT.	714			3.4		19	0		2.1	
09	669	6 •2	1.1	2.8	1.3	25	0	3.6	3.2	.0
DATE	BDRON (B)	CIS- SCLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARC- NESS	DIS- SOLVED SDLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACG3	SPECI- FIC CONC- UCTANCE (MICRO- MHOS)	РН
ост. 10		SOL VED SOL IDS (RESI- DUE AT	NESS	CAR- BONATE HARC-	SOLVED SDLIDS (TONS PER		AD- SORP- TION	LINITY	FIC CONC- UCTANCE (MICRO-	PH_ 6•7
OCT. 10 NOV. 06	(8)	SCL VED SOL IDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARC- NESS	SOLVED SDLIDS (TONS PER AC-FT)	500 I UM	AD- SORP- TION RATIO	LINITY AS CACG3	FIC CONC- UCTANCE (MICRO- MHOS)	-
OCT. 10 NOV. 06 DEC. 10	.10	SCLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARC- NESS	SOLVED SDLIDS (TONS PER AC-FT)	32 32	AD- SORP- TION RATIO	LINITY AS CACG3	FIC CONC- UCTANCE (MICRO- MHOS)	6.7
OCT. 10 NOV. 06 DEC. 10 JAN. 08	.10	SCL VED SOL IDS (RESI- DUE AT 180 C)	NESS (CA,MG) 14 36	CAR- BONATE HARC- NESS O	SOLVED SDLIDS (TONS PER AC-FT)	32 17	AD- SORP- TION RATIO	LINITY AS CACG3	FIC CONC- UCTANCE (MICRO- MHOS) 46	6.7 7.5
OCT. 10 NOV. 06 DEC. 10 JAN. 08 FEB.	.10	SCL VED SOL IDS (RESI- DUE AT 180 C)	NESS (CA,MG) 14 36 25	CAR- BONATE HARC- NESS O O	SOLVED SOLIDS (TONS PER AC-FT)	32 17 23	AD- SORP- TION RATIO	LINITY AS CACG3 15 45	FIC CONC- UCTANCE (MICRO- MHOS) 46 123	6.7 7.5 7.6
OCT. 10 NOV. 06 DEC. 10 JAN. 08 FEB. 12 MAR.	.10 .00	SCLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 14 36 25	CÂR- BONATE HARC- NESS 0 0	SOLVED SOLIDS (TONS PER AC-FT)	32 17 23 29	AD- SORP- TION RATIO .3 .2 .3	LINITY AS CACG3 15 45 22 21	FIC CONC- UCTANCE (MICRO- MHOS) 46 123 54	6 • 7 7 • 5 7 • 6 7 • 6
OCT. 10 NDV. 06 DEC. 10 JAN. 08 FEB. 12 MAR. 11	.1000 .04 .03	SCLVED SOLIDS (RESI- DUE AT 180 C) 46	NESS (CA,MG) 14 36 25 19	CAR- BONATE HARC- NESS 0 0 3	SOLVED SOLIDS (TONS PER AC-FT)	32 17 23 29 27	.3 .2 .3 .4	LINITY AS CACG3 15 45 22 21	FIC CONC- UCTANCE (MICRO- MHOS) 46 123 54 58	6.7 7.5 7.6 7.6 7.5
OCT. 10 NOV. 06 DEC. 10 JAN. 08 FEB. 12 MAR.	.10 .00 .04 .03	SCLVED SOLIDS (RESI- DUE AT 180 C) 46	NESS (CA,MG) 14 36 25 19 18	CAR- BONATE HARC- NESS 0 0 3 0	SOLVED SOLIDS (TONS PER AC-FT)	32 17 23 29 27 26	.3 .2 .3 .4 .3	LINITY AS CACG3 15 45 22 21 20	FIC CONC- UCTANCE (MICRO- MHOS) 46 123 54 58	6.7 7.5 7.6 7.6
OCT. 10 NOV. 06 10 JAN. 08 FEB. 12 MAR. 11 APR. 08 MAY	.10 .00 .04 .03 .00	SOL VED SOL IOS (RES I- DUE AT 180 C) 46	NESS (CA,MG) 14 36 25 19 18 15	CAR-BONATE HARC-NESS O O O O O O O O O O O	SOLVED SDLIDS (TONS PER AC-FT)	32 17 23 29 27 26	.3 .2 .3 .4 .3 .3	LINITY AS CACG3 15 45 22 21 20 17	FIC CONC- UCTANCE (MICRO- MHOS) 46 123 54 58 57 49	6.7 7.5 7.6 7.6 7.5 7.5
OCT. 10 NDV. 06 DEC. 10 JAN. 08 FEB. 12 MAR. 11 APR. 08 APR. JUNE 11 JULY 09	.10 .00 .04 .03 .00	SOL VED SOL 10S (RES1- DUE AT 180 C)	NESS (CA, MG) 14 36 25 19 18 15 12 6	CAR- BONATE HARC- NESS 0 0 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	32 17 23 29 27 26 28	.3 .2 .3 .4 .3 .3 .3 .3	LINITY CACG3 15 45 22 21 20 17 15	FIC CONC- CONC- CONC- CONC- WHOS) 46 123 54 58 57 49 37 24	6.7 7.9 7.6 7.6 7.5 7.5 7.4
OCT. 10 NOV. 06 DEC. 10 JAN. 08 FEB. 12 MAR. 11 APR. 08 MAY 13 JUNE 11 JULY	.10 .00 .04 .03 .00 .00	SOL VED SOL 10S (RESID- DUE AT 180 C)	NESS (CA, MG) 14 36 25 19 18 15 12 6 8	CAR- BONATE - HARCT- NESS - 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	300 i um 32 17 23 29 27 26 28 33 29	.3 .2 .3 .3 .3 .2	11 AS CACCO 15 AS CACCO 15 AS CACCO 17 L5 AS B	FIC CONC- CONC- CONC- CONC- CONC- MHCS) 46 123 54 58 57 49 37 24 28	6.7 7.5 7.6 7.6 7.5 7.5 7.4 7.3

102 TULARE LAKE BASIN

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY MAX MIN MAX MIN MAX MIN MAX HIN MA	#IN 4.0 4.0 6.0 6.0 5.0 5.0 5.0 5.0
\$\frac{2}{3}	4.0 4.0 6.0 6.0 5.0 5.0 5.0 5.0 6.0 4.0
5 6.0 4.0 9.0 6 12.0 9.0 7.0 8 12.0 9.0 8.0 10 11.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 9.0 15 11.0 7.0 9.0	4.0 4.0 6.0 6.0 5.0 5.0 5.0 5.0 6.0 4.0
5 6.0 4.0 9.0 6 12.0 9.0 7.0 8 12.0 9.0 8.0 10 11.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 9.0 15 11.0 7.0 9.0	6.0 6.0 5.0 5.0 5.0 5.0 6.0 4.0
5 6.0 4.0 9.0 6 12.0 9.0 7.0 8 12.0 9.0 8.0 10 11.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 9.0 15 11.0 7.0 9.0	6.0 5.0 5.0 5.0 5.0 5.0 5.0
9 12.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 7.0 15 11.0 7.0 9.0	5.0 5.0 5.0 5.0 6.0 4.0 5.0
9 12.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 7.0 15 11.0 7.0 9.0	5.0 5.0 5.0 6.0 4.0 5.0
9 12.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 7.0 15 11.0 7.0 9.0	5.0 5.0 6.0 4.0 5.0
10 11.0 9.0 4.0 3.0 8.0 11 11.0 9.0 4.0 2.0 8.0 12 10.0 9.0 4.0 2.0 7.0 13 12.0 9.0 7.0 14 13.0 9.0 10.0 15 11.0 7.0 9.0	5.0 6.0 4.0 5.0
15 11.0 7.0 9.0	4.0 5.0
15 11.0 7.0 9.0	4.0 5.0
15 11.0 7.0 9.0	5.0
15 11.0 7.0 9.0	
16 11.0 6.0 7.0 4.0 8.0 17 12.0 8.0 8.0	6.0 6.0
17 12.0 8.0 8.0	6.0
18	6.0
	6.0
19 11.0 9.0 8.0	6.0 6.0
21 11.0 7.0 11.0 22 10.0 23 12.0	7.0 7.0
22 10.0	7.0
24 13.0	8.0
25 13.0	9.0
26 14.0 27 14.0 28 8.0 4.0 14.0 29 6.0 4.0 7.0 4.0 14.0	9.0
27 14.0 28 8.0 4.0 14.0	9.0 9.0
28 8.0 4.0 14.0 29 7.0 4.0 14.0 30 6.0 4.0 16.0	10.0
30 6.0 4.0 16.0	11.0
31 15.0	11-0
MONTH 16.0	4.0
APRIL YAM JULY SEP	PTEMBER
DAY MAX MIN MAX MIN MAX MIN MAX MIN MAX MIN MAX	
	MIN
1 12.0 9.0 13.0 9.0 16.0 13.0 16.0 12.0 15.0 11.0 18.0	12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0	12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0	12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 12.0 17.0 12.0 13.0 10.0 22.0	12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 12.0 17.0 12.0 13.0 10.0 22.0	12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 12.0 17.0 12.0 13.0 10.0 22.0	12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 12.0 17.0 12.0 13.0 10.0 22.0	12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 17.0 12.0 13.0 10.0 22.0 6 12.0 9.0 17.0 12.0 17.0 12.0 14.0 10.0 7 12.0 8.0 13.0 11.0 13.0 10.0	12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 10.0 22.0 16.0 17.0 12.0 13.0 10.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 10.0 22.0 16.0 17.0 12.0 13.0 10.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 10.0 22.0 16.0 17.0 12.0 13.0 10.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 15.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 17.0 12.0 13.0 10.0 22.0 6 12.0 8.0 13.0 11.0 13.0 10.0 10.0 8 13.0 8.0 13.0 11.0 14.0 13.0 10.0 17.0 9 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 19.0 10 13.0 9.0 17.0 12.0 15.0 12.0 13.0 10.0 19.0 11 9.0 8.0 17.0 13.0 15.0 13.0 19.0 12.0 14.0 12 8.0 7.0 17.0 13.0 </th <th>12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 11.0</th>	12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 13.0 3.0 11.0 15.0 14.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 13	12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 13.0 3.0 11.0 15.0 14.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 10.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 11.0 11.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 22.0 17.0 12.0 13.0 10.0 14.0 13.0 10.0 12.0 13.0 10.0 14.0 13.0 10.0 12.0 13.0 10.0 14.0 12.0 13.0 10.0 14.0 12.0 13.0 10.0 14.0 12.0 13.0 10.0 14.0 12.0 13.0 10.0 14.0 12.0 13.0 10.0 14.0 12.0 13.0 12.0 13.0 10.0 14.0 12.0 13.0 12.0 13.0 10.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 11.0 14.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 15.0 12.0 13.0 10.0 14.0 15.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 15.0 13.0 10.0 15.0 13.0 10.0 15.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 13.0 10.0 13.0 10.0 15.0 1	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 12.0 11.0 12.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 -13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 -14.0 12.0 17.0 12.0 13.0 10.0 15.0 6 12.0 8.0 13.0 11.0 13.0 10.0 7 13.0 8.0 13.0 11.0 13.0 10.0 17.0 9 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 19.0 11 9.0 8.0 17.0 13.0 15.0 12.0 13.0 <td< th=""><th>12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0</th></td<>	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 -13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 15.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 17.0 12.0 13.0 10.0 15.0 6 12.0 8.0 13.0 11.0 13.0 10.0 7 13.0 8.0 13.0 11.0 13.0 10.0 17.0 9 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 19.0 11 8.0 7.0 17.0 13.0 15.	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 -13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 17.0 12.0 13.0 10.0 15.0 6 12.0 8.0 13.0 11.0 13.0 10.0 7 13.0 8.0 13.0 11.0 13.0 10.0 17.0 9 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 17.0 10 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 19.0 11 9.0 8.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3 13.0 9.0 17.0 14.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 14.0 12.0 13.0 10.0 12.0 13.0 10.0 22.0 17.0 14.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 9 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 17.0 10 13.0 9.0 17.0 12.0 15.0 12.0 13.0 10.0 19.0 11.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 10.0 16.0 12.0 13.0 12.0 13.0 10.0 16.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 14.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 14.0 15.0 12.0 13.0 10.0 14.0 5 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 22.0 17.0 14.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 10.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 4 13.0 9.0 17.0 14.0 16.0 12.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 15.0 5 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 9 13.0 8.0 13.0 11.0 16.0 12.0 13.0 10.0 17.0 10 13.0 9.0 16.0 11.0 16.0 12.0 13.0 10.0 19.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 3	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
2 11.0 9.0 13.0 9.0 17.0 14.0 16.0 12.0 13.0 11.0 15.0 13.0 10.0 14.0 4 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 14.0 5 13.0 9.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 5 14.0 12.0 17.0 14.0 15.0 12.0 13.0 10.0 15.0 10.0 22.0 17.0 14.0 12.0 13.0 10.0 15.0 10.0 22.0 17.0 14.0 12.0 13.0 10.0 12.0 13.0 10.0 15.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 17.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 15.0 12.0 13.0 10.0 16.0 13.0 10.0 16.0 13.0 10.0 17.0 12.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0

THE ARE LAKE BASEN

103

11222700 KINGS RIVER AT PEOPLES WEIR, NEAR KINGSBURG, CALIF.

LOCATION.--Lat 36°29'06", long 119°32'22", in NW4 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 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS∽ CHARGE (CFS)	CAL- GIUM (CA)	MAG— NE- Sium (MG)	SODTUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- Ride (CL)	NITRATE (NO3)
JAN. 12 May	670			2.9		24	0		1.4	
06	150	12	5.4	9.5	2.0	71	0	5.6	4.0	1.6
Ol SEPT.	1500			2 - 4		27	0		1.9	
09	1230	4.8	1.0	2.1	1.2	21	0	1.0	2.5	.8
OATE	BORON (B)	DIS- SOLVED SOLIDS (RESI- DJE AT 190 C)	HARO NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AO- SDRP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РΗ
JAN. 12 May	.13		20	0		24	•3	20	54	7.5
06 JULY	.01	85	52	0	.12	27	-6	58	150	7.5
Ol SEPT.	.00		19	0		22	-2	22	69	7.6
09	.00	23	16	D	.03	21	• 2	17	46	7.0

SAN JOAQUIN RIVER BASIN

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CALIF.

LOCATION.--Lat 37°13'10", long 119°12'50", in NW\$\frac{1}{4}\text{ 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.

PERIOD OF RECORD, -- Water temperatures: July 1961 to September 1968.

EXTREMES, --1967-68:
Water temperatures: Maximum, 16.0°C on several days during August and September; minimum, freezing point Dec. 18-21.

Period of record: Water temperatures: Maximum, 17.0° C Aug. 10, 11, 1967; minimum (1961-63, 1965-68), freezing point on several days during winter periods.

YEAR

16.0

0.0

SAN JOAQUIN RIVER BASIN

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CALIF .-- Continued

TEMPERATURE (C°) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		11	SMPKKATUKE	(C) OF	WAIDE, WA	ILER IBAK	OCTOBER 1	907 10 31	PIDMOIN I	500		
	001	FOBER	NOVE	4BER	DEC	EMBER	JAN	IUARY	FEBR	LUARY	MA	IRCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
041	700		784	17.4	7788	714	774	nin	n AA	HIM	750	- TIM
1	13.0	12.0	11.0	9.0	4.0	2.0	2.0	2.0	1.0	1.0	4.0	3.0
2	13.0	11.0 12.0	11.0 10.0	9.0 9.0	4.0 4.0	4.0 4.0	2.0 1.0	1.0	1.0 1.0	1.0	4.0 4.0	2.0 2.0
4	13.0	11.0	11.0	9.0	5.0	4.0	1.0	1.0	2.0	1.0	4.0	3.0
5	13.0	12.0	10.0	9.0	5.0	2.0	1.0	1.0	2.0	1.0	4.0	3.0
6	12.0	11.0	10.0	9.0	4.0	3.0	1.0	1.0	2.0	2.0	4.0	3.0
7	13.0	11.0	9.0	8.0	4.0	3.0	1.0	1.0	2.0	2.0	3.0	2.0
8	13.0	11.0	9.0	8.0	4.0	3.0	2.0	1.0	2.0	2.0	2.0	2.0
.9	13.0	11.0	9.0	8.0	4.0	3.0	2.0	2.0	2.0	1.0	2.0	2.0
10	13.0	11.0	9.0	8.0	4.0	3.0	2.0	1.0	2.0	1.0	3.0	2.0
11	13.0	11.0	9.0	8.0	4.0	3.0	1.0	1.0	2.0	1.0	3.0	2.0
12	12.0	11.0	9.0	8.0	4.0	3.0	1.0	1.0	2.0	1.0	3.0	2.0
13 14	12.0 12.0	11.0 11.0	9.0 10.0	9.0 9.0	3.0 2.0	2.0 1.0	2.0 2.0	1.0	2.0 2.0	2.0 1.0	3.0 3.0	2.0
15	12.0	11.0	9.0	8.0	2.0	2.0	2.0	2.0	1.0	1.0	3.0	2.0
16 17	12.0 12.0	11.0 11.0	9.0 9.0	7.0 8.0	2.0 2.0	2.0 1.0	2.0 2.0	2.0 1.0	1.0	1.0	3.0 2.0	1.0
18	12.0	10.0	8.0	7.0	1.0	0.0	2.0	1.0	2.0	1.0	2.0	1.0
19	12.0	10.0	7.0	7.0	0.0	0.0	2.0	1.0	2.0	2.0	2.0	1.0
20	12.0	10.0	8.0	7.0	0.0	0.0	2.0	2.0	2.0	2.0	3.0	1.0
21	12-0	10.0	7.0	7.0	1.0	0.0	2.0	2.0	2.0	2.0	3.0	2.0
22	12.0	10.0	7.0	6.0	1.0	1.0	3.0	2.0	3.0	2.0	3.0	2.0
23	12.0	10.0	6.0	6.0	1.0	1.0	2.0	2.0	3.0	2.0	4.0	2.0
24 25	12.0 11.0	10.0	6.0 6.0	6.0 6.0	2.0 2.0	1.0 2.0	2.0 2.0	2.0 2.0	3.0 3.0	2.0 2.0	4.0 4.0	3.0 3.0
26 27	11.0	10.0	6.0	5.0 5.0	2.0	2.0 2.0	2.0	2.0	3.0	2.0 2.0	4.0	3.0
28	11.0 11.0	10.0 10.0	6.0 7.0	5.0	2.0 2.0	1.0	2.0 1.0	1.0	3.0 4.0	2.0	4.0 4.0	3.0 3.0
29	11.0	9.0	6.0	4.0	2.0	1.0	1.0	1.0	4.0	2.0	5.0	3.0
30	11.0	9.0	4.0	2.0	2.0	1.0	1.0	1.0			6-0	3.0
31	11.0	9.0			2.0	2.0	1.0	1.0			6.0	4.0
MONTH	13.0	9.0	11.0	2.0	5.0	0.0	3.0	1.0	4.0	1.0	6.0	1.0
	Al	PRIL		AY	JI	JNE	J	JL Y	AUG	SUST	SEPT	r EMBER
DAY											SEPT	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	MAX 6.0	MIN 2.0	MAX 9.0	MIN 6.0	MAX 12.0	MIN 8.0	MAX 13.0	M [N 9 • 0	MAX 14.0	MIN 11.0	MAX 16-0	MIN 13.0
1 2	MAX 6.0 3.0	MIN 2.0 2.0	MAX 9.0 10.0	MIN 6.0 6.0	MAX 12.0 13.0	MIN 8.0 8.0	MAX 13.0 13.0	MIN 9.0 9.0	MAX 14.0 14.0	MIN 11.0 11.0	MAX 16-0 16-0	MIN 13.0 13.0
1 2 3	MAX 6.0 3.0 4.0 6.0	MIN 2.0 2.0 3.0 3.0	9.0 10.0 11.0	MIN 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0	MIN 8.0 8.0 9.0 9.0	MAX 13.0 13.0 13.0 13.0	#IN 9.0 9.0 9.0 10.0	MAX 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0	MAX 16.0 16.0 16.0	MIN 13.0 13.0 13.0
1 2 3	MAX 6.0 3.0 4.0	MIN 2.0 2.0 3.0	9.0 10.0 11.0	MIN 6.0 6.0 6.0	MAX 12.0 13.0 12.0	MIN 8.0 8.0 9.0	MAX 13.0 13.0 13.0	MIN 9.0 9.0 9.0	MAX 14.0 14.0 14.0	MIN 11.0 11.0 12.0	MAX 16.0 16.0 16.0	MIN 13.0 13.0 13.0
1 2 3 4 5	MAX 6.0 3.0 4.0 6.0	MIN 2.0 2.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0	MIN 8.0 8.0 9.0 9.0	MAX 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0
1 2 3 4 5	MAX 6.0 3.0 4.0 6.0 6.0	MIN 2.0 2.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0 10.0	MIN 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0	MIN 8.0 8.0 9.0 9.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8	MAX 6.0 3.0 4.0 6.0 6.0 6.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0 10.0	6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 8.0 9.0	MIN 8.0 9.0 9.0 8.0 7.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 12.0 12.0 11.0 11.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8	MAX 6-0 3-0 4-0 6-0 6-0 5-0 6-0 7-0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 8.0 9.0 11.0	MIN 8.0 8.0 9.0 9.0 8.0 7.0 8.0 7.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 13.0 15.0	MIN 11.0 12.0 12.0 12.0 11.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9	MAX 6.0 3.0 4.0 6.0 6.0 5.0 6.0 7.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0	MIN 6.0 6.0 6.0 6.0 5.0 6.0 6.0	9.0 9.0 11.0 9.0 9.0 9.0 11.0	MIN 8.0 8.0 9.0 9.0 8.0 7.0 8.0 7.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 13.0 15.0	MIN 11.0 12.0 12.0 11.0 11.0 12.0 12.0 12.0	MAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9	MAX 6-0 3-0 4-0 6-0 6-0 5-0 6-0 7-0 7-0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 9.0 11.0 12.0	MIN 8.0 8.0 9.0 9.0 8.0 7.0 7.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0	MAX 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.
1 2 3 4 5 6 7 8 9 10	MAX 6-0 3-0 4-0 6-0 6-0 7-0 7-0 7-0	MIN 2.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	9.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 9.0 11.0 12.0	MIN 8.0 9.0 9.0 9.0 7.0 8.0 7.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 12.0 12.0 12.0 11.0 12.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 6-0 3-0 4-0 6-0 6-0 5-0 6-0 7-0 7-0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 9.0 11.0 12.0	MIN 8.0 8.0 9.0 9.0 8.0 7.0 7.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0	MAX 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 6.0 3.0 4.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 10.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 9.0 11.0 12.0	MIN 8.0 9.0 9.0 9.0 8.0 7.0 8.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.	MAX 14.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 6-0 3-0 4-0 6-0 6-0 5-0 6-0 7-0 7-0 7-0 7-0 7-0 8-0	MIN 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 10.0 11.0 9.0 8.0 7.0 7.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 12.0 13.0 12.0 12.0 9.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0	8.0 8.0 9.0 9.0 8.0 7.0 7.0 7.0 8.0 8.0 8.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0	MIN 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12.0	MAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 6.0 3.0 4.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0	9.0 11.0 11.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 12.0 12.0 9.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0	MIN 8.0 9.0 9.0 9.0 8.0 7.0 8.0 8.0 8.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 11.	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 6.0 3.0 4.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	MIN 2.0 2.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 8.0 7.0 7.0 10.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 12.0 9.0 9.0 12.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	8.0 8.0 9.0 9.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9:0 9:0 9:0 10:0 10:0 11:0 11:0 11:0 11:	14.0 14.0 14.0 14.0 14.0 14.0 13.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	HIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 1 0 1 1 1 2 1 3 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MAX 6.0 3.0 4.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 10.0 11.0 10.0	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 12.0 9.0 9.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 8.0 9.0 9.0 7.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.	14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 11.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0	MAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MAX 6.0 3.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0	MIN 2.0 2.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 10.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 8.0 9.0 9.0 7.0 8.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 11.	14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MIN 8.0 9.0 9.0 9.0 8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9:0 9:0 9:0 10:0 11:0 11:0 11:0 11:0 11:	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 11.0 12.0 12	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0 14-0 13-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 11 15 15 16 16 17 18 19 20 21 12 22	MAX 6.0 3.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 9.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	8.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0	MIN 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 10.0 10.0 10.0 10.0 1	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MIN 8.0 9.0 9.0 9.0 8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9:0 9:0 9:0 10:0 11:0 11:0 11:0 11:0 11:	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 11.0 12.0 12	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 6.0 3.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0	9.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 9.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 8.0 8.0 9.0 9.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0	MIN 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 2 11 3 11 4 11 5 11 6 11 7 11 8 11 9 20 21 22 23 24 25	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 12.0 9.0 9.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	#IN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 9.0 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 2 11 3 11 4 11 5 11 6 11 7 11 8 11 9 20 21 22 23 24	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 8.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	#IN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 9.0 9.0 10.0 11.0	14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
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 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	8.0 8.0 9.0 9.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HIN 9.0 9.0 10.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 11 15 16 6 17 18 19 20 21 22 23 24 25 26 27 28 29	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 12.0 9.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	#IN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 9.0 9.0 10.0 11.0	14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
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 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 9.0 10.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	8.0 8.0 9.0 9.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HIN 9.0 9.0 10.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	MAX 6.0 3.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 6.0 9.0 9.0 9.0 9.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 11	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	8.0 9.0 9.0 9.0 8.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29 30	MAX 6.0 3.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 2.0 2.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 9.0 10.0 11.0 11.0 9.0 9.0 9.0 10.0 11.0 11	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 12.0 12.0 12.0 12.0 12.0 9.0 9.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	#IN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HIN 9.0 9.0 10.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CALIF.

LOCATION.--Lat 37°09'10", long 119°27'30", in NE¹/₄ sec.18, T.9 S., R.23 E., Fresno County, temperature recorder at gaging station on left bank, 40 ft upstream from bridge, 0.4 mile upstream from mouth, 1.3 miles downstream from Whiskey Creek, and 4.3 miles northeast of Auberry.

DRAINAGE AREA. -- 130 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1960 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 31.0°C July 29, Aug. 3; minimum, 2.0°C on several days during December and January.

Period of record:
Water temperatures: Maximum (1980-63, 1964-68), 33.0°C Aug. 5, 1966; minimum 2.0°C on several days in 1961, 1965-68.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

REMARKS .-- No flow Aug. 4-20, Aug. 26 to Sept. 30.

	or	TOBER	NOV	EMBER	ner	EMBER	.1 A	NUARY	FER	RUARY		ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	20.0 19.0	18.0 16.0	14.0 14.0	12.0 12.0	8.0 8.0	7.0 6.0	5.0 5.0	4.0 4.0	6.0 7.0	4.0 6.0	11.0 11.0	10.0 9.0
3	19.0	17.0	14.0	12.0	7.0	6.0	4.0	3.0	8.0	6.0	12.0	9.0
4	19.0	16.0	14.0	12.0	8.0	7.0	3.0	2.0	8.0	6.0	12.0	9.0
5	18.0	16.0	14.0	13.0	8.0	8.0	3.0	2.0	8.0	6.0	12.0	9.0
6	17.0	14.0	14.0	12.0	8.0	6.0	3.0	3.0	8.0	7.0	11.0	9.0
7	17.0	14.0	14.0	12.0	7.0	7.0	3.0	2.0	9.0	7.0	10.0	9.0
8 9	17.0 17.0	14.0 14.0	14.0 13.0	12.0	7.0 7.0	7.0 7.0	3.0 4.0	2.0 3.0	9.0 9.0	8.0 8.0	9.0 9.0	9.0 8.0
10	18.0	14.0	12.0	12.0 11.0	7.0	6.0	6.0	4.0	9.0	7.0	9.0	7.0
11	18.0	14.0	12.0	11.0	7.0	6.0	6.0	5.0	8.0	6.0	9.0	7.0
12	18.0	14.0	12.0	11.0	7.0	5.0	6.0	4.0	8.0	6.0	9.0	8.0
13	18.0	15.0	13.0	12.0	6.0	3.0	6.0	5.0	8.0	7-0	11.0	8.0
14	18.0	16.0	15.0	13.0	3.0	2.0	6-0	4-0	8.0	7.0	10-0	7.0
15	17.0	14-0	15.0	13.0	3.0	2.0	8.0	6.0	8.0	6.0	9.0	8.0
16	17.0	14.0	14.0	12.0	3.0	2.0	8.0	8.0	8.0	7.0	9.0	8.0
17	17.0	14.0	14.0	13.0	3.0	2.0	8.0	6.0	9.0	8.0	9.0	8.0
18 19	16.0 16.0	13.0 13.0	14.0 13.0	13.0	4-0	3.0	6.0	4.0	9.0	7.0	9.0 9.0	7.0
20	16.0	13.0	12.0	12.0 12.0	4.0 4.0	3.0 3.0	6.0 7.0	5.0 5.0	9.0 12.0	9.0 9.0	11.0	6.0 7.0
21	15.0	13.0	12.0	11.0	3.0	2.0	7.0	6.0	11.0	9.0	10.0	7.0
22	16.0	13.0	12.0	10-0	3.0	2.0	8.0	6.0	11.0	9.0	11.0	8.0
23	16.0	13.0	11.0	10.0	4.0	3.0	8.0	6.0	12.0	10.0	12.0	8.0
24	16.0	13.0	11.0	9.0	4.0	3.0	8.0	6.0	12.0	11.0	12-0	9.0
25	16.0	13.0	10.0	8.0	6.0	4.0	7.0	6.0	12.0	11.0	12.0	9.0
26 27	16.0 16.0	13.0 13.0	9.0	9.0	6.0	4.0	7.0 7.0	6.0	12.0 12.0	10.0	12.0 12.0	9.0 9.0
28	15.0	13.0	10.0 10.0	8.0 9.0	7.0 7.0	6.0 6.0	4.0	4.0 3.0	12.0	11.0	14.0	10.0
29	15.0	13.0	9.0	8.0	7.0	5.0	4.0	3.0	12.0	9.0	14.0	11.0
30	14.0	12.0	8.0	8.0	6.0	5.0	3.0	3.0			15.0	11.0
31	14.0	11.0			6.0	5.0	6.0	3.0			15.0	12.0
HONTH	20.0	11.0	15.0	8.0	8.0	2.0	8.0	2.0	12.0	4.0	15.0	6.0
	AF	PRIL	,	YAY	Jt	JNE	Jt	JLY	AUG	SUST	SEPI	EMBER
DAY	AF MAX	PRIL Min	MAX	YAY Min	JL XAM	JNE Min	JI. Max	JLY Min	AUG M AX	GUST Min	SEP1 Max	TEMBER Min
DAY 1	MAX		MAX	MIN	MAX		MAX	MIN	MAX	MIN		
1 2	MAX 14.0 10.0	MIN 10.0 9.0	MAX 19.0 19.0	MIN 14.0 14.0	MAX 22.0 23.0	MIN 17.0 18.0	MAX 26.0 26.0	MIN 19.0 20.0	MAX 29.0 30.0	MIN 23.0 23.0	MAX	MIN
1 2 3	MAX 14.0 10.0 11.0	MIN 10.0 9.0 8.0	MAX 19.0 19.0 19.0	MIN 14.0 14.0 14.0	MAX 22.0 23.0 22.0	MIN 17.0 18.0 18.0	MAX 26.0 26.0 26.0	MIN 19.0 20.0 20.0	MAX 29.0	MIN 23.0	MAX	#IN
1 2 3 4	MAX 14.0 10.0 11.0 12.0	MIN 10.0 9.0 8.0 9.0	MAX 19.0 19.0 19.0	MIN 14.0 14.0 14.0 14.0	MAX 22.0 23.0 22.0 22.0	MIN 17.0 18.0 18.0 18.0	MAX 26.0 26.0 26.0 27.0	MIN 19.0 20.0 20.0 21.0	MAX 29.0 30.0	MIN 23.0 23.0	MAX	MIN
1 2 3 4 5	14.0 10.0 11.0 12.0 12.0	MIN 10.0 9.0 8.0 9.0 11.0	MAX 19.0 19.0 19.0 19.0	MIN 14-0 14-0 14-0 14-0	MAX 22.0 23.0 22.0 22.0 19.0	MIN 17.0 18.0 18.0 18.0	MAX 26.0 26.0 26.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 21.0	MAX 29.0 30.0	MIN 23.0 23.0	MAX	#IN
1 2 3 4 5	MAX 14.0 10.0 11.0 12.0 12.0	MIN 10.0 9.0 8.0 9.0 11.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 14-0 14-0 14-0 14-0 14-0	MAX 22.0 23.0 22.0 22.0 19.0	MIN 17.0 18.0 18.0 18.0 17.0	MAX 26.0 26.0 26.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 21.0	29.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	MIN
1 2 3 4 5	MAX 14.0 10.0 11.0 12.0 12.0	MIN 10.0 9.0 8.0 9.0 11.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 14-0 14-0 14-0 14-0 14-0	MAX 22.0 23.0 22.0 22.0 19.0	MIN 17.0 18.0 18.0 18.0 17.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0	9.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8	MAX 14.0 10.0 11.0 12.0 12.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 14-0 14-0 14-0 14-0 14-0	MAX 22.0 23.0 22.0 22.0 19.0	MIN 17.0 18.0 18.0 17.0 14.0 15.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 26.0 25.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 22.0	9.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	MIN
1 2 3 4 5	MAX 14.0 10.0 11.0 12.0 12.0	MIN 10.0 9.0 8.0 9.0 11.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 14-0 14-0 14-0 14-0 14-0	MAX 22.0 23.0 22.0 22.0 19.0	MIN 17.0 18.0 18.0 18.0 17.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0	9.0 30.0 31.0	MIN 23.0 23.0	MAX	MIN
1 2 3 4 5 6 7 8 9	MAX 14.0 10.0 11.0 12.0 11.0 11.0 13.0 14.0 15.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 8.0 9.0 10.0	MAX 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0	MIN 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	MAX 22.0 23.0 22.0 22.0 19.0 17.0 17.0 17.0 20.0 21.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0	MAX 26.0 26.0 27.0 27.0 27.0 27.0 25.0 27.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 22.0 21.0	MAX 29.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	HAX 14.0 10.0 11.0 12.0 12.0 11.0 11.0 15.0 14.0 15.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 11.0	MAX 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0	22.0 23.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0	MAX 26.0 26.0 27.0 27.0 27.0 27.0 25.0 25.0 27.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 22.0 21.0 21	MAX 29.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 14.0 10.0 11.0 12.0 12.0 11.0 11.0 13.0 14.0 15.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 11.0	MAX 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0	MAX 22.0 23.0 22.0 19.0 17.0 17.0 19.0 20.0 21.0	MIN 17.0 18.0 18.0 17.0 14.0 15.0 14.0 16.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 26.0 25.0 25.0 25.0 29.0 29.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 22.0 21.0 21.0 21.0	MAX 29.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	HAX 14.0 10.0 11.0 12.0 12.0 11.0 11.0 15.0 14.0 15.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 11.0	MAX 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0	22.0 23.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0	MAX 26.0 26.0 27.0 27.0 27.0 27.0 25.0 25.0 27.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 22.0 21.0 21	9.0 30.0 31.0	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 14.0 10.0 11.0 12.0 12.0 11.0 11.0 13.0 14.0 15.0 15.0 16.0 17.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 10.0 12.0 11.0 12.0 13.0	MAX 19.0 19.0 19.0 19.0 17.0 16.0 16.0 18.0 18.0 15.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0	MAX 22.0 23.0 22.0 19.0 17.0 17.0 19.0 21.0 21.0 22.0 22.0 23.0	MIN 17.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0 17.0 17.0	MAX 26.0 26.0 27.0 27.0 27.0 27.0 27.0 25.0 27.0 29.0 29.0 28.0 28.0	MIN 19.0 20.0 21.0 21.0 21.0 22.0 21.0 21.0 21	MAX 29.0 30.0 31.0 	MIN 23.0 23.0 23.0	HAX	#IN
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17	MAX 14.0 10.0 11.0 12.0 11.0 11.0 11.0 11.0 11	9.0 9.0 9.0 11.0 9.0 8.0 9.0 11.0 12.0 12.0 11.0 12.0 13.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0 15.0 13.0 12.0 15.0	MIN 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 19.0 9.0 11.0	MAX 22.0 23.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 23.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 26.0 25.0 25.0 28.0 29.0 28.0 28.0 28.0	MIN 19.0 20.0 21.0 21.0 21.0 23.0 23.0 22.0 21.0 21.0 22.0 22.0 22.0 22.0 22	9.0 30.0 31.0 	MIN 23.0 23.0 23.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 14.0 10.0 11.0 12.0 11.0 12.0 11.0 13.0 14.0 15.0 16.0 17.0 13.0 17.0 13.0	9.0 11.0 9.0 9.0 11.0 9.0 11.0 12.0 11.0 12.0 11.0 11.0 11.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 13.0 12.0 15.0 17.0 18.0	MIN 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 22.0 23.0 22.0 22.0 19.0 17.0 19.0 21.0 21.0 22.0 22.0 22.0 23.0 24.0 23.0 25.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 15.0 14.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 25.0 25.0 28.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22	9.0 30.0 31.0 	MIN 23.0 23.0 23.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 14.0 10.0 11.0 12.0 12.0 11.0 11.0 14.0 15.0 16.0 17.0 13.0 17.0 13.0 12.0 12.0 13.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 11.0 12.0 11.0 13.0 11.0 9.0 7.0 8.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 13.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 23.0 22.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 22.0 22.0 23.0 24.0 25.0 25.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 15.0 14.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 27.0 25.0 25.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	9.0 30.0 31.0 	MIN 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 15.0 16.0 15.0 16.0 15.0 16.0 17.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 10.0 11.0 12.0 11.0 13.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	19.0 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 14.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 22.0 23.0 22.0 22.0 19.0 17.0 19.0 21.0 21.0 22.0 22.0 22.0 23.0 24.0 23.0 25.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 15.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 25.0 27.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 22.0 21.0 21	9.0 30.0 31.0 31.0	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	HAX 14.0 10.0 11.0 12.0 11.0 11.0 11.0 15.0 15.0 15.0 15.0 15	MIN 10.0 9.0 8.0 9.0 11.0 9.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 9.0 8.0 9.0 8.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 13.0 12.0 12.0 13.0 12.0 14.0 15.0 16.0 17.0 18.0	HIN 14.0 14.0 14.0 14.0 13.0 14.0 15.0 16.0 1	HAX 22.0 23.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	HIN 19.0 20.0 21.0 21.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0 21.0 22.0	29.0 30.0 31.0 31.0	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	14.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 15.0 16.0 15.0 16.0 15.0 16.0 17.0	MIN 10.0 9.0 8.0 9.0 11.0 9.0 11.0 12.0 11.0 13.0 11.0 9.0 8.0 9.0 8.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 14.0 14.0 14.0 14.0 14.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 23.0 22.0 22.0 22.0 19.0 17.0 17.0 10.0 20.0 21.0 21.0 22.0 22.0 23.0 25.0 25.0 25.0 25.0 25.0	MIN 17.0 18.0 18.0 18.0 17.0 17.0 14.0 14.0 14.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 25.0 25.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 22.0 21.0 21	9.0 30.0 31.0 	MIN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	#IN
1 2 3 3 4 5 5 6 7 8 9 10 0 11 12 13 14 15 17 18 19 20 21 22 22 23 24	HAX 14.0 10.0 11.0 12.0 11.0 11.0 11.0 15.0 15.0 15.0 15.0 15	MIN 10.0 9.0 8.0 9.0 11.0 9.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 9.0 8.0 9.0 8.0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 18.0 15.0 17.0 18.0 12.0 12.0 12.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	HIN 14.0 14.0 14.0 14.0 13.0 14.0 15.0 16.0 1	HAX 22.0 23.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0	26.0 26.0 26.0 27.0 27.0 27.0 26.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0	HIN 19.0 20.0 21.0 21.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0 21.0 22.0	29.0 30.0 31.0 31.0	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	#IN
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 14.0 10.0 11.0 12.0 11.0 11.0 11.0 11.0 11	9:0 8:0 9:0 11:0 9:0 8:0 9:0 11:0 12:0 12:0 11:0 11:0 11:0 9:0 8:0 8:0 8:0 8:0 8:0	19.0 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 13.0 12.0 15.0 13.0 12.0 15.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	HIN 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 16.0 1	HAX 22.0 23.0 22.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 25.0 25.0 25.0 26.0 26.0	MIN 17.0 18.0 18.0 18.0 17.0 14.0 15.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 20.0 19.0 21.0	26.0 26.0 26.0 27.0 27.0 27.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	HIN 19.0 20.0 21.0 21.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0	29.0 30.0 31.0 31.0 	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	#IN
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	HAX 14.0 11.0 11.0 12.0 11.0 13.0 15.0 15.0 15.0 15.0 17.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 10.0 9.0 9.0 9.0 11.0 9.0 11.0 12.0 11.0 12.0 11.0 13.0 11.0 9.0 9.0 11.0 12.0 11.0 13.0	MAX 19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 21.0 21.0 21.0	MIN 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	HAX 22.0 23.0 22.0 22.0 22.0 19.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 18.0 18.0 18.0 17.0 14.0 15.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 20.0 19.0 21.0 22.0 22.0	MAX 26.0 26.0 27.0 27.0 27.0 27.0 28.0 29.0 28.0 28.0 28.0 29.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22	9.0 30.0 31.0 31.0 	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	HAX	HIN
1 2 2 3 4 5 6 7 8 9 10 11 12 13 11 15 11 16 11 7 11 16 12 20 22 23 24 25 26 27	14.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 11.0 9.0 10.0 12.0 11.0 12.0 11.0 12.0 11.0 9.0 11.0 9.0 11.0	19.0 19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 15.0 17.0 18.0 12.0 12.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0 15.0 16.0	22.0 23.0 22.0 22.0 17.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0	26.0 26.0 27.0 27.0 27.0 27.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0	#IN 19.0 20.0 20.0 21.0 21.0 22.0 21.0 21.0 21	9.0 30.0 31.0 31.0 	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	HAX	MIN
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	HAX 14.0 10.0 11.0 11.0 12.0 11.0 13.0 15.0 15.0 15.0 15.0 15.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	9.0 9.0 9.0 9.0 11.0 9.0 11.0 12.0 11.0 12.0 11.0 13.0 9.0 9.0 9.0 10.0 11.0	MAX 19.0 19.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0 15.0 17.0 18.0 17.0 18.0 18.0 21.0 21.0 22.0 21.0 22.0	MIN 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	HAX 22.0 23.0 22.0 22.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 23.0 24.0 25.0 25.0 25.0 26.0 26.0 27.0 28.0 27.0	MIN 17.0 18.0 18.0 18.0 17.0 17.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 26.0 26.0 27.0 27.0 27.0 27.0 28.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	9.0 30.0 31.0 	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	HAX	MIN
1 2 3 3 4 5 5 6 7 7 8 9 9 10 11 12 12 13 14 5 16 17 18 12 22 22 22 22 22 22 22 22 22 22 22 22	14.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 11.0 9.0 10.0 12.0 11.0 12.0 11.0 12.0 11.0 9.0 11.0 9.0 11.0	MAX 19.0 19.0 19.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 11.0 17.0 17.0 18.0 18.0 21.0 22.0 22.0 22.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	22.0 23.0 22.0 22.0 17.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 28.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	29.0 30.0 51.0 51.0 	93.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 2	HAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 22 5 26 27 28 29	14.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 11.0 9.0 10.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 11	19.0 19.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 18.0 15.0 17.0 18.0 12.0 17.0 18.0 18.0 12.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 14.0 14.0 14.0 14.0 14.0 13.0 14.0 15.0 14.0 15.0 16.0 16.0 17.0	22.0 23.0 22.0 22.0 17.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 25.0 25.0 25.0 26.0 26.0 27.0 28.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 14.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 21.0 20.0	26.0 26.0 26.0 27.0 27.0 27.0 25.0 27.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	#IN 19.0 20.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	29.0 30.0 31.0 23.0 24.0 24.0 25.0	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX	HIN
1 2 3 3 4 5 5 6 7 7 8 9 9 10 11 12 12 13 14 5 16 17 18 12 22 22 22 22 22 22 22 22 22 22 22 22	14.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 11.0 9.0 10.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 11	MAX 19.0 19.0 19.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 11.0 17.0 17.0 18.0 18.0 21.0 22.0 22.0 22.0	MIN 14-0 14-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	22.0 23.0 22.0 22.0 17.0 17.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 25.0 25.0 25.0 26.0 26.0 27.0 28.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 17.0 18.0 18.0 18.0 17.0 14.0 14.0 14.0 14.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 21.0 20.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 28.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	29.0 30.0 51.0 51.0 	#IN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	HAX	MIN

11247000 SAN JOAQUIN RIVER BELOW KERCKHOFF POWERHOUSE, NEAR PRATHER, CALIF. (Formerly published as San Joaquin River below Kerckhoff powerhouse, Calif.)

LOCATION. -- Lat 37°04'45", long 119°33'35", in NW\[sec.10, T.10 S., R.22 E., Fresno County, temperature recorder at gaging station on left bank, 1.1 miles downstream from Kerckhoff powerhouse, 1.4 miles downstream from Big Sandy Creek, and 3.8 miles coutheast of Prather.

DRAINAGE AREA .-- 1,481 sq mi.

PERIOD OF RECORD. -- Water temperatures: November 1960 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 29.0°C Sept. 1, 2; minimum, 2.0°C Jan. 29.

riod of record: Water temperatures: Maximum (1960-66, 1967-68), 29.0°C Sept. 1, 2, 1968; minimum, 2.0°C Jan. 29, 1968.

REMARKS .-- No record Oct. 1-24.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	000	TOBER		EMBER		EMBER		IUARY				
				_						RUARY		ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			15.0	14.0	12.0	12.0	6.0	6.0	5.0	5.0	7.0	7.0
2			15.0 14.0	14.0	12.0	11.0 11.0	6.0	6.0	5.0 5.0	4.0	7.0	6.0
4			14.0	14.0	11.0 11.0	11.0	6.0 6.0	6.0 6.0	5.0	5.0 5.0	7.0 9.0	7.0 7.0
5			14.0	14.0	11.0	11.0	6.0	6.0	7.0	6.0	9.0	8.0
6			14.0	14.0	11.0	11.0	6.0	6.0	6.0	5.0	8.0	8.0
7			14.0	14.0	11.0	11.0	6.0	5.0	5.0	5.0	8.0	8.0
В			14.0	14.0	11.0	10.0	6.0	5.0	6.0	5.0	8.0	8.0
9			14.0	14.0	10.0	10.0	5.0	5.0	6.0	6.0	8.0	8.0
10			14.0	14.0	10.0	9.0	5.0	5.0	6.0	5.0	8.0	8.0
11 12			14.0	14.0	9.0	9.0	6.0	5.0	6.0	5.0	8.0	8.0
13			14.0 14.0	14.0 14.0	9.0 9.0	9.0 8.0	6.0 5.0	5.0 4.0	6.0 6.0	5.0 5.0	8.0 8.0	8.0 7.0
14			14.0	14.0	8.0	7.0	5.0	4.0	5.0	5.0	8.0	7.0
15			14.0	14.0	8.0	7.0	5.0	5.0	6.0	5.0	8.0	B.0
16			14.0	14.0	8.0	7.0	5.0	5.0	6.0	5.0	9.0	8.0
17			14.0	14.0	8.0	7.0	6.0	5.0	6.0	5.0	8.0	8.0
18			14.0	14-0	B-0	7.0	6.0	4.0	6.0	5.0	8.0	7.0
19 20			14.0 14.0	14.0	7.0 7.0	7.0 7.0	5.0 5.0	4-0 4-0	6.0 5.0	5.0 5.0	8.0 11.0	4.0 4.0
									_			
21 22			13.0 13.0	13.0	7.0	7.0	5.0	4.0	6.0	5.0	9.0	5.0
23			13.0	13.0 13.0	7.0 7.0	7.0 7.0	5.0 5.0	4.0 4.0	7.0 6.0	6.0 6.0	11.0 8.0	7.0 7.0
24			13.0	12.0	7.0	6.0	5.0	5.0	6.0	6.0	9.0	7.0
25	16.0	16.0	12.0	12.0	6.0	6.0	6.0	5.0	6.0	6.0	13.0	B.0
26	16.0	16.0	12.0	12.0	6.0	6.0	6.0	6.0	7.0	6.0	11.0	8.0
27	16.0	16.0	14.0	12.0	6.0	6.0	6.0	6.0	7-0	7.0	9.0	7.0
28 29	16.0 15.0	15.0 15.0	12.0 12.0	12.0 12.0	6.0 6.0	6.0 6.0	6.0 6.0	4.0 2.0	7.0 7.0	6.0 6.0	9.0 13.0	8.0 8.0
30	15.0	15.0	12.0	12.0	6.0	6.0	5.0	5.0			8.0	8.0
31	15.0	15.0			6.0	6.0	5.0	5.0			9.0	B.0
MONTH			15.0	12.0	12.0	6.0	6.0	2.0	7.0	4.0	13.0	4.0
	4.0	100		444		IME	911	II V	A110	T 2115	SE D1	CHRED
		PRIL		PAY	-	UNE	•	ILY		SUST		TEMBER
DAY	MAX	MIN	MAX	MIN	JI MAX	MIN	JŲ. VAM	MIN	MAX	SUST MIN	SE P	TEMBER MIN
DAY 1		MIN 8.0		MIN 10.0	-		MAX 15.0	MIN 14.0	MAX 19.0	MIN 18.0	MAX 29.0	MIN 19.0
1 2	MAX 12.0 11.0	MIN 8.0 9.0	MAX 11.0 11.0	MIN 10.0 11.0	MAX 12.0 12.0	MIN 12.0 12.0	MAX 15.0 15.0	MIN 14.0 15.0	MAX 19.0 19.0	MIN 18.0 18.0	MAX 29.0 29.0	MIN 19.0 19.0
1 2 3	MAX 12.0 11.0 9.0	MIN 8.0 9.0 9.0	MAX 11.0 11.0	MIN 10.0 11.0 11.0	MAX 12.0 12.0 12.0	MIN 12.0 12.0 12.0	MAX 15.0 15.0 15.0	MIN 14.0 15.0 15.0	MAX 19-0 19-0 19-0	MIN 18.0 18.0 18.0	MAX 29.0 29.0 22.0	MIN 19.0 19.0 17.0
1 2 3 4	MAX 12.0 11.0	MIN 8.0 9.0	MAX 11.0 11.0 11.0	MIN 10.0 11.0	MAX 12.0 12.0	MIN 12.0 12.0	MAX 15.0 15.0	MIN 14.0 15.0	MAX 19.0 19.0	MIN 18.0 18.0	MAX 29.0 29.0	MIN 19.0 19.0
1 2 3 4 5	MAX 12.0 11.0 9.0 9.0 9.0	M1N 8.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0	MAX 12.0 12.0 12.0 12.0 13.0	MIN 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0	MIN 14.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0	MAX 29.0 29.0 22.0 20.0 23.0	MIN 19.0 19.0 17.0 19.0 20.0
1 2 3 4 5	MAX 12.0 11.0 9.0 9.0 9.0	M1N 8.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0	MAX 12.0 12.0 12.0 12.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0	MIN 14.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0	MAX 29.0 29.0 22.0 20.0 23.0	MIN 19.0 19.0 17.0 19.0 20.0
1 2 3 4 5	MAX 12.0 11.0 9.0 9.0 9.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0	MAX 12.0 12.0 12.0 12.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0	MIN 14.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0	MAX 29.0 29.0 22.0 20.0 23.0	MIN 19.0 19.0 17.0 19.0 20.0
1 2 3 4 5 6 7 8	MAX 12.0 11.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 10.0 11.0	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0	MAX 29.0 29.0 22.0 20.0 23.0 21.0 23.0 20.0	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 19.0
1 2 3 4 5	MAX 12.0 11.0 9.0 9.0 9.0 9.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 10.0 10.0	MAX 12.0 12.0 12.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0	MAX 29.0 29.0 22.0 20.0 23.0 23.0 21.0 23.0	MIN 19.0 19.0 17.0 19.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 9.0 9.0 9.0 9.0 9.0 12.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	MAX 29.0 29.0 20.0 20.0 23.0 21.0 21.0 21.0	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	MAX 29.0 29.0 22.0 20.0 23.0 23.0 21.0 21.0 21.0 21.0	MIN 19-0 19-0 17-0 19-0 20-0 20-0 19-0 17-0 19-0 19-0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 9.0 9.0 9.0 9.0 9.0 12.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	MAX 29.0 29.0 20.0 23.0 23.0 21.0 23.0 21.0 20.0 21.0	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 19.0 17.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	MAX 29.0 29.0 22.0 20.0 23.0 23.0 21.0 21.0 21.0 21.0	MIN 19-0 19-0 17-0 19-0 20-0 20-0 19-0 17-0 19-0 19-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0	#1N 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 29.0 29.0 22.0 23.0 23.0 21.0 20.0 21.0 20.0 20.0 20.0 20.0	MIN 19-0 17-0 17-0 20-0 20-0 19-0 17-0 19-0 19-0 19-0 19-0 19-0 19-0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0 11.0 11.0 11.0	MAX 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 29.0 29.0 20.0 20.0 23.0 23.0 21.0 23.0 20.0 21.0 20.0 20.0	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0	#1N 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 29.0 29.0 22.0 20.0 23.0 21.0 23.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	M1N 8.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0	19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 20.0 23.0 23.0 21.0 23.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 15.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 14-0 16-0 16-0 16-0 16-0	19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 29.0 29.0 22.0 20.0 23.0 21.0 23.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 19.0 19.0 17.0 19.0 20.0 20.0 20.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 10.0 10	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 21.0 23.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 19.0 19.0 17.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 12 22	MAX 12.0 11.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 1	#IN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 23.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0	MIN 19-0 17-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 10.0 10	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 10	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	HIN 10.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	12.0 12.0 12.0 12.0 13.0 12.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 21.0 23.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 19-0 19-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 12.0 11.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 1	#IN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 20.0 23.0 21.0 23.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 19-0 17-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 5 6 7 8 9 10 11 12 13 11 4 15 15 16 17 18 19 20 21 22 23 24	12.0 11.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0	MAX 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 20.0 23.0 23.0 23.0 20.0 21.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 19.0 19.0 17.0 17.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 11.0 11	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 15.0 15.0 17.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 23.0 23.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 19-0 19-0 17-0 17-0 19-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
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	MAX 12.0 11.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 10	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	12.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 18.0 18.0 18.0 18.0 18.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 20.0 23.0 23.0 23.0 20.0 20.0 20	MIN 19-0 19-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 29	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 11.0 11.0 11	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 15.0 15.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0	MAX 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 23.0 23.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 19-0 19-0 17-0 17-0 19-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
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	MAX 12.0 11.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 10	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	12.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 18.0 18.0 18.0 18.0 18.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 20.0 23.0 23.0 23.0 20.0 20.0 20	MIN 19-0 19-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
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	12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 10.0 11.0 11	MIN 8.0 9.0 9.0 9.0 9.0 9.0 9.0 10	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 23.0 23.0 23.0 20.0 20	MIN 19-0 19-0 17-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 8 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	MAX 12.0 11.0 9.0 9.0 9.0 9.0 12.0 10.0 10.0 10.0 10.0 11.0 11.0 11	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10	HAX 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11	12.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 15.0 15.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MAX 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	MIN 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	29.0 29.0 22.0 22.0 23.0 23.0 23.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 19-0 19-0 17-0 17-0 19-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1

11264500 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 Mappy 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 to September 1968, Water temperatures: October 1965 to September 1968,

EXTREMES, --1967-68:
Water temperatures: Maximum, 17,0°C June 23, 24, 26, 27; minimum, freezing point Nov. 30, Mar. 14, 18, 19.

Period of record:

riod of record: Water temperatures: Maximum (1966-68), 17.0°C on several days during August 1967 and June 1968; minimum, freezing point on many days during winter periods.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SOOTUN (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCD3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
MAR. 12 APR.	105	8.0	-01	2.2	.2	2.0	.3	8	0	1.0	2.2	
02 MAY	298											
14	416											
ll	342	3.8	•00	1.0	.1	.9	.2	6	0	1.0	. 4	.1
09	120	3.4		1.3	.1	1.1	.2	5	0	2.0	1.0	.0
13 SEPT.	28	3.7		2.0	-1	1.5	.4	6	o	•0	2.2	•0
17	5.4	7.2		3.0	-1	2-4	.6	9	0	1.0	3.8	•0
DATE	NITRATE (NO3)	BORON (B)	OIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	OIS- SOLVED SOLIDS ITONS PER AC-FT)	HARD— NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	PERCENT SODIUM	SODIUM AD- SORP- Tion Ratio	ALKA- LINITY AS CACO3	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH	DIS- SOLVED OXYGEN
MAR.		-00	20									
APR-			20	.03	6	0	44	• •	7	26	6.9	12.0
02 May												12.0
14		_										11.0
JUNE												
JUNE 11 JULY	.1.	.DO	11	-01	3	0	36	.2	5	10	6.5	10.0
11	.1 . .0	.DO	11 11	.01	3 4	o 0	36 38	.2 .3	5 4	10 14	6.5 6.4	10.0
11 JULY 09		-										

DATE	PHOS- PHATE (PO4)	ORTHO PHOS- PHATE (PO4)	AMMONIA (NH4)	ORGANIC NITRO- GEN (N)	CDLI- FORM (COL- ONIES PER 100 ML)	TEMP- ERATURE (DEG C)
MAR.						
12					9	3
APR.						
02					ı	3
MAY						
14 JUNE					3	5
JULY	.07		.10	.08	2	12
09	-02	.02	-05	.03	12	15
13 SEPT.	-41	.32	•05	.31		15
17	.00	.03	.00	2.4		13

YEAR 17.0 0.0

SAN JOAQUIN RIVER BASIN

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CALIF. -- Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oci	TOBER	NOVE	MBER	DEC	EMBER	JAN	NUARY	FEBR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	10.0	7.0	4 0	1.0	1.0				1.0	4.0	2.0
2	11.0	9.0	7.0	6.0 6.0	1.0	1.0	1.0	1.0	1.0 2.0	1.0 1.0	4.0 4.0	3.0 2.0
3	11.0	10.0	7.0	7.0	1.0	1.0	1.0	1.0	2.0	1.0	4.0	2.0
4	11.0	8.0	7.0	6.0	2.0	1.0	1.0	1.0	2.0	2.0	4.0	3.0
5	10.0	8.0	7.0	7.0	2.0	2.0	1.0	1.0	3.0	2.0	4.0	3.0
6 7	8.0 9.0	7.0 8.0	8.0 7.0	7.0 7.0	2.0	1.0	1.0	1.0	3.0 3.0	3.0 3.0	3.0	2.0
Ŕ	9.0	8.0	7.0	7.0	2.0	2.0	1.0	1.0	3.0	3.0	3+0 3+0	2.0
ğ	9.0	8.0	7.0	6.0	2.0	2.0	1.0	1.0	3.0	3.0	3.0	1.0
10	9.0	8.0	6.0	6.0	2.0	2.0	2.0	1.0	3.0	1.0	3.0	1.0
11	9.0	9.0	6.0	6.0	2.0	2.0	1.0	1.0	2+0	1.0	3.0	1.0
12	9.0	9.0	7.0	6.0	2.0	1.0	1.0	1-0	2.0	1.0	4.0	3.0
13 14	10.0	9.0 9.0	7.0 8.0	7.0 7.0	1.0	1.0	1.0 2.0	1.0	2.0 3.0	2.0 2.0	2.0 2.0	1.0
15	9.0	7.0	7.0	7.0	1.0	1.0	2.0	1.0	3.0	1.0	3.0	1.0
16	8.0	7.0	7.0	7.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0	1.0
17	8.0	8.0	7.0	7.0	1.0	1.0	1.0	1.0	3.0	2.0	1.0	1.0
1B 19	8.0	7.0	7.0	7.0	1.0	1.0	1.0	1.0	4.0	3.0	2.0	0.0
20	8.0 8.0	7.0 7.0	7.0 6.0	6.0	1.0	1.0 1.0	2.0 2.0	1.0 2.0	4.0 5.0	4.0 3.0	1.0 2.0	1.0
21	B. 0	7.0	6.0	5.0	1.0	1.0	2.0	2.0	5.0	4.0	4.0	1.0
22	8.0	7.0	5.0	4.0	2.0	1.0	3.0	2.0	6.0	4-0	4.0	2.0
23	8.0	8.0	4.0	4.0	2.0	2.0	3.0	2.0	7.Q	6.0	5.0	2.0
24	8.0	8.0	4.0	3.0	2.0	2.0	3.0	2.0	6.0	4.0	6.0	3.0
25	8.0	7.0	4.0	4.0	2.0	2.0	3.0	2.0	6.0	4.0	6.0	3.0
26	8.0	7.0	4.0	3.0	2.0	2.0	2.0	2.0	6.0	4.0	6.0	2.0
27 28	7.0 8.0	7.0 7.0	3.0	3.0	2.0	1.0	2.0	1.0	6.0	3.0	7.0	3.0
29	8.0	7.0	3.0 2.0	2.0 1.0	2.0 1.0	1.0	1.0 1.0	1.0	5.0 5.0	2.0 2.0	7.0 7.0	4.0 4.0
30	8.0	7.0	2.0	0.0	1.0	1.0	1.0	1.0			7.0	3.0
31	7.0	6.0			1.0	1.0	1.0	1.0			7.0	3.0
MONTH	12.0	6.0	8.0	0.0	2.0	1.0	3.0	1.0	7.0	1.0	7.0	0.0
	AF	PRIL		IAY	J	JNE	JI	JL Y	AUG	GUST	SEP.	TEMBER
DAY	AF Max	PRIL MIN	MAX	MIN	JU XAM	JNE MIN	JI Max	JLY MIN	AUA MAX	GUST MIN	SEP'	TEMBER MIN
1	MAX 5.0	MIN 3.0	MAX 9.0	MIN 6.0	MAX 13.0	MIN 9.0	MAX 14.0	MIN 12.0	MAX 16-0	MIN 16.0	MAX 14.0	MIN 13.0
1 2	MAX 5.0 4.0	MIN 3.0 2.0	MAX 9.0 8.0	MIN 6.0 6.0	MAX 13.0 13.0	MIN 9.0 11.0	MAX 14.0 14.0	MIN 12.0 13.0	MAX 16-0 16-0	MIN 16.0 16.0	MAX 14.0 14.0	MIN 13.0 13.0
1 2 3	MAX 5-0 4-0 6-0	MIN 3.0 2.0 2.0	MAX 9.0 8.0 9.0	MIN 6.0 6.0 6.0	MAX 13.0 13.0 13.0	9.0 11.0 11.0	MAX 14.0 14.0 15.0	MIN 12.0 13.0 13.0	MAX 16-0 16-0 16-0	MIN 16.0 16.0 14.0	MAX 14.0 14.0 14.0	MIN 13.0 13.0 12.0
1 2 3 4	MAX 5.0 4.0 6.0 7.0	MIN 3.0 2.0 2.0 4.0	MAX 9.0 8.0 9.0 9.0	MIN 6.0 6.0 6.0	MAX 13.0 13.0 13.0	9.0 11.0 11.0	MAX 14.0 14.0 15.0 16.0	MEN 12.0 13.0 13.0 14.0	MAX 16.0 16.0 16.0	MIN 16.0 16.0 14.0	MAX 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0
1 2 3 4 5	MAX 5.0 4.0 6.0 7.0 7.0	MIN 3.0 2.0 2.0 4.0 4.0	9.0 8.0 9.0 9.0	MIN 6.0 6.0 6.0 5.0	MAX 13.0 13.0 13.0 13.0	9.0 11.0 11.0 11.0	MAX 14.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 14.0 14.0	MAX 16-0 16-0 16-0 16-0	MIN 16-0 16-0 14-0 14-0	MAX 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0
1 2 3 4 5	MAX 5-0 4-0 6-0 7-0 7-0	MIN 3.0 2.0 2.0 4.0 4.0	9.0 8.0 9.0 9.0 8.0	MIN 6.0 6.0 6.0 5.0	MAX 13.0 13.0 13.0 13.0 11.0	9.0 11.0 11.0 11.0 8.0	MAX 14.0 14.0 15.0 16.0 16.0	MIN 12-0 13-0 13-0 14-0 14-0	MAX 16-0 16-0 16-0 16-0	MIN 16.0 16.0 14.0 14.0 14.0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0
1 2 3 4 5	MAX 5.0 4.0 6.0 7.0 7.0 6.0 7.0	MIN 3-0 2-0 2-0 4-0 4-0 2-0 3-0	MAX 9.0 8.0 9.0 9.0 8.0 8.0	MIN 6.0 6.0 6.0 5.0 4.0	MAX 13.0 13.0 13.0 13.0 11.0	9.0 11.0 11.0 11.0 8.0	MAX 14.0 14.0 15.0 16.0 16.0	MIN 12-0 13-0 13-0 14-0 14-0	MAX 16-0 16-0 16-0 16-0 16-0	MIN 16-0 16-0 14-0 14-0 14-0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0
1 2 3 4 5	MAX 5-0 4-0 6-0 7-0 7-0	MIN 3.0 2.0 2.0 4.0 4.0 2.0 3.0 4.0	9.0 8.0 9.0 9.0 8.0	MIN 6.0 6.0 6.0 5.0 5.0	MAX 13.0 13.0 13.0 11.0	9.0 11.0 11.0 11.0 8.0 7.0	MAX 14.0 14.0 15.0 16.0 16.0	MIN 12.0 13.0 13.0 14.0 14.0 15.0	MAX 16.0 16.0 16.0 16.0 16.0 15.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8	MAX 5.0 4.0 6.0 7.0 7.0 6.0 7.0	MIN 3-0 2-0 2-0 4-0 4-0 2-0 3-0	MAX 9.0 8.0 9.0 9.0 8.0 8.0	MIN 6.0 6.0 6.0 5.0 4.0	MAX 13.0 13.0 13.0 13.0 11.0	9.0 11.0 11.0 11.0 8.0	MAX 14.0 14.0 15.0 16.0 16.0	MIN 12-0 13-0 13-0 14-0 14-0	MAX 16-0 16-0 16-0 16-0 16-0	MIN 16-0 16-0 14-0 14-0 14-0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	MAX 5-0 6-0 7-0 7-0 6-0 7-0 8-0 8-0	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 8.0 8.0 9.0 8.0	MIN 6.0 6.0 6.0 5.0 5.0 4.0 6.0 6.0 6.0	MAX 13.0 13.0 13.0 13.0 11.0 10.0 10.0 12.0 12.0 13.0	9.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0	MAX 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0	MAX 16.0 16.0 16.0 16.0 15.0 14.0 16.0 16.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	MAX 5-0 4-0 6-0 7-0 7-0 8-0 8-0 8-0 8-0	MIN 3.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 8.0 9.0 8.0 9.0 8.0	MIN 6.0 6.0 6.0 6.0 5.0 4.0 6.0 6.0 6.0	MAX 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 12.0 13.0	MIN 9.0 11.0 11.0 11.0 7.0 8.0 7.0 8.0 7.0 8.0 9.0	MAX 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0	MAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	MAX 5-0 6-0 7-0 7-0 6-0 7-0 8-0 8-0 8-0	MIN 3-0 2-0 2-0 4-0 4-0 4-0 4-0 4-0 4-0 3-0	9.0 8.0 9.0 9.0 8.0 8.0 9.0 8.0 9.0	MIN 6.0 6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0	MAX 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 12.0 13.0 13.0	MIN 9.0 11.0 11.0 11.0 7.0 8.0 7.0 8.0 9.0 9.0	MAX 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 13.0 14.0 14.0 15.0 15.0 13.0	MAX 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 14.0 14.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	MAX 5-0 4-0 6-0 7-0 7-0 8-0 8-0 8-0 8-0	MIN 3.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 8.0 9.0 8.0 9.0 8.0	MIN 6.0 6.0 6.0 6.0 5.0 4.0 6.0 6.0 6.0	MAX 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 12.0 13.0	MIN 9.0 11.0 11.0 11.0 7.0 8.0 7.0 8.0 7.0 8.0 9.0	MAX 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0	MAX 16-0 16-0 16-0 16-0 16-0 15-0 16-0 15-0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	MAX 5-0 4-0 6-0 7-0 7-0 6-0 7-0 8-0 8-0 7-0 7-0 8-0 6-0	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 13.0 13.0 13.0 11.0 10.0 10.0 11.0 12.0 13.0 13.0 13.0 13.0	9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 9.0 9.0	MAX 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 13.0 14.0 14.0 15.0 15.0 14.0 13.0 14.0 13.0	MAX 16.0 16.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 12.0 11.0 11.0 11.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	5.0 6.0 7.0 7.0 6.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 6.0	MIN 3.0 2.0 2.0 4.0 4.0 3.0 4.0 4.0 4.0 4.0 3.0 4.0	9.0 8.0 9.0 8.0 9.0 8.0 8.0 9.0 8.0 7.0 9.0	4.0 6.0 5.0 5.0 6.0 5.0 6.0 6.0 6.0 4.0 4.0 4.0	MAX 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 13.0 13.0 13.0 14.0	MIN 9.0 11.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 9.0 9.0	MAX 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 13.0	MAX 16.0 16.0 16.0 16.0 15.0 15.0 16.0 15.0 15.0 15.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13-0 12-0 13-0 13-0 13-0 13-0 13-0 11-0 11-0 11
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 5.0 6.0 7.0 7.0 6.0 7.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0	MIN 3.0 2.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0	8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0	4.0 6.0 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	13.0 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0	9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 9.0 9.0 9.0 11.0	14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12-0 13-0 13-0 14-0 14-0 15-0 15-0 13-0 13-0 13-0 14-0 13-0 14-0 13-0	16-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 13-0 13-0 13-0	HIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 14.0 11.0 11.0 11.0 12.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 5.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 3.0 2.0 4.0 4.0 4.0 3.0 4.0 4.0 4.0 4.0 3.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0	#AX 9.0 8.0 9.0 8.0 8.0 9.0 8.0 9.0 10.0 10.0 11.0	6.0 6.0 6.0 5.0 5.0 6.0 6.0 6.0 4.0 3.0 4.0 7.0 7.0	13.0 13.0 13.0 13.0 13.0 11.0 10.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0	MIN 9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 13.0 13.0	MAX 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12-0 13-0 13-0 14-0 15-0 15-0 15-0 13-0 14-0 13-0 14-0 15-0	MAX 16.0 16.0 16.0 16.0 16.0 15.0 14.0 16.0 15.0 15.0 13.0 13.0 13.0	MIN 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 11.0 11.0 11
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	#AX 9.0 8.0 9.0 8.0 8.0 9.0 8.0 9.0 8.0 9.0 10.0 11.0	MIN 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	13.0 13.0 13.0 13.0 13.0 11.0 10.0 10.0	MIN 9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 13.0 13.0 13.0	MAX 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12-0 13-0 13-0 14-0 15-0 15-0 15-0 13-0 14-0 13-0 14-0 15-0	MAX 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0	HIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 12.0 12.0 12.0 12.0 11.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 11.0 11.0 11
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0 3.0 3.0 3.0 3.0	MAX 9.0 8.0 9.0 9.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 10.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAX 13.0 13.0 13.0 13.0 13.0 13.0 10.0 10.0	MIN 9.0 11.0 11.0 11.0 18.0 8.0 7.0 8.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 13.0 13.0 12.0	MAX 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 2.0 3.0 2.0 3.0 3.0 3.0	#AX 9.0 8.0 9.0 9.0 8.0 8.0 8.0 8.0 7.0 7.0 10.0 11.0 11.0 11.0 8.0	MIN 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAX 13.0 13.0 13.0 13.0 13.0 10.0 10.0 10.0	MIN 9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 13.0 13.0 13.0	14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12-0 13-0 13-0 14-0 15-0 15-0 15-0 13-0 14-0 13-0 14-0 15-0	MAX 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 16.0 16.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 24	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 6.0 7.0 8.0 8.0 6.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0 3.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0	8.0 8.0 9.0 9.0 9.0 8.0 8.0 7.0 7.0 10.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 8.0 8.0 8.0	13.0 13.0 13.0 13.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0 15.0 17.0	MIN 9.0 11.0 11.0 11.0 8.0 7.0 8.0 7.0 8.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 14.0	14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 15.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 16.0 16.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 12.0 13.0 14.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MAX 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 11.0 11
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 2.0 3.0 2.0 3.0 3.0 3.0	#AX 9.0 8.0 9.0 9.0 8.0 8.0 8.0 8.0 7.0 7.0 10.0 11.0 11.0 11.0 8.0	MIN 6.0 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 6.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 10.0 10.0 10.0	MIN 9.0 11.0 11.0 11.0 18.0 8.0 7.0 8.0 9.0 9.0 10.0 11.0 12.0 13.0 13.0 13.0 14.0	14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0	16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
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 25 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0 3.0 3.0 3.0 4.0 4.0 4.0 6.0	#AX 9.0 8.0 9.0 9.0 8.0 8.0 8.0 7.0 7.0 10.0 11.0 11.0 9.0 8.0 9.0 10.0 11.0 11.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 13.0 13.0 13.0 13.0 13.0 10.0 10.0 10.0	MIN 9.0 11.0 11.0 11.0 18.0 8.0 9.0 9.0 9.0 10.0 11.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0	14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 14.0 15.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0 13-0 1	MIN 16.0 16.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 14 15 16 7 18 19 20 21 22 23 4 25 26 27	MAX 5.0 4.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 9.0 9.0 9.0	MIN 3.0 2.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 2.0 3.0 4.0 4.0 4.0 6.0	#AX 9.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 10.0 11.0 11.0 9.0 8.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	13.0 13.0 13.0 13.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0	MIN 9.0 11.0 11.0 11.0 8.0 7.0 8.0 9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 14.0 14.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 16.0 16.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
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11283100 LILY CREEK NEAR PINECREST, CALIF.

LOCATION.--Lat 38°08'40", long 119°54'05", 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 1968,

EXTREMES. --1967-68:
Water temperatures: Maximum, 23.0°C July 27; minimum, freezing point on many days during winter months.

Period of record:
Water temperatures: Maximum, 25.0°C Aug. 17, 1966; minimum, freezing point on many days during winter periods. REMARKS, -- Recorder malfunction Oct. 26 to Apr. 5. Stream frozen during most of winter.

TEMPERATURE (°C) OF	WATER,	WATER	YEAR	OCTOBER	1967	TO	SEPTEMBER	1968	
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DAY	MAX	MIN	MAX	MIN	MAX	NIN	MAX	MIN	MAX	MEN	MAX	MIN
1	12.0	11.0										
2	11.0	11.0										
3	11.0	10.0										
4	10.0	8.0										
5	9.0	8.0										
6	8.0	8.0										
7	9.0	8.0						===				
8 9	9.C 10.0	8.0										
10	9.0	8.0 8.0	=									
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13	10.0	8.0										
14	9.C	8.0										
15	9.0	8.0										
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17	9.0	8.0		===		=======================================	===				=	
18	8.0	7.0										
19	8.C	7.0										
20	8.C	7.0										
21	7.0	7.0										
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MONTH	12.0	6.0										
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DAY	, NAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
			MAX	MIN	MAX	MIN	MAX	MIN	MAX	HIN	MAX	MIN
DAY 1			MAX 4.0	MIN 4.0	MAX 13.0	MIN 10.0	MAX 20-0	MIN 16.0	MAX 20.0	MIN 18.0	MAX 21.0	MIN 18.0
1	, MAX	MIN	MAX 4.0 6.0	MIN 4.0 4.0	MAX 13.0 14.0	MIN 10.0 10.0	MAX 20.0 20.0	MIN 16.0 16.0	MAX 20.0 21.0	MIN 18.0 19.0	MAX 21.0 20.0	MIN 18.0 18.0
1 2 3 4	, NAX	#1N	MAX 4.0 6.0 5.0 6.0	MIN 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0	MIN 10.0 10.0 10.0	MAX 20.0 20.0 20.0 20.0	MIN 16.0 16.0 16.0 17.0	MAX 20.0 21.0 22.0 21.0	MIN 18.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0	MIN 18.0 18.0 18.0
1 2 3	, MAX	MIN	MAX 4.0 6.0 5.0	MIN 4.0 4.0	MAX 13.0 14.0 12.0	MIN 10.0 10.0	MAX 20-0 20-0 20-0	MIN 16.0 16.0 16.0	MAX 20.0 21.0 22.0	MIN 18.0 19.0 19.0	MAX 21.0 20.0 20.0	MIN 18.0 18.0 18.0
1 2 3 4	, MAX	#IN	MAX 4.0 6.0 5.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 12.0	MIN 10.0 10.0 10.0 10.0	MAX 20.0 20.0 20.0 20.0 20.0	MIN 16.0 16.0 17.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0	MIN 18.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0 21.0	MIN 18.0 18.0 18.0 18.0
1 2 3 4 5	, NAX	#IN	MAX 4.0 6.0 5.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 12.0 10.0	MIN 10.0 10.0 10.0	MAX 20-0 20-0 20-0 20-0 22-0 22-0	MIN 16.0 16.0 16.0 17.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0	HIN 18.0 19.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0	MIN 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8	3.0 4.0	#IN	MAX 4.0 6.0 5.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 10.0 10.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0	MAX 20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 18.0 20.0 19.0 20.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8	3.0 4.0 4.0	#IN	MAX 4.0 6.0 5.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 5.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0	MAX 20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 17.0 18.0 20.0 19.0 20.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 20.0 21.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8	3.0 4.0	#IN	MAX 4.0 6.0 5.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 10.0 10.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0	MAX 20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 18.0 20.0 19.0 20.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 21.0 20.0 20.0 20.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9	3.0 4.0 4.0 4.0	2.0 2.0 2.0 2.0 2.0 2.0	MAX 4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 10.0 10.0 10.0 11.0 12.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0	MAX 20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0 21.0	MIN 16.0 16.0 17.0 18.0 20.0 20.0 20.0 19.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	3.0 4.0 4.0 4.0 4.0	#IN	MAX 4-0 6-0 5-0 6-0 6-0 6-0 6-0 6-0	MIN 4.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 13.0 14.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 8.0	MAX 20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 17.0 18.0 20.0 19.0 20.0 19.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 20.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0	MAX 21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	3-0 4-0 4-0 4-0 4-0 4-0	2.0 2.0 2.0 2.0 2.0 2.0 3.0	MAX 4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0	MAX 20.0 20.0 20.0 22.0 22.0 21.0 21.0 21.0	MIN 16.0 16.0 17.0 18.0 20.0 20.0 20.0 20.0 19.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10	3.0 4.0 4.0 4.0 4.0 4.0 4.0	2.0 2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0	MAX 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MIN 0 4.0 0 4.0 0 4.0 0 5.0 0 4.0 0 5.0 0 4.0 0 5.0 0 4.0 0 5.0 0 6.0 0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 14.0	MIN 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 8.0	MAX 20.0 20.0 20.0 22.0 22.0 21.0 21.0 21.0	MIN 16.0 16.0 17.0 18.0 20.0 20.0 20.0 20.0 19.0 20.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 20.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0	#1N	MAX 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MIN 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0	MAX 13.0 14.0 12.0 10.0 10.0 10.0 11.0 11.0 14.0 14.0 14	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 16.0 17.0 18.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MAX 21.0 20.0 20.0 21.0 21.0 21.0 20.0 20.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	#IN	4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 18.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 22.0 22.0 21.0 21.0 21.0	MIN 16.0 16.0 16.0 17.0 20.0 19.0 20.0 19.0 20.0 19.0 18.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 20.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0	MAX 21-0 20-0 20-0 21-0 21-0 21-0 21-0 20-0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	#IN	MAX 4-0 6-0 5-0 6-0 6-0 6-0 6-0 6-0 6-0 7-0	#10 4-0 4-0 4-0 4-0 4-0 5-0 4-0 5-0 4-0 5-0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 16.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 17.0 17.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0	20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	#IN	4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0	MIN 4-0 4-0 4-0 4-0 4-0 5-0 4-0 4-0 4-0 4-0 4-0	13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 16.0 18.0 20.0	NIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 17.0 17.0 18.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0 18.0	20.0 21.0 22.0 22.0 22.0 22.0 20.0 21.0 22.0 22	HIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 20.0 20	HIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	#IN	MAX 4-0 6-0 5-0 6-0 6-0 6-0 6-0 6-0 6-0 7-0	#10 4-0 4-0 4-0 4-0 4-0 5-0 4-0 5-0 4-0 5-0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 16.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0 21.0	MIN 16.0 16.0 17.0 17.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0	20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	#IN	6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	#10 4.0 4.0 4.0 4.0 4.0 5.0 4.0 4.0 5.0 4.0 5.0 6.0	13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 16.0 18.0 20.0	NIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20-0 20-0 20-0 20-0 22-0 22-0 21-0 21-0	MIN 16.0 16.0 17.0 18.0 20.0 19.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0	20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0	4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 8.0	# 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 4 - 0 6	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0 12.0 14.0 14.0 16.0 18.0 20.0 20.0 20.0	MIN 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	20.0 20.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	HIN 18.0 19.0 1	21.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0	HIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	NAX 4-0 6-0 5-0 6-0 6-0 6-0 6-0 6-0 7-0 8-0 8-0 8-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6	MIN 4.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 6.0 6.0 6.0	MAX 13.0 14.0 12.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 18.0 20.0 19.0 20.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 17.0 19.0 20.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 20.0 21.0 22.0 22	HIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 7 8 8 9 10 11 11 12 12 13 11 15 16 17 17 18 19 12 12 12 12 12 12 12 12 12 12 12 12 12	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	4.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0	# C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 6	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0 14.0 14.0 16.0 18.0 20.0 20.0 20.0 20.0 20.0 20.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 16.0 16.0 16.0 17.0 18.0 17.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0	HIN 18.0 19.0 1	21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	NAX 4-0 6-0 5-0 6-0 6-0 6-0 6-0 6-0 7-0 8-0 8-0 8-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6-0 6	MIN 4.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 6.0 6.0 6.0	13.0 14.0 12.0 12.0 10.0 10.0 11.0 11.0 11.0 11	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 17.0 19.0 20.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 21.0 22.0 21.0 22.0 20.0 21.0 22.0 22	HIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	**************************************	MIN 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 6.0 6.0 6.0 6.0 6.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0 12.0 14.0 14.0 16.0 18.0 20.0 20.0 19.0 20.0 20.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 17.0 19.0 20.0 20.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	MAX 20.0 21.0 22.0 21.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	**************************************	# C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 4 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7 - C 6 - C 7	13.0 14.0 12.0 12.0 10.0 10.0 11.0 11.0 11.0 11	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 21.0 22.0 21.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 21	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	**************************************	MIN 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0 12.0 14.0 14.0 16.0 18.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	MAX 20.0 21.0 22.0 21.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 15 16 7 18 19 20 21 22 23 24 25 26 27 28 29	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	**************************************	# C 4 - C 4 - C 4 - C 4 - C 4 - C 5 - C 6	13.0 14.0 12.0 12.0 10.0 10.0 11.0 11.0 11.0 11	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	20.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0	HIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	**************************************	MIN 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0 12.0 14.0 14.0 16.0 18.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	MAX 20.0 21.0 22.0 21.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0	**************************************	MIN 4.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 8.0	13.0 14.0 12.0 12.0 10.0 10.0 11.0 11.0 11.0 11	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 21.0 22.0 20.0	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	MAX 20.0 21.0 22.0 22.0 22.0 20.0 21.0 22.0 22	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	3-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4-0 4	2.0 2.0 2.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0	**************************************	MIN 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 5.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6	13.0 14.0 12.0 12.0 10.0 10.0 10.0 11.0 12.0 14.0 14.0 16.0 16.0 18.0 20.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 10.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0 10	20.0 20.0 20.0 20.0 22.0 22.0 22.0 21.0 22.0	MIN 16.0 16.0 16.0 17.0 18.0 19.0 20.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	MAX 20.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0	MIN 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0

11290000 TUOLUMNE RIVER AT MODESTO, CALIF.

LOCATION.--Lat 37°37'38", long 120°59'20", in SW2 sec.33, T.3 S., R.9 E., Stanislaus County, temperature recorder at gaging station on left bank, at bridge on U.S. Highway 99 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 1968.

EXTREMES. --1967-68:
Water temperatures: Minimum, 9.0°C on many days during winter months.

Period of record:
Water temperatures: Maximum (1965-67), 29.0°C Aug. 7, 1966, Aug. 15, 1967; minimum, 8.0°C on several days during January to March 1966.

REMARKS .-- Recorder malfunctioned July 22 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOVE	MBER	DEC	EMBER	JAF	IUARY	FEBR	UARY	M	ARCH
DAY	MAX	MIN										
1	22.0	21.0	16.0	16.0	13.0	13.0	11.0	10.0	11.0	9.0	12.0	12.0
2	22.0	21.0	16.0	16.0	13.0	13.0	11.0	10.0	11.0	11.0	12.0	11.0
3	21.0	20.0	16.0	16.0	13.0	13.0	11.0	10.0	12.0	11.0	13.0	12.0
4 5	22.0 21.0	20.0 20.0	16.0 16.0	16.0 16.0	14.0 14.0	13.0 14.0	10.0 9.0	9.0 9.0	13.0 14.0	12.0 13.0	13.0 13.0	13.0 12.0
6	21.0	19.0	16.0	16.0	14.0	13.0	9.0	9.0	14.0	13.0	12.0	12.0
7	21.0	19.0	16.0	16.0	13.0	13.0	10.0	9.0	14.0	14.0	12.0	12.0
8	21.0	19.0	16.0	16.0	13.0	13.0	10.0	9.0	15.0	14.0	12.0	12.0
9	21.0	19.0	16.0	16.0	13.0	12.0	9.0	9.0	15.0	14.0	12.0	12.0
10	21.0	19.0	16.0	16.0	13.0	12.0	9.0	9.0	14.0	13.0	13.0	12.0
11	21.0	19.0	16.0	15.0	13.0	12.0	10.0	9.0	14.0	13.0	13.0	12.0
12 13	21.0 21.0	19.0 19.0	15.0 15.0	15.0 15.0	13.0 11.0	11.0 9.0	10.0 10.0	9.0 9.0	14.0 14.0	13.0 13.0	12.0 12.0	12.0 11.0
14	19.0	18.0	16.0	15.0	10.0	9.0	11.0	10.0	13.0	12.0	12.0	11.0
15	19.0	18.0	16.0	15.0	11.0	9.0	11.0	11.0	12.0	11.0	12.0	12.0
16	19.0	18.0	16.0	15.0	11.0	11.0	12.0	11.0	12.0	12.0	12.0	9.0
17	19.0	18.0	16.0	16.0	11.0	10.0	11.0	11.0	13.0	12.0	12.0	11.0
18	19.0	18.0	16.0	16.0	10.0	9.0	11.0	10.0	14.0	13.0	13.0	12.0
19 20	18.0 18.0	18.0 17.0	16.0	16.0 15.0	11.0	9.0 11.0	11.0	10.0	14.0 16.0	13.0 15.0	13.0 13.0	12.0 11.0
21	18.0	17.0	16.0	15.0	11.0	10.0	11.0	10.0	16.0	14.0	13.0	12.0
22	18.0	17.0	15.0	15.0	11.0	10.0	12.0	11.0	14.0	13.0	13.0	12.0
23	18.0	17.0	15.0	15.0	11.0	10.0	12.0	11.0	13.0	11.0	14.0	13.0
24	18.0	17.0	15.0	15.0	11.0	10.0	12.0	11.0	12.0	11.0	15.0	13.0
25	18.0	17.0	15.0	14.0	11.0	10.0	11.0	11.0	12.0	11.0	15.0	14.0
26	17.0	17.0	14.0	14.0	11.0	11.0	11.0	11.0	12.0	11.0	15.0	14.0
27 28	17.0 17.0	16.0 16.0	14.0 14.0	14.0 14.0	11.0 11.0	11.0	11.0 11.0	11.0 10.0	12.0	11.0 11.0	15.0 16.0	14.0 14.0
29	16.0	16.0	14.0	13.0	11.0	10.0	10.0	9.0	12.0	12.0	17.0	15.0
30	16.0	16.0	14.0	13.0	11.0	10.0	9.0	9.0			18.0	16.0
31	16.0	16.0			11.0	10.0	9.0	9.0			19.0	17.0
HTMOP	22.0	16.0	16.0	13.0	14.0	9.0	12.0	9.0	16.0	9.0	19.0	9.0
	A	PRIL	•	4AY	J	UNE	Jt	JLY	AUG	GUST	SEP	TEMBER
DAY	MAX	MIN										
	18.0	16.0	24.0	20.0								
ž	17.0	16.0	24.0	20.0	26.0 26.0	23.0 24.0	26.0 26.0	22.0 22.0				
3	19.0	16.0	24.0	21.0	27.0	24.0	27.0	22.0				
4	18.0	17.0	23.0	20.0	26.0	23.0	28.0	23.0				
5	18.0	17.0	23.0	20.0	24.0	22.0	28.0	25.0				
6 7	18.0	16.0	22.0	19.0	25.0	22.0	28.0	25.0				
8	19.0 19.0	16.0 17.0	23.0 23.0	19.0 20.0	24.0 25.0	22.0 22.0	27.0 27.0	24.0 24.0				
9	21.0	17.0	23.0	19.0	28.0	22.0	28.0	24.0				
10	21.0	18.0	22.0	19.0	26.0	23.0	27.0	24.0				
11	22.0	19.0	21.0	19.0	26.0	23.0	27.0	24.0				
12	21.0	19.0	22.0	19.0	25.0	22.0	27.0	24.0				
13 14	21.0 21.0	18.0 18.0	20.0 21.0	18.0	26.0 26.0	21.0 22.0	26.0 27.0	23.0 23.0				
15	21.0	19.0	22.0	19.0	28.0	24.0	27.0	23.0				
16	19.0	18.0	23.0	19.0	28.0	25.0	26.0	23.0				
17	19.0	16.0	23.0	21.0	28.0	24.0	27.0	23.0				
18	19.0	16.0	24.0	21.0	28.0	24.0	28.0	24.0				
19 20	20.0 19.0	17.0 17.0	24.0 24.0	22.0 22.0	28.0 28.0	24.0 25.0	28.0 28.0	25.0 25.0				
21 22	18.0	16.0 15.0	24.0	22.0 21.0	28.0 28.0	25.0 26.0	28.0	24.0				
23	19.0	17.0	23.0	21.0	28.0	26.0						
24	21.0	17.0	23.0	21.0	28.0	25.0						
25	21.0	18.0	25.0	22.0	28.0	26.0						
26	22.0	19.0	25.0	22.0	28.0	24.0						
27 28	22.0 23.0	19.0 20.0	26.0 27.0	23.0 23.0	27.0 27.0	24.0 24.0						
29	24.0	21.0	26.0	23.0	24.0	22.0						
30	23.0	21.0	25.0	23.0	26.0	22.0						
31			26.0	23.0								
HTMOK	24.0	15.0	27.0	18.0	28.0	21.0						
YEAR	28.0	9.0										

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CALIF.

LOCATION. -- Lat 38°14'49", long 120°01'51", in SW\mathbb{RE} 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 1968.

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 22.0°C sometime during period June 7-26, and on June 27; minimum, freezing point on several days during December and January.

Nator teaperstures: Maximum (1966-68), 22.0°C sometime during period June 7-26, and on June 27, 1968; minimum, freezing point on several days during December and January each year.

REMARKS.--Clock stopped Apr. 17-30, May 18 to June 3, June 7-26, Aug. 21-30, Sept. 7-12; temperature ranges, 2.0°C to 11.0°C, 9.0°C to 17.0°C, 10.0°C to 22.0°C, 11.0°C to 19.0°C, and 14.0°C to 18.0°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc	TOBER	NOV!	EMBER	ner	EMBER		IUARY	EERI	RUARY		ARCH
	_						_	-				
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	15.0 14.0	13.0 13.0	11.0 11.0	9.0 9.0	3.0 3.0	2.0 2.0	3.0 2.0	1.0	2.0 2.0	1.0	8.0 8.0	6.0 5.0
3	13.0	12.0	11.0	9.0	3.0	2.0	2.0	1.0	4.0	2.0	8.0	5.0
4	14.0	12.0	11.0	9.0	5.0	3.0	2.0	0.0	4.0	2.0	8.0	6.0
5	14.0	12.0	11.0	10.0	6.0	4.0	2.0	0.0	4.0	3.0	B.0	6.0
6	13.0	11.0	11.0	9.0	4-0	3.0	2.0	0.0	4.0	3.0	7.0	4.0
7 8	13.0	11.0	11.0	9.0	4-0	3.0	2.0	1.0	6.0	4.0	6.0 6.0	5.0 4.0
9	14.0	11.0	11.0 10.0	9.0 8.0	4.0 3.0	3.0 2.0	2.0 3.0	1.0 2.0	6.0 5.0	4.0	6.0	4.0
1ó	14.0	11.0	10.0	8.0	4.0	2.0	3.0	2.0	6.0	4.0	6.0	3.0
11	14.0	12.0	10.0	8.0	4.0	2.0	3.0	2.0	6.0	4.0	6.0	3.0
12	14.0	12.0	9.0	8.0	3.0	0.0	3.0	1.0	6.0	4.0	5.0	4.0
13	14-0	12.0	10.0	9.0	1.0	0.0	3.0	2.0	5.0	3.0	5.0	3.0
14 15	13.0	12.0 11.0	11.0	10.0	0.0	0.0	3.0 4.0	2.0 3.0	5.0 5.0	3.0 3.0	6.0 6.0	3.0
16	13.0	10.0	11.0	9.0	0.0	0.0	4.0	3.0	4.0	4.0	5.0	2.0
17	13.0	11.0	11.0	9.0	0.0	0.0	3.0	2.0	6.0	4.0	4.0	2.0
18	12.0	10.0	11.0	9.0	0.0	0.0	4.0	2.0	7.0	4.0	5.0	2.0
19	12.0	10.0	10.0	9.0	0.0	0.0	4.0	3.0	6.0	6.0	6.0	3.0
20	12.0	10.0	10.0	8.0	1.0	0.0	5.0	3.0	7.0	4-0	7.0	3.0
21	12.0	10.0	9.0	8.0	1.0	0.0	6.0	4.0	7.0	6.0	7.0	4-0
22 23	12.0 12.0	10.0 10.0	8.0 8.0	6.0	1.0 2.0	1.0	7.0 6.0	5.0 4.0	7.0 8.0	6.0 6.0	7.0 8.0	4.0
24	12.0	10.0	7.0	6.0	2.0	1.0	6.0	4.0	8.0	5.0	8.0	5.0
25	12.0	10.0	7.0	6.0	2.0	1.0	6.0	4.0	8.0	6.0	7.0	6.0
26	12.0	9.0	7.0	5.0	3.0	2.0	4.0	3.0	8.0	6.0	8.0	4.0
27	11.0	9.0	7.0	5.0	4.0	3.0	3.0	1.0	8.0	6.0	8.0	4.0
28 29	12.0	9.0 9.0	6.0 5.0	5.0 4.0	4.0 4.0	2.0 2.0	2.0 2.0	0.0 1.0	8.0 8.0	5.0 5.0	9.0 10.0	6.0 7.0
30	11.0	9.0	4.0	2.0	3.0	2.0	1.0	1.0			9.0	7.0
31	11.0	9.0			3.0	2.0	2.0	1.0			9.0	6.0
MONTH	15.0	9.0	11.0	2.0	6.0	0.0	7.0	0.0	8.0	1.0	10.0	2.0
	AF	PRIL		MAY	J	JNE .	JU	IL Y	AUG	SUST	SEP	TEMBER
DAY	AF MAX	PRIL	MAX									
	MAX	MIN	MAX	MIN	IL XAM	MIN	MAX	MEN	мах	MIN	MAX	MIM
1	MAX 8.0	MIN 6+0	MAX 12.0	MIN 8.0	MAX	MIN	MAX 20.0	MEN 17.0	MAX 21.0	MIN 18.0	MAX 19.0	MIM 16.0
1 2 3	MAX 8.0 6.0 8.0	MIN 6.0 4.0 4.0	MAX 12.0 13.0 13.0	MIN 8.0 9.0 9.0	MAX	MIN	MAX 20-0 19-0 20-0	MIN 17.0 16.0 16.0	MAX 21.0 21.0 21.0	MIN 18.0 17.0 17.0	MAX 19.0 19.0 19.0	MIM 16.0 16.0 15.0
1 2 3 4	MAX 8.0 6.0 8.0	MIN 6.0 4.0 4.0 5.0	MAX 12.0 13.0 13.0	MIN 8.0 9.0 9.0 10.0	MAX	MIN 11.0	MAX 20.0 19.0 20.0 21.0	MIN 17.0 16.0 16.0 16.0	MAX 21.0 21.0 21.0 20.0	MIN 18.0 17.0 17.0 16.0	MAX 19.0 19.0 19.0	MIM 16.0 16.0 15.0 14.0
1 2 3	MAX 8.0 6.0 8.0	MIN 6.0 4.0 4.0	MAX 12.0 13.0 13.0	MIN 8.0 9.0 9.0	MAX	MIN	MAX 20-0 19-0 20-0	MIN 17.0 16.0 16.0	MAX 21.0 21.0 21.0	MIN 18.0 17.0 17.0	MAX 19.0 19.0 19.0	MIM 16.0 16.0 15.0
1 2 3 4 5	MAX 8.0 6.0 8.0 8.0 8.0	MIN 6-0 4-0 5-0 6-0	MAX 12.0 13.0 13.0 13.0 12.0	MIN 8.0 9.0 9.0 10.0 9.0	15.0 12.0	11.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 16.0	MAX 21.0 21.0 21.0 20.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0	MIM 16.0 16.0 15.0 14.0
1 2 3 4 5	MAX 8.0 6.0 8.0 8.0 8.0	MIN 6-0 4-0 5-0 6-0	MAX 12.0 13.0 13.0 13.0 12.0	MIN 8.0 9.0 9.0 10.0 9.0	15.0 12.0	11.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0	MAX 21.0 21.0 21.0 20.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5	MAX 8.0 6.0 8.0 8.0 8.0 8.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0	MAX 12.0 13.0 13.0 13.0 12.0 11.0	MIN 8.0 9.0 9.0 10.0 9.0 8.0 8.0	15.0 12.0	11.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8	MAX 8.0 6.0 8.0 8.0 8.0	MIN 6-0 4-0 5-0 6-0	MAX 12.0 13.0 13.0 13.0 12.0	MIN 8.0 9.0 9.0 10.0 9.0	15.0 12.0	11.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0	MAX 21.0 21.0 21.0 20.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 10.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0 6.0	12.0 13.0 13.0 13.0 12.0 12.0 11.0 12.0 13.0 14.0	8.0 9.0 10.0 9.0 8.0 8.0 10.0 10.0	15.0 12.0	11.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0	MAX 19.0 19.0 19.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	8.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0 6.0 6.0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 14.0	8.0 9.0 9.0 10.0 9.0 10.0 10.0 10.0	15.0 12.0	11.0 10.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 16.0 16.0 14.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 6.0 8.0 8.0 8.0 9.0 9.0 10.0	MIN 6-0 4-0 5-0 6-0 4-0 5-0 6-0 6-0 6-0	MAX 12.0 13.0 13.0 12.0 12.0 11.0 12.0 13.0 14.0	#IN 8.0 9.0 9.0 10.0 8.0 8.0 10.0 10.0 10.0	15.0 12.0	11.0 10.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	MAX 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	8.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0 6.0 6.0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 14.0	8.0 9.0 9.0 10.0 9.0 10.0 10.0 10.0	15.0 12.0	11.0 10.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 16.0 16.0 14.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0 18.0	MIM 16.0 16.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0 6.0 6.0 6.0	MAX 12.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0	8.0 9.0 9.0 10.0 9.0 8.0 10.0 10.0 10.0 4.0 4.0	15.0 12.0	11.0 10.0 10.0	MAX 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	MIN 18.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0 15.0 15.0 15.0 15.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	MIM 16.0 16.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 8.0 6.0 8.0 8.0 8.0 9.0 10.0	MIN 6.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	HAX 12.0 13.0 13.0 12.0 11.0 12.0 11.0 13.0 14.0 10.0 9.0 12.0	MIN 8.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 4.0 6.0 10.0	15.0 12.0	11.0 10.0 10.0	MAX 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 18.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 15.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0	MIM 16.0 16.0 15.0 14.0 14.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 4.0 5.0 6.0 4.0 5.0 6.0 6.0 6.0	MAX 12.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0	8.0 9.0 9.0 10.0 9.0 8.0 10.0 10.0 10.0 4.0 4.0	15.0 12.0	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	MIN 18.0 17.0 17.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0 13.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0	MIM 16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	#AX 8.0 6.0 8.0 8.0 8.0 9.0 10.0	#IN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 10.0 9.0 14.0	8.0 9.0 9.0 10.0 9.0 10.0 9.0 10.0 10.0 1	15.0 12.0 12.0	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17-0 16-0 16-0 16-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	21-0 21-0 21-0 21-0 20-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0	MIN 18.0 17.0 17.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIM 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 5 5 6 7 8 9 9 10 11 12 2 13 14 4 15 17 18 19 20	8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	#IN 6.0 4.0 4.0 5.0 6.0 5.0 6.0 6.0 6.0 6.0 5.0 6.0	HAX 12.0 13.0 13.0 12.0 11.0 12.0 11.0 13.0 14.0 10.0 9.0 12.0	8.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	15.0 12.0 12.0	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17-0 16-0 16-0 16-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0	21-0 21-0 21-0 21-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0	MIN 18.0 17.0 17.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	MIM 16.0 16.0 16.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 17 18 19 20 21	#AK 8.0 6.0 8.0 8.0 8.0 9.0 9.0 10.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 6.0 4.0 4.0 5.0 6.0 5.0 6.0 6.0 6.0 6.0 5.0 6.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 10.0 9.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIM 16.0 16.0 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 9 10 11 12 2 13 14 4 15 17 18 19 20	#AX 8.0 6.0 8.0 8.0 8.0 9.0 9.0 10.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 12.0 13.0 14.0 10.0 9.0 14.0 14.0	8.0 9.0 9.0 10.0 9.0 10.0 9.0 10.0 10.0 1	15.0 12.0 12.0	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17-0 16-0 16-0 16-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIM 16.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24	8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 11.0 13.0 13.0 13.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 8.0 8.0 10.0 10.0 9.0 4.0 6.0 10.0	15.0 12.0 12.0	11.0 10.0 10.0	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 13.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIM 16.0 16.0 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 7.0	MIN 6.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	HIN	20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	HIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIM 16.0 16.0 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 11.0 11
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 23 24 25 26	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	HIN	20.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 21.0 20.0 21.0 20.0 20.0 21.0 21.0 20.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	HIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0	MIM 16.0 16.0 16.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 11.0 11.0 11.0 11.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 2 11 3 11 4 11 5 11 7 11 8 11 9 12 0 12 12 22 23 24 25 26 27	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	15.0 12.0 12.0	11.0 11.0 10.0 10.0	20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0 16.0 15.0 15.0 15.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIM 16.0 16.0 15.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 23 24 25 26	#AX 8.0 6.0 8.0 8.0 8.0 9.0 9.0 10.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	HIN	20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	HIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	MIM 16.0 16.0 16.0 15.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 10.0 7.0	MIN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	15.0 12.0 12.0	11.0 11.0 10.0 10.0	20.0 19.0 20.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIM 16.0 16.0 15.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 7 18 19 20 21 22 23 24 25 26 27 28 29	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 11.0 12.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIM 16.0 16.0 15.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30	#AX 8.0 6.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 4.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	12.0 13.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	8.0 9.0 10.0 9.0 10.0 10.0 10.0 10.0 10.0	HAX	11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	20.0 19.0 20.0 21.0	MIN 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0 14.0 13.0	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIM 16.0 16.0 15.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CALIF.

LOCATION. -- Lat 37°51'01", long 120°38'13", in Nj sec.15, T.1 S., R.12 E., Stanislaus County, temperature recorder at gaging station on right bank 0.1 mile upstream from Owl Creek, 1.0 mile downstream from Goodwin Dam, and 3 miles northeast of Knights Ferry.

DRAINAGE AREA .-- 986 sq mi.

PERIOD OF RECORD, -- Water temperatures: February 1966 to September 1968.

EXTREMES, --1967-68:
Water temperatures: Maximum, 27.0°C June 25; minimum, 6.0°C sometime during period Jan. 13-31.

Period of record:

Water temperatures: Maximum, 27.0°C June 25, 1968; minimum, 6.0°C sometime during period Jan. 13-31, 1968.

REMARKS.--Clock stopped Dec. 6 to Jan. 4, Jan. 13-31; temperature ranges, 8.0°C to 14.0°C, and 6.0°C to 8.0°C, respectively. Recorder malfunctioned Feb. 1-25.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc	TOBER	NOVE	MBFR	DECI	MBER	MAL	IUARY	FEBR	RUARY	m	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.0	21.0	17.0	17.0	14.0	14.0					10.0	10.0
2	21.0 21.0	20.0 20.0	17.0 17.0	17.0 17.0	14.0 14.0	14.0 14.0					11.0 12.0	10.0 11.0
4	21.0	20.0	17.0	17.0	14.0	14.0					12.0	11.0
5	21.0	20.0	17.0	17.0	14.0	14.0	8.0	7.0			12.0	12.0
6	21.0	20.0	17.0	17.0			8.0	8.0			12.0	12.0
. 7	21.0	19.0	17.0	17.0			8.0	8.0			12.0	12.0
. 8	20.0 20.0	19.0 19.0	17.0 17.0	16.0 17.0			8.0 8.0	8.0			12.0 12.0	12.0 12.0
10	20.0	19.0	17.0	16.0			8.0	8.0		===	12.0	12.0
11	20.0	19.0	16.0	16.0			8.0	7.0			12.0	12.0
12	20.0	19.0	16.0	16.0			7.0	7.0			12.0	12.0
13 14	20.0 20.0	19.0 19.0	16.0 16.0	16.0 16.0							12.0 12.0	11.0 11.0
15	19.0	18.0	16.0	16.0							12.0	11.0
16	19.0	18.0	16.0	16.0							11.0	11.0
17	19.0	18.0	16.0	15.0							11.0	11.0
18	19.0	18.0	16.0	15.0							11.0	11.0
20	18.0	17.0 17.0	16.0 16.0	16.0 15.0							12.0 11.0	11.0
21	18.0	17.0	16.0	15.0							12.0	10.0
22	18.D	17.0	16.0	15.0							10.0	9.0
23 24	18.0	17.0 17.0	16.0 16.0	15.0 15.0							10.0	9.0 9.0
25	18.0	17.0	15.0	15.0							10.0	9.0
26	18.0	17.0	15.0	15.0					11.0	10.0	10.0	9.0
27	17.0	17.0	15.0	15.0					11.0	11.0	10.0	9.0
28 29	17.0 17.0	17.0 17.0	15.0 15.0	15.0 15.0					11.0	11.0 11.0	10.0	9.0 9.0
30	17.0	17.0	15.0	14.0							9.0	9.0
31	17.0	17.0									10.0	9.0
MONTH	22.0	17.0	17.0	14.0							12.0	9.0
	A1	PRIL		MAY	.10	JNE	JI	JLY	AUG	GUST	SEP	TEMBER
	A.				-							
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	NIM	MAX	MIN
1	MAX 10.0	MIN 9.0	MAX 17.0	MIN 16.0	MAX 21.0	MIN 20.0	24.0	23.0	MAX 24.0	24.0	24.0	MIN 24.0
1 2	MAX 10.0 9.0	MIN 9.0 8.0	MAX 17.0 18.0	MIN 16.0 17.0	MAX 21.0 21.0	MIN 20.0 20.0	24.0 24.0	23.0 23.0	MAX 24.0 24.0	24.0 23.0	24.0 24.0	MIN 24.0 23.0
1 2 3	MAX 10.0 9.0 9.0	MIN 9.0 8.0 9.0	MAX 17.0 18.0 18.0	MIN 16.0 17.0 17.0	MAX 21.0 21.0 22.0	MIN 20.0 20.0 21.0	24.0 24.0 24.0	23.0 23.0 23.0	MAX 24.0 24.0 24.0	24.0 23.0 23.0	24.0 24.0 24.0	MIN 24.0 23.0 24.0
1 2	MAX 10.0 9.0	MIN 9.0 8.0	MAX 17.0 18.0	MIN 16.0 17.0	MAX 21.0 21.0	MIN 20.0 20.0	24.0 24.0	23.0 23.0	MAX 24.0 24.0	24.0 23.0	24.0 24.0	MIN 24.0 23.0
1 2 3 4 5	MAX 10.0 9.0 9.0 9.0 9.0	MIN 9.0 8.0 9.0 9.0	MAX 17.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0	MAX 21.0 21.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0	24.0 24.0 24.0 26.0 26.0	23.0 23.0 23.0 24.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0	24.0 24.0 24.0 25.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0
1 2 3 4 5	MAX 10.0 9.0 9.0 9.0 9.0 10.0	9.0 8.0 9.0 9.0 9.0 9.0	MAX 17.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0	MIN 20-0 20-0 21-0 21-0 20-0	24.0 24.0 24.0 26.0 26.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0	MAX 24-0 24-0 24-0 24-0 24-0 24-0	24.0 23.0 23.0 23.0 23.0 23.0	24.0 24.0 24.0 25.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0
1 2 3 4 5	MAX 10.0 9.0 9.0 9.0 9.0 10.0	9.0 8.0 9.0 9.0 9.0 9.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 20.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0	24.0 24.0 25.0 24.0 25.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 24.0
1 2 3 4 5	MAX 10.0 9.0 9.0 9.0 9.0 10.0	9.0 8.0 9.0 9.0 9.0 9.0	MAX 17.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0	MIN 20-0 20-0 21-0 21-0 20-0	24.0 24.0 24.0 26.0 26.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0	MAX 24-0 24-0 24-0 24-0 24-0 24-0	24.0 23.0 23.0 23.0 23.0 23.0	24.0 24.0 24.0 25.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0
1 2 3 4 5 6 7 8 9	MAX 10.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0 20.0 20.0	MIN 20.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24-0 24-0 25-0 25-0 25-0 25-0 24-0 24-0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	17.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0	24.0 24.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.	9.0 9.0 9.0 9.0 9.0 9.0 11.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 22.0 21.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0	23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0	24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 10.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 14.0	9.0 8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0	17.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0	MIN 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 10.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 12.0 12.0 15.0 15.0	9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 12.0 13.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0	MAX 21.0 21.0 22.0 21.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 14.0 15.0	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 14.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0	MAX 21.0 21.0 22.0 21.0 20.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18	MAX 10.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 15.0 14.0 14.0 13.0	9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 18.0	21.0 21.0 22.0 22.0 21.0 21.0 20.0 20.0	20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 22.0 22.0 22	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 25.0 25.0 24.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 12.0 14.0 15.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 14.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	HAX 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 14.0 15.0 14.0 14.0 13.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 24.0 25.0 25.0 25.0	23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	17.0 18.0 18.0 18.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0	21.0 21.0 22.0 22.0 21.0 21.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 25.0 25.0 24.0	23.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	MIN 24-0 23-0 24-0 24-0 24-0 24-0 23-0 23-0 23-0 23-0 23-0 23-0 23-0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 18.0 18.0 18.0 18.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 20.0	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 18.0	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 25.0 24.0 25.0 24.0 24.0 25.0 24.0 25.0 24.0 24.0 25.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 25.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 22.0 22.0 22.0 22	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 12 13 3 11 4 15 16 17 18 19 20 21 22 23 24	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 18.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 22.0 22	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 25.0 25.0 24.0 24.0 25.0 26.0	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 24.0 25.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	MIN 24-0 23-0 24-0 24-0 24-0 24-0 23-0 23-0 23-0 23-0 23-0 21-0 21-0 21-0 21-0 21-0
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 11 2 11 3 11 4 11 5 11 7 18 18 19 20 21 22 23 24 25	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0	17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 18.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0	17.0 18.0 18.0 18.0 18.0 18.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 18.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 24.0 25.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 26.0	23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 11 2 11 3 11 4 11 5 11 7 18 18 19 20 21 22 23 24 25	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0	17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 18.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0 18.0 19.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0	23.0 23.0 24.0 24.0 25.0 25.0 25.0 24.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 22.0	#IN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0	17.0 18.0 18.0 18.0 18.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 19.0 1	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 24.0 24.0 25.0 25.0 24.0 24.0 25.0 25.0 26.0	23.0 23.0 23.0 24.0 25.0 25.0 25.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	MAX 10.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 25.0 24.0	23.0 23.0 23.0 24.0 25.0 25.0 25.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 22.0	#IN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30 31	MAX 10.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 1	MIN 9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 12.0 13.0 14.0 13.0 13.0 14.0 14.0 15.0 16.0 16.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 20.0 19.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 16.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 22.0 22.0 21.0 20.0 20.0 20.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 25.0 24.0	23.0 23.0 23.0 24.0 25.0 25.0 25.0 24.0 23.0 24.0 24.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0	24.0 24.0 24.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0 22.0 21.0 21.0 22.0 21.0	#IN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 20

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CALIF. (International Hydrological Decade River 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 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 1968. Water temperatures: March 1961 to September 1965. Sediment records: November 1956 to September 1965.

Nater temperatures: Maximum, 27.0°C Aug. 7, 9, 11; minimum, 9.0°C Dec. 12, 15-18. Sediment concentrations: Maximum daily, 173 mg/l July 12; minimum daily, 18 mg/l Dec. 23. Sediment discharge: Maximum daily, 1,210 tons Febt. 23; minimum daily, 63; nos Sept. 8.

Period of record:

FROM DIFECURA: Water temperatures: Maximum 29.5°C June 14, Aug. 9, Sept. 2, 1966; minimum, 3.0°C Jan. 24, 1962. Sediment concentrations: Maximum daily, 1,590 mg/l Dec. 25, 1964; minimum daily, 9 mg/l Jan. 4, 1960, Nov. 18, 1961.

Nov. 18, 1961.
Sediment discharge: Maximum daily, 54,100 tons Dec. 25, 1964; minimum daily, 2 tons Aug. 10, 1961.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	S IL ICA (S102)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SI UM (MG)	SODI UM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	STRON- TIUM (SR)	BICAR- BDNATE (HCQ3)	CAR- BONATE (CO3)	SULFATE (SB4)
OCT.	2530	20	•02	31	12	53	3.2	.01	. 30	123	0	39
NOV. 08	3320	13	.05	19	9.7	41	1.7	.D1	.14	72	0	34
DEC. 06	3790	12	.02	19	9.4	40	1.9	.01	-22	77	0	37
JAN. 10	3500	12	.02	22	11	53	1.9	.00	.30	83	c	51
FEB. OB Mar.	2110	17	.03	35	17	89	3.1	.01	.35	120	0	89
O6 APR.	3020	13	.01	24	12	60	1.9	.01	•26	83	0	67
03	3060	15	.03	24	12	53	2.4	-01	.30	84	0	55
MAY. OB JULY	911	20	.01	49	25	118	4.3	. 02	.64	173	0	103
03	477	20	.01	60	30	140	5.1	•01	.65	200	0	103
AUG. 07 SEPT.	646	22	.04	52	26	124	5.5	.01	.56	186	C	86
:04	834	26	•00	53	26	126	5.2	.01	. 50	194	0	91
DATE	CHLO- RIDE (CL)	FLUO- RIOE (F)	NITRATE (NO3)	PHOS - PHATE (PO4)	BORON (8)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOCIUP	SODIUM AC- SORP- TION PATIC	ALKA- LINITY AS CACO3
0CT.	75	•2	5.1	.79	.10	300	127	26	.41	47	2 .D	101
NOV. 08	56	.1	2.6	.14	-10	212	88	29	.29	50	1.9	59
DEC. 06	50	.1	2.3	.50	-20	210	86	23	. 29	50	1.9	63
JAN. 10	64	.2	4.4	.07	.20	261	100	32	.35	53	2.3	68
FEB. 08	108	.0	6.4	. 76	.40	424	158	60	.58	55	3.1	98
MAR. 06	71	.1	3.0	.54	.30	294	110	42	-40	54	2.5	68
APR. 03	64	.1	4.7	-41	.43	272	110	41	.38	51	2.2	69
MAY OR	1 64	•2	5.4	.84	.40	575	226	84	.78	53	3.4	142
JULY 03	214	. 3	4.6	1.2	•31	677	273	109	.92	52	3.7	164
AUG. 07 SFPT.	188	•2	4.0	1.3	.38	600	237	84	.82	53	3.5	153
04	179	•2	6.2		.36	609	239	80	.83	53	3.5	159

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	FIC COND UCTANCE (MICRO	РН	TEM- PERA- TURE (DEG C)	TUR- BID- ITY	DIS- SOLVED DXYGEN
DATE	MHOS)		(DEG C)	277	UATGEN
OCT.					
04	529	7.5		24	
NOV.					
08	378	7.5	17	12	7.4
DEC.					
06	368	7.6		153	
JA N.					
10	464	7.5		5.0	
FEB.					
08	752	7.4	13	28	9.1
MAR.					
06	522	7.4	17	14	11.7
APR.					
03	471	7.8		30	
MAY					11.4
08	1010	7.4	20	60	11.4
JULY	1100	7.3		40	
03	1190	1.3		40	
AUG. 07	1070	7.6	21	60	7.3
	1070	1.0	21	90	1.5
SEPT.	1060	0.2			

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	CCT	NCV	DEC	JAN	FE8	MAR	APR	MAY	ИÚL	JUL	AUG	SEP
1	23.C	18.0	12.0	21.0	20.0	20.0	14.0	19.0	20.0	21.0	22.0	23.0
2	21.0	17.0		19.0	20.0	21.0	17.0	17.0	22.0	21.0	23.0	25.0
3	18.0	18.0		21.0	20.0	22.0	16.0	19.0	22.0	20.0	21.0	25.0
4	24.0	18.0	13.0	21.0	19.0	23.0	13.0	18.0	19.0	21.0	22.0	21.0
5	21.0	19.0	14.0	20.0	20.0	21.0	13.0	17.0	20.0	24.0	20+0	20-0
6	2C.C	17.0	11.0	20.C	21.0	21.0	14-0	16.0	18.0	24.0	22.0	21.0
7	19.0	17.0	12.0	21.0		19.0	14.0	17.0	18.0	23.0	27.0	19.0
8	19.0	16.0	11.0		21.0	21.0	14.0	18.0	19.0	23.0	23.0	21.0
5	19.C	17.0	11.0	19.0	21.0	21.0	16.0	17.0	19.0	22.0	27.0	21.0
10	20.0	17.0	14.0		21.0	21.0	16.0	16.0	19.0	21.0	21.0	19.0
11	21.0	14.0	11.0	19.0	22.0	19.0	17.0	16.0	21.0	23.0	27.0	19.0
12	20.0	17.0	9.0	19.0	23.0	20.0	19.0	17.0	18.0	22.0	20.0	21.0
13	21.0	14.0	10.0	14-0	19.0	20.0	19.0	16.0	18.0	20-0	23.0	20.0
14	18.0	17.0	11.0	19.0	21.0	20.0	16.0	15.0	20.0	20.0	19.0	21.0
15	18.0	16.0	9.0	18.0	20.0	21.0	17.0	16.0	20.0	21.0	24.0	18.0
16	16.0	18.0	9.0	19.C	21.0	21.0	16.0	16.0	23.0	20.0	20.0	18.0
17	17.C	18.0	9.0	19.0	21.0	21.0	16.0	18.0	23.0	20.0	24.0	20.0
18	18.0	16.0	9.0	19.0	20.0	22.0	14.0	17.0	23.0	22.0	20.0	20.0
19	17.0	17.0		19.0	20.0	22.0	14.0	20.0	23.0	24.0	24.0	18.0
20	17.0	14.0		18.0	21.0	21.0	14.0	18.0	23.0	23.0	18.0	18.0
21	18.C	16.0	11.0	21.0	22.0	22.0	13.0	17.0	23.0	21.0	23.0	17.0
22	18.0	14.0	14.0	19.0	23.0	22.0	13.0	17.0	24.0	22.0	18.0	19.0
23	19.0	16.0		19.0	21-0	22.0	13.0	17.0	24.0	21.0	18.0	15.0
24	17.C	14.0		22.0	20.C	23.0	15.0	16.0	24.0	22.0	20.0	17.0
25	17.C	14.0	11.0	21.0	21.0	22.0	17.0	18.0	24.0	20.0	18.0	17.0
26	18.0	13.0	21.0	21.0	19.C	15.0	18.0	19.0	23.0	21.0	19.0	18.0
27	17-C	13.0		21.C	21.0	18.0	20.0	21.0	23.0	22.0	20.0	19.0
28	18.0	13.0	22.0	21.0	21.0	13.0	18.0	20.0	22.0	23.0	21.0	18.0
29	17.C		21.0	21 • C	19.0	15.0	19.0	21.0	20.0	23.0	22.0	18.0
30	18.0		21.0	18.0		17.0		21.0	21.0	24.0	23.0	17.0
31	17.0		22.0	21.0		20.0		18.0		23.0	23.0	
AVERAGE	18.5	16.0		19.5	20.5	20.0	15.5	17.5	21.0	22.0	21.5	19.5

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		US PENDED-:				CTOBER 1967			
		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE {CES}	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CES)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	2620 2930	83 85	587 672	798 780	136 147	293 310	549 601	100 96	148 156
3	3060	87	719	816	154	339	650	92	161
4	2750	81	601	826	144	321	593	89	142
5	2570	69	479	920	159	395	589	105	167
6	2440	72	474	975	142	374	646	129	225
7 R	2130 1900	68 83	391 426	930 911	154	387 394	654 632	116 141	205 241
9	1680	71	322	870	152	357	704	131	249
10	1440	68	264	848	145	337	749	106	214
11	1240	86	288	893	127	306	690	141	263
12	1120	76	230	970	129	338	623 593	127	214 109
13 14	1100 1100	84 94	249 279	1040	130	365 329	628	68 75	127
15	1160	90	282	1120	107	324	610	79	130
16	1000	102	275	1040	110	309	581	109	171
17	906	103	252	995	116	312	641	123	213
18	930	88	221	960	114	295 257	589 577	91	145 126
19 20	844 830	102 129	232 289	950 995	100 103	277	493	81 96	128
21	862 945	118	275	902 875	93 99	226 234	553 529	115 94	172 134
22 23	940	110 117	281 297	844	84	191	585	98	155
24	945	131	334	893	106	256	641	104	180
25	980	146	386	884	93	722	549	129	191
26	925	145	362	844	108	246	489	132	174
27	880 955	148 149	352 384	875 794	106 100	250 214	501 533	104 86	141 124
28 29	980	145	384	700	100	189	485	125	164
30	902	140	341	654	93	164	489	98	129
31				581	106	166			
TOTAL	43064		10928	27623		8972	17746		5098
		JULY			AUGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
	MFAN Discharge	MEAN CONCEN-	SEDIMENT Discharge	MFAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	MFAN DISCHARGE (CFS)	MEAN	SEDIMENT Discharge (Tons/Day)	MFAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION	
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	(CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 898	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3	DISCHARGE (CFS) 517 469 477	MEAN CONCEN- TRATION (MG/L) 67 91 136	DISCHARGE (TONS/DAY) 94 115 175	DISCHARGE (CFS) 549 577 581	MEAN CONCEN- TRATION (MG/L) 109 148 144	DISCHARGE (TONS/DAY) 162 231 226	DISCHARGE (CFS) 898 898 857	MEAN CONCEN- TRATION (MG/L) 53 60 83	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192
1 2 3 4	DISCHARGE (CFS) 517 469 477 485	MEAN CONCEN- TRATION (MG/L) 67 91 136 136	DISCHARGE (TONS/DAY) 94 115 175 178	01SCHARGE (CFS) 549 577 581 646	MEAN CONCEN- TRATION (MG/L) 109 148 144 100	DISCHARGE (TONS/DAY) 162 231 226 174	DISCHARGE (CFS) 898 898 857 834	MEAN CONCEN- TRATION (MG/L) 53 60 83 95	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214
1 2 3 4 5	DISCHARGE (CFS) 517 469 477 485 485	MEAN CONCENT TRATION (MG/L) 67 91 136 136	DISCHARGE (TONS/DAY) 94 115 175 178 139	01SCHARGE (CFS) 549 577 581 646 708	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118	DISCHARGE (TONS/DAY) 162 231 226 174 226	DISCHARGE (CFS) 898 898 857	MEAN CONCEN- TRATION (MG/L) 53 60 83	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192
1 2 3 4 5	DISCHARGE (CFS) 517 469 477 485 485	MEAN CONCEN- TRATION (MG/L) 67 91 136 136 106	DISCHARGE (TONS/DAY) 94 115 175 178 139 103	DISCHARGE (CFS) 549 577 581 646 708	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118	DISCHARGE (TONS/DAY) 162 231 226 174 226	DISCHARGE (CF5) 898 898 857 834 803	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128
1 2 3 4 5	DISCHARGE (CFS) 517 469 477 485 485	MEAN CONCENTRATION (MG/L) 67 91 136 136 106	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118	DISCHARGE (CFS) 549 577 581 646 708 682 646	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82	DISCHARGE (CFS) 898 898 857 834 803 857	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 517 469 477 485 485 485 469 469	MEAN CONCENTRATION (MG/L) 67 91 136 136 106 79 93 133 153	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192	DISCHARGE (CFS) 549 577 581 646 708 682 646 618 589	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47 105 84	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134	DISCHARGE (CFS) 898 898 857 834 803 857 893 965 980	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 517 469 477 485 485 485 469	MEAN CONCENTRATION (MG/L) 67 91 136 136 106 79 93 133	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168	01SCHARGE (CFS) 549 577 581 646 708 682 646 618	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175	DISCHARGE (CF5) 898 898 857 834 803 857 893 965	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469	MEAN CONCEN- TRATION (MG/L) 67 91 136 136 106 79 93 133 153 145	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184	OISCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47 105 84 113	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218	DISCHARGE (CFS) 898 897 834 803 857 893 965 980 893	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26 49	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 517 469 477 485 485 469 469 469	MEAN CONCEN- TRATION (MG/L) 67 91 136 136 106 79 93 133 153 145	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47 105 84 113	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218	DISCHARGE (CFS) 898 897 834 803 857 893 965 980 893	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26 46 49	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 517 469 477 485 485 469 469 469 469 469 469 469	MEAN CONCEN- TRATION (MG/L) 67 91 136 136 106 79 93 133 153 145	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184	OISCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47 105 84 113	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218	DISCHARGE (CFS) 898 897 834 803 857 893 965 980 893	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26 49	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469	MEAN CONCENTRATION (MG/L) 67 91 136 136 106 79 93 133 163 163 165	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610	MEAN CONCEN- TRATION (MG/L) 109 148 144 100 118 109 47 105 84 113	DISCHARGE (TONS/DAY) 162 231 226 201 201 82 175 134 186 218 170 151	DISCHARGE (CFS) 898 898 857 834 803 857 893 965 980 893	MEAN CONCEN- TRATION (MG/L) 53 60 83 95 59 50 37 26 46 49 69 62 48	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589	MEAN CONCENTATION (MG/L) 67 91 136 136 106 179 93 143 145 122 173 144 85 117	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185	01SCHARGE (CFS) 549 577 581 646 708 682 666 618 589 610 677 677 641 636 618	MEAN CONCENTRATION (MG/L) 109 148 140 118 100 118 105 84 113 119 93 87 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149	DISCHARGE (CFS) 898 898 897 834 803 857 893 965 980 893 852 916 935 945 1000	MEAN CONCENTATION (MG/L) 53 60 83 95 59 50 37 26 46 49 69 62 48 50 56	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 118 159 153 121 121 121 121 121 121
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 525 585	MEAN CONCENTRATION (MG/L) 67 91 136 136 136 136 137 145 173 144 85 117	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 190 120 185 227 199	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 641 636 618	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 945 1000	MEAN CONCENTRATION (MG/L) 53 60 83 95 95 50 37 26 46 49 62 48 50 56	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 585 569 569 501	MEAN CONCENTATION (MG/L) 67 91 136 136 136 137 145 145 147 148 134 148 134	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152	01SCHARGE (CFS) 549 577 581 646 708 682 666 618 589 610 677 641 636 618 623 610 754	MEAN CONCENTRATION (MG/L) 109 148 100 118 109 47 105 84 113 119 93 87 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214	DISCHARGE (CFS) 898 899 897 834 803 857 893 965 980 893 852 916 935 945 1000	MEAN CONCENTATION (MG/L) 53 60 83 95 59 50 37 26 46 49 69 62 48 50 56	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 68 122 11R 159 153 121 121 121 121 121 121 127
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 525 585	MEAN CONCENTRATION (MG/L) 67 91 136 136 136 136 137 145 173 144 85 117	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 190 120 185 227 199	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 641 636 618	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 945 1000	MEAN CONCENTRATION (MG/L) 53 60 83 95 95 50 37 26 46 49 62 48 50 56	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 575 569 569 569 576	MEAN CONCENTATION (MC/L) 136 136 136 137 133 145 122 173 144 85 117	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152 139 108	01SCHARGE (CFS) 549 577 581 646 618 589 610 677 641 636 618 623 610 754 812 834	MEAN CONCENTRATION (MG/L) 109 144 100 118 109 47 105 84 113 119 87 95 89 96 77	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 945 1000	MEAN CONCENTATION (MG/L) 53 60 83 95 59 50 37 26 46 49 62 48 50 56	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 118 159 153 121 128 151 129 151 120 151 128
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589 589 589 589 589 589 589 589 589 58	MEAN CONCENTATION (MC/L) 67 91 136 136 133 143 153 145 122 173 144 85 117 148 138 138 138 138 138	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 190 120 185 227 199 152 139 108	01SCHARGE (CFS) 549 577 581 646 618 589 610 677 641 636 618 623 610 754 812 834	MEAN CONCENTRATION (MG/L) 109 144 100 118 109 47 105 84 113 119 93 87 87 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 945 1000	MEAN CONCENTATION (MG/L) 53 60 85 95 59 50 37 26 49 69 62 48 50 56 47 80 62 62 67	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 118 159 153 121 128 151 129 151 121 128 151 121 128 151 153 121 128 151 153 121 128 151 153 153 153 154 155 157 157 157 157 157 157 157 157 157
1 2 3 4 4 5 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 586 549 501 457 469	MEAN CONCENTATION (MC/L) 67 91 136 136 137 143 153 165 172 173 144 185 117 148 134 112 113 188 128 148	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152 139 108	OISCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 641 636 618 623 610 754 812 834	MEAN CONCENTRATION (MG/L) 109 144 144 100 118 109 47 105 84 113 113 87 77 105 89 77 105 89 77 105 88 78 80 85	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167	DISCHARGE (CFS) 898 897 834 803 857 834 803 965 980 893 852 916 935 945 1000 1030 960 935 884 875 893 925	MEAN CONCENTRATION (MG/L) 53 600 83 95 59 50 37 26 46 49 69 662 67 67 60 60 60 60 60 60 60 60 60 60 60 60 60	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 68 8122 11R 159 153 121 12R 151 151 151 151 151 157 148 158 137 122 187
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589 589 589 589 589 589 589 589 589 58	MEAN CONCENTATION (MC/L) 47 136 136 136 136 137 145 144 157 148 138 148 144 168 148 148 113	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 215 227 1190 120 185 227 189 100 120 185 227 186 189 161 161 162 184	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 647 641 638 618 623 610 754 812 834 893 985	MEAN CONCENTRATION (MG/L) 109 144 100 118 109 47 105 84 113 119 93 87 96 77 105 98 74 78 80 85	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167 188 218 218 180 218 219 219 219 219 219 219 219 219 219 219	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 905 906 1000 1030 960 935 884 875 893 925 975 980	MEAN CONCENTATION (MG/L) 53 60 83 95 59 26 46 49 69 48 50 56 47 80 62 62 67 74 49	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151 129 153 121 128 151 129 153 121 128 153 121 128 153 121 128 153 121 128 153 121 128 131 148 153 153 164 165 165 165 165 165 165 165 165 165 165
1 2 3 3 4 4 5 6 6 7 7 8 8 9 10 11 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589 589 589 589 589 581 467 469 469 469 469 469 469 469 469 469 469	MEAN CONCENTRATION (MC/L) 136 136 136 136 137 145 145 117 148 134 112 113 188 144 108 113 92	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 2194 150 1200 1200 185 227 199 152 139 108 164 165 161 167 179	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 677 661 636 618 623 610 754 812 834 893 985 1020 950	MEAN CONCENTRATION (MG/L) 109 144 100 118 109 47 105 84 113 119 87 97 97 105 98 74 78 80 86 62	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167 188 218 218 179 219 219 219 219 219 219 219 219 219 21	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 945 1000 1030 960 935 884 875 893 925 936	MEAN CONCENTATION (MG/L) 53 60 83 95 59 59 50 37 26 44 9 62 48 50 56 47 87 80 62 62 67 79 61 61 62	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151 129 151 128 151 128 151 129 153 121 128 151 128 151 128 151 128 153 121 128 153 121 128 153 121 128 146 153 164 165 165 165 165 165 165 165 165 165 165
1 2 3 4 5 6 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 22 23 24	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 585 569 569 561 553 513 481	MEAN CONCENTRATION (MC/L) 67 91 136 136 137 148 127 148 148 148 148 148 148 148 148 148 148	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152 139 108 166 167 218 161 157 119	OISCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 641 636 618 623 610 754 812 834 893 985 1020 950	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 75 89 77 105 98 77 78 80 85 62 75	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167 188 213 234 159 199 267	DISCHARGE (CFS) 898 897 834 803 857 834 803 965 980 893 852 916 935 945 1000 1030 960 935 884 875 893 925 975 980	MEAN CONCENTRATION (MG/L) 53 60 83 95 59 50 37 26 46 49 62 48 80 62 62 67 67 80 62 62 67 71 61 62 57	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 155 121 12R 151 1207 157 148 158 137 122 187 161 164
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 7 28	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589 569 569 561 563 469 561 563 469 571 467	MEAN CONCENTATION (MC/L) 67 91 136 136 136 137 145 127 173 144 117 148 128 128 128 128 128 1144 118 118	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152 139 108 166 167 218 161 157 119 153 156 217	01SCHARGE (CFS) 549 577 581 646 708 682 666 618 589 610 677 641 636 618 623 610 754 812 834 893 985 1020 950 1040 1040 1040	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 75 89 96 67 77 105 98 74 880 85 62 75 95 92 85	DISCHARGE (TONS/DAY) 162 231 226 174 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167 188 213 234 159 199 267 258 225	DISCHARGE (CFS) 898 897 898 857 834 803 857 893 965 980 893 852 916 935 945 1000 1030 960 935 884 875 893 925 975 980 980 1010 1070 1070	MEAN CONCENTRATION (MG/L) 53 60 83 95 59 50 37 26 46 49 62 48 50 56 62 67 7 80 62 62 67 7 1 61 62 57 57 57 57 57 57	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151 151 131 207 157 148 158 137 127 148 158 137 161 164
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 4 15 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29	DISCHARGE (CFS) 517 469 477 485 485 485 486 469 469 469 469 575 589 589 589 581 461 467 469 469 469 469 469 469 469 469 469 469	MEAN CONCENTRATION (MG/L) 136 136 136 136 137 145 144 45 117 148 134 141 141 141 151 151 151	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 219 120 120 185 227 199 152 139 108 162 218 161 157 119 153 156 217 232	01SCHARGE (CFS) 549 577 581 646 708 682 646 618 589 610 677 641 636 618 623 610 754 812 834 893 985 1020 950 1040 1040 980	MEAN CONCENTRATION (MG/L) 109 144 100 118 109 47 105 84 113 119 93 87 96 77 105 98 74 78 80 85 75 95 89	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 21R 170 151 163 149 161 127 214 215 167 188 213 189 216 217 214 215 217 214 215 216 217 214 215 216 217 218 218 218 218 218 218 218 218 218 218	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 946 935 946 935 947 1000 1030 1030 1010 1010 1010 1020 1020	MEAN CONCENTATION (MG/L) 53 60 95 59 59 50 37 26 48 50 56 49 62 62 67 79 60 62 62 67 75 75 60 60 60 60 60 60 60 60 60 60 60 60 60	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 12R 151 131 207 157 148 158 137 122 187 161 164 155 150 157 167
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 7 28	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 589 569 569 561 563 469 561 563 469 571 467	MEAN CONCENTATION (MC/L) 67 91 136 136 136 137 145 127 173 144 117 148 128 128 128 128 128 1144 118 118	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 154 219 120 185 227 199 152 139 108 166 167 218 161 157 119 153 156 217	01SCHARGE (CFS) 549 577 581 646 708 682 666 618 589 610 677 641 636 618 623 610 754 812 834 893 985 1020 950 1040 1040 1040	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 75 89 96 67 77 105 98 74 880 85 62 75 95 92 85	DISCHARGE (TONS/DAY) 162 231 226 174 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 214 215 167 188 213 234 159 199 267 258 225	DISCHARGE (CFS) 898 897 898 857 834 803 857 893 965 980 893 852 916 935 945 1000 1030 960 935 884 875 893 925 975 980 980 1010 1070 1070	MEAN CONCENTRATION (MG/L) 53 60 83 95 59 50 37 26 46 49 62 48 50 56 62 67 7 80 62 62 67 7 1 61 62 57 57 57 57 57 57	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 128 151 151 131 207 157 148 158 137 127 148 158 137 161 164
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 5 26 27 7 28 29 30 30	DISCHARGE (CFS) 517 469 477 485 485 485 469 469 469 469 469 575 585 569 569 561 561 563 513 481 497 521 533 573	MEAN CONCENTATION (MC/L) 67 91 136 136 137 145 173 145 173 144 117 148 114 111 111 151 151	DISCHARGE (TONS/DAY) 94 115 175 178 139 103 118 168 192 184 219 190 120 185 227 199 152 139 108 164 161 161 167 119 153 166 217 232 187	01SCHARGE (CFS) 549 577 581 646 708 682 666 618 589 610 677 641 636 618 623 610 754 812 834 893 985 1020 950 1040 1040 1040 1040 1030 960	MEAN CONCENTRATION (MG/L) 109 148 144 100 118 109 47 105 84 113 119 93 87 75 89 96 62 77 105 98 74 80 85 62 75 95 92 85 49 68	DISCHARGE (TONS/DAY) 162 231 226 174 226 201 82 175 134 186 218 170 151 163 149 161 127 714 215 167 188 713 234 159 192 267 258 225 136 176	DISCHARGE (CFS) 898 898 897 834 803 857 803 965 980 893 852 916 935 946 935 946 935 947 1000 1030 1030 1010 1010 1010 1020 1020	MEAN CONCENTATION (MG/L) 53 60 95 59 59 50 37 26 48 50 56 49 62 62 67 79 60 62 62 67 75 75 60 60 60 60 60 60 60 60 60 60 60 60 60	SEDIMENT DISCHARGE (TONS/DAY) 129 145 192 214 128 116 89 68 122 11R 159 153 121 12R 151 131 207 157 148 158 137 122 187 161 164 155 150 157 167

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

720263 120402

MICHE MAYIN MUSEROU MAG

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CALIF. -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

WATER Tem				SUSPENDED PARTICLE SIZE									METHOD				
		PERA	-		SED IMENT DISCHARGE		NT F	INER 1	THAN	THE S	1 Z E (1 M A I	LLIME	TERSI	INDI	CATED	OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	-002	-004	.008	.C16	.031	•062	.125	.250	.500	1.00	2.00	SIS
JAN 16 1968	1220	11	2910	49	385	6	37	37	52	59	92	97	1 00				VCBW
MAR 12	1650	15	2830	94	718	6	22	37	47	54	80	84	93	1 CO			SCBW
APR 8	1620	16	1910	66	340	7	20	45	57	64	94	96	98	100			SCBW
MAY 7	1035		852	130	299	30	45	62	75	84	94	96	99	100			SCBW
JUN 7	1400		668	104	188	34	46	62	73	78	93	96	59	100			SCBW

11311150 STOCKTON SHIP CANAL AT LIGHT 4D, 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 to September 1968,

REMARKS, -- Records furnished by U.S. Bureau of Reclamation and reviewed by Geological Survey.

CHEMICAL ANALYSES, IN NILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- Sium (K)	RICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- Riof (CL)	PHOS- PHATE (PO4)
FEB. 02	28	17	68	5.0	110	0	69	112	
MAR. 22	28	12	42	3.4	80	0	48	51	-28
APR.						-			
19 MAY									
16									
17 JUNE									
17 JULY									.04
16 AUG.									
14									
SEPT. 11									
DATE	HARD-	N JN- CAR- Bonate		SODIUM AD- SDRP-	ALKA- LINITY	SPECI- FIC COND- UCTANCE		TEM- PERA-	-21 0
DATE	NESS (CA.MG)	HARD- NESS	PERCENT SODIUM	TION RATIO	AS CACO3	(MICRO- MHOS)	PH	TURE (DEG C)	SOLVED OXYGEN
FEB.							Рн		SOLVED
FEB. 02							Р Н 7•1		SOLVED
FEB. 02 MAR. 22	(CA.MG)	NESS	SODIUM	RATIO	CACO3	MHOS)		(DEG C)	SOLVED OXYGEN
FEB. 02 MAR.	(CA.MG)	NESS 52	SOD TUM	2.5	CACN3 90	MHOS) 650	7.1	(DEG C)	SOLVED DXYGEN 10.0
FEB. 02 MAR. 22 APR. 19	(CA.MG) 142 119	NESS 52 53	50 43	2.5 1.7	90 66	MHOS) 650 395 470	7.1 7.4 8.2	(DEG C) 9 14 17	10.0 9.0 11.0
FEB. 02 MAR. 22 APR. 19 MAY	(CA.MG) 142 119	NESS 52 53 	50 43 	2.5 1.7	90 66 	MHOS) 650 395 470 395	7.1 7.4 8.2 7.9	(DEG C) 9 14 17 18	SOLVED OXYGEN 10.0 9.0 11.0
FEB. 02 MAR. 22 APR. 19 MAY 16 17 JUNE	(CA.MG) 142 119	52 53 	50 43 	2.5 1.7	90 66 	MHOS) 650 395 470 395	7.1 7.4 8.2 7.9	(DEG C) 9 14 17 18 18	SOLVED DXYGEN 10.0 9.0 11.0 9.0 10.1
FEB. 02 MAR. 22 APR. 19 MAY 16	(CA.MG) 142 119	NESS 52 53 	50 43 	2.5 1.7	90 66 	MHOS) 650 395 470 395	7.1 7.4 8.2 7.9	(DEG C) 9 14 17 18	SOLVED OXYGEN 10.0 9.0 11.0
FEB. 02 MAR. 22 APR. 19 MAY 16 17 JUNE 17 JULY 16	(CA.MG) 142 119	52 53 	50 43 	2.5 1.7	90 66 	MHOS) 650 395 470 395	7.1 7.4 8.2 7.9	(DEG C) 9 14 17 18 18	SOLVED DXYGEN 10.0 9.0 11.0 9.0 10.1
FEB. 02 MAR. 22 APR. 19 MAY 16 17 JUNE 17 JULY	142 119 	52 53 	50 43	2.5 1.7	90 66 	MHOS) 650 395 470 395 —	7•1 7•4 8•2 7•9 7•9	(DEG C) 9 14 17 18 18 24	SOLVED DXYGEN 10.0 9.0 11.0 9.0 10.1 7.5

11312990 DELTA-MENDOTA CANAL ABOVE TRACY PUMPING PLANT, NEAR TRACY, CALIF.

LOCATION (revised).--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 1968.

REMARKS. -- Chemical -quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Records of discharge are given for 11313000 Delta-Mendota Canal at Tracy Pumping Plant, near Tracy. No appreciable inflow between sampling point and gaging station.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	01	AN S- RGE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SCCIUM (NA)	ŠIÚM	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- R IDE (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PO4)
0C1. 17	1170)											
JAN. 1C	()	26	18	76	2.9	95	0	74	108	2.9	-47	• 59
FEB. C7	1500)	39	18	88	4 - 2	111	0	98	122	B.5	.50	-28
APR. C2	3450)	25	12	38	2.2	77	0	54	51	3.6	.31	
CO	4420)	16	8.5	21	1.5	76	0	22	24	2.1	-16	
C7	385)	20	11	33	2.3	93	0	34	43	3.0	.18	
02 ALG-	47 C)	16	12	46	2.4	85	0	31	61	4.0	•06	
C7 SEFT.	4300)	16	14	70	3.4	79	0	34	112	2.1	.08	
11	453	3	20	11	46	2.3	97	1	26	62	1.5	.10	
CAT	ſĘ	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS	NON- CAR- BONATI HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM		ALKA LINI AS CACO	TY UCTAN	- CE O-	TE PE PH TU (DE	RA- DI: RE SOL	VED
CCT. 17. JAN.									75	3	1	19 9.	.7
10. ff8.	• •	370	138	60	•50	54	2 • 8	78	67	3	8.0	6 3	. 3
C7. APR.		439	171	80	.60	52	2.9	91	81	9	8.0 -		
O2.		268	110	47	.36	42	1.6	63	44	3	7.9		
C 8.		140	75	13	.19	37	1.1	62	25	6	8.0		
C7.		169	97	21	.23	42	1.5	76	39	ı	8.0		_
OZ.		207	88	18	.28	52	2.1	70	42	0	8.1	· -	
C7. SEPT		300	97	32	-41	60	3.1	65	604	•	7.7	. .	
11.		238	95	14	.32	50	2.1	81	43	4	8.4		

11313050 DELTA-MENDOTA CANAL NEAR MENDOTA, CALIF.

LOCATION (revised).--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 1968.

REMARKS,.-No discharge records available. Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

11313050 DELTA-MENDOTA CANAL NEAR MENDOTA, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR DCTOBER 1967 TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PD- TAS- SIUM (K)	BICAR- BDNATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SD4)	CHLO- R IDE (CL)	NITRATE (NO3)	PHDS- PHATE (PD4)
JAN. 10	27	14	67	2.7	75	7	87	72	2.0	.07
6EB. 07	39	20	97	3.4	115	0	111	130	5.5 6.3	•33 •52
APR. 02	26	13	44	2.4	76	0	65	59	5.0	
08 JUNE	16	.8.5	21	1.6	74	0	20	23	3.4	
07 JULY	16	10	27	2.2	85	0	28	31	3.6	.97
02	19	11	38	2.5	84	0	29	48	20	
AUG. 07	16	14	74	3.8	80	0	38	117	1.5	
SEPT. 11	20	13	52	2.6	98	0	34	69	2.1	
DATE	BORON (B)	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- Bonate Haro- Ness	DIS- SDLVED SDLIDS (TDNS PER AC-FT)	PERCENT SOD I UM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH
JAN. 10	.39	328	125	52	.45	53	2.6	73	592	8.9
65. 07 13	•56	494	177	83	•67	53	3.1	94	859	8.2
4PR. 02 May	. 35	297	120	58	.40	44	1.8	62	497	7.8
09 JUNE	-16	144	75	14	•20	37	1.1	61	254	7.9
07	.16	146	82	12	•20	41	1.3	70	310	8.1
JULY 02 AUG.	. 04	224	90	21	.30	47	1.7	69	392	7.9
07 SEPT.	.04	314	100	34	.43	61	3.3	66	621	7.9
11	-12	265	104	24	.36	51	2.2	80	478	8.2

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CALIF.

LOCATION. -- Lat 38°18'46", long 120°43'09", in SW4SW4 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 of Mokelumne River

DRAINAGE AREA . -- 544 sq mi.

PERIOD OF RECORD .-- Water temperatures: February 1961 to September 1968.

EXTREMES, --1967-68:
Water temperatures: Maximum, 22,0°C July 7; minimum, 1,0°C Jan, 31, Feb, 1,

Period of record:
Water temperatures: Maximum, 24.5°C Aug. 5, 1967; minimum (1961-65, 1966-68), 1.0°C Jan. 31, Feb. 1, 1968.

REMARKS. -- Recorder malfunctioned Dec. 1-24, Mar. 1 to Apr. 1, May 1-7; temperature ranges, 2.0°C to 9.0°C, 3.0°C to 10.0°C, and 9.0°C to 14.0°C, respectively. No record June 18-20.

YEAR

22.0

1.0

SAN JOAQUIN RIVER BASIN

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		TE	IPERATURE	('C) OF	WATER, WAI	ER YEAR C	CTOBER 19	67 TO SEP	I PHO PK IS			
	oc.	TOBER	NOV	MBER	DEC	MBER	JAN	WARY	FEBI	UARY	MA	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	12.0	12.0	11.0			4.0	4.0	2.0	1.0		
ž	13.0	12.0	12.0	12.0			4.0	3.0	3.0	2.0		
3	13.0	12.0	12.0	11.0			4.0	2.0	4.0	2.0		
4	13.0	12.0	13.0	11.0			3.0	2.0	4.0	2.0		
5	13.0	12.0	13.0	12.0			4.0	2.0	3.0	3.0		
6	13.0	12.0	12.0	11.0			3.0	2.0	4.0	3.0		
7	13.0	12.0	13.0	12.0			3.0	2.0	5.0	3.0		
8	13.0	12.0	13.0	12.0			3.0	2.0	4.0	3.0		
. 9	14.0	12.0	13.0	11.0			3.0	2.0	5.0	4-0		
10	13.0	12.0	13.0	11.0			4.0	3.0	6.0	4.0		
11	13.0	12.0	12.0	11.0			3.0	3.0	6.0	3.0		
12	14.0	12.0	12.0	11.0			3.0	2.0	4.0 5.0	3.0		
13 14	14.0	12.0 12.0	12.0 12.0	11.0 11.0			3.0 3.0	2.0 3.0	6.0	4.0 4.0		
15	13.0	12.0	12.0	12.0			4.0	3.0	6.0	4.0		
										4.0		
16 17	13.0 13.0	12.0 12.0	13.0 14.0	12.0 12.0			4.0 4.0	3.0 2.0	6.0 7.0	5.0		
18	13.0	12.0	13.0	12.0			3.0	2.0	7.0	6.0		
19	13.0	11.0	13.0	12.0			3.0	2.0	7.0	6.0		
20	13.0	11.0	13.0	12.0			3.0	2.0	8.0	7.0		
21	13.0	11.0	13.0	12.0			4.0	3.0	8.0	7.0		
22	14.0	12.0	13.0	12.0			4.0	3.0	7.0	7.0		
23	14.0	12.0	12.0	11.0			4.0	3.0	8.0	B.0		
24	13.0	12.0	12.0	10.0			4.0	3.0	8.0	8.0		
25	13.0	12.0	12.0	11.0	3.0	2.0	4.0	3.0	8.0	7.0		
26	13.0	12.0	12.0	11.0	4.0	3.0	4.0	3.0	6.0	7.0		
27	13.0	11.0	11.0	10.0	4.0	3.0	3.0	2.0	8.0	7.0		
28	13.0	11.0	11.0	10.0	4.0	3.0	3.0	2.0	8.0	7.0		
29	12.0	11.0	11.0	10.0	5.0	4.0	2.0	2.0	8.0	7.0		
30 31	12.0	11.0 11.0	10.0	9.0	5.0 5.0	4.0	2.0 2.0	2.0 1.0				
HONTH	14-0	11.0	14.0	9.0			4.0	1.0	8.0	1.0		
	A	PRIL		MAY	J.	JNE	JU	JL Y	AU	GUST	SEPT	EMBER
DAY	A XAM	PRIL Min	MAX	MAY Min	JL XAP	JNE MIN	JU MAX	PLY MIN	AUI MAX	GUST MIN	SEP1	TEMBER MIN
					MAX	MIN	MAX	MIN	MAX	MIN	MAX	
DAY 1 2			MAX		MAX 14.0 14.0		MAX 16.0 16.0		MAX 17.0 17.0	MIN 14.0 14.0	MAX 17.0 16.0	MIN 14.0 14.0
1	MAX 8.0 8.0	MIN 7.0 7.0	MAX	MIN	MAX 14.0 14.0 14.0	MIN 13.0 13.0 13.0	MAX 16.0 16.0 15.0	MIN 13.0 13.0 13.0	MAX 17.0 17.0 18.0	MIN 14.0 14.0 14.0	MAX 17.0 16.0 16.0	MIN 14.0 14.0 15.0
1 2 3 4	MAX 8.0 8.0 8.0	MIN 7.0 7.0 6.0	MAX	MIN	MAX 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0	MAX 16.0 16.0 15.0 18.0	MIN 13.0 13.0 13.0 14.0	MAX 17.0 17.0 18.0 19.0	MIN 14.0 14.0 14.0 15.0	MAX 17.0 16.0 16.0	MIN 14.0 14.0 15.0
1 2	MAX 8.0 8.0	MIN 7.0 7.0	MAX	MIN	MAX 14.0 14.0 14.0	MIN 13.0 13.0 13.0	MAX 16.0 16.0 15.0	MIN 13.0 13.0 13.0	MAX 17.0 17.0 18.0	MIN 14.0 14.0 14.0	MAX 17.0 16.0 16.0	MIN 14.0 14.0 15.0
1 2 3 4	MAX 8.0 8.0 8.0	MIN 7.0 7.0 6.0	MAX	MIN	MAX 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0	MAX 16.0 16.0 15.0 18.0	MIN 13.0 13.0 13.0 14.0 15.0	MAX 17.0 17.0 18.0 19.0	MIN 14.0 14.0 14.0 15.0 14.0	MAX 17.0 16.0 16.0 16.0 16.0	MIN 14.0 14.0 15.0 15.0
1 2 3 4 5	MAX 8.0 8.0 8.0 8.0	7.0 7.0 6.0 7.0	MAX	HIN	MAX 14.0 14.0 14.0 13.0 13.0	MIN 13.0 13.0 13.0 13.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0	MIN 14.0 14.0 15.0 15.0 14.0	MAX 17.0 16.0 16.0 16.0 16.0	MIN 14.0 14.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8	MAX 8.0 8.0 8.0 8.0 8.0	7-0 7-0 7-0 6-0 7-0 7-0	MAX	MIN	MAX 14.0 14.0 14.0 13.0 13.0 14.0	MIN 13.0 13.0 13.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 15.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0	MIN 14.0 14.0 15.0 14.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 16.0 17.0 17.0	MIN 14.0 14.0 15.0 15.0 15.0 16.0
1 2 3 4 5 6 7 8	8.0 8.0 8.0 8.0 8.0 11.0	7.0 7.0 6.0 7.0 7.0 7.0 7.0	MAX	9.0	MAX 14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0 19.0 22.0 19.0 18.0	MIN 13.0 13.0 13.0 14.0 15.0 15.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0 17.0 16.0 16.0	MIN 14.0 14.0 15.0 15.0 14.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 18.0	MIN 14.0 15.0 15.0 15.0 16.0 16.0
1 2 3 4 5 6 7 8	MAX 8.0 8.0 8.0 8.0 8.0	7-0 7-0 7-0 6-0 7-0 7-0	MAX	MIN	MAX 14.0 14.0 14.0 13.0 13.0 14.0	MIN 13.0 13.0 13.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 15.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0	MIN 14.0 14.0 15.0 14.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 16.0 17.0 17.0	MIN 14.0 14.0 15.0 15.0 15.0 16.0
1 2 3 4 5 6 7 8 9	#AX 8.0 8.0 8.0 8.0 11.0 9.0 9.0	MIN 7.0 6.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0	MAX	9.0 9.0 10.0	MAX 14-0 14-0 14-0 13-0 13-0 14-0 14-0 14-0	MIN 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0 19.0 19.0 19.0 18.0 17.0	MIN 13.0 13.0 14.0 15.0 15.0 15.0 15.0 16.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0	MIN 14.0 14.0 15.0 14.0 15.0 14.0 15.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MIN 14-0 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	MIN 7.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0	MAX	9.0 9.0 10.0	MAX 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 15.0 18.0 17.0 19.0 22.0 19.0 18.0 17.0	MIN 13.0 13.0 14.0 15.0 15.0 16.0 16.0 14.0	MAX 17.0 17.0 18.0 19.0 17.0 17.0 16.0 16.0 16.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10	8.0 8.0 8.0 8.0 8.0 11.0 9.0 9.0	MIN	MAX 11.0 12.0 12.0 11.0 11.0	9.0 9.0 10.0	MAX 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0 19.0 22.0 19.0 17.0	MIN 13.0 13.0 13.0 15.0 15.0 15.0 16.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 19.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13	#AX 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 12.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MAX 11.0 12.0 12.0 11.0 11.0 11.0	9.0 10.0 10.0 9.0	MAX 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0 19.0 22.0 19.0 18.0 17.0	MIN 13.0 13.0 14.0 15.0 15.0 16.0 16.0 14.0 14.0	MAX 17.0 17.0 18.0 19.0 17.0 17.0 16.0 16.0 16.0 19.0 19.0 19.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX 17.0 16.0 16.0 16.0 17.0 17.0 18.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 8.0 8.0 8.0 8.0 8.0 9.0 9.0 911.0 11.0 12.0 11.0	MIN	MAX 11.0 12.0 12.0 11.0 11.0	9.0 9.0 10.0 10.0 9.0 9.0	MAX 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 16.0 15.0 18.0 17.0 19.0 22.0 19.0 17.0	MIN 13.0 13.0 13.0 15.0 15.0 15.0 16.0 15.0	MAX 17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 19.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 	MIN 7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0	MAX	HIN	MAX 14-0 14-0 14-0 13-0 13-0 14-0 14-0 14-0 14-0 14-0 14-0	MIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 15.0 15.0 17.0 19.0 22.0 19.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 15.0 15.0 16.0 15.0 14.0 14.0 14.0 14.0	MAX 17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 16.0 17.0	HIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0	MAX 17.0 16.0 16.0 16.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 	MIN 7.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 7.0	MAX 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	HIN 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 11.0	HAX 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	16.0 16.0 15.0 18.0 17.0 19.0 19.0 18.0 17.0 16.0 16.0 16.0 16.0	NIN 13-0 13-0 13-0 14-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 15-0	17.0 17.0 18.0 19.0 17.0 17.0 16.0 16.0 16.0 19.0 19.0 16.0 16.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0	MIN 14.0 15.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	#AX 8.0 8.0 8.0 8.0 11.0 9.0 9.0 11.0 12.0 10.0 9.0 9.0 9.0 8.0	7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0	MAX 11.0 12.0 12.0 11.0 11.0 11.0 11.0 15.0	HIN	14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 15.0 18.0 17.0 19.0 19.0 18.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0	NIN 13-0 13-0 13-0 14-0 15-0 15-0 15-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0 14-0	17.0 17.0 18.0 19.0 17.0 17.0 16.0 16.0 16.0 19.0 19.0 19.0 16.0 17.0	HIN 14-0 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	#AX 8.0 8.0 8.0 8.0 11.0 8.0 11.0 11.0 11.0	MIN 7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 6.0	MAX 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	HIN 9.0 9.0 10.0 10.0 9.0 9.0 11.0 11.0 12.0	HAX 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MAX 16.0 15.0 15.0 18.0 17.0 22.0 19.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0	NIN 13-0 13-0 13-0 14-0 15-0 15-0 15-0 16-0 16-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 19.0 16.0 17.0 16.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 19.0 16.0	HIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0
1 2 3 4 4 5 5 6 7 7 8 9 9 10 0 11 12 2 13 14 4 15 5 16 17 18 19 20	#AX 8.0 8.0 8.0 8.0 11.0 9.0 11.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0	MIN 7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MAX 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	9.0 10.0 10.0 9.0 11.0 12.0 13.0	14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 1	MAX 16.0 15.0 15.0 18.0 17.0 19.0 22.0 19.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	NIN 13-0 13-0 13-0 14-0 15-0 15-0 15-0 16-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	17.0 17.0 18.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 16.0 17.0 16.0 17.0 17.0 17.0 15.0	MIN 14-0 14-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 14-0 14-0 14-0 14-0 14-0	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 19.0 16.0 15.0 15.0 15.0	HIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 4 25 26 27 28 8 29	#AX 8.0 8.0 8.0 8.0 11.0 11.0 11.0 11.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 12.0 9.0 9.0 12.0	MIN 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	MIN 9.0 9.0 10.0 10.0 10.0 11.0 9.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	16.0 15.0 17.0 17.0 19.0 22.0 19.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	NIN 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 18.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 19.0 16.0 17.0 16.0 17.0 15.0 16.0 17.0 15.0 17.0 15.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 19.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	#AX 8.0 8.0 8.0 8.0 8.0 9.0 9.0 11.0 12.0 12.0 10.0 11.0 9.0 9.0 8.0 9.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 7.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX	MIN 9.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 13.0 13.0 13.0 15.0 15.0 14.0 13.0	14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 17.0 18.0 17.0 19.0 22.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	NIN 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 4 25 26 27 28 8 29	#AX 8.0 8.0 8.0 8.0 11.0 11.0 11.0 11.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 12.0 9.0 9.0 12.0	MIN 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX	MIN 9.0 9.0 10.0 10.0 10.0 11.0 9.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	16.0 15.0 17.0 17.0 19.0 22.0 19.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	NIN 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 18.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 19.0 16.0 17.0 16.0 17.0 15.0 16.0 17.0 15.0 17.0 15.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 19.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	#AX 8.0 8.0 8.0 8.0 11.0 11.0 11.0 11.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 12.0 9.0 9.0 12.0	MIN 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX	MIN 9.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 13.0 13.0 13.0 15.0 15.0 14.0 13.0	14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0	HIN 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MAX 16.0 16.0 17.0 18.0 17.0 19.0 22.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	NIN 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 18.0 19.0 17.0 16.0 16.0 16.0 19.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 19.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14-0 15-0 15-0 15-0 16-0 16-0 16-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CALIF.

LOCATION.--Lat 38°13'15", long 121°02'20", in NW\NW\\ sec.7, T.4 N., R.9 E., San Joaquin County, temperature recorder at gaging station on left bank, 0.7 mile downstream from Murphy Creek, 1.0 mile downstream from Camanche Dam, and 3.4 miles northeast of Clements.

DRAINAGE AREA, -- 627 sq mi.

PERIOD OF RECORD. -- Water temperatures: October 1961 to September 1968. Sediment records: October 1965 to September 1968 (periodic).

water temperatures: Maximum, 17.0°C on several days during November and July; minimum, 9.0°C on many days in January and February.

Period of record (1961-63, 1964-68): Water temperatures: Maximum (1961-63, 1964-65, 1966-68), 18.0°C Oct. 14-16, 1961; minimum (1961-63, 1965-68), 7.0°C Jan. 22-26, 1962.

REMARKS .-- Recorder malfunctioned Oct. 1-31.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		TEN	(PERATURE	(°C) OF W	ATER, WAT	ER YEAR	OCTOBER 19	67 TO SEP	TEMBER 19	68		
	OCT	OBER	NOVE	MBER	DEC	EMBER	JAN	IUARY	FEBR	UARY	M/	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	HAX	MIN	MAX	MIN
1			17.0	17.0	14.0	14.0	11.0	10-0	9.0	9.0	10.0	10.0
2			17.0	17.0	14.0	14.0	10.0	10.0	9.0	9.0	10.0	10.0
3			17.0 17.0	17.0 17.0	14.0 14.0	14.0 14.0	10.0 10.0	10.0	9.0 9.0	9.0 9.0	10.0 10.0	10.0 10.0
5			17.0	17.0	15.0	14.0	10.0	9.0	9.0	9.0	10.0	10.0
6			17.0	16.0	15.0	15.0	9.0	9.0	9.0		10.0	
7			17.0	16.0	15.0	15.0	9.0	9.0	9.0	9.0 9.0	10.0	10.0 10.0
8			17.0	17.0	15.0	15.0	9.0	9.0	9.0	9.0	10.0	10.0
9 10			17.0	16.0	15.0	15.0	9.0	9.0	9.0	9.0	10.0	10.0
10			16.0	16.0	15.0	15.0	9.0	9.0	9.0	9.0	10.0	10.0
11			16.0	16.0	15.0	15.0	9.0	9.0	9.0	9.0	10.0	10.0
12 13			16.0 16.0	16.0 16.0	15.0 15.0	15.0 14.0	9.0 9.0	9.0 9.0	9.0 9.0	9.0 9.0	10.0	10.0
14			16.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	10.0	10.0
15			16.0	16.0	14.0	14-0	9.0	9.0	9.0	9.0	10.0	10.0
16			16.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	10.0	10.0
17			16.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	11.0	10.0
18 19			16.0	16.0	14.0	14.0	9.0 9.0	9.0	9.0	9.0 9.0	11.0	11.0
20			16.0 16.0	16.0 16.0	14.0 14.0	14.0	9.0	9.0 9.0	9.0 9.0	9.0	11.0 11.0	11.0
21 22			16.0 16.0	16.0 16.0	14.0 14.0	14.0 14.0	9.0 9.0	9.0 9.0	9.0 9.0	9.0 9.0	11.0	11.0 11.0
23			16.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	11.0	11.0
24			16.0	16.0	14.0	14.0	9.0	9.0	9.0	9.0	11.0	11.0
25			16.0	15.0	14.0	14.0	9.0	9.0	9.0	9.0	11.0	11.0
26			15.0	15.0	14.0	14.0	9.0	9.0	9.0	9.0	11.0	11.0
27 28			15.0 15.0	15.0 15.0	14.0 14.0	14.0 13.0	9.0 9.0	9.0 9.0	10.0 10.0	9.0 10.0	11.0 11.0	11.0 11.0
29			15.0	14.0	13.0	12.0	9.0	9.0	10.0	10.0	11.0	11.0
30			14.0	14.0	12.0	12.0	9.0	9.0			11.0	11.0
31					12.0	11.0	9.0	9.0			11.0	11.0
HTMOP			17.0	14.0	15.0	11.0	11.0	9.0	10.0	9.0	11.0	10.0
	ΔP	RIL		YAY	.10	UNF	JL	JLY	AUG	SUST	SEP	TEMBER
OAY	MAX	MIN										
1 2	11.0 11.0	11.0 11.0	11.0 12.0	11.0 11.0	14.0 14.0	14.0 14.0	16.0 16.0	16.0 16.0	16.0 16.0	16.0 15.0	14.0	14.0 14.0
3	11.0	11.0	12.0	12.0	14.0	14.0	16.0	16.0	15.0	14.0	14.0	14.0
4	11.0	11.0	12.0	12.0	14.0	14.0	16.0	16.0	15.0	14.0	14.0	14.0
5	11.0	11.0	12.0	12.0	14.0	14.0	16.0	16.0	14.0	14.0	14.0	14.0
6	11.0	11.0	12.0	12.0	15.0	14.0	16.0	16.0	14-0	14.0	14.0	14.0
7 8	11.0	11.0	12.0	11.0	15.0 15.0	15.0 15.0	16.0 16.0	16.0	15.0 14.0	14.0 14.0	14.0 14.0	14.0 14.0
9	11.0 11.0	11.0	12.0 12.0	11.0 12.0	15.0	15.0	16.0	16.0 16.0	15.0	14.0	15.0	14.0
10	11.0	10.0	12.0	12.0	15.0	15.0	16.0	16.0	14.0	14.0	15-0	14.0
11	11.0	10.0	12.0	12.0	15.0	15.0	16.0	16.0	14.0	14.0	14-0	14.0
12	11.0	11.0	12.0	12.0	15.0	15.0	17.0	16.0	14.0	14.0	14-0	14.0
13	11.0	11.0	12.0	12.0	15.0	15.0	16.0	16.0	14.0	14.0	14.0	14.0
14 15	11.0 11.0	11.0 11.0	12.0 12.0	12.0 12.0	15.0 15.0	15.0 15.0	17.0 17.0	16.0 16.0	14.0	14.0 14.0	14.0 14.0	14.0 14.0
16 17	11.0 12.0	11.0 11.0	12.0 12.0	12.0 12.0	15.0 15.0	15.0 15.0	17.0 16.0	16.0 16.0	14.0 14.0	14.0	14.0 14.0	14.0 14.0
18	12.0	12.0	13.0	12.0	15.0	15.0	16.0	16.0	14.0	14.0	14-0	14.0
19	12.0	12.0	13.0	13.0	16.0	15.0	17.0	16.0	14.0	14.0	14.0	14.0
20	12.0	11.0	13.0	13.0	16.0	16.0	17.0	17.0	14.0	14.0	14.0	14.0
21	11.0	11.0	13.0	13.0	16.0	16.0	17.0	17.0	14.0	14.0	15.0	14-0
22 23	11.0	11.0 11.0	13.0	13.0	16.0	16.0	17.0 16.0	16.0 16.0	14.0 14.0	14.0 14.0	15.0 15.0	14-0 14-0
24	12.0	11.0	13.0 13.0	13.0 13.0	16.0 16.0	16.0 16.0	17.0	16.0	14.0	14.0	15.0	14.0
25	12.0	12.0	13.0	13.0	16.0	16.0	17.0	17-0	14.0	14.0	14.0	14.0
26	12.0	12.0	13.0	13.0	16.0	16.0	17.0	16.0	14.0	14.0	14.0	14.0
27	12.0	11.0	13.0	13.0	16.0	16.0	16.0	16.0	14.0	14.0	14.0	14.0
28	11.0	11.0	14.0	13.0	16.0	16.0	16.0	16.0	14.0	14.0	15.0	14.0
29 30	11.0 11.0	11.0	14.0 14.0	14.0 14.0	16.0 16.0	16.0 16.0	16.0 16.0	16.0 16.0	14.0 14.0	14.0 14.0	15.0 15.0	14.0 14.0
31			14.0	14.0			16.0	16.0	14.0	14.0		
MONTH	12.0	10.0	14.0	11.0	16.0	14.0	17.0	16.0	16.0	14.0	15.0	14.0
			. 4. 0	****		. ***					.,	
YEAR	17.0	9.0										

11323500 MOKELUMNE RIVER BELOW CAMANCBE DAM, CALIF, -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

			WATER			
			TEM-			SUSPENDED-
			PFRA~		CONCEN-	SEDIMENT
			TURE	DISCHARGE	TRATION	DISCHARGE
	DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)
NOV	1, 1967	1450	16	1540	3	12
DEC	1	0900	13	119	4	1.3
JAN	3, 1968	1230		195	2	1.1
FFB	1	1015	R	201	4	2.2
ΔPR	1	1230	10	369	2	2.0
MAY	1	1230		464	3	3.8
JUN	3	1050	15	454	2	2.5
JUL	7	1320	17	500	2	2.7
AHG	1	1230	13	520	11	15
SFP	4	1110		365	5	4.9

11325500 MOKELUMNE RIVER AT WOODBRIDGR, CALIF.

LOCATION (revised).--Lat 38°09'31", long 121°18'09", in NW4NE4 sec.34, T.4 N., R.6 E., San Joaquin County, at gaging station on right bank at Woodbridge, 0.35 mile downstream from county highway bridge, and 0.4 mile downstream from dam and canal intake at Woodbridge Trigation District.

DRAINAGE AREA. -- 661 sq mi.

PERIOD OF RECORD. -- Chemical analyses: March 1951 to September 1963, April to September 1968. Water temperatures: March 1951 to September 1958, November 1960 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 23.0°C June 24, 25, July 7, 8; minimum, 6.0°C on several days in December.

Period of record:

Mater temperatures: Maximum (1951-54, 1956-58, 1960-68), 28.5°C July 9, 1951; minimum (1951-55, 1956-58, 1961-68), 1.5°C Jan. 29, 30, 1954.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Prior to July 25, gaging station was located on left bank 125 ft downstream. Temperature recorder malfunction Apr. 17 to May 10.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHAPGE ECFSI	CAL- CIUM (CA)	MAG- NE- S [UM (MG)	SODIUM (NA)	BICAR- BONATE (HCC3)	CAR- BONATE (CO3)	CHL N- RIDF (CL)	HARD- MESS (CA.MG)
APR. 04	108	4.8	1.2	1.9	21	0	2.2	17
MAY	100	7.0	1.2	1.7	7 1	v	2.02	.,
15	37	4.6	1.6	2.2	21	0	1.9	18
07 JULY	36	4.6	1.3	1.9	22	0	1.0	17
11 AUG.	37	5.7		2.4	22	0	1.8	18
06	42	6.0		2.5	23	n	2.0	19
DATE	NON- CAR- BONATE HARD- NESS	PERCENT SDD LUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC CDND- UCTANCE (MICPO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
APR.								
04 MAY	0	50	•5	17	48	7.3	13	11.4
15	1	21	• 5	17	51	7.1	14	
07	0	20	• 2	18	51	7.6	19	9.6
JULY 11	0	27	.3	18	57	7.3	22	9.1
AUG. 06	0	27	.3	19	62	7.6	19	9.1

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOVI	EMBER	DEC	EMBER	1AL	WARY	FEBI	RUARY	4.	ARCH
DAY	XAM	MIN	MAX	MIN	MAX	HIN	HAX	MIN	HAX	HIN	MAX	MIN
1	16.0	16.0	16.0	16.0	10.0	9.0	8.0	8.0	7.0	7.0	11.0	11.0
2	16.0	16.0	16.0	16.0	9.0	9.0	8.0	8.0	8.0	7.0	11.0	11.0
3	16.0 16.0	16.0 16.0	16.0 16.0	16.0 16.0	9.0 10.0	9.0 9.0	8.0 7.0	7.0 7.0	8.0 8.0	7.0 8.0	11.0 11.0	11.0 11.0
5	16.0	16.0	16.0	16.0	11.0	10.0	7.0	7.0	8.0	8.0	11.0	11.0
6	16.0	16.0	16.0	16.0	11.0	11.0	7.0	7.0	9.0	8.0	11.0	11.0
7	16.0	16.0	16.0	16.0	11.0	10.0	7.0	7.0	10.0	9.0	11.0	11.0
8	16.0 16.0	16.0 16.0	16.0 16.0	16.0 16.0	10.0 9.0	9.0 9.0	7.0 7.0	7.0 7.0	10.0	10.0 9.0	11.0	11.0 11.0
1ó	16.0	16.0	16.0	16.0	9.0	9.0	7.0	7.0	9.0	9.0	11.0	11.0
11	16.0	16.0	16.0	16.0	9.0	9.0	7.0	7.0	9.0	9.0	11-0	11.0
12 13	16.0 16.0	16.0 16.0	16.0 16.0	16.0 16.0	9.0 8.0	8.0 7.0	7.0 8.0	7.0 7.0	9.0 9.0	9.0 9.0	11.0	10.0
14	16.0	16.0	16.0	16.0	7.0	6.0	8.0	8.0	9.0	9.0	10.0	10.0
15	16.0	16.0	16.0	16.0	6.0	6.0	9.0	8.0	9.0	9.0	11.0	10.0
16	16.0	16.0	16.0	16.0	6.0	6.0	9.0	8.0	9.0	9.0	11.0	11.0
17 18	16.0 16.0	16.0	16.0 16.0	16.0 16.0	6.0 6.0	6.0 6.0	9.0 8.0	8.0 8.0	10.0 11.0	9.0 10.0	11.0	11.0 11.0
19	16.0	16.0	16.0	16.0	6.0	6.0	8.0	8.0	11.0	11.0	12.0	11.0
50	16.0	16.0	16.0	15.0	6.0	6.0	8.0	8.0	12.0	11.0	12.0	12.0
21 22	16.0 16.0	16.0	16.0 14.0	14.0 13.0	6.0 6.0	6.0 6.0	8.0 8.0	8.0 8.0	12.0 12.0	12.0 11.0	12.0 13.0	12.0 12.0
23	16.0	16.0	13.0	13.0	7.0	6.0	8.0	8.0	11.0	11.0	13.0	13.0
24	16.0	16.0	13.0	12.0	7.0	7.0	8.0	8.0	11.0	11.0	14.0	13.0
25	16.0	16.0	12.0	12.0	7.0	7.0	8.0	8.0	11.0	11.0	14.0	14.0
26 27	16.0	16.0	12.0	12.0	8.0 8.0	7.0	8.0	8.0	11.0	11.0	14.0 14.0	14.0
28	16.0 16.0	16.0 16.0	12.0 11.0	11.0	8.0	8.0 8.0	8.0 8.0	8.0 7.0	11.0	11.0	13.0	13.0 13.0
29	16.0	16.0	11.0	11.0	8.0	8.0	7.0	7.0	11.0	11.0	14.0	13.0
30 31	16.0	16.0	11.0	10.0	8.0 8.0	8.0	7.0 7.0	7.0 7.0			16.0 17.0	14.0 16.0
· -	16.0	16.0				8.0						
HTMOP	16.0	16.0	16.0	10.0	11.0	6.0	9.0	7.0	12.0	7.0	17.0	10.0
		PRIL		4AY	-	JNE		ILY		GUST		TEMBER
DAY	MAX	MIN	MAX	HIN	MAX	HIN	MAX	MIN	MAX	MIN	MAX	HIN
1	17.0	16.0			20.0	20.0	21.0	21.0	21.0	21.0	20.0	19.0
2	16.0 14.0	14.0			21.0 21.0	20.0 21.0	21.0 21.0	21.0 21.0	21.0 20.0	20.0 19.0	19.0 19.0	19.0 19.0
4					21.0	20.0	21.0	21.0	19.0	19.0	19.0	19.0
5	14.0	14.0			20.0	19.0	22.0	21.0	19.0	19.0	19.0	19.0
6	14.0	14.0			19.0	19.0	22.0	21.0	19.0	18.0	19.0	19.0
7 8	14.0 14.0	14.0 14.0			19.0 19.0	19.0 19.0	23.0 23.0	22.0 22.0	18.0 19.0	18.0 18.0	19.0 19.0	19.0 19.0
9	16.0	14.0			19.0	19.0	21.0	21.0	19.0	18.0	19.0	19.0
10	17.0	16.0			20.0	19.0	21.0	21.0	19.0	18.0	19.0	18.0
11	17.0	17.0	17.0	17.0	20.0	19.0	22.0	21.0	19.0	18.0	18.0	18.0
12 13	17.0 17.0	17.0 16.0	17.0 16.0	16.0 15.0	19.0 19.0	19.0 18.0	22.0 22.0	21.0 21.0	19.0 19.0	18.0 18.0	18.0 18.0	18.0 18.0
14	16.0	16.0	15.0	14.0	19.0	18.0	22.0	21.0	18.0	18.0	19.0	18.0
15	16.0	16.0	14.0	14.0	20.0	19.0	22.0	21.0	18.0	17.0	18.0	18.0
16 17	16.0	15.0	16.0 17.0	14.0	21.0	19.0	22.0	21.0	18.0 18.0	18.0	18.0	18.0
18			18.0	16.0 17.0	21.0 21.0	21.0 21.0	21.0 22.0	21.0 21.0	18.0	18.0 18.0	18.0 18.0	18.0 18.0
19			18.0	18.0	21.0	21.0	22.0	21.0	18.0	18.0	18.0	18.0
20			18.0	18.0	21.0	21.0	22.0	22.0	18.0	17.0	18.0	18.0
21 21			18.0 18.0	18.0 18.0	21.0 22.0	21.0	22.0 22.0	22.0	18.0 18.0	17.0 17.0	18.0 17.0	17.0 16.0
23			18.0	18.0	22.0	21.0 21.0	22.0	21.0 21.0	18.0	18.0	17.0	16.0
24			18.0	17.0	23.0	22.0	21.0	20.0	18.0	18.0	16.0	16.0
25			18.0	17.0	23.0	22.0	21.0	21.0	18.0	18.0	17.0	16.0
26 27			18.0 19.0	18.0 18.0	22.0 22.0	22.0 22.0	21.0 21.0	19.0 21.0	19.0 19.0	18.0 18.0	17.0 18.0	16.0 17.0
28			20.0	19.0	22.0	22.0	21.0	21.0	19.0	18.0	18.0	17.0
29			21.0	20.0	22.0	21.0	21.0	21.0	19.0	19.0	17-0	17.0
30 31			20.0 21.0	20.0 20.0	21.0	21.0	21.0 21.0	21.0 21.0	20.0 20.0	19.0 19.0	17.0	17.0
MCNTH					23.0	18.0	23.0	19.0	21.0	17.0	20.0	16.0
	23.0	4.0										
YEAR	23.0	6.0										

11335000 COSUMNES RIVER AT MICHIGAN BAR, CALIF.

LOCATION. -- Lat 38°30'00", long 121°02'45", in SE1 sec.36, T.8 N., R.8 E., Sacramento County, at gaging station on downstream side of midstream pier of highway bridge at Michigan Bar, 5.5 miles southwest of Latrobe, and 12 miles downstream from confluence of North and Middle Fork Cosumens River.

DRAINAGE AREA. -- 536 sq m1.

PERIOD OF RECORD. --Chemical analyses: October 1953 to September 1963, January to September 1968. Water temperatures: October 1962 to September 1968. Sediment records: October 1962 to September 1968.

EXTREMES. -- 1967-68:

Water temperatures: Maximum, 28.0°C June 23, 25, July 6; minimum, 2.0°C on several days during December and

January.

Januar

Water temperatures: Maximum (1965-68), 30.0°C Aug. 26, 27, 1967; minimum (1963-68), 2.0°C on several days dur-ing December in 1965 and 1967, and January 1968. Sediment concentrations: Maximum daily, 3,070 mg/l Feb. 1, 1963; minimum daily, 1 mg/l on many days during _ 1962-68.

1902-68. Sediment discharge: Maximum daily, 245,000 tons Feb. 1, 1963; minimum daily, 0.01 ton (revised) on several days during 1962-67.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, JANUARY TO SEPTEMBER 1968

	MEAN CIS- CHARGE	CAL- CIUM	MAG- NE- Sium	SODIUM	BICAR- BONATE	CAR- BONATE	CHLC- RIDE	HARD- NESS
DATE	(CFS)	(CA)	(MG)	(NA)	(HCO3)	(C03)	(CL)	(CA, MG)
								•
JAN.					54	_		
09 Mar.	86	12		3.8	24	0	3.3	48
11	508	9.0		3.4	50	0	2.5	40
APR.								
04	669	6.6	2.6	2.2	34	0	1.5	27
μΔΥ 14	294	6.2	2.6	2.8	36	0	•9	26
JUNE	2,4	0.2	2.0	•••		•	•,	
07	95	6.5	2.7	3.0	38	0	1.1	27
JULY 11	50	7.2		3.9	38	0	1.8	27
AUG.	50	1.2		3.7	30	Ū	1.0	21
06	44	6.4		3.3	32	0	1.4	22
SEPT.					41	_		
05	12	7.3		4.4	41	0	1.7	32
					SPECI-			
	NON-		SODIUM AD-	AI KA-	COND-		TEM-	
	CAR- BCNATE		SODIUM AD- SORP-	ALKA- LINITY	FIC COND- UCTANCE		TEM- Pera-	DIS-
	CAR- BCNATE HARD-	PERCENT	AD- SORP- TION	LINITY AS	COND- UCTANCE (MICRO-	PH	PERA- TURE	DIS- SOLVED
DATE	CAR- BCNATE	PERCENT SODIUM	AD- SDRP-	LINITY	COND- UCTANCE	РН	PERA-	
DATE Jan.	CAR- BCNATE HARD-		AD- SORP- TION	LINITY AS	COND- UCTANCE (MICRO-	₽Н	PERA- TURE	SOLVED
JAN. 09	CAR- BCNATE HARD-		AD- SORP- TION	LINITY AS	COND- UCTANCE (MICRO-	PH 7.9	PERA- TURE	SOLVED
JAN. 09 MAR.	CAR- BCNATE HARD- NESS	SODIUM 22	AD- SORP- TION RATIO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.9	PERA- TURE (DEG C)	SOLVED OXYGEN
JAN. 09 MAR. 11	CAR- BCNATE HARD- NESS	SODIUM	AD- SORP- Tion Ratio	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED
JAN. 09 MAR.	CAR- BCNATE HARD- NESS	SODIUM 22	AD- SORP- TION RATIO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.9	PERA- TURE (DEG C)	SOLVED OXYGEN
JAN. 09 MAR. 11 APR. 04	CAR- BCNATE HARD- NESS 4 O	22 25 15	AD- SORP- TION RATIO •3 •3	LINITY AS CACO3 44 41 28	COND- UCT ANCE (MICRO- MHOS) 117	7.9 7.6 7.7	PERATURE (DEG C)	SOLVED DXYGEN 10.9 10.8 11.9
JAN. 09 MAR. 11 APR. 04 MAY	CAR- BCNATE HARD- NESS	SODIUM 22 25	AD- SORP- TION RATIO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.9 7.6	PERA- TURE (DEG C)	SOLVED OXYGEN 10.9
JAN. 09 MAR. 11 APR. 04	CAR- BCNATE HARD- NESS 4 O	22 25 15	AD- SORP- TION RATIO •3 •3	LINITY AS CACO3 44 41 28	COND- UCT ANCE (MICRO- MHOS) 117	7.9 7.6 7.7 7.6	PERATURE (DEG C) 8 12 14	10.9 10.8 11.9
JAN. 09 MAR. 11 APR. 04 MAY 14 JUNE 07 JLLY	CAR- BCNATE HARD- NESS 4 0 0	22 25 15 19	AD- SORP- TION RATIO	LINITY AS CACO3 44 41 28 30	COND- UCTANCE (MICRO- MHOS) 117 99 66 71	7.9 7.6 7.7 7.6 8.0	PERATURE (DEG C) 8 12 14 23	SOLVED DXYGEN 10.9 10.8 11.9
JAN. 09 MAR. 11 APR. 04 HAY 14 JUNE 07 JLLY 11	CAR- BCNATE HARD- NESS	22 25 15	AD- SORP- TION RATIO .3 .3 .2	LINITY AS CACO3 44 41 28 30	COND- UCT ANCE (MICRO- MHOS) 117 99 66 71	7.9 7.6 7.7 7.6	PERATURE (DEG C) 8 12 14	10.9 10.8 11.9
JAN. 09 MAR. 11 APR. 04 MAY 14 JUNE 07 JLLY 11 AUG.	CAR- BCMATE HARD- NESS 4 0 0 0 0	22 25 15 19 19	.3 .3 .2 .2	LINITY AS CACO3 44 41 28 30 31	COND- UCTANCE (MICRO- MHOS) 117 - 99 - 66 - 71 - 76 - 79	7.9 7.6 7.7 7.6 8.0	PERATURE (DEG C) 8 12 14 23	10.9 10.8 11.5 10.4
JAN. 09 MAR. 11 APR. 04 HAY 14 JUNE 07 JLLY 11	CAR- BCNATE HARD- NESS 4 0 0	22 25 15 19	AD- SORP- TION RATIO	LINITY AS CACO3 44 41 28 30	COND- UCTANCE (MICRO- MHOS) 117 99 66 71	7.9 7.6 7.7 7.6 8.0	PERA- TURE (DEG C) 	10.9 10.8 11.9

11335000 COSUMNES RIVER AT MICHIGAN BAR, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		TE	MPERATURE	(C) OF	ATER, WAT	CER TEAR	OCTOBER 15	967 TU SEI	PIEMBER 15	700		
	oc.	TOBER	NOV	EMBER	OECI	EMBER	JAN	NUARY	FEBR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	4 AX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.0	20.0	16.0	13.0	7.0	7.0	4.0	3.0	6.0	4.0	12.0	11.0
2	20.0	18.0	15.0	13.0	7.0	6.0	4.0	3.0	7.0	5.0	12.0	11.0
3	21.0	18.0	15.0	13.0	7.0	6.0	4.0	3.0	8.0	7.0	12.0	10.0
4	19.0 19.0	18.0 18.0	16.0 16.0	14.0 14.0	8.0 9.0	7.0 8.0	3.0 3.0	3.0	8 • O	8.0 8.0	12.0	10.0 11.0
-	17.0	10.00		17.0	7.0	040	3.0	2.0	0.0	0.0	12.0	11.0
6	18.0	17.0	16.0	14.0	9.0	7.0	3.0	2.0	8.0	8.0	11.0	10.0
7	18.0	17.0	15.0	13.0	8.0	8.0	3.0	3.0	10.0	8.0	11-0	9.0
8	18.0 19.0	17.0 18.0	16.0 16.0	13.0 14.0	8.0 7.0	7.0 6.0	3.0 3.0	3.0	10.0 9.0	8.0 8.0	11.0	9.0 9.0
10	19.0	18.0	15.0	13.0	6.0	6.0	5.0	3.0 3.0	9.0	8.0	10.0	8.0
						0.0	300	340		540		3.0
11	20.0	18.0	14.0	12.0	6.0	6.0	5.0	3.0	9.0	8.0	9.0	8.0
12 13	21.0 20.0	18.0 18.0	13.0 13.0	12.0 13.0	6.0 4.0	4.0 3.0	4.0 4.0	3.0 4.0	9•0 9•0	8.0 8.0	10.0 10.0	8.0 9.0
14	20.0	17.0	14.0	13.0	3.0	2.0	6.0	4.0	9.0	8.0	11.0	9.0
15	18.0	16.0	14.0	13.0	3.0	2.0	8.0	6.0	9.0	8.0	10.0	8.0
16 17	18.0	16.0 16.0	14.0 14.0	13.0 13.0	2.0 2.0	2.0 2.0	8.0 7.0	7.0 5.0	9.0 11.0	9.0 9.0	10.0 11.0	9.0 9.0
18	18.0	16.0	14.0	14.0	3.0	2.0	6.0	4.0	11.0	9.0	11.0	9.0
19	17.0	15.0	14.0	13.0	4.0	3.0	6.0	4.0	12.0	10.0	11.0	8.0
20	17.0	14.0	13.0	12.0	4.0	3.0	6.0	4.0	12.0	11.0	11.0	9.0
21	17.0	14.0	13.0	12.0	4.0	3.0	6.0	5.0	11.0	11.0	12.0	11.0
22	18.0	15.0	12.0	11.0	3.0	3.0	6.0	6.0	12.0	11.0	13.0	11.0
23	18.0	15.0	11.0	10.0	4.0	3.0	7.0	6.0	13.0	12.0	12.0	11.0
24	17.0	15.0	11.0	9.0	4.0	3.0	7.0	6.0	13.0	11.0	13.0	11-0
25	17.0	15.0	10.0	8.0	4.0	3.0	7.0	6.0	13.0	11.0	13.0	12.0
26	17.0	14.0	9.0	8.0	4.0	3.0	6.0	6.0	13.0	11.0	13.0	11.0
27	16.0	14.0	8.0	7.0	5.0	3.0	6.0	5.0	13.0	11.0	13.0	11.0
28	17.0	15.0	8.0	7.0	5 • O,	4.0	5.0	4.0	13.0	12.0	14.0	12.0
29 30	17.0 16.0	14.0 13.0	8.0 8.0	8.0 7.0	4.0 4.0	3.0 3.0	4.0 6.0	4.0 4.0	13.0	11.0	16.0	11.0 14.0
31	16.0	13.0			4.0	3.0	6.0	4.0			16.0	14.0
HONTH	23.0	13.0	16.0	7.0	9.0	2.0	8.0	2.0	13.0	4.0	16.0	8.0
				MAY				JLY	411	GUST	SED	TEMBER
	A	PRIL		MAT		UNE	JU					
		PRIL				UNE						
DÁY	MAX	MIN	МАХ	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY 1	MAX	MIN	MAX	MIN	MAX 24.0	MIN 21.0	MAX	MIN				
1 2	MAX 16.0 13.0	MIN 12.0 12.0	MAX 19.0 19.0	MIN 18.0 17.0	MAX 24.0 25.0	MIN 21.0 22.0	MAX 26.0 26.0	MIN 21.0 21.0	MAX 27-0 27-0	MIN 23.0 23.0	MAX 27.0 27.0	MIN 23.0 22.0
1 2 3	MAX 16.0 13.0 13.0	MIN 12.0 12.0 11.0	MAX 19.0 19.0 20.0	MIN 18.0 17.0 18.0	MAX 24.0 25.0 25.0	MIN 21.0 22.0 23.0	MAX 26.0 26.0 26.0	MIN 21.0 21.0 21.0	MAX 27.0 27.0 27.0	MIN 23.0 23.0 23.0	MAX 27.0 27.0 27.0	MIN 23.0 22.0 22.0
1 2 3 4	MAX 16.0 13.0 13.0	MIN 12.0 12.0 11.0 12.0	MAX 19.0 19.0 20.0 19.0	MIN 18.0 17.0 18.0 18.0	MAX 24.0 25.0 25.0 24.0	MIN 21.0 22.0 23.0 22.0	MAX 26.0 26.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0	MAX 27-0 27-0 27-0 27-0	MIN 23.0 23.0 23.0 23.0	MAX 27.0 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0
1 2 3	MAX 16.0 13.0 13.0	MIN 12.0 12.0 11.0	MAX 19.0 19.0 20.0	MIN 18.0 17.0 18.0	MAX 24.0 25.0 25.0	MIN 21.0 22.0 23.0	MAX 26.0 26.0 26.0	MIN 21.0 21.0 21.0	MAX 27.0 27.0 27.0	MIN 23.0 23.0 23.0	MAX 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0 22.0
1 2 3 4 5	MAX 16.0 13.0 13.0 13.0 14.0	MIN 12.0 12.0 11.0 12.0 13.0	MAX 19.0 19.0 20.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0	MIN 21.0 22.0 23.0 22.0 20.0	MAX 26.0 26.0 26.0 26.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0	MAX 27.0 27.0 27.0 27.0 26.0	MIN 23.0 23.0 23.0 23.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0 22.0
1 2 3 4 5	MAX 16.0 13.0 13.0 13.0 14.0	MIN 12.0 12.0 11.0 12.0 13.0	MAX 19.0 19.0 20.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0	MIN 21.0 22.0 23.0 22.0 20.0	MAX 26.0 26.0 26.0 27.0 28.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 24.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0
1 2 3 4 5 6 7 8	MAX 16.0 13.0 13.0 14.0 14.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0	MAX 19.0 19.0 20.0 19.0 19.0 18.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 22.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0
1 2 3 4 5	MAX 16.0 13.0 13.0 13.0 14.0	MIN 12.0 12.0 11.0 12.0 13.0	MAX 19.0 19.0 20.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0	MIN 21.0 22.0 23.0 22.0 20.0	MAX 26.0 26.0 26.0 27.0 28.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 24.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0
1 2 3 4 5 6 7 8 9	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 22.0 23.0 23.0 23.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 24.0 23.0 23.0 23.0 23.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 24.0 25.0	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9	MAX 16.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 20.0 19.0	MAX 26.0 26.0 26.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 25.0 26.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0	MAX 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 21.0 21.0 21.0 22.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	MAX 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 24.0 25.0 26.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9	MAX 16.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0	MAX 26.0 26.0 26.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0	MAX 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 25.0 26.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	MAX 16.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0	MAX 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 24.0 25.0 26.0 24.0	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 16.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 16.0 16.0 16.0	MIN 12.0 12.0 11.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0	MAX 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 24.0	MIN 21.0 22.0 23.0 20.0 19.0 19.0 20.0 19.0 20.0 19.0 21.0	MAX 26.0 26.0 26.0 27.0 28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MAX 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 23-0 23-0 23-0 23-0 22-0 22-0 22-0 21-0 21-0 21-0 21-0 21	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 23.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	HIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 14.0	MAX 19-0 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	MIN 18-0 17-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 18-0 18-0 15-0 15-0 16-0	HAX 24.0 25.0 25.0 24.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 24.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 20.0 19.0 20.0 19.0 21.0	MAX 26.0 26.0 26.0 26.0 27.0 28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	MAX 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 24.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 12.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0	19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 15.0 14.0	24.0 25.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 26.0 26.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 21	MAX 27-0 27-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 25-0 26-0 25-0 26-0 25-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0 12.0 12.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0 17.0 20.0 21.0	NIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 19.0 15.0 14.0 15.0 16.0 19.0 19.0	MAX 24.0 25.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 26.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 12.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0	19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 15.0 14.0	24.0 25.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 26.0 26.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 21	MAX 27-0 27-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 25-0 26-0 25-0 26-0 25-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0 14.0 12.0 12.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 20.0 21.0 22.0	NIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 19.0 15.0 14.0 15.0 16.0 19.0 19.0	MAX 24.0 25.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 26.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 26.0 26.0 25.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 15.0 15.0 19.0 20.0 20.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 27.0 27.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 20.0 21.0 21.0 22.0 22.0 22	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0	21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 22.0 22.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 21.0 22.0 22.0 22.0 22.0 22.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 20.0 19.0	HAX 24.0 25.0 25.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 27.0 27.0 27.0 27.0 27.0 28.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 24.0 25.0 22.0 22.0 22.0 22.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27-0 27-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 25-0 26-0 25-0 26-0 25-0 26-0 25-0 26-0 21-0 21-0 21-0 21-0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 2 0 21 22 23 24	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0	MIN 12.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 27.0 27.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 20.0 21.0 22.0 22.0 23.0 22.0 22.0 24.0 24.0	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0	21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 24.0 24.0 24.0 22.0 22.0 22.0 22.0 22	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 15.0 15.0 19.0 20.0 20.0 19.0 19.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 27.0 27.0 27.0 27.0 28.0 28.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 20.0 21.0 22.0 22.0 22.0 22	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 24.0 24.0 22.0 22.0 22.0 22.0 24.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 25.0 26.0 22.0 24.0 24.0 24.0 22.0 21.0 21.0 21.0	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HAX 24.0 25.0 25.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 22.0 24.0 24.0	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 22.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HAX 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 24.0 24.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 12 12 13 14 5 16 7 17 18 19 20 21 22 32 24 25 26 27	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 15.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 12.0 12.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 22.0 24.0 27.0 27.0 27.0 28.0 27.0 27.0 28.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 22.0 22	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 22.0 23.0 23.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 24.0 24	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 22.0 24.0 22.0 21.0 21.0 21.0 21.0	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	MAX 16.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 24.0 25.0 25.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 22.0 24.0 24.0	26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 22.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HAX 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 24.0 24.0	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 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	MAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 15.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 20.0 19.0 20.0 19.0 21.0 22.0 22.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 23.0 22.0 24.0 27.0 27.0 27.0 28.0 27.0 27.0 28.0 27.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 7 17 8 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 12.0 12.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 12.0 12.0 12.0 12.0 13.0 14.0 15.0 17.0 17.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 20.0 19.0 19.0 21.0 19.0 22.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 22.0 24.0 26.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 24.0 24.0 24.0 23.0 23.0 22.0	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 22.0 23.0 23.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 24.0 24	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 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	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 19.0 19.0	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 14.0 14.0 12.0 12.0 12.0 13.0 12.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 22.0 23.0 22.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 24.0 24.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0 22.0 21.0 20.0 20	#AX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21
1 2 3 4 5 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	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 12.0 12.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 12.0 12.0 12.0 12.0 13.0 14.0 15.0 17.0 17.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 20.0 19.0 20.0 19.0 21.0 22.0 22.0	MAX 24.0 25.0 25.0 24.0 22.0 21.0 23.0 23.0 23.0 22.0 24.0 26.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 24.0 24.0 24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 24.0 24.0 24.0 22.0	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.	MAX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 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	HAX 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 19.0 19.0	MIN 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 14.0 14.0 12.0 12.0 12.0 13.0 12.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 25.0 24.0 22.0 22.0 23.0 23.0 23.0 22.0 23.0 22.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 21.0 22.0 23.0 22.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 24.0 24.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0	26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 21.0 21.0 21.0 21.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0 22.0 21.0 20.0 20	#AX 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21

11335000 COSUMNES RIVER AT MICHIGAN BAR, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	_	OCTOBER		-	NOVEMBER	CTUBER 1967	TO SEPTEMBE	DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	29	2	•16	36	2	-19	136	4	1.5
2 3	32 76	3 10	•26 3•5	35 35	2	.19 .66	97 82	6	1.6 1.3
4	155	14	6.2	36	3	•29	116	9	2.8
5	90	26	6.3	38	3	.31	385	63	85
6 7	71	40	7.7	36	2	-19	340	75 18	76
8	62 57	26 14	4.4 2.2	36 34	2 2	.19 .18	204 240	18	9.9 3.2
9	53	7	1.0	35	2	•19	171	3	1.4
10	49	4	•53	35	2	.19	136	3	1.1
11	46	3	• 37	34	2 3	.18	120	2	•65
12 13	42 40	3 3	.34 .32	35 36	3 2	.28 .19	105	1	•28 •24
14	40	3	• 32	41	2	•22	66	1	.18
15	40	3	• 32	61	3	.49	53	1	.14
16	39	3	• 32	71	3	.58	66	1	. 18
17 18	38 36	3 3	•31 •29	54 50	4 2	.58 .27	86 98	1	.23 .26
19	36	3	,29	145	20	12	113	2	-61
20	36	3	•29	206	39	22	113	2	.61
21	36	3	.29	110	37	11	100	1	-27
22	38	3	.31	75	15	3.0	93	1	-25
23 24	36 38	2	•19 •21	62 59	11 5	1.8	88 93	1	•24 •25
25	38	2	•21	56	3	.45	93	ī	. 25
26	36	3	.29	53	2	•29	100	1	.27
27	36	3	•29	53	3	•43	113	ī	.31
28 29	36 35	3 2	•19	56 62	3	•45 •67	113	1 2	•31 •61
30	35	2	•19	90	4	.97	113 107	2	.5B
31	36	2	•19				100	1	•27
TOTAL	1467		38.07	1765		59.23	3930		190.79
		JANUARY			FEBRUARY			MARCH	
		MEAN	CENTMENT		MEAN			MEAN	
	MEAN	MEAN CONCEN-	SEDIMENT DISCHARGE	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)		MEAN	DISCHARGE	MEAN Discharge (CFS)	MEAN	DISCHARGE
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 8.3
1 2 3	DISCHARGE (CFS) 95 93 88	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -26 -50 -48	MEAN DISCHARGE (CFS) 620 472 557	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 40 18 33	DISCHARGE (CFS) 613 557 526	MEAN CONCEN- TRATION (MG/L) 5 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7
1 2 3	DISCHARGE (CFS) 95 93 88 79	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -26 -50 -48 -64	MEAN DISCHARGE (CFS) 620 472 557 460	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 40 18 33 11	01SCHARGE (CFS) 613 557 526 502	MEAN CONCEN- TRATION (MG/L) 5	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1
1 2 3 4 5	95 95 93 88 79 75	MEAN CONCEN- TRATION (MG/L) 1 2 2 3 2	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 41	MEAN DISCHARGE (CFS) 620 472 557 460 390	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7	DISCHARGE (TONS/DAY) 40 18 33 11 7.4	DISCHARGE (CFS) 613 557 526 502 472	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8
1 2 3 4 5	DISCHARGE (CFS) 95 93 88 79 75	MEAN CONCEN- TRATION (MG/L) 1 2 2 3 2	DISCHARGE (TONS/DAY) -26 -50 -48 -64 -41 -21	MEAN DISCHARGE (CFS) 620 472 557 460 390	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7	DISCHARGE (TONS/DAY) 40 18 33 11 7.4	DISCHARGE (CFS) 613 557 526 502 472	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 95 93 88 79 75 77 79 84	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -26 -50 -48 -64 -41 -21 -43 -45	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3	DISCHARGE (CFS) 613 557 526 502 472 478 448 442 897	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3 2 2 2	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4	01SCHARGE (CFS) 613 557 526 502 472 448 442 897 797	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3 2 2 20	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) -26 -50 -48 -64 -41 -21 -43 -45 -23 -97	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3	DISCHARGE (CFS) 613 557 526 502 472 448 442 897 797 606	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3 2 2 2 20 19	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7 6 8 5 4 6	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3	DISCHARGE (CFS) 613 557 526 502 472 448 442 897 797 606	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3 2 2 20 19	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 95 98 88 79 75 77 79 84 86 133 350 208 155	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 1 2 2 17 19 12	DISCHARGE (TONS/DAY) -26 -50 -48 -64 -64 -21 -43 -45 -23 -97 -15	MEAN DISCHARGE (CFS) 620 472 557 460 390 340 322 318 390 345 306 286	MEAN CONCEN- TRATION (MG/L) 24 14 22 9 7 6 8 5 4 6	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.5 .77	DISCHARGE (CFS) 613 557 526 502 472 448 442 897 797 606 508	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 20 19 10 4 3 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139	MEAN CONCENTRATION (MG/L) 1 2 2 3 3 2 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1 1 2 2 1	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8	MEAN DISCHARGE (CFS) 620 472 557 460 390 340 322 318 390 345 306 286 274	MEAN CONCENTRATION (MG/L) 24 14 22 9 7 6 8 5 4 6	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.5 .77	DISCHARGE (CFS) 613 557 526 502 472 448 442 897 797 606 508	MEAN CONCEN- TRATION (MG/L) 5 4 4 3 3 2 2 2 20 19 10 4 3 4 22	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9 56
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 95 93 88 79 75 77 77 84 86 133 350 208 155 139 743	MEAN CONCENTRATION (MG/L) 1 2 2 2 3 2 2 1 2 2 1 2 2 1 1 2 2 1 1 0 4 3	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8 - 102	MEAN DISCHARGE (CFS) 620 4772 557 460 390 360 341 322 318 390 345 306 286 274 262	MEAN CONCENT TRATION (MG/L) 24 14 22 29 7 7 6 8 5 5 4 6	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.577 1.5 2.1	DISCHARGE (CFS) 613 557 526 502 472 448 442 897 797 606 508 466 585 950 770	MEAN CONCENTRATION (MG/L) 5 4 4 4 3 3 3 2 2 2 0 19 10 4 4 4 4 2 2 8	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9 56
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 95 97 98 79 77 79 84 86 133 350 208 155 139 743	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 2 2 2 1 1 2 2 1 1 2 1 1 0 4 3 3 6 5	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8 - 102 - 138 - 22	MEAN DISCHARGE (CFS) 620 472 557 460 390 340 342 318 390 306 274 262 258	MEAN CONCENT TRATION (MG/L) 24 14 22 9 7 6 8 5 4 6 5 3 1 2 3	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 4.7 2.5 7.7 1.5	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 585 950 770 887	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 2 20 19 10 4 3 4 22 20	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 60 5.5 3.8 7.9 56 17
1 2 3 4 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 2 2 2 1 1 2 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 3 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 15 11 5.0 3.8 102 138 22 5.8	MEAN DISCHARGE (CFS) 620 472 557 460 390 340 342 318 390 306 274 262 258 556 928	MEAN CONCENT TRATION (MG/L) 24 14 22 9 7 6 8 5 3 1 1 1 3 3	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.5 7.7 1.5 2.1	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 585 950 770 887 1330 932	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 2 2 20 19 10 4 3 4 22 8	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 60 5.5 3.8 7.9 56 17
1 2 3 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 18 19	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243	MEAN CONCENT TRATION (MG/L) 1 2 2 3 3 2 2 1 1 2 2 2 1 1 2 2 1 1 2 1 2 1 1 2	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8 - 102 - 138 - 22 - 5.8 - 2.6	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 286 274 262 258 556 928 804	MEAN CONCENTRATION (MG/L) 24 14 22 9 7 6 8 5 5 1 2 3 1 1 3 36 57	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 3.4 6.3 4.7 2.5 7.7 1.5 2.1 .70 27	DISCHARGE (CFS) 613 557 526 502 472 448 442 449 797 606 508 466 585 950 770 887 1330 932 746	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 110 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 15
1 2 3 4 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212	MEAN CONCENTRATION (MG/L) 1 2 2 3 3 2 1 1 2 2 1 1 2 1 1 1 2 1 1 1 1	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8 - 102 - 138 - 22 - 5.8 - 2.6 - 2.9	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 286 274 262 258 556 928 804 3290	MEAN CONCENT (MG/L) 24 14 22 9 9 7 6 8 5 5 4 6 6 5 7 3 3 1 1 2 2 3 3 3 3 6 5 7 148	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.5 77 15 27 70 199 1230	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 508 770 887 1330 746 648	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 2 19 110 4 4 4 4 4 2 2 8 8 17 7 30 6 5 5 5	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 5.0 41 16 5.5 3.8 7.9 56 17 49 115 15 10 8.7
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 2 2 1 2 2 1 2 1 1 0 4 3 4 3 6 5 18 7 7 4 5 5 3 3 3 3 5 1 8 7 7 7 7 5 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .29 .57 .15 .0 3.8 102 .22 .8 2.6 2.9 1.6	MEAN DISCHARGE (CFS) 620 4772 557 460 390 340 322 318 390 345 306 226 2274 262 258 804 3290 3150	MEAN CONCENT (MG/L) 24 14 22 9 7 6 8 5 4 6 5 3 1 1 3 3 6 5 7 148 80	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 4.7 2.5 70 27 90 199 1230 702	DISCHARGE (CFS) 613 557 526 502 472 448 449 897 797 606 508 466 585 950 770 887 1330 932 746 648	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 2 20 19 10 4 4 3 3 4 2 2 8 8 17 30 6 6 5 5 5 5 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 10 8.7
1 2 3 4 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212	MEAN CONCENTRATION (MG/L) 1 2 2 3 3 2 2 1 1 2 2 2 1 1 2 2 1 1 2 2 1 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1	DISCHARGE (TONS/DAY) - 26 - 50 - 48 - 64 - 64 - 61 - 21 - 43 - 45 - 23 - 97 - 15 - 11 - 5.0 - 3.8 - 102 - 138 - 22 - 5.8 - 2.6 - 2.9 - 1.6 - 96	MEAN DISCHARGE (CFS) 620 4772 557 460 390 340 322 318 390 345 266 262 258 804 3290 3150 2120 1660	MEAN CONCENT (MG/L) 24 14 22 9 9 7 6 8 5 5 4 6 6 5 7 3 3 1 1 2 2 3 3 3 3 6 5 7 148	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 2.5 77 1.5 2.1 .70 27 90 199 1230 702 166 67	DISCHARGE (CFS) 613 557 526 502 472 448 449 897 797 606 508 466 585 950 770 887 1330 932 746 648 606 606 592	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 2 20 19 10 4 3 3 4 4 22 2 8 8 17 30 6 6 5 5 5 5 4 4 4 3 3	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 61 65 61 7 49 61 65 6.5 6.5 6.5 6.5 6.5
1 2 3 4 4 5 5 6 7 8 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212	MEAN CONCENTRATION (MG/L) 1 2 2 3 3 2 2 1 1 2 2 2 1 1 2 2 1 1 2 1 1 2 1 2	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .61 .21 .43 .45 .23 .97 15 11 .0 3.8 102 138 22 5.8 2.6 2.9 1.6	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 286 274 262 258 556 928 804 3290 3150 2120 1660 1510	MEAN CONCENTRATION (MG/L) 24 14 22 9 9 7 6 8 5 5 4 6 6 5 7 14 8 80 29 15 11	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 4.7 2.5 77 1.5 2.1 .70 27 77 20 199 1230 702 166 67 45	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 505 970 887 1330 932 746 648 606 606 592 585	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 110 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 15 10 8.7 6.5 6.5 4.8
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 .55 .11 .5.0 3.8 .102 .22 .8 .26 .29 .8 .8 .96 .96	MEAN DISCHARGE (CFS) 620 4772 557 460 390 340 322 318 390 345 266 262 258 804 3290 3150 2120 1660	MEAN CONCENT (MG/L) 24 122 9 7 7 6 8 5 5 4 6 6 5 3 1 1 2 2 3 3 1 1 3 6 5 7 1 148 80 29 9 15	DISCHARGE (TONS/DAY) 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 2.5 77 1.5 2.1 .70 27 90 199 1230 702 166 67	DISCHARGE (CFS) 613 557 526 502 472 448 449 897 797 606 508 466 585 950 770 887 1330 932 746 648 606 606 592	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 2 2 20 19 10 4 3 3 4 4 22 2 8 8 17 30 6 6 5 5 5 5 4 4 4 3 3	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 10 8.7 6.5 4.8 4.7
1 2 3 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26	DISCHARGE (CFS) 95 97 98 88 79 77 77 79 84 86 133 350 208 155 139 743 788 448 306 243 212 194 177 171 168 161	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 .51 .50 3.8 102 .84 .64 .64 .64 .64 .64 .64 .64 .64 .64 .6	MEAN DISCHARGE (CFS) 620 4772 557 460 390 340 322 318 390 345 306 274 262 258 804 3290 3150 2120 1660 1510 1140 970	MEAN CONCENT (MG/L) 24 14 22 9 7 7 6 8 5 5 4 6 6 5 7 1 1 3 3 6 6 5 7 1 1 8 8 0 2 9 9 7 1 1 1 9 9 7 7	DISCHARGE (TONS/DAY) 40 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 4.7 2.5 77 1.5 2.1 .70 27 90 199 1230 702 166 67 45 28	DISCHARGE (CFS) 613 557 526 502 472 448 449 7797 606 508 466 585 950 770 887 1330 932 746 648 606 606 592 585 592	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 19 10 4 3 4 4 22 2 8 8 7 30 6 6 5 5 5 5 4 4 4 3 3 3 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 61 65 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.8
1 2 3 4 4 5 6 7 8 8 9 10 11 12 11 15 11 15 11 17 11 18 11 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 3500 208 155 139 788 448 306 243 212 194 177 171 168 161	MEAN CONCENTRATION (MG/L) 1 2 2 3 3 2 2 1 1 2 2 2 1 1 2 2 1 1 2 2 1 1 2 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 .55 .0 3.8 102 .22 .58 .26 .29 .66 .96 .96 .96 .96 .96	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 286 274 262 258 556 928 804 3290 3150 2120 1660 1510	MEAN CONCENT (MG/L) 24 14 22 9 7 7 6 8 5 5 4 6 6 5 7 14 8 8 0 29 15 11 1 9 9 15 5 4	DISCHARGE (TONS/DAY) 40 40 18 33 11 7-4 5-8 7-3 4-3 3-4-6-3 4-7 2-5 2-1 -70 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 585 950 970 887 1330 932 746 648 606 606 592 585 592	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 110 4 3 4 4 22 8 8 17 7 30 6 5 5 5 5 4 4 4 3 3 3 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 10 8.7 6.5 6.5 6.5 6.5 6.6 6.8 6.8 6.8
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 95 93 88 79 75 77 79 84 86 133 350 208 155 179 743 788 448 306 243 212 194 1177 171 168 161	MEAN CONCENT 1 2 2 3 3 2 2 1 2 2 2 1 2 2 2	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .23 .43 .45 .23 .97 15 11 5.0 3.8 22 5.8 2.6 .96 .96 .92 .45 .43 .84 .47	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 286 274 262 258 556 928 804 3290 3150 2120 1660 1510 1140	MEAN CONCENT (MG/L) 24 14 22 9 9 7 6 8 5 5 4 6 6 5 7 148 80 29 15 11 1 9 7 5	DISCHARGE (TONS/DAY) 40 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 4.7 2.5 77 1.5 2.1 .70 27 90 199 1230 702 166 67 45 28	DISCHARGE (CFS) 613 557 526 502 472 448 4497 797 606 508 466 5887 1330 932 746 648 606 606 592 585 592 634 627 606 627	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 110 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 10 8.7 6.5 6.8 6.8 6.8
1 2 3 4 4 5 6 7 8 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	DISCHARGE (CFS) 95 95 97 77 79 84 86 133 350 208 155 139 748 448 306 243 212 194 177 171 168 166 155 174	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 .55 .0 3.8 102 .22 .58 .26 .29 .66 .96 .96 .96 .96 .96	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 266 274 262 258 804 3290 3150 2120 1660 1510 1140	MEAN CONCENT (MG/L) 24 14 22 9 7 7 6 8 5 5 4 6 6 5 7 14 8 8 0 29 15 11 1 9 9 15 5 4	DISCHARGE (TONS/DAY) 40 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 7.7 1.5 2.1 2.7 90 199 1230 702 166 67 45 28 18 11 8.0	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 585 950 770 887 1330 932 746 648 606 606 592 585 592 634 627 606	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 19 10 4 3 4 4 4 4 3 3 3 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 50 41 16 5.5 3.8 7.9 56 17 49 115 10 8.7 6.5 6.5 6.5 6.5 6.6 6.8 6.8 6.8
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	DISCHARGE (CFS) 95 95 97 88 88 79 77 77 79 84 86 133 350 208 155 139 748 448 306 243 212 194 177 168 161 155 174 184 161 1200	MEAN CONCENTRATION (MG/L) 1 2 2 3 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .26 .50 .48 .64 .41 .21 .43 .45 .23 .97 .55 .0 3.8 102 .84 .22 .5.8 .66 .96 .96 .96 .96 .96 .96 .97 .97 .98 .98 .98 .98	MEAN DISCHARGE (CFS) 620 472 557 460 390 360 340 322 318 390 345 306 266 274 262 258 804 3290 3150 2120 1660 1510 1140	MEAN CONCENT (MG/L) 24 122 9 7 6 8 5 5 4 6 5 7 11 13 36 6 57 7 148 80 29 15 11 9 7 5 5 4 5 5	DISCHARGE (TONS/DAY) 40 40 18 33 11 7.4 5.8 7.3 4.3 3.4 6.3 3.4 6.3 7.7 1.5 2.1 2.7 90 199 1230 702 166 67 45 28 18 11 8.0	DISCHARGE (CFS) 613 557 526 502 472 448 449 797 606 508 466 585 950 770 887 1330 932 746 648 606 606 592 585 592 634 627 606 607 607	MEAN CONCENTRATION (MG/L) 5 4 4 3 3 3 2 2 20 19 10 4 3 4 4 22 8 8 17 30 6 6 5 5 5 5 5 4 4 4 4 4 4 4 4 5 5	DISCHARGE (TONS/DAY) 8.3 6.0 5.7 4.1 3.8 2.4 2.4 2.4 50 41 10 8.7 9 115 15 10 8.7 6.5 4.8 6.8 6.8 6.8 6.8 6.9 9.1

11335000 COSUMNES RIVER AT MICHIGAN BAR, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MEAN MEAN MEAN SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) MEAN DISCHARGE (CFS) SEDIMENT MEAN DISCHARGE CONCEN-CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE DISCHARGE (TONS/DAY) (TONS/DAY) 738 860 738 669 634 10 14 8.0 3.6 3.4 282 278 270 262 258 .76 .75 .73 - 28 102 5 6 4 2 2 1 2 3 4 5 102 100 95 90 88 .27 2 1.4 .24 599 564 538 .66 .62 6 3.2 86 95 •23 •26 1 1 1 1 3.0 2.9 2.8 4.2 229 215 2 2 3 8 97 95 .26 526 514 •56 •53 208 198 10 77 .21 .51 .50 .54 2.4 1.3 11 520 514 502 478 472 4.2 4.2 4.1 2.6 2.5 1'90 187 .20 .18 .18 .17 3 3 2 2 1 73 66 66 62 54 ı ı 13 201 294 240 3 2 1 51 51 .14 .14 .14 .12 448 2.4 3.4 2.1 1.9 2.8 215 2 16 17 18 19 20 23223 420 390 360 194 177 168 •52 •48 •45 1 1 2 1 46 350 168 1.8 1.7 .82 .79 1.6 42 41 39 70 .34 .33 .21 21 335 318 302 2 1 1 2 164 1 1 1 1 3 2 .44 .42 .39 22 164 24 25 294 146 144 1 1.5 1.5 1.5 .77 •32 •24 •12 26 27 286 286 141 1 .38 59 44 .36 .34 .32 133 28 282 2 126 ì 46 39 1 2 30 113 .31 38 . 21 1973 TOTAL 13807 98.06 5988 19.72 6.41 JULY AUGUST SEPTEMBER MEAN MFAN MEAN SEDIMENT DISCHARGE (TONS/DAY) SEDIMENT CONCEN-TRATION (MG/L) CONCEN-TRATION (MG/L) MEAN DISCHARGE CONCEN-TRATION MEAN SEDIMENT MEAN DISCHARGE DISCHARGE (CFS) DISCHARGE (TONS/DAY) DI SCHARGE (TONS/DAY) DAY (CFS) 1 39 39 40 .21 .21 .11 .12 .26 .27 .28 .25 14 12 12 12 12 .08 .06 2 49 50 51 47 46 2 2 2 1 5 5 5 5 5 .06 43 44 .06 43 42 .12 44 43 1 1 .12 10 .03 40 38 39 42 46 44 .11 9.7 1 1 1 1 1 .11 .03 1 .10 .03 ŧ٥ .12 10 11 12 13 50 53 51 .27 .43 .41 .50 3 3 2 38 42 1 2 2 1 .10 .23 .25 .12 9.4 10 1 •03 •03 .03 .03 11 46 111 14 15 46 10 16 17 77 2 1 1 40 -11 10 .03 1 1 1 2 .62 .38 .15 42 44 40 54 9.7 8.8 9.1 9.1 .11 .03 18 19 20 70 54 53 .11 1 .02 02 51 50 51 8.5 8.5 7.0 21 .14 66 1 1 2 .36 1 - 02 22 .14 44 32 27 22 .12 .02 24 53 53 1 .07 .02 .15 .15 19 17 16 26 54 54 54 53 .10 7.9 .02 27 28 29 30 .09 .04 .04 8.2 7.6 7.0 .02 •02 •02 •02 111 .14 16 31 53 14 •08 TOTAL 1625

1169

4.49

288.8

6.66

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

. 94 85566.8 4596.52

11335000 COSUMNES RIVER AT MICHIGAN BAR, CALIF. -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM WITHDRAWAL TUBE: C, CHEMICALLY DISPERSED: N, IN NATIVE MATER: P, PIPET: S, SIEVE: V, VISUAL ACCUMULATION TUBE: W, IN DISTILLED MATER)

		WATER								PART	ICLE :	SIZE					
		TEMP- PERA- TURE			SUSPENDED- SEDIMENT DISCHARGE		ENT F	INER	MAHT	THE S	IZE (IN MII	LLIMET	TERS)	INDI	CATED	METHOD OF Analy-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	• OD4	.D08	.016	.D31	•062	•125	.250	.5D0	1.00	2.OD	\$15
DEC 6 1967	09D0	7	370	71	71	68	83	94	97	98	99	99	100				SCBW
JAN 31 1968	1135	4	1280	25	86	11	22	43	56	65	89	94	97	99	100		SCBW
FEB 20	1115	10	4200	254	28BD	33	42	53	70	B6	94	97	99	100			VPWC
FEB 21	0600	12	3580	144	139D	10	28	40	47	52	80	86	98	100			VCBW
FEB 21	1640	12	3200	73	631	13	31	42	49	54	79	86	99	100			ACBM
MAR 8	0635	11	970	30	79	31	44	62	69	73	84	97	99	100			SCBW
MAR 8	1720	11	1030	17	47	32	47	62	75	82	93	97	98	100			SCBW

11337200 SAN JOAQUIN RIVER AT ANTIOCH, CALIF.

LOCATION.--Lat 38°01'04", long 121°48'06", in NW\$SW\$\frac{1}{2}\$ 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 1968.

REMARKS. -- No discharge records available. Chemical quality records furnished by California Department of Water Resources and reviewed by Geological Survey.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CAL- CIUM	MAG- NE- Sium	SODIUM	BICAR- BONATE	CAR- BONATE	CHLO- RIDE	HARD- NESS
DATE	(CA)	(MG)	(NA)	(HC03)	(CD3)	(CL)	(CA.MG)
JAN.							
09	16		32	68	0	43	75
APR.							
04	16	10	17	81	0	21	81
MAY							
15	23	18	215	79	c	374	182
JUNE							
07	23	27	165	87	0	309	168
JULY				•••		50,	200
11	56		930	88	0	1620	594
AUG.				•••	•	1010	,,,
15	37		522	83	0	915	361
SEPT.	"		722	73	v	717	301
12	27		317		_		
12	21		317	94	0	551	258

JATE	NON- CAR- RONATE HARD- NESS	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
JAN.						
39	19	56	324	8.D	11	9.1
APR.						9.3
04	15	66	240	7.8	16	7.0
MAY	117	65	1520	7.7	18	8.8
15 JUNE	117	67	1320			•••
07	97	71	1300	7.7	21	6.1
JULY	7,	**	1555	•••		
11	522	72	5490	7.8	21	7.5
AJG.	,,,,					
15	293	68	3100	8.0	21	7.5
SEPT.						
12	181	77	2090	8.0	22	7.4

11341400 SACRAMENTO RIVER NEAR MOUNT SHASTA, CALIF.

LOCATION.--Lat 41°15'56", long 122°18'32", in SE\SE\ sec.33, T.40 N., R.4 W., Siskiyou County, temperature recorder at gaging station on left bank, 200 ft upstream from Stink Creek, 0.3 mile upstream from Southern Pacific Railroad bridge, and 3.3 miles south of Mount Shasta.

DRAINAGE AREA .-- 134 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1965 to September 1968.

EXTREMES . -- 1967-68:

water temperatures: Maximum, 17.0°C on many days during July and August; minimum, 2.0°C on several days during January.

Period of record:
Water temperatures: Maximum (1966-68), 17.0°C on many days during July and August 1968; minimum (1965-66, 1967-68), 2.0°C Dec. 24, 1965 and on several days during January 1968.

REMARKS, --Clock stopped Oct. 18 to Nov. 3, Jan. 31 to Feb. 2, Feb. 3-27; temperature ranges, 8.0°C to 10.0°C, 3.0°C to 4.0°C, and 3.0°C to 5.0°C, respectively.

		15,			,							
		OBER		MBER		MBER		UARY		UARY		RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.0			5.0	4.0	4.0 4.0	3.0 3.0			5.0 6.0	4.0 4.0
2	10.0	9.0 9.0			5.0 5.0	4.0 4.0	4.0	3.0			6.0	4.0
4	10.0	9.0	9.0	9.0	5.0	4.0	4.0	3.0			6.0	5.0
5	11.0	10.0	10.0	9.0	6.0	4.0	4.0	3.0			6.0	4.0
6	11.0	9.0	10.0	9.0	5.0	3.0	4.0	3.0			6.0	4.0
7	11.0	9.0	9.0	8.0	6.0	3.0	4.0	3.0			6.0 6.0	5.0 4.0
8	11.0 11.0	9.0 9.0	9.0 9.0	9.0 9.0	5.0 4.0	4.0 3.0	4.0 5.0	4.0 4.0			6.0	5.0
10	11.0	9.0	9.0	9.0	4.0	3.0	4.0	4.0			6.0	4.0
11	11.0	10.0	9.0	8.0	4.0	3.0	4.0	3.0			6.0	5.0
12	11.0	9.0	9.0	8.0	4.0	3.0	4.0	3.0			5.0	3.0
13	10.0	9.0	9.0	9.0	4.0 4.0	4.0 3.0	3.0 3.0	3.0 2.0			5.0 6.0	4.0 5.0
14 15	10.0	9.0 8.0	9.0 8.0	8.0 7.0	4.0	3.0	3.0	2.0			6.0	5.0
16	10.0	8.0	8.0	7.0	4.0	3.0	4.0	3.0			6.0	4.0
17	10.0	9.0	8.0	7.0	4.0	3.0	3.0	3.0			6.0	5.0
18			8.0	7.0	4.0	3.0	4.0	3.0			6.0	5.0
19			8.0	7.0	4.0	4.0	4.0	3.0			7.0 7.0	5.0 5.0
20			8.0	7.0	5.0	4.0	4.0	3.0				
21			7.0	6.0	4.0	4.0	5.0	4.0			7.0	5.0
22 23			7.0 7.0	6.0 6.0	6.0 5.0	4-0 4-0	4.0 4.0	4.0 3.0			7.0 7.0	5.0 6.0
24			7.0	6.0	5.0	4.0	4.0	4.0			7.0	6.0
25			6.0	6.0	5.0	4.0	4.0	3.0			7.0	6.0
26			6.0	6.0	5.0	4.0	4.0	3.0			7.0	5.0
27 28			6.0 6.0	5.0 5.0	5.0 5.0	4.0 4.0	3.0 2.0	2.0 2.0	6.0	4.0	7.0 8.0	5.0 6.0
29			6.0	4.0	4.0	4.0	2.0	2.0	6.0	4.0	8.0	6.0
30			5.0	4.0	4.0	4.0	3.0	2.0			8.0	6.0
31					4.0	4.0					8.0	6.0
HTMOF			10.0	4.0	6.0	3.0	5.0	2.0			8.0	3.0
	A	PRIL		YAY	J	JNE	JU	JLY	AU	GUST	SEP	TEMBER
DAY	A Max	PRIL MIN	MAX	MIN	U XAM	JNE MIN	JU XAM	JLY Min	AU! MAX	GUST MIN	SEP MAX	TEMBER MIN
1	MAX 7.0	MIN 6.0	MAX 9.0	MIN 7.0	MAX 13.0	MIN 10.0	MAX 16.0	MIN 12.0	MAX 17.0	MIN 15.0	MAX 16.0	MIN 13.0
1 2	MAX 7.0 7.0	MIN 6.0 6.0	MAX 9.0 9.0	MIN 7.0 7.0	MAX 13.0 11.0	MIN 10.0 11.0	MAX 16.0 16.0	MIN 12.0 13.0	MAX 17.0 17.0	MIN 15.0 14.0	MAX 16.0 16.0	MIN 13.0 14.0
1 2 3	MAX 7.0 7.0 7.0	MIN 6.0 6.0 6.0	MAX 9.0 9.0 9.0	MIN 7.0 7.0 7.0	MAX 13.0 11.0 12.0	MIN 10.0 11.0 10.0	MAX 16.0 16.0 16.0	MIN 12.0 13.0 13.0	MAX 17.0 17.0 17.0	MIN 15.0 14.0 14.0	MAX 16.0 16.0 15.0	MIN 13.0 14.0 13.0
1 2	MAX 7.0 7.0	MIN 6.0 6.0	MAX 9.0 9.0	MIN 7.0 7.0	MAX 13.0 11.0	MIN 10.0 11.0	MAX 16.0 16.0	MIN 12.0 13.0	MAX 17.0 17.0	MIN 15.0 14.0	MAX 16.0 16.0	MIN 13.0 14.0
1 2 3 4	MAX 7.0 7.0 7.0 7.0	MIN 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0	MIN 7.0 7.0 7.0 7.0 7.0	MAX 13.0 11.0 12.0 12.0 11.0	MIN 10.0 11.0 10.0 11.0	MAX 16.0 16.0 16.0 17.0	MIN 12.0 13.0 13.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0	MAX 16.0 16.0 15.0 15.0	MIN 13.0 14.0 13.0 13.0
1 2 3 4 5	MAX 7.0 7.0 7.0 7.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0	MAX 13.0 11.0 12.0 12.0 11.0	MIN 10.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 16.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 15.0 15.0 15.0	MIN 13.0 14.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8	MAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0	MAX 13-0 11-0 12-0 12-0 11-0	MIN 10.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 17.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 15.0 15.0 15.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8	MAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 6.0 7.0 8.0	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9	**************************************	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 8.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 13.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9	**************************************	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 8.0 8.0 10.0 10.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 10.0 11.0	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 13.0 11.0 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 8.0 10.0 10.0 10.0 10.0 8.0 8.0 8.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 13.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 10.0 11.0 11	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 8.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 8.0 10.0 10.0 10.0 10.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 10.0 11.0 11	HAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 8.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 14.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 2 3 4 5 5 6 7 7 8 8 9 10 11 11 12 13 11 14 15 16 17 18 19 20 21	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	13.0 11.0 12.0 12.0 12.0 11.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 0 11 12 13 14 15 16 17 18 18 19 20 21 12 22	HAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	MIN 7.07 7.07 7.00 7.00 7.00 8.00 8.00 8.00	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 14.0 14.0 14.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	MIN 13-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13
1 2 2 3 4 5 5 6 7 7 8 8 9 10 11 11 12 13 11 14 15 16 17 18 19 20 21	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 10.0 9.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0	MAX 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0
1 2 2 3 4 4 5 5 6 7 7 8 8 9 9 10 11 12 13 11 14 15 16 17 7 18 19 20 21 22 23	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	MIN 7.07 7.07 7.07 6.07 8.07 8.07 8.07 8.07 8.07 8.07 8.07 8	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 14.0 14.0 14.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	MIN 13-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13
1 2 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 5 26	HAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 1	MIN 7.0 7.0 7.0 7.0 6.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 10.0 11.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16-0 16-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 15.0 14.0 14.0 15.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	MIN 7.07 7.07 6.07 6.07 8.00 8.00 8.00 8.00 8.00 9.00 9.00 9.00	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 5 26	HAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 1	MIN 7.0 7.0 7.0 7.0 6.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 16-0 16-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27 7 28	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	#IN 7.00 7.00 7.00 8.00 8.00 8.00 8.00 8.00	MAX 13.0 11.0 12.0 12.0 11.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 0 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 9 30 31 1	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	#IN 7.0 7.0 7.0 7.0 6.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 10.0 11.0 10.0 11.0 11.0 11.0 10.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 15 16 6 17 7 18 20 21 22 23 24 5 26 27 28 29 30	**AX	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 11.0	#IN 7.00 7.00 7.00 8.00 8.00 8.00 8.00 8.00	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 10.0 11.0 10.0 11.0 11.0 11.0 10.0 9.0 10.0 11.0 11	MAX 16-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MIN 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13
1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 0 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 9 30 31 1	HAX 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	#IN 7.00 7.00 7.00 6.00 8.00 8.00 8.00 8.00 8.00 9.00 9.00 9	MAX 13.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	MIN 10.0 11.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 10.0 11.0 11	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13

SACRAMENTO RIVER BASIN

11342000 SACRAMENTO RIVER AT DELTA, CALIF.

LOCATION.--Lat 40°56'20", long 122°24'55", in NW 2 sec.35, T.38 N., R.5 W., Shasta County, at gaging station 0.2 mile downstream from Dog Creek, 0.6 mile southeast of Delta, and 2.8 miles south of Lamoine.

DRAINAGE AREA. -- 425 sq m1.

PERIOD OF RECORD, --Chemical analyses: December 1953 to September 1968.
Water temperatures: June to September 1951, October 1953 to September 1957, October 1962 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 28.0°C July 6; minimum, freezing point Jan. 11, 28-30.

Period of record:

rico of record:
**Maximum (1951, 1953-57, 1963-68), 28.0°C July 6, 1968; minimum, freezing point Dec. 18, 19, 1964, Jan. 20, 1967, Jan. 11, 28-30, 1968.

REMARKS. .--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Jan. 1-4, Sept. 3-13; temperature ranges, 3.0°C to 6.0°C, and 16.0°C to 23.0°C, respectively.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SCOIUM (NA)	PO- TAS- S 1UM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLC- RIDE (CL)	NI TRATE (NO3)
OCT.										
09	257			10		76	0		6.5	
NOV. 08	270			10		75	0		6.7	
DEC. 12	351			9.8		70	0		7.6	
JAN. 03	371			6.8		71	0		1 .2	
FEB. 13	1280			2.8		54	0		1.3	
MAR. 06	1630			2.5		47	0		2.2	
APR. 01	1670			2.2		50	0		1.0	
MAY 06	968	4.1	6.8	3.4	.3	49	0	.0	2.3	.с
JUNE 11	452			6.1		66	0		4.1	
JULY D3	257			6.8		76	0		5 •B	
AUG.	231						_			
06 SEPT.	195			12		80	0		7.6	
04	188	9.0	8.1	9.8	1.3	82	0	1.5	1.8	. c
DAT E	BCRON (B)	HARD- NESS (CA,MG)	NON- CAR+ BONATE HARD- NESS	PERCENT SODIUM	SCOLUM AD- SORP- TION RATIO	ALKA- LINITY AS GACC3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM~ PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
OCT.	(8)	NESS (CA,MG)	CAR+ BCNATE HARD- NESS	SODIUM	AD- SORP- TION RATIO	LINITY AS CACC3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED
00T. 09	.07	NESS (CA,MG)	CAR+ BONATE HARD- NESS	30 EUM	AD- SORP- TION RATIO	LINITY AS CACC3	FIC COND- UCTANCE (MICRO- MHGS)	7.8	PERA- TURE (DEG C)	SOLVED OXYGEN
OCT. 09 NOV. 08 DEC.	(8)	NESS (CA,MG) 51	CAR- BONATE HARD- NESS O	30 29	AD- SORP- TION RATIO	LINITY AS CAC C3 62	FIC COND- UCTANCE (MICRO- MHGS)	7.8 7.9	PERA- TURE (DEG C) 12	SOLVED OXYGEN 10-1 11-1
09 09 NOV. 08	.07	NESS (CA,MG)	CAR- BONATE HARD- NESS O O	30 29 31	AD- SORP- TION RATIO	LINITY AS CACC3 62 62 57	FIC COND- UCTANCE (MICRO- MHOS) 150 148	7.8 7.9 8.0	PERA- TURE (DEG C) 12 11	10-1 11-1 13-2
DCT. 09 NOV. 08 DFC.	.07 .14	NESS (CA,MG) 51	CAR- BCNATE HARD- NESS O O O	30 29 31 22	AD- SORP- TION RATIO	62 62 57 58	FIC COND- UCTANCE (MICRO- MHOS) 150 148 146	7.8 7.9 8.0 8.1	PERATURE (DEG C)	10-1 11-1 13-2 13-3
OCT. 09 NOV. 08 DEC. 12 JAN.	.07 .14	NESS (CA, MG) 51 54 48	CAR- BCNATE HARD- NESS O O O O	30 29 31 22	AD- SORP- TION RATIO	EINITY AS CACC3 62 62 57 58 44	FIC COND- UCTANCE (MICRO- MHOS) 150 148 146 137	7.8 7.9 8.0 8.1 7.7	PERATURE (DEG C) 12 11 3 2 5	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6
DCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB. 13	.07 .14 .12	NESS (CA, MG) 51 54 48	CAR- BCNATE HARD- NESS O O O	30 29 31 22	AD- SORP- TION RATIO	62 62 57 58	FIC COND- UCTANCE (MICRO- MHOS) 150 148 146	7.8 7.9 8.0 8.1	PERATURE (DEG C)	10-1 11-1 13-2 13-3
OCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01	.07 .14 .12 .14	NESS (CA, MG) 51 54 48 54	CAR- BCNATE HARD- NESS O O O O	30 29 31 22	AD- SORP- TION RATIO	EINITY AS CACC3 62 62 57 58 44	FIC COND- UCTANCE (MICRO- MHOS) 150 148 146 137	7.8 7.9 8.0 8.1 7.7	PERATURE (DEG C) 12 11 3 2 5	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6 12-1
DCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY	.07 .14 .12 .14 .06	NESS (CA.MG) 51 54 48 54 42 36	CAR- ECNATE HARD- NESS O O O O	30 29 31 22 13	AD- SORP- TION RATIO .6 .6 .6 .4	62 62 62 57 58 44	FIC COND- UCTANCE (MICRO- MHOS) 150 148 146 137 101	7.8 7.9 8.0 8.1 7.7	PERA- TURE (DEG C) 12 11 3 2 5 6 8	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6 12-1 11-4
OCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY 06 JUNE	.07 .14 .12 .14 .06 .02	NESS (CA:MG) 51 54 48 54 42 36	CAR- BONATE HARD- NESS 0 0 0 0 0	30 29 31 22 13 13	AD- SORP- TION RATIO .6 .6 .6 .4 .2	62 62 62 57 58 44 39	FIC COND- COND- COND- CONTENT NO	7.8 7.9 8.0 8.1 7.7 7.9	PERATURE (DEG C) 12 11 3 2 5 6	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6 12-1
OCT. O9 NOV. O8 DEC. 12 JAN. O3 FEB. 13 APR. O6 APR. O1 MAY U6 JUNE JUNE JULY O3	.07 .14 .12 .14 .06 .02	NESS (CA.MG) 51 54 48 54 42 36 38	CAR- BCNAT E HARD- NESS	30 29 31 22 13 13	AD- SORP- TION RATIO .6 .6 .6 .4 .2 .2 .2	LINITY AS CACC3 62 62 57 58 44 39 41 40	COND- UCTANCE (MICRO- MICRO- MHCRS) 150 148 146 137 101 84 85	7.8 7.9 8.0 8.1 7.7 7.9 7.8	PERA- TURE (DEG C) 12 11 3 2 5 6 8	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6 12-1 11-4
OCT. O9 NOV. O8 DEC. 12 JAN. O3 FEB. 13 MAR. O6 APR. O1 MAY O6 JUNE 11 JULY	.07 .14 .12 .14 .06 .02 .02	NESS (CA.MG) 51 54 48 54 42 36 38 38	CAR-EONATE HARD-NESS	30 29 31 22 13 13 11 16 19	AD- SORP- TION RATIO .6 .6 .6 .4 .2 .2 .2	62 62 57 58 44 39 41 40 54	FIG. COND- UCTANCE (MICRO- MHCRO- MHCRO) 150 148 146 137 101 84 85 88 120	7.8 7.9 8.0 8.1 7.7 7.9 7.8 8.2	PERATTURE (DEG C) 12 11 2 5 6 8 11	SOLVED OXYGEN 10-1 11-1 13-2 13-3 12-6 12-1 11-4 11-6

11342000 SACRAMENTO RIVER AT DELTA, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc	TOBER	NOV	EMBER	DEC	EMBER	JAR	NUARY	FEBR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MEN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	16.0	16.0	12.0	6.0	5.0			6.0	3.0	9.0	8.0
ž	16.0	11.0	16.0	12.0	6.0	4.0			4.0	3.0	11.0	7.0
3	14-0	11.0	14.0	12.0	4.0	2.0			7.0	3.0	10.0	7.0
4	14.0	12.0	13.0	11.0	6.0	3.0			7.0	4.0	10.0	7.0
5	14.0	12.0	14.0	12.0	8.0	6.0			7.0	6.0	11.0	9.0
6	16.0	11.0	16.0	12.0	6.0	4.0	6.0	3.0	8.0	6.0	9.0	6.0
7	17.0	11.0	14.0	12.0	6.0	4.0	5-0	3.0	9.0	6.0	8.0	7.0
8	17.0	12.0	14.0	13.0	7.0	5.0	5-0	4.0	9.0	6.0	10.0	6.0
10	18.0 18.0	13.0 13.0	14.0 16.0	12.0 13.0	8.0 8.0	5•0 6•0	5.0 2.0	1.0	8.0 9.0	7.0 7.0	10.0 9.0	7.0 5.0
11	17.0	14.0	14.0	12.0	7.0	5.0	2.0	0.0	9.0	7.0	9.0	7.0
12	18.0	13.0	14.0	12.0	6.0	4.0	3.0	1.0	9.0	7.0	9.0	4.0
13	17.0	12.0	13.0	13.0	4.0	2.0	4.0	3.0	8.0	6.0	6.0	3.0
14	16.0	12.0	14.0	13.0	3.0	1.0	4-0	4-0	7.0	6.0	7.0	6.0
15	16.0	12.0	14.0	12.0	3.0	1.0	7.0	4.0	7.0	7.0	7.0	6.0
16	16.0	11.0	15.0	12.0	4.0	2.0	8.0	6-0	7.0	6.0	7.0	7.0
17	16.0	11.0	14.0	12.0	4.0	2.0	7.0	4.0	7.0	6.0	8.0	6.0
18	16.0	11.0	13.0	12.0	3.0	2.0	7.0	5.0	8.0	7.0	9.0	4.0
19	17.0	12.0	13.0	11.0	4.0	2.0	7.0	4.0	8.0	7.0	9.0	4.0
20	16.0	12.0	13.0	11.0	4.0	2.0	8.0	5.0	8.0	7.0	9.0	5.0
21	13.0	12.0	12.0	9.0	4.0	3.0	10.0	7.0	9.0	8.0	9.0	6.0
22	16.0	12.0	11.0	8.0	7.0	4-0	9.0	7.0	9.0	8.0	9.0	6.0
23 24	16.0 15.0	12.0 12.0	11.0	7.0 8.0	8.0	6.0	9.0	7.0	9.0 10.0	8.0	9.0	7.0
25	17.0	12.0	11.0 11.0	8.0	8.0 8.0	6.0 6.0	9.0 9.0	6.0 7.0	12.0	8.0 7.0	11.0 11.0	7.0 9.0
26	16.0	12.0	10.0	7.0	8.0	6.0	7.0	4.0	12.0	8.0	10-0	5.0
27	14.0	12.0	7.0	6.0	9.0	7.0	5.0	3.0	12.0	8.0	11.0	6.0
28	16.0	13.0	8.0	6.0	9.0	7.0	3.0	0.0	12.0	7.0	13.0	8.0
29	14.0	11.0	7.0	5.0	8.0	7.0	0.0	0.0	11.0	7.0	13.0	9.0
30	15.0	11.0	5.0	4.0	8.0	6.0	2.0	0.0			13-0	9.0
31	16.0	12.0			6.0	4.0	3.0	2.0			13.0	9.0
HTMOP	19.0	11.0	16.0	4.0	9.0	1.0	10.0	0.0	12.0	3.0	13.0	3.0
	A	PRIL		MAY	J	JNE	JU	JLY	AUG	SUST	SEP.	FEMBER
DAY	MAX				MAX		MAY		MAX			
UAY		MIN	MAX	MIN	MAX	MIN		MIN		MIN	MAX	MIN
1	12.0	8.0	14.0	9.0	21.0	16.0	22.0	16.0	25.0	20.0	24.0	18.0
2	11.0	8.0	14.0	9.0	19.0	15.0	22.0	17.0	26.0	20.0	24.0	18.0
3	11.0	6.0 8.0	14.0 14.0	10.0	19.0 19.0	14.0 16.0	24.0 27.0	18.0 20.0	26.0 24.0	21.0		
5	11.0	8.0	13.0	9.0	17.0	12.0	27.0	21.0	24.0	19.0		
6	11.0	7.0	12.0					21.0				
7	12.0	7.0	12.0	7.0 8.0	17.0 17.0	12.0 13.0	28.0 27.0	22.0	24.0 24.0	18.0 18.0		
á	13.0	8.0	14.0	9.0	18.0	13.0	26.0	21.0	23.0	19.0		
9	14.0	9.0	14.0	10.0	18.0	14.0	26.0	21.0	24.0	19.0		
10	14.0	10.0	14.0	10.0	19.0	15.0	26.0	20.0	24.0	18.0		
11	14.0	9.0	14.0	10.0	19.0	16.0	24.0	19.0	24.0	19.0		
12	13.0	7.0	13.0	10.0	19.0	15.0	23.0	19.0	23.0	19.0		
13	11.0	6.0	12.0	8.0	17.0	14.0	24.0	19.0	21.0	18.0		
14	12.0	7.0	11.0	7.0	19.0	13.0	24.0	19.0	18.0	17.0	19.0	16.0
15	12.0	8.0	13.0	7.0	22.0	16.0	24.0	19.0	19.0	13.0	19.0	14.0
16	11.0	7.0	16.0	11.0	23.0	17.0	24.0	19.0	19.0	16.0	19.0	14.0
17	9.0	5.0	14.0	11.0	23.0	18.0	25.0	19.0	19.0	14.0	21.0	15.0
18	11.0	6.0	16.0	12.0	24.0	19.0	26.0	19.0	18.0	16.0	21.0	16.0
19	12.0	8.0	16.0	12.0	24.0	19.0	26.0	19.0	18.0	16.0	17-0	14.0
20	11.0	6.0	13.0	11.0	24.0	19.0	26.0	19.0	17.0	13.0	15.0	12.0
21	10.0	6.0	12.0	10.0	25.0	19.0	26.0	19.0	16.0	12.0	14.0	9.0
22 23	11.0	6.0	13.0	10.0	24.0 25.0	19.0 20.0	25.0	19.0	19.0	13.0	16.0	9.0
23	11.0 12.0	8.0 6.0	13.0 12.0	11.0	25.0	19.0	26.0 24.0	19.0 18.0	20.0 21.0	14.0 16.0	17.0 19.0	11.0 12.0
25	13.0	9.0	14.0	11.0	25.0	18.0	24.0	18.0	20.0	16.0	19.0	13.0
26	14.0	9.0	17.0	12.0	26.0	19.0	25.0	18.0	18.0	14.0	19.0	14.0
27	14.0	10.0	18.0	13.0	26.0	19.0	26.0	19.0	20-0	14.0	19.0	13.0
28	14.0	9.0	19.0	15.0	22.0	18.0	26.0	19.0	55.0	16.0	18.0	14.0
29	14.0	9.0	19.0	16.0	20.0	16.0	25.0	21.0	23.0	17.0	18.0	13.0
30	14.0	11.0	18.0	14.0	21.0	14.0	27.0	21.0	24.0	17-0	17.0	13.0
31			18.0	13.0			24.0	21.0	24.0	18.0		
MONTH	14.0	5.0	19.0	7.0	26.0	12.0	28.0	16.0	26.0	12.0		
YEAR	28.0	0.0										

11345500 SOUTH FORK PIT RIVER NEAR LIKELY, CALIF.

LOCATION.--Lat 41°13'51", long 120°26'10", in NE4SE4 sec.11, T.39 N., R.13 E., Modoc County, at gaging station 100 ft downstream from highway bridge, 1.4 miles downstream from West Valley Creek, and 3.5 miles east of Likely.

DRAINAGE AREA. -- 247 sq mi.

PERIOD OF RECORD. -- Chemical analyses: October 1958 to September 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	S OD LUM	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- 80NA TE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	N[TRATE (ND3)	80RON (B)
OCT.											
10	24			5.6		61	0		1.1		.05
NOV. 06	27			5.7		64	0		1.1		•00
DEC.	_						-				
13 Jan.	20			6.2		64	0		1.4		.04
04 FEB.	22			5.4		69	0				•00
08	53			4.7		78	0				•05
MAR. 07	15			5.4		61	0		1.0		-04
APR.							-				
03 May	29			4.6		60	0				•00
07 JUNE	122	9.9	4.2	6.6	2.6	64	0	.0	1.6	.7	.04
10 JULY	88			6.1		71	0		1.3		.16
04	83			7.8		83	Q		2.7		•00
AUG. OB SEPT.	119			11		92	0		2.3		•02
05	34	13	5.7	10	4.3	88	0	2 - 1	2.3	.3	•02
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS I TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РΗ	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
OCT.											
10 NDV.		40	0		23	.4	50	108	7.7	11	9.9
06 CEC.		40	0		24	.4	52	107	8.0	9	9.9
13		40	0		25	.4	52	115	7.5	0	12.2
JAN. 04		46	0		20	.3	57	118	8.0	0	12.7
FE8. 08		56	0		15	.3	64	143	7.5	3	11.2
MAR. 07		40	0		23	.4	50	104	8.1	8	10.1
APR. 03		40	0		20	.3	49	107	7.8	3	11.7
MAY										-	
JUNF	75	42	0	-10	24	•4	52	112	7.9	13	9.8
JULY		47	0		22	.4	58	119	8.1	14	9.1
04 AUG.		60	0		22	• 4	68	149	8.2	19	9.2
OB SEPT.		58	Q		29	•6	75	175	8.0	19	8.2
05	139	56	0	-19	26	•6	72	160	8.2	21	8.7

SACRAMENTO RIVER BASIN

11348500 PIT RIVER NEAR CAMBY, CALIF.

LCCATION.--Lat 41°24'22", long 120°55'36", in NW 15W 1 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 1968, Water temperatures: March 1965 to September 1968, Sediment records: October 1966 to September 1968 (periodic),

Period of record:
Water temperatures: Maximum, 28.0°C on several days during June and July 1968; minimum (1965-66, 1967-68), freezing point on several days during February 1966, Nov. 26, 27, 30, 1967.

REMARKS...-Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Dec. 29 to Jan. 16, Sept. 1-11; temperature ranges, 1.0°C to 1.5°C, and 14.0°C to 23.0°C, respectively.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLD- RIDF (CL)	NITRATE (NO3)	RORON (8)
OCT. 10 NOV.	79			28		168	0		6.1		.07
07 OEC.	56			38		185	0		10		.21
13 JAN.	66			38		183	0		13		.33
05 FEB.	41			31		166	0		5.8		•11
09 MAR.	409			27		114	0		5.8		.14
07 APR.	206			17		116	0		5.7		.13
02 May	100			25		131	0		9.6		.10
C7 JUNE	104	21	9.B	30	6.4	157	0	17	10	1.8	•22
IOTA TO***	241			29		174	2		5.0		.40
04 AUG.	60			31		173	В		7.8		.12
C7 SEPT.	92			26		159	n		6.5		.12
05	26	23	10	36	7.9	189	0	13	8.6	-6	• 22
	DIS-			015-				SPECI-			
CATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	Рн	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
CCT. 10	SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- SONATE HARD-	SOLVED SOLIDS (TONS PER		AU- SORP- TION	LINITY	FIC COND- UCTANCE (MICRO-	РН 8• 0	PERA- Ture	SOLVED
CCT. 10 NOV. 07	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA+MG)	CAR- SONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED DXYGEN
CCT. 10 NUV. 07 DEC. 13	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA+MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	\$0DIUM 40	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	8.0	PERA- TURE (DEG C)	SOLVED DXYGEN
CCT. 10 NGV. 07 DEC. 13 JAN. 05	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA+MG) 93 97	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	50DIUM 40 46	SORP- TION RATIO	LINITY AS CACO3 138	FIC COND- UCTANCE (MICRO- MHOS) 306	8.0 8.2	PERATURE (DEG C)	SOLVED DXYGEN 9.3 10.1
CCT. 10 NGV. 07 DEC. 13 JAN. 05 FEB.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 93 97 105	CAR- dONATE HARD- NESS O	SOL VED SOL IDS (TONS PER AC-FT)	40 46 44	AO- SORP- TION RATIO 1.3 1.7	LINITY AS CACO3 138 152	FIC COND- UCTANCE (MICRO- MHOS) 306 366	8.0 8.2 8.0	PERATURE (DEG C)	9.3 10.1 12.2
CCT. 10 NGV. 07 DEC. 13 JAN. 05 FEB. 09 MAR.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 93 97 105 95	CAR- dONATE HARD- NESS 0 0 0	SOL VED SOL IDS (TONS PER AC-FT)	40 46 44 42	AD- SORP- TION RATIO 1.3 1.7 1.6	LINITY AS CACO3 138 152 150 136	FIC COND- UCTANCE (MICRO- MHOS) 306 366 379 314	8.0 8.2 8.0 7.9	PERA- TURE (DEG C)	9.3 10.1 12.2
CCT. 10 NOV. 07 DEC. 13 JAN. 05 FEB. 09	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA+MG) 93 97 105 95 68	CAR- dONATE HARD- NESS 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	40 46 44 42 46	AD- SORP- TION RATIO 1.3 1.7 1.6	LINITY AS CACO3 138 152 150 136 94	FIC COND- UCTANCE (MICRO- MHOS) 306 366 379 314 253	8.0 8.2 8.0 7.9	PERA- TURE (DEG C) 12 8 0	9.3 10.1 12.7 11.1 9.8
CCT. 10 NdV. 07 DEC. 13 JAN. 05 FEB. 09 MAR. 07 APR. 02 MAY. C7 JUNE	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 93 97 105 95 68 73 79 93	CAR- dONATE HARD- NESS 0 0 0 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	\$001UM 40 46 44 42 46 34 41 39	A0- SORP- TION RATIO 1.3 1.7 1.6 1.4 1.4	LINITY AS CACO3 138 152 150 136 94 95 107 129	FIC COMP- UCTANCE (MICRO- MHOS) 306 366 379 314 253 243 266 319	8.0 8.2 8.0 7.9 7.5 8.2 9.1	PERA- TURE (DEG C) 12 8 0 0 0 8 11	9.3 10.1 12.7 11.1 9.8 7.9 10.6
CCT. 10 07 DEC. 13 JAN. 05 FEB. 09 MAR. 07 APR. 02 MAY. C7 JUNE 10 JULY	SOLVED SOLUTION (RESIDUE AT 180 C)	NESS (CA.MG) 93 97 105 95 68 73 79 93 103	CAR- dONATE HARD- NESS 0 0 0 0 0 0 0 0 0 0	SOL VED SOL IOS (1 TONS PER AC-FT)	SODIUM 40 46 44 42 46 34 41 39 38	AO- SORP- TION RATIO 1.3 1.7 1.6 1.4 1.4 2.9	LINITY AS CACO3 138 152 150 136 94 95 107 129 146	FIC COND- UCTANCE (MICRO- WHOS) 306 366 379 314 253 243 266 319	8.0 8.2 8.0 7.9 7.5 8.2 9.1 8.0	PERATURE (DEG C) 12 8 0 0 0 0 8 11 14 10	9.3 10.1 12.7 11.1 9.8 7.9 10.6 9.1 8.3
CCT. 10 Mdv. 07 DEC. 13 JAN. 05 FEB. 09 MAR. 07 APR. 02 MAY CT JULY 04 AUG.	SOLVED SOLVED SOLIDS (RESIDUE AT 180 C)	NESS (CA.MG) 93 97 105 95 68 73 79 93 103	CAR- dONATE HARD- NESS 0 0 0 0 0 0 0 0 0 0 0	SOL VED SOL IOS SOL IOS SOL IOS (10NS PER AC-FT)	\$0010M 40 46 44 42 46 34 41 39 38 40	AO- SORP- TION RATIO 1.3 1.7 1.6 1.4 1.4 .9 1.2 1.4	LINITY AS CACO3 138 152 150 136 94 95 107 129 146 155	FIC COND- COND- UCTANCE (MICRO- MHOS) 306 366 379 314 253 243 266 319 320 340	8.0 8.2 8.0 7.9 7.5 8.2 9.1 8.0 8.4	PERATURE (DEG C) 12 8 0 0 8 11 14 10 23	9.3 10.1 12.7 11.1 9.8 7.9 10.6 9.1 8.3
CCT. 10 NGV. 07 DEC. 13 JAN. 05 FEB. 09 MAR. 07 APR. 02 MAY C7 JUNE 10 JULY	SOLVED SOLLEDS (RESIDUE AT 180 C)	NESS (CA.MG) 93 97 105 95 68 73 79 93 103	CAR- dONATE HARD- NESS 0 0 0 0 0 0 0 0 0 0	SOL VED SOL IOS (1 TONS PER AC-FT)	SODIUM 40 46 44 42 46 34 41 39 38	AO- SORP- TION RATIO 1.3 1.7 1.6 1.4 1.4 2.9	LINITY AS CACO3 138 152 150 136 94 95 107 129 146	FIC COND- UCTANCE (MICRO- WHOS) 306 366 379 314 253 243 266 319	8.0 8.2 8.0 7.9 7.5 8.2 9.1 8.0	PERATURE (DEG C) 12 8 0 0 0 0 8 11 14 10	9.3 10.1 12.7 11.1 9.8 7.9 10.6 9.1 8.3

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;

			٧,	VISUAL	ACCUMULATIO	N TUB	E; ₩,	IN D	ISTIL	LEG W	ATER)						
		WATER	ર							PART	ICLE :	SIZE					
		TEM-			SUSPENDED -												METHOD
		PERA-		CONCEN-	SEDIMENT	PERCI	ENT F	INER	THAN	THE S	IZE (IN MI	LLIME	TERS)	INDI	CATED	OF
		TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.00B	.016	.031	.062	.125	•250	.500	1.00	2.00	212
NOV 8 1967	1315	7	56	35	5.3											:	
JAN 16 1968	1500	i	310	127	106												
FEB 20	1720	4	1430	223	861	47	56	67	75	79	91	93	96	100			SCBW
FEB 22	1650	7	2180	118	695	43	56	74	80	84	93	94	96	100			SCBW
APR 2		11	95	30	7.7												
MAY 14	1 300	11	238	84	54		20	55	63	70	95	98	99	100			SCBW
MAY 22	1300	ii	98	89	24												
JUL 16	1015	17	28	38	2.9												
SEP 11	1015	15	24	51	3.3												

SACRAMENTO RIVER BASIN

11348500 PIT RIVER NEAR CAMBY, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	or	TUBER	NOV	MBFR	DECI	MBER	.141	IUARY	FFRE	LUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	MIN
1	15.0	13.0	9.0	5.0	2.0	1.0			1.0	1.0	9.0	B.0
2	13.0 10.0	8.0 7.0	8.0 7.0	6.0 5.0	1.0 3.0	1.0			1.0	1.0	10.0 10.0	7.0 7.0
4	10.0	B.0	7.0	5.0	4.0	2.0			1.0	1.0	11.0	7.0
5	11.0	9.0	7.0	6.0	3.0	1.0			1.0	1.0	9.0	6.0
6	10.0	8.0	8.0	6.0	1.0	1.0			1.0	1.0	9.0	6.0
8	11.0 12.0	8.0 10.0	8.0 8.0	6.0 7.0	2.0 1.0	1.0 1.0			1.0	1.0	8.0 B.O	6.0
9 10	12.0 12.0	10.0 10.0	8.0 7.0	6.0 6.0	1.0	1.0 1.0			1.0	1.0	9.0 9.0	4.0 4.0
11 12	14.0	11.0	7.0 7.0	6.0 6.0	1.0	1.0			1.0 3.0	1.0 2.0	8.0 6.0	4.0 3.0
13	13.0	10.0	7.0	6.0	1.0	1.0			3.0	2.0	7.0	3.0
14 15	12.0 12.0	9.0 8.0	8.0 7.0	6.0 6.0	1.0	1.0			2.0 3.0	1.0	7.0 10.0	4.0 4.0
16	12.0	8.0	8.0	6.0	1.0	1.0			3.0	1.0	8.0	4.0
17	11.0	8.0	7.0	4.0	1.0	1.0	1.0	1.0	3.0 4.0	2.0	7.0 7.0	3.0 3.0
18 19	11.0 12.0	8.0 8.0	6.0	4.0 3.0	1.0 2.0	1.0	1.0	1.0	4.0	3.0 3.0	9.0	3.0
20	12.0	8.0	5.0	2.0	2.0	1.0	2.0	1.0	4.0	3.0	11.0	4.0
21	9.0	8.0	4.0	2.0	2.0	2.0	2.0	1.0	6.0 7.0	3.0	11.0 9.0	5.0 7.0
22 23	11.0 12.0	8.0 8.0	3.0 4.0	1.0	2.0 2.0	2.0 2.0	2.0 2.0	1.0 1.0	9.0	5.0 7.0	10-0	6.0
24 25	11.0	8.0 7.0	4.0 3.0	1.0	2.0 2.0	2.0	2.0 1.0	1.0	9.0 10.0	7.0 7.0	12.0 9.0	6.0 7.0
26 27	9.0 9.0	7.0 7.0	3.0 3.0	0.0	2.0 2.0	1.0	1.0	1.0 1.0	11.0 9.0	7.0 8.0	12.0 13.0	5.0 6.0
28	9.0	7.0	3.0	1.0	2.0	1.0	1.0	1.0	9.0 9.0	7.0	15.0	8.0 9.0
29 30	8.0 8.0	6.0 4.0	2.0 3.0	1.0			1.0	1.0		7.0	16.0 17.0	10.0
31	9.0	5.0					1.0	1.0			16.0	11.0
MONTH	15.0	4.0	9.0	0.0	4.0	1.0			11.0	1.0	17.0	3.0
	A	PRIL	•	YAY	J	JNE	JU	JL Y	AUG	GUST	SEP	TEMBER
DAY	A) MAX	PRIL Min	MAX	MIN	IL XAP	MIN	JL Måx	JLY Min	MAX	GUST MIN	SEP'	TEMBER MIN
1	MAX 13.0	MIN 11.0	MAX 17.0	MIN 11.0	4AX 21.0	MIN 15.0	MAX 25.0	MIN 18.0	MAX 25.0	MIN 19.0	MAX	# I N
	MAX 13.0 12.0	MIN 11.0 8.0	MAX 17.0 18.0	MIN 11.0 12.0	4AX 21.0 18.0	MIN 15.0 14.0	MAX 25.0 23.0	MIN 18.0 19.0	MAX 25.0 27.0	MIN 19.0 18.0		MIN
1 2 3 4	MAX 13.0 12.0 12.0 11.0	MIN 11.0 8.0 6.0 8.0	MAX 17.0 18.0 17.0 17.0	MIN 11.0 12.0 12.0 13.0	94X 21.0 18.0 20.0 21.0	MIN 15.0 14.0 15.0 15.0	MAX 25.0 23.0 25.0 27.0	MIN 18.0 19.0 18.0 20.0	MAX 25.0 27.0 26.0 24.0	MIN 19.0 18.0 18.0	MAX	#IN
1 2 3 4 5	MAX 13.0 12.0 12.0 11.0	MIN 11.0 8.0 6.0 8.0 8.0	MAX 17.0 18.0 17.0 17.0	MIN 11.0 12.0 12.0 13.0 11.0	MAX 21.0 18.0 20.0 21.0 16.0	MIN 15.0 14.0 15.0 15.0 13.0	MAX 25.0 23.0 25.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0	MAX 25.0 27.0 26.0 24.0 23.0	MIN 19.0 18.0 18.0	MAX	MIN
1 2 3 4 5	MAX 13.0 12.0 12.0 11.0 10.0	MIN 11.0 8.0 6.0 8.0 8.0	MAX 17.0 18.0 17.0 17.0 16.0	MIN 11.0 12.0 12.0 13.0 11.0	94X 21.0 18.0 20.0 21.0 16.0	MIN 15.0 14.0 15.0 15.0 13.0	MAX 25.0 23.0 25.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0	MAX 25.0 27.0 26.0 24.0 23.0	MIN 19.0 18.0 18.0 18.0 16.0	MAX	#IN
1 2 3 4 5 6 7 8	MAX 13.0 12.0 12.0 11.0 10.0	MIN 11.0 8.0 6.0 8.0 8.0 5.0	MAX 17.0 18.0 17.0 17.0 16.0	MIN 11.0 12.0 12.0 13.0 11.0	MAX 21.0 18.0 20.0 21.0 16.0 17.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0	MAX 25.0 23.0 25.0 27.0 26.0 27.0 28.0 27.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0	MIN 19.0 18.0 18.0 16.0 16.0	MAX	MIN
1 2 3 4 5 6 7 8	MAX 13.0 12.0 11.0 10.0 11.0 13.0 15.0	MIN 11.0 8.0 6.0 8.0 8.0 5.0 6.0 7.0 9.0	MAX 17.0 18.0 17.0 17.0 16.0 15.0 17.0 18.0	MIN 11.0 12.0 13.0 13.0 11.0 9.0 10.0 12.0 13.0	18.0 20.0 21.0 16.0 21.0 16.0 17.0 19.0 20.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0	MAX 25.0 23.0 25.0 27.0 26.0 27.0 28.0 27.0 27.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 22.0 21.0 20.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0	MIN 19.0 18.0 18.0 18.0 16.0 16.0 19.0 20.0	MAX	MIN
1 2 3 4 5 6 7 8 9	MAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 15.0 17.0 18.0	MIN 11.0 8.0 6.0 8.0 8.0 5.0 6.0 7.0 9.0	MAX 17.0 18.0 17.0 17.0 16.0 15.0 17.0 18.0 18.0	MIN 11.0 12.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0	16.0 17.0 19.0 20.0 21.0 16.0 17.0 19.0 20.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 15.0 16.0	MAX 25.0 23.0 27.0 27.0 26.0 27.0 27.0 27.0 27.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 19.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0 22.0	MIN 19-0 18-0 18-0 16-0 16-0 19-0 20-0 18-0	MAX	MIN
1 2 3 4 5 6 7 8 9	MAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 17.0 18.0 17.0 14.0	MIN 11.0 8.0 6.0 8.0 8.0 6.0 7.0 9.0 11.0	MAX 17.0 18.0 17.0 17.0 16.0 15.0 17.0 18.0 18.0	MIN 11.0 12.0 13.0 11.0 11.0 10.0 12.0 13.0 13.0	21.0 18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 15.0 16.0	MAX 25.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 19.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0	MIN 19.0 18.0 18.0 16.0 16.0 19.0 20.0 18.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 15.0 17.0 18.0	MIN 11.0 8.0 6.0 8.0 8.0 5.0 6.0 7.0 9.0 11.0	MAX 17.0 18.0 17.0 17.0 16.0 15.0 17.0 18.0 18.0 16.0 17.0 13.0	MIN 11.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 13.0 13.0 13.0	16.0 20.0 21.0 16.0 16.0 16.0 17.0 19.0 20.0 20.0 20.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 16.0 17.0	MAX 25.0 23.0 27.0 27.0 26.0 27.0 27.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 19.0 18.0 18.0 17.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0 24.0 24.0 24.0 24.0 20.0	MIN 19-0 18-0 18-0 18-0 16-0 16-0 16-0 17-0 16-0 16-0	MAX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 17.0 18.0 17.0 14.0	MIN 11.0 8.0 6.0 8.0 8.0 5.0 6.0 7.0 9.0 11.0	MAX 17.0 18.0 17.0 17.0 16.0 15.0 18.0 18.0 18.0	MIN 11.0 12.0 13.0 11.0 11.0 10.0 12.0 13.0 13.0	21.0 18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0	MIN 15.0 15.0 15.0 13.0 13.0 13.0 16.0 17.0	MAX 25.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 19.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0 22.0 24.0 24.0	MIN 19.0 18.0 18.0 18.0 16.0 16.0 19.0 20.0 17.0 16.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 12.0 12.0 11.0 10.0 11.0 15.0 17.0 14.0 14.0 15.0 17.0 14.0	MIN 11.0 8.0 6.0 8.0 8.0 7.0 9.0 11.0 11.0 11.0 9.0	MAX 17.0 18.0 17.0 16.0 15.0 18.0 18.0 18.0 18.0 17.0 13.0 13.0 13.0	MIN 11.0 12.0 12.0 13.0 11.0 9.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	18.0 20.0 20.0 16.0 16.0 17.0 19.0 20.0 20.0 20.0 19.0 21.0 24.0	MIN 15.0 14.0 15.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0	MAX 25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 19.0 18.0 17.0 18.0	MAX 25.0 27.0 26.0 23.0 23.0 22.0 22.0 24.0 23.0 24.0 29.0 29.0 29.0 29.0 19.0 19.0	MIN 19.0 18.0 18.0 16.0 16.0 19.0 20.0 18.0 17.0 16.0 16.0 16.0	21.0 19.0 18.0	HIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 12.0 12.0 10.0 10.0 13.0 15.0 17.0 18.0 14.0 15.0 15.0 13.0	MIN 11.0 8.0 6.0 8.0 8.0 7.0 9.0 11.0 10.0 7.0 9.0	HAX 17.0 18.0 17.0 17.0 16.0 15.0 18.0 18.0 18.0 16.0 17.0 13.0 16.0	MIN 11.0 12.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 13.0 11.0 9.0 10.0	18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 24.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 18.0 20.0	25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 24.0 25.0 25.0 24.0	MIN 18.0 19.0 20.0 20.0 24.0 22.0 21.0 20.0 19.0 18.0 17.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 24.0 29.0 19.0 19.0	MIN 19.0 18.0 18.0 16.0 16.0 16.0 19.0 20.0 17.0 16.0 16.0 14.0	MAX	HIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MAX 13.0 12.0 12.0 12.0 11.0 10.0 11.0 13.0 15.0 17.0 18.0 17.0 18.0 17.0 18.0	MIN 11.0 8.0 6.0 8.0 5.0 7.0 9.0 11.0 10.0 10.0 8.0 8.0	17.0 18.0 17.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 11.0 12.0 13.0 12.0 16.0 17.0	MIN 11.0 12.0 12.0 13.0 11.0 9.0 12.0 13.0 13.0 11.0 9.0 8.0 10.0 12.0 11.0	21.0 18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0 20.0 19.0 21.0 24.0 24.0 25.0 26.0 27.0 28.0	15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 16.0 16.0 18.0 20.0	25.0 23.0 25.0 27.0 26.0 27.0 28.0 27.0 27.0 26.0 24.0 25.0 25.0 25.0 24.0 25.0 26.0	18.0 19.0 19.0 20.0 20.0 22.0 21.0 22.0 21.0 20.0 19.0 18.0 17.0 17.0 17.0	25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 24.0 21.0 20.0 19.0 17.0 17.0	MIN 19.0 18.0 18.0 16.0 19.0 20.0 19.0 20.0 16.0 16.0 16.0 14.0	21.0 19.0 18.0 20.0 18.0	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 12.0 12.0 10.0 10.0 13.0 15.0 17.0 18.0 14.0 15.0 15.0 13.0	MIN 11.0 8.0 6.0 8.0 8.0 7.0 9.0 11.0 10.0 7.0 9.0	HAX 17.0 18.0 17.0 17.0 16.0 15.0 18.0 18.0 18.0 16.0 17.0 13.0 16.0	MIN 11.0 12.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 13.0 11.0 9.0 10.0	18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 24.0	MIN 15.0 14.0 15.0 15.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 18.0 20.0	25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 24.0 25.0 25.0 24.0	MIN 18.0 19.0 20.0 20.0 24.0 22.0 21.0 20.0 19.0 18.0 17.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 24.0 29.0 19.0 19.0	MIN 19.0 18.0 18.0 16.0 16.0 16.0 19.0 20.0 17.0 16.0 16.0 14.0	MAX	HIN
1 2 3 4 5 5 6 7 8 9 10 11 12 12 12 12 14 15 16 17 18 19 20 21	MAX 13.0 12.0 12.0 11.0 11.0 13.0 15.0 17.0 14.0 15.0 17.0 16.0 10.0 10.0 10.0 11.0 11.0 11.0 11	MIN 11.0 6.0 6.0 8.0 8.0 8.0 7.0 9.0 11.0 10.0 7.0 9.0 10.0 7.0 9.0	17.0 18.0 17.0 17.0 16.0 17.0 16.0 18.0 18.0 18.0 12.0 16.0 17.0 13.0 12.0 16.0 17.0 18.0	MIN 11.0 12.0 13.0 11.0 10.0 12.0 12.0 13.0 13.0 11.0 9.0 10.0 12.0 14.0 14.0 14.0 14.0 15.0 13.0	21.0 18.0 20.0 21.0 16.0 17.0 19.0 20.0 20.0 20.0 21.0 24.0 24.0 26.0 26.0 26.0	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 17.0 16.0 18.0 20.0 19.0 19.0 19.0 20.0 21.0	MAX 25.0 23.0 27.0 27.0 27.0 27.0 27.0 27.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MIN 18.0 19.0 18.0 20.0 24.0 22.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 23.0 19.0 19.0 17.0 18.0 17.0 15.0 14.0	MIN 19-0 18-0 18-0 18-0 16-0 19-0 20-0 18-0 17-0 16-0 16-0 14-0 13-0 14-0 13-0 13-0 12-0	21.0 19.0 18.0 20.0 15.0 14.0	HIN 14-0 14-0 13-0 12-0 11-0 12-0 11-0 10-0 8-0
1 2 3 4 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20	13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	11.0 6.0 6.0 8.0 8.0 7.0 7.0 11.0 11.0 10.0 7.0 9.0 8.0	17.0 18.0 17.0 17.0 16.0 15.0 18.0 18.0 18.0 18.0 17.0 13.0 12.0 16.0 18.0	MIN 11.0 12.0 12.0 13.0 11.0 10.0 12.0 12.0 13.0 12.0 14.0 14.0 14.0 15.0 15.0 15.0	21.0 18.0 20.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 21.0 24.0 24.0 26.0 26.0 26.0	HIN 15.0 14.0 15.0 15.0 13.0 13.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0	25.0 23.0 25.0 27.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0	HIN 18.0 19.0 20.0 22.0 22.0 21.0 20.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0	25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 23.0 20.0 19.0 19.0 17.0 18.0 15.0 14.0	HIN 19.0 18.0 18.0 18.0 18.0 16.0 18.0 19.0 20.0 18.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	21.00 18.00 18.00 15.00 14.00 14.00	HIN
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	HAX 13.0 12.0 12.0 11.0 11.0 11.0 15.0 17.0 18.0 17.0 16.0 10.0 10.0 10.0 10.0 11.0 11.0 11	MIN 11.0 8.0 8.0 8.0 7.0 9.0 11.0 11.0 10.0 9.0 8.0 5.0 6.0 10.0 7.0 9.0	17.0 18.0 17.0 16.0 17.0 16.0 18.0 18.0 18.0 11.0 11.0 11.0 11.0 11	11.0 12.0 13.0 13.0 11.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 14.0 15.0 14.0 15.0 15.0 12.0 14.0 15.0	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 21.0 22.0 22	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 17.0 16.0 17.0 16.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	MAX 25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 26.0 24.0 25.0 24.0 24.0 26.0 26.0 25.0 26.0 26.0 26.0	MIN 18.0 19.0 18.0 20.0 22.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 16.0 16.0	MAX 25.0 27.0 26.0 24.0 23.0 23.0 22.0 22.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 18.0 18.0 16.0 16.0 19.0 20.0 11.0 16.0 16.0 16.0 16.0 16.0 16.0 1	21.00 18.00 18.00 15.00 14.00 17.00 16.00 16.00	HIN
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 24 25	13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	11.0 8.0 8.0 8.0 7.0 9.0 11.0 10.0 10.0 9.0 8.0 6.0 10.0 7.0 9.0	17.0 18.0 17.0 16.0 17.0 16.0 18.0 18.0 18.0 11.0 11.0 11.0 11.0 11	11.0 12.0 13.0 13.0 11.0 12.0 13.0 12.0 13.0 12.0 11.0 12.0 11.0 12.0 14.0 15.0 14.0 15.0 12.0 14.0 15.0	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 24.0 24.0 26.0 27.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 16.0 17.0 16.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 27.0 26.0 24.0 25.0 24.0 24.0 26.0 25.0 25.0 25.0 26.0 25.0 26.0 27.0 26.0	MIN 18.0 19.0 18.0 20.0 22.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 14.0 17.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 24.0 24.0 24.0 19.0 17.0 14.0 14.0 17.0 16.0 17.0 17.0	MIN 19.0 18.0 18.0 16.0 16.0 19.0 20.0 11.0 16.0 16.0 16.0 16.0 11.0 11.0 1	21.00 18.00 18.00 14.00 14.00 16.00 16.00	HIN
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1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 5 15 16 17 18 19 20 21 22 3 24 25 26 27 28	HAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 17.0 14.0 15.0 17.0 16.0 15.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 11.0 6.0 8.0 8.0 8.0 7.0 9.0 11.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 9.0 10.0 9.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	17.0 18.0 17.0 17.0 17.0 16.0 18.0 18.0 18.0 12.0 16.0 17.0 13.0 12.0 16.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 12.0 13.0 11.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 14.0 15.0 14.0 15.0 12.0 14.0 15.0 13.0 12.0 11.0 12.0 14.0 15.0 13.0 17.0	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 24.0 24.0 26.0 26.0 27.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 17.0 16.0 11.0 20.0 20.0 21.0 21.0 21.0 21.0 21	MAX 25.0 23.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 14.0 18.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 23.0 19.0 17.0 15.0 14.0 16.0 17.0 18.0 17.0 17.0 19.0 19.0	MIN 19-0 18-0 18-0 18-0 18-0 16-0 18-0 16-0 19-0 20-0 18-0 16-0 16-0 14-0 13-0 13-0 14-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HAX	HIN
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27	MAX 13.0 12.0 12.0 11.0 11.0 13.0 15.0 17.0 18.0 17.0 18.0 19.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 11.0 8.0 8.0 8.0 9.0 11.0 11.0 11.0 10.0 8.0 5.0 6.0 10.0 7.0 8.0 6.0 9.0 9.0 9.0 9.0	17.0 18.0 17.0 17.0 16.0 15.0 18.0 18.0 18.0 11.0 11.0 11.0 11.0 11	11.0 12.0 13.0 13.0 10.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 15.0 15.0 17.0 11.0	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 20.0 21.0 22.0 24.0 24.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 16.0 16.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MAX 25.0 23.0 25.0 27.0 26.0 27.0 27.0 27.0 26.0 25.0 25.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0	MIN 18.0 19.0 18.0 20.0 22.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 18.0	MAX 25.0 27.0 26.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 21.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 18.0 18.0 16.0 16.0 19.0 20.0 11.0 16.0 16.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 17.0 17.0 17.0 18.0	MAX	HIN
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	HAX 13.0 12.0 12.0 11.0 10.0 11.0 13.0 17.0 14.0 15.0 17.0 16.0 15.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 11.0 6.0 8.0 8.0 8.0 7.0 9.0 11.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 7.0 9.0 10.0 9.0 10.0 9.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	17.0 18.0 17.0 17.0 17.0 16.0 18.0 18.0 18.0 12.0 16.0 17.0 13.0 12.0 16.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 12.0 13.0 11.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 14.0 15.0 14.0 15.0 12.0 14.0 15.0 13.0 12.0 11.0 12.0 14.0 15.0 13.0 17.0	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 24.0 24.0 26.0 26.0 27.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 17.0 16.0 11.0 20.0 20.0 21.0 21.0 21.0 21.0 21	MAX 25.0 23.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 14.0 18.0	MAX 25.0 27.0 26.0 24.0 23.0 22.0 22.0 22.0 24.0 23.0 19.0 17.0 15.0 14.0 16.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0	MIN 19-0 18-0 18-0 18-0 18-0 16-0 18-0 16-0 19-0 20-0 18-0 16-0 16-0 14-0 13-0 13-0 14-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HAX	HIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	MAX 13.0 12.0 12.0 11.0 11.0 13.0 15.0 17.0 18.0 17.0 18.0 19.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MIN 11.0 8.0 8.0 8.0 9.0 11.0 11.0 11.0 10.0 8.0 5.0 6.0 10.0 7.0 8.0 6.0 9.0 9.0 9.0 9.0	17.0 18.0 17.0 17.0 17.0 16.0 18.0 18.0 18.0 11.0 12.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HIN 11.0 12.0 13.0 11.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 1	21.0 18.0 20.0 21.0 16.0 17.0 20.0 20.0 20.0 20.0 21.0 20.0 21.0 22.0 24.0 24.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	HIN 15.0 14.0 15.0 15.0 13.0 13.0 13.0 16.0 16.0 16.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MAX 25.0 23.0 25.0 27.0 26.0 27.0 27.0 26.0 25.0 25.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 18.0 19.0 18.0 20.0 24.0 22.0 21.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 18.0 18.0 19.0	MAX 25.0 27.0 26.0 26.0 26.0 23.0 23.0 22.0 22.0 24.0 23.0 19.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 19.0 18.0 18.0 18.0 16.0 19.0 20.0 18.0 17.0 16.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 14.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX	HIN
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11365000 . PIT RIVER NEAR MONTGOMERY CREEK, CALIF.

LOCATION. --Lat 40°50'36", long 122°00'58", in SE 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 1968.
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 IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	\$001UM (AA)	PO- TAS- S I UM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- Ride (CL)	NITRATE (NO3)	BORON (B)
CCT. 10	5050			9.7		77	0		3.4		.02
NOV. C7	3370			9.5		79	0		6.7		.02
13	3600			9.9		80	o		3.0		.06
JAN. 05 FEB.	4240			8.6		90	0				.04
09	5300			7.2		76	0		2.3		.07
07 APR.	0730			6.0		62	0		2.0		.04
02 MAY	7340			6.6		72	0		1.5		.01
07 JUNE	5360	10	5.1	8.7	1.8	73	0	.0	2.7	.3	.09
10 JULY	4290			9.2		77	0		2.5		.11
O5 AUG.	4380			8.7		83	0		3.0		.02
C7 SEPT.	3070			10		80	0		3.0		•02
06	4720	10	5.6	10	2.2	80	0	4.6	3.2	•0	• 09
	OIS-			015-				SPEC 1-			
DATE	SOLIDS (RESI- OUE AT 180 C)	HARO~ NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SOLVEO SOLIDS LIONS PER AC-FTI	PERCENT SOOIUM	S JOI UM AD- SORP- TION RATTO	ALKA- LINITY AS CACO3	FIC COND- UCTANCF (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
CCT.	SOLIDS IRESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLIDS LTONS PER AC-FTI	\$001UM	AD- SORP- TION RATTO	LINITY AS CACO3	COND- UCTANCF (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
CC T. 10 NOV.	SOLIDS (RESI- OUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLIDS LIONS PER AC-FTI	\$001UM 31	AD- SORP- TION RATTO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.9	PERA- TURE	SOLVED OXYGEN 9.8
10 NOV. 07	SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 48	CAR- BONATE HARD- NESS O	SOLIDS LTONS PER AC-FTI	31 30	AD- SORP- TION RATTO -6	LINITY AS CACO3	COND- UCTANCF (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
CCT. 10 NOV. 07 DEC. 13	SOLIDS (RESI- OUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLIDS LIONS PER AC-FTI	\$001UM 31	AD- SORP- TION RATTO	LINITY AS CACD3 63	COND- UCTANCF (MICRO- MHOS)	7.9 8.0	PERA- TURE (DEG C)	SOLVED OXYGEN 9.8 11.3
CCT. 10 NOV. 07 DEC. 13 JAN. 05 FEB. C9	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 48 49 51	CAR- BONATE HARD- NESS O O	SOLIDS (TONS PER AC-FT)	31 30 30	SORP- TION RATTO	63 65 66	COND- UCTANCF (MICRO- MHOS) 141 139 148	7.9 8.0 8.0	PERA- TURE (DEG C)	9.8 11.3
CCT. 10 NOV. 07 DEC. 13 JAN. 05 FEB. C9 MAR. C7	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 48 49 51	CAR- BONATE HARD- NESS 0 0 0	SOLIDS (TONS PER AC-FT)	31 30 30 27	AD- SORP- TION RATTO -6 -6	63 65 66	COND- UCTANCE (MICRO- MHOS) 141 139 148 143	7.9 8.0 8.0	PERA- TURE (DEG C) 14 11 5	9.8 11.3 12.4
CCT. 10 NOV. 07 OEC. 13 JAN. 05 FEB. C9 MAR. C7	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 48 49 51 50	CAR- BONATE HARD- NESS 0 0 0	SOLIDS (TONS PER AC-FT)	31 30 30 27 24	AD- SORP- TION RATTO -6 -6 -6	LINITY AS CACO3 63 65 66 66	COND- UCTANCE (MICRO- MHOS) 141 139 148 143	7.9 8.0 8.0 8.1 7.7	PERA- TURE (DEG C) 14 11 5 5	9.8 11.3 12.4 12.4
CCT. 10 NOV. 07 0EC. 13 JAN. 05 FEB. C9 MAR. 07 APR. 02 MAY C7	SOLIDS (RESI- OUE AT 180 C)	NESS (CA, MG) 48 49 51 50 50 42	CAR- BONATE HARD- NESS 0 0 0 0	SOLIDS (TONS PER AC-FT)	31 30 30 27 24	AD- SORP- TION RATTO -6 -6 -6 -6	63 65 66 66 62	COND- UCTANCF (MICRO- MHOS) 141 139 148 143 140	7.9 8.0 8.0 8.1 7.7 8.0	PERA- TURE (DEG C) 14 11 5 5	9.8 11.3 12.4 12.4 10.8
CCT. 10 NOV. 07 DEC. 13 JAN. 05 FEB. C9 MAR. C7 APR. 02 MAY. G7 JUNE	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 48 49 51 50 50 42 46	CAR- BONATE HARD- NESS O O O O O	SOLIDS (TONS PER AC-FT)	31 30 30 27 24 24	-6 -6 -6 -6 -4	63 65 66 66 62 51	COND- UCTANCE (MICRO- MHOS) 141 139 148 143 140 116	7.9 8.0 8.1 7.7 8.0	PERA- TURE (DEG C) 14 11 5 5 5 9	9.8 11.3 12.4 12.4 10.8
CCT. 10 NOV. 07 0EC. 13 JAN. 05 FEB. C9 MAR. C7 APR. 02 MAY C7 JULY 05	SOLIDS (RESI- DUE AT 180 C) 88	NESS (CA, MG) 48 49 51 50 50 42 46 46	CAR- BONATE HARD- NESS 0 0 0 0 0 0 0	SOLIDS (TONS PER AC-FT)	31 30 30 27 24 24 24 28	.6 .6 .5 .4 .4 .6	LINITY AS CACO3 63 65 66 66 62 51 59 60	COND- UCTANCF (MICRO- MHOS) 141 139 148 143 140 116 130	7.9 8.0 8.1 7.7 8.0 7.9	PERA- TURE (DEG C) 14 11 5 5 9 11 13	9.8 11.3 12.4 12.4 10.8 11.0
CCT. 10 NOV. 07 0EC. 13 JAN. 05 FEB. C9 MAR. C7 APR. 02 MAY C7 JUNE	SOLIDS (RESI- DUE AT 180 C) 88	NESS (CA, MG) 48 49 51 50 50 42 46 46 51	CAR-BONATE HARD-NESS 0 0 0 0 0 0 0 0 0	SOLIDS (170NS PER AC-FT1	31 30 30 27 24 24 24 28 28	AD- SORP- TION RATTO -6 -6 -6 -5 -4 -4 -4	LINITY AS CACO3 63 65 66 66 62 51 59 60 63	COND- UCTANCE (MICRO- MHOS) 141 139 148 143 140 116 130 130	7.9 8.0 8.1 7.7 8.0 7.9 8.0	PERA- TURE (DEG C) 14 11 5 5 9 11 13 16	9.8 11.3 12.4 12.4 10.8 11.0

11368000 MCCLOUD RIVER ABOVE SHASTA LAKE, CALIF.

LOCATION.--Lat 40°57'30", long 122°13'05", in NW sec.28, T.36 N., R.3 W., Shasta County, at gaging station just upstream from Shasta Lake, 0.2 mile downstream from Hig Hollibokka Creek, and 11.3 miles east of Lamoine.

DRAINAGE AREA, -- 604 sq mi.

PERIOD OF RECORD. --Chemical analyses: October 1958 to September 1968.
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.

SACRAMENTO RIVER BASIN

11368000 MCCLOUD RIVER ABOVE SHASTA LAKE, CALIF. -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTORER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BDNATE (HCD3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NETRATE (NO3)	BORON (8)
00T. 09	317			5.7		60	o		1.7		.03
08	305			5.0		62	0		1.5		.00
DEC. 12 JAN.	334			5.2		59	0		1.6		.05
03	297			4.0		36	0				.00
FEB. 13 Mar.	77B			2.5		54	0				.03
06	764			3.1		58	0		.5		.00
APR. Ol May	727			2.6		59	0				.00
06	348	16	2.9	4.2	.5	65	0	1.0	1.7	•0	.06
10	334			4.4		62	0		1.3		.05
03 AUG.	289			3.4		64	0		1.7		•00
C6 SEPT.	265			5.4		62	0		1.5		•00
04	273	12	3.6	5.6	1.1	62	0	2.0	1.4	•0	.00
	015-										
DATE	SOLVED SOLIOS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BDNATE HARD- NESS	OIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCF (MICRO- MHOS)	РН	TEM- PERA TURE (DEG C)	DIS- SOLVED OXYGEN
DATE OCT.	SOLVED SOLIOS (RESI- DUE AT	NESS	CAR- BDNATE HARD-	SOLVED SOLIDS ITONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCF IMICRO-	РН	PERA TURE	SOLVED
OCT. 09	SOLVED SOLIOS (RESI- DUE AT	NESS	CAR- BDNATE HARD-	SOLVED SOLIDS ITONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCF IMICRO-	PH 7.6	PERA TURE	SOLVED
0CT. 09 NDV. 08	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BDNATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA TURE (DEG C)	SOLVED
OCT. 09 NDV. 08 DEC. 12	SOLVED SOLIOS (RESI- DUE AT 180 C)	NESS (CA.MG)	CAR- BDNATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	S0D1 UM	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND— UCTANCE (MICRO— MHOS)	7.6	PERA TURE (DEG C)	SOLVED OXYGEN
OCT. 09 NOV. 08 DEC. 12 JAN. 03	SOLVED SOLIOS (RESI- DUE AT 180 C)	NESS (CA, MG) 43	CAR- BDNATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	22 20	AD- SORP- TION RATIO	LINITY AS CACO3 49	FIC COND— UCTANCE (MICRO— MHOS)	7.6 8.1	PERA- TURE (DEG C)	SOLVED OXYGEN 10.5
OCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB.	SOLVED SOLIOS (RESI- DUE AT 180 C)	NESS (CA,MG) 43 43 44 46	CAR- BDNATE HARD- NESS 0 0	SOLVED SOLIDS (TONS PER AC-FT)	22 20 20 16	SORP- TION RATIO	LINITY AS CACO3 49 51 48	FIC COND- UCTANCE (MICRO- MHOS) 112 109	7.6 8.1 7.9	PERA- TURE (DEG C)	SOLVED OXYGEN 10.5 11.1 12.5
OCT. 09 NDV. 08 DEC. 12 JAN. 03 FEB. 13 MAR.	SOLVED SOL IOS (RESI- DUE AT 180 C)	NESS (CA, MG) 43 43	CAR- BDNATE HARD- NESS 0 0	SOL VED SOL IDS (TODS PER AC-FT)	22 20 20	AD— SORP— TION RATIO	LINITY AS CACO3 49 51 48 30	FIC COND— UCTANCE (MICRO÷ MHOS) 112 109 115	7.6 8.1 7.9 8.0	PERATURE (DEG C) 10 9 14	10.5 11.1 12.5 12.7
OCT. 09 NDV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06	SOLVED SOLIOS (RESI- DUE AT 180 C)	NESS (CA+MG) 43 43 44 46 43	CAR- BDNATE HARD- NESS 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	22 20 20 16 11	AD- SORP- TION RATIO .4 .3 .3 .3	LINITY AS CACO3 49 51 48 30 44	FIC COMP- UCTANCE (MICRO- MHOS) 112 109 115 113	7.6 8.1 7.9 8.0 7.7	PERATURE (DEG C)	10.5 11.1 12.5 12.7
OCT. 09 NDV. 08 12 JAN. 03 FEB. 13 MAR. 06 APR.	SOLVED SOLIOS (RESIDUE AT 180 C)	NESS (CA.MG) 43 43 44 46 43 48	CAR- BDNATE HARD- NESS 0 0 0 16 0	SOLVED SOL IDS (170NS PER AC-FT)	22 20 20 16 11 12	AD- SORP- TION RATIO .4 .3 .3 .3 .2 .2	LINITY AS CACO3 49 51 48 30 44 48	FIC COND- UCTANCE (MICRO- MHOS) 112 109 115 113 101 107	7.6 8.1 7.9 8.0 7.7 8.0	PERA- TURE (DEG C) 10 9 14 2 6 7	SOLVED OXYGEN 10.5 11.1 12.5 12.7 12.2 11.0
OCT. 09 NDV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY 06 JUNE	SOLVED SOLIOS (RESI-DUE AT 180 C)	NESS (CA.MG) 43 43 44 46 43 48 45	CAR- BDNATE HARD- NESS 0 0 0 16 0 0 0	SOLVED SOL IDS (TONS PER AC-FT)	22 20 20 16 11 12 11	AO- SORP- TION RATIO -4 -3 -3 -2 -2 -2 -3	LINITY AS CACO3 49 51 48 30 44 48 48 53	FIC COND- UCTANCF (MICRO- WHOS) 112 109 115 113 101 107 108 118	7.6 8.1 7.9 8.0 7.7 8.0 7.9	PERA- TUDEG C) 10 9 14 2 6 7 9 10	10.5 11.1 12.5 12.7 12.2 11.0 9.5
OCT. 09 NDV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY 06 JUNE 10 JULY	SOLVED SOLIOS (RESIDUE AT 180 C)	NESS (CA. MG) 43 43 44 46 43 48 45 52	CAR- BONATE HARD- NESS 0 0 0 16 0 0 0	SOLVED SOL IDS (170NS PER AC-FT)	22 20 20 16 11 12 11	40- SOPP- TION RATIO -4 -3 -3 -3 -2 -2 -2 -3 -3	LINITY AS CACO3 49 51 48 30 44 48 48 53 51	FIC COND- UCTANCE [MICRO- MHOS) - 112 109 115 113 101 107 109 118	7.6 9.1 7.9 8.0 7.7 8.0 7.9 8.0	PERA- TURE (DEG C) 10 9 14 2 6 7 9	SOLVED OXYGEN 10.5 11.1 12.5 12.7 12.2 11.0 9.5 10.2 10.1
OCT. 09 09 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY 06 JUNE 10 JULY	SOLVED SOLIOS (RESI-DUE AT 180 C)	NESS (CA.MG) 43 43 44 46 43 48 45	CAR- BDNATE HARD- NESS 0 0 0 16 0 0 0	SOLVED SOL IDS (TONS PER AC-FT)	22 20 20 16 11 12 11	AO- SORP- TION RATIO -4 -3 -3 -2 -2 -2 -3	LINITY AS CACO3 49 51 48 30 44 48 48 53	FIC COND- UCTANCF (MICRO- WHOS) 112 109 115 113 101 107 108 118	7.6 8.1 7.9 8.0 7.7 8.0 7.9	PERA- TUDEG C) 10 9 14 2 6 7 9 10	10.5 11.1 12.5 12.7 12.2 11.0 9.5
OCT. 09 NDV. 08 DEC. 12 JAN. 03 FEB. 13 MAR. 06 APR. 01 MAY 06 JUNE 10 JULY	SOLVED SOLIOS (RESI-DUE AT 180 C)	NESS (CA. MG) 43 43 44 46 43 48 45 52	CAR- BONATE HARD- NESS 0 0 0 16 0 0 0	SOLVED SOL IDS (TONS PER AC-FT)	22 20 20 16 11 12 11	40- SOPP- TION RATIO -4 -3 -3 -3 -2 -2 -2 -3 -3	LINITY AS CACO3 49 51 48 30 44 48 48 53 51	FIC COND- UCTANCE [MICRO- MHOS) 112 109 115 113 101 107 109 118	7.6 9.1 7.9 8.0 7.7 8.0 7.9 8.0	PERA- TURE (DEG C) 10 9 14 2 6 7 9	SOLVED OXYGEN 10.5 11.1 12.5 12.7 12.2 11.0 9.5 10.2 10.1

11370500 SACRAMENTO RIVER AT KESWICK DAM, NEAR KESWICK, CALIF.
(Formerly published as Sacramento River at Keswick, Calif.)

LOCATION (revised).--Lat 40°36'04", long 122°26'36", in 8\pi_2\pi_2\pi_2\pi_2\pi_3\pi_1, 32\pi_1, R.5\pi_1, Shasta County, 0.5\pi ile upstress from gaging station, 0.4\pi 110\pi upstress from Riddle Creek, 0.8\pi 11e\pi downstress from Keswick Dam, 1.6\pi iles\pi downstress from Shasta Dam.

DRAINAGE AREA. -- 6,468 sq mi, excluding Goose Lake basin.

PERIOD OF RECORD, -- Chemical analyses: December 1953 to September 1968.

REMARES, -- Prior to 1965 water year, sampling site was at gaging station. Records furnished by California Department of Water Resources and reviewed by Geological Survey.

11370500 SACRAMENTO RIVER AT KESWICK DAM, NEAR KESWICK, CALIF, -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OATE	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- Slum (MG)	SODIUM (NA)	PO- TAS- S IUN (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
DCT.											
09 NOV.	9600	8.8	4.4	4.9		54	0	3.4	1.7		.00
02 DEC.	8180			4.9		57	0	4.3	1.7		.00
11	8290			7.6		66	0	2.5	3.7		.04
JAN. 17	6650			5.8		66	0	4.6	1.6		.08
ffB. 05	6680			6.4		66	0	3.8	1.4		.00
MAR. 07	12100			5.5		61	0	5.8	1.6		•02
APR.											
MAY	6040			5.4		62	0	4.6	1.6		.00
Ol JUNE	10000	8.5	5.4	5.4	.5	56	0	2.6	2.1	.1	.01
12 JULY	10500			5.0		57	0	3.3	1.8		•00
05 AUG.	1 3900			3.8		58	0		1.7		.03
01 SEPT.	14200			5.5		57	0	2.3	1.9		.00
C6	9790	9.2	4.9	5.8	1.1	60	0	3.3	2.0	•0	.00
	D1 S-			DIS-				SPECI-			
CATE	SOLVED SOLIOS (RESI- DUE AT 190 C)	HARD- NESS (CA,MG)	N 3N- C AR- BONATF HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOOIUM	SOCIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACN3	FIC COND- UCTANCF (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
сст.	SOLVED SOLIOS (RESI- OUE AT	NESS	CAR- BONATF HARD- NESS	SOLVED SOLIDS (TONS PER	PU1002	AD- SORP- TION RATIO	LINITY AS CACH3	FIC COND- UCTANCF (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED DXYGEN
CC T.	SOLVED SOLIOS (RESI- OUE AT	NESS	CAR- BUNATF HARD-	SOLVED SOLIDS (TONS PER		AD- SORP- TION	LINITY	FIC COND- UCTANCF (MICRO-	р н 7.9	PERA- Ture	SOLVED
CCT. 09 NUV. 02	SOLVED SOLIOS (RESI- OUE AT	NESS (CA, 4G)	CAR- BONATF HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PU1002	AD- SORP- TION RATIO	LINITY AS CACH3	FIC COND- UCTANCF (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED DXYGEN
CCT. 09 NUV. 02 0EC. 11	SOLVED SOLIDS (RESI- OUE AT 190 C)	NESS (CA, MG)	CAR- BUNATF HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	\$00IU4 21	AD- SORP- TION RATIO	LINITY AS CACH3	FIC COND- UCTANCF (MICRO- MHOS)	7. 9	PERA- TURE (DEG C)	SOLVED DXYGEN 10-1
CCT. 09 NUV. 02 0EC. 11 JAN.	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA, MG) 40 41	CAR- BUNATF HARD- NESS 0	SOL VED SOL IDS (TONS PER AC-FT)	21 21	AD- SORP- TION RATIO	LINITY AS CACHS 44	FIC COND- UCTANCF (MICRO- MHOS)	7.9 7.9	PERA- TURE (DEG C)	SOLVED DXYGEN 10-1
CC T. 09 NUV. 02 OEC. 11 JAN. 17 FER. 05	SOLVED SOLIOS (RESI- DUE AT 190 C)	NESS (CA, MG) 40 41 48	CAR- BUNATF HARD- NESS 0 0	SOL VEO SOL IDS (TONS PER AC-FT)	21 21 26	AD- SORP- TION RATIO .3	LINITY AS CACHS 44 47 54	FIC COND- UCTANCF (MICRO- MHOS) 102 106	7.9 7.9	PERA- TURE (DEG C)	SOLVED DXYGEN 10.1 8.8 10.5
CC T. 09 NUV. 02 0EC. 11 JAN. 17 FEB.	SOLVED SOLIOS (RESI- DUE AT 190 C)	NESS (CA, MG) 40 41 48 48	CAR- BONATF HARD- NESS 0 0	SOL VEO SOL IDS (TONS PER AC-FT)	21 21 26 21	AD- SORP- TION RATIO	LINITY AS CACH3 44 47 54	FIC COND- UCTANCF (MICRO- MHOS) 102 106 138 122	7.9 7.9 8.0 7.9	PERATURE (DEG C)	SOLVED DXYGEN 10-1 8-8 10-5 11-1
CCT. 09 NJV. 02 0EC. 11 JAN. 17 FEB. 05 MAR. 07	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA+MG) 40 41 48 48 48	CAR- BONATF HARD- NESS 0 0 0	SOLVEO SOLIDS (TONS PER AC-FT)	21 21 26 21 23	AD— SORP— TION RATIO .3 .3 .5	LINITY AS CACO3 44 47 54 54	FIC COND- UCTANCF (MICRO- MHOS) 102 106 138 122	7.9 7.9 8.0 7.9	PERATURE (DEG C)	10.1 8.8 10.5 11.1
CCT. 09 NUV. 02 0EC. 11 JAN. 17 FER. 05 MAR. 07 APR. 05	SOLVED SPLIOS (VESI- OUE AT 190 C1	NESS (CA. MG) 40 41 48 48 46 47	CAR- BUNATF HARD- NESS 0 0 0 0	SOL VEO SOL IDS (TONS PER AC-FT)	21 21 26 21 23 20 21	AD— SORP— TION RATIO .3 .3 .5 .4	LINITY AS CACH3 44 47 54 54 54 50	FIC COND- UCTANCF (MICRO- MHOS) 102 106 138 122 125 123 118	7.9 7.9 8.0 7.9 7.5 7.9	PERA- TURE (DEG C) 11 11 10 8 8	10.1 8.8 10.5 11.1 11.6 11.1
CCT. 09 NUV. 02 0EC. 11 JAN. 17 FER. 05 MAR. 07 APR. 05 PAY 01 JUNE	SOLVED SOLIOS (RESI- DUE AT 130 C1	NESS (CA, MG) 40 41 48 48 46 47 44	CAR-BUNATH HARD-NESS	SOL VED SOL IDS (TONS PER AC-FT)	21 21 26 21 23 20 21	AD- SORP- TION RATIO .3 .3 .5 .4 .4	LINITY AS CACCIS 44 47 54 54 50 51 46	FIC COND- UCTANCE (MICRO- (MICRO- MHOS) 102 106 138 122 125 123 118	7.9 7.9 8.0 7.9 7.5 7.9 7.7	PERA- TURE (DEG C) 11 11 10 8 8 7 8	10.1 8.8 10.5 11.1 11.6 11.1 12.1
CCT. 09 NJV. 02 0EC. 11 JAN. 17 FER. 05 MAR. 07 APR. 05 JUNE 12 JULY	SOLVED SOLIOS (RESI- DUE AT 130 C1	NESS (CA. NG) 40 41 48 48 46 47 44 43	CAR- BONATF HARD- NESS 0 0 0 0 0 0 0 0	SOL VED SOL IDS (TONS PER AC-FT)	\$00104 21 21 26 21 23 20 21 21	AD- SORP- TION RATIO .3 .3 .5 .4 .4 .4	LINITY AS CACING 44 47 54 54 50 51 46 47	FIC COND- UCTANCE (MICRO- (MICRO- MHOS) 102 106 138 122 125 123 118 107	7.9 7.9 8.0 7.9 7.5 7.9 7.7 7.6	PERA- TURE (OEG C)	SOLVED DXYGEN 10.1 8.8 10.5 11.1 11.6 11.1 12.1 11.0
CCT. 09 NUV. 02 0EC. 11 JAN. 17 FEB. 07 APR. 01 JUNE 12 JUNE 12 AUG.	SOLVED SOLIOS (RESI- DUE AT 130 C1	NESS (CA. MG) 40 41 48 48 46 47 44 43	CAR- BONATF HARD- NESS 0 0 0 0 0 0 0 0	SOL VED SOL IDS SOL IDS (TONS PER AC-FT)	21 21 26 21 23 20 21 21 21 16	AD- SORP- TION RATIO .3 .3 .5 .4 .4 .4 .4	LINITY AS CACOS 44 47 54 54 50 51 46 47 48	FIC COND- COND- COND- COND- COND- COND- MHOS) 102 106 138 122 125 123 118 107 110	7.9 7.9 8.0 7.9 7.5 7.9 7.7 7.6 8.0	PERATURE (OFG C) 11 10 8 8 7 8 9	SOLVED DXYGEN 10-1 8-8 10-5 11-1 11-6 11-1 12-1 11-0 10-7
CCT. 09 NJV. 02 0EC. 11 JAN. 17 FER. 05 MAR. 07 APR. 05 JUNE 12 JULY C5	SOLVED SOLIOS (RESI- DUE AT 130 C1	NESS (CA. NG) 40 41 48 48 46 47 44 43	CAR- BONATF HARD- NESS 0 0 0 0 0 0 0 0	SOL VED SOL IDS (TONS PER AC-FT)	\$00104 21 21 26 21 23 20 21 21	AD- SORP- TION RATIO .3 .3 .5 .4 .4 .4	LINITY AS CACING 44 47 54 54 50 51 46 47	FIC COND- UCTANCE (MICRO- (MICRO- MHOS) 102 106 138 122 125 123 118 107	7.9 7.9 8.0 7.9 7.5 7.9 7.7 7.6	PERA- TURE (OEG C)	SOLVED DXYGEN 10.1 8.8 10.5 11.1 11.6 11.1 12.1 11.0

11372000 CLEAR CREEK NEAR IGO, CALIF.

LOCATION. -- Lat 40°30'50", long 122°31'20", Shasta County, temperature recorder at gaging station on left bank, at highway bridge on Redding-Igo road, 1.0 mile northeast of Igo, 5.3 miles southwest of Redding, and 10.4 miles upstream from south.

DRAINAGE AREA. -- 228 sq mi.

PERIOD OF RECORD, ---Chemical analyses: October 1958 to September 1966. Water temperatures: March 1965 to September 1968.

EXTREMES.--1967-68: Water temperatures: Maximum, 19.0°C Aug. 2; minimum, 2.0°C sometime during period Jan. 3 to Feb. 1.

Period of record: Water temperatures: Maximum, 21.0°C July 1, 1967; minimum, 2.0°C sometime during period Jan. 3 to Feb. 1, 1968.

REMARES, -- Recorder malfunctioned Jan. 3 to Feb. 1, Aug. 24 to Sept. 3; temperature ranges, 2.0°C to 7.0°C, and 14.0°C to 18.0°C, respectively.

11372000 CLEAR CREEK NEAR IGO, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oct	TOBER	NOVI	EMBER	DEC	MBER	JAL	IUARY	FEBR	UARY	MA	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	12.0	12.0	10.0	8.0	8.0	7.0	6.0			11.0	9.0
2	13.0 13.0	11.0 11.0	12.0 12.0	10.0 10.0	8.0 8.0	7.0 7.0	7.0	5.0	7.0 8.0	6.0 7.0	11.0 11.0	9.0
4	13.0	11.0	12.0	10.0	9.0	8.0			8.0	6.0	11.0	9.0
5	13.0	12.0	12.0	11.0	9.0	8.0			8.0	7-0	11.0	9.0
6	13.0	11.0	12.0	11.0	9.0	7.0			9.0	7.0	10.0	8.0
7 8	13.0 13.0	11.0 11.0	12.0 12.0	11.0 11.0	8.0 8.0	7.0 7.0			8.0 8.0	7+0 7+0	10.0 11.0	9.0 8.0
9	13.0	11.0	12.0	11.0	9.0	7.0			9.0	8.0	11.0	9.0
10	13.0	11.0	12.0	11.0	8.0	7.0			9.0	8.0	11.0	7.0
11	13.0	11.0	12.0	11.0	8.0 8.0	7.0			9.0 9.0	8.0	10.0 10.0	8.0 8.0
12 13	13.0 13.0	11.0 10.0	11.0 11.0	11.0 10.0	7.0	7.0 6.0			9.0	8.0 8.0	8.0	8.0
14	13.0	10.0	11-0	11.0	6.0	5.0			8.0	7.0	11.0	8.0
15	12.0	9.0	11.0	10.0	7.0	6.0			8.0	8.0	10.0	9.0
16 17	12.0 13.0	9.0 9.0	11.0 11.0	10.0 10.0	7.0 7.0	6.0 4.0			9.0 11.0	8.0 9.0	10.0	9.0 8.0
18	13.0	10.0	11.0	10.0	7.0	4.0			11.0	10.0	11.0	7.0
19	13.0	11.0	11.0	10.0	7.0	6.0			11.0	10.0	11.0	7.0
20	13.0	10.0	11.0	9.0	7.0	6.0			11.0	11.0	11.0	7.0
21 22	13.0 13.0	11.0 11.0	11.0 10.0	9.0 8.0	7.0 8.0	7.0 7.0			12.0 12.0	11.0 11.0	11.0	7.0 8.0
23	13.0	11.0	10.0	8.0	8.0	7.0			12.0	12.0	11.0	9.0
24	12.0	11.0	10.0	9.0	8.0	7.0			12.0	11.0	12.0	8.0
25	13.0	11.0	10.0	8.0	8.0	7.0			12.0	10.0	12.0	9.0
26 27	13.0 12.0	10.0	9.0 9.0	8.0 8.0	8.0 B.0	7.0 7.0			12.0 12.0	9.0 9.0	11.0 12.0	8.0 8.0
28	12.0	11.0	9.0	8.0	8.0	7.0			11.0	9.0	13.0	8.0
29	12.0	9.0	9.0	8.0	B.0	7.0			11-0	8.0	13.0	9-0
30 31	12.0 12.0	9.0	9.0	8.0	7.0 7.0	6.0 6.0					13.0 13.0	9.0 9.0
MONTH	14.0	9.0	12.0	8.0	9.0	4.0			12.0	6.0	13.0	7.0
						INE	-					
244		PRIL		MAY	-			JLY		GUST		TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	TEMBER MIN
1	MAX 13.0	MIN 9.0	MAX 14.0	MIN 11.0	MAX 16.0	MIN 12.0	MAX 16.0	MIN 14.0	MAX 18.0	MIN 15.0	MAX	MIN
1 2 3	MAX 13.0 11.0 11.0	MIN 9.0 8.0 8.0	MAX 14.0 16.0 16.0	MIN 11.0 11.0 12.0	MAX 16.0 16.0 14.0	MIN 12.0 12.0 12.0	MAX 16.0 16.0 17.0	MIN 14.0 14.0 14.0	MAX 18.0 19.0 18.0	MIN 15.0 17.0 17.0	MAX	HIN
1 2 3 4	MAX 13.0 11.0 11.0	MIN 9.0 8.0 8.0	MAX 14.0 16.0 16.0	MIN 11.0 11.0 12.0 12.0	MAX 16.0 16.0 14.0 15.0	MIN 12.0 12.0 12.0 11.0	MAX 16.0 16.0 17.0 17.0	MIN 14.0 14.0 14.0 16.0	MAX 18.0 19.0 18.0	MIN 15.0 17.0 17.0 16.0	MAX	HIN
1 2 3 4 5	MAX 13.0 11.0 11.0 11.0	MIN 9.0 8.0 8.0 8.0	MAX 14.0 16.0 16.0 16.0	MIN 11.0 11.0 12.0 12.0	MAX 16.0 16.0 14.0 15.0	MIN 12.0 12.0 12.0 11.0	MAX 16.0 16.0 17.0 17.0 18.0	MIN 14.0 14.0 14.0 16.0	MAX 18.0 19.0 18.0 18.0	MIN 15.0 17.0 17.0 16.0	16.0 17.0	14.0 15.0
1 2 3 4	MAX 13.0 11.0 11.0	MIN 9.0 8.0 8.0	MAX 14.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 12.0 12.0	MAX 16.0 16.0 14.0 15.0	MIN 12.0 12.0 12.0 11.0 11.0	MAX 16.0 16.0 17.0 17.0 18.0	MIN 14.0 14.0 14.0 16.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0	MAX 16.0 17.0	14.0 15.0
1 2 3 4 5 6 7 8	MAX 13.0 11.0 11.0 11.0 11.0	MIN 9.0 8.0 8.0 9.0 8.0 9.0	MAX 14.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 14.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0	MIN 14.0 14.0 14.0 16.0 16.0	MAX 18.0 19.0 18.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0	16.0 17.0 16.0 16.0	14.0 15.0 15.0
1 2 3 4 5 6 7 8	MAX 13.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0	MIN 9.0 8.0 8.0 9.0 8.0 9.0 9.0	MAX 14.0 16.0 16.0 16.0 16.0 14.0 16.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 14.0 15.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0	MIN 14.0 14.0 14.0 16.0 16.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0	16.0 17.0 17.0 16.0 16.0	14.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9	MAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0	MIN 9.0 8.0 8.0 9.0 8.0 9.0 9.0	MAX 14.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 13.0	MAX 16.0 17.0 17.0 18.0 18.0 18.0 18.0	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0	16-0 16-0 16-0 16-0	14.0 15.0 15.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	MAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0	MIN 9-0 8-0 8-0 9-0 8-0 9-0 9-0 9-0 11-0	MAX 14-0 16-0 16-0 16-0 16-0 14-0 14-0 16-0 16-0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 15.0 15.0 14.0 15.0 14.0 15.0 15.0	MIN 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0	MIN 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0	MIN 15-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0	MAX 16.0 17.0 16.0 16.0 16.0	14.0 15.0 15.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	HAX 13.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 14.0 14.0	MIN 9-0 8-0 8-0 8-0 9-0 9-0 9-0 9-0	MAX 14.0 16.0 16.0 16.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0	MIN 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0	MIN 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0	MAX 16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	MAX 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0	14.0 15.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	13.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 14.0 14.0 12.0	MIN 9-0 8-0 8-0 8-0 9-0 9-0 9-0 11-0 9-0 8-0 8-0	MAX 14.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0	MIN 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 15.0	MAX	HIN 14.0 15.0 15.0 15.0 14.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0	MIN 9-0 8-0 8-0 9-0 8-0 9-0 9-0 9-0 9-0 11-0 9-0 8-0 9-0	MAX 14-0 16-0 16-0 16-0 16-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 11.0 13.0	MAX 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	MIN 14.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0	MAX 18.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0	HIN 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 14.0 12.0 13.0 14.0 12.0 13.0 14.0	9.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 11.0 11.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	MIN 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 15.0	MAX	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 14-0 16-0 16-0 16-0 16-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HIN 11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	HAX 16.0 16.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 12.0 11.0 13.0 14.0 14.0 14.0	16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0	HIN 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	HIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 14.0 12.0 13.0 14.0 12.0 13.0 14.0	9.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 11.0 11.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	MIN 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0	HIN 14.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0	MAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 15.0	HAX 16.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0	HIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 12 14 15 16 17 18 19 20 21	HAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0 13.0	MIN 9-0 8-0 8-0 9-0 9-0 9-0 11-0 9-0 8-0 8-0 9-0 8-0 8-0 9-0 8-0 8-0 9-0 8-0 8-0 9-0 8-0 8-0 9-0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	16.0 16.0 14.0 15.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0	HIN
1 2 2 3 4 4 5 6 7 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	HAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 12.0 13.0 14.0 12.0 12.0 12.0 12.0 13.0 13.0	MIN 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 9.0 8.0 9.0 9.0 9.0 9.0 8.0 9.0 9.0 8.0 9.0	14.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0	HIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 15.0 15.0	MAX 16-0 16-0 17-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	HIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	HAX 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18-0 17-0 17-0 16-0 16-0 16-0 15-0 16-0 16-0 15-0 16-0 15-0 16-0 15-0 16-0 15-0 16-0 15-0	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 12.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 9-0 8-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 8-0 8-0 9-0 9-0 8-0 9-0 9-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	16.0 16.0 14.0 15.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 12.0 14.0 15.0 15.0 15.0 16.0	MAX 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	HIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 18.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	HAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 12.0 13.0 14.0 12.0 12.0 12.0 12.0 13.0 13.0	MIN 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 9.0 8.0 9.0 9.0 9.0 9.0 8.0 9.0 9.0 8.0 9.0	14.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0	HIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 15.0 15.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	HAX 18.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18-0 17-0 17-0 16-0 16-0 16-0 15-0 16-0 16-0 15-0 16-0 15-0 16-0 15-0 16-0 15-0 16-0 15-0	HIN 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 9-0 8-0 8-0 9-0 9-0 9-0 11-0 9-0 8-0 9-0 9-0 11-0 9-0 11-0 9-0 11-0 11-0 1	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	16.0 16.0 14.0 15.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 16.0 14.0 14.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 13.0 14.0 12.0 12.0 13.0 12.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 24 25	HAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 9.0 8.0 8.0 8.0 9.0 9.0 11.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 12.0 9.0 8.0 8.0 9.0 9.0 9.0 12.0 9.0 9.0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 13.0 15.0 15.0 15.0 16.0 16.0 14.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX 18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	HAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MIN 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 9.0 8.0 8.0 8.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 16.0 16.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 14.0 16.0 14.0 16.0 16.0 16.0 17.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	HAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 14.0 12.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 9-0 8-0 8-0 8-0 9-0 9-0 9-0 11-0 9-0 8-0 8-0 9-0 11-0 9-0 11-0 11-0 11-0 11-0 11-0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 11.0 12.0	HAX 16.0 16.0 14.0 15.0 15.0 14.0 15.0 15.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 13.0 14.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	HAX 13.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 9-0 8-0 8-0 9-0 9-0 9-0 11-0 9-0 8-0 9-0 9-0 11-0 11-0 11-0 11-0 11-0 11-0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0	16.0 16.0 14.0 15.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	HAX 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MIN 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 9.0 8.0 8.0 8.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0	14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 11.0 12.0	MAX 16.0 16.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 12.0 12.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 14.0 16.0 14.0 16.0 16.0 16.0 17.0	MAX 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0

11372200 SOUTH COW CREEK NEAR MILLVILLE, CALIF.

LOCATION. -- Lat 40°32'55", long 122°05'30", in NW\[NE\[\] 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 Millyille.

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DRAINAGE AREA. -- 77.3 sq mi.

PERIOD OF RECORD, --- Water temperatures: December 1965 to September 1968.

EXTREMES . -- 1967-68:

Water temperatures: Maximum, 29.0°C July 5, 6, 19, Aug. 2; minimum, 3.0°C on several days during December and January.

Period of record: Water temperatures: Maximum, 31.0°C Aug. 6, 7, 1966; minimum (1965-68), 0.5°C Dec. 17, 19, 20, 1965.

REMARKS. --Clock stopped Oct. 23-31, Nov. 6 to Dec. 5, June 5 to July 3, Sept. 16-30; temperature ranges, 9.0°C to 16.0°C, 7.0°C to 14.0°C, 14.0°C to 26.0°C, and 13.0°C to 22.0°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 198	7 T(27 TC	SEDTEMBER :	1000
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	oc.	TOBER	NOV	EMBER	DEC	EMBER	IAL	NUARY	FERS	RUARY		ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.0	17.0	16.0	11.0			7.0	5.0	7.0	5-0	9.0	9.0
Ž	17-0	14.0	15.0	12.0			7.0	4.0	6.0	5.0	10.0	8.0
3	16.0	13.0	14.D	12.0			6.0	4.0	8.0	6.0	10.0	8.0
5	16.0 17.0	13.0	14.0	13.0			6.0	4.0	8.0	6.0	10-0	8.0
_		14.0	16.0	14.0			6.0	3.0	8.0	7.0	11.0	10.0
6	16.0	12.0			9.0	8.0	6.0	3.0	9.0	7.0	10-0	9.0
á	17.0 17.0	12.0 13.0			9.0 8.0	8.0 7.0	6.0 6.0	4.0 5.0	9.0 9.0	7.0 7.0	9.0 11.0	9.0 8.0
š	17.0	13.0			8.0	7.0	6.0	3.0	9.0	9.0	11.0	8.0
10	17.0	13.0			8.0	6.0	6.0	3.0	9.0	9.0	9.0	7.0
11	18.0	14.0			8.0	6.0	5.0	3.0	10.0	9.0	11.0	8.0
12 13	17.0 17.0	14.0 12.0			7.0 6.0	6.0 4.0	6.0 8.0	4.0 6.0	10.0	9.0	9.0	8.0
14	16.0	12.0			3.0	3.0	8.0	7.0	9.0 8.0	7-0 7-0	9.0 9.0	7.0 8.0
15	15.0	11.0			4.0	3.0	8.0	8.0	8.0	8.0	9.0	8.0
16	16.0	11.0			3.0	6.0	8.0	8.0	9.0	8.0	9.0	8.0
17	16.0	11.0			6.0	4.0	8.0	6.0	10.0	9.0	10.0	8.0
18	16.0	11.0			7.0	5.0	8.0	6.0	10.0	9.0	10.0	7.0
19	16.0	11.0			7.0	6.0	8.0	6.0	11.0	10.0	10.0	7.0
20	16.0	11.0			7.0	6.0	8.0	6.0	11.0	10.0	10.0	7.0
21	14.0	12.0			8.0	6.0	9.0	8.0	11.0	10.0	10.0	8.0
22	16.0	12.0			8.0	7.0	9.0	7.0	11.0	10.0	11.0	9.0
23 24					9.0 9.0	7.0 7.0	8.0 8.0	7.0 6.0	12.0 11.0	10.0 9.0	12.0	9.0 9.0
25			===		9.0	7.0	7.0	6.0	11.0	8.0	12.0 13.0	11.0
26					11.0	7.0	6.0	4.0	11.0	8.0	11.0	8.0
27					11.0	8.0	6.0	4.0	10.0	8.0	11.0	8.0
28					10.0	8.0	5.0	4.0	10.0	7.0	12.0	9.0
29 30					9.0 8.0	7.0	5.0	4.0 4.0	9.0	8.0	13.0 14.0	11.0
31					7.0	5.0 6.0	6-0 7-0	6.0			15.0	11.0 12.0
HONTH					11.0	3.0	9.0	3.0	12.0	5.0	15.0	7.0
	AI	PRIL		YAP	ji	JNE	JU	JLY	AUC	SUST	SEP.	TEMBER
DAY		PRIL		MIN		JNE M T N		JLY Min				TEMBER MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	JU		MAX	MIN	MAX	MIN
1	MAX 13.0	MIN 11.0	MAX 17.0	MIN 13.0	MAX 24.0	MIN 17.0	MAX	MEN	MAX 28.0	MIN 22.0	MAX 26.0	MIN 21-0
1 2	MAX 13.0 13.0	MIN 11.0 10.0	MAX 17.0 18.0	MIN 13.0 12.0	MAX 24.0 20.0	MIN 17.0 17.0			MAX 28.0 29.0	MIN 22.0 23.0	MAX 26.0 26.0	MIN 21-0 21-0
1	MAX 13.0	MIN 11.0	MAX 17.0 18.0 19.0 19.0	MIN 13.0	MAX 24.0	MIN 17.0	MAX 28.0	MIN 21.0	MAX 28.0 29.0 28.0 27.0	MIN 22.0 23.0 23.0 22.0	MAX 26.0 26.0 24.0 25.0	MIN 21-0 21-0 20-0 20-0
1 2 3	MAX 13.0 13.0 12.0	MIN 11.0 10.0 9.0	MAX 17.0 18.0 19.0	MIN 13.0 12.0 13.0	MAX 24.0 20.0 22.0	MIN 17.0 17.0 17.0	HAX	MIN	MAX 28.0 29.0 28.0	MIN 22.0 23.0 23.0	MAX 26.0 26.0 24.0	MIN 21-0 21-0 20-0
1 2 3 4	MAX 13.0 13.0 12.0 12.0	MIN 11.0 10.0 9.0 10.0 10.0	MAX 17.0 18.0 19.0 19.0 18.0	MIN 13.0 12.0 13.0 14.0 12.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	MAX 	21.0 22.0 23.0	MAX 28.0 29.0 28.0 27.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0	MAX 26.0 26.0 24.0 25.0 26.0	MIN 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5	MAX 13.0 13.0 12.0 12.0 13.0	MIN 11.0 10.0 9.0 10.0 10.0	MAX 17.0 18.0 19.0 19.0 18.0	MIN 13.0 12.0 13.0 14.0 12.0	MAX 24.0 20.0 22.0	MIN 17-0 17-0 17-0 18-0	#AX 28.0 29.0 29.0	21.0 22.0 23.0 23.0	MAX 28.0 29.0 28.0 27.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0	MAX 26.0 26.0 24.0 25.0 26.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5	MAX 13.0 13.0 12.0 12.0 13.0 12.0	MIN 11.0 10.0 9.0 10.0 10.0 9.0	MAX 17.0 18.0 19.0 19.0 18.0	MIN 13.0 12.0 13.0 14.0 12.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	MAX 	21.0 22.0 23.0 23.0 23.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 22.0	MAX 26.0 26.0 24.0 25.0 26.0 25.0 25.0 24.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8	MAX 13.0 13.0 12.0 12.0 13.0 13.0	MIN 11.0 10.0 9.0 10.0 10.0 9.0 9.0 10.0	MAX 17.0 18.0 19.0 19.0 18.0 17.0 17.0 18.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 12.0	MAX 24.0 20.0 22.0 23.0	MIN 17-0 17-0 17-0 18-0	28.0 29.0 29.0 28.0 28.0 28.0	21.0 22.0 23.0 23.0 22.0 22.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0 26.0 26.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 22.0 21.0	MAX 26.0 26.0 24.0 25.0 26.0 25.0 25.0 24.0 24.0	MIN 21.0 21.0 20.0 20.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8 9	MAX 13.0 13.0 12.0 12.0 13.0 13.0 14.0 16.0	9.0 10.0 9.0 10.0 10.0 10.0 10.0 11.0	MAX 17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 12.0 13.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	28.0 29.0 29.0 29.0 28.0 28.0 28.0 27.0	21.0 22.0 23.0 23.0 22.0 22.0 22.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0 27.0 26.0 27.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 22.0 21.0 21.0	MAX 26.0 26.0 24.0 25.0 25.0 25.0 24.0 25.0 24.0 23.0	MIN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0
1 2 3 4 5 6 7 8 9	MAX 13.0 13.0 12.0 12.0 13.0 13.0 13.0 14.0 16.0	9.0 10.0 9.0 10.0 10.0 10.0 11.0 12.0	MAX 17.0 18.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 12.0 13.0 13.0 14.0	MAX 24.0 20.0 22.0 23.0	HIN 17.0 17.0 17.0 18.0	#AX 	21.0 22.0 23.0 23.0 22.0 22.0 22.0	MAX 28.0 29.0 27.0 27.0 27.0 26.0 27.0 27.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 21.0 21.0	MAX 26.0 26.0 25.0 25.0 25.0 25.0 24.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 13.0 13.0 12.0 12.0 13.0 13.0 14.0 13.0 14.0 16.0	MIN 11.0 10.0 9.0 10.0 10.0 10.0 11.0 12.0	MAX 17.0 18.0 19.0 19.0 19.0 17.0 18.0 19.0 18.0 19.0	MIN 13.0 12.0 14.0 12.0 11.0 12.0 13.0 13.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	#AX	21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0 26.0 27.0 27.0 26.0 27.0 26.0 26.0 26.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 21.0 21.0 21.0	MAX 26.0 26.0 24.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 13.0 12.0 12.0 13.0 12.0 13.0 14.0 13.0 14.0 16.0 16.0 14.0 13.0	MIN 11.0 9.0 10.0 10.0 10.0 9.0 10.0 11.0 12.0 12.0 9.0	MAX 17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 12.0 13.0 13.0 13.0 14.0 11.0	MAX 24.0 20.0 22.0 23.0	HIN 17.0 17.0 17.0 18.0	#AX	21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 20.0 21.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0 26.0 27.0 27.0 26.0 27.0 24.0 24.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 22.0 21.0 21.0 21.0 21	MAX 26.0 26.0 24.0 25.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0	MIN 21.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 13.0 13.0 12.0 12.0 13.0 13.0 14.0 16.0	9-0 10-0 10-0 10-0 10-0 10-0 11-0 12-0 13-0 12-0	MAX 17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 13.0 13.0 14.0 13.0 11.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	HAX 	21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0	MAX 28.0 29.0 28.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 22.0 21.0 21.0 21.0 21	MAX 26.0 26.0 24.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 13.0 13.0 12.0 12.0 13.0 13.0 13.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 11.0 10.0 9.0 10.0 9.0 10.0 10.0 11.0 12.0 12.0 9.0 9.0 9.0	MAX 17.0 18.0 19.0 18.0 17.0 18.0 19.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 13.0 13.0 13.0 11.0 11.0 11	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	HAX	23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	MAX 28.0 29.0 28.0 27.0 27.0 26.0 26.0 27.0 27.0 26.0 24.0 24.0 24.0	MIN 22.0 23.0 23.0 23.0 21.0 20.0 20.0 21.0 21.0 21.0 21.0 21	MAX 26.0 26.0 24.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0 22.0	MIN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 13.0 13.0 12.0 12.0 13.0 13.0 13.0 14.0 16.0 14.0 13.0 14.0 13.0	MIN 11.0 10.0 9.0 10.0 9.0 10.0 11.0 12.0 12.0 9.0 11.0	HAX 17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 13.0 14.0 13.0 11.0 11.0 11.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	29.0 29.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	23.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0	28.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 21.0 21.0 21.0 21	MAX 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 17-0 16-0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18	HAX 13.0 13.0 12.0 12.0 12.0 13.0 13.0 14.0 13.0 14.0 16.0 14.0 13.0 14.0 12.0 12.0 13.0	MIN 11.0 10.0 9.0 10.0 10.0 10.0 11.0 12.0 13.0 12.0 9.0 9.0 9.0 7.0	HAX 17.0 18.0 19.0 19.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HIN 13.0 12.0 13.0 14.0 12.0 11.0 12.0 13.0 14.0 13.0 11.0 11.0 11.0 11.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	HAX 28.0 29.0 29.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 28.0 27.0 28.0 28.0 27.0	21.0 22.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	28.0 29.0 28.0 27.0 27.0 27.0 26.0 26.0 27.0 27.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	22.0 23.0 23.0 22.0 22.0 21.0 20.0 22.0 21.0 21.0 21	MAX 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0	MIN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 13.0 13.0 12.0 12.0 13.0 13.0 13.0 14.0 16.0 14.0 13.0 14.0 13.0	MIN 11.0 10.0 9.0 10.0 9.0 10.0 11.0 12.0 12.0 9.0 11.0	HAX 17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 18.0 19.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 13.0 14.0 13.0 11.0 11.0 11.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 18.0	29.0 29.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	23.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0	28.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 20.0 21.0 21.0 21.0 21	MAX 26.0 26.0 24.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0 22.0	#IN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 17-0 16-0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 19 20	13.0 13.0 12.0 12.0 12.0 13.0 13.0 14.0 16.0 14.0 13.0 14.0 13.0 14.0 12.0 12.0 12.0	11.0 10.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 9.0 11.0 12.0 9.0 11.0 9.0 11.0	17.0 18.0 19.0 19.0 19.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 15.0 18.0 19.0 15.0 15.0 17.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 12.0 13.0 13.0 13.0 11.0 11.0 11.0 11.0 11	MAX 24.0 20.0 22.0 23.0	HIN 17.0 17.0 17.0 18.0 18.0	28.0 29.0 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	21.0 22.0 23.0 22.0 22.0 22.0 22.0 20.0 21.0 21.0 21	MAX 28.0 29.0 28.0 27.0 27.0 27.0 26.0 27.0 27.0 26.0 27.0 27.0 24.0 24.0 24.0 23.0 21.0 18.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 25.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0 21.0	#IN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	HAX 13.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 12.0 13.0 12.0	MIN 11.0 10.0 9.0 10.0 10.0 11.0 12.0 12.0 13.0 12.0 9.0 9.0 9.0 11.0	17.0 18.0 19.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0 15.0 19.0 15.0 15.0 17.0 17.0	MIN 13.0 12.0 13.0 14.0 12.0 11.0 11.0 13.0 13.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	MAX 24.0 20.0 22.0 23.0	HIN 17.0 17.0 17.0 18.0 18.0	HAX 28.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 29.0	21.0 22.0 23.0 22.0 22.0 22.0 22.0 20.0 21.0 21.0 21	28.0 29.0 28.0 27.0 27.0 27.0 26.0 26.0 27.0 27.0 26.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 21.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 25.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0
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1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 12 12 13 14 15 16 17 18 19 20 21 22 23 24	HAX 13.0 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0	MIN 13.0 12.0 14.0 12.0 11.0 11.0 12.0 13.0 14.0 13.0 14.0 11.0 1	MAX 24.0 20.0 22.0 23.0	HIN 17.0 17.0 17.0 18.0 18.0	#AX	23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	MAX 28.0 29.0 28.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 23.0 21.0 23.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 22.0 21.0 21.0 21.0 21	MAX 26.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 7 18 19 20 21 22 23 24 25	HAX 13.0 13.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 13.0 12.0 13.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 11.0 11.0 11.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	23.0 23.0 22.0 22.0 22.0 22.0 22.0 20.0 21.0 21	28.0 29.0 28.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0 24.0 23.0 21.0 21.0 23.0 23.0 23.0 23.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 22.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26	HAX 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 14.0 14.0 13.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0 14.0 15.0 17.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	17.0 18.0 19.0 19.0 19.0 17.0 17.0 18.0 18.0 19.0 18.0 19.0 15.0 18.0 19.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 13.0 12.0 14.0 12.0 11.0 11.0 11.0 13.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 14.0 15.0 16.0 1	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	HAX 28.0 29.0 28.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 28.0 29.0 28.0 28.0 28.0 28.0 28.0	#IN	MAX 28.0 29.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0 23.0 24.0 21.0 18.0 21.0 23.0 22.0	MIN 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 3 14 5 15 16 7 18 19 20 21 22 23 24 25 26 27	HAX 13.0 13.0 13.0 12.0 12.0 13.0 14.0 13.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 13.0 12.0 13.0 17.0 9.0 9.0 9.0 9.0 9.0 11.0	17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 11.0 11.0 11.0 11.0 11	MIN 13.0 12.0 13.0 14.0 12.0 13.0 14.0 13.0 14.0 13.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	#AX	23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21	28.0 29.0 28.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 24.0 24.0 24.0 24.0 21.0 21.0 23.0 21.0 23.0 21.0	MIN 22.0 23.0 23.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21.0 21.0 21.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26 27 28	HAX 13.0 13.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 14.0 14.0 13.0 12.0 13.0 12.0 13.0 14.0 15.0 17.0 17.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	17.0 18.0 19.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 16.0 17.0 17.0 18.0 19.0 18.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 13.0 12.0 14.0 12.0 11.0 11.0 13.0 13.0 13.0 14.0 13.0 11.0 11.0 11.0 11.0 14.0 14.0 14.0 15.0 16.0 1	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	#AX	MIN 21.0 22.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 22	28.0 29.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0 24.0 23.0 21.0 18.0 23.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	MIN 22.0 23.0 23.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 3 14 5 15 16 7 18 19 20 21 22 23 24 25 26 27 28 8 29	HAX 13.0 13.0 13.0 12.0 12.0 13.0 14.0 13.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 13.0 12.0 13.0 9.0 9.0 9.0 9.0 9.0 11.0 12.0 11.0 12.0 12.0 12.0 12.0 12	17.0 18.0 19.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 11.0 11.0 11.0 11.0 11	MIN 13.0 12.0 13.0 14.0 12.0 13.0 14.0 13.0 14.0 13.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	#AX	23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21	28.0 29.0 28.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 24.0 24.0 24.0 24.0 21.0 21.0 23.0 21.0 23.0 21.0	MIN 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 25.0 25.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26 27 28	HAX 13.0 13.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 14.0 14.0 13.0 12.0 13.0 12.0 13.0 14.0 15.0 17.0 17.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	17.0 18.0 19.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 16.0 17.0 17.0 18.0 19.0 18.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 13.0 12.0 14.0 12.0 11.0 11.0 13.0 13.0 13.0 14.0 13.0 11.0 11.0 11.0 11.0 14.0 14.0 14.0 15.0 16.0 1	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	#AX	23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	28.0 29.0 28.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 24.0 24.0 24.0 23.0 21.0 21.0 23.0 21.0 21.0 22.0 23.0 21.0 23.0 21.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	MIN 22.0 23.0 23.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 17.0 19.0 19.0 19.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	HAX 13.0 13.0 13.0 12.0 12.0 13.0 14.0 13.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MIN 11.0 10.0 10.0 10.0 10.0 11.0 12.0 13.0 12.0 13.0 9.0 9.0 9.0 9.0 9.0 11.0 12.0 11.0 12.0 12.0 12.0 12.0 12	17.0 18.0 19.0 19.0 19.0 17.0 17.0 18.0 18.0 19.0 18.0 19.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 13.0 12.0 13.0 14.0 11.0 11.0 11.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 15.0 16.0 14.0 13.0 16.0 16.0 16.0	MAX 24.0 20.0 22.0 23.0	MIN 17.0 17.0 17.0 17.0 18.0	HAX 28.0 29.0 28.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0 29.0 28.0	#IN	28.0 29.0 27.0 27.0 26.0 27.0 26.0 27.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 21.0 18.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 24.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 21.0	#IN 21-0 21-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17

11374000 COW CREEK NEAR MILLVILLE, CALIF.

LOCATION. -- Lat 40°30'20", long 122°13'55", in NEINWI sec. 32, T.31 N., R.3 W., Shasta County, temperature recorder at gaging station on right bank, 4.2 miles southwest of Millville, and 4.3 miles downstream from Little Cow Creek.

DRAINAGE AREA. -- 425 sq m1.

PERIOD OF RECORD, --Chemical analyses: October 1958 to September 1966. Water temperatures: October 1965 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Minimum, freezing point Dec. 14, 15, Jan. 10, 11.

Period of record:

Water temperatures: Maximum (1966-67), 32.0°C Aug. 3, 4, 7, 1966; minimum, freezing point Dec. 14, 15, 1967, Jan. 10, 11, 1968.

REMARKS.--Clock stopped June 4 to July 3; temperature range, 21.0°C to 32.0°C. Recorder malfunctioned July 11-30, Aug. 3-8, Aug. 15 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOV	EMBER	DECE	MBER	JAL	IUARY	FEBR	LUARY	м.	ARCH
DAY	MAX	MIN	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24-0	23.0	17.0	14.0	8.0	7.0	4.0	3.0	6.0	4.0	13.0	12.0
2	23.0	20.0	17.0	15.0	8.0	B. 0	4.0	2.0	5-0	4.0	13.0	11.0
3	20.0 19.0	18.0 18.0	16.0	15.0 15.0	8.0 9.0	7.0	4.0	2.0	8.0	5.0	13.0	11.0
5	20.0	19.0	16.0 16.0	15.0	9.0	7.0 7.0	4.0 4.0	3.0 2.0	8.0 7.0	4.0 6.0	13.0 13.0	11.0
•		1,,,,	-0-0	.,,,			***				1310	
6	20.0	18.0	16.0	16.0	8.0	6.0	3.0	2.0	9.0	6.0	13.0	11.0
7	19.0	18.0	16.0	15.0	8.0	6.0	3.0	3.0	9.0	6.0	12.0	11.0
8	20.0	18.0	16.0	16.0	7.0	4.0	3.0	3.0	9.0	6.0	12.0	11.0
10	20.0 21.0	19.0 19.0	16.0 17.0	16.0 16.0	7•0 6•0	4.0 4.0	3.0 3.0	2.0 0.0	10.0	8.0 9.0	13.0 13.0	11.0 11.0
10	21.0	17.0	11.0	10.0	0.0	4.0	3.0	0.0	10.0	7.0	15.0	11.0
11	21.0	19.0	17.0	16.0	6.0	4.0	3.0	0.0	10.0	8.0	13.0	11.0
12	21.0	19.0	16.0	14.0	5.0	3.0	4.0	1.0	11.0	8.0	13.0	12.0
13	20.0	18.0	14.0	14.0	3.0	1.0	6.0	4.0	11.0	8.0	12.0	11.0
14 15	19.0 18.0	17.0 16.0	15.0 15.0	14.0	2.0 2.0	0.0	6.0 6.0	6.0 6.0	9.0 9.0	8.0 8.0	12.0 12.0	11.0 11.0
15	10.0	10.0	19.0	14.0	2+0	0.0	0.0	0.0	7.0	8.0	12.0	11.0
16	18.0	16.0	14.0	13.0	3.0	2.0	7.0	6.0	9.0	8.0	13.0	12.0
17	18.0	16.0	14.0	14.0	3.0	2.0	6.0	3.0	10.0	9.0	13.0	11.0
18	18.0	16.0	14.0	13.0	4.0	3.0	7.0	4-0	11.0	10.0	13.0	11.0
19 20	18.0 18.0	16.0	14.0 13.0	13.0 12.0	4.0	3.0 4.0	7.0 7.0	4.0	11.0	10.0	13.0 13.0	11.0 11.0
20	10.0	10.0	13.0	12.0	4.0	4.0	7.0	4.0	11.0	10.0	13.0	11.0
21	17.0	17.0	13.0	11.0	4.0	3.0	7.0	5.0	12.0	11.0	13.0	11.0
22	18.0	16.0	11.0	10.0	6.0	4.0	9.0	6.0	12.0	11.0	13.0	12.0
23	18.0	17.0	11.0	9.0	6.0	4.0	8-0	6.0	12.0	11.0	14.0	12.0
24 25	18.0 18.0	17.0 17.0	11.0	9.0	7.0 7.0	4.0 5.0	8.0 7.0	5.0 5.0	12.0 13.0	11.0	14.0 16.0	12.0
٠,	10.0	17.0	11.0	7.0		3.0	,	3.0	13.0	11.0	10.0	13.0
26	18.0	16.0	9.0	8.0	8.0	6.0	6.0	4.0	13.0	10.0	16.0	13.0
27	17.0	16.0	9.0	8.0	9.0	7.0	5.0	4.0	13.0	11.0	16.0	13.0
28	17.0	16.0	9.0	8.0	8.0	6.0	4.0	3.0	13.0	11.0	15.0	12.0
29 30	16.0 15.0	14.0 13.0	9.0 9.0	9.0 8.0	7•0 6•0	6.0 3.0	4.0 5.0	3.0 3.0	13.0	11.0	16.0 16.0	13.0 13.0
31	16.0	13.0			4.0	3.0	6.0	5.0			16.0	14.0
MONTH	24.0	13.0	17.0	8.0	9.0	0.0	9.0	0.0	13.0	4.0	16.0	11.0
TUNIN	24.0	13.0	17.0	0.0	9.0	0.0	9.0	0.0	13.0	4.0	19.0	11.0
	A	PRIL		MAY	JL	INE	J	JL Y	AUG	GUST	SEP	TEMBER
DAY	A XAM	PRIL Min	MAX	MAY Min	IL XAM	JNE MIN	JL XAP	JLY MIN	DUA XAM	GUST MIN	SEP Max	TEMBER MIN
1	MAX 17.0	MIN 16.0	MAX 18.0	MIN 16.0	MAX 26.0	MIN 23.0	MAX	MIN	MAX 32.0	MIN 28.0	MAX	#IN
1 2	MAX 17.0 16.0	MIN 16.0 14.0	MAX 18.0 18.0	MIN 16.0 16.0	MAX 26.0 26.0	MIN 23.0 24.0	MAX	#IN	MAX 32.0 33.0	MIN	MAX	MIN
1 2 3	MAX 17.0 16.0 16.0	MIN 16.0 14.0 14.0	MAX 18.0 18.0 18.0	MIN 16.0 16.0 16.0	MAX 26.0	MIN 23.0	MAX	MIN	MAX 32.0 33.0	MIN 28.0	MAX	#IN
1 2	MAX 17.0 16.0	MIN 16.0 14.0	MAX 18.0 18.0	MIN 16.0 16.0	MAX 26.0 26.0	MIN 23.0 24.0	MAX	#IN	MAX 32.0 33.0	MIN 28.0	MAX	MIN
1 2 3 4 5	MAX 17.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0	MAX 18.0 18.0 18.0 19.0	MIN 16.0 16.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0	MIN 21-0 22-0	MAX 32.0 33.0	MIN 28.0 29.0	MAX	MIN
1 2 3 4 5	MAX 17.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0	MAX 18.0 18.0 18.0 19.0 19.0	MIN 16.0 16.0 16.0 17.0 17.0	MAX 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0	MIN 21.0 22.0	MAX 32.0 33.0	MIN 28.0 29.0	MAX	MIN
1 2 3 4 5	MAX 17.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0	MAX 18.0 18.0 18.0 19.0 19.0	MIN 16.0 16.0 16.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0	MIN 21-0 22-0 22-0	MAX 32.0 33.0	MIN 28.0 29.0	MAX	MIN
1 2 3 4 5 6 7 8	MAX 17.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 18.0 18.0 19.0 19.0 19.0 18.0 19.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 16.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 26.0 25.0 24.0	MIN 21.0 22.0 22.0 22.0 22.0 21.0	MAX 32.0 33.0 32.0	MIN 28.0 29.0 	MAX	MIN
1 2 3 4 5 6 7 8	MAX 17.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0	MAX 18.0 18.0 18.0 19.0 19.0 19.0	MIN 16.0 16.0 17.0 17.0 16.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 26.0 25.0	MIN 21-0 22-0 22-0 22-0	MAX 32.0 33.0	MIN 28.0 29.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0	MIN 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 25.0 24.0 24.0	MIN 21.0 22.0 22.0 22.0 22.0 21.0	MAX 32.0 33.0 32.0 32.0	MIN 28.0 29.0 28.0 28.0 28.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0 19.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 25.0 24.0 24.0	MIN 21.0 22.0 22.0 22.0 21.0 21.0	MAX 32.0 33.0 32.0 32.0 32.0 32.0	MIN 28.0 29.0 	MAX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0	MIN 16.0 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 26.0 25.0 24.0	MIN 21.0 22.0 22.0 22.0 21.0 21.0	MAX 32.0 33.0 32.0 32.0 32.0 32.0 32.0 32.0	MIN 28.0 29.0 28.0 28.0 28.0 28.0 27.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 18.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 18.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX 25.0 26.0 26.0 25.0 24.0 24.0	MIN 21.0 22.0 22.0 22.0 21.0 21.0	MAX 32.0 33.0 32.0 32.0 32.0 32.0	MIN 28.0 29.0 	MAX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0	MIN 16.0 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	MAX	MIN 21.0 22.0 22.0 22.0 21.0 21.0	MAX 32.0 33.0 32.0 32.0 32.0 32.0 32.0 32.0	MIN 28.0 29.0 28.0 28.0 28.0 28.0 27.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0 17-0 17-0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0	MIN 21.0 22.0 22.0 22.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0	MIN 28.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 20.0 18.0 20.0 20.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	25.0 26.0 26.0 26.0 25.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 31.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 18.0 20.0 20.0 20.0 21.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 18.0 16.0 17.0	MAX 26.0 26.0 26.0	#IN 23.0 24.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 32.0 31.0 30.0 29.0	28.0 29.0 29.0 28.0 28.0 28.0 28.0 27.0 27.0	MAX	MIN
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19	MAX 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 21.0 21	MIN 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 18.0 16.0 18.0 18.0	MAX 26.0 26.0 26.0	MIN 23.0 24.0 23.0	25.0 26.0 26.0 26.0 25.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 31.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	MAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 0 11 12 13 14 15 16 17 18 19 20	17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0	MIN 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	MAX 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0	25.0 26.0 25.0 25.0 25.0 25.0 24.0 24.0	22.0 22.0 22.0 22.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 32.0 31.0 30.0 29.0	28.0 29.0 	HAX	MIN
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19	MAX 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 21.0	MIN 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	MAX 26.0 26.0 26.0 26.0	MIN 23.0 24.0 23.0	25.0 26.0 26.0 26.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 21.0 21.0	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0	28.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	MAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0	MIN 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	MAX 26.0 26.0 26.0	HIN 23.0 24.0 23.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0	#IN	32.0 33.0 32.0 32.0 32.0 32.0 31.0 30.0 29.0	28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 3 14 15 16 17 18 19 20 21 22 23 24	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0 24.0	22.0 22.0 22.0 22.0 21.0 21.0 21.0	MAX 32.0 33.0 32.0 32.0 32.0 32.0 32.0 32.0	28.0 29.0 29.0 28.0 28.0 28.0 27.0 27.0	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 21.0 22.0	MIN 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0	MAX 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0	#IN	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0 	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0	#IN	32.0 33.0 32.0 32.0 32.0 30.0 29.0 	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 4 15 16 7 18 19 20 21 22 23 24 25 26 27	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 26.0	MIN 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.0 26.0 26.0 25.0 24.0 24.0 24.0	MIN	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HAX	MIN
1 2 3 4 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0 23.0	25.0 26.0 26.0 25.0 24.0 24.0 24.0	MIN	MAX 32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 4 15 16 7 18 19 20 21 22 23 24 25 26 27 28 29	17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 17.0 17.0 16.0 17.0 17.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0	MAX 26.0 26.0 26.0 26.0	MIN 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.0 26.0 26.0 25.0 24.0 24.0 24.0	MIN	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HAX	MIN
1 2 3 4 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.0 26.0 26.0 25.0 24.0 24.0 24.0	MIN	32.0 33.0 32.0 32.0 32.0 32.0 30.0 29.0 	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HAX	MIN
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30	17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 22.0 22.0 22	MIN 16.0 16.0 16.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 22.0	MAX 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	HIN 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	26.0 26.0 26.0 25.0 24.0 24.0 24.0	MIN	MAX 32.0 33.0 32.0 32.0 32.0 30.0 29.0	MIN 28.0 29.0 29.0 29.0 28.0 28.0 27.0 27.0 27.0 27.0	HAX	MIN

11374400 MIDDLE FORK COTTONWOOD CREEK NEAR ONO, CALIF.

LOCATION.--Lat 40°23'25", long 122°31'15", in SE\sE\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 Cottonwood Creek, and 7.8 miles southeast of Ono.

DRAINAGE AREA .-- 249 sq mi.

PERIOD OF RECORD, --Water temperatures: October 1963 to September 1965, July to September 1968. Sediment records: October 1963 to September 1968 (periodic).

REMARKS. -- Sediment analyses for the 1967 water year were reported as miscellaneous analyses.

TEMPERATURE (°C) OF WATER, JULY TO SEPTEMBER 1968

	AP	RIL	4	AY	Ju	INE	JI	JLY	AUG	GUST	SEPT	EMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1									31.0	25.0	28.0	
2									31.0	24.0	28.0	
3									30.0	24.0	27.0	
4									29.0	24.0	27.0	
5									29.0	23.0	27.0	
6									29.0	23.0	27.0	
7									29.0	23.0	27.0	
8									29.0	24.0	26.0	
9									29.0	23.0	26.0	
10									29.0	22.0	26.0	
11									28.0	22.0	26.0	
12									27.0	22.0	26.0	
13									27.0	22.0	24.0	
14									26.0	22.0	24.0	
15									26.0	20.0	23.0	
16									26.0	21.0	23.0	
17									26.0	20.0	24.0	
18									26.0	21.0	24.0	
19									24.0	21.0	22.0	
20									22.0	19.0	22.0	
21									22.0	19.0	21.0	
22									25.0	19.0	20.0	
23									26.0	20.0	22.0	
24							30.0	23.0	27.0	21.0	22.0	
25							30.0	23.0	23.0	22.0	22.0	
26							30.0	22.0	26.0	22.0	22.0	
27							31.0	23.0	27.0	21.0	22.0	
28							29.0	23.0	27.0	21.0	21.0	
29							28.0	25.0	27.0	21.0	21.0	
30							30.0	24.0	28.0	21.0	21.0	
31							27.0	25.0	28.0	22.0		
MONTH									31.0	19.0	28.0	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		WATER								PART	ICLE S	SIZE					
		TEMP-			SUSPENDED -												METHO
		PERA-		CONCEN-	SEDIMENT	PERCE	ENT F	INER 1	THAN ?	THE S	ZE (1	IN MI	I I IME	FRSI	INDI	CATED	OF
		TURE	DISCHARGE	TRATION.	DISCHARGE												ANALY
	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	•0 0 B	.016	.031	.062	•125	.250	. 500	1.00	2.00	SIS
T 12 1967		19	18	2	.10												
V 2		17	15	3	.12												
C 4	1100	7	139	21	7.9												
N 9 196B		2	65	1	.18												
N 15	1120	6	2370	937	6000	22	30	42	53	61	67	79	91	100			VPW
N 16	1110	6	1190	484	1560	22	31	40	45	4B	67	79	93	100			vca:
N 30	1320	3	374	175	177	26	36	45	50	51	67	75	91	100			VCB
В 17	1630	11	1570	633	26B0	24	35	44	54	67	73	78	88	99	100		VPW
B 20	1450	9	376D	2150	21800												
В 20	1455	9	3660	1790	1770 0	18	2B	35	49	60	66	79	94	99	100		VPW
R 1	1050	7	770	12B	266	25	36	47	55	59	69	72	84	96	100		SCB
R 19	1100	7	332	14	13												
R 1	1220	12	276	11	8.2												
R 11	0955	13	183	4	2.0												
Y 9	0930	14	87	1	.23												
N 4	0945	17	59	2	•32												
L 1	1300	26	20	1	-05												
L 29	1045	25	7.0	2	.04												
G 13	1320	24	5.5	5	.07												
IG 27	1300	23	1B	3	.15												

11376000 COTTONWOOD CREEK NEAR COTTONWOOD, CALIF.

LCCATION. -- Lat 40°23'10", long 122°14'15", in NE4 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 1968. 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 IN MILLIGRAMS PER LITER, WATER YEAP OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATF (SO4)	CHLO- RIDF (CL)	NITRATE (ND3)	8020N (8)
OG T.	108			8.6		114	0		8.1		.01
NOV. 02	84			9.1		129	0		9.0		.00
DEC. 11	296			17		135	o		24		.07
JAN. 16	4060			6.2		87	0		3.7		.00
FEB. 06	1440			8.3		113	o		4.7		.03
MAR. C7	1160			7.8		129	0		5.6		•01
APR. 05	605			7.6		124	0		5.2		.00
MAY 01	332	26	13	9.9	.5	137	0	13	7.7	•5	.03
JUNE 13	217			9.2		128	2		7.8		.00
JULY 02	86			6.8		113	3		7.2		.07
AUG. 01	48			8.5		97	9		3.7		.00
SEPT. C6	63	18	11	8.8		113	0	-6.1	4.9	•0	.00
	DIS-			D I S-				SPECI-			
DATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAP- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SOOIUM	SOCIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
0C T.	SOLVED SOLIDS (RESI- DUE AT	NESS	CAP- BONATE HARD-	SOLVED SOLIDS (TONS PER		AD- SORP- TION	LINITY	FIC COND- UCTANCE (MICRO-	PH 7•9	PERA TURE	SOLVED
09 09 NOV. 02	SOLVED SOLIDS (RESI- DUE AT	NESS (CA,MG)	CAP- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	MUIOOZ	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED DXYGEN
00 T. 09 NOV. 02 CFC.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAP- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	5001UM 16	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	7.9	PERA- TURE (DEG C)	SOLVED DXYGEN 9.0
0C T. 09 NOV. 02 CFC. 11 JAN. 16	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 96 108	CAP- BONATE HARD- NESS 2	SOLVED SOLIDS (TONS PER AC-FT)	16 16	AD- SORP- TION RATIO -4	LINITY AS CACO3 94 106	FIC COND- UCTANCE (MICRO- MHOS) 229 248	7.9 9.2	PERA- TURE (DEG C) 23	SOLVED DXYGEN 9.0 9.9
0C T. 09 NOV. 02 CFC. 11 JAN. 16 FEB. 06	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 96 108	CAP- BONATE HARD- NESS 2 2 2	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19	AD- SORP- TION RATIO -4 -4	LINITY AS CACO3 94 106	FIC COND- UCTANCE (MICRO- MHOS) 229 248 374	7.9 9.2 8.1	PERATURE (DEG C)	SOLVED DXYGEN 9.0 9.9
OCT. 09 NOV. 02 EFC. 11 JAN. 16 FEB. 06 MAR. C7	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 96 108 153 81	CAP- BONATE HARD- NESS 2 2 2 42	SOLVED SOLIDS (TONS PER AC-FT)	16 16 16 19	AD- SORP- TION RATIO .4 .4 .6	LINITY AS CACO3 94 106 111	FIC COND- UC TANCE (MICRO- MHOS) 229 248 374 185	7.9 9.2 8.1 8.1	PERATURE (DEG C) 23 16 6	9.0 9.0 9.9 12.0
OC T. O9 NOV. O2 CFC. 11 JAN. 16 FEB. O6 MAR. C7 APR. O5	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 96 108 153 81	CAP- BONATE HARD- NESS 2 2 42 10	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14	AD- SORP- TION RATIO .4 .4 .6 .3	LINITY AS CACO3 94 106 111 71	FIC COND- UCTANCE (MICRO- MHOS) 229 248 374 185 241	7.9 9.2 8.1 8.1	PERA- TURE (DEG C) 23 16 6 7	9.0 9.0 9.9 12.0 11.8
OCT. 09 NOV. 02 EFC. 11 JAN. 16 FEB. 06 MAR. C7 APR. 05 MAY	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 96 108 153 81 102 125	CAP- BONATE HARD- NESS 2 2 2 42 10 9	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14 15	AD- SORP- TION RATIO .4 .4 .6 .3 .4	LINITY AS CACO3 94 106 111 71 93	FIC COND- UCTANCE (MICRO- MHDS) 229 248 374 185 241 264	7.9 9.2 8.1 8.1 8.0	PERA- TURE (DEG C) 23 16 6 7 10	9.0 9.0 9.9 12.0 11.8 11.4
OCT. 09 NOV. 02 CFC. 11 JAN. 16 FEB. 06 MAR. C7 APR. 05 MAY 01 JUNE	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 96 108 153 81 102 125	CAP- BONATE HARD- NESS 2 2 2 42 10 9	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14 15 12	AD- SORP- TION RATIO .4 .4 .6 .3 .4	LINITY AS CACO3 94 106 111 71 93 106	FIC COND- UC TANCE (MICRO- MHOS) 229 248 374 185 241 264 250	7.9 9.2 8.1 8.1 8.0 8.2	PERA- TURE (DEG C) 23 16 6 7 10	9.0 9.0 9.9 12.0 11.8 11.4 10.8
OCT. 09 09 10 16 16 16 16 16 17 19 19 19 19 19 19 19 19 19 19 19 19 19 19	SOL VED SOL IDS (RES1- DUE AT 180 C)	NESS (CA.MG) 96 108 153 81 102 125 107	CAP- BONATE HARD- NESS 2 2 2 42 10 9 19 5	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14 15 12 13	AD- SORP- TION RATIO .4 .4 .6 .3 .4 .3	LINITY ASC CACO3 94 106 111 71 93 106 102	FIC COND- UCTANCE (MICRO- MHOS) 229 248 374 185 241 264 250 267	7-9 9-2 8-1 8-1 8-0 8-2 8-1	PERA- TURE (DEG C) 23 16 6 7 10 10	9.0 9.0 9.9 12.0 11.9 11.4 10.8
OCT. O9 NUV. O2 FCC. 11 JAN 16 FEB O6 MAR C7 APR O5 MAY U1 JUNE 13 JULY O2 AUG	SOL VED SOL INDS (RESI – DUE AIT 180 C) — — — — — — — — — — — — — — — — — —	NESS (CA,MG) 96 108 153 81 102 125 107 118	CAP- BONATE HARD- NESS 2 2 2 42 10 9 19 5 6 3	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14 15 12 13 15	AD- SORP- TION RATIO .4 .4 .6 .3 .4 .3 .4	LINITY AS CACO3 94 106 111 71 93 106 102 112 108	FIC COND- CO	7.9 9.2 8.1 8.1 8.0 8.2 8.1 8.2	PERA- TURE (DEG C) 23 16 6 7 10 10	9.0 9.0 9.9 12.0 11.8 11.4 10.8 10.2 9.8
OCT. 09 NDV. 02 EFC. 11 JAN. 16 FEB. 06 MAR. C7 APR. 05 MAY 01 JUNE 13 JULY 02 AUG.	SOL VED SOL INDS (RESI – DUE AIT 180 C) — — — — — — — — — — — — — — — — — —	NESS (CA, MG) 96 108 153 81 102 125 107 118 111 99	CAP- BONATE HARD- NESS 2 2 2 42 10 9 19 5 6 3 1	SOLVED SOLIDS (TONS PER AC-FT)	16 16 19 14 15 12 13 15 15 13	AD- SORP- TION RATIO -4 -4 -6 -3 -4 -3 -4 -4 -3	LINITY AS CACO3 94 106 111 71 93 106 102 112 108 98	FIC COND- CO	7.9 9.2 8.1 8.1 8.0 8.2 8.1 8.2	PERATURE (DEG C) 23 16 6 7 10 10 13 18 18	SOLVED OXYGEN 9.0 9.0 12.0 11.8 11.4 10.8 10.2 9.8 8.0 10.5

11376550 BATTLE CREEK BELOW COLEMAN FISH HATCHERY, NEAR COTTONWOOD, CALIF.

LOCATION (revised).--Lat 40°23'55", long 122°08'45", in SW\NE\{ sec.1, T.29 N., R.3 W., temperature recorder at Coleman Fish Hatchery, 300 ft upstream from gaging station, 3.7 miles downstream from Spring Branch, 5.7 miles upstream from mouth, and 7.0 miles east of Cottonwood.

DRAINAGE AREA. -- 358 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1961 to September 1966. Water temperatures: December 1965 to September 1968, Sediment records: October 1965 to September 1968 (periodic).

EXTREMES.--1967-68:
Water temperatures: Maximum, 21.0°C on several days in June; minimum, 3.0°C Jan. 10.

Period of record:

Water temperatures: Maximum, 21.0°C July 31, Aug. 1, 1967 and on several days in June 1968; minimum, 3.0°C Jan. 10, 1968.

REMARKS, --Clock stopped Dec. 4 to Jan. 9; temperature range, 6.0°C to 11.0°C. Temperature records prior to June 3 are from site at gaging station 300 ft downstream.

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

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

			PERAIURE	,								ARCH
		TOBER		MBER		EMBER		WARY		RUARY		
PAC	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	HIN
1 2	16.0 16.0	15.0 14.0	13.0 13.0	12.0 13.0	10.0	9.0 9.0			8.D 8.0	7.0 7.0	11.0 12.0	11.0
3	14.0	14.0	13.0	12.0	9.0	9.0			9.0	8.0	12.0	10.0
4	14.0	13.0	13.0	12.0					9.0	8.0	12.0	11.0
5	14.0	13.0	13.0	13.0					9.0	9.0	12.0	11.0
6	14.0	13.0	13.0	12.0					10.0	9.0	11.0	10.0
7	14.0	13.0	13.0	12.0					11.0	10.0	11.0	10.0
8	14.0	14.0 14.0	13.0 13.0	13.0 13.0					11.0 11.0	9.0 11.0	11.0	10.0
10	14.0	14.0	13.0	13.0			6.0	3.0	11.0	11.0	11.0	10.0
11	15.0	14.0	13.0	12.0			6.0	4.0	11.0	11.0	11.0	10.0
12	15.0	14.0	12.0	12.0			7.0	5.0	11.0	11.0	11.0	9.0
13	14.0	13.0	13.0	12.0			B. O	7.0	11.0	10.0	10.0	9.0
14 15	13.0 13.0	13.0 12.0	13.0 13.0	13.0 12.0			8.0 7.0	7.0 7.0	10.0 10.0	9.0 10.0	11.0	9.0 10.0
			-						-			
16	13.0	13.0	12.0 12.0	12.0			7.0	7.0 6.0	10.0 11.0	10.0	11.0	9.0 8.0
17 18	13.0 13.0	13.0 13.0	12.0	12.0 12.0			7.0 7.0	6.0	11.0	10.0	10.0	9.0
19	13.0	13.0	12.0	12.0			8.0	7.0	12.0	11.0	11.0	9.0
20	13.0	13.0	12.0	11.0			B.O	7.0	12.0	10.0	11.0	9.0
21	13.0	13.0	12.0	11.0			9.0	8.0	11.0	11.0	11.0	10.0
22	13.0	13.0	11.0	11.0			9.0	8.0	11.0	10.0	11.0	11.0
23 24	14.0	13.0 13.0	11.0	11.0 11.0			9.0 9.0	8.0 8.0	12.0 12.0	11.0 10.0	12.0 12.0	11.0
25	13.0	13.0	11.0	11.0			8.0	B.O	11.0	10.0	12.0	11.0
26	13.0	13.0	11.0	9.0			9.0	7.0	11.0	10.0	12.0	9.0
27	13.0	13.0	10.0	10.0			7.0	7.0	11.0	10.0	12.0	10.0
28 29	13.0	13.0	10.0 10.0	9.0 9.0			7.0 7.0	7.0 6.0	11.0 11.0	10.0	13.0 13.0	11.0 12.0
30	12.0	12.0	10.0	9.0			7.0	6.0		10.0	14.0	12.0
31	13.0	12.0					8.0	7.0			13.0	12.0
MONTH	16.0	12.0	13.0	9.0					12.0	7.0	14-0	8.0
	Al	PRIL		YAP	JI	UNE	JL	JL Y	AUG	GUST	SEP	TEMBER
DAY	AI MAX	PRIL Min	MAX	YAP Min	JL XAM	UNE MIN)L XAM	JL Y M I N	AUA XAM	GUST M EN		TEMBER MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	мах	MIN	MAX	MIN
DAY 1 2	MAX 13.0	MIN 11.0	MAX 16.0	MIN 14.0	MAX 17.0	MIN 16.0	MAX 19.0	MIN 15.0	MAX 19.0	MIN 16.0	MAX 18+0	MIN 16.0
1 2 3	MAX 13.0 12.0 12.0	MIN 11.0 11.0 10.0	MAX 16.0 16.0 16.0	MIN 14.0 13.0 14.0	MAX 17.0 17.0 17.0	MIN 16.0 16.0 14.0	MAX 19.0 19.0 19.0	MIN 15.0 17.0 17.0	MAX 19.0 19.0 19.0	MIN 16.0 17.0 17.0	MAX 18+0 18-0 17-0	MIN 16.0 16.0
1 2 3 4	MAX 13.0 12.0 12.0 12.0	MIN 11.0 11.0 10.0 11.0	MAX 16.0 16.0 16.0	MIN 14.0 13.0 14.0 14.0	MAX 17.0 17.0 17.0 18.0	MIN 16.0 16.0 14.0 15.0	MAX 19.0 19.0 19.0 18.0	MIN 15.0 17.0 17.0	MAX 19.0 19.0 19.0	MIN 16.0 17.0 17.0	MAX 18.0 18.0 17.0	MIN 16.0 16.0 16.0
1 2 3	MAX 13.0 12.0 12.0	MIN 11.0 11.0 10.0	MAX 16.0 16.0 16.0	MIN 14.0 13.0 14.0	MAX 17.0 17.0 17.0	MIN 16.0 16.0 14.0	MAX 19.0 19.0 19.0	MIN 15.0 17.0 17.0	MAX 19.0 19.0 19.0	MIN 16.0 17.0 17.0	MAX 18+0 18-0 17-0	MIN 16.0 16.0
1 2 3 4 5	MAX 13.0 12.0 12.0 12.0 13.0	MIN 11.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 14.0 13.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0	MIN 15.0 17.0 17.0 17.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0	MAX 18-0 18-0 17-0 17-0 18-0	MIN 16.0 16.0 16.0 15.0 16.0
1 2 3 4 5	MAX 13.0 12.0 12.0 12.0 13.0	MIN 11.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 14.0 13.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0	MIN 15.0 17.0 17.0 17.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0	MAX 18-0 18-0 17-0 17-0 18-0	MIN 16.0 16.0 16.0 15.0 16.0
1 2 3 4 5	MAX 13.0 12.0 12.0 12.0 13.0	MIN 11.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0	MIN 14.0 13.0 14.0 14.0 14.0 12.0 12.0 13.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0	MIN 15.0 17.0 17.0 17.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0	MAX 18.0 18.0 17.0 17.0 18.0	MIN 16.0 16.0 16.0 15.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8	MAX 13.0 12.0 12.0 13.0 13.0	MIN 11.0 11.0 10.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 14.0 13.0 14.0 14.0 14.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0	MIN 15.0 17.0 17.0 17.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0	MAX 18-0 18-0 17-0 17-0 18-0	MIN 16.0 16.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8 9	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0	MAX 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0	MIN 15.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0 16.0 16.0	MAX 18-0 18-0 17-0 17-0 18-0 17-0 17-0 17-0 17-0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0	MAX 17.0 17.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 15.0 15.0 14.0 13.0 14.0 14.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0	MIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 16-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0	MAX 18-0 17-0 17-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0	MIN 16.0 16.0 15.0 16.0 15.0 16.0 15.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 13.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 16.0	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0 14.0 13.0	MAX 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0	MIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 18-0 17-0 17-0 18-0 17-0 18-0 17-0 17-0 17-0 16-0 17-0 17-0 16-0 17-0	MIN 16.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 14.0
1 2 3 4 5 6 7 8 9 10	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0 13.0 14.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 14.0 15.0 15.0 16.0	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0 13.0 13.0 13.0	MAX 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	MIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0	MIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 18-0 17-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	HIN 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 14.0 15.0 15.0 16.0	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0	MAX 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0	MIN 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16-0 16-0 16-0 15-0 16-0 15-0 15-0 15-0 15-0 15-0 14-0 14-0 14-0
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0	MIN 11.0 11.0 10.0 11.0 11.0 11.0 12.0 12.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 14.0	MIN 14.0 13.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 13.0 14.0	MAX 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0	MAX 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0	HIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	MAX 18-0 18-0 17-0 17-0 18-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 16-0 16-0	MIN 16-0 16-0 16-0 15-0 15-0 15-0 15-0 14-0 14-0 14-0 14-0 13-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	HAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0 11.0 14.0 15.0 11.0 14.0	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 12.0	MAX 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 15.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0	HAX 19-0 19-0 18-0 18-0 18-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0	MIN 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 45 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0 14.0 15.0 14.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 21.0 21.0 20.0	MIN 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	HIN 15.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0	19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0	18.0 18.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	HAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 15.0 11.0 14.0 15.0 11.0 14.0	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 12.0	MAX 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 15.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0	HAX 19-0 19-0 18-0 18-0 18-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0	HIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	MIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 15.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0	MIN 11.0 11.0 10.0 11.0 11.0 11.0 11.0 11.	16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0	17.0 17.0 17.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 21.0 20.0	MIN 16.0 16.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0	HIN 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0	MIN 16-0 16-0 16-0 15-0 15-0 15-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14
1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 11 11 11 11 11 11 11 11 11 11	MAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 11.0 15.0 11.0 11.0 11	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0 13.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 1	MIN 15.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	MAX 18-0 18-0 17-0 17-0 18-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 13.0 14.0 14.0 14.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 19.0 21.0 20.0 19.0 20.0	HIN 16.0 16.0 14.0 15.0 14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 1	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0	HAX 18-0 18-0 18-0 17-0 18-0 17-0 18-0 17-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 15.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 11.0 11.0 10.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 13.0 14.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 21.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 11 15 16 17 18 19 20 21 22 23 24 25 26 27	HAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 11.0 11.0 11.0 11.0 11	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	16.0 16.0 16.0 16.0 16.0 17.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 13.0 14.0 13.0 14.0 13.0 13.0 14.0 13.0 13.0 14.0 13.0 1	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 13.0 14.0 1	MAX 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 15.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 11.0 11.0 10.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 16.0 16.0 16.0 16.0 17.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 17.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 19.0 21.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	HAX 13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 15.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 13.0 14.0 15.0 15.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 11.0 11.0 10.0 11.0 11.0 11.0 11.0 11.	MAX 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0	MAX 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 12 13 11 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	HAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 11.0 11.0 12.0 13.0 14.0 14.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	16.0 16.0 16.0 16.0 16.0 17.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 14.0 13.0 14.0 14.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 17.0 18.0 18.0 19.0 1	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0	HAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 15.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 11.0 11	MAX 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	HAX 13.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 11.0 11.0 12.0 13.0 14.0 14.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 13.0 14.0 14.0 14.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0	17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21	MIN 16.0 16.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 15.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0	MAX 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	13.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 13.0 14.0 14.0 14.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 20.0 19.0 21.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 16.0 16.0 16.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 15.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 17-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0

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

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B, BOTTOM WITHORAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;

		WATER TEM-			CUCDENCED -					PART	ICLE :	SIZE					
		PERA-			SUSPENDED ~ SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (IN MI	LLIME	TERS)	INDIC	CATED	METHOD OF
DATE	TIME	(C)	(CFS)	(MG/L)		•002	• 004	.008	.016	.031	•062	.125	.250	•500	1.00	2.00	ANALY- SIS
NOV 2 1967	1700	13	244	6	4.0												
DEC 4	1000	9	440	8	9.5												
JAN 9 1968	1430	7	280	4	3.0												
FEB 12	1555	11	464	11	14				_								
FEB 2D	1135	10	2440	147	968	16	26	35	39	41	65	72	81	98	100		VCBW
MAR 19	1500	9	60B	4	6.6												
MAY 3	1115	14	410	В	8.9												
JUN 4	1050	16	350	7	6.6												
JUL 31	1030	17	220	В	4.B												
SEP 5	1430	16	234	14	8.8												

113772DO SACRAMENTO RIVER AT BEND, CALIF.

LOCATION (revised).--Lat 40°15'51", long 122°13'19", in NW SE; sec.20, T.28 N., R.3 W., Tehama County, at highway bridge at Bend, approximately 7.9 miles upstream from gaging station near Red Bluff, 0.3 mile upstream from Spring Creek, and approximately 9 miles north of Red Bluff.

DRAINAGE AREA, -- 9,022 sq mi, excluding Goose Lake basin (at gaging station).

PERIOD OF RECORD, --Chemical analyses: May 1955 to September 1968. Water temperatures: May 1955 to September 1988. Sediment records: October 1957 to September 1968.

EXTREMES . -- 1967-68:

KEMDS, --1967-96: Water temperatures: Minimum, 4.0°C Jan. 26. Sediment concentrations: Maximum daily, 957 mg/l Jan. 15; minimum daily, 2 mg/l on several days. Sediment discharge: Maximum daily, 106,000 tons Jan. 15; minimum daily, 42 tons Nov. 21, 22.

Water temperatures: Maximum (1955-66), 19.0°C June 1, 1960; minimum, 3.5°C Jan. 22, 1962. Sediment concentrations: Maximum daily, 2,920 mg/l Dec. 24, 1964; minimum daily, 1 mg/l on many days in 1964, July 12, 1967.

Sediment discharge: Maximum daily, 876,000 tons Dec. 22, 1964; minimum daily, 12 tons Dec. 8-10, 15, 1964.

REMARKS.--Sediment records published as "near Red Bluff" 1957-66. Records of daily discharge data given for sta-tion 11378000 Sacramento River near Red Bluff. No appreciable inflow between sampling point and gaging station except during periods of heavy local runoff.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 DAY

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

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)

		WATER TEM- PERA-			SUSPENDED-		NT F	INER '	THAN '	PARTI			LIME	TERS)	10010	CATED	METHOD OF
DATE	TIME	TURE (C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	•008	.016	.031	.062	.125	-250	.500	1.00	2.00	ANALY- SIS
JAN 15 1968 FEB 21	1025 1605		44600 35200	910 412	110000 39200	24 24	3B 48	50 58	61 67	73 76	81 98	90 100	96 	100	=		VPWC SCBW

11377200 SACRAMENTO RIVER AT BEND, CALIF.--Continued CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- S IUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SUL FATE (SO4)	CHLO- R IDE (CL)	NI TRATE (NO3)	PHOS- PHATE (PO4)
OCT.											
C9	9750			5.0		57	0		2. 5	.7	. 09
NOV. 01 DEC.	10000	_		5.3	_	58	0		2.4	.5	•03
11	9430			6.3		64	0		2.0	.7	. 05
JAN. 16	20100			5.8		57	0		2.0	2.1	.45
FEB. 06 MAR.	10800	_	,	6.8		70	0		2.7	1.1	-04
(7 APR.	16000			6.0		66	0		2.2	-1	.06
05 PAY	8370		-	6.2		71	0		2.2	•3	•00
Ol	10500	9.5	5.7	6.3	.6	62	0	4.3	2. 8	•2	.34
13	10500			5.4		60	0		2-1	.3	-06
JULY 02 AUG.	13500			5.9		48	6		2.1	1.0	.07
Ol SEPT.	14500			5.6		58	0		2.0	-1	• 02
03	1 05 00	9.4	4.7	5.1	1.0	61	0	3.4	2.8	-1	.09

DATE	BORON (B)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	PERCENT S ODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECT- FIC COND- UCTANCE (MI CRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
ост.										
09	.04	44	0	20	.3	47	114	8.0	11	9.2
NOV.			_		_					
01 DEC.	-05	45	0	20	. 3	48	110	7.9	12	10.9
11	-05	49	0	22	. 4	52	120	7.7	12	9.5
JAN.			•		• •					,.,
16	.11	46	0	22	-4	47	120	7.8	8	11.4
FEB.			_		_				_	
06 PAR.	.04	55	0	21	.4	57	145	7.7	8	11.4
07	-00	61	7	18	.3	54	134	7.8	8	11.0
APR.										
05	-00	51	0	21	.4	58	137	7.6	11	11.4
MAY 01	.11	47	0		.4	51				
JUNE		41	U	22	••	>1	122	7.9	11	10.7
13	-00	45	0	21	.4	49	115	8.0	12	10.9
JULY										
02	- 04	45	0	22	.4	49	146	9.1	12	11.3
AUG.			_							
Ol SEPT.	• 02	46	0	21	.4	48	127	8.2	12	11.0
03	-00	43	0	20	.3	50	113	7.9	13	11.1

11377200 SACRAMENTO RIVER AT BEND, CALIF, -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9550	22	567	10000	5	135	8210	11	244
2	9660 10100	24 20	626 545	8870 8560	6	144 139	8100 10900	14 20	306 589
4	9840	5	133	8590	4	93	11100	117	3510
5	9810	4	106	7920	4	86	13600	150	5510
6	9780	4	106	7560	4	82	9840	37	983
7 8	9750 9720	4	105 105	7640 7670	4 7	83 145	12700	7	240 178
9	9750	4	105	7670	6	124	9890	5	134
10	9720	5	131	7700	4	83	9490	5	128
11	9720	4	105	7700	4	83	9430	4	102
12	9720 9660	4	105	7730	4	83	9420	5	127 498
13 14	9580	5 4	130 103	7750 8080	3 10	63 218	9230 9090	20 33	810
15	9580	3	78	8130	4	88	9090	13	319
16	9580	4	103	7830	4	85	9150	4	99
17 18	9550 9550	4	103 103	7810 7780	10	84 210	9150	4	99 99
19	9600	4	103	7810	4	210 84	9180 9210	5	124
20	9600	5	130	7940	4	86	9120	4	98
21	9660	4	104	7780	2	42	9090	3	74
22	9720	4	105	77B0	2	42	9040	5	122
23	9750	5	132	7780	4	84	9070	3	73
24 25	9780 9810	5 4	132 106	7780 7780	3 3	63 63	9070 9090	3	73 74
26 27	9840 9840	5	133 106	7810 7860	3	84 64	9180 9290	4 5	99 125
28	9860	4	106	7860	3	64	9350	5	126
29 30	9840 9860	3	80	8080	4	В7	9320	. 5	126
31	9980	4	106 108	8270		112	9260 9230	11 6	275 150
TOTAL	301760		4811	239520		2903	297890		15514
		JANUARY			FERRUARY			MARCH	
		JANHARY MFAN			FERRUARY MEAN			MARCH MEAN	
DAY	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
	DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
DAY 1 2	DISCHARGE (CFS) 8810 8480	MFAN CONCEN- TRATION (MG/L)	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) 29900 25200	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 3070 1090
1 2 3	DISCHARGE (CFS) 8810 8480 8460	MEAN CONCEN- TRATION (MG/L) 6 7	DISCHARGE (TONS/DAY) 143 160 160	DISCHARGE (CFS) 11200 17200 18800	MEAN CONCEN- TRATION (MG/L) 43 47 42	DISCHARGE (TONS/DAY) 1300 2180 2130	DISCHARGE (CFS) 29900 25200 20000	MEAN CONCEN- TRATION (MG/L) 38 16 11	DISCHARGE (TONS/DAY) 3070 1090 594
1 2 3 4	B810 8480 8460 8370	MEAN CONCEN- TRATION (MG/L) 6 7 7	DISCHARGE (TONS/DAY) 143 160 160 203	DISCHARGE (CFS) 11200 17200 18800 13300	MEAN CONCEN- TRATION (MG/L) 43 47 42 30	DISCHARGE (TONS/DAY) 1300 2180 2130 1080	DISCHARGE (CFS) 29900 25200 20000 16800	MEAN CONCEN- TRATION (MG/L) 38 16 11	DISCHARGE (TONS/DAY) 3070 1090 594 771
1 2 3 4 5	DISCHARGE (CFS) 8810 8480 8460 8370 8180	MFAN CONCEN- TRATION (MG/L) 6 7 7 9	DISCHARGE (TONS/DAY) 143 160 160 203 265	DISCHARGE (CFS) 11200 17200 18800 13300 11600	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630	29900 25200 2000 2000 16800 16500	MEAN CONCEN- TRATION (MG/L) 38 16 11 17	DISCHARGE (TONS/DAY) 3070 1090 594 771 535
1 2 3 4 5	DISCHARGE (CFS) 8810 8480 8460 8370 8180	MEAN CONCEN- TRATION (MG/L) 6 7 7	DISCHARGE (TONS/DAY) 143 160 160 203 265 206	DISCHARGE (CFS) 11200 17200 18800 13300 11600	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630	DISCHARGE (CFS) 29900 25200 20000 16800 16500	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396
1 2 3 4 5	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7430	MFAN CONCEN- TRATION (MG/L) 6 7 7 9 12	DISCHARGE (TDNS/DAY) 143 160 203 265 206 139 401	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10800 10500 10100	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52 47 28	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300	DISCHARGE (CFS) 29900 25200 20000 16800 16500 16300 16000 15900	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12 9 10	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7430 7740	MFAN CONCEN- TRATION (MG/L) 6 7 9 12 10 7 20 263	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10800 10500 10100 9840	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52 47 28 11	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266	29900 25200 20000 16800 16500 16300 16000 15900 15600	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12 9 10 13	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7440 20500	MFAN CONCEN- TRATION (MG/L) 6 7 7 9 12 10 7 20 263 246	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52 47 28 11 10	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266 262	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 16300 15900 15600 14800	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12 9 10 13 18 20	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 799
1 2 3 4 5 6 7 8 9	DISCHARGE (CF5) 8810 8480 8460 8370 8180 7640 7380 7430 7430 7740 20500	MFAN CONCEN- TRATION (MG/L) 6 7 7 9 12 10 7 20 263 246	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10	DISCHARGE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266 262	DISCHARGE (CFS) 29900 25200 20000 16800 16500 16900 15900 15800 14800	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12 9 10 13 18 20	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 779
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 8810 8440 8440 8460 8370 8180 7640 7380 7430 7740 20500 11900 9090 9010	MFAN CONCENTRATION (MG/L) 6 7 7 9 12 10 7 20 263 246 54 11 22	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52 47 28 11 10 10	DISCHARCE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266 262 260 252 227	DISCHARGE (CFS) 29900 25200 20000 16800 16500 16300 16900 15900 14200 14600 14300	MEAN COMCEN- TRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 779 843 808 1010
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 8810 8480 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200	MFAN CONCENTRATION (MG/L) 677 779 12 1077 200 263 246 54 11 22 474	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350 9210	MEAN CONCEN- TRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 9	DISCHARCE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266 262 260 252 227 323	DISCHARGE (CFS) 29900 25200 20000 16800 16500 16300 15900 15600 14800 14200 13600 16300 16300	MEAN CONCEN- TRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23 19	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 799 843 808 1010 836
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7430 7740 20500 11900 9090 9010 22200 41000	MFAN CONCENTRATION (MG/L) 677 779 121 1077 200 263 246 544 11 22 474 957	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350 9210 9070	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 9 13	DISCHARCE (TONS/DAY) 1300 2180 2130 1080 1630 1370 794 300 266 262 260 252 227 323 857	DISCHARGE (CFS) 29900 25200 20000 16800 16800 16900 15900 14800 14800 14800 14800 16300 16300 16300 16300 16300	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23 19 28	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 779 843 808 1010 836 1150
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000	MFAN CONCENTRATION (MG/L) 6 7 7 9 12 10 7 20 263 246 54 11 22 474 957	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9310 9310 90770	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 9 13 355 42	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 227 323 857	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 16500 15900 15400 14400 14600 14300 16300 16300 16300 16300	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23 19 28 25	DISCHARGE (TONS/DAY) 3070 1090 1594 771 535 396 432 558 758 759 843 808 1010 836 1150
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7430 7740 20500 11900 9090 9010 22200 41000	MFAN CONCENTRATION (MG/L) 6 7 7 9 12 10 7 20 263 246 54 11 22 474 957	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350 9210 9070	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 43 35 42 40 40 42 40	DISCHARCE (TONS/DAY) 1300 2180 2180 2180 1080 1630 1870 794 300 266 262 260 252 227 323 857 1080 2660	DISCHARGE (CFS) 29900 25200 20000 16800 16800 16900 15900 14800 14800 14200 13600 16300 16300 16300 16300 16300 16300	MEAN CONCENTIATION (MG/L) 38 16 11 17 12 9 10 13 18 18 20 22 22 23 19 28 25 13	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 779 843 808 1010 836 1150
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9010 22200 41000 20100 13900 10800 9690	MFAN CINCENTRATION (MG/L) 6 7 7 9 12 10 7 7 20 263 246 54 11 22 474 957 20 66 643 333	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9320 9320 9350 9400 24600 18500 17100	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 42 45 45 45 46 46 46 46 46 46 46 46 46 46 46 46 46	DISCHARCE (TONS/DAY) 1300 2180 2180 2180 1080 1630 1870 794 300 266 262 260 252 227 323 857 1080 2660 2150 2150	DISCHARGE (CFS) 29900 25200 25000 16800 16500 16500 15900 14800 14800 14200 13600 16300 16300 16300 16300 16300 16300 17300 16300 12300 11000	MEAN CONCENTIATION (MG/L) 38 16 11 17 17 12 9 10 13 18 18 20 22 22 23 19 28 25 13 18 18 25	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 779 843 800 1010 636 1150 1170 572 598 773
1 2 3 4 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9010 22200 41000 20100 13900 10800 9650 9150	MFAN CINCENTRATION (MG/L) 7 7 9 12 10 7 7 20 263 246 54 11 122 474 957 20 66 43 33 33 22	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863 544	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9350 9210 9270 9480 24600 18500 17100 42100	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 42 42 40 43 281 484	DISCHARCE (TONS/DAY) 1300 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 227 323 857 1080 2660 2150 11400 55000	DISCHARGE (CFS) 29900 25200 25200 25000 16500 16500 16500 15900 15600 14400 14200 13600 16300 16300 16300 16300 12300 11000	MEAN CONCENTIATION (MG/L) 38 16 11 17 17 12 9 10 13 18 18 20 22 22 23 19 28 25 13 18 25 27	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 778 800 1010 636 1150 1170 572 598 744
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 20100 13900 10800 9690 9150	MFAN CINCENTITATION (MG/L) 6 7 7 9 12 10 7 20 263 246 544 11 12 22 474 957 209 66 43 33 32 22	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863 544	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9350 9210 9077	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 227 323 857 1080 2660 2150 14400 55900	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 16300 15900 15600 14400 13600 16300 16300 16300 16300 16300 16300 16300 16300 17300 16300 12300 11000 10200	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 22 23 19 28 25 13 18 25 27 15	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 759 843 808 1010 836 1150 1170 572 598 743 744
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9090 9090 10800 9150 8840	MFAN CINCENTRATION (MG/L) 7 7 9 12 10 7 7 20 263 246 54 11 22 474 957 29 66 43 33 32 22	DISCHARGE (TONS/DAY) 143 140 160 203 265 206 139 401 5570 13500 1950 270 270 270 270 270 2480 1250 863 544 621 710	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9630 9210 9250 9210 9480 24600 18500 17100 42100 32500 32800	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 43 35 42 40 43 281 484 412 358	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1630 1630 1630 266 262 260 252 27 323 3857 1080 2660 2150 14400 55000 31700	DISCHARGE (CFS) 29900 25200 25200 25000 16800 16500 16500 15900 15600 14800 14200 13600 16300 16300 16300 11200 17300 16300 12300 11000 10200	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 18 20 22 22 23 19 28 25 13 18 25 27 15 16 16 16 16 16 16 16 16 16 16 16 16 16	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 709 843 808 1010 8150 1170 572 598 744 390 406
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 20100 13900 10800 9690 9150	MFAN CINCENTITATION (MG/L) 6 7 7 9 12 10 7 20 263 246 544 11 12 22 474 957 209 66 43 33 32 22	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863 544	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9350 9210 9077	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 227 323 857 1080 2660 2150 14400 55900	DISCHARGE (CFS) 29900 25200 25000 16800 16500 16500 15900 15600 14800 14200 13600 16300 16300 16300 16300 16300 16300 17300 16300 11000 12300 11000	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 22 23 19 28 25 13 18 25 27 15	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 759 843 808 1010 836 1150 1170 572 598 743 744
1 2 3 4 4 5 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 13900 10800 9690 9150 8840 8760 8620	MFAN CINCENTITATION (MG/L) 6 7 7 9 12 10 7 7 20 263 246 544 11 12 22 474 957 209 66 43 33 32 22	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 105000 11300 2480 1250 863 544 621 710 489	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350 9210 9070 9480 24600 18500 17100 42100 32500 32800 41400	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 43 35 42 40 43 281 484 412 358 126	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 27 323 857 1080 2660 2150 14400 55000 36200 31700 14100	DISCHARGE (CFS) 29900 25200 25200 25000 16800 16500 16500 15900 15600 14800 14200 13600 16300 16300 16300 11200 17300 16300 12300 11000 10200	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 22 23 19 28 25 13 18 25 27 15 16 8	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 709 843 808 1010 836 1150 1170 572 598 743 744 390 406
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 26 27 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 13900 10800 9690 9150 8840 8760 8620 8460 8320	MFAN CINCENTRATION (MG/L) 6 7 7 9 12 10 7 203 246 54 11 12 2474 474 957 209 666 43 33 32 22 26 30 21 15 15 56	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863 544 621 710 489 343 337	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9720 9630 9320 9320 93210 9077 9480 24600 18500 17100 42100 32500 32800 41400 54800 58800	MEAN CONCENTRATION (MG/L) 43 47 42 300 52 47 28 11 100 100 100 100 100 100 100 100 100	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1080 1630 1370 794 300 266 262 260 252 227 323 857 1080 2660 2150 14400 55000 36200 31700 6360 6180 7140	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 16300 15900 15600 14400 13600 16300 16300 16300 16300 16300 16300 16300 17300 16300 11000 12300 11000 9630 9400 9120 9010 8930	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23 19 28 25 25 16 6 8 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 3070 1090 594 7711 535 396 432 558 758 759 843 808 1010 836 1150 1170 572 598 743 744 390 406 197 97 96
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9010 22700 41000 20100 13900 10800 9650 9150 8840 8320 8460 8320 8290 8180	MFAN CINCENTRATION (MG/L) (MG/L) (7 7 9 12 10 7 7 20 263 246 54 11 122 474 957 20 66 43 33 32 22 26 47 47 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 143 140 160 203 265 206 139 401 5570 13500 1950 2700 2150 36800 1250 863 544 621 710 489 343 337 1250 1330	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9210 9350 9350 9210 9350 9350 9350 9350 9350 9350 9350 935	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 43 35 42 40 43 281 484 412 358 126 43 37 45 33	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1630 1630 1370 794 300 266 262 260 252 27 323 327 3237 327 327 327 327 327 32	DISCHARGE (CFS) 29900 25200 25200 25000 16800 16500 16500 15900 15600 14800 14200 15200 17300 16300 16300 16300 16300 16300 17300 16300 17	MEAN CONCENTRATION (MG/L) 38 16 11 17 17 12 9 10 13 18 18 20 22 22 23 19 28 25 13 18 25 27 15 16 8 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 758 709 843 808 1010 836 1150 1170 572 598 744 390 406 107 97 96
1 2 3 4 5 6 7 8 9 10 11 12 2 13 14 4 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 20100 13900 10800 9690 9150 8840 8840 8620 8460 8320 8290 8180 8080	MFAN CINCENTATION (MG/L) (MG/L) (7 7 9 9 12 10 7 20 263 246 54 11 12 22 474 957 20 6 6 7 7 9 9 12 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 11300 2480 1250 863 544 621 710 489 343 337	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9720 9630 9320 9320 93210 9077 9480 24600 18500 17100 42100 32500 32800 41400 54800 58800	MEAN CONCENTRATION (MG/L) 43 47 42 300 52 47 28 11 100 100 100 100 100 100 100 100 100	DISCHARGE (TONS/DAY) 1 300 2 180 2 180 2 180 1 180 1 180 1 180 1 180 2	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 15900 15900 15800 14200 13600 16300	MEAN CONCENTRATION (MG/L) 38 16 11 17 12 9 10 13 18 20 22 22 23 19 28 25 25 16 6 8 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 758 709 843 808 1010 836 1150 1170 572 598 774 390 406 107 97 96 99 96 95 93
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 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 13900 10800 9690 9150 8840 8760 8620 8460 8720 8490 8180 8890 8180 8080 15300 23900	MFAN CINCENTRATION (MG/L) 6 7 7 9 12 10 7 20 263 246 54 11 22 474 957 209 66 43 33 22 26 51 15 15 15 56 66 77 72 65 66 77 72 65	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 106000 11300 2480 1250 863 544 621 710 489 343 337 1250 1330 1460 2970 4190	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9320 9320 9350 9210 9070 9480 24600 18500 17100 42100 32500 32800 41400 54800 58800 56800	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY) 1300 2180 2180 2180 2180 1630 1630 1370 794 300 266 262 260 252 27 323 327 3237 327 327 327 327 327 32	DISCHARGE (CFS) 29900 25200 25200 25200 26800 16800 16500 16300 15900 15600 14400 13600 16300 16300 16300 16300 16300 16300 16300 16300 17300 16300 11000 17300 16300 19200 9630 9400 9120 9010 89900 8760 8650	MEAN CONCENTITATION (MG/L) 18 16 11 17 12 9 10 13 18 20 22 22 23 19 28 25 13 18 25 27 16 6 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 3070 1090 594 7711 535 396 432 558 758 759 843 808 1010 836 1150 1170 572 598 743 744 390 406 197 97 96 99 96 95 93 93
1 2 3 4 5 6 7 8 9 10 11 12 2 13 14 4 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 8810 8480 8460 8370 8180 7640 7380 7740 20500 11900 9090 9010 22200 41000 20100 13900 10800 9690 9150 8840 8840 8620 8460 8320 8290 8180 8080	MFAN CINCENTATION (MG/L) (MG/L) (7 7 9 9 12 10 7 20 263 246 54 11 12 22 474 957 20 6 6 7 7 9 9 12 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 143 160 160 203 265 206 139 401 5570 13500 1950 270 535 36800 11300 2480 1250 863 544 621 710 489 343 337	DISCHARGE (CFS) 11200 17200 18800 13300 11600 10500 10100 9840 9720 9630 9320 9320 9320 9320 9350 9210 9070 9480 24600 18500 17100 42100 32500 32800 41400 54800 58800 56800	MEAN CONCENTRATION (MG/L) 43 47 42 30 52 47 28 11 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY) 1 300 2 180 2 180 2 180 1 180 1 180 1 180 1 180 2	DISCHARGE (CFS) 29900 25200 25200 20000 16800 16500 15900 15900 15800 14200 13600 16300	MEAN CONCENTRATION (MG/L) 38 16 11 17 17 12 9 10 13 18 18 20 22 22 23 19 28 25 15 16 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	DISCHARGE (TONS/DAY) 3070 1090 594 771 535 396 432 558 758 758 709 843 808 1010 836 1150 1170 572 598 774 390 406 107 97 96 99 96 95 93

11377200 SACRAMENTO RIVER AT BEND, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

TOTAL

11378000 SACRAMENTO RIVER NEAR RED BLUFF, CALIF.

LOCATION. - Lat 40°13'55", long 122°10'50", in SE; sec.34, T.28 N., R.3 W., Tehama County, temperature recorder at gaging station on left bank at lower end of Iron Canyon, 0.5 mile downstream from Sevenmile Creek, and 4.6 miles northeast of Red Bluff.

DRAINAGE AREA. -- 9,022 sq mi, excluding Goose Lake basin.

PERIOD OF RECORD .-- Water temperatures: November 1960 to September 1968.

EXTREMES, -1967-68: Water temperatures: Maximum, 14.0°C on several days during May, August, and September; minimum, 6.0°C Jan. 10-13.

Period of record: Water temperatures: Maximum (1961-63, 1964-68), 15.5°C Oct. 3-7, 1961; minimum, 4.0°C Jan. 22, 23, 1962.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc:	TOBER	NOVE	MBER	DEC	EMBER	JAN	IUARY	FEBR	RUARY	м	ARCH
DAY	MAX	MIN										
1	11.0	11.0	11.0	11.0	9.0	9.0	9.0	9.0	7.0	7.0	9.0	9.0
2	11.0	11.0	11.0	11.0	10.0	9.0 9.0	9•0 9•0	8.0 8.0	7.0 7.0	7.0 7.0	9.0 9.0	9.0 9.0
4	11.0	11.0	11.0	11.0	9.0	9.0	8+0	8.0	7.0	7.0	9.0	9.Q
5	11.0	11.0	11.0	11.0	9.0	9.0	8.0	8.0	7.0	7.0	9.0	9.0
6	12.0	11.0	11.0	11.0	9.0	9.0	8.0	8.0	7.0	7.0	9.0	8.0
7 8	12.0 12.0	11.0	11.0	11.0 11.0	9.0 9.0	9.0 9.0	8.0 8.0	8.0 8.0	7.0 7.0	7.0 7.0	8.0 8.0	8.0
9	12.0	12.0	11.0	11.0	9.0	9.0	8.0	7.0	8.0	7.0	8.0	8.0
10	12.0	11.0	11.0	11.0	9.0	9.0	7.0	6.0	8.0	8.0	8.0	8.0
11	11.0	11.0	11.0	11.0	9.0	9.0	6.0	6.0	8.0	8.0	8.0	8.0
12 13	12.0 12.0	11.0 12.0	11.0 11.0	11.0	9.0 9.0	9.0 9.0	6.0 7.0	6.0	8.0 8.0	8.0 8.0	8.0 8.0	8.0 8.0
14	12.0	12.0	11.0	11.0	9.0	8.0	7.0	7.0	8.0	8.0	8.0	8.0
15	12.0	11.0	11.0	11.0	8.0	8.0	7.0	7.0	8.0	8.0	8.0	8.0
16	11.0	11.0	11.0	11.0	8.0	8.0	7.0	7.0	8.0	8.0	8.0	8.0
17 18	11.0	11.0 11.0	11.0 11.0	11.0	9.0 9.0	8.0 9.0	7.0 7.0	7.0 7.0	8.0 8.0	8.0 8.0	8.0 8.0	8.0
19	11.0	11.0	11.0	11.0	9.0	9.0	7.0	7.0	8.0	8.0	9.0	8+0 8-0
20	11.0	11.0	11.0	11.0	9.0	9.0	7.0	7.0	9.0	8.0	9.0	9.0
21	11.0	11.0	11.0	11.0	9.0	9.0	7.0	7.0	9.0	9.0	9.0	9.0
22 23	11.0	11.0 11.0	11.0	11.0	9.0	9.0 9.0	7.0 7.0	7.0 7.0	9.0 9.0	9•0 9•0	9.0 9.0	9.0 9.0
24	11.0	11.0	11.0	10.0	9.0	9.0	7.0	7.0	9.0	9.0	11.0	9.0
25	11.0	11.0	10.0	10.0	9.0	9.0	7+0	7.0	9.0	8.0	11.0	11.0
26 27	11.0	11.0	10.0	10.0	9.0 9.0	9.0 9.0	7•0 7•0	7.0 7.0	8.0	8.0 8.0	11.0	11.0 11.0
28	11.0	11.0	10.0	9.0	9.0	9.0	7.0	7.0	8.0	8.0	11.0	11.0
29	11.0	11.0	9.0	9.0	9.0	9.0	7.0	6.0	9.0	8.0	11.0	11.0
30 31	11.0	11.0 11.0	9.0	9.0	9.0 9.0	9.0 9.0	6•0 7•0	6.0 6.0			11.0 11.0	11.0 11.0
HUNTH	12.0	11.0					9-0		9.0	7.0	11.0	8.0
HINDE			11.0	9.0	10.0	8.0	,,,,	6.0				
	Al	PRIL	•	IAY	J	JNE	JU	ILY	AUG	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN.								
1	11.0	11.0	12.0	12.0	13.0	13.0	12.0	12.0	12.0	12.0	14.0	13.0
2	11.0 11.0	10.0	12.0 12.0	12.0 12.0	13.0 13.0	13.0 12.0	12.0 12.0	12.0 12.0	12.0 12.0	12.0 12.0	14.0 14.0	13.0 13.0
4	11.0	11.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	13.0	13.0 .
5	11.0	11.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	13.0	13.0
6 7	11.0	11.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	13.0	13.0
Ŕ	11.0 12.0	11.0 11.0	12.0 12.0	12.0	12.0 12.0	12.0 12.0	13.0	12.0 12.0	12.0 12.0	12.0 12.0	13.0 13.0	13.0 13.0
9	12.0	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	13.0	13.0
10	12.0	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	13.0	13.0
11	12.0	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12-0	12.0	13.0	13.0
12 13	12.0 12.0	12.0 12.0	12.0 12.0	12.0 12.0	12.0 12.0	12.0	13.0 13.0	12.0 12.0	12.0 12.0	12.0 12.0	13.0 13.0	13.0 13.0
14	12.0	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	14.0	13.0
15	12.0	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	14.0	14.0
16	12.0	12.0	13.0	12.0	13.0	12.0	12.0	12.0	12.0	12.0	14.0	14.0
17 18	12.0 11.0	11.0 11.0	13.0 13.0	13.0 13.0	13.0	12.0	12.0	12.0 12.0	12.0 12.0	12.0 12.0	14.0	13.0 13.0
19	11.0	11.0	13.0	13.0	13.0	12.0	12.0	12.0	12.0	12.0	13.0	13.0
20	11.0	11.0	13.0	12.0	13.0	13.0	12.0	12.0	12.0	12.0	13.0	13.0
21	11.0	11.0	13.0	12.0	13.0	13.0	12.0	12.0	12.0	12.0	13.0	13.0
22 23	11.0	11.0	13.0 13.0	12.0 13.0	13.0	13.0 13.0	12.0 12.0	12.0 12.0	13.0 13.0	12.0	13.0 13.0	13.0 13.0
24	11.0	10.0	13.0	13.0	13.0	13.0	12.0	12.0	13.0	13.0	13.0	13.0
25	11.0	11.0	13.0	13.0	13.0	12.0	12.0	12.0	13.0	13.0	13.0	13.0
26 27	11.0 12.0	11.0 11.0	13.0 13.0	13.0 13.0	13.0 13.0	12.0	12.0 12.0	12.0 12.0	13.0 13.0	13.0 13.0	13.0 13.0	13.0 13.0
28	12.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	13.0	13.0	13.0	13.0
29	12.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	14.0	13.0	13.0	13.0
30 31	12.0	12.0	14.0 13.0	13.0 13.0	13.0	12.0	12.0 12.0	12.0	14.0 14.0	14.0 13.0	13.0	13.0
MONTH	12.0	10.0	14.0	12.0	13.0	12.0	13.0	12.0	14.0	12.0	14.0	13.0
			440	12.00	13.0	12.00	1500		440	12.0	. 700	4.74.9
YEAR	14.0	6.0										

11381620 MILL CREEK AT MOUTH, NEAR LOS MOLINOS, CALIF.

LOCATION.--Lat 40°02'34" (revised), 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 1968.

REMARKS, --Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Records of discharge given for 11381500 Mill Creek near Los Molinos.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	S OD IUM (N A)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
ECT.	130			17		52	o		20		.44
NCV. 01	117			16		58	0		18		.58
DEC.	146			18		57	0		20		.51
JAN. 16	928			5.2		32	0		5.4		•20
FEB. 05	434			7.0		46	0		6.5		.21
MAR. 06	363			8.1		38	0		8.6		•20
APR.	290			9.2		44	0		9.0		•26
30 JUNE	333	8.7	3.5	9.6	1.3	36	ō	15	8.2	-1	. 33
03 JULY	240			9.0		33	0		7.6		.21
02 AUG.	161			12		50	0		14		.47
01 SEP1.	110		_	17		92	0		17		.43
03	101	14	7.5	16	2.7	72	0	18	19	.0	.38
CATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	PH	TEM- PERA- Ture (Deg C)	DIS- SOLVED OXYGEN
CC1.		52	9		42	1.0	43	200	7.7	22	10.8
NOV.		52	4		40	1.0	48	194	7.9	16	11-2
DEC.		65	18		38	1.0	47	210	7.8	8	12.2
JAN. 16		30	4		27	.4	26	94	7.7	7	12-1
FEB. 05		37	0		29	.5	38	118	7.8	7	11.3
P#R. 06		40	9		31	.6	31	119	7.9	9	11.8
APR. OB		37	1		35	.7	36	132	7.8	14	10.0
30 JUNE	101	36	6	-14	36	.7	30	126	7.6	14	10.1
C3		36	9		35	•7	27	131	7.7	18	9.4
02 AUG.		50	9	-	34	.7	41	177	8.2	21	9.8
01 SEP1.		84	9		31	• B	75	233	7.9	22	8.9
03	154	66	7	-21	33	.9	59	225	7.7	22	9.9

11382000 THOMES CREEK AT PASKENTA, CALIF.

LOCATION. --Lat 38°52'57", long 122°33'03", in SWANWA sec.4, T.23 N., R.6 W., Tehama County, at gaging station on left bank, 0.25 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 1968. Water temperatures: October 1951 to September 1968. Sediment records: October 1952 to September 1968.

MA G~

98

153

170

167

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223

03... JLLY

02...

AUG. 01... SEPT.

18

40

67

10

11

13

.30

EXTREMES, -- 1967-68:

Water temperatures: Maximum, 30.0°C Aug. 31, Sept. 1; minimum, freezing point on several days during December and January.

and January. Sediment concentrations: Maximum daily, 10,700 mg/l Jan. 14; minimum daily, 1 mg/l on many days. Sediment discharge: Maximum daily, 149,000 tons Jan. 14; minimum daily, 0.01 ton on several days.

MEAN

Priod of record:
Water temperatures: Maximum, 34.5°C Aug. 18, 23, 1967; minimum, freezing point on several days during December and January most years.
Sediment concentrations: Maximum daily, 60,200 mg/l Dec. 22, 1964; minimum daily, no flow Oct. 4, 1964.
Sediment discharge: Maximum daily, 5,070,000 tons Dec. 22, 1964; minimum daily, 0 ton Oct. 4, 1964.

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.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PO-

	DIS- CHARGE	CAL- Cium	NE- SIUM	MUIGOS	TAS-	BICAR- BONATE	CAR- BONATE	SULFATE	CHLO- RIDE	NITRATE	BORON	PHOS-
CATE	(CFS)	(CA)	(MG)	(NA)	(K)	(HC03)	(CO3)	(504)	(CL)	(NO3)	(8)	(PO4)
CCT.												
C9	23			11		151	0		17	•4	•0B	.02
C1	17			13 _		173	c		18	•3	.12	.03
DEC.	110			9.9		125	0		9.0	.6	.13	.02
JAN.												
16 FEB.	153C			2.5		64	0		-4	• 6	-04	2.8
C5	545			3.4		86	0		1.2	• 3	.03	•01
Cé	495			3.1		78	a		.5	•1	-00	. 27
APR. C8	324			3.1		84	0		1.6	•0	.00	.03
30	214	24	4.9	4.2	.4	84	ŏ	14	3.0	• 2	-04	.19
JUNE C3	17			5.0		98	a		3.6	•0	.03	.0€
JLLY							6		9.2	•0	.08	.01
C2	19			9.0		125	•		9.2		.08	
Ol SEPT.	7•2			12		125	0		16	•2	.07	•02
03	9.0	44	14	13	1.4	121	0	68	21	-1	-00	•02
	DIS- SOLVED		NON-	DIS- Solved		50010	м	SPECT	-			
	\$01.10\$		CAR-	SOLIDS		AD-	AI KA-	- COND-	_	TEM-	DIS-	
	(RESI- DUE AT		BONATE HARO-	(TONS PER	PERCENT	SORP- TION	LINI			PERA- TURE	SOLVE	
CAT	E 180 C)	(CA, MG)	NE S S	AC-FT)	SODIUM	RATIO	CACO	3 MHOS 1		(DEG C) OXYGEI	N
CCT.												
NCV.		193	69		11	.3	124	4 442	8.	2 23	9.	2
OI.		214	72		12	-4	142	2 483	8.	2 18	10.0	0
11.		113	10		16	-4	10	3 320	8.	0 9	11.0	•
JAN.		61	8		8	-1	5.	2 132	8.	2 6	12.	a
FEB.		_										
MAR.		82	11		8	•2	7	1 181	7.	9 6	12.0	0
C6.		78	14		8	•2	64	4 163	8.	2 10	11.0	0
(8.		78	9		8	•2	6		8.		10-1	
30.		80	11	-14	10	•5	69	9 176	8.	2 16	9.7	7

.2

. 3

. 4

80

112

103

99

217

335

399

408

8.2

8.5

8.2

21

23

24

8.9

9.2

7.3

9.9

26 22 23 23

113S2000 THOMES CREEK AT PASKENTA, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH 1 2 3 4 5 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 6 OCTOBER. MAXIMUM MINIMUM NOVEMBER. 25 18 21 20 22 22 24 23 24 24 25 24 24 20 22 23 22 22 22 22 18 21 21 21 21 21 20 19 18 17 14 13 13 14 13 13 14 15 15 16 15 14 13 12 13 13 13 14 13 13 12 13 13 14 13 13 13 12 22 13 15 10 ---8 3 ---7 19 19 19 18 14 12 13 13 14 17 17 14 13 16 11 10 11 12 10 9 MAXIMUM MINIMUM DECEMBER. 21 19 20 13 13 12 17 18 16 15 14 11 12 13 13 14 9 8 13 17 13 15 8 9 13 13 11 9 12 8 7 6 6 -6 6 1 4 6 2 4 8 4 2 9 7 5 7 8 9 9 4 2 7 4 8 11 11 3 3 4 8 MAXIMUM 7 6 8 8 9 7 6 6 11 11 10 0 0 2 1 -- 7 6 4 4 4 4 -- -- -- --3 -- -- -- --7 7 7 7 MINIMUM 6 3 3 7 7 6 4 3 5 3 3 6 ---6 JANUARY.. MAXIMUM 7 --1 6 3 1 7 7 6 3 2 6 6 1 8 6 6 2 7 --MINIMUM 0 1 3 8 FEBRUARY. MAXIMUM 7 7 8 8 7 8 9 8 10 9 9 8 8 _____ = MINIMUM MARCH.... __ -- -- --------11 12 9 8 8 9 9 9 10 10 7 8 8 8 8 7 9 7 7 8 6 7 7 10 8 8 6 9 10 8 10 9 9 10 12 12 9 13 11 12 13 13 11 14 12 11 12 12 11 MINIMUM 9 11 11 11 11 13 11 12 13 10 13 13 12 APRIL... MAXIMUM MINIMUM 11 13 16 19 MAY.... 13 14 16 16 13 13 16 19 20 13 12 15 12 14 --22 19 22 17 13 12 17 13 14 17 20 19 16 21 18 19 16 -- -- -- ---- --MINIMUM JUNE.... MAXIMUM MINIMUM 21 -- 19 -- 18 27 26 -- 26 = = 27 -- --= 24 == == 21 28 27 20 -- --29 ---- 23 ---- 23 ---- -- ---- 26 --------22 16 -- 23 -- 22 -- 22 - 21 MUMIXAM MUMIKAM MUMINIM -- 22 -- 26 23 27 21 25 27 17 17 --__ __ --27 17 AUGUST... 27 27 17 29 17 30 19 -- -- 17 MINIMUM SEPTEMBER

29 29 28 29 28 27 27 28 28 27 27 23 23 26 27 22 19 19 19 24 26 26 26 26 26 18 18 19 19 19 19 19 19 19 18 17 17 15 14 16 17 14 12 12 11 12 15 16 17 17 17

MAX I MUM

MINIMUM

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: 8. BOTTOM MITHORAMAL TUBE: C. CHENICALLY DISPERSED: N. IN NATIVE WATER; P. PIPET; S. SIEVE:
V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED MATER)

WATER										PART	ICLE S	SIZE					
		TEM PERA TURE	DISCHARGE		SUSPENDEO SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	IZE ()	N MI	LLIMET	rers)	INDI	CATED	METHOD DF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.008	•016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 10 1968	0730	3	564	1030	1570		45		67		84	88	96	100			VPMC
JAN 13	1735	6	880	2540	6040	15	22	34	45	58	67	81	94	99	100		VPWC
JAN 14	0740	ŭ	4100	12000	133000	21	24	33	43	55	61	83	94	99	100		VPWC
JAN 14	2255	Ä	6750	12900	235000	16	20	31	40	51	59	80	93	99	100		VPWC
JAN 15			5060	9420	129000	17	19	32	41	53	60	77	90	96	100		VPWC
FEB 15	1530	А	414	222	248	15	24	37	44	47	60	67	74	96	100		VC8W
FEB 17	1130	Ř	1010	2170	5920	15	21	30	41	54	60	74	90	98	99	100	VPWC
FEB 19			3340	8270	74600	12	18	25	35	47	55	72	86	94	98	100	SPWC
FEB 20	0740	7	4960	8000	107000	15	22	30	41	53	58	72	90	98	100		VPWC
FEB 21	1540	ġ	3930	6160	65400	14	20	28	37	49	55	67	85	95	100		VPWC
MAY 20	0815	13	273	318	234	15	24	37	46	50	80	89	96	100			SCBW

11382000 THOMES CREEK AT PASKENTA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTORER			NOVEMBER			DECEMBER	
		MEAN			MEAN			ME AN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	7.0 11	4 5	.08	17 16	8 10	.37 .43	44 41	1	•12
2 3	79	80	.08 .15 20	16	4	.17	142	171	-12 -11 75
4 5	46 34	12	1.5 .18	16 17	2	•09 •09	202 302	125 257	68 243
6	31	2		17	2	•09	140	19	7.2
7	27	2	•17 •15	17	9	.41	176	100	48
8	24 23	2	•13 •12	17 18	6	.2B	116 81	12 4	3.8 .87
10	21	3	.17	19	8	•41	96	6	1.6
11	21	4	.23	19	3	.15	110	4	1.2
12 13	20 20	3 3	.16 .16	19 22	2 4	•10 •24	110 90	5 4	1.5 .97
14 15	20 19	3 3	•16 •15	115 80	214 35	93 7.6	75 51	7	1.4
							59		
16 17	18 18	2	.19 .10	53 44	2 1	•29 •12	51	4 2	•64 •28
18 19	18 18	1 1	•05 •05	42 42	1 1	•11 •11	81 51	9	2.0 .41
20	17	14	.64	42	2	.23	40	2	•22
21	18	10	.49	40	1	•11	42	1	-11
22	19 20	7 7	.36 .38	38 37	1 2	•10 •20	40 42	1 2	•11 •23
24 25	20 20	9 11	•49 •59	35 34	2 1	.19 .09	87 160	5 62	1.2 27
				-					
26 27	20 19	8 4	.43 .21	34 33	1	•09 •09	240 331	90 175	58 156
28	19	4	•21	34	1	•09	325	73	64
29 30	18 18	4 6	.19 .29	42 55	2 7	•23 1•0	304 255	58 44	48 30
31	18	6 7	. 34				238	19	12
TOTAL	701.0		28.52	1030		106.67	4122		853.93
		JANUARY			FEBRUARY			MARCH	
		MFAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS) 220	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY) 209	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY) 992
1 2 3	DISCHARGE (CFS) 220 205 188	MEAN CONCEN- TRATION (MG/L) 17 5 2	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0	DISCHARGE (CFS) 535 1000 790	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 506 403	SEDIMENT DISCHARGE (TONS/DAY) 992 672
1 2 3 4	DISCHARGE (CFS) 220 205 188 182	MEAN CONCEN- TRATION (MG/L) 17 5 2	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98	DISCHARGE (CFS) 535 1000 790 535	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758	DISCHARGE (CFS) 726 618 580 562	MEAN CONCEN- TRATION (MG/L) 506 403 412 359	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545
1 2 3 4 5	DISCHARGE (CFS) 220 205 188 182 174	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 2	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4	DISCHARGE (CFS) 535 1000 790 535 545	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611	DISCHARGE (CFS) 726 618 580 562 568	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491
1 2 3 4 5	DISCHARGE (CFS) 220 205 188 182 174	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 3	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4	01SCHARGE (CFS) 535 1000 790 535 545	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611	DISCHARGE (CFS) 726 618 580 562 568 495	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358
1 2 3 4 5	DISCHARGE (CFS) 220 205 188 182 174 164 144 137	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 3 3	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415 420 480 570	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823	DISCHARGE (CFS) 726 618 580 562 568 495 441 414	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209
1 2 3 4 5	DISCHARGE (CFS) 220 205 188 182 174	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 3	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4	DISCHARGE (CFS) 535 1000 790 535 545 586	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415 420 480	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759	DISCHARGE (CFS) 726 618 580 562 568 495	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 3 3 3 3 3 30 569	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4 1.3 1.2 1.1 1.2 739	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187 173 141	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 200 205 188 182 174 164 144 137 154 444 280 245	MEAN CONCEN- TRATION (MG/L) 17 5 2 2 3 3 3 30 569	SEDIMENT DISCHARGE (YONS/DAY) 10 2.8 1.0 .98 1.4 1.3 1.2 1.1 1.2 739	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 340	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744	DISCHARGE (CFS) 726 618 580 562 568 495 441 381 344 324 354	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187 173 141	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444	MFAN CONCENTRATION (MG/L) 17 5 2 2 3 3 30 569 42 9 1050	SEDIMENT DISCHARGE (YONS/DAY) 10 2.8 1.0 .98 1.4 1.3 1.2 1.1 12 739	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475	MEAN CONCEN- TRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187 173 141	SEDIMENT DISCHARGE (YONS/DAY) 992 672 645 545 491 358 256 209 178 131
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 245 562	MEAN CONCEN- TRATION (MG/L) 17 5 2 3 3 3 3 30 569 42 9	SEDIMENT DISCHARGE (YONS/DAV) 10 2.8 1.098 1.4 1.3 1.2 1.1 12 739 32 6.0 2720	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 340 350	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436	DISCHARGE (CF5) 726 618 580 562 568 495 441 414 381 344 324 354 362	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187 173 141	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444 280 245 567 4510 4080	MEAN CONCENTRATION (MG/L) 17 5 2 2 7 3 3 3 3 3 3 3 3 3 5 6 9 4 7 9 1050 10700 8890 3390	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.098 1.4 1.3 1.2 1.1 12 739 32 6.0 2720 149000 99400	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 4175 455 418	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 340 350 360 320 880	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361	DISCHARGE (CFS) 726 618 580 562 588 495 441 414 381 344 324 356 351 348 423	MEAN CONCENTRATION (MG/L) 506 403 359 320 268 215 187 173 141 117 140 161 102 108 243	SEDIMENT DISCHARGE (TONS/DAY) 992 645 545 491 358 256 209 178 131 102 134 157 97
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444 280 245 567 4510 4080	MEAN CONCENTRATION (MG/L) 17 5 2 2 7 3 3 3 3 3 3 3 3 9 0 1070 0 8890 3390 1450 810	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4 1.2 1.1 1.2 7.39 32 6.0 2720 149000 99400	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 455 418 545 1070 946	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 360 320	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 324 354 362 351 348	MEAN CONCEN- TRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 103 157 97
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 265 562 4510 4080 1530 890 790	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 2 3 3 3 3 3 0 569 42 9 1050 10700 8490 3390 1450 810 535	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4 1.3 1.2 1.1 1.1 1.7 739 32 6.0 2720 149000 99400 14700 3480 1730 1140	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 485 545 1070 946 3580	MEAN CONCENTRATION (MG/L) 145	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361 1290 7510 4470 107000	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 324 354 362 351 348 423 410 369 354	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 99 130	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 265 562 4510 4080 1530 890 790 820	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 3 3 3 3 3 0 569 42 9 10750 8490 1450 8490 1450 810 535 380	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.9 1.4 1.3 1.2 1.1 1.7 739 32 6.0 2720 149000 99400 14700 3480 1730 1140 841	OISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 485 418 545 418	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 320 880 820 880 880 8840	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 6111 658 759 823 807 744 548 436 449 449 442 361 1290 7510 4470 107000 104000	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 362 354 369 369 369 369 369	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 99 130 99	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278 99 124
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 245 542 4510 4080 1530 890 790 820 1040	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 2 3 3 3 3 3 0 569 42 9 1050 10700 8490 3390 1450 810 510 510 510	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.9 1.4 1.3 1.2 1.1 1.7 739 32 4.0 2720 149000 99400 14700 3480 1730 1140 841 1540 1530	OISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 475 475 475 475 476 946 3580 4360	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 360 320 880 880 2600 1750 6840 8340 6470	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 499 442 361 1290 7510 4470 107000 104000 64700 32500	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 324 3562 351 348 423 410 369 354 340 348	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 100 243 179 99 130 99 90 76	SEDIMENT DISCHARGE (YONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278 198 99 124 91
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3	DISCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444 280 245 567 4510 4080 1530 890 790 820 1040 1110	MEAN CONCENTRATION (MG/L) 17	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.098 1.4 1.3 1.2 1.1 12 739 32 6.0 2720 149000 99400 14700 3480 1730 1140 841 1540 1550 1210	OISCHARGE (CFS) 575 1000 790 535 545 580 586 535 520 540 495 475 475 455 418 545 1070 946 3580 4360	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 3500 320 1750 6840 8840 6470 44820 6470 4820	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361 1290 7510 4470 107000 104000	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 354 362 351 348 423 410 369 354 369 354 346 334 337	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 9 130 9 9 9 76 62	SEDIMENT DISCHARGE (TONS/DAY) 992 645 545 545 256 209 178 131 102 134 157 97 101 278 198 99 124 91 85 71 56
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 245 542 4510 4080 1530 890 790 820 1040	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 2 3 3 3 3 3 0 569 42 9 1050 10700 8490 3390 1450 810 510 510 510	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.9 1.4 1.3 1.2 1.1 1.7 739 32 4.0 2720 149000 99400 14700 3480 1730 1140 841 1540 1530	OISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 475 475 475 475 476 946 3580 4360	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 360 320 880 880 2600 1750 6840 8340 6470	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 499 442 361 1290 7510 4470 107000 104000 64700 32500	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 324 3562 351 348 423 410 369 354 340 348	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 100 243 179 99 130 99 90 76	SEDIMENT DISCHARGE (YONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278 198 99 124 91
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 224 25 26	DISCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444 280 245 567 4510 4080 1530 890 790 820 1040 1110 1090 1040 790	MEAN CONCENTRATION (MG/L) 17	SEDIMENT DISCHARGE (YONS/DAY) 10 2.8 1.098 1.4 1.3 1.2 1.1 12 739 32 6.0 2720 149000 99400 14700 3480 1730 1140 841 1540 1530 1210 870 728	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 455 418 545 1070 946 3580 3680 2790 1950 1170	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 320 880 2200 1750 6840 8840 8470 4410 4420 3300 1890	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361 1290 7510 407000 104000 64700 32500 41500 17400	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 354 362 351 348 423 410 369 354 340 348 344 337 351 441	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 99 130 99 90 662 83	SEDIMENT DISCHARGE (TONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 117 97 101 278 198 99 124 91 85 71
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 22 22 22 25 26 27	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 245 562 4510 4080 1530 800 790 790 1040 1090 1040 946 790 626	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 3 3 3 3 3 3 0 569 47 9 10750 14750	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4 1.3 1.2 1.1 1.7 739 32 4.0 2720 149000 14700 3480 1.730 1140 841 1540 1530 1210 870 728 469 262	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 451 1070 946 3580 3680 3680 3790 3190 1170 979 935	MEAN CONCENTRATION (MG/L) 145 111 1110 525 415 420 480 576 576 576 350 320 880 1750 6840 8340 6470 4310 4820 3300 1890 1290	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 499 442 361 1290 7510 4470 107000 104000 64700 32500 41500 17400 5970	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 324 3562 351 348 423 410 349 349 340 348 344 337 351 441 455 405	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 99 130 99 90 662 83 310 239 180	SEDIMENT DISCHARGE (YONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278 198 99 124 91 85 71 56 79 369
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28	DISCHARGE (CFS) 220 205 188 182 174 164 144 137 154 444 280 245 562 4510 890 790 1040 1110 1090 1040 796 526 510 830	MEAN CONCENTRATION (MG/L) 17 5 2 2 2 3 3 3 3 3 0 569 42 9 1050 10700 1450 8490 3390 1450 810 510 510 510 510 510 510 510 510 510 5	SEDIMENT DISCHARGE (TONS/DAY) 10 2.8 1.0 .98 1.4 1.1 1.7 739 32 4.0 2720 149000 14700 3480 1.730 1140 841 1540 1530 1210 870 728 469 262 269 1820	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 451 1070 946 3580 3680 3790 3190 1170 979 935 880 790	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 480 570 575 510 410 350 320 880 2200 1750 6840 8840 8470 4410 4420 3300 1890	SEDIMENT DISCHARGE (TONS/DAY) 209 1710 2370 758 611 658 759 823 807 744 548 436 449 442 361 1290 7510 4470 107000 104000 64700 32500 41500 17400 5970	DISCHARGE (CFS) 726 618 580 562 568 495 441 381 324 356 3562 351 348 423 410 369 354 340 348 423 410 349 351 441 455 405 432 510	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 100 8 243 179 99 130 99 90 76 62 83 310 239 180 163 162	SEDIMENT DISCHARGE (YONS/DAY) 992 672 645 545 491 358 256 209 178 131 102 134 157 97 101 278 198 99 124 91 85 77 369 294 197 190 223
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 22 5 26 27 28	DISCHARGE (CFS) 270 205 188 182 174 164 144 137 154 444 280 245 567 4510 4080 1530 890 790 820 1040 1110 1090 1040 946 790 626 510	MEAN CONCENTRATION (MG/L) 17 5 2 2 3 3 3 3 10 569 42 9 1050 8190 81450 8150 8150 8150 8160 8170 8170 8180 8180 8180 8180 8180 818	SEDIMENT DISCHARGE (YONS/DAY) 10 2.8 1.098 1.4 1.3 1.2 1.1 12 739 32 6.0 2720 149000 99400 14700 3480 1730 1140 841 1540 1530 1210 870 728 469 262 269	DISCHARGE (CFS) 535 1000 790 535 545 580 586 535 520 540 495 475 475 455 418 545 1070 946 3580 4360 3680 2790 3190 1950 1170 979 935 880	MEAN CONCENTRATION (MG/L) 145 511 1110 525 415 420 570 575 510 410 350 320 1750 6840 880 2600 1750 6840 8340 3390 1890 1200 966 860 866 866	SEDIMENT DISCHARGE (TONS/DAY) 209 170 2370 758 611 658 759 823 807 744 548 436 449 442 361 1290 7510 107000 104000 104000 5970 3170 2420 2040	DISCHARGE (CFS) 726 618 580 562 568 495 441 414 381 344 354 362 351 348 423 410 369 354 340 348 344 337 351 441 455 405 432	MEAN CONCENTRATION (MG/L) 506 403 412 359 320 268 215 187 173 141 117 140 161 102 108 243 179 99 99 76 62 283 310 239 180 163	SEDIMENT DISCHARGE (TONS/DAY) 992 645 545 545 256 276 178 131 102 134 157 97 101 278 198 99 124 91 85 71 56 79 369 294

TOTAL 25758 -- 283298.78 35349 -- 407045 13417 -- 7828

11382000 THOMES CREEK AT PASKENTA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MEAN MEAN MEAN MEAN CONCEN-SEDIMENT DISCHARGE MEAN CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) MEAN CONCEN-SEDIMENT DISCHARGE DISCHARGE DISCHARGE DISCHARGE DAY (CFS) (MG/L) (TONS/DAY) (CFS) (MG/L) (CFS) (MG/L) (TONS/DAY) 127 212 13 /.4 7.9 8.4 9.2 8.2 2 495 170 80 441 414 381 130 210 14 79 77 2 .43 ? 94 78 75 80 72 214 16 14 74 76 - 20 4 5 1 .21 358 .40 1.9 .47 190 168 158 10 9 6 351 67 59 74 69 2 10 3 2 2 334 324 327 49 44 43 57 2.6 58 6 65 81 2.6 154 10 348 76 2.9 51 -28 116 108 77 11 12 13 116 104 152 6 2.5 49 1 .13 369 1.9 3.0 3.8 2.9 358 309 144 46 .25 64 49 40 294 62 48 156 132 9 39 37 2 .21 2.6 2.9 2.3 1.4 16 17 297 37 30 120 8 9 7 35 .19 2 2 3 4 4 268 248 240 .18 .26 .33 28 34 32 31 20 120 18 19 20 15 13 10 122 134 224 22 20 136 225 17 93 30 7.2 3.1 1.7 .38 21 216 196 192 8.2 166 16 28 5 .27 .25 .23 22 5.8 142 25 190 4.1 4.1 112 3 .91 28 25 190 1.2 .20 1.1 .83 .81 .53 196 204 194 8 24 23 26 27 4.2 106 3 .19 11 6.1 102 .19 28 29 30 21 100 3 5.8 7.5 98 91 86 .22 11 13 214 20 . 46 4587 193.03 1302 9.43 TOTAL 8673 1351.6 JULY AUGUST SEPTEMBER MEAN MEAN MEAN MEAN DISCHARGE (CFS) MEAN SCHARGE CONCEN-MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE CONCEN-TRATION SEDIMENT SEDIMENT DISCHARGE DISCHARGE (TONS/DAY) (CES) (CES) DAY (MG/L) (MG/L) (TONS/DAY) (MG/L) .26 .36 .49 .47 7.2 6.7 6.2 9.6 9.0 8.3 8.3 .03 19 •06 1 3 19 .05 .03 6.2 5.6 5 . 04 .08 .09 .04 23 27 21 20 .31 .24 .23 8.3 8.3 8.3 7.7 7.7 -04 5.6 5 4 3 11 -08 54456 .06 .05 5.6 5.6 5.0 .04 .02 .02 .31 10 19 4.3 2 .02 1 .02 18 .24 4.3 4.4 4.4 .02 •02 11 24567 7.7 1 18 18 18 .05 .06 7.7 7.7 7.7 7.1 7.1 .02 .02 12 .19 14 15 .24 4.6 -09 .02 .23 .27 .14 .06 4.6 4.6 5.2 8.3 .10 .10 5.9 5.2 5.2 5.2 4.6 16 17 18 19 20 17 8 7 -02 .01 16 13 12 12 2 1 6 .08 .01 1 .06 8 4 3 3 2 4.6 4.0 4.0 10 8.9 8.9 .26 .17 22 23 .05 24 21 .01 .02 .07 4.0 3 .07 .09 .01 18 18 16 26 27 28 29 **3**0 7.2 .10 .10 .15 4.0 4.0 4.0 4.0 3.5 -01 3 6.7 6.7 7.2 6.7 7.2 .05 .01 .06 14 .08 .01 1 .01 31 .06 11 .03 TOTAL 459.9 5.76 296.6 3.14 190.0

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

95885.5 700724.43

11383800 SACRAMENTO RIVER NEAR HAMILTON CITY, CALIF.

LOCATION.--Lat 39°45'06", long 121°59'40", in NE NE sec. 20, R.1 W., T.22 N., Butte County, at State-operated 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 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- Clum (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
0CT. 10 NOV.	9530			6.1		59	0		2.7		•01
14	7760			6.6		64	0		3.0		.06
DEC. 07 JAN.	12200			B.O		66	0		5.0		.06
04 FER.	8890			6.8		73	0		3.9		.05
06 MAR.	14100			6.0		70	0		2.6		.04
05 APR.	18100			5.4		66	0		3.2		.00
03 MAY	9210			6.R		73	0		2.8		.02
07 JUNE	8570	8.6	6.7	5.8	.9	65	0	2.6	3.8	.2	•00
05 JULY	8160			6.1		62	0		2.8		.00
09 AUG.	10400			4.4		62	0		2.2		.01
06 SEPT.	11600			5.8		59	0		2.1		• 02
04	8100	9.8	5.7	6.9	1.4	60	0	5.9	3.0	•2	.07
	DIS-			DIS-				SPECI-			
OATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARO- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SOBIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
OCT.	SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOL VED SOL IDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	PH 7•7	PERA- TURE	SOLVED
00 T. 10 NOV. 14	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
OCT. 10 NOV. 14 DEC. 07	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 45	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	23	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	7+7	PERA- TURE (DEG C)	SOLVED OXYGEN 10.5
OCT. 10 NOV. 14 DEC. 07 JAN. 04	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 45 48	CAR- BONATE HARD- NESS	SOL VEO SOL IDS (TONS PER AC-FT)	23 23	AD- SORP- TION RATIO	LINITY AS CACO3 48 52	FIC COND- UCTANCE (MICRO- MHOS) 120	7•7 7•9	PERA- TURE (DEG C)	SOLVED OXYGEN 10.5
OCT. 10 NOV. 14 DEC. 07 JAN. 04 FEB.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 45 48 55	CAR- BONATE HARD- NESS O O	SOLVED SOLIDS (TONS PER AC-FT)	23 23 24	SORP- TION RATIO	LINITY AS CACO3 48 52 54	FIC COND- UCTANCE (MICRO- MHOS) 120 127	7•7 7•9 7•7	PERA- TURE (DEG C) 13 12	SOLVED OXYGEN 10.5 10.5
OCT. 10 NOV. 14 DEC. 07 JAN. FEB. 06 MAR.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 45 48 55	CAR- BONATE HARD- NESS 0 0	SOL VED SOL IDS (TONS PER AC-FT)	23 23 24 22	AD- SORP- TION RATIO	LINITY AS CACO3 48 52 54 60	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143	7•7 7•9 7•7	PERATURE (DEG C) 13 12 9	10.5 10.5 11.1 12.0
OCT. 10 NOV. 14 DEC. 07 JAN. 04 FEB. 06 MAR. 05 APR.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 45 48 55 54	CAR- BONATE HARD- NESS 0 0 1	SOLVED SOLIDS (TONS PER AC-FT)	23 23 24 22 19	AD- SORP- TION RATIO	LINITY AS CACO3 48 52 54 60	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143	7•7 7•9 7•7 8•1	PERATURE (DEG C) 13 12 9 7 8	SOLVED OXYGEN 10.5 10.5 11.1 12.0
OCT. 10 NOV. 14 DEC. 07 JAN. 06 MAR. 05 APR. 03 MAY	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 45 48 55 54 56	CAR- BONATE HARD- NESS 0 0 1	SOLVED SOLIDS (TONS PER AC-FT)	23 23 24 22 19	AD- SORP- TION RATIO	LINITY AS CACO3 48 52 54 60 57	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143 148	7.7 7.9 7.7 8.1 7.7	PERA- TURE (DEG C) 13 12 9 7 8	SOLVED OXYGEN 10.5 10.5 11.1 12.0 11.8
OCT. 10 NOV. 14 DEC. 07 JAN. 04 FEB. 06 MAR. 05 APR. 03 MAY. UT JUNE 07 JUNE	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 45 48 55 54 56	CAR- BONATE HARD- NESS O O 1 O 1 O 0	SOL VEO SOL IDS (TONS PER AC-FT)	23 23 24 22 19 18	AD- SORP- TION RATIO -4 -4 -5 -4 -3 -3	LINITY AS CACO3 48 52 54 60 57 54	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143 148	7.7 7.9 7.7 8.1 7.7 7.8	PERA- TURE (DEG C) 13 12 9 7 8 11	SOLVED OXYGEN 10.5 10.5 11.1 12.0 11.8 11.1
OCT. 10	SOLVED SOLIDS (RESI- DUE AT 180 C1	NESS (CA, MG) 45 48 55 54 56 57 56	CAR-BONATE PROMATE PRO	SOL VEO SOL IDS (TONS PER AC-FT)	23 23 24 22 19 18 21	AD- SORP- TION RATIO .4 .5 .4 .3 .3	LINITY AS CACO3 48 52 54 60 57 54 60 53	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143 148 143 148 127	7.7 7.9 7.7 8.1 7.7 7.8 8.0	PERA- TURE (DEG C) 13 12 9 7 8 11 12	10.5 10.5 11.1 12.0 11.8 11.1 10.9
OCT. 10 10 14 14 07 JAN. 04 FEB. 06 MAR. 03 MAY. 07 JUNE 05 JUNE	SOLVED SOLIDS (RESI – DUE AT 180 C)	NESS (CA, MG) 45 48 55 54 56 57 56 49	CAR-BONATE HARD-NESS	SOL VEO SOL IDS (TONS PER AC-FT)	23 23 24 22 19 18 21 20 22	AD- SORP- TION RATIO -4 -4 -5 -4 -3 -3 -4 -4	LINITY AS CACO3 48 52 54 60 57 54 60 53 51	FIC COND- UCTANCE (MICRO- MHOS) 120 127 148 143 148 143 148 127	7.7 7.9 7.7 8.1 7.7 7.8 8.0 8.2	PERA- TURE (DEG C) 13 12 9 7 8 11 12 13 14	SOLVED OXYGEN 10.5 10.5 11.1 12.0 11.8 11.1 10.9 10.8 9.7

11384090 BIO 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 1958.

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

11384000 BIG CHICO CREEK NEAR CHICO, CALIF, -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- S I U M { K }	BICAR- BONATE (HCO3)	CAR- BONATE (CG3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
0CT. 10	26			14		102	0		10		.06
NOV. 14	44			15		105	0		13		.10
DEC .	142			8.3		69	0		6.0		.12
JAN. 04	40			11		91	0		8.8		-14
FEB. 06	296			3.8		49	0		1.0		•01
MAR. 05	129			4.8		62	0		9.7		•00
APR. 03	118			5.2		66	0		2.8		.01
MAY 07	39	15	7.4	12	1.0	88	2	3.4	7.8	•0	.07
JUNE 05	31			13		100	0		8.3		.12
O9	24			13		101	3		10		-14
AUG.	22			16		110	0		11		•22
SEPT. 04	22	16	8.8	16	1.2	110	0	9.7	11	•2	.20
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD+ NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVEO SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- Ture (Deg C)	DIS- SOLVED OXYGEN
CCT.											
10 NGV.		73	0		29	.7	84	205	8.2	15	10.5
14 DEC.		79	0		29	.7	86	230	B • 2	13	11.0
07 JAN.		54	0		25	•5	57	147	8.0	7	12.6
04 FEB.		67	0		26	.6	75	184	8.2	2	14.5
06 MAR.		36	0		19	.3	40	94	7.7	7	12.8
05 APR.		50	0		17	• 3	51	119	8.0	11	11.4
03 MAY		47	0		19	.3	54	123	8.0	11	11.8
07 JUNE	128	68	0	.17	27	•6	75	182	8.4	15	10.4
JULY		72	0		28	• 7	82	199	8.1	18	9.4
09 AUG.		75	0		27	.7	88	213	8.5	24	8.5
06 SEPT.		80	0		30	•B	90	218	8.2	22	8.8
34	153	76	c	•21	31	. 8	9 D	221	8.2	22	9.0

11384600 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-Stonyford 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 1968.

EXTREMES . -- 1967-68:

water temperatures: Maximum, 29.0°C on many days during July and August; minimum, 1.0°C on several days during December and January.

Period of record: Water temperatures: Maximum, 29.0°C on many days during July and August 1968; minimum, 1.0°C on several days during December 1967 and January 1968.

REMARKS.--Clock stopped July 24-31, Aug. 11 to Sept. 3, Sept. 27-30; temperature ranges, 22.0°C to 29.0°C, 16.0°C to 28.0°C, and 16.0°C to 23.0°C, respectively.

YEAR 29.0 1.0

11384600 LITTLE STONY CREEK ABOVE EAST PARK RESERVOIR, NEAR LODOGA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		TE	PERATURE	(-C) OF W	ATER, WAL	ER YEAR U	CTOBER 19	67 TO SEE	TEMBER 19	00		
	oc.	TOBER	NOV	EMBER	DEC	MBER	JAN	UARY	FEB	LUARY	144	RCH
DAY	MAX	MIN	NAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DA.		DIM	MAA	HIM	HAA	uru	HAA	717	TIAA	717	TOA	714
1	20.0	17.0	16.0	12.0	6.0	4.0	5.0	3.0	7.0	6.0	11.0	8.0
2	19.0 18.0	14.0 13.0	16.0 15.0	12.0	7.0 9.0	4.0 7.0	4.0	2.0	8.0	6.0	12.0	8.0
4	18.0	13.0	14.0	11.0 12.0	9.0	7.0	3.0 3.0	1.0 1.0	8.0 8.0	6.0 6.0	12.0 12.0	8.0 8.0
5	18.0	13.0	17.0	13.0	8.0	6.0	2.0	1.0	8.0	7.0	12.0	8.0
-				.,,,,								
6	18.0	13.0	16.0	12.0	7.0	4.0	2.0	1.0	9.0	8.0	10.0	7.0
7	18.0	13.0	16.0	12.0	8.0	6.0	2.0	1.0	9.0	8.0	9.0	7.0
8	19.0	13.0	17.0	13.0	6.0	4.0	3.0	1.0	8.0	7.0	12.0	8.0
9	19.0	14-0	14.0	12.0	7.0	4.0	6.0	3.0	9-0	7.0	12.0	7.0
10	19.0	14.0	14.0	11.0	6.0	4.0	7.0	4.0	9.0	7.0	11.0	6.0
11	20.0	16.0	14.0	11.0	6.0	3.0	4.0	2.0	9.0	7.0	11.0	7.0
12	19.0	15.0	13.0	12.0	5.0	3.0	4.0	1.0	9.0	7.0	8.0	7.0
13	19.0	14.0	14.0	13.0	3.0	1.0	7.0	4.0	9.0	7.0	9.0	7.0
14	18.0	13.0	14.0	13.0	2.0	1.0	8.0	7.0	8.0	7.0	11.0	7.0
15	17.0	12.0	14.0	12.0	1.0	1.0	9.0	8.0	9.0	7.0	10.0	7.0
16	17.0	12.0	14.0	11.0	1.0	1.0	8.0	7.0	9.0	8.0	9.0	7.0
17 18	17.0 18.0	12.0 13.0	15.0 13.0	11.0 12.0	2.0 4.0	1.0 2.0	7.0 7.0	6.0 6.0	11.0	8.0	9.0 10.0	7.0 7.0
19	18.0	13.0	12.0	11.0	3.0	1.0	7.0	6.0	10.0	8.0 9.0	11.0	7.0
20	18.0	13.0	13.0	10.0	3.0	1.0	7.0	6.0	12.0	9.0	11.0	6.0
		.,,,,		2000	3.0					,,,,		
21	17.0	13.0	12.0	9.0	3.0	1.0	8.0	7.0	11.0	10.0	11.0	6.0
22	18.0	13.0	11.0	8.0	4.0	3.0	9.0	8.0	12.0	10.0	10.0	8.0
23	17.0	13.0	9.0	7.0	6.0	3.0	8.0	7.0	12.0	11.0	12.0	8.0
24	17.0	13.0	10.0	7.0	7.0	4.0	8.0	6.0	12.0	9.0	13.0	8.0
25	17.0	13.0	9.0	7.0	8.0	7.0	8.0	7.0	12.0	9.0	12.0	9.0
26	17.0	12.0	8.0	5.0	8.0	6.0	7.0	5.0	12.0	9.0	12.0	7.0
27	17.0	12.0	8.0	5.0	9.0	8.0	5.0	4.0	11.0	9.0	12.0	7.0
28	18.0	13.0	8.0	5.0	8.0	7.0	8.0	3.0	11.0	9.0	14.0	8.0
29	16.0	12.0	8.0	6.0	7.0	6.0	10.0	3.0	12.0	8.0	14.0	10.0
30	16.0	11.0	8.0	6.0	6.0	4.0	7.0	5.0			15.0	10.0
31	16.0	12.0			5.0	3.0	8.0	6.0			14.0	9.0
HONTH	20.0	11.0	17.0	5.0	9.0	1.0	10.0	1.0	12.0	6.0	15.0	6.0
	A	PRIL		4AY	J	JNE	JU	JLY	AUA	EUST	SEPT	EMBER
DAY												
DAY	AI MAX	PRIL MIN	MAX	YAY Min	JU XAM	JNE M I N	JU Max	ILY MIN	NAX	BUST MIN	SEP1	EMBER M I N
									MAX 29+0			
1 2	MAX 11.0 13.0	MIN 9.0 8.0	MAX 19.0 19.0	MIN 13.0 14.0	MAX 24.0 22.0	MIN 17.0 17.0	MAX 27.0 27.0	MIN 18.0 21.0	MAX 29.0 29.0	MIN 22.0 23.0		
1 2 3	MAX 11.0 13.0 13.0	MIN 9.0 8.0 8.0	MAX 19.0 19.0 20.0	MIN 13.0 14.0 14.0	MAX 24.0 22.0 21.0	HIN 17.0 17.0 17.0	MAX 27.0 27.0 28.0	MIN 18.0 21.0 21.0	MAX 29.0 29.0 29.0	MIN 22.0 23.0 22.0	MAX	# EN
1 2 3 4	MAX 11.0 13.0 13.0 13.0	MIN 9.0 8.0 8.0 9.0	MAX 19.0 19.0 20.0 20.0	MIN 13.0 14.0 14.0 14.0	MAX 24.0 22.0 21.0 23.0	MIN 17.0 17.0 17.0 17.0	MAX 27.0 27.0 28.0 28.0	MIN 18.0 21.0 21.0 22.0	MAX 29.0 29.0 29.0 29.0	MIN 22.0 23.0 22.0 22.0	MAX 26.0	#IN
1 2 3	MAX 11.0 13.0 13.0	MIN 9.0 8.0 8.0	MAX 19.0 19.0 20.0	MIN 13.0 14.0 14.0	MAX 24.0 22.0 21.0	HIN 17.0 17.0 17.0	MAX 27.0 27.0 28.0	MIN 18.0 21.0 21.0	MAX 29.0 29.0 29.0	MIN 22.0 23.0 22.0	MAX	# EN
1 2 3 4 5	HAX 11.0 13.0 13.0 13.0	MIN 9.0 8.0 8.0 9.0 9.0	MAX 19.0 19.0 20.0 20.0	MIN 13.0 14.0 14.0 14.0	MAX 24.0 22.0 21.0 23.0 19.0	MIN 17.0 17.0 17.0 17.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0	MAX 29.0 29.0 29.0 29.0 28.0	MIM 22.0 23.0 22.0 22.0 23.0	MAX ————————————————————————————————————	#IN 20.0 21.0
1 2 3 4 5	MAX 11.0 13.0 13.0 13.0 13.0	MIN 9.0 8.0 8.0 9.0 9.0	MAX 19.0 19.0 20.0 20.0 19.0	MIN 13.0 14.0 14.0 14.0 12.0	MAX 24.0 22.0 21.0 23.0 19.0	MIN 17.0 17.0 17.0 17.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0	MAX 29.0 29.0 29.0 29.0 28.0	MIM 22.0 23.0 22.0 22.0 23.0	26.0 27.0	20.0 21.0
1 2 3 4 5	HAX 11.0 13.0 13.0 13.0 13.0	MIN 9.0 8.0 9.0 9.0 9.0	MAX 19.0 19.0 20.0 20.0 19.0	MIN 13-0 14-0 14-0 12-0 12-0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0	MIN 17.0 17.0 17.0 17.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0	MIM 18.0 21.0 21.0 22.0 23.0 23.0	MAX 29.0 29.0 29.0 29.0 28.0 28.0	MIN 22-0 23-0 22-0 23-0 23-0	MAX 	MIN 20.0 21.0 21.0
1 2 3 4 5	MAX 11.0 13.0 13.0 13.0 13.0	9.0 8.0 8.0 9.0 9.0 9.0	MAX 19.0 19.0 20.0 20.0 19.0 18.0 19.0	MIN 13.0 14.0 14.0 12.0 12.0 12.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0	MIN 17.0 17.0 17.0 16.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0	#IN 20.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	HAX 11.0 13.0 13.0 13.0 13.0	MIN 9.0 8.0 9.0 9.0 9.0	MAX 19.0 19.0 20.0 20.0 19.0	MIN 13-0 14-0 14-0 12-0 12-0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0	MIN 17.0 17.0 17.0 17.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0	MIM 18.0 21.0 21.0 22.0 23.0 23.0	MAX 29.0 29.0 29.0 29.0 28.0 28.0	MIN 22-0 23-0 22-0 23-0 23-0	MAX 	MIN 20.0 21.0 21.0
1 2 3 4 5 6 7 8 9	MAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0	9.0 8.0 9.0 9.0 9.0 9.0	HAX 19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	MIN 13.0 14.0 14.0 12.0 12.0 12.0 13.0 14.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 22.0 23.0 23.0	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MAX 27.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 23.0 22.0 23.0	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0	20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	HAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0	9.0 8.0 9.0 9.0 9.0 9.0 10.0	MAX 19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	MIN 13.0 14.0 14.0 12.0 12.0 12.0 13.0 14.0 14.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 22.0 23.0 23.0	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 22.0 23.0 23.0 22.0 22.0 23.0 22.0	MAX 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0	20.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0	#IN 9.0 8.0 9.0 9.0 9.0 8.0 9.0 9.0 10.0	MAX 19.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0	MIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0	MAX 	20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0	MIN 9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 8.0	MAX 19.0 19.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 18.0 18.0 18.0 17.0	MIN 13.0 14.0 14.0 12.0 12.0 12.0 13.0 14.0 13.0 13.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 18.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0 22.0	MAX	MIN 20.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13	HAX 11.0 13.0 13.0 13.0 13.0 13.0 15.0 16.0 16.0	#IN 9.0 8.0 9.0 9.0 8.0 9.0 9.0 10.0 11.0 10.0 8.0	MAX 19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 18.0 17.0	MIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 13.0 13.0 13.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0 22.0	MAX	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0	MIN 9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 8.0	MAX 19.0 19.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 18.0 18.0 18.0 17.0	MIN 13.0 14.0 14.0 12.0 12.0 12.0 13.0 14.0 13.0 13.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0	MIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 18.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0 22.0	MAX	MIN 20.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13	NAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 14.0 14.0	MIN 9.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 10.0 8.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0	MAX 24.0 22.0 21.0 23.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0	MAX 27.0 27.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	#AX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 23.0 22.0 23.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	20.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	8.0 8.0 9.0 9.0 9.0 8.0 9.0 10.0 11.0 10.0 8.0 9.0	HAX 19.0 19.0 20.0 19.0 19.0 19.0 20.0 18.0 18.0 17.0 18.0 17.0	HIN 13.0 14.0 14.0 12.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 24.0 25.0 25.0	HIM 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 18.0 18.0 18.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 23.0 22.0 23.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	HAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	8.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 10.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 18.0 18.0 18.0 17.0 15.0	HIN 13.0 14.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 25.0 25.0 26.0 26.0 27.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 19.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 18.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22	29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 23.0 22.0 23.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 45 6 7 8 9 10 11 12 13 14 15	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	8.0 8.0 9.0 9.0 9.0 10.0 10.0 10.0 8.0 9.0 10.0 8.0 9.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 17.0 18.0 15.0 15.0 19.0 20.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 13.0 13.0 13.0 11.0 12.0 11.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	HIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	NIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	#AX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 23.0 22.0 23.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	20.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	HAX 11.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	8.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 10.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 18.0 18.0 18.0 17.0 15.0	HIN 13.0 14.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 25.0 25.0 26.0 26.0 27.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 19.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 18.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22	29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 21.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 5 6 7 7 8 8 9 9 10 11 12 13 14 15 16 17 18 19 20	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	8.0 8.0 9.0 9.0 9.0 10.0 10.0 8.0 9.0 10.0 8.0 8.0 9.0 10.0	19.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 18.0 17.0 18.0 17.0 18.0 19.0 20.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 13.0 13.0 11.0 11.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0	HIN 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0	20.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 20 21	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.	MIN 9.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 10.0 9.0 10.0 8.0 8.0 8.0 9.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 18.0 15.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 22.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0 27.0	NIN 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0 20.0 2	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 23.0 22.0 22.0 22	PAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	#IN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	HAX 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 12 22	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 9.0 8.0 9.0 8.0 9.0 10.0 11.0 10.0 10.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 17.0 15.0 20.0 18.0 20.0 19.0 20.0 18.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 11.0 14.0 16.0 16.0 15.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 28.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 22 23	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.	MIN 9.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 11.0 15.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0	NIN 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0	MAX 27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0 20.0 2	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 23.0 22.0 22.0 22	PAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	#IN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 23.0 21.0 21.0 22.0	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 12 22	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 9.0 8.0 9.0 8.0 9.0 10.0 11.0 10.0 10.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 17.0 15.0 20.0 18.0 20.0 19.0 20.0 18.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 11.0 14.0 16.0 16.0 15.0	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	PAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	#IN 22.0 23.0 22.0 23.0 22.0 23.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 28.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 8.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 17.0 15.0 20.0 18.0 20.0 19.0 20.0 18.0	HIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 13.0 1	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	HAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 9.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 1	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 18.0 18.0 19.0 20.0 18.0 19.0 20.0 18.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 16.0 16.0 15.0 13.0 13.0 14.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	NIN 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 4 25 26 27	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0	9.0 8.0 9.0 8.0 9.0 10.0 11.0 10.0 10.0 9.0 8.0 9.0 8.0 10.0 8.0 9.0 9.0 9.0 11.0	19.0 19.0 20.0 20.0 19.0 19.0 20.0 18.0 19.0 20.0 18.0 17.0 15.0 20.0 19.0 19.0 19.0 19.0 20.0	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 11.0 11.0 11.0 11.0 11.0 11.0 11	24.0 22.0 21.0 23.0 19.0 22.0 22.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.	MIN 9.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0 1	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 11.0 17.0 15.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 16.0 15.0 13.0 13.0 14.0 16.0 15.0 16.0 17.0 17.0 17.0	24.0 22.0 23.0 19.0 22.0 23.0 22.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	NIN 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 11 14 15 16 7 18 19 20 21 22 23 4 25 26 27 288 29	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 8.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0 9.0 9.0 8.0 10.0	19.0 19.0 20.0 20.0 19.0 19.0 20.0 18.0 19.0 20.0 18.0 17.0 15.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 11.0 14.0 15.0 16.0 16.0 17.0 17.0 17.0 17.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28	HAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.	MIN 9.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0 1	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 11.0 15.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	24.0 22.0 23.0 19.0 22.0 23.0 22.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	NIN 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
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 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 8.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0 9.0 9.0 8.0 10.0	19.0 19.0 20.0 20.0 19.0 19.0 20.0 18.0 19.0 20.0 18.0 17.0 15.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 11.0 14.0 15.0 16.0 16.0 17.0 17.0 17.0 17.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	#IN 22.0 23.0 22.0 22.0 23.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0
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 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 8.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0 9.0 9.0 8.0 10.0	19.0 19.0 20.0 20.0 19.0 19.0 19.0 20.0 18.0 11.0 15.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21	NIN 13.0 14.0 14.0 12.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	24.0 22.0 21.0 23.0 19.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	27.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 18.0 21.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22	MAX 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0	MIN 22.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 25.0 21.0 21.0 22.0 22.0 22.0 22.0	20.0 21.0 21.0 21.0 22.0 20.0 20.0 20.0

11388000 STONY CREEK BELOW BLACK BUTTE DAM, NEAR ORLAND, CALIF.

LOCATION. --Lat 38°49'00", long 122°19'25", in SW1 sec.28, T.23 N., R.4 W., Glenn 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.

DRAINAGE AREA. -- 741 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1957 to September 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS CHARGI (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCQ3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PG4)
OCT.												
NOV.	117	-		14		179	0		13	1.1	.23	. 16
14 DEC.	53	_		16	-	202	3		15	1.3	.27	•19
D7 JAN-	35	_		17		206	0		16		-18	
04	37	_		16		207	D		18		-24	
FEB. 06	46			12		141	0		19	3.8	-17	.13
MAR. 05	255			11		118	0		14	-1	-D8	-17
APR. 03	52			12		120	2		12	-5	•06	-00
MAY 07	515	29	12	13	1.0	122	5	15	14	•5	-09	.22
JUNE 05	154	_		13		138	2	_	13	-4	-13	.03
JULY	163			15		147	4		14	-1	-11	-04
AUG. 06 SEPT.	345	_		15	-	168	2		14	.1	-21	-05
D4	152	32	19	14	1.2	178	D	15	16	.2	•12	.17

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARO- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- Tion RATIO	ALKA- LINITY AS CACO3	SPECI- FIC CONG- UCTANCE (MICRO- MHOS)	PH	FEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
DCT.											
10		153	6		17	.5	147	368	8.2	18	9.2
NDV.											
14		177	6	_	16	.5	171	418	8.5	14	9.3
DEC. 07		168	D		18	.6				_	
JAN.		100			10	.6	169	422	8.2	9	11.6
04		190	20		15	.5	170	439	8.2	6	13.2
FEB.		_									
06		1 36	20		16	.4	116	351	B. 1	9	12.7
MAR. D5		110	13		18	_					
APR.		110	13		10	.5	97	274	B. D	12	10.5
03		112	10		19	.5	102	275	B. 4	12	12.9
MAY											
D7	162	120	12	-22	19	.5	108	291	8.6	16	11.1
JUNE 05		126	9			_					
JULY		126	9		18	.5	116	304	8.4	18	10.0
09		138	11		19	-6	127	323	8.6	23	8.7
AUG.								323	0.0		٠.,
06		154	13		17	.5	141	344	B. 4	25	8.3
SEPT.	142	150				_					
04	162	158	12	.22	16	.5	146	360	7.8	22	B.9

11390000 BUTTE CREEK NEAR CHICO, CALIF.

LOCATION.--Lat 39°43'34", long 121°42'28", in NW\n\u00e4 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 1968. Water temperatures: November 1961 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 21.0°C July 7-9; minimum, 1.0°C Dec. 14, 15.

Period of record:
Water temperatures: Maximum (1961-64, 1965-68), 26.0°C July 21, 22, 1966; minimum, 1.0°C Dec. 14, 15, 1967.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- Clum (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATF (SO4)	CHLD- R (DE (CL)	NITRATE (NO3)	RORON (R)
cct.											
10 NOV.	138			3.9		64	0		1.4		.03
14 DEC.	172			4.8		70	0		1.6		•01
09 JAN.	201			3.6		56	0		1.4		.01
04	161			3.0		65	o		.7		-02
FER. 06 Mar.	375			2.5		56	0				.00
05	568			1.9		39	o				•00
APR. 03 May	544			2 • 1		42	0				-00
C7	354	7.3	2.9	2.6	.5	43	0	•0	1.1	.0	•00
05 JULY	255			2.9		50	n		.9		.00
09 AUG.	142			3.1		64	0		1.0		.02
G6 SEPT.	121			4.1		63	0		1.3		.03
04	129	11	5.0	4.1	.8	64	0	2.5	1.2	.0	•05
	DIS-			015-				SPEC1-			
CATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, 4G)	NON- CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SDRP- TION PATIO	ALKA- LINITY AS CACD3	FIC CDND- UCTANCE (MICPD- MHOS)	РН	TEM- PERA- Ture (Deg C)	DIS- SOLVED OXYGEN
CCT.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, 4G)	CAR- BONATE HARD- NESS	SOLIDS (TONS PER AC-FT)	SODIUM	AD- SDRP- TION PATIO	LINITY AS CACD3	CDND- UCTANCE (MICPD- MHUS)		PERA- TURE (DEG C)	DXYGEN
	SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLIDS (TONS PER		AD- SDRP- TION	LINITY AS	CDND- UCTANCE (MICPD-	PH 7.9	PERA- TURE	SOLVED
CCT. 10 NOV. 14	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, 4G)	CAR- BONATE HARD- NESS	SOLIDS (TONS PER AC-FT)	SODIUM	AD- SDRP- TION PATIO	LINITY AS CACD3	CDND- UCTANCE (MICPD- MHUS)		PERA- TURE (DEG C)	DXYGEN
CCT. 10 NOV. 14 DEC.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 47	CAR- BONATE HARD- NESS	SOLIDS (TONS PER AC-FT)	\$00 TUM 15	AD- SDRP- TION PATIO	LINITY AS CACD3	CDND- UCTANCE (MICPO- MHOS)	7.9	PERA- TURE (DEG C)	SOLVED OXYGEN
CCT. 10 NOV. 14 DEC. C9 JAN.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 47 53	CAR- BONATE HARD- NESS O	SOLIDS (TONS PER AC-FT)	15 16	AD- SDRP- TION PATIO	LINITY AS CACD3 52 57	CDND— UCTANCE {MICRD— MHOS} 110	7.9 8.1	PERA- TURE (DEG C)	SOLVED DXYGEN 11.3 11.0
CCT. 10 NOV. 14 DEC. C9 JAN. 04 FEB.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, 4G) 47 53 42	CAR- BONATE HARD- NESS 0 0	SOLIDS (TONS PER AC-FT)	15 16 16	AD- SDRP- TION PATIO	LINITY AS CACD3 52 57 46	CDNO- UCTANCE (MICPO- MHOS) 110 121	7.9 8.1 7.6	PERA- TURE (DEG C) 12 12	SOLVED DXYGEN 11.3 11.0
CCT. 10 NDV. 14 CG JAN. 04 FEB. 06 MAR. 05	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 47 53 42 51	CAR- BONATE HARD- NESS 0 0	SOLIDS (TONS PER AC-FT)	15 16 16 11	AD- SDRP- TION PATIO -2 -3 -2	52 57 46	CDNP- UCTANCE (MICPO- MHOS) 110 121 107	7.9 8.1 7.6 8.1	PERA- TURE (DEG C) 12 12 7	SOLVED OXYGEN 11.3 11.0 12.5
CCT. 10 NOV. 14 DEC. C9 JAN. 04 FEB. 06 MAR. 05 APR.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA. MG) 47 53 42 51 39	CAR- BONATE HARD- NESS 0 0 0	SOLIDS (TDNS PER AC-FT)	15 16 16 11	AD- SDRP- TION PATIO -2 -3 -2 -2	52 57 46 53	CDND- UCTANCE (MICPO- MHOS) 110 121 107 110	7.9 8.1 7.6 8.1 7.7	PERATURE (DEG C) 12 12 7 3	SOLVED DXYGEN 11.3 11.0 12.5 14.4 12.4
CCT. 10 NOV. 14 DEC. C9 JAN. 04 FEB. 05 APR. 03 PAY	SOLIDS (RESI- DUE AT 180 C)	NESS (CA. MG) 47 53 42 51 39 32	CAR- BONATE HARD- NESS 0 0 0 0	SOLIDS (TONS PER AC-FT)	15 16 16 11 12	AD- SDRP- TION PATIO -2 -3 -2 -2 -2	52 57 46 53 46 32	CDNN- UCTANCE (MICPD- MHOS) 110 121 107 110 101	7.9 8.1 7.6 8.1 7.7	PERATURE (DEG C) 12 12 7 3	SOLVED OXYGEN 11.3 11.0 12.5 14.4 12.4
CCT. 10 NOV. 14 DEC. Qq JAN. 04 FEB. 06 MAR. 05 APR. 07 JUNE 05	SOLIDS (RESI- DUE AT 180 C)	NESS (CA. 4G) 47 53 42 51 39 32 30	CAR- BONATE HARD- NESS O O O O O	SOLIDS (TONS PER AC-FT)	15 16 16 11 12 11	AD- SDRP- TION PATIO -2 -3 -2 -2 -2 -1	52 57 46 53 46 32	CDNN- UCTANCE (MICPD- MHOS) 110 121 107 110 101 70	7.9 8.1 7.6 8.1 7.7 7.8 7.8	PERA- TURE (DEG C) 12 12 7 3 8 10	SOLVED OXYGEN 11.3 11.0 12.5 14.4 12.4 11.7
CCT. 10 NOV. 14 DEC. Qq JAN. 04 FEB. 06 MAR. 05 APR. 03 PAY 07 JUNE 05 JULY	SOLIDS {RESI_DUE AT 180 C}	NESS (CA. 4G) 47 53 42 51 39 32 30 30	CAR-BONATE HARD-NESS	SOLIDS (TONS) PER AC-FT)	SODIUM 15 16 16 11 12 11 13 16	AD- SDRP- TION PATIO -2 -3 -2 -2 -1 -2	LINITY AS CACD3 52 57 46 53 46 32 34 35	CDND- UCTANCE (MICPD- MHOS) 110 121 107 110 101 70 71	7.9 8.1 7.6 8.1 7.7 7.8 7.8	PERA- TURE (DEG C) 12 12 7 3 8 10	SOLVED OXYGEN 11.3 11.0 12.5 14.4 12.4 11.7 12.1 11.1
CCT. 10 NOV. 14 DEC. C9 JAN. 04 FEB. 05 APR. 03 MAY. OT JUNE 05 JULY	SOLIDS {RESI_DUE AT 180 C}	NESS (CA. MG) 47 53 42 51 39 32 30 30 36	CAR-BONATE HARD-NESS 0 0 0 0 0 0 0 0 0	SOLIDS (TONS) PER AC-FT)	SODIUM 15 16 16 11 12 11 13 16	AD- SDRP- TION PATIO -2 -3 -2 -2 -1 -2 -2	LINITY AS CACD3 52 57 46 53 46 32 34 35 41	COND- UCTANCE (MICPO- MHOS) 110 121 107 110 101 70 71 74 86	7.9 8.1 7.6 8.1 7.7 7.8 7.8 8.1	PERA- TURE (DEG C) 12 12 7 3 8 10	SOLVED OXYGEN 11.3 11.0 12.5 14.4 12.4 11.7 12.1 11.1

11390000 BUTTE CREEK NEAR CHICO, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc	TOBER	NOV	EMBER	DEC	EMBER	JAI	NUARY	FEB	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	MIN
1	16.0	15.0	12.0	10.0	6.0	4.0	4.0	3.0	6.0	6.0	8.0	7.0
ž	15.0	14.0	12.0	11.0	5.0	4.0	4.0	3.0	6.0	6.0	8.0	7.0
3	14.0	13.0	12.0	11.0	6.0	5.0	3.0	2.0	7.0	6.0	8.0	7.0
4	13.0	12.0	12.0	11.0	7.0	6.0	3.0	2.0	8.0	7.0	B.0	7.0
5	13.0	13.0	12.0	11.0	7.0	6.0	3.0	2.0	8.0	7.0	8.0	7.0
6	13.0	12.0	12.0	11.0	7.0	6.0	3.0	2.0	8.0	7.0	8.0	7.0
7	13.0	11.0	11.0	10.0	7.0	6.0	3.0	3.0	B•0	7.0	7.0 7.0	7.0
8	13.0 14.0	12.0 12.0	11.0	10.0	6.0 6.0	4.0 4.0	3.0 4.0	3.0 3.0	8.0 8.0	7.0 7.0	7.0	7.0 6.0
1ó	14.0	12.0	11.0	10.0	6.0	4.0	6.0	4.0	8.0	7.0	7.0	6.0
11	14.0	12.0	11.0	9.0	6.0	4.0	5.0	4.0	8.0	7.0	7.0	6.0
12	14.0	13.0	10.0	9.0	5.0	3.0	4.0	3.0	8.0	7.0	7.0	6.0
13	14.0	12.0	10.0 12.0	9.0 10.0	4.0	3.0 1.0	5.0 6.0	4.0 5.0	8.0	7.0 7.0	7.0 7.0	6.0 6.0
14 15	13.0	11.0 11.0	12.0	11.0	3.0 3.0	1.0	7.0	6.0	8.0 8.0	7.0	7.0	6.0
16	13.0	11.0	12.0	11.0	3.0	2.0	7.0	6.0	8.0	7.0	7.0	7.0
17	13.0	11.0	11.0	11.0	3.0	2.0	7.0	6.0	8.0	7.0	7.0	6.0
18	13.0	11.0	11.0	10.0	3.0	2.0	6.0	5.0	8.0	8.0	7.0	6.0
19 20	13.0 13.0	11.0 11.0	11.0	11.0 9.0	3.0 3.0	3.0 3.0	6.0 7.0	6.0	8.0 9.0	8.0 8.0	7.0 7.0	6.0 6.0
22 21	12.0 13.0	12.0 12.0	11.0 9.0	9.0 8.0	4.0	3.0 3.0	7.0 7.0	6.0 6.0	8.0 8.0	8.0 8.0	8.0 8.0	6.0 7.0
23	13.0	12.0	9.0	7.0	4.0 5.0	3.0	7.0	6.0	9.0	8.0	8.0	7.0
24	13.0	12.0	8.0	7.0	5.0	4.0	7.0	6.0	8.0	7.0	8.0	7.0
25	13.0	12.0	8.0	7.0	5.0	3.0	7.0	6.0	8.0	7.0	8.0	7.0
26	13.0	12.0	8.0	6.0	5.0	4.0	7.0	6.0	8.0	7.0	8.0	6.0
27 28	12.0 12.0	11.0 11.0	7.0 7.0	6.0	6.0 6.0	4.0	6.0 5.0	5.0 4.0	8.0 8.0	7.0 7.0	8.0 8.0	6.0 7.0
29	11.0	10.0	7.0	6.0	6.0	4.0	5.0	4.0	8.0	7.0	9.0	7.0
30	11.0	9.0	6.0	5.0	5.0	3.0	6.0	4.0			9.0	8.0
31	12.0	9.0			4.0	3.0	6.0	6.0			9.0	8.0
MONTH	16.0	9.0	12.0	5.0	7.0	1.0	7.0	2.0	9.0	6.0	9.0	6.0
	A	PRIL		MAY	ال	UNE	J	ULY	AU	GUST	SEP	TEMBER
OAY	MAX	PRIL MIN	MAX	MAY Min	JI MAX	UNE MIN	JI MAX	ULY Min	AUI Max	GUST MIN	SEP [*]	TEMBER Min
1	MAX 9.0	M1N 8.0	MAX 12.0	MIN 11.0	MAX 15.0	MIN 13.0	MAX 18.0	MIN 17.0	MAX 17.0	MIN 14.0	MAX 19.0	MIN 17.0
1 2	MAX 9.0 8.0	MIN 8.0 7.0	MAX 12.0 12.0	MIN 11.0 10.0	MAX 15.0 15.0	MIN 13.0 13.0	MAX 18.0 19.0	MIN 17.0 17.0	MAX 17.0 17.0	MIN 14.0 16.0	MAX 19.0 19.0	MIN 17.0 17.0
1 2 3	MAX 9.0 8.0 8.0	MIN 8.0 7.0 7.0	MAX 12.0 12.0 12.0	MIN 11.0 10.0 11.0	MAX 15.0 15.0 15.0	MIN 13.0 13.0 14.0	MAX 18.0 19.0 19.0	MIN 17.0 17.0 17.0	MAX 17.0 17.0 18.0	MIN 14.0 16.0 16.0	MAX 19.0 19.0 19.0	MIN 17.0 17.0 17.0
1 2	MAX 9.0 8.0	MIN 8.0 7.0	MAX 12.0 12.0	MIN 11.0 10.0	MAX 15.0 15.0	MIN 13.0 13.0	MAX 18.0 19.0	MIN 17.0 17.0	MAX 17.0 17.0	MIN 14.0 16.0	MAX 19.0 19.0	MIN 17.0 17.0
1 2 3 4 5	9.0 8.0 8.0 8.0 9.0	8.0 7.0 7.0 7.0	MAX 12.0 12.0 12.0 13.0 13.0	MIN 11.0 10.0 11.0 11.0	MAX 15.0 15.0 15.0 15.0	MIN 13.0 13.0 14.0 14.0	MAX 18.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0	MAX 17.0 17.0 18.0 18.0	MIN 14.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0	M1N 17.0 17.0 17.0 17.0
1 2 3 4 5	MAX 9-0 8-0 8-0 8-0 9-0	8.0 7.0 7.0 7.0 8.0	MAX 12.0 12.0 12.0 13.0 13.0	MIN 11.0 10.0 11.0 11.0	MAX 15.0 15.0 15.0 15.0	MIN 13.0 13.0 14.0 14.0 14.0	MAX 18.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0	MAX 17.0 17.0 18.0 18.0 18.0	MIN 14.0 16.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0	M1N 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	MAX 9.0 8.0 8.0 8.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 8.0 7.0	MAX 12.0 12.0 12.0 13.0 13.0	MIN 11.0 10.0 11.0 11.0 11.0	MAX 15.0 15.0 15.0 15.0 15.0 14.0	MIN 13.0 13.0 14.0 14.0 14.0 13.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0	MIN 17-0 17-0 17-0 17-0 17-0 18-0 18-0	MAX 17.0 17.0 18.0 18.0 18.0	MIN 14.0 16.0 16.0 17.0 16.0 16.0	MAX 19.0 19.0 19.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	9.0 8.0 8.0 9.0 9.0 9.0	#IN 8.0 7.0 7.0 7.0 8.0 7.0 7.0	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0	MIN 13.0 13.0 14.0 14.0 14.0 13.0 13.0 12.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9	9-0 8-0 8-0 9-0 9-0 9-0 10-0	#IN 8.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0	MAX 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 12.0 13.0 12.0 12.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0	MIN 17-0 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 14-0 16-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	9-0 8-0 8-0 9-0 9-0 9-0 10-0	#IN 8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 8.0	MAX 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0	MIN 17-0 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 14-0 16-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0 17-0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	9-0 8-0 8-0 9-0 9-0 9-0 11-0	MIN 8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0	MAX 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 10.0 10.	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0
1 2 3 4 5 6 7 8 9 10	9-0 8-0 8-0 9-0 9-0 9-0 9-0 10-0	MIN 8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 8.0 9.0 9.0	MAX 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0	MIN 17-0 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 17-0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 17.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0	MIN 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0
1 2 3 4 5 6 7 8 9 10	9-0 8-0 8-0 9-0 9-0 9-0 11-0	MIN 8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0	MAX 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 10.0 10.	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 13.0	MAX 18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9-0 8-0 8-0 9-0 9-0 9-0 9-0 10-0 11-0 11-0 9-0 9-0	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	HAX 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0	MIN 11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 9.0	MAX 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0	MIN 13.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	18.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 20.0 19.0 20.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0	M1N 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 8.0 8.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 9.0 9.0	#IN 8.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	HAX 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	HIN 11.0 10.0 11.0 11.0 11.0 10.0 10.0 10.	15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0	MIN 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 20	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 14.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0	HAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 15-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 8.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0	8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 11	HIN 11.0 10.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 9.0 9.0	15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	18.0 19.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14-0 16-0 16-0 16-0 17-0 16-0 16-0 16-0 17-0 16-0 16-0 17-0 16-0 16-0 16-0 16-0 16-0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	9-0 8-0 8-0 9-0 9-0 9-0 10-0 11-0 11-0 9-0 9-0 10-0	8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MAX 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 10.0 10.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0	MIN 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	18.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 20.0 19.0 20.0 20.0 19.0 20.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20	MAX 9-0 8-0 8-0 9-0 9-0 10-0 11-0 11-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0	8.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MIN 11.0 10.0 11.0 11.0 11.0 11.0 10.0 10.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0	MIN 13.0 14.0 14.0 14.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	18.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 20.0 19.0 20.0 19.0 20.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	#AX 9.0 8.0 8.0 8.0 9.0 9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 18.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MAX 9.0 8.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0 18.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0	18.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	#AX 9.0 8.0 8.0 8.0 9.0 9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 18.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	#AX 9.0 8.0 8.0 8.0 9.0 9.0 9.0 10.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 19.0 19.0 21.0 21.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0
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	#AX 9.0 8.0 8.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 19.0 19.0 21.0 21.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 9 10 11 2 13 11 4 15 16 17 18 19 20 21 22 24 25 26 27	9.0 8.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
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	#AX 9-0 8-0 8-0 8-0 9-0 9-0 9-0 10-0 11-0 11-0 10-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0	MIN 8.0 7.0 7.0 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 19.0 19.0 21.0 21.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 9 10 11 2 13 11 4 15 16 17 18 19 20 21 22 24 25 26 27	9.0 8.0 8.0 9.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 14.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 14.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 9 10 11 2 13 14 5 16 7 18 12 20 21 22 23 24 25 26 26 29	MAX 9.0 8.0 8.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 10.0 11.0 11	MIN 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 13.0 14.0 14.0 14.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 1	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 14.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15

YEAR 21.0 1.0

11390500 SACRAMENTO RIVER BELOW WILKINS SLOUGH, NEAR GRIMES, CALIF.

LOCATION. -- Lat 39°00'36", long 121°49'25", in NW{NE} 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 52.9 upstream from Sacramento.

DRAINAGE AREA. -- 12,940 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1966 to September 1968.

NOVEMBER

EXTRIBUES. -- 1967-68:
Water temperatures: Maximum, 21.0°C on several days in June; minimum, 5.0°C Dec. 15-17, Jan. 13.

Period of record: Water temperatures: Maximum, 21.0°C on several days in June 1988; minimum, 5.0°C Dec. 15-17, 1987, Jan. 13, 1988.

REMARKS, -- Recorder malfunctioned Oct. 1, 2.

OCTOBER

TEMPERATURE (°C)	OF	WATER.	WATER	YKAR	OCTOBER	1967	TO	SEPTEMBER	1968
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JANUARY

FEBRUARY

MARCH

DECEMBER

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			13.0	12.0	9.0	9.0	9.0	8.0	7.0	6.0	12.0	11.0
2			13.0	13.0	9.0	9.0	8.0	B. 0	8.0	7.0	12.0	11.0
3	16.0	15.0	13.0	13.0	9.0	9.0	8.0	8.0	B.0	8.0	12.0	11.0
4	15.0	14.0	13.0	13.0	9.0	9.0	8.0	7.0	8.0	8.0	12.0	12.0
5	15.0	14.0	13.0	13-0	9.0	9.0	7.0	7.0	9.0	8.0	12.0	12.0
6	15.0	14.0	13.0	13.0	9.0	9-0	7.0	7.0	9.0	8.0	13.0	12.0
7	15.0	14.0	13.0	13.0	9.0	9.0	7.0	7.0	9.0	8.0	13.0	12.0
8	16.0	15.0	13.0	13.0	9.0	8.0	7.0	7.0	10-0	9.0	12.0	11.0
9	16.0	15.0	14.0	14.0	8.0	8.0	7.0	7.0	11.0	10.0	12.0	11.0
10	16.0	14.0	14.0	13.0	8.0	8.0	7.0	7.0	11.0	11.0	12.0	12.0
11	14.0	14.0	13.0	13.0	8.0	8.0	8.0	7.0	11.0	11.0	12.0	12.0
12	14.0	14.0	13.0	13.0	8.0	8.0	7.0	6.0	11.0	11.0	12.0	11.0
13	14.0	14.0	13.0	13.0	8.0	7.0	6.0	5.0	11.0	11.0	11.0	11.0
14	14.0	14.0	13.0	13.0	7.0	6.0	8.0	6.0	11.0	11.0	11.0	10.0
15	14.0	13.0	13.0	13.0	6.0	5.0	8.0	8.0	11.0	11.0	10.0	10.0
16	13.0	13.0	13.0	13.0	5.0	5.0	9.0	8.0	11.0	11.0	11.0	10.0
17	14.0	13.0	13.0	13.0	6.0	5.0	8.0	8.0	11.0	11.0	11.0	11.0
18	14.0	13.0	13.0	13.0	6.0	6.0	8.0	8.0	11.0	11.0	11.0	11-0
19	14.0	13.0	13.0	13.0	7.0	6.0	8.0	8.0	12.0	11.0	11.0	11.0
20	14.0	13.0	13.0	13.0	7.0	7.0	8-0	8.0	12.0	12.0	12.0	11.0
21	14.0	14.0	13.0	12.0	7.0	7.0	9.0	8.0	13.0	12.0	12.0	12.0
22	14.0	13.0	12.0	12.0	8.0	7.0	9.0	9.0	13.0	12.0	13.0	12.0
23	14.0	13.0	12-0	11.0	8.0	8.0	10.0	9.0	13.0	13.0	13.0	12.0
24	14.0	13.0	12.0	11.0	8.0	8.0	10.0	10.0	13.0	13.0	13.0	13.0
25	14-0	14.0	11.0	11.0	9.0	8.0	10.0	10.0	13.0	12.0	13.0	13.0
26	14.0	13.0	11.0	11.0	10.0	9.0	10.0	10.0	12.0	11.0	13.0	13.0
27	14.0	13.0	11.0	11.0	11.0	10.0	10.0	9.0	12.0	11.0	13.0	13.0
28	14.0	13.0	11.0	10.0	11.0	10.0	9.0	8.0	12.0	11.0	13.0	13.0
29	14.0	13.0	10.0	10-0	11.0	10.0	8.0	8.0	12.0	11.0	14.0	13.0
30	13.0	12.0	10.0	9.0	10.0	9.0	8.0	7.0			15.0	14-0
31	13.0	12.0			9.0	9.0	7.0	6.0			16.0	15.0
MONTH	16.0	12.0	14.0	9.0	11.0	5.0	10.0	5.0	13.0	6.0	16.0	10.0
	A 1	PRIL		MAY		UNE		ULY	Atte	SUST	CEP.	TEMBER
OAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OAY 1	16-0											
1	16-0	15.0	18.0	17.0	19.0	18.0	18.0	17.0	18.0	17.0	20.0	19.0
1 2	16.0 15.0	15.0 14.0	18.0 18.0	17.0 18.0 18.0	19.0	18.0 18.0	18.0 18.0 19.0	17.0 18.0	18.0 18.0	17.0 17.0	20.0	19.0
1	16-0	15.0	18.0	17.0 18.0 18.0	19.0	18.0	18.0 18.0 19.0	17.0	18.0 18.0 18.0	17.0	20.0	19.0
1 2 3	16.0 15.0 14.0	15.0 14.0 14.0	18.0 18.0 18.0	17.0 18.0	19.0 20.0 20.0	18.0 18.0 19.0	18.0	17.0 18.0 18.0	18.0 18.0 18.0	17.0 17.0 18.0	20.0 20.0 20.0	19.0 20.0 20.0
1 2 3 4 5	16.0 15.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0	17.0 18.0 18.0 18.0	19.0 20.0 20.0 19.0 18.0	18.0 18.0 19.0 18.0	18.0 18.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0	18.0 18.0 18.0 19.0	17.0 17.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0	19.0 20.0 20.0 20.0 20.0
1 2 3 4 5	16.0 15.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0	17.0 18.0 18.0 18.0 17.0	19.0 20.0 20.0 19.0 18.0	18.0 18.0 19.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0	18.0 18.0 18.0 19.0 19.0	17.0 17.0 18.0 18.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0	19.0 20.0 20.0 20.0 20.0
1 2 3 4 5	16.0 15.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0	17.0 18.0 18.0 18.0 17.0	19.0 20.0 20.0 19.0 18.0	18.0 18.0 19.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0	18.0 18.0 18.0 19.0 19.0	17.0 17.0 18.0 18.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0	19.0 20.0 20.0 20.0 20.0
1 2 3 4 5	16.0 15.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0 17.0	17.0 18.0 18.0 18.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0	18.0 18.0 19.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0	17.0 18.0 18.0 18.0 18.0	18.0 18.0 18.0 19.0 19.0 19.0	17.0 17.0 18.0 18.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0	19.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5	16.0 15.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0	17.0 18.0 18.0 18.0 17.0	19.0 20.0 20.0 19.0 18.0	18.0 18.0 19.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0	18.0 18.0 18.0 19.0 19.0	17.0 17.0 18.0 18.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0	19.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9	16.0 15.0 14.0 14.0 14.0 15.0 15.0 15.0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 18.0 18.0 17.0 17.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	16.0 15.0 14.0 14.0 14.0 15.0 15.0 16.0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	18.0 19.0 19.0 18.0 17.0 17.0 17.0 18.0 18.0	18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	16-0 15-0 14-0 14-0 14-0 15-0 15-0 16-0 17-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 18.0	18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	16-0 15-0 14-0 14-0 15-0 15-0 15-0 16-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	16-0 15-0 14-0 14-0 14-0 15-0 15-0 16-0 17-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 18.0	18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	16-0 15-0 14-0 14-0 15-0 15-0 16-0 17-0 17-0 16-0 16-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 15.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 15.0 14.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15	16-0 15-0 14-0 14-0 15-0 15-0 16-0 17-0 17-0 17-0 16-0 16-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 15.0 15.0	18-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0	17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	17-0 17-0 18-0 18-0 19-0 18-0 18-0 18-0 18-0 18-0 17-0 17-0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	16-0 15-0 14-0 14-0 15-0 15-0 15-0 16-0 17-0 16-0 16-0 16-0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 16.0 15.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	17-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 15-0 15-0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0	17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 18-0 19-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15	16-0 15-0 14-0 14-0 15-0 15-0 16-0 17-0 17-0 17-0 16-0 16-0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 15.0 15.0	18-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0	17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	17-0 17-0 18-0 18-0 19-0 18-0 18-0 18-0 18-0 18-0 17-0 17-0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 16.0 15.0 16.0 16.0 15.0 16.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 18.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0	19.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	18.0 18.0 19.0 18.0 11.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 16.0 15.0 16.0 14.0 14.0	18-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 18-0 18-0 18-0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 16.0 15.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0	18.0 18.0 19.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19-0 20-0 20-0 20-0 20-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 18.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 15.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	18.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 16.0 15.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	18.0 18.0 19.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 20.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	17.0 17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 18.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 15.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	18.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0	18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	17.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 20.0 20.0 21.0 20.0 21.0 20.0 20.0 20.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 18.0 19.0 19.0 19.0 18.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 19.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 23 24 25 26 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 17.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 7 8 9 10 11 11 12 13 11 15 16 6 17 18 19 20 21 22 23 24 25 26 27	16.0 15.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 17.0 16.0 17.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0
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 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 18.0 17.0 16.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0
1 2 3 4 5 6 7 7 8 9 10 11 11 12 13 11 15 16 7 18 19 20 21 22 23 24 25 26 27 28 8 29	16.0 15.0 14.0 14.0 15.0 15.0 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18-0 18-0 18-0 18-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 16-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 20.0 21.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 16.0 17.0 16.0 17.0 17.0
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 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 18.0 17.0 16.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0
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 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 15.0 16.0 17.0 18.0 19.0	19.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 20.0 21.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0
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 20 20 20 20 20 20 20 20 20 20 20 20 20	16.0 15.0 14.0 14.0 15.0 15.0 15.0 16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 17.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 15.0 16.0 17.0 18.0 18.0 19.0	19.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18.0 18.0 19.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0	18.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	18.0 18.0 19.0 19.0 19.0 18.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 20.0 20.0 20.0 20.0 19.0	19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0

11390650 SACRAMENTO RIVER ABOVE COLUSA TROUGH, AT KNIGHTS LANDING, CALIF.

LOCATION.--Lat 38°48'18", long 121°43'22", in NW 2 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 1968,

REMARKS, -- Records furnished by California Department of Water Resources and reviewed by Geological Survey. Records of discharge given for 11391000 Sacramento River at Knights Landing.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	B1CAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SD4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
0CT. 11 NOV.	10400			6.1		64	0		3.2		•02
15 DEC.	8930			7.8		71	0		4.0		-06
08 JAN.	13600			7.2		58	0		5 • 2		.08
05 FEB.	9660			7.0		75	0	-	3.7		.08
07 Mar.	19200			6.0		67	0		2.3		.08
O6 APR.	22800		-	6.6	-	72	0		2.7		.00
04 May	11500			6.6		78	0		2.8		• 02
JUNE 08	8250	14	7.0	12	1.2	82	0	7.6	7.1	•2	.01
JULY 06	5960			11		81	0		5.6		.03
10 AUG.	8520		_	6.6		70	0		3.5		- 04
O7 SEPT.	10800			9.2		72	0		3.8		•06
05	8950	12	8.1	12	1.2	86	0	6.1	5.4	•1	•00
	DIS- SOLVED SOLIDS (RESI-		NON- CAR-	DIS- SOLVED SOLIDS		SODIUM AD-	ALKA-	SPECI- FIC COND-		TEM-	
DATE	DUE AT 180 C)	HARD- NESS (CA.MG)	BONATE HARO- NESS	(TONS PER AC-FT)	PERCENT SODIUM	SORP- TION RATIO	LINITY AS CACO3	UCTANCE (MICRO- MHOS)	PH	PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
ост.	DUE AT 180 C)	NESS (CA.MG)	HARO- NESS	PER AC-FT)	SODIUM	TION	AS CACO3	(MICRO- MHOS)		TURE (DEG C)	SOLVED DXYGEN
OCT. .11 NOV.	DUE AT 180 C)	NESS (CA.MG)	HARO- NESS O	PER AC-FT)	SODI UM	TION RATIO	AS CACO3	(MICRO- MHOS)	8.0	TURE (DEG C)	SOLVED DXYGEN 10.0
OCT. .11 NOV. 15	DUE AT 180 C)	NESS (CA.MG) 49 53	HARO- NESS O	PER AC-FT)	21 24	TION RATIO	AS CACO3 52 58	(MICRO- MHOS) 127 143	8.0 7.8	TURE (DEG C) 16 13	SOLVED DXYGEN 10.0 10.4
OCT. .11 NOV. 15 DEC. 08 JAN.	DUE AT 180 C)	NESS (CA. HG) 49 53 52	HARD- NESS 0 0	PER AC-FT)	21 24 23	**************************************	AS CACO3 52 58 48	(MICRO-MHOS) 127 143 136	8.0 7.8 7.8	16 13 9	SOLVED DXYGEN 10.0 10.4 11.0
OCT. .11 NOV. 15 DEC. 08 JAN. 05 FEB.	DUE AT 180 C)	NESS (CA.MG) 49 53 52 58	HARD- NESS 0 0 4	PER AC-FT)	21 24 23 21	**************************************	AS CACO3 52 58 48 62	(MICRO-MHOS) 127 143 136 145	8.0 7.8 7.8 8.0	TURE (DEG C) 16 13 9 7	10.0 10.4 11.0 12.4
OCT. .11 NOV. 15 DEC. 08 JAN. 05 FEB. 07	DUE AT 180 C)	NESS (CA. MG) 49 53 52 58	HARO- NESS 0 0 4 0	PER AC-FT)	21 24 23 21 21	110N RATIO	AS CACO3 52 58 48 62 55	(MICRO-MHOS) 127 143 136 145	8.0 7.8 7.8 8.0 7.6	TURE (DEG C) 16 13 9 7	10.0 10.4 11.0 12.4 11.3
OCT	DUE AT 180 C)	NESS (CA-MG) 49 53 52 58 50 62	HARO- NESS 0 0 4 0	PER AC-FT)	21 24 23 21 21 21	**************************************	AS CACO3 52 58 48 62 55	(MICRO-MHOS) 127 143 136 145 144 151	8.0 7.8 7.8 8.0 7.6 7.8	TURE (DEG C) 16 13 9 7 9 12	10.0 10.4 11.0 12.4 11.3
OCT	DUE AT 180 C)	NESS (CA. MG) 49 53 52 58 50 62	HARD- NESS 0 0 4 0 0 3	PER AC-FT)	21 24 23 21 21 19	**************************************	AS CACO3 52 58 48 62 55 59 64	127 143 136 145 144 151	8.0 7.8 7.8 8.0 7.6 7.8 7.9	TURE (DEG C) 16 13 9 7 9 12	SOLVED DXYGEN 10.0 10.4 11.0 12.4 11.3 10.5 10.3
OCT	DUE AT 180 C)	NESS (CA. MG) 49 53 52 58 50 62 60 64	HARD- NESS 0 0 4 0 3 0 0	PER AC-FT)	21 24 23 21 21 19	**************************************	AS CACO3 52 58 48 62 55 59 64 67	127 143 136 145 144 151 156 186	8.0 7.8 7.8 8.0 7.6 7.8 7.9	TURE (DEG C) 16 13 9 7 9 12 14 18	SOLVED DXYGEN 10.0 10.4 11.0 12.4 11.3 10.5 10.3 9.6
OCT11 MOV15 DEC08JAN 05FEB 07MAR 04APR 04APR 04JUNE	DUE AT 180 C)	NESS (CA. MG) 49 53 52 58 50 62 60 64	0 0 4 0 3 0	PER AC-FT)	21 24 23 21 19 19 29 28	-4 .4 .4 .4 .4 .7 .6	AS CACO3 52 58 48 62 55 59 64 67 66	(MICRO-MHOS) 127 143 136 145 144 151 156 186 174	8.0 7.8 7.8 8.0 7.6 7.8 7.9 8.2	TURE (DEG C) 16 13 9 7 9 12 14 18 19	SOLVED DXYGEN 10-0 10-4 11-0 12-4 11-3 10-5 10-3 9-6 9-0
OCT11 NOV 15 DEC 08 JAN 05 FEB 07 MAR 06 APR 04 MAY 08 JUNE 06 JULY 10 AUG		NESS (CA, MG) 49 53 52 58 50 62 60 64 62 53	HARO-NESS 0 0 4 0 0 3 0 0 0 0	PER AC-FT)	21 24 23 21 19 19 29 28 21	110N RATIO -4 -5 -4 -4 -4 -4 -4 -4 -4 -7 -6 -4	AS CACO3 52 58 48 62 55 59 64 67 66 57	(MICRO-MHOS) 127 143 136 145 144 151 156 186 174 138	8.0 7.8 7.8 8.0 7.6 7.8 7.9 8.2 7.7	TURE (DEG C) 16 13 9 7 9 12 14 18 19 21	SOLVED DXYGEN 10.0 10.4 11.0 12.4 11.3 10.5 10.3 9.6 9.0
OCT11 NOV 15 DEC 08 JAN 05 FEB 07 MAR 06 APR 04 MAY UNB JUNE 06 JULY	DUE AT 180 C)	NESS (CA. MG) 49 53 52 58 50 62 60 64	0 0 4 0 3 0	PER AC-FT)	21 24 23 21 19 19 29 28	-4 .4 .4 .4 .4 .7 .6	AS CACO3 52 58 48 62 55 59 64 67 66	(MICRO-MHOS) 127 143 136 145 144 151 156 186 174	8.0 7.8 7.8 8.0 7.6 7.8 7.9 8.2	TURE (DEG C) 16 13 9 7 9 12 14 18 19	SOLVED DXYGEN 10-0 10-4 11-0 12-4 11-3 10-5 10-3 9-6 9-0

11390700 COLUSA TROUGH NEAR COLUSA, CALIF.

LOCATION.--Lat 39°11'43", long 122°03'34", in SEANE sec.34, T.15 N., R.2 W., Columa County, at State-operated gaging station 3 miles west of Columa, on State Highway 20, and 6 miles northeast of Williams.

PERIOD OF RECORD, -- Chemical analyses: October 1953 to September 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- STUM (MG)	SODIUM (NA)	PO- TAS- STUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- R TOE (CL)	NITRATE (NO3)	BORON (B)
2CT. 11	217	36	24	62	1.6	226	0	81	38	2.2	.34
15 DEC.	490	25	20	55	3.1	501	0	57	25	1.9	-19
OB JAN.	333	33	27	98	3.6	251	0	126	49	3.5	.24
05 FEB.	86	51	48	153	2.7	311	12	239	86	1.8	.32
07 Mar.	1000	40	21	99	3.6	198	0	158	56	6.1	.37
06 APR.	306	50	41	138	1.3	332	0	197	88	2.7	.43
04 May	274	30	21	70	1.4	174	0	98	45	1.8	.29
08 JUNE	1330	22	17	47	2.1	139	В	65	20	1.7	.19
JULY	500	21	29	82	1.5	200	6	114	43	3.3	.34
10	473	28	24	71	1.1	231	0	82	31	1.6	.32
C7 SEPT.	857	25	21	53	1.2	220	0	58	23	.6	.21
05	1100	28	21	52	1.5	STB	0	50	24	.6	• 26
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	DIS- SOLVEO SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AO- SORP- Tion Ratio	ALKA- LINITY AS CACD3	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DFG C)	D1S- SOLVED OXYGEN
CCT.	347	189	4	.47	41	2.0	185	654	8.1	18	8.2
NOV. 15	304	145	0	-41	45	2.0	165	531	7.7	14	8.8
DEC.	450	195	0	.61	52	3-1	206	811	8.2	8	11.1
JAN. 05	748	324	49	1.02	50	3.7	275	1150	8.5	4	13.0
FE8. C7	508	188	26	•69	53	3.2	162	848	8.2	12	9.3
MAR. 06	628	295	23	.85	50	3.5	272	1170	8.0	15	9.2
APR. 04	383	162	19	•52	48	2.4	143	649	8.0	16	9.5
PAY 08	279	124	0	.38	44	1.8	127	469	8.6	21	7.5
JUNE 06	407	173	0	.55	51	2.7	174	725	8.5	20	7.7
JULY 10	320	170	0	.44	48	2.4	189	623	7.8	24	7.1
AUG. C7	278	150	0	.38	43	1.9	180	546	8.0	23	7.1
SEPT. 05	284	156	0	.39	42	1.8	179	528	8.2	22	7.5

11392500 MIDDLE FORK FEATHER RIVER NEAR CLIO, CALIF.

LOCATION, -- Lat 39°45'10", long 120°35'40", in SE¹/₂ 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 Clio, and 2.2 miles southeast of Blairsden.

DRAINAGE AREA. -- 686 sq mi.

PERIOD OF RECORD. -- Water temperatures: october 1963 to September 1968.

EXTREMES,--1967-68: Water temperatures: Maximum, 23.0°C June 27, July 8, 9, 18.

Period of record:
Water temperatures: Maximum, 26.0°C Aug. 3, 1966; minimum (1963-66), freezing point on several days in December 1963.

REMARKS .-- Recorder malfunctioned Nov. 24 to Feb. 23.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOV	EMBER	DEC	EMBER	JAI	NUARY	FEBI	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.0	12.0	9.0	7.0							6.0	6.0
2	14.0	11.0	9.0	7.0							6.0	6.0
3	13.0 13.0	10.0	8.0	7.0							7-0	6.0
5	12.0	11.0 11.0	8.0 9.0	7.0 8.0							7.0 7.0	7.0 7.0
6	12.0	9.0	9.0	7.0							7.0	6.0
7 8	12.0 12.0	9.0 10.0	8.0 8.0	7.0 7.0							6.0 6.0	6.0 5.0
9	12.0	10.0	8.0	7.0							5.0	5.0
10	12.0	10.0	7.0	6.0							5.0	4.0
11	13.0	11.0	7.0	6.0							5.0	5.0
12	14.0	11.0	7.0	7.0							5.0	5.0
13 14	13.0 12.0	11.0 9.0	7.0 9.0	7.0 7.0							5.0 5.0	4.0 4.0
15	12.0	8.0	8.0	7.0							5.0	5.0
16 17	12.0 12.0	8.0 8.0	8.0 7.0	6.0 6.0							5.0 5.0	5.0 4.0
18	11.0	8.0	7.0	6.0							5.0	4.0
19	11.0	8.0	6.0	6.0							6.0	5.0
20	11.0	8.0	7.0	6.0							6.0	5.0
21	11.0	8.0	7.0	6.0							6.0	6.0
22	12.0	9.0	6.0	4.0				==			6.0	6.0
23 24	11.0 11.0	10.0 8.0	4.0	3.0					4.0	4.0	7.0 7.0	6.0 7.0
25	11.0	9.0							5.0	4.0	7.0	7.0
26	10.0											
26 27	10.0	8.0 8.0							6.0	5.0 6.0	7.0 7.0	7.0 7.0
28	11.0	9.0							6.0	6.0	8.0	7.0
29	10.0	8.0							6.0	6.0	8.0	8.0
30	9.0	7.0									9.0	8.0
31	9.0	7.0									9.0	8.0
MONTH	15.0	7.0									9.0	4.0
	Ai	PRIL		MAY	ال	UNE	J	JLY	AUG	GUST	SEP	TEMBER
DAY	AI MAX	PRIL Min	MAX	MAY MIN	IL Xam	UNE MIN	IL XAM	ULY MIN	NAX	GUST MIN	SEP'	TEM8ER Min
1	MAX 8.0	M1N 8.0	MAX 13.0	MIN 11.0	MAX 18.0	MIN 15.0	MAX 20.0	MIN 17.0	MAX		MAX 21.0	MIN 17.0
1	MAX 8.0 8.0	MIN 8.0 8.0	MAX 13.0 13.0	MIN 11.0 11.0	MAX 18.0 19.0	MIN 15.0 17.0	MAX 20.0 20.0	MIN 17-0 18-0	MAX 22.0 22.0	MIN 18.0 18.0	MAX 21.0 21.0	MIN 17.0 16.0
1 2 3	MAX 8.0 8.0 8.0	MIN 8.0 8.0 7.0	MAX 13.0 13.0 14.0	MIN 11.0 11.0 11.0	MAX 18.0 19.0 19.0	MIN 15-0 17-0 17-0	MAX 20.0 20.0 21.0	MIN 17-0 18-0 17-0	MAX 22.0 22.0 22.0	MIN 18.0 18.0 17.0	MAX 21.0 21.0 20.0	MIN 17.0 16.0 16.0
1	MAX 8.0 8.0	MIN 8.0 8.0 7.0 8.0	MAX 13.0 13.0 14.0 14.0	MIN 11.0 11.0 11.0	MAX 18.0 19.0 19.0	MIN 15.0 17.0 17.0 16.0	MAX 20.0 20.0	MIN 17.0 18.0 17.0	MAX 22.0 22.0 22.0 21.0	MIN 18.0 18.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0	MIN 17.0 16.0 16.0
1 2 3 4 5	MAX 8.0 8.0 8.0 8.0	MIN 8.0 8.0 7.0 8.0	13.0 13.0 14.0 14.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0	MAX 18.0 19.0 19.0 17.0	MIN 15-0 17-0 17-0 16-0 16-0	MAX 20.0 20.0 21.0 22.0 22.0	MIN 17-0 18-0 17-0 19-0	MAX 22.0 22.0 22.0 21.0 18.0	MIN 18.0 17.0 17.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0	MIN 17.0 16.0 16.0 15.0 16.0
1 2 3 4 5	MAX 8.0 8.0 8.0 8.0 8.0	MIN 8.0 8.0 7.0 8.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0	MAX 18.0 19.0 19.0 17.0 17.0	MIN 15-0 17-0 17-0 16-0 16-0	MAX 20.0 20.0 21.0 22.0 22.0	MIN 17-0 18-0 17-0 19-0 19-0	MAX 22.0 22.0 22.0 21.0 18.0	MIN 18.0 18.0 17.0 17.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0	MIN 17.0 16.0 16.0 15.0 16.0
1 2 3 4 5	MAX 8.0 8.0 8.0 8.0 8.0	MIN 8.0 8.0 7.0 8.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0	MAX 18.0 19.0 19.0 17.0 17.0	MIN 15-0 17-0 17-0 16-0 16-0	MAX 20.0 20.0 21.0 22.0 22.0 22.0	MIN 17-0 18-0 17-0 19-0 19-0	MAX 22.0 22.0 22.0 21.0 18.0	MIN 18.0 18.0 17.0 17.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0	MIN 17.0 16.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0	MIN 8.0 8.0 7.0 8.0 8.0 7.0 7.0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 15.0 16.0 16.0	MIN 15.0 17.0 17.0 16.0 16.0 14.0 14.0	MAX 20.0 20.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0	MIN 17-0 18-0 17-0 19-0 19-0 20-0 20-0	MAX 22.0 22.0 22.0 21.0 18.0	MIN 18.0 18.0 17.0 17.0 16.0 14.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0
1 2 3 4 5 6 7 8	MAX 8.0 8.0 8.0 8.0 8.0 9.0	MIN 8.0 8.0 7.0 8.0 8.0 7.0 7.0	MAX 13.0 13.0 14.0 14.0 13.0 12.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0	18.0 19.0 19.0 17.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 14.0	MAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0	MIN 17-0 18-0 17-0 19-0 19-0 20-0	MAX 22.0 22.0 22.0 21.0 18.0	MIN 18.0 18.0 17.0 17.0 16.0 14.0 16.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0	MIN 17.0 16.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0	MIN 8.0 8.0 7.0 8.0 8.0 7.0 7.0	MAX 13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 14.0	MIN 11.0 11.0 12.0 11.0 10.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0	MIN 15.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0	MAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	MIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 20.0	MAX 22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0	MIN 18.0 17.0 17.0 16.0 14.0 16.0 17.0 19.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 8-0 8-0 7-0 8-0 8-0 7-0 7-0 8-0 8-0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0	MIN 15-0 17-0 16-0 16-0 14-0 14-0 14-0 15-0	MAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0	MIN 17-0 18-0 17-0 19-0 19-0 20-0 20-0 20-0 18-0	MAX 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 15.0 13.0
1 2 3 4 5 6 7 8 9 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 7.0 8.0 8.0 9.0 9.0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	MAX 18.0 19.0 19.0 17.0 17.0 16.0 15.0 16.0 17.0	MIN 15.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0	MIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0	MAX 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 18.0 18.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0	MIN 17.0 16.0 15.0 15.0 15.0 13.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10	8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 9.0 9.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 13.0 14.0 13.0	MIN 11.0 11.0 12.0 11.0 12.0 11.0 11.0 11.	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0	MAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22	MIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 20.0 18.0 17.0 18.0	MAX 22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 18.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 15.0 13.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 7.0 8.0 8.0 9.0 8.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	HAX 18.0 19.0 19.0 17.0 17.0 16.0 15.0 16.0 17.0 17.0 17.0 17.0 20.0	MIN 15-0 17-0 16-0 16-0 14-0 14-0 14-0 15-0 15-0 15-0 15-0 17-0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22	MIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 18.0 18.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 15.0 13.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 9.0 8.0	HAX 13.0 13.0 14.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	HAX 18.0 19.0 19.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 20.0	MIN 15.0 17.0 17.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 17.0	HAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22	MIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 18.0 17.0	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 18.0 18.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 13.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 9.0 9.0	MIN 8.0 8.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 9.0 8.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 14.0 13.0 13.0 14.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 20.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0	HAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22	MIN 17-0 18-0 17-0 19-0 19-0 20-0 20-0 20-0 18-0 17-0 18-0 17-0 18-0 17-0	HAX 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	HIN 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 13.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	8.0 8.0 8.0 8.0 8.0 8.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 9.0 8.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	HAX 18.0 19.0 19.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 20.0	MIN 15.0 17.0 17.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 17.0	20.0 20.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 17.0 17.0	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HIN 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 13.0 14.0 13.0 14.0 13.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0	MIN 8.0 8.0 7.0 8.0 7.0 7.0 8.0 8.0 9.0 8.0 9.0 8.0	MAX 13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 13.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 15.0 16.0 16.0 17.0 17.0 17.0 20.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	HAX 20.0 20.0 21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22	MIN 17-0 18-0 17-0 19-0 19-0 20-0 20-0 20-0 18-0 17-0 18-0 17-0 18-0 17-0	HAX 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	HIN 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 13.0 14.0 14.0 14.0
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 6 17 18 19 20 21	MAX 8.0 8.0 8.0 8.0 8.0 8.0 8.0 10.0 10.0 1	MIN 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	13.0 13.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 16.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 12.0 21.0 21.0 21.0 21.0 21.0 20.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 19.0 19.0 18.0 18.0	20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	NIN 17.0 18.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 18.0 17.0 17.0 17.0 16.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0	21.0 21.0 22.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 8.0 8.0 8.0 8.0 8.0 8.0 10.0 10.0 10.0	MIN 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 9.0 9.0 8.0 8.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 20.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 19.0 18.0 18.0	20.0 20.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 16.0 16.0 16.0 16.0	MIN 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 13.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 6 17 18 19 20 21	MAX 8.0 8.0 8.0 8.0 8.0 8.0 8.0 10.0 10.0 1	MIN 8.0 8.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	13.0 13.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 13.0 12.0 13.0 14.0 15.0 16.0 16.0 14.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 15.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0	20.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22	NIN 17.0 18.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 1	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 17.0 17.0 17.0 16.0 16.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0	21.0 21.0 22.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 13.0 11.0	MIN 17-0 16-0 15-0 16-0 15-0 15-0 13-0 14-0 14-0 13-0 14-0 13-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 8.0 8.0 8.0 8.0 8.0 8.0 10.0 10.0 10.0	MIN 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 9.0 9.0 8.0 8.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 20.0	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 19.0 18.0 18.0	20.0 20.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 16.0 16.0 16.0 16.0	MIN 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 13.0	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	MIN 17.0 16.0 15.0 16.0 15.0 15.0 15.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0
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	8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 8.0 8.0 8.0 8.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 1	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 18.0 18.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	MIN 17.0 16.0 16.0 15.0 15.0 15.0 15.0 13.0 14.0 14.0 13.0 11.0
1 2 3 4 5 6 7 8 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 4 25 26 27	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	MIN 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 14.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 11.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 15.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	20.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 1	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 18.0 18.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 16.0 16.0 15.0 16.0 15.0 15.0 13.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 25 26 27 28	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	MIN 8.0 8.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	13.0 13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 12.0 13.0 13.0 14.0 15.0 16.0 16.0 14.0 13.0 16.0 16.0 16.0 17.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 18.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	NIN 17.0 18.0 19.0 19.0 19.0 20.0 20.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 18.0 17.0 17.0 16.0 16.0 19.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 15.0 13.0	21.0 21.0 22.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 19 20 21 22 23 24 25 26 7 28 29	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	MIN 8.0 8.0 7.0 6.0 8.0 7.0 7.0 8.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0	MIN 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0	20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 1	22.0 22.0 22.0 21.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 1	MIN 18.0 18.0 17.0 17.0 16.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 14.0 13.0 14.0 14.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 25 26 27 28	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	MIN 8.0 8.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 15.0 17.0 18.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	21.0 21.0 22.0 19.0 19.0 19.0 18.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30	MAX 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	MIN 8.0 8.0 7.0 6.0 8.0 7.0 7.0 8.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 14.0 13.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0	MIN 11.0 11.0 11.0 11.0 12.0 11.0 11.0 11.0	18.0 19.0 19.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 15.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 15.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0	20.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	NIN 17.0 18.0 17.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 1	22.0 22.0 22.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 17.0 17.0 16.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 14.0 13.0 14.0 14.0	MIN 17.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17

11394500 MIDDLE FORK FEATHER RIVER NEAR MERRIMAC, CALIF.

LOCATION. --Lat 39°42'30", long 121°16'10", in NW\nE\frac{1}{2} 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 Morth Fork, 4.5 miles southeast of Merrimac, and 20 miles northeast of Croville.

DRAINAGE AREA. -- 1,062 sq mi.

OCTOBER

MIN

15.0 13.0

PERIOD OF RECORD, --Chemical analyses: July 1963 to June 1966, Water temperatures: October 1962 to September 1968,

NOVEMBER

MIN

9.0 9.0

MAX

10.0

EXTREMES, -- 1967-68:

during December to February.

Period of record:

MAX

16.0

DAY

Mater temperatures: Maximum (1964-68), 24.0°C Aug. 3, 1966; minimum (1962-64, 1965-68), 0.5°C Jan. 26, 27, 1966 1966.

DECEMBER

MAX

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 MIN

3.0 3.0

JANUARY

MIN

2.0

MAX

3.0 2.0

FEBRUARY

MAX

2.0

MIN

2.0

MARCH

HIN

MAX

8.0 8.0

3	13.0	12.0	10.0	9.0	4.0	4.0	2.0	2.0	2.0	2.0	8.0	7.0
4	13.0	12.0	10.0	9.0	4.0	4.0	2.0	2.0	3.0	2.0	8.0	7-0
5	13.0	12.0	11.0	10.0	5-0	4.0	2.0	1.0	4.0	3.0	8.0	8.0
6	12.0	12.0	11.0	11.0	5.0	4.0		2.0	5.0		• •	
7	13.0	12.0	11.0	10.0	5.0	4.0	2.0 2.0	2.0	5.0	4.0 4.0	8.0 7.0	7.0 7.0
8	13.0	12.0	11.0	11.0	4.0	4.0	2.0	2.0	5.0	5.0	7.0	7.0
ğ	13.0	13.0	11.0	11.0	4.0	3.0	3.0	2.0	6.0	5.0	7.0	6.0
10	13.0	13.0	11.0	10.0	4.0	3.0	4.0	3.0	6.0	5.0	7.0	6.0
11	13.0	13.0	10.0	9.0	3.0	3.0	3.0	2.0	6.0	6.0	7-0	6.0
12	13.0	13.0	10.0	9.0	3.0	2.0	2.0	2.0	6.0	6.0	6.0	5.0
13	13.0	13.0	10.0	10.0	2.0	1.0	3.0	2.0	6.0	6.0	5.0	4.0
14	13.0	12.0	11.0	10.0	1.0	1.0	4.0	3.0	6.0	6.0	6.0	5.0
15	12.0	11.0	11.0	11.0	1.0	1.0	4.0	3.0	6.0	5.0	7.0	5.0
16	12.0	11.0	11.0	11.0	1.0	1.0	4.0	3.0	5.0	5.0	7.0	6.0
17	12-0	11.0	11.0	11.0	1.0	1.0	4.0	4.0	5.0	5.0	6.0	6.0
18 19	12.0	11.0	11.0	11.0	1.0	1.0	4.0	4.0	6.0	5.0	6.0	6.0
20	12.0 12.0	11.0 11.0	11.0 10.0	10.0 9.0	1.0 2.0	1.0 1.0	4.0 4.0	4.0 4.0	6.0	6.0 6.0	6.0 7.0	6.0 6.0
20	12.0	11.0	10.0	9.0	2.0	1.0	4.0	4.0	6.0	0.0	7.0	6.0
21	11.0	11.0	9.0	8.0	2.0	2.0	5.0	4.0	6.0	6.0	7.0	7.0
22	12.0	11.0	8.0	8.0	3.0	2.0	6.0	5.0	6.0	6.0	8.0	7.0
23	12.0	12.0	8.0	7.0	3.0	3.0	6.0	6.0	7.0	6.0	8.0	8.0
24	12.0	12.0	7.0	7.0	3.0	3.0	5.0	4.0	8.0	7.0	8.0	8.0
25	12.0	12.0	7.0	7.0	4.0	3.0	4.0	4.0	8.0	7.0	8.0	8.0
26	12.0	11.0	7.0	6.0	4.0	3.0	4.0	3.0	8.0	8.0	8.0	7.0
27	11.0	11.0	6.0	6.0	4.0	4.0	3.0	2.0	8.0	8.0	8.0	7.0
28	11.0	11.0	6.0	6.0	4.0	3.0	2.0	2.0	8.0	7.0	9.0	8.0
29	11.0	10.0	6.0	5.0	4.0	3.0	2.0	1.0	7.0	7.0	9.0	9.0
30	10.0	9.0	4.0	3.0	3.0	3.0	1.0	1.0			9.0	9.0
31	10.0	9.0			3.0	2.0	1.0	1.0			9.0	8.0
MONTH	16.0	9.0	11.0	3.0	5.0	1.0	6.0	1.0	B.0	1.0	9.0	4.0
	A	PRIL	,	YAY	JI	JNE	JU	JLY	AUG	GUST	SEP	TEMBER
DAY			MAX		MAX					MIN		MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	HIN	MAX	MIN
					• • •	12.0			31.0	10.0	21.0	20.0
1	9.0	8.0	10.0	9.0	14.0	13.0	18.0	17.0	21.0	19.0	21.0	20.0
1 2	8.0	7.0	11.0	9.0	15.0	14.0	18.0	17.0	22.0	20.0	21.0	20.0
1 2 3	8.0 8.0	7.0 7.0	11.0 11.0	9.0 10.0	15.0 15.0	14.0 15.0	18.0 19.0	17.0 18.0	22.0 22.0	20-0 20-0	21.0 21.0	20.0 20.0
1 2 3 4	8.0 9.0	7.0 7.0 8.0	11.0 11.0 11.0	9.0 10.0 10.0	15.0 15.0 15.0	14.0 15.0 14.0	18.0 19.0 21.0	17.0 18.0 19.0	22.0 22.0 21.0	20.0 20.0 20.0	21.0 21.0 21.0	20.0 20.0 19.0
1 2 3	8.0 8.0	7.0 7.0	11.0 11.0	9.0 10.0	15.0 15.0	14.0 15.0	18.0 19.0	17.0 18.0	22.0 22.0	20-0 20-0	21.0 21.0	20.0 20.0
1 2 3 4 5	8.0 9.0 9.0	7.0 7.0 8.0 8.0	11.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0	15.0 15.0 15.0 15.0	14.0 15.0 14.0 13.0	18.0 19.0 21.0 21.0	17.0 18.0 19.0 19.0	22.0 22.0 21.0 21.0	20.0 20.0 20.0 19.0	21.0 21.0 21.0 21.0	20.0 20.0 19.0 20.0
1 2 3 4 5	8.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0	11.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0	15.0 15.0 15.0 15.0	14.0 15.0 14.0 13.0	18.0 19.0 21.0 21.0	17.0 18.0 19.0 19.0	22.0 22.0 21.0 21.0	20.0 20.0 20.0 19.0 18.0	21.0 21.0 21.0 21.0	20.0 20.0 19.0 20.0 20.0
1 2 3 4 5	8.0 9.0 9.0 9.0 8.0	7.0 7.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0	9.0 10.0 10.0 10.0 9.0 9.0	15.0 15.0 15.0 15.0 14.0	14.0 15.0 14.0 13.0 13.0	18.0 19.0 21.0 21.0 22.0 22.0	17.0 18.0 19.0 19.0 21.0	22.0 22.0 21.0 21.0 21.0	20.0 20.0 20.0 19.0 18.0	21.0 21.0 21.0 21.0 21.0	20.0 20.0 19.0 20.0 20.0
1 2 3 4 5	8.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0	11.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0	15.0 15.0 15.0 15.0	14.0 15.0 14.0 13.0	18.0 19.0 21.0 21.0	17.0 18.0 19.0 19.0	22.0 22.0 21.0 21.0	20.0 20.0 20.0 19.0	21.0 21.0 21.0 21.0	20.0 20.0 19.0 20.0
1 2 3 4 5	8.0 9.0 9.0 9.0 8.0 8.0	7.0 7.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0	9.0 10.0 10.0 10.0 9.0 9.0	15.0 15.0 15.0 15.0 14.0 14.0	14.0 15.0 14.0 13.0 13.0 13.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0	22.0 22.0 21.0 21.0 21.0 19.0 20.0	20.0 20.0 20.0 19.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0	20.0 20.0 19.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8 9	8.0 9.0 9.0 9.0 8.0 8.0 9.0	7.0 7.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20-0 20-0 20-0 19-0 18-0 18-0 19-0 19-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8 9	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0	7.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0	22.0 22.0 21.0 21.0 21.0 29.0 20.0 20.0 21.0	20-0 20-0 19-0 18-0 18-0 19-0 19-0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	8.0 8.0 9.0 9.0 8.0 8.0 9.0 10.0	7.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 19.0 19.0 18.0 19.0 19.0 19.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	8.0 9.0 9.0 8.0 8.0 8.0 9.0 10.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 20.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0	15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	8.0 9.0 9.0 8.0 8.0 8.0 9.0 10.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 20.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	8.0 9.0 9.0 8.0 8.0 9.0 10.0	7.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0	15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 8.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 8.0	11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0 10.0 9.0 8.0 8.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 8.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0	14.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 17.0 17.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	8.0 9.0 9.0 8.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 8.0 6.0 6.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0 10.0 8.0 8.0 10.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 18.0 18.0 18.0	14.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 17.0 18.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 8.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0	14.0 15.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0 17.0 17.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 6.0 6.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0 10.0 11.0 8.0 11.0 11.0 11.	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 19.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 18.0 17.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	22.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0 21.0 20.0 21.0 20.0 19.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	8.0 9.0 9.0 9.0 8.0 8.0 8.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 7.0 7.0 6.0 7.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0 10.0 8.0 8.0 8.0 11.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0 18.0 18.0 19.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 18.0 18.0 18.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 19.0 20.0 20.0 21.0 20.0 20.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 6.0	11.0 11.0 11.0 11.0 10.0 11.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0 18.0 18.0 19.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 17.0 18.0 17.0 18.0 17.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 19.0 20.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 17.0 16.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 29.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 16.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 7.0 7.0 7.0 7.0 7.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0 18.0 18.0 19.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 18.0 18.0 18.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22	8.0 9.0 9.0 9.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 6.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 17.0 18.0 19.0 19.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0	18.0 19.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	22.0 22.0 21.0 21.0 21.0 19.0 20.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 17.0 16.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 16.0
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 11 4 15 17 18 19 20 21 22 23 24 25	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 5.0 6.0 6.0 7.0 7.0 7.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 10.0 11.0 10.0 8.0 8.0 11.0 11.0 12.0 11.0 12.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 18.0 18.0 17.0 18.0 18.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	8.0 8.0 8.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0 10.0 11.0 12.0 12.0 11.0 11	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	14.0 15.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 18.0	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 11 4 15 17 18 19 20 21 22 23 24 25 26 27	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 6.0 7.0 8.0 6.0 7.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 9.0 9.0 9.0 11.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0	14.0 15.0 13.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0	20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 18.0 17.0 16.0 15.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	8.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 10.0 11.0 10.0 11.0 12.0 11.0 11.0 11	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	14.0 15.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 16.0 16.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 15.0
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1 2 3 3 4 5 5 6 7 8 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	8.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 11.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	14.0 15.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 20.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 16.0 16.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 15.0
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 11 15 16 17 18 19 20 20 21 22 23 24 25 26 27 28 29	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 6.0 7.0 8.0 7.0 8.0 7.0 8.0 9.0 8.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 9.0 9.0 9.0 11.0 10.0 10.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	14.0 15.0 13.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0 21	17.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 17 18 19 20 21 22 23 24 5 25 26 27 28 29 30 31	8.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 10.	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 18.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 11.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0 16.0 16.0 17.0 18.0 18.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 11.0 20.0 19.0 18.0 17.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 16.0 16.0 16.0 16.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 3 4 5 5 6 7 8 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	8.0 9.0 9.0 8.0 8.0 9.0 10.0 10.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 11.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	14.0 15.0 13.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 21.0 20.0	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0
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1 2 3 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 17 18 19 20 21 22 23 24 5 25 26 27 28 29 30 31	8.0 8.0 9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 10.	7.0 8.0 8.0 8.0 8.0 9.0 9.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 18.0	9.0 10.0 10.0 10.0 9.0 9.0 9.0 11.0 11.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0 16.0 16.0 17.0 18.0 18.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	14.0 15.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	18.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0 21	17.0 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 11.0 20.0 19.0 18.0 17.0	20-0 20-0 20-0 19-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 16.0 16.0 16.0 16.0	20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0

11401180 LITTLE GRIZZLY CREEK NEAR GENESEE, CALIF.

LOCATION.--Lat 40°00'55", long 120°45'10", in NEISWI sec.21, T.25 N., R.11 E., Plumas County, 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 1968.

EXTREMES. --1967-68:
Water temperatures: Maximum, 18.0°C June 27, July 6-9; minimum, freezing point on many days during winter period.

Period of record:

YEAR

18.0

0.0

Nator temperatures: Maximum, 19.5°C Aug. 2, 3, 1966; minimum, freezing point on many days during winter peri-ods.

REMARKS. --Clock stopped Nov. 6 to Dec. 7, Jan. 23-25, Aug. 22-29; temperature ranges, 0.0°C to 8.0°C, 1.0°C to 2.0°C, and 7.0°C to 14.0°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DOCTOREN MANY MIN MAX			TE	MPERATURE	(°C) OF I	TATER, WA	TER YEAR O	OCTOBER 19	67 TO SEI	TEMBER 19	968		
1		OCT	TOBER	NOVE	MBER	DEC	EMBER	JAI	NUARY	FEB	RUARY	M	RCH
2 11.0 9.0 7.0 6.0 1.0 0.0 1.0 1.0 1.0 4.0 2.0 5 10.0 5.0 10.0 1.0 1.0 4.0 2.0 5 10.0 6.0 9.0 8.0 1.0 1.0 1.0 1.0 2.0 1.0 4.0 2.0 5 10.0 6.0 9.0 8.0 1.0 1.0 1.0 1.0 3.0 2.0 4.0 3.0 3.0 6 9.0 7.0 7.0 1.0 1.0 1.0 1.0 3.0 2.0 1.0 4.0 3.0 3.0 6 9.0 7.0 7.0 1.0 1.0 1.0 1.0 3.0 2.0 1.0 3.0 3.0 4.0 3.0 8.0 7.0 7.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 3.0 8.0 7.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 3.0 8.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 3.0 8.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
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3	2	11.0	9.0	7.0	6.0			1.0	0.0	1.0	1.0	4.0	2.0
5 10.0 8.0 9.0 8.0 9.0 8.0 1.0 1.0 1.0 3.0 2.0 4.0 3.0 7.0 7 9.0 8.0 1.0 1.0 1.0 3.0 2.0 4.0 3.0 7.0 7 9.0 8.0 1.0 1.0 1.0 1.0 3.0 2.0 4.0 3.0 8.0 8.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 4.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 3.0 3.0 3.0 3.0 3.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1		9.0											2.0
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10 10.0 8.0								1.0					
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14 7.0 3.0 9.0 4.0 14.0 10.0 17.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 11.0 13.0 11.0 13.0 11.0 13.0 11.0 13.0 11.0 13.0 11.0 13.0 11.0 11.0 13.0 14.0 12.0<	3 4 5 6 7 8 9 10	5.0 6.0 7.0 6.0 6.0 7.0 7.0 8.0	3.0 4.0 4.0 3.0 3.0 3.0 4.0 4.0	9.0 11.0 9.0 8.0 9.0 10.0 10.0	6.0 6.0 5.0 4.0 5.0 6.0 6.0	14.0 13.0 13.0 12.0 11.0 12.0 14.0 13.0	11.0 11.0 11.0 9.0 9.0 9.0 8.0 8.0 10.0	16.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0	12.0 13.0 13.0 14.0 14.0 14.0 15.0 13.0	17.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0	14.0 13.0 12.0 12.0 11.0 12.0 13.0 13.0	14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
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27 8.0 4.0 13.0 9.0 18.0 13.0 13.0 13.0 11.0 8.0 28 9.0 4.0 13.0 9.0 17.0 13.0 16.0 13.0 9.0 8.0 29 9.0 6.0 13.0 9.0 16.0 11.0 17.0 14.0 9.0 7.0 30 9.0 5.0 13.0 9.0 14.0 9.0 16.0 15.0 14.0 11.0 9.0 7.0 31 13.0 9.0 16.0 15.0 14.0 12.0	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	5.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0	3.0 4.0 4.0 3.0 3.0 3.0 4.0 4.0 2.0 3.0 3.0 3.0 3.0 3.0 2.0 3.0	9.0 11.0 8.0 9.0 10.0 10.0 11.0 9.0 8.0 9.0 9.0 11.0 12.0 11.0 12.0 12.0 12.0 9.0	6.0 6.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 8.0	14.0 13.0 12.0 11.0 11.0 12.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0	11.0 11.0 11.0 9.0 9.0 8.0 10.0 10.0 10.0 11.0 12.0 12.0 12.0 12	16.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 13.0 14.0 12.0 12.0 12.0 10.0	14.0 13.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 11.0 10.0 10.0 10.0 10.0 10.0 10	14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	12.0 12.0 11.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 11.0 10.0 11.0 11
27 8.0 4.0 13.0 9.0 18.0 13.0 16.0 13.0 11.0 8.0 28 9.0 4.0 13.0 9.0 17.0 13.0 16.0 13.0 9.0 8.0 29 9.0 6.0 13.0 9.0 16.0 11.0 17.0 14.0 9.0 7.0 30 9.0 5.0 13.0 9.0 16.0 9.0 16.0 11.0 15.0 14.0 11.0 9.0 7.0 31 13.0 9.0 16.0 15.0 14.0 12.0	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	5.0 6.0 6.0 6.0 6.0 7.0 7.0 6.0 7.0 6.0 7.0 6.0 6.0 6.0	3.0 4.0 4.0 3.0 3.0 4.0 4.0 2.0 3.0 3.0 3.0 3.0 2.0 3.0	9.0 11.0 9.0 8.0 9.0 10.0 10.0 11.0 8.0 9.0 9.0 9.0 11.0 12.0	6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	14.0 13.0 12.0 11.0 11.0 12.0 14.0 13.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0	11.0 11.0 11.0 9.0 9.0 8.0 8.0 10.0 10.0 10.0 12.0 12.0 12.0 12.0 12	16.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	12.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 12.0 13.0 14.0 12.0 12.0 10.0	14.0 13.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 11.0 12.0 11.0 8.0	14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0
29 9.0 6.0 13.0 9.0 16.0 11.0 17.0 14.0 9.0 7.0 30 9.0 5.0 13.0 9.0 16.0 15.0 15.0 14.0 11.0 9.0 7.0 31 13.0 9.0 16.0 15.0 14.0 12.0	3 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26	5.0 6.0 7.0 6.0 7.0 7.0 7.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 7.0 6.0 7.0 6.0 7.0 7.0 7.0 8.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	3.0 4.0 4.0 3.0 3.0 3.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 11.0 8.0 9.0 10.0 10.0 11.0 9.0 8.0 9.0 9.0 11.0 12.0 11.0 12.0 12.0 11.0	6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 8.0 7.0 7.0 7.0 8.0	14.0 13.0 12.0 11.0 11.0 11.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	11.0 11.0 11.0 11.0 9.0 9.0 8.0 10.0 10.0 10.0 12.0 12.0 12.0 12.0 12	16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 11.0	14.0 13.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 10.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 10.0	12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
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31 13.0 9.0 16.0 15.0 14.0 12.0	3 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	5.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0	3.0 4.0 4.0 3.0 3.0 4.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 11.0 8.0 9.0 10.0 10.0 11.0 9.0 9.0 9.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 8.0 7.0 7.0 7.0 8.0 8.0 9.0	14.0 13.0 12.0 11.0 11.0 11.0 12.0 14.0 14.0 14.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	11.0 11.0 11.0 19.0 9.0 9.0 8.0 10.0 10.0 10.0 12.0 12.0 12.0 12.0 12	16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 11.0	14.0 13.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 10.0 9.0 9.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 10.0 10.0 10.0 11.0 11	12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
MONTH 9-0 1.0 13-0 4.0 18.0 8.0 18.0 11.0 14.0 5.0	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28	5.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 6.0 7.0 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0	3.0 4.0 3.0 3.0 4.0 4.0 4.0 3.0 3.0 4.0 3.0 4.0 2.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 9.0 8.0 9.0 10.0 10.0 11.0 9.0 9.0 11.0 12.0 11.0 9.0 9.0 9.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	14.0 13.0 12.0 11.0 11.0 12.0 14.0 13.0 14.0 14.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	11.0 11.0 11.0 9.0 9.0 8.0 8.0 10.0 10.0 12.0 12.0 12.0 12.0 12.0 12	16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0	12.0 13.0 14.0 14.0 14.0 15.0 13.0 14.0 14.0 15.0 16.0 17.0	17.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 13.0 12.0 11.0 12.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 13.0 12.0 10.0 10.0 9.0 9.0 10.0 11.0 11.0	12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
	3 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	5.0 6.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 6.0 7.0 7.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0	3.0 4.0 3.0 3.0 4.0 4.0 4.0 3.0 3.0 4.0 3.0 4.0 2.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	9.0 11.0 8.0 9.0 10.0 10.0 11.0 9.0 9.0 9.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 13.0 13.0 13.0	6.0 6.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 8.0 7.0 7.0 7.0 8.0 8.0 9.0 9.0	14.0 13.0 12.0 11.0 11.0 12.0 14.0 13.0 14.0 14.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	11.0 11.0 11.0 9.0 9.0 8.0 8.0 10.0 10.0 12.0 12.0 12.0 12.0 12.0 12	16.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0	14.0 13.0 12.0 12.0 11.0 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 13.0 12.0 10.0 10.0 9.0 9.0 10.0 11.0 11.0	12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0

DAY

SACRAMENTO RIVER BASIN

11401500 INDIAN CREEK NEAR CRESCENT MILLS, CALIF.

LOCATION.--Lat 40°04'20", long 120°55'35", in SWASWA 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.

PERIOD OF RECORD, --Chemical analyses: October 1958 to September 1963. Water temperatures: October 1962 to September 1968.

EXTREMES . -- 1967-68:

LEMBLO. --1997-90: Water temperatures: Maximum, 27.0°C July 4, 27, 30, Aug. 1, 2; minimum, freezing point on several days during December to February.

MAX MIN

OCTOBER

MAX

Period of record (1962-65, 1966-68):
Water temperatures: Maximum, 28.0°C July 26-28, 1963; minimum (1962-64, 1966-68), freezing point on several days during winter periods most years.

REMARKS. --Clock stopped Nov. 26-30; temperature range, 2.0°C to 6.0°C. Recorder malfunctioned Dec. 1-12, 21-25, Dec. 30 to Jan. 1, Jan. 6-8, 10-12, 21-25. TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

> DECEMBER MIN MAX MIN MAX MIN MAX MIN MAX MIN

1	15.0	13.0	11.0	8.0					1.0	0.0	6.0	4.0
2	13.0	10.0	11.0	8.0			2.0	0.0	2.0	1.0	7.0	4.0
3	14.0	9.0	11.0	8.0			1.0	0.0	3.0	2.0	7.0	4.0
4	13.0	11.0	10.0	8.0			1.0	0.0	4.0	2.0	7.0	4.0
Ś	14.0	12.0	11.0	9.0			1.0	1.0	3.0	2.0	7.0	6.0
,	14.0	12.0	11.0	7.0			1.0	1.0	3.0	2.0	1.0	0.0
6	15.0	11.0	11.0	8.0					4.0	2.0	7.0	4.0
7	16.0	12.0	11.0	8.0					5.0	2.0	6.0	4.0
8	16.0	12.0	11.0	8.0					4.0	2.0	6.0	4.0
ğ	16.0	12.0	11.0	9.0			4.0	2.0		3.0	8.0	4.0
			11.0	7.0			7.0	2.0	4.0			7.0
10	16.0	12.0	10.0	8.0					4.0	3.0	7.0	3.0
11	16.0	12.0	9.0	7.0					4.0	3.0	6.0	3.0
12	17.0	13.0	9.0	7.0					5.0	3.0	4.0	2.0
13	16.0	12.0	9.0	8.0	3.0	0.0	3.0			3.0	6.0	2.0
								1-0	4.0			
14	14.0	11.0	9.0	8.0	0.0	0.0	2.0	1.0	4.0	3.0	7.0	3.0
15	14.0	9.0	9.0	9.0	0.0	0.0	2.0	1.0	5.0	3.0	B.0	4.0
16	14.0	10-0	10.0	8.0	0.0	0.0	3.0	1.0	5.0	3.0	6.0	3.0
		10.0				0.0			3.0	3.0	9.0	
17	14.0	10.0	9.0	B.0	1.0	0.0	3.0	2.0	4.0	3.0	7.0	2.0
18	14.0	10.0	9.0	8.0	1.0	0.0	4.0	2.0	5.0	3.0	7.0	3.0
19	14.0	10.0	8.0	6.0	1.0	1.0	4.0	2.0	5.0	3.0	8.0	3.0
20	13.0	10.0	8.0	6.0	1.0	1.0	4.0	2.0	4.0	3.0	8.0	3.0
20	43.0	10.0	0.0	0.0	1.0	1.0	7.0	2.0	7.0	3.0		3.0
21	13.0	10.0	8.0	6.0					4.0	2.0	6.0	4.0
22	15.0	12.0	7.0	4.0					5.0	4.0	8.0	4.0
23	14.0	12.0	7.0	4.0					6.0	4.0	9.0	6.0
24	14.0	11.0	7.0	4.0					6.0	4.0	9.0	5.0
25	14.0	*****	7.0	4.0					2.0	4.0		6.0
20	14.0	11.0	7.0	7.0					7.0	4.0	8.0	6.0
26	13.0	10.0			4.0	1.0	2.0	1.0	7.0	4.0	8.0	4.0
27	13.0	10.0			4.0	1.0	3.0	1.0	7.0	4.0	9.0	4.0
28	14.0	12.0			3.0	1.0	2.0	1.0	7.0	4.0	10.0	6.0
29	12.0	8.0			3.0		1.0	0.0		4.0	11.0	7.0
						1.0			7.0	7.0		1.0
30	12.0	8.0					1.0	1.0			11.0	7.0
31	12.0	8.0					1.0	0.0			11.0	7.0
MENTH	17.0	8.0	11.0	4.0					7.0	0.0	11.0	2.0
ACM III	1	0.0		***					7.0			2.00
	A1	PRIL	1	MAY	J	JNE	JI	JLY	AUG	SUST	SEP.	TEMBER
DAY	MAX	MTN	MAX	MIN	MAY	MIN	MAY	MTM	MAY	MIN	MAY	MTM
OAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	HIN	MAX	HIN	MAX	MIN
1	8.0	7.0	14.0	11.0	21.0	16.0	24.0	17-0	27.0	21.0	22.0	16.0
1 2	8.0 9.0	7.0 6.0	14.0 15.0	11.0 12.0	21.0 21.0	16.0 17.0	24.0 22.0	17.0 18.0	27.0 27.0	21.0 22.0	22.0	16.0 15.0
1	8.0 9.0 9.0	7.0	14.0	11.0	21.0	16.0	24.0 22.0	17.0 18.0	27.0 27.0	21.0 22.0	22.0	16.0 15.0
1 2	8.0 9.0 9.0	7.0 6.0 6.0	14.0 15.0 16.0	11.0 12.0 12.0	21.0 21.0 20.0	16.0 17.0 17.0	24.0 22.0 25.0	17.0 18.0 17.0	27.0 27.0 26.0	21.0 22.0 20.0	22.0 23.0 24.0	16.0 15.0 15.0
1 2 3	8.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0	14.0 15.0 16.0 16.0	11.0 12.0 12.0 13.0	21.0 21.0 20.0 20.0	16.0 17.0 17.0 16.0	24.0 22.0 25.0 27.0	17.0 18.0 17.0 19.0	27.0 27.0 26.0 26.0	21.0 22.0 20.0 19.0	22.0 23.0 24.0 23.0	16.0 15.0 15.0 14.0
1 2 3	8.0 9.0 9.0	7.0 6.0 6.0	14.0 15.0 16.0	11.0 12.0 12.0	21.0 21.0 20.0	16.0 17.0 17.0	24.0 22.0 25.0	17.0 18.0 17.0	27.0 27.0 26.0	21.0 22.0 20.0	22.0 23.0 24.0	16.0 15.0 15.0
1 2 3 4 5	8.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0	17.0 18.0 17.0 19.0 21.8	27.0 27.0 26.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5	8.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0	17.0 18.0 17.0 19.0 21.8	27.0 27.0 26.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5	8.0 9.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0	17-0 18-0 17-0 19-0 21-8	27.0 27.0 26.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5	8.0 9.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0	17-0 18-0 17-0 19-0 21-8	27.0 27.0 26.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5	8.0 9.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0 6.0 6.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0 18.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0	17-0 18-0 17-0 19-0 21-8	27.0 27.0 26.0 26.0 25.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0	22.0 23.0 24.0 23.0 22.0 22.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8	8.0 9.0 9.0 9.0 9.0 10.0 11.0	7.0 6.0 7.0 7.0 7.0 7.0 6.0 7.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0	21.0 21.0 20.0 20.0 19.0 18.0 19.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0	17-0 18-0 17-0 19-0 21-8 19-0 20-0	27-0 27-0 26-0 26-0 25-0 26-0 25-0 26-0 26-0	21.0 22.0 20.0 19.0 18.0 18.0 20.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8	8.0 9.0 9.0 9.0 9.0 9.0	7.0 6.0 6.0 7.0 7.0 6.0 6.0	14.0 15.0 16.0 16.0 14.0	11.0 12.0 12.0 13.0 12.0	21.0 21.0 20.0 20.0 19.0 18.0 19.0	16.0 17.0 17.0 16.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0	17-0 18-0 17-0 19-0 21-8	27.0 27.0 26.0 26.0 25.0 26.0 25.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0	22.0 23.0 24.0 23.0 22.0 22.0 22.0	16.0 15.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0	7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 6 9 10	8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	7.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 14.0 15.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 11.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 18.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 26.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0
1 2 3 4 5 6 7 8 9	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0	7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	7.0 6.0 6.0 7.0 7.0 7.0 6.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	7.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 9.0 8.0	14.0 15.0 16.0 16.0 14.0 14.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 14.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 11.0	7.0 6.0 6.0 7.0 7.0 6.0 6.0 7.0 8.0 9.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	7.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 9.0 8.0	14.0 15.0 16.0 16.0 14.0 14.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 19.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 14.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10	8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 11.0	7.0 6.0 6.0 7.0 7.0 6.0 6.0 7.0 8.0 9.0 8.0 7.0	14.0 15.0 16.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 11.0 13.0 13.0 13.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 11.0	7.0 6.0 6.0 7.0 7.0 6.0 6.0 7.0 8.0 9.0 8.0 7.0	14.0 15.0 16.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 11.0 13.0 13.0 13.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 21.0 22.0	16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 14.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21	16.0 15.0 15.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0	7.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 8.0 9.0 8.0 7.0	14.0 15.0 16.0 14.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 10.0 11.0 13.0 13.0 13.0 11.0 11.0	21.0 21.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	16.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0	17.0 18.0 17.0 19.0 21.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 20.0 18.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	16.0 15.0 15.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 7.0 6.0 7.0 8.0 9.0 8.0 7.0 7.0 8.0	14.0 15.0 16.0 14.0 14.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0	11.0 12.0 12.0 13.0 12.0 11.0 11.0 13.0 13.0 13.0 11.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 14.0 14.0 14.0 15.0 16.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0	16.0 15.0 15.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11	7.0 6.0 6.0 7.0 7.0 7.0 7.0 8.0 7.0 9.0 8.0 7.0 8.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0	11.0 12.0 12.0 13.0 13.0 12.0 10.0 11.0 13.0 13.0 11.0 11.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 22.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 15.0 14.0 16.0 16.0 14.0 17.0 17.0 17.0 18.0	24.0 22.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 26.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 21.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 22.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 6.0 7.0 7.0 6.0 7.0 7.0 8.0 9.0 8.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0	11.0 12.0 12.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 11.0 10.0 11.0 11.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 14.0 15.0 16.0 17.0 17.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 23.0 20.0	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 12.0 11.0 11.0 11.0 11	7.0 6.0 6.0 7.0 7.0 7.0 7.0 8.0 7.0 9.0 8.0 7.0 8.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 15.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0	11.0 12.0 12.0 13.0 13.0 12.0 10.0 11.0 13.0 13.0 11.0 11.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 22.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 15.0 14.0 16.0 16.0 14.0 17.0 17.0 17.0 18.0	24.0 22.0 27.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 26.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 21.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 6.0 7.0 7.0 6.0 7.0 7.0 8.0 9.0 8.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0	11.0 12.0 12.0 13.0 13.0 12.0 11.0 12.0 13.0 13.0 11.0 10.0 11.0 11.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 14.0 15.0 16.0 17.0 17.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 23.0 20.0	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 22.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	T.0 6.0 7.0 7.0 7.0 6.0 7.0 8.0 9.0 8.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 13.0 11.0 11.0 11.0 11.0 11.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 22.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 17.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 26.0 24.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 21.0 21.0 21.0	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 20.0 19.0 21.0 20.0 19.0 20.0 19.0 21.0	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 0 11 12 13 14 15 16 17 18 19 20 21	8.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 11.0 11.0 10.0 10	7.0 6.0 7.0 7.0 6.0 7.0 8.0 9.0 8.0 7.0 8.0 6.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0	11.0 12.0 12.0 13.0 12.0 11.0 11.0 13.0 13.0 13.0 11.0 10.0 11.0 11	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 24.0 24.0 25.0	17.0 18.0 17.0 19.0 21.8 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	27.0 27.0 26.0 26.0 25.0 26.0 25.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 21.0 20.0 21.0 21.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0	22.0 23.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 13.0 11.0 13.0 11.0 13.0 11.0 13.0 11.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 17.0 18.0 17.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	17.0 18.0 17.0 17.0 21.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 20.0 19.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 25.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 25.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17-0 18-0 17-0 19-0 21-8 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 21.0 20.0 11.0 23.0 21.0 23.0	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 19.0 20.0	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0
1 2 3 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 15 16 17 18 19 20 22 23 24	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 11.0 12.0 13.0 13.0 13.0 11.0 11.0 11.0 11.0 13.0 13	21.0 21.0 20.0 20.0 20.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 22.0 23.0 23.0 25.0 26.0 25.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 17.0 21.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 20.0 19.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 25.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 25.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 17.0 21.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0
1 2 3 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 15 16 17 18 19 20 22 23 24	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 12.0 11.0 12.0 13.0 13.0 13.0 11.0 11.0 11.0 11.0 13.0 13	21.0 21.0 20.0 20.0 20.0 19.0 19.0 20.0 19.0 20.0 21.0 22.0 22.0 23.0 23.0 25.0 26.0 25.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17-0 18-0 17-0 19-0 21-8 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 21.0 20.0 11.0 23.0 21.0 23.0	21.0 22.0 20.0 19.0 18.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 19.0 20.0	16.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 8.0 7.0 7.0 7.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 17.0	11.0 12.0 12.0 13.0 10.0 11.0 11.0 12.0 13.0 13.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 25.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 20.0 20.0 19.0 20.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 25.0 26.0 24.0 24.0 23.0 23.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 20.0 21.0	16.0 15.0 15.0 14.0 14.0 13.0 14.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 12.0 12.0 9.0 9.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 24 25 26	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 6.0 7.0 7.0 8.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 7.0 8.0 7.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0	17-0 18-0 17-0 19-0 21-8 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 18-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 21.0 20.0 19.0 21.0 23.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 19.0 16.0 16.0 17.0 17.0 16.0 17.0 17.0 18.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 19.0 20.0 16.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 9.0 8.0 9.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 6 17 18 8 19 20 22 23 4 25 26 27	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	7.0 6.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 13.0 11.0 11.0 11.0 11.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 20.0 20.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 25.0 26.0 24.0 24.0 23.0 23.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 18.0 16.0 16.0 16.0 18.0 18.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 9.0 9.0 11.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0	17-0 18-0 17-0 19-0 21-8 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 18-0 19-0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 21.0 20.0 19.0 21.0 23.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 19.0 16.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 3 4 5 6 7 7 8 9 10 11 12 13 3 14 5 15 16 6 17 20 20 22 23 24 25 26 27 28 29	8.0 9.0 9.0 9.0 9.0 11.0	7.0 6.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 11.0 11.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 20.0 20.0 19.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 25.0 26.0 24.0 24.0 23.0 23.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 20.0 18.0 16.0 16.0 16.0 18.0 18.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 9.0 9.0 11.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	8.0 9.0 9.0 9.0 9.0 11.0	7.0 6.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	14.0 15.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 11.0 11.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 20.0 20.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 23.0 23.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 9.0 9.0 9.0 11.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 1	7.0 6.0 7.0 7.0 7.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	14.0 15.0 16.0 16.0 14.0 17.0 20.0	11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0 25.0 26.0	17-0 18-0 17-0 19-0 20-0 19-0 20-0 19-0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 23.0 21.0 20.0 19.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 3 4 5 6 7 7 8 9 10 11 12 13 3 14 5 15 16 6 17 20 20 22 23 24 25 26 27 28 29	8.0 9.0 9.0 9.0 9.0 11.0	7.0 6.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	14.0 15.0 16.0 14.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0	11.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 11.0 11.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 22.0 25.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 17.0 19.0 20.0 19.0 20.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	27.0 27.0 26.0 26.0 25.0 25.0 26.0 25.0 26.0 24.0 24.0 23.0 23.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0	21.0 22.0 20.0 19.0 18.0 18.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 9.0 9.0 9.0 11.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 23 24 25 26 27 28 29 30 31	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0	7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 10.0 10.0 11.0 12.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	11.0 12.0 12.0 12.0 12.0 13.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 25.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0	17-0 18-0 17-0 19-0 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 23.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 27.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	8.0 9.0 9.0 9.0 9.0 11.0	7.0 6.0 7.0 7.0 6.0 6.0 6.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	14.0 15.0 16.0 16.0 14.0 17.0 20.0	11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0 25.0 26.0	17-0 18-0 17-0 19-0 20-0 19-0 20-0 19-0	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 23.0 21.0 20.0 19.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 9.0 9.0 9.0 11.0
1 2 3 4 5 5 6 7 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 40NTH	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0	7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 10.0 10.0 11.0 12.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	11.0 12.0 12.0 12.0 12.0 13.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 25.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0	17-0 18-0 17-0 19-0 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 23.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 27.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 23 24 25 26 27 28 29 30 31	8.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0 11.0 10.0	7.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 10.0 10.0 11.0 12.0	14.0 15.0 16.0 16.0 14.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	11.0 12.0 12.0 12.0 12.0 13.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	21.0 21.0 20.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0	16.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	24.0 22.0 25.0 27.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 25.0 24.0 25.0 26.0 25.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0	17-0 18-0 17-0 19-0 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1	27.0 27.0 26.0 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 24.0 23.0 21.0 21.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 27.0	21.0 22.0 20.0 19.0 18.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	22.0 23.0 24.0 22.0 22.0 22.0 22.0 21.0 19.0 21.0 20.0 19.0 20.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12

11404500 NORTH FORK FEATHER RIVER AT PULGA, CALIF.

LOCATION.--Lat 39°47'40", long 121°27'00", in NE{ sec.6, T.22 N., R.5 E., Butte County, 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 24.0°C Aug. 1-4; minimum, 2.0°C on several days during December and January.

Period of record:
Water temperatures: Maximum (1963-64, 1965-66, 1967-68), 24.0°C Aug. 1-4, 1968; minimum (1963-65, 1966-68),
1.0°C Jan. 12, 13, 1963.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	001	TOBER	NOVE	MBER	DEC	EMBER	JAK	NUARY	FEB	RUÁRY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	HIN	MAX	MIN	MAX	MIN	MAX	MIN
1					8.0	7.0	4.0	3.0	6.0	5.0	8.0	7.0
2					7.0 8.0	6.0	4.0 3.0	3.0 3.0	6.0 7.0	6.0 6.0	9.0 9.0	8.0 8.0
4			13.0	11.0	9.0	7.0 7.0	3.0	3.0	7.0	6.0	10.0	8.0
5			12.0	12.0	8.0	7.0	3.0	2.0	7.0	6.0	10.0	9.0
6			13.0	12.0	7.0	7.0	3.0	2.0	7.0	6.0	9.0	8.0
7 8					8.0 7.0	7.0 5.0	3.0 3.0	2.0 3.0	7.0 7.0	6.0 6.0	9.0 9.0	8.0 8.0
9					6.0	5.0	5.0	3.0	7.0	6.0	9.0	7.0
10					6.0	5.0	6.0	5.0	7.0	7.0	8.0	7.0
11 12					6.0 5.0	4.0 3.0	5.0	4.0 3.0	8.0 8.0	7.0	8.0	7.0 6.0
13					3.0	2.0	4.0 5.0	4.0	8.0	7.0 7.0	7.0 7.0	6.0
14			12.0	11.0	2.0	2.0	7.0	5.0	8.0	7.0	8.0	6.0
15			12.0	11.0	3.0	2.0	7.0	4.0	8.0	6.0	8.0	6.0
16			12.0	11.0	3.0	3.0	6.0	5.0	7.0	6.0	8.0	7.0
17 18			11.0 11.0	11.0	3.0 5.0	2.0 2.0	7.0 7.0	6.0 6.0	8.0 8.0	7.0 7.0	8.0 8.0	7.0 7.0
19					4.0	4.0	7.0	6.0	9.0	7.0	8.0	7.0
50					5.0	4.0	7.0	6.0	7.0	7.0	8.0	6.0
21 22			11.0 10.0	10.0 8.0	4.0 4.0	4.0 4.0	7.0 8.0	6.0 7.0	8.0 8.0	7.0 7.0	8.0 8.0	7.0 7.0
23			10.0	9.0	5.0	4.0	8.0	7.0	8.0	7.0	8.0	8.0
24			10.0	9.0	6.0	5.0	7.0	6.0	8.0	7.0	9.0	8.0
25			9.0	8.0	6.0	4.0	7.0	6.0	8.0	7.0	9.0	8.0
56			9.0	7.0	5.0	4.0	6.0	5.0	8.0	8.0	9.0	7.0
27 28			8.0 8.0	7.0 8.0	6.0	4.0 4.0	5.0 6.0	4.0	8.0 8.0	8.0 7.0	8.0 11.0	7.0 8.0
29			8.0	7.0	5.0	4.0	7.0	5.0	7.0	7.0	12.0	9.0
30 31			8.0	7.0	5.0 4.0	4.0 4.0	6.0 6.0	5.0 6.0			12.0 12.0	9.0 9.0
40NTH					9.0	2.0	8.0	2.0	9.0	5.0	12.0	6.0
TUMTH												
		PRIL		IAY		JNE		JLY		GUST		remser
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	9.0	14.0	11.0	18.0	14.0			24.0	20.0	21.0	18.0
2 3	10.0	9.0 8.0	15.0 15.0	11.0 12.0	18.0 18.0	15.0 16.0	21.0 21.0	17.0 18.0	24.0 24.0	21.0 21.0	22.0 21.0	18.0 18.0
4	11.0	9.0	16.0	12.0	19.0	16.0	22.0	18.0	24.0	21.0	21.0	18.0
5	11.0	9.0	15.0	12.0	16.0	15.0	22.0	19.0	23.0	20.0	21.0	18.0
6	11.0	8.0	14.0	11.0	17.0	15.0	23.0	19.0	23.0	20.0	21.0	18.0
7 8	11.0 12.0	8.0 8.0	14.0 14.0	11.0 11.0	17.0	14.0	23.0 23.0	19.0 19.0	23.0 22.0	19.0 19.0	21.0 20.0	18.0 18.0
9	12.0	9.0	15.0	12.0			23.0	19.0	22.0	19.0	19.0	18.0
10	13.0	9.0	16.0	12.0					23.0	19.0	20.0	17.0
11	13.0	10.0	15.0	12.0					23.0	19.0	20.0	17.0
12 13	13.0	11.0 9.0	15.0 13.0	13.0 12.0			22.0	19.0 19.0	22.0 22.0	19.0 19.0	19.0 19.0	17.0 17.0
14	12.0	9.0	13.0	12.0			22.0	19.0	21.0	19.0	19.0	18.0
15	12.0	9.0	14.0	11.0			22.0	18.0	21.0	18.0	19.0	17.0
16	11.0	9.0	15.0	12.0			22.0	18.0	20-0	18.0	19.0	16.0
17 18	11.0 11.0	8.0 8.0	16.0 16.0	13.0 13.0			22.0 22.0	18.0 18.0	21.0 20.0	17.0 18.0	19.0 19.0	16.0 17.0
19	11.0	8.0	16.0	14.0			22.0	19.0	18.0	17.0	18.0	17.0
20	11.0	8.0	16.0	14.0			23.0	19.0	18.0	16.0	18.0	16.0
21	11.0	8.0	16.0	14.0			22.0	18.0	18.0	16.0	17.0	15.0
22	11.0	8.0	15.0 16.0	13.0			23.0 23.0	19.0 19.0	19.0 19.0	16.0 16.0	17.0 17.0	14.0
23 24	11.0 12.0	9.0 9.0	16.0	13.0 13.0			22.0	18.0	19.0	16.0	17.0	14.0
25	12.0	9.0	16.0	13.0			22.0	18.0	18.0	16.0	18.0	15.0
26	13.0	9.0	17.0	13.0			22.0	19.0	19.0	17.0	18.0	16.0
27 28	13.0 14.0	10.0	17.0 18.0	14.0 14.0			23.0 23.0	19.0 19.0	19.0 20.0	16.0 17.0	18.0 17.0	16.0 15.0
29	14.0	11.0	18.0	14.0			22.0	20.0	20.0	17.0	18.0	15.0
30 31	12.0	11.0	18.0 18.0	14.0			23.0 22.0	20.0 21.0	21 • 0 21 • 0	17.0 18.0	17.0	15.0
MONTH	14-0	8.0	18.0	11.0			23.0	17.0	24.0	16.0	22.0	14.0
YEAR	24.0	2.0										

11405300 WEST BRANCH FEATHER RIVER NEAR PARADISE, CALIF.

LOCATION. --Lat 39°47'15", long 121°33'40", in SE§SE2 sec.6, T.22 M., R.4 E., Butte County, temperature recorder at gaging station on left bank, 0.6 mile upstream from Griffin Gulch, and 4.0 miles northeast of Paradise.

DRAINAGE AREA. -- 110 sq mi (revised).

PERIOD OF RECORD. -- Water temperatures: October 1962 to September 1968.

EXTREMES,--1967-68:
Water temperatures: Maximum, 30.0°C July 6, 7; minimum, 2.0°C on several days during December and January.

Period of record: Water temperatures: Maximum (1962-63, 1964-68), 30.5°C Aug. 18, 1967; minimum 1.5°C Jan. 12-14, 1963.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		1 154	MPERATURE	(0, 0,			O TODAL T	IO DE	TIBELDEN IS			
	OC.	TOBER	NOV	EMBER	DEC	EMB ER	JAN	IUARY	FEB	RUARY	M	ARCH
OAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	NIN	NAX	NIN	MAX	MIN
1	19.0	18.0	12.0	12.0	6.0	6.0	4.0	4.0	4.0	3.0	7.0	6.0
Ž	18.0	16.0	12.0	11.0	6.0	6.0	4.0	3.0	4.0	3.0	7.0	7.0
3	12.0	11.0	12.0	11.0	6.0	6.0	3.0	3.0	4.0	4.0	7.0	7.0
4	14-0	12.0	12.0	11.0	6.0	6.0	2.0	2.0	4.0	4.0	7.0	7.0
5	14.0	14.0	12.0	12.0	6.0	5.0	2.0	2.0	4.0	4.0	7.0	7.0
6 7	15.0	13.0	12.0	12.0	5.0	4.0	2.0	2.0	5.0	4.0	7.0	6.0
	16.0	13.0	12.0	12.0	4.0	4.0	2.0	2.0	5.0	5.0	7.0	7.0
8	17.0	14.0	12.0	12.0	4.0	4.0	2.0	2.0	6.0	5.0	7.0	7.0
9 10	17.0 16.0	14.0 14.0	12.0	12.0	4.0 5.0	4.0 5.0	3.0 4.0	2.0 4.0	6.0	6.0	6.0 6.0	6.0
10	10.0		12.0	11.0	3.0	2.0	4.0	7.0	6.0	6.0	0.0	6.0
11	17.0	14.0	12.0	11.0	5.0	5.0	4.0	3.0	6.0	6.0	7.0	6.0
12	17.0	15.0	11.0	11.0	5.0	4.0	3.0	3.0	7.0	7.0	6.0	6.0
13 14	16.0 16.0	14.0 14.0	12.0 12.0	11.0	4.0 3.0	3-0 2-0	4.0 5.0	4.0	7.0 7.0	7.0 7.0	6.0 6.0	5.0 5.0
15	16.0	14.0	12.0	12.0	2.0	2.0	6.0	5.0	7.0	7.0	7.0	6.0
16 17	15.0 16.0	13.0 14.0	12.0	12.0	3.0	2.0	5.0	5.0	7.0	7-0	7.0	6.0
18	15.0	14.0	12.0	12.0 11.0	3.0 3.0	2.0 2.0	5.0 4.0	4.0 5.0	7.0 6.0	6.0 6.0	6.0 6.0	6.0 6.0
19	15.0	14.0	11.0	11.0	3.0	3.0	4.0	4.0	6.0	6.0	7.0	6.0
žó	16.0	14.0	11.0	10.0	4.0	3.0	5.0	4.0	6.0	6.0	7.0	6.0
21	15.0	13.0	10.0	9.0	4.0	4.0	6.0	5.0	7-0	6.0	7.0	7.0
22 23	16.0 16.0	14.0 14.0	9.0 9.0	8.0 8.0	4.0 5.0	4.0 4.0	6.0 6.0	6.0 6.0	6.0 6.0	6.0 6.0	7.0 8.0	7.0 7.0
24	16.0	14.0	8.0	8.0	6.0	5.0	6.0	6.0	7.0	6.0	8.0	7.0
25	16.0	14.0	8.0	7.0	6.0	5.0	6.0	6.0	7.0	6.0	8.0	8.0
26		13.0	8.0									
26 27	15.0 14.0	13.0	7.0	7.0 7.0	5.0 5.0	4.0 4.0	6.0 6.0	6.0 4.0	7.0 7.0	6.0 6.0	8.0 8.0	6.0 7.0
28	14.0	13.0	7.0	7.0	5.0	4.0	4.0	4.0	7.0	6.0	9.0	8.0
29	13.0	12.0	7.0	6.0	4.0	4.0	3.0	2.0	7.0	6.0	9.0	8.0
30	13.0	12.0	6.0	6.0	4.0	3.0	4.0	2.0			9.0	8.0
31	13.0	12.0			4.0	4.0	4.0	4.0			9.0	8.0
MONTH	19-0	11.0	12.0	6.0	6.0	2.0	6.0	2.0	7.0	3.0	9.0	5.0
	A	PRIL		MAY	J	JNE	Ji	JLY	AU	GUST	SEP.	TEMBER
DAY	A MAX	PRIL MIN	MAX	MIN	IL XAM	JNE H I N	JL Max	JLY MIN	AU(GUST HIN	MAX	MIN
	MAX				MAX				MAX	MIN		
1 2	MAX 9.0 7.0	MIN 7.0 7.0	MAX 11.0 12.0	MIN 10.0 10.0	MAX 17.0 17.0	HIN 14.0 16.0	MAX 27.0 26.0	MIN 21.0 22.0	MAX 28.0 29.0	MIN 23.0 24.0	MAX 25.0 26.0	MIN 21.0 21.0
1 2 3	MAX 9.0 7.0 8.0	MIN 7.0 7.0 7.0	MAX 11.0 12.0 12.0	MIN 10.0 10.0 11.0	MAX 17.0 17.0 17.0	MIN 14.0 16.0 16.0	MAX 27.0 26.0 27.0	MIN 21.0 22.0 22.0	MAX 28.0 29.0 29.0	MIN 23.0 24.0 24.0	MAX 25.0 26.0 26.0	MIM 21.0 21.0 21.0
1 2 3 4	MAX 9.0 7.0 8.0 8.0	MIN 7.0 7.0 7.0 8.0	MAX 11.0 12.0 12.0 12.0	MIN 10.0 10.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0	MIN 14.0 16.0 16.0 16.0	MAX 27.0 26.0 27.0 28.0	#IN 21.0 22.0 22.0 23.0	MAX 28.0 29.0 29.0 29.0	MIN 23.0 24.0 24.0 23.0	MAX 25.0 26.0 26.0 25.0	MIN 21.0 21.0 21.0 21.0
1 2 3	MAX 9.0 7.0 8.0	MIN 7.0 7.0 7.0	MAX 11.0 12.0 12.0	MIN 10.0 10.0 11.0	MAX 17.0 17.0 17.0	MIN 14.0 16.0 16.0	MAX 27.0 26.0 27.0	MIN 21.0 22.0 22.0	MAX 28.0 29.0 29.0	MIN 23.0 24.0 24.0	MAX 25.0 26.0 26.0	MIM 21.0 21.0 21.0
1 2 3 4 5	9.0 7.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 8.0 8.0	MAX 11.0 12.0 12.0 12.0 12.0	MIN 10.0 10.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0	MIN 14.0 16.0 16.0 16.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0	MIN 21.0 22.0 22.0 23.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0	MIN 23.0 24.0 24.0 23.0 21.0	MAX 25.0 26.0 26.0 25.0 25.0	MIN 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5	MAX 9.0 7.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 8.0 8.0	MAX 11.0 12.0 12.0 12.0 12.0	MIN 10.0 10.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0	HIN 14-0 16-0 16-0 14-0 13-0	MAX 27.0 26.0 27.0 28.0 29.0	MIN 21.0 22.0 22.0 23.0 24.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0	HIN 23.0 24.0 24.0 23.0 21.0 21.0	MAX 25.0 26.0 26.0 25.0 25.0 24.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5	MAX 9.0 7.0 8.0 8.0 8.0 8.0	7.0 7.0 7.0 7.0 8.0 8.0 7.0 8.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0	MIN 10.0 10.0 11.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0	MIN 14.0 16.0 16.0 14.0 13.0 13.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0	MIN 21.0 22.0 22.0 23.0 24.0 24.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0	MIM 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0
1 2 3 4 5 6 7 8	MAX 9.0 7.0 8.0 8.0 8.0 8.0 9.0	7.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0	MIN 10.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0	MIN 14.0 16.0 16.0 16.0 14.0 13.0 13.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0	MAX 25.0 26.0 25.0 25.0 25.0 24.0 24.0 22.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0
1 2 3 4 5	MAX 9.0 7.0 8.0 8.0 8.0 8.0	7.0 7.0 7.0 7.0 8.0 8.0 7.0 8.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0	MIN 10.0 10.0 11.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0	MIN 14.0 16.0 16.0 14.0 13.0 13.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0	MIN 21.0 22.0 22.0 23.0 24.0 24.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 24.0	MIM 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0
1 2 3 4 5 6 7 8	MAX 9.0 8.0 8.0 8.0 9.0 9.0	7.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0	9.0 9.0 10.0 11.0 11.0 11.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0 17.0 17.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 28.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0	MIN 23.0 24.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0	MAX 25.0 26.0 25.0 25.0 25.0 24.0 24.0 24.0 22.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	9.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0	MIN 7.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	9.0 10.0 11.0 11.0 11.0 11.0 11.0	MAX 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0	HIN 14.0 16.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 28.0 28.0 27.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	HAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0	MAX 25.0 26.0 25.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MIN 7.0 7.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	MIN 10.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0 15.0 17.0 17.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 28.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 25.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MIN 7.0 7.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	9.0 10.0 11.0 11.0 11.0 11.0 10.0 10.0 1	MAX 17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 17.0 18.0 18.0 19.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 28.0 27.0 28.0 28.0 28.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0	HAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0 25.0 24.0 23.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	MAX 25.0 26.0 25.0 25.0 25.0 24.0 24.0 22.0 23.0 24.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MIN 7.0 7.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	MIN 10.0 10.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 14.0 16.0 15.0 17.0 17.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 28.0	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0	MAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 25.0	MIN 23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MIN 7.0 7.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0 9.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	9.0 10.0 11.0 11.0 11.0 11.0 10.0 10.0 1	MAX 17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 17.0 18.0 18.0 19.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0	MAX 27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 27.0 28.0	MIN 21.0 22.0 22.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0	HAX 28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0	MIN 23.0 24.0 24.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 7.0 8.0 8.0 7.0 7.0 7.0 9.0 9.0 9.0 7.0	HAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0	MIN 10.0 10.0 11.0 11.0 11.0 9.0 10.0 11.0 10.0 6.0 7.0 7.0	MAX 17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 18.0 17.0 18.0 17.0 19.0 21.0	MIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0	HAX 27.0 26.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	MIN 21.0 22.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0	28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 29.0 29.0 29.0 29.0 29.0 20.0 20.0 20	MIN 23.0 24.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	7.0 7.0 8.0 8.0 7.0 8.0 8.0 9.0 9.0 9.0 9.0	HAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	9.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0	17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 18.0 17.0 18.0 19.0 22.0 23.0 24.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 17.0	27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	#IN 21.0 22.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0 24.0 23.0 23.0 22.0	23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	25.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 22.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	MAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 7.0 7.0 7.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 6.0 6.0	HAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0	9.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 1	17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 22.0 23.0 24.0	HIN 14.0 16.0 16.0 16.0 14.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0	27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 21.0 22.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0 23.0 23.0 24.0 22.0 24.0 22.0	HIN 23.0 24.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	MAX 25.0 26.0 25.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	#IN 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	7.0 7.0 8.0 8.0 7.0 8.0 8.0 9.0 9.0 9.0 9.0	HAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 12.0 12	9.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0	17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 18.0 17.0 18.0 19.0 22.0 23.0 24.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 17.0	27.0 26.0 27.0 28.0 29.0 30.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	#IN 21.0 22.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0 24.0 23.0 23.0 22.0	23.0 24.0 24.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	25.0 26.0 26.0 25.0 25.0 25.0 24.0 24.0 22.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 8.0 8.0 6.0 7.0 7.0 7.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 7.0 7.0 7.0 7.0 11.0 11.0 11.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 23.0 24.0 24.0 24.0 26.0	HIN 14.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 21.0 21.0 21.0 21.0	27.0 26.0 27.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0 22.0 23.0 22.0 21.0 18.0	MIN 23.0 24.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0 21	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0 21.0 2	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	HAX 9-0 7-0 8-0 8-0 8-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9	MIN 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 6.0 6.0 7.0	MAX 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	9:0 10:0 11:0 11:0 11:0 11:0 10:0 10:0 1	17.0 17.0 17.0 17.0 16.0 16.0 15.0 17.0 18.0 17.0 18.0 21.0 21.0 24.0 24.0 24.0 24.0	HIN 14.0 16.0 16.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 19.0 21.0 21.0 21.0 21.0	MAX 27.0 26.0 27.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	#IN 21.0 22.0 22.0 23.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 29.0 29.0 29.0 21.0 21.0 21.0	MIN 23.0 24.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21	MAX 25.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0 2	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 9.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 9.0 9.0 9.0 9.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0	MAX 11.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0	MIN 10.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 1	17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 22.0 23.0 24.0 24.0 24.0 26.0 27.0	HIN 14.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0	27.0 26.0 27.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	MIN 21.0 22.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28.0 29.0 29.0 29.0 26.0 26.0 26.0 27.0 27.0 27.0 23.0 24.0 24.0 23.0 25.0 21.0 18.0	HIN 23.0 24.0 23.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 25.0 26.0 26.0 25.0 25.0 24.0 24.0 22.0 23.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0 21.0 19.0 18.0 18.0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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11406920 THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROYILLE, CALIF.

LOCATION. -- Lat 39°27'23", long 121°38'10", in NW\{3E\{2}\} sec.33, T.19 N., R.3 E., Butte County, at gaging station 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 to September 1968.

REMARKS. -- Temperature is listed only when water is released from Thermalito Afterbay. Due to the complete regula-tion of the Feather River below Oroville Dam, the temperature of the water released from Thermalito Afterbay affects the temperature of the Feather River helow the Oroville project.

								TE	IPE	RAT	URE	(*	C)	OF	WAT	TR.	MA	T T	0 8	EPI	EME	ER	196	8								
MAY																•																
MUNIXAM										-														15	16	17	18	19	19	19	19	
MUNIMUM					-																			14	14	16	17	17	17	18	17	
JUNE																																
MUNIXAM	21	21	19	19	18	19	21	22	23	22	21	21	23	24	25	25	27	26	24	24	26	24	26	24	25	24	27	25	24	22		23
MUNINUM	18	18	18	18	17	17	18	19	21	21	21	21	21	22	23	23	23	24	23	23	23	24	23	23	23	23	23	24	21	21		21
JULY																								•								
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MINIMUM																																
AUGUST																																
MUMIXAM																				21	21	21	22	23	22	23	23	23	23	24	25	
MINIMUM																				19	19	20	21	21	21	21	21	22	22	23	23	
SEPTEMBER																																
MUMIXAM	24	24	25	26	25	25	24	25	23	24	23	23	23	22	22	21	22	21	22	21	19	18	17	18	20	21	21	21	21	21		22
MINIMUM	23	23	23	23	23	23	23	23	23	22	22	22	22	22	21	20	19	21	21	19	18	17	17	17	18	19	19	20	20	19		21

11407000 FEATHER RIVER AT OROVILLE, CALIF.

LCCATION. -- Lat 39°31'13", long 121°32'48", in SWHNE's sec. 8, T.19 N., R.4 E., Butte County, at 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 1956, Water temperatures: October 1953 to September 1954, Movember 1956 to September 1958. Sediment records: November 1966 to September 1958.

EXTREMES, -- 1957-68:

Sediment concentrations: Maximum daily, 38 mg/l Feb. 26; minimum daily, 1 mg/l on many days during June and July. Sediment discharge: Maximum daily, 456 tons Oct. 3; minimum daily, 1.0 ton June 9, 10.

Period of record:

Water t temperatures (1956-67): Maximum, 27.0°C Sept. 10, 12, 1959; minimum, 1.5°C Dec. 27, 1959, Jan. 23-25,

1905.
Sediment concentrations: Maximum daily, 4,100 mg/l Feb. 1, 1963; minimum daily, 1 mg/l on many days in 1961-62, 1964, and 1966.
Sediment discharge: Maximum daily, 1,500,000 tons Feb. 1, 1963; minimum daily, 1.0 ton June 9, 10, 1966.

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11407000 FEATHER RIVER AT OROVILLE, CALIF. -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL~ CIUM (CA)	MAG- NE- SIUM (MG)	SOUTUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO~ R10E (F)
OCT.												
03 31	4970 2850	11	.01	8.5	4.0	3.2	.9	50	0	3.0	1.8	.0
NOV.	2030											
30	956											
DEC • 27 • • •	624	10	.00	9.3	3.7	3.8	1.0	48	0	3.0	1.6	.1
JAN.									_			
31 MAR.	392	13	•01	9.8	3.9	3.5	1.0	52	0	4.0	1.3	-1
09	392	12	.06	9.6	4.1	3.8	.9	54	0	2.0	1.1	•0
APR.	382	12	•03	7.6	3.6	3.0		45	0	4.0	1.0	.0
02 May	302	12	•03	7.0	3.0	3.0	-8	40	U	4.0	1.0	••
03	392	12	•00	8.5	3.8	3.3	.8	48	0	4.0	1.6	•0
JUNE	402	12	•00	8.5	3.8	3.2	.9	46	0	3.0	1.0	-1
JULY		13							0			
02 AUG.	412	13	•00	8.8	3.4	3.0	.8	46	U	3-0	1.0	•1
01 SEPT.	412	12	•00	8 • 2	3.7	3.4	•9	48	0	2.0	• 6	•0
05	402	12	•00	8.0	3.2	3.2	.8	42	0	4.0	. 7	•0
				DIS-	015-			ois-				SPECI-
DATE	NITRATE (ND3)	PHOS- PHATE (PO4)	BORON (B)	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM , AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)
DATE OCI.		PHATE		SOLVEO SOLIOS (RESI- DUE AT	SOLVEO SOLIOS (SUM OF CONSTI-	NESS	CAR- BONATE Haro-	SOLVEO SOLIOS (TONS PER		, AD- SORP- TION	LINITY AS	FIC COND- UCTANCE IMICRO-
OCT.	(ND3)	PHATE (PD4)	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	SOL VEO SOLIOS (TONS PER AC-FT)	SODIUM 15	, AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE [MICRO- MHOS]
0CT. 03 31	(ND3)	PHATE (PO4)	(8)	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	SOLVED SOLIDS (TONS PER AC-FT)	MUIGGZ	, AD- SORP- Tion Ratio	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)
0CT. 03 31 NDV. 30	(ND3)	PHATE (PD4)	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	SOL VEO SOLIOS (TONS PER AC-FT)	SODIUM 15	, AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE [MICRO- MHOS]
0CT. 03 31	.1 .1	PHATE (PO4) -11 -06	·05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	SOLVED SOLIDS (TONS PER AC-FT)	\$001UM 15 	, AD— SORP— TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)
0CT. 03 31 NDV. 30 0EC. 27 JAN.	.1 .1 .0	.11 .06 .10	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS) 58 59	NESS (CA,MG) 38 38	CAR- BONATE HARO- NESS	SOL VEO SOL IOS (TONS PER AC-FT)	15 18	AD- SORP- TION RATIO	LINITY AS CACO3 41	FIC COND- UCTANCE IMICRO- NHOS) 95 94
OCT. 03 31 NDV. 30 OEC. 27 JAN. 31	•1 •1 •0	PHATE (PD4) -11 -06	•05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVED SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	SOLVED SOLIDS (TONS PER AC-FT)	\$001UM 15 	, AD— SORP— TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)
OCT. 03 31 NDV. 30 0EC. 27 JAN. 31 MAR.	.1 .1 .0	.11 .06 .10	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOLVEO SOLIOS (SUM OF CONSTI- TUENTS) 58 59	NESS (CA,MG) 38 38	CAR- BONATE HARO- NESS	SOL VEO SOL IOS (TONS PER AC-FT)	15 18	AD- SORP- TION RATIO	LINITY AS CACO3 41	FIC COND- UCTANCE IMICRO- NHOS) 95 94
OCT. 03 31 NDV. 30 27 JAN. 31 MAR. 09	.1 .1 .0 .0 .0 .2 .4	PHATE (PD4) -11 -06 -10 -06 -07 -09	.00	SOLVEO SOLIOS (RESI- DUE AT 180 C)	SOL VEO SOL 10S (SUM OF CONSTI- TUENTS) 58 59 63 61	NESS (CA,MG) 38 38 40 41	CAR- BONATE HARO- NESS 0 0 0	SOL VEO SOLIOS (TONS PER AC-FT) -08 .09 .09	15 18 15	. AD— SORP— TION RATIO	LINITY AS CACO3 41 39 43 44	FIC COND— UCTANCE (MICRO- MHOS) 95 94 96
OCT. 03 31 NDV. 30 DEC. 27 JAN. 31 MAR. 09 APR. 02 MAY	.1 .1 .0 .0 .2 .4	PHATE (PD4) -11 -06 -10 -06 -07 -09 -12	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C) 	SOL VEO SOL 10S (SUM OF CONSTI- TUENTS) 58 59 63 61	NESS (CA,MG) 38 38 40 41 34	CAR- BONATE HARD- NESS 0 0 0 0	SOL VED SOLIDS (TONS PER AC-FT) .08 .09 .09 .09	15 18 15 17	. AD— SORP— TION RATIO -23 -2 -3 -2	LINITY AS CACO3 41 39 43 44	FIC COND- UCTANCE (MICRO- NHOS) 95 94 96 99
OCT. 03 31 NDV. 30 DEC. 27 JAN. 31 MAR. 09 APR. 02 MAY 03 JUNE	.1 .1 .0 .0 .2 .4	PHATE (PD4) -11 -06 -10 -06 -07 -09 -12 -13	.00	SDLVEO SOLIOS (RESI- DUE AT 180 C) 	SOL VEO SOL 10S (SUM OF CONSTI-TUENTS) 58	NESS (CA,MG) 38 38 40 41 34 36	CAR-BONATE HARO-NESS	SDL VEO SOLIOS (170NS PER AC-FT) -0809 -09 -09 -08 -07 -08	15 18 15 17 16	. AD— SORP— TION RATIO -23 -2 -3 -2 -3	41 39 43 44 37 39	FIC COND- UCTANCE (MICRO- NHOS) 95 94 96 99 84
OCT. 03 31 NOV. 30 OEC. 27 JAN. 31 MAR. 09 APR. 02 MAY 03 JUNE	.1 .1 .0 .0 .2 .4	PHATE (PD4) -11 -06 -10 -06 -07 -09 -12	.05	SOLVEO SOLIOS (RESI- DUE AT 180 C) 	SOL VEO SOL 10S (SUM OF CONSTI- TUENTS) 58 59 63 61	NESS (CA,MG) 38 38 40 41 34	CAR- BONATE HARD- NESS 0 0 0 0	SOL VED SOLIDS (TONS PER AC-FT) .08 .09 .09 .09	15 18 15 17	. AD— SORP— TION RATIO -23 -2 -3 -2	LINITY AS CACO3 41 39 43 44	FIC COND- UCTANCE (MICRO- NHOS) 95 94 96 99
OCT. 03 31 NOV. 30 0EC. 27 JAN. 31 MAR. 09 APR. 02 MAY 03 JUNE 06 JULY 02	.1 .1 .0 .0 .2 .4	PHATE (PD4) -11 -06 -10 -06 -07 -09 -12 -13	.00	SDLVEO SOLIOS (RESI- DUE AT 180 C) 	SOL VEO SOL 10S (SUM OF CONSTI-TUENTS) 58	NESS (CA,MG) 38 38 40 41 34 36	CAR-BONATE HARO-NESS	SDL VEO SOLIOS (170NS PER AC-FT) -0809 -09 -09 -08 -07 -08	15 18 15 17 16	. AD— SORP— TION RATIO -23 -2 -3 -2 -3	41 39 43 44 37 39	FIC COND- UCTANCE (MICRO- NHOS) 95 94 96 99 84
OCT. 03 31 NDV. 30 OEC. 27 JAN. 31 MAR. 09 APR. 02 MAY 03 JUNE 06 JULY	.1 .1 .0 .0 .2 .4 .1	PHATE (PD4) -11 -06 -10 -06 -07 -09 -12 -13 -08	.05 .00 .00 .03 .02	SDLVEO SOLIOS (RESI-DUE AT 180 C)	SOL VEO SOL 10S (SUM OF CONSTI-TUENTS) 58	NESS (CA, MG) 38 38 40 41 34 36	CAR- BONATE HARO- NESS 0 0 0 0 0 0	SDL VED SOL IDS (170NS PER AC-FT)	15 18 15 17 16 16	. AD- SORP- 110N RATIO -2 -3 .2 .3 .2	LINITY AS CACO3 41 39 43 44 37 39 38	FIC COND- COND- UCTANCE INICRO- HHOS) 95 94 96 99 84 87

AMMONIA (NH4)

ORGANIC NITRO-GEN (N)

ORTHO PHOS-PHATE (PO4)

TOTAL NITRO-GEN (N)

11407000 FRATHER RIVER AT OROVILLE, CALIF. -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

COLOR

TEM-PERA-TURE (DEG C)

DATE

							•		****		
		OCT.									
		03	7.1	16	_	-12					
		31		12		.06					
		NOV.					_		_		
		30		8		.09		_			
		DEC.				.09					
		27	7.6	8							
		JAN.	1.0	•	_						
				_							
		31	7.8	5			_	-			
		MAR.		_							
		09	7.8	7							
		APR.							_		
		02	7.8	8	5	- 06	-00		.05		
		MAY									
		03	7.5	8		•12	.09		.18		
		JUNE									
		06	7.4	15	4	.21	-18		.34		
		JULY									
		02	7.7	22	2	-08	.04		.10		
		AUG.									
		01	7.7	17		.06	.00	•02			
		SEPT.									
		05	7.9	17	0	.00		.04			
					•			•••			
	ALDRIN	DOD	DD T	DI- ELDRIN	ENDRIN	HEPT A- CHLOR	HEPTA- CHLOR EPOXIDE	LINDANE	2•4-D	SILVEX	2,4,5-T
DATE											
JAN.											
31	00										
	-00	-00	•00	•00	•00	.00	• 00	•D0	.00	-00	•00
MAR.											
09	•00	-00	-01	•00	-00	.00	-00	•00	.00	-00	•00
APR.											
02	. DO	.00	•00	-00	.00	.00	-00	• OD	.00	•00	.00
MAY											
03	.00	.00	-00	•00	.00	-00	.00	.00	.00	.00	-00
JUNE											
06	.00	.00	•00	•00	-00	.00	.00	.00	.00	.00	.00
JULY								• • • •			
02	.00	•00	-00	•00	-00	-00	•00	-00	.00	•00	•00
AUG.									• • • •	• • • • • • • • • • • • • • • • • • • •	
01	.00	.00	-00	•00	•00	.00	•00	•00	-00	.00	-00
SEPT.			•								
05	-00	.00	-00	•00	.00	•00	•00	-00	-00	•00	-00
					***	•••	•••	•00	•00	•00	•00

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBEE 1968

MUNTH	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-	•
UCTOBER		18	16	17		17		17			18		18		17		17			16		16		17			16		17		14		
NOVEMBER.		16		14		15		15		14		13		14		14		13	13		13		12		12		11		9	9			
DECEMBER.	9	9		9		9			9		9		7			6		7		6		7		8		9	11	7		7	7		
JANUARY																																	
FEBRUARY.																																	
MAKCH	9		10		9		8		8		9		9		9	8		11		11		9		11			_	11		11	12		
APRIL																																	
MAY			8	12		11		12		13		12		12		14		13		14		14		14		17		17		17			
JUNE		17		16		16			19	19			20		22		23		_	20	21		20		20		21		20	22			
JULY																															19		
AUGUST																																	
SEPTEMBER	22		19		17		21		19		20		20		16	_	22		18		17		19		21		21		19				

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YRAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B. ROTTOM MITHORAMAL TUBE; C. CHEMÍCÁLLY DÍSPERSED; N. IN NATIVE MATER; P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE; W. IN DISTILLED MATER)

		WATER			PARTICLE SIZE												
		TEM- PERA-		CONCEN-	SUSPENDED~ SEDIMENT	PERC	ENT FI	INER '	THAN '	THE S	12E (IN MI	LLIMET	ERS)	INDIC	CATED	METHOD OF
DATE	TIME	TURE (C)	DISCHARGE (CFS)	TRATION	(TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.DQ	ANALY- SIS
FEB 17 1968 MAR 16			746 390	21 18	42 19	42 56	68 76	78 86	83 90	88 91	94 95	97 98	99 100	100		=	SC8W SC8W

11407000 FEATHER RIVER AT OROVILLE, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OC TORER			NOVEMBER		DECEMBER					
DAY	MEAN DISCHARGE (CFS)	MFAN 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	1180	7	22	2910	12	94	948	11	28			
5	3560	11	127	3250	10	88	948	11	28			
3	4970	34	456	3100	9	75	935	16	40			
4	3980	31	333	2570	9	62	935	24	61			
5	3560	20	192	1940	8	42	922	18	45			
6	3470	14	131	2510	6	41	909	12	29			
7	3620	11	108	2890	7	55	909	11	27			
8	3230	10	87	1570	8	34	909	11	27			
9	3070	10	83	1190	9	29	909	10	25			
10	3140	10	85	1190	10	32	909	10	25			
11	2490	11	74	1180	9	29	896	9	22			
12	2100	11	62	1750	8	38	B96	10	24			
13	2160	10	58	2380	7	45	896	12	29			
14	2950	9	72	1480	5	20	890	12	29			
15	2910	7	55	1140	4	12	896	11	27			
16	2630	7	50	970	4	10	909	11	27			
17	2950	11	88	942	3	7.6	909	10	25			
18	2730	11	81	956	3	7.7	922	8	20			
19	2710	9	66	970	4	10	909	8	20			
20	2630	8	57	970	11	29	909	9	22			
21	2140	7	40	956	23	59	909	9	22			
22	2120	6	34	956	28	72	834	7	16			
23	2290	7	43	970	25	65	810	6	13			
24	2630	7	50	1050	20	57	810	6	13			
25	2650	7	50	1430	14	54	810	6	13			
26	2870	6	46	1430	9	35	692	7	13			
27	2450	5	33	1430	6	23	624	6	10			
28	1690	5	23	1370	6	22	547	4	5.9			
29	1620	5	22	970	7	18	420	2	2.3			
30	1890	5	26	956	10	26	401	2	2.2			
31	2850	10	77				401	3	3.2			
TOTAL	85240		2731	47376		1191.3	25523		693.6			

		JANHARY			FERRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MFAN 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	401	5	5.4	392	13	14	750	8	16
2	401	6	6.5	401	12	13	810	24	52
3	401	6	6.5	401	11	12	810	20	44
4	410	5	5.5	401	11	12	822	16	36
5	420	5	5.7	401	12	13	786	14	30
6	420	4	4.5	401	13	14	580	12	19
7	420	4	4.5	401	16	17	420	9	10
8	430	3	3.5	392	21	22	392	7	7.4
9	401	4	4.3	392	25	26	392	7	7.4
10	420	5	5.7	401	27	29	401	7	7.6
11	410	4	4.4	410	25	28	420	6	6.8
12	410	4	4.4	420	20	23	410	7	7.7
13	420	5	5.7	430	17	20	410	11	12
14	401	6	6.5	494	16	21	382	10	10
15	401	7	7.6	774	16	33	401	8	8.7
16	401	8	8.7	810	14	31	420	16	18
17	410	8	8.9	786	14	30	392	11	12
18	401	7	7.6	810	13	28	401	10	11
19	392	7	7.4	822	13	29	372	10	10
20	392	9	9.5	822	12	27	420	12	14
21	410	10	11	834	13	29	401	11	12
22	410	10	11	822	17	38	382	10	10
23	410	11	12	822	22	49	472	12	15
24	392	13	14	810	30	66	738	14	28
25	392	12	13	798	35	75	410	17	19
26	392	10	11	810	38	83	410	15	17
27	401	11	12	822	34	75	410	14	15
28	401	12	13	822	31	69	420	14	16
29	420	12	14	834	28	63	410	13	14
30	420	17	19	~-			410	10	11
31	392	15	16				410	10	11
TOTAL	12602		268.8	17935		989	15064		507.6

11407000 FEATHER RIVER AT OROVILLE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MEAN MEAN MEAN SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION CONCEN-TRATION CONCEN-TRATION SEDIMENT DISCHARGE MEAN MEAN SEDIMENT MEAN DISCHARGE (TONS/DAY) DISCHARGE DISCHARGE (CFS) DISCHARGE DAY (CFS) MG/L) (CFS) (MG/L) 410 382 420 430 11 9.3 10 410 420 392 392 392 4.4 4.5 4.2 5.3 5.3 3.3 3.3 3.3 3.2 2.1 2 10 9 9 410 3 3 3 410 410 392 387 10 441 2.2 2.2 1.1 1.0 420 7 7.9 392 4D2 401 382 392 401 6.5 5.4 4.3 4.3 5.2 5.3 402 393 384 384 6544 8 401 1 10 401 4.3 392 5.3 1.0 11 12 13 4.3 3.3 3.3 3.2 3.2 5.4 5.5 6.5 3.2 3.2 393 393 384 2.1 2.1 3.1 3.3 3.3 401 401 55533 43333 2 3 3 3 410 410 401 401 401 392 412 392 363 354 382 4.2 3.9 4.8 5.2 4.3 392 401 3.2 3.2 2.2 2.1 2.1 2.2 2.2 2.2 402 16 17 18 19 20 3 2 2 2 2 2 2 3 412 401 392 392 2.2 402 393 410 401 401 401 401 4.4 4.3 4.3 392 401 410 2.1 3.2 2.2 3.3 2.2 1.1 410 21 22 23 24 25 3 2 3 2 1 412 420 412 420 420 410 410 410 410 401 401 401 401 410 4.3 4.3 4.3 4.3 3.4 3.4 2.2 2.2 2.2 2.2 2.2 3.3 1.1 26 27 28 29 30 402 44444 2 2 3 412 412 402 393 . --2 2.2 31 TOTAL 12553 12058 12050 112-3 161.1 69.5 AUGUST SEPTEMBER JULY MEAN MEAN MEAN SEDIMENT MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE CONCEN-MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE DISCHARGE (TONS/DAY) DAY (CFS) (MG/L) (CFS) (MG/L) (CFS) (MG/L) (TONS/DAY) 2.2 2.2 3.4 3.5 2.2 2.2 3.3 4.5 5.7 5.6 1 402 2 412 2 412 2 3 3 : 2 412 2 2.2 412 412 422 431 402 3 4 5 5 4 5 402 2.2 421 412 412 65333 402 3 3.3 412 422 412 1.1 5.6 3.3 3.3 3.3 412 412 402 3.3 3 2 2 402 2.1 9 10 412 1.1 402 3.3 3.3 4.3 4.3 3.2 3.3 2.2 2.3 3.5 4.7 11 412 1 1.1 412 3 4 4 3 402 2 2 3 4 12 412 412 412 412 2.2 402 412 422 431 431 14 1.1 402 392 412 412 412 412 412 422 431 431 431 431 4.6 3.5 3.5 2.3 2.3 392 2 3 3 4 2.1 433 412 412 412 2.2 3.3 3.3 1.1 18 19 20 1.1 Š 412 1.1 4.4 2.3 2.2 2.2 3.3 4.2 21 22 23 412 412 412 412 3.2 2.2 2.2 1 397 422 1.1 3 2 2 5 5 5 1.1 402 402 412 1.1 402 2.2 402 3 412 2 1.1 2.2 2.2 2.2 2 2 2 2 3.2 2.2 2.2 2.2 26 402 412 393 2.2 412 422 422 402 27 28 29 30 31 402 402 402 408 412 2.1 2.2 393 412

12689 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

TOTAL

48.4

12695

86.0 278132 6962.3

12347

103.7

11407150 FRATHER RIVER NEAR GRIDLEY, CALIF.

LOCATION.--Lat 39°22'00", long 121°38'46", in SW1 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 1968. Sediment records: October 1964 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Minimum, 4.0°C Jan, 3, 5-8.
Sediment concentrations: Maximum daily, 54 mg/l Feb. 13; minimum daily, 2 mg/l Dec. 24.
Sediment discharge: Maximum daily, 554 tons Feb. 13; minimum daily, 3.0 tons July 25, 27, 30.

Period of record:

or record: Water temperatures: Minimum, 4.0°C on several days during December and January of most years. Sediment concentrations: Maximum daily, 1,340 mg/l Dec. 25, 1964; minimum daily, 2 mg/l Dec. 24, 1967. Sediment discharge: Maximum daily, 527,000 tons Dec. 23, 1964; minimum daily, 1,4 tons Oct. 27, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	AY																	
MONTH	ì	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	A VER	-
OCTOBER		17		16		16		18		17		17		16		16		16		17		16		16		16	_	15		14			
NOVEMBER.	14				13		14		13		13		12		13		13		12	14		12	11	12	11	11	9	9	8	8			
DECEMBER.	8	9	10	10	9	8	9	9	9	9	8	7	5	5	7	6	5	6	6	5	6	6	7	8	8	9	9	9	9	7	6	8	
JANUARY	6	6	4	5	4	4	4	4	6	6	6	6	7	8	8	8	8	8	9	9	9	9	9	9	9	7	7	7	6	6	7	7	
FEBRUARY.	6	8	8	9	9	9	10	10	8	10	11	11	11	11	11	9	11	11	9	12	12	12	13	13	13	13	13	13	13			11	
MARCH	12	13	13				11	11	12	13	12	11	11	11						14	13	14		13	14	14	15	16	17	17	16		
APRIL	14	13	15	15	15	10	14	16	17	18	18	17	18	17	17	16	16	16	15	15	15	14	14	14	16	16	17	17	12	17		15	
MAY	17		16	14	14	13	14	14	14	14	14	14	13	15	17	17	17	17	16	16	16	16	16	16	16	16	18	20	20	20	21	16	
JUNE	19	20	20	20	17	18	19	21	22	21	21	21	22	22	24	26	26	25	25	26	26	25	26	26	26	22	26	26	22	20		23	
JULY	22	24	25	27	27	27	27	27	26	26	26	26	25	23	24	25	27	27	26	23	26	26	24	24	24	24	24	24	26	26	25	25	
AUGUST																																	
SEPTEMBER	23		24		24		23		22		21		21		20		20		18		19		20		21		21		19				

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM WITHDRAWAL TUBE: C. CHEMICALLY DISPERSED; N. IN MATIVE WATER; P., PIPET; S., SIEVE; V., VISUAL ACCUMULATION TUBE; W., IN DISTILLED WATER)

		WATER			CHCDCHOCO -					PART	CLE :	SIZE					WE THOS
		TEM- PERA- TURE			SUSPENDED - SEDIMENT DISCHARGE	PERC	NT F	INER	THAN	THE SI	ZE (IN MI	LIMET	TERS)	1001	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	•00B	.016	•D31	.062	.125	.250	•500	1.00	2.00	212
FEB 13 1968	1730	11	4650	73	917	25	33	44	50	52	83	91	97	100			SCBW
FEB 14			1380	21	TB	8	19	42	58	68	88	94	97	100	~-		SCBW
FEB 21			1100	25	74	53	61	72	78	82	93	95	97	98	100		SC8W
MAR 20			835	18	41	28	49	65	73	77	87	94	99	100	~-		SCBW
MAY 3			3740	30	303	1	12	33	43	51	82	96	99	100			SCBW
MAY Q	1320	15	2170	12	วัง	20	30	4B	59	65	88	94	96	100			SCBW

11407150 FEATHER RIVER NEAR GRIDLEY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	697	22	41	2690	8	58	964	7	18
2	1910	24	124	3120	20	168	953	8	21
à	3880	20	210	3000	20	162	953	6	15
4	3290	13	115	2730	50	147	931	6	15
5	2700	13	95	198D	19	102	920	9	22
6	2690	12	87	1990	13	70	920	10	25
7	2780	10	75	2840	10	77	920	8	20
8	2470	7	47	2170	9	53	920	6	15
9	2440	7	46	1210	8	26	920	6	15
10	2200	7	42	1260	6	20	920	6	15
11	1980	9	48	1230	5	17	920	10	25
12	1600	11	48	1470	6	24	920	6	15
13	1190	10	32	2190	7	41	920	7	17
14	2290	9	56	1930	6	31	920	7	17
15	2200	7	42	1190	4	13	920	9	22
16	2170	5	29	1070	4	12	931	7	18
17	2240	4	24	994	4	11	931	8	20
18	2090	4	23	975	4	11	942	7	18
19	2020	6	33	991	3	8.0	942	12	31
20	1950	9	47	985	5	13	942	12	31
21	1850	8	40	959	12	31	903	5	12
22	1380	6	22	964	20	52	905	5	12
23	1670	6	27	964	14	36	868	9	21
24	1810	5	24	1160	20	63	860	2	4.6
25	2140	5	29	147D	25	99	860	3	7.0
26	2110	5	28	1470	18	71	893	5	12
27	2300	5	31	1480	13	52	863	5	12
28	1880	5	25	1420	8	31	909	5	12
29	1610	5	22	987	8	21	906	6	15
30	1450	5	20	984	8	21	887	5	12
31	2500	6	41				888	3	7.2
TOTAL	65487		1573	47873		1541.0	28351		521.8
		JANUARY			FERRUARY			MARCH	
		MEAN			MEAN			MEAN	

		JANUARY			FERRUARY			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	892	3	7.2	1040	18	51	867	33	77
2	897	3	7.3	1090	18	53	857	29	67
3	893	3	7.2	1070	14	40	880	31	74
4	889	4	9.6	1050	12	34	863	31	72
5	911	3	7.4	1030	12	33	868	29	68
6	923	4	10	988	11	29	864	25	58
7	925	3	7.5	1010	13	35	877	20	47
8	931	3	7.5	996	16	43	855	20	46
9	937	6	15	966	14	37	822	20	44
10	990	5	13	964	15	39	817	5.5	49
11	930	6	15	953	18	46	821	20	44
12	931	6	15	953	5.5	57	820	10	22
13	931	6	15	3220	54	554	868	8	19
14	955	6	15	1990	30	191	839	9	20
15	998	8	22	105D	21	60	841	10	23
16	965	7	18	1020	20	55	888	10	. 24
17	942	7	18	1010	5.5	60	866	11	26
18	906	7	17	966	21	55	846	12	27
19	873	6	14	989	22	59	840	13	29
20	779	7	15	1080	23	67	858	14	32
21	875	7	17	1090	19	56	868	14	33
22	899	9	22	1060	22	63	860	13	30
23	930	11	28	1010	50	55	853	13	30
24	972	11	29	974	25	66	B23	13	29
25	1070	13	38	943	25	64	884	11	56
26	1020	12	33	929	32	80	797	13	28
27	992	9	24	921	43	107	848	12	27
28	1010	9	25	909	39	96	843	10	23
29	1080	14	41	909	37	91	835	11	25
30	1110	12	36				845	10	23
31	1050	18	51				847	9	21
TOTAL	29406		599.7	32180		2276	26360		1163

TOTAL LOAD FOR YEAR (TONS)

SACRAMENTO RIVER BASIN

11407150 FEATHER RIVER NEAR GRIDLEY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

11710.3

11407700 FEATHER BIVER AT YUBA CITY, CALIF.

LOCATION (revised).--Lat 39°08'20", long 121°36'17", in NE sec.23, T.15 N., R.3 E., Sutter 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 1968, Sediment records: October 1964 to September 1968,

EXTREMES. -1967-68:

Sediment concentrations: Maximum daily, 400 mg/l Jan. 31; minimum daily, 8 mg/l on several days during December and January.

Sediment discharge: Maximum daily, 4,860 tons Jan. 31; minimum daily, 19 tons on several days during July and

Period of record:

August.

Water temperatures (1964-67): Maximum, 31.5°C July 29, 1984; minimum (1964-65), 3.5°C on several days in January 1965. Sediment concentrations: Maximum daily, 786 mg/l Dec. 24, 1964; minimum daily, 8 mg/l on several days during

1967-68. Sediment discharge: Maximum daily, 334,000 tons Dec. 24, 1964; minimum daily, 12 tons Oct. 27, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1986

υ	

															U	••																	
MONTH	ı	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	۷9	30	31	AVER- AGE	
OCTOBER																																	
NUVEMBER. DECEMBER.																																7	
JANUARY																																6	
FEBRUARY.	6	7	9		9	8	9	9	10	12		10	11	11	11	12	11		12	13	13	14	14	13		13	13	13	13			11	
MARCH	13	14		13	13	12	12	11	12		12	12	11	11	11	12		11	11	13	12	12	13		13	14	12	14	15	17		12	
APRIL	15	14	13	14	14	14		14	15	17	17	17	16		16	14	14	13	14	14		13	14	14	14	15			11	12		14	
MAY	16	16	18	14	14	13	13	14	14	16	16		15	13	14	16	17	17		16	15	16	16	15	16		16	18	19		18	16	
JUNE	_		19		17	-		20		20		19		22			41		21			24		23		23		23					
JULY																																	
AUGUS T																																	
SEPTEMBER			26		25		23		23		23			21		21		20		19			16		18		19			20			

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER TEAR OCTOBER 1967 TO SEPTEMBER 1968 (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)

		WATER	₹							PART	ICLE :	SIZE					
		TEM- PERA-	- DISCHARGE		SUSPENDED- SEDIMENT DISCHARGE		ENT F	INER 1	THAN	THE S	IZE (IN MII	LLEMET	TERS)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TDNS/DAY)	.002	.004	.008	.016	.031	.D62	.125	.250	.500	1.00	2.00	818
JAN 30 1968	1645	6	2300	73	453	25	34	44	55	6 D	87	92	96	100			SCBW
FEB 14	1745	12	4370	48	566	21	36	55	64	66	92	95	99	100			SCBW
FEB 20	1800	13	4100	155	1720	44	59	77	88	91	99	99	1 DO				SCBW
MAR 20	1345	13	1900	24	123	22	40	58	72	80	98	99	100				SCBW
MAY 4			447D	114	1380	7	14	23	32	36	89	95	98	100			SCBW
MAY 9	1110	15	3000	31	251	10	19	35	45	51	91	97	99	100			SCBW

11407700 FEATHER RIVER AT YUBA CITY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER		·	NOVEMBER			OECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1550	16	67	2860	36	278	1340	14	51
2	2000	30	162	3200	45	389	1260	15	51
3	3900	122	1280	3470	51	478	1270	19	65
4	4140	110	1230	3270	45	397	1420	5.5	84
5	3650	75	739	2480	26	174	1540	22	91
6	3430	54	500	2090	21	119	1420	20	77
7	3240	43	376	2940	28	222	1400	16	60
8	3180	35	301	2770	28	209	1390	16	60
10	2990 2550	29 27	234 186	1530 1360	20 19	83 70	1270 1220	12 8	41 26
•••				1300					
11	2600	28	197	1320	15	53	1190	9	29
12 13	2030 1610	30 25	164 109	1420 1920	19 35	73 181	1140 1130	9 14	28 43
14	2300	25	155	2310	32	200	1120	23	70
15	2610	29	204	1450	16	63	1120	18	54
16 17	2590 2440	36 42	252 277	1280	15 15	52 46	1150 1160	16 16	50 50
16	2540	40	274	1080	17	50	1210	12	39
19	2240	31	187	1150	20	62	1170		28
50	2390	32	206	1200	18	58	1150	13	40
	2240		255	1150					
21 22	2360 1790	40 56	255 271	1150 1140	15 15	47 46	1130 1130	14 14	43 43
23	1930	70	365	1130	14	43	1070	12	35
24	2000	56	302	1120	20	60	1040	10	28
25	2430	34	223	1400	34	129	1030	10	28
26	2360	30	191	1460	36	142	1040	12	34
27	2660	25	180	1480	27	108	1060	15	43
2B	2520	15	102	1510	20	82	1030	13	36
29	1910	12	62	1510	18	73	1040	12	34
30 31	1730 2310	16 29	75 181	1380	17	63	1040 1020	11 8	31 22
		27							
TOTAL	77980		9307	53520		4050	36700		1414
		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MARCH MEAN	
	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	DISCHARGE	MEAN CONCEN- TRATION	DI SCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DI SCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
DAY		MEAN CONCEN-		MEAN	MEAN CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)		MEAN CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 22	MEAN DISCHARGE (CFS) 2960	MEAN CONCEN- TRATION (MG/L)	DI SCHARGE (TONS/DAY) 735	DISCHARGE (CFS)	MEAN CONCEN- TRATION	DISCHARGE
1 2	DISCHARGE (CFS) 1030 1030	MEAN CONCEN- TRATION (MG/L) 8	DISCHARGE (TONS/DAY) 22 22	MEAN DISCHARGE (CFS) 2960 1700	MEAN CONCEN- TRATION (MG/L) 92 65	DI SCHARGE (TONS/DAY) 735 298	DISCHARGE (CFS) 1520 1480	MEAN CONCEN- TRATION (MG/L) 34 30	DISCHARGE (TONS/DAY) 140 120
1 2 3	DISCHARGE (CFS) 1030 1030 1030	MEAN CONCEN- TRATION (MG/L) 8 8	DI SCHARGE (TONS/DAY) 22 22 22 22	MEAN DISCHARGE (CFS) 2960 1700 1500	MEAN CONCEN- TRATION (MG/L) 92 65 122	DI SCHARGE (TONS/DAY) 735 298 494	DISCHARGE (CFS) 1520 1480 1470	MEAN CONCEN- TRATION (MG/L) 34 30 24	DISCHARGE (TONS/DAY) 140 120 95
1 2 3 4	1030 1030 1030 1030 1030	MEAN CONCEN- TRATION (MG/L) 8 8 8	DI SCHARGE (TONS/DAY) 22 22 22 22 25	MEAN DISCHARGE (CFS) 2960 1700 1500 1350	MEAN CONCEN- TRATION (MG/L) 92 65 122 73	DI SCHARGE (TONS/DAY) 735 298 494 266	DISCHARGE (CFS) 1520 1480 1470 1460	MEAN CONCEN- TRATION (MG/L) 34 30 24 27	DISCHARGE (TONS/DAY) 140 120 95 106
1 2 3	1030 1030 1030 1030 1030 1020	MEAN CONCEN- TRATION (MG/L) 8 8	DI SCHARGE (TONS/DAY) 22 22 22 22	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31	DI SCHARGE (TONS/DAY) 735 298 494 266 105	DISCHARGE (CFS) 1520 1480 1470	MEAN CONCEN- TRATION (MG/L) 34 30 24	DISCHARGE (TONS/DAY) 140 120 95
1 2 3 4 5	DISCHARGE (CFS) 1030 1030 1030 1020 1020	MEAN CONCEN- TRATION (MG/L) 8 8 8 9	DISCHARGE (TONS/DAY) 22 22 22 25 25 25	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31	DI SCHARGE (TONS/DAY) 735 298 494 266 105	DISCHARGE (CFS) 1520 1480 1470 1460 1420	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29	DISCHARGE (TONS/DAY) 140 120 95 106 111
1 2 3 4 5	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130	MEAN CONCEN- TRATION (MG/L) 8 8 8 9 9	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 23 24	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1020	MEAN CONCEN- TRATION (MG/L) 8 8 9 9	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 23 24 28	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250 1220 1210 1220	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78
1 2 3 4 5	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130	MEAN CONCEN- TRATION (MG/L) 8 8 8 9 9	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 23 24	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1160 1230 1440	MEAN CONCEN- TRATION (MG/L) 88 8 9 9 9	DI SCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22 29 22	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1160 1230 1440	MEAN CONCENTRATION (MG/L) 8 8 8 8 9 9 8 8 10	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 24 28 33 58	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250 1220 1210 1200 1180 1170	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1310 1300	MEAN CONCEN- TRATION (MG/L) 34 27 29 28 21 22 29 22	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 1660 1390	MEAN CONCEN- TRATION (MG/L) 8 8 8 9 9 9 10 15	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75	MEAN DISCHARGE (CF5) 2960 1700 1350 1250 1220 1210 1200 1180 1170	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88	DISCHARGE (CFS) 1520 1480 1470 1460 1470 1460 1310 1310 1340 1300	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22 29 22	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1160 1230 1440 1660 1390 1220 12240	MEAN CONCENTRATION (MG/L) 8 8 8 8 9 9 8 8 10	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1210 1210 1180 1170 1170 1200 2780 4370	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28 17 16 51	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1310 1300	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22 29 22 19 14 57 68	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1020 1130 1160 1230 1440	MEAN CONCEN- TRATION (MG/L) 8 8 8 9 9 10 15	DISCHARGE (TONS/DAY) 22 22 25 25 25 23 24 28 33 39 90 75 53	MEAN DISCHARGE (CFS) 2960 1700 1550 1250 1220 1210 1200 1170 1170 1200 2780	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1310 1300	MEAN CONCENTRATION (MG/L) 34 30 24 27 29 28 21 22 29 19 14 57	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1020 1020 1020	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 23 24 28 33 58 90 75 53 44 951	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250 1220 1210 1200 1180 1170 1170 1170 1200 2780 4370 2430	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28 17 16 51 150 27	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1310 1310 1310 1310 1300 1000 1000	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22 29 22 19 14 57 68 41	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 1030 1030 1030 1030 1020 1020 1020 1020	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 16 13 166	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44	MEAN DISCHARGE (CFS) 2960 1700 1500 1350 1250 1220 1210 1200 1180 1170 1170 1170 1200 2780 4370 2430	MEAN CONCEN- TRATION (MG/L) 92 65 122 73 31 29 30 29 32 28 17 16 51	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000	MEAN CONCEN- TRATION (MG/L) 34 30 24 27 29 28 21 22 29 22 19 14 57 68	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 12660 1390 1220 1240 1970 2090 1740 1560	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 10 15 20 20 16 13 66 97 32 16	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 24 28 33 58 90 75 53 44 351 547 150 68	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 1180 1170 1170 1200 2760 4370 2430 1550 1350	MEAN CONCENTRATION (MG/L)) 92 65 122 73 31 29 30 29 32 28 17 16 150 27	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000 2300 2300 2500 1820 2500 3050	MEAN CONCENTATION (MG/L) 34 30 00 24 27 29 28 21 22 29 22 29 21 57 68 41	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 1660 1390 1220 1270 2090 1740 1580	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 166 97 7 32 16 14	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44 4551 547 150 68 53	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 1170 1170 1170 1200 2780 4370 2430 1680 1350 2000	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 32 28 17 16 51 150 27 23	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 2 333 170 104 77 113 221	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1100 1000 1000 1200 2000 1820 2500 3050 2500	MEAN CONCENTRATION (MG/L) 34 30 24 27 29 28 21 12 29 22 29 34 41 35 46 37 28	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 12660 1390 1220 1240 1970 2090 1740 1560	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 10 15 20 20 16 13 66 97 32 16	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 24 28 33 58 90 75 53 44 351 547 150 68	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 1180 1170 1170 1200 2760 4370 2430 1550 1350	MEAN CONCENTRATION (MG/L)) 92 65 122 73 31 29 30 29 32 28 17 16 150 27	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000 2300 2300 2500 1820 2500 3050	MEAN CONCENTATION (MG/L) 34 30 00 24 27 29 28 21 22 29 22 29 21 57 68 41	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 1240 12660 1390 1270 2090 1740 1560 1390 1290	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 166 97 7 32 16 14	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44 4551 547 150 68 53	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 1180 1170 1200 2780 4370 2430 2000 4100 5400	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 20 22 28 17 16 6 51 150 27 31 44 44 85	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000 1000 12000 1820 2500 2500 2500 1900	MEAN CONCENTRATION (MG/L) 34 30 24 27 29 28 21 12 29 22 29 34 41 35 46 37 28	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 1030 1030 1030 1020 1070 1130 1160 1230 1440 1660 1390 1220 2090 1740 1580 1390 1290	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 166 97 7 32 16 14 13 12 12	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44 351 547 150 68 53 45	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 1170 1170 1170 1170 1200 2780 4370 2430 1680 1350 2000 4100 5400 5200	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 29 28 17 16 51 150 27 23 31 41 84	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1777 104 77 113 221 930 1240 814	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1310 1340 1300 2300 1100 1080 1300 2500 1900 1600 1500	MEAN CONCENTRATION (MG/L) 34 30 24 27 29 28 21 12 29 22 29 19 4 57 68 41 35 46 37 28 26 25 5 24	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189 133
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 1030 1030 1030 1020 1020 1070 1130 1230 1440 1240 1270 1240 1270 1240 1390 1240 1390 1240 1390 1240 1390 1240 1390 1210 1180 1180	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 8 8 9 10 15 5 20 16 13 3 666 11 3 12 12 12 12	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44 351 547 150 68 53 45 39 38 37	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1170 1200 2780 4370 24430 1680 1590 1590 2000 4100 52000 4500	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 22 28 17 16 51 150 27 7 16 41 41 41 41 41 41 41 41 41 41 41 41 41	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000 1000 100	MEAN CONCENTRATION (MG/L) 340 247 27 29 28 21 22 29 22 29 14 41 57 68 41 35 35 68 41 28 26 26 25 24 23	DISCHARGE (TONS/DAY) 14-0 12-0 95 10-6 11-1 10-3 74 78 105 77 76 41 200 422 221 172 311 305 189 133 108 97 86
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 1030 1030 1030 1020 1070 1130 1240 1440 1660 1390 1220 1240 1770 2090 1740 1580 1390 1290	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 166 97 7 32 16 14 13 12 12 12 12 12	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 444 551 547 150 68 53 45 39 38 37 36	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1200 2780 4370 2430 1680 1590 1350 2000 4100 5400 5500 4500 3700	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 28 17 6 51 150 27 23 14 1 84 85 58 40 21	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1777 104 77 113 221 930 1240 814 486 210	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1340 1310 1340 1300 1100 1080 1300 2300 1800 2500 1900 1600 1500 1390 1390	MEAN CONCENTRATION (MG/L) 34 30 24 27 27 29 28 21 22 29 22 19 4 57 68 41 35 46 37 28 26 25 24 23 21	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 75 6 41 200 422 221 172 305 189 133 108 97 86 74
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 1030 1030 1030 1020 1070 1130 1240 1240 1660 1390 1220 1240 1770 2090 1740 1580 1390 1290 1210 1180 1150 1190	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 16 16 17 32 16 16 17 17 17 17 17 17 17 17 17 17 17 17 17	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 23 24 28 33 58 90 75 53 44 351 547 150 68 53 45 39 38 37	MEAN DISCHARGE (CFS) 2960 1700 1550 1250 1220 1210 1200 1180 1170 1170 1200 2780 4370 2430 1680 1590 1350 2000 4100 5400 5500 3700 3000	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 22 28 17 16 51 150 27 7 16 41 41 41 41 41 41 41 41 41 41 41 41 41	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1000 1000 1000 100	MEAN CONCENTRATION (MG/L) 340 247 27 29 28 21 22 29 22 29 14 41 57 68 41 35 35 68 41 28 26 26 25 24 23	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189 133 108 97 86
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	DISCHARGE (CFS) 1030 1030 1030 1030 1020 1020 1070 1130 1240 1240 1270 1240 1270 1240 1270 1240 1270 1240 1390 1240 1390 1210 1180 1180 1110 1090	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 8 8 9 10 15 20 16 66 13 66 14 13 12 12 12 12 13 13 13	DISCHARGE (TONS/DAY) 22 22 22 25 25 23 24 28 33 58 90 75 53 44 351 547 150 68 53 45 39 38 37 36 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1170 2780 4370 2430 1680 1590 1590 1590 1500 3700 3700 3700 3000	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 32 28 17 16 51 150 27 23 19 31 41 84 85 58 40 21 27 34	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486 210 219	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1310 1340 1300 2300 2300 2300 2500 1620 2500 1600 1500 1500 1500 1500 1500 1390 1390 1390 1390	MEAN CONCENTRATION (MG/L) 340 247 279 281 222 29 22 29 22 29 22 29 22 29 22 29 22 29 22 29 22 29 29	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 76 41 200 422 221 172 311 305 189 133 108 97 86 74 71
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 15 16 17 18 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 1030 1030 1030 1020 1070 1130 1220 1240 1240 1660 1390 1220 1270 1290 1216 1390 1290 1210 1180 1150 1190	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 16 14 13 11 11 11 11 11 11 11 11 11 11 11 11	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 23 24 28 33 58 90 75 53 444 551 547 150 68 53 45 39 39 36 38 37 36 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 2780 4370 2430 1680 1350 2000 4100 5200 4500 3700 3000 2350 1890	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 32 28 17 6 51 150 27 23 19 41 84 85 58 40 21 27 34 30	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1777 104 77 113 221 930 1240 814 486 210 219	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1340 1310 1340 1300 1100 1000 1300 2300 1820 2500 1900 1600 1500 1390 1250 1390 1250	MEAN CONCENTRATION (MG/L) 34 30 22 27 29 28 21 22 29 22 29 22 29 22 29 22 29 22 29 22 29 22 21 21 25 26 25 26 25 24 23 21 21 19 18	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 75 41 200 422 221 172 305 189 133 108 97 86 74 71 61 55
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	DISCHARGE (CFS) 1030 1030 1030 1030 1020 1020 1070 1130 1240 1240 1270 1240 1270 1270 1280 1390 1210 1180 1150 1110 1080 1100	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 8 8 9 9 10 15 20 16 66 13 66 14 13 12 12 12 12 13 13 11 10	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 26 28 33 58 90 75 53 44 951 547 150 68 53 45 37 36 38 38 38 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1170 2780 4370 2430 1680 1590 1590 1500 3700 3700 3700 3700 3890 1890 1650	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 22 28 17 16 51 150 27 16 41 41 41 41 41 41 41 41 41 41 41 41 41	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486 210 219 216 153 138	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1300 2300 2300 2300 2500 1600 1500 1500 1500 1500 1500 1500 1	MEAN CONCENTRATION (MG/L) 340 247 279 281 222 29 22 29 22 29 22 29 22 22 29 22 21 9 24 25 26 26 26 27 28 21 21 21 21 21 21 21 21 21 21 21 21 21	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189 133 108 97 86 74 71 61 55 56
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 1030 1030 1030 1020 1070 1130 1220 1240 1440 1660 1390 1220 1240 1770 2090 1740 1580 1390 1290 1150 1150 1150 1150 1150 1150 1150 11	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 10 15 20 16 13 16 14 13 12 12 12 13 11 11 0 9	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 26 28 33 58 90 75 53 44 45 551 547 150 68 53 45 39 38 37 36 38 38 38 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1210 1200 2780 4370 2430 1680 1350 2000 4100 5200 4500 3700 3000 2350 1890	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 32 28 17 6 51 150 27 23 19 41 84 85 58 40 21 27 34 30	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1777 104 77 113 221 930 1240 814 486 210 219	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1100 1080 1300 2300 2000 1820 2500 2500 1900 1600 1390 1390 1250 1190 1190 1140 1100 1080	MEAN CONCENTRATION (MG/L) 34 30 24 27 27 29 28 21 22 29 22 29 34 41 35 46 37 28 26 25 24 23 21 21 19 18 19 18	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 75 56 41 200 422 221 172 311 305 189 133 108 97 86 71 61 55 56 52
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	DISCHARGE (CFS) 1030 1030 1030 1030 1020 1020 1070 1130 1240 1240 1270 1240 1270 1270 1280 1390 1210 1180 1150 1110 1080 1100	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 8 8 9 9 10 15 20 16 66 13 66 14 13 12 12 12 12 13 13 11 10	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 26 28 33 58 90 75 53 44 951 547 150 68 53 45 37 36 38 38 38 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1170 2780 4370 2430 1680 1590 1590 1500 3700 3700 3700 3700 3890 1890 1650	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 22 28 17 16 51 150 27 16 41 41 41 41 41 41 41 41 41 41 41 41 41	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486 210 219 216 153 138	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1300 2300 2300 2300 2500 1600 1500 1500 1500 1500 1500 1500 1	MEAN CONCENTRATION (MG/L) 340 247 279 281 222 29 22 29 22 29 22 29 22 22 29 22 21 9 24 25 26 26 26 27 28 21 21 21 21 21 21 21 21 21 21 21 21 21	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189 133 108 97 86 74 71 61 55 56
1 2 3 4 5 6 7 8 9 1 D 11 12 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 0	DISCHARGE (CFS) 1030 1030 1030 1030 1020 1020 1070 1130 1230 1440 1240 1270 1240 1270 1240 1270 1240 1390 1240 1390 1210 1180 1180 1110 1080 1100 1130 1380 2300	MEAN CONCENTRATION (MG/L) 8 8 8 9 9 9 8 8 9 9 10 15 20 16 66 13 66 14 13 12 12 12 12 13 13 11 10 9 93	DISCHARGE (TONS/DAY) 22 22 22 25 25 25 25 26 28 33 58 90 75 53 44 951 547 150 68 53 45 37 36 38 38 38 38 38 38 38 38 38 38 38 38 38	MEAN DISCHARGE (CFS) 2960 1700 1350 1250 1220 1210 1200 1180 1170 1170 1170 2780 4370 2430 1680 1590 1590 1500 3700 3700 3700 3700 3890 1890 1650	MEAN CONCENTRATION (MG/L) 92 65 122 73 31 29 30 29 22 28 17 16 51 150 27 16 41 41 41 41 41 41 41 41 41 41 41 41 41	DISCHARGE (TONS/DAY) 735 298 494 266 105 96 98 94 102 88 54 52 383 1770 177 104 77 113 221 930 1240 814 486 210 219 216 153 138	DISCHARGE (CFS) 1520 1480 1470 1460 1420 1360 1310 1310 1340 1300 1300 2300 2300 2500 1820 2500 1600 1500 1500 1500 1500 1500 1500 1	MEAN CONCENTRATION (MG/L) 340 340 340 247 29 28 29 29 22 19 14 57 68 41 35 56 46 37 28 26 25 29 21 21 21 21 19 18 19 18	DISCHARGE (TONS/DAY) 140 120 95 106 111 103 74 78 105 77 56 41 200 422 221 172 311 305 189 133 108 97 86 74 71 61 55 56 52 55

11407700 FRATHER RIVER AT YUBA CITY, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
DAY	DISCHARGE	TRATION	DISCHARGE (TONS/DAY)	DISCHARGE	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
DAY	(CFS)	(MG/L)	(TURS/ DAT /	(CFS)	(MG/L)	(TURS/DAT)	(05)	(MG/L)	(1043/241)
1	1050	15 14	43	2180	40	235	2920	29	229
2	1070	14	40 50	2410 3510	41 78	267 739	2750 2700	28 27	208 197
	1150 1210	16 17	50 56	4470	102	1230	2700 2540	27	171
4 5	1190	17	55	4560	72	886	2260	23	140
6	1180	18	57	4550	61	749	1900	21	108
7 8	1170 1160	20 19	63 60	3690 3210	37 29	369 251	1310 1 09 0	19 18	67 53
ÿ	1150	18	56	3000	30	243	1070	17	49
10	1150	21	65	2060	19	106	1060	16	46
						_			
11	1130	21	64	1300	20	70 77	1050	16 16	45 45
12 13	1110 1090	-21 22	63 65	1240 1800	23 22	107	1040 990	16	43
14	1070	18	52	3430	62	574	995	17	46
15	1030	18	50	2480	26	174	1250	18	61
					_				
16	990	18	48 49	1750 2470	50 60	236 267	1520 1530	18 18	74 74
17 18	1010 1040	18 21	59	3370	69	628	1480	17	68
19	1040	20	56	3390	51	467	1460	16	63
20	1040	20	56	3240	35	306	1630	20	88
21 22	1050 1100	18 20	51 59	2000 2300	24 30	130 186	1730 1830	22 22	103 109
23	1380	23	86	3220	35	304	2080	28	157
24	1490	27	109	3520	42	399	2060	33	184
25	1480	31	124	3650	49	483	1840	23	114
					53	532	1410	18	69
26 2 7	1450 1470	26 22	102 87	3720 3800	45	462	1130	17	52
28	1520	23	94	3750	39	395	1030	16	44
29	1590	25	107	3650	36	355	982	16	42
30	1800	31	151	3240	32	280	1030	16	44
31				3120	31	261			
TOTAL	36360		2077	94080		11768	47667		2793
		JULY			AUGUS T			SEPTEM8ER	;
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1 2	961 637	17	44 28	412	20	22	945	17	43
3	585	15	28 24	420 415	21 21	24 24	951 952	17 15	44 39
•	529	14	20	410	22	24	951	16	41
5	563	15	23	412	22	24	966	16	42
6 7	507 471	15 15	21 19	413 410	22	25 23	986	20	53
8	477	15	19	410	21 20	22	1020 1040	21 21	58 59
ğ	448	18	22	410	17	19	1080	20	58
10	440	21	25	410	17	19	1090	18	53
11	452 456	22	27	410	21	23	1080	17	50
12 13	457	22 22	27 27	410 410	21 20	23 22	1130 1170	15 14	46 44
14	484	22	29	410	20	22	1140	15	46
15	545	22	32	410	20	22	1130	17	52
	473								
16 17	473 438	20	26	410	20	22	1110	16	48
18	431	19 19	22 22	410 410	20 20	22 22	1260 1100	18 18	61 53
19	433	20	23	501	19	26	1060	13	37
20	440	21	25	706	17	32	1080	13	38
						4.			
21 22	440 437	22 21	26 25	741 743	17 18	34 36	1100 1100	14 16	42 48
23	429	18	21	769	19	39	1000	15	44
24	420	17	19	772	20	42	1070	12	35
25	420	18	20	751	20	41	1070	10	29
26	400								
26 27	420 420	20 20	23 23	773 955	19 18	40 46	1090 1090	12 15	35 44
28	415	20	22	966	18	47	1100	15	45
29	410	19	21	958	17	44	1090	15	44
30	410	18	20	940	17	43	1100	13	39
31	410	17	19	935	17	- 43			
TOTAL	14858		744	17912		917	32141		1370
		10 /6== =	• • • •						
TOTAL DISCHA			173)						568968 55661

11409000 MIDDLE YUBA RIVER ABOVE OREGON CREEK, NEAR NORTH SAN JUAN, CALIF.

LOCATION.--Lat 39°23'35", long 121°04'50", in SE\(2 \text{sec.28}, T.18 \text{ N.}, R.8 \text{ E.}, Nevada County, temperature recorder at gaging station on left bank, 1,000 ft upstream from Oregon Creek, and 2 miles northeast of North San Juan.

DRAINAGE ARRA, -- 162 sq mi.

PERIOD OF RECORD. -- Water temperatures: February 1965 to September 1968. Sediment records: October 1966 to September 1968 (periodic).

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 27.0°C on several days during June to August; minimum, freezing point on several days during December to February.

Period of record:

Water temperatures: Maximum, 27.0°C on several days during June to August 1968; minimum, freezing point on several days during December to February of most years.

REMARKS, -- Clock stopped Feb. 20 to Mar. 16; temperature range, 3.0°C to 8.0°C.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	GC.	TOBER	NOV	EMBER	DEC	EMBER	JAN	NUARY	FEBI	RUARY	M,	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	16.0	9.0	8.0	4.0	4.0	2.0	2.0	2.0	0.0		
2	16.0	14.0	10.0	8.0	4.0	3.0	2.0	2.0	2.0	2.0		
3	14.0	13.0	10.0	9.0	4.0	3.0	2.0	1.0	3.0	2.0		
4	15.0	13.0	10.0	9.0	6.0	4-0	1.0	1.0	4.0	3.0		
5	15.0	14.0	11.0	10.0	6.0	6.0	1.0	1.0	5.0	4.0		
6	14.0	13.0	11.0	9.0	6.0	4.0	1.0	1.0	6.0	4.0		
7	14.0	13.0	11.0	9.0	6.0	5.0	1.0	1.0	6.0	5.0		
8	15.0	13.0	11.0	9.0	5.0	4.0	1.0	1.0	6.0	4.0		
9 10	14.0	13.0 13.0	11.0 9.0	9.0 9.0	4.0 4.0	3.0 3.0	3.0 4.0	1.0 3.0	7.0 6.0	6.0 5.0		
11	14.0	13.0	9.0	8.0	3.0	3.0	3.0	2.0	7.0	6.0		
12	15.0	13.0	9.0	8.0	3.0	1.0	2.0	1.0	7.0	6.0		
13	14.0	13.0	11.0	9.0	1.0	0.0	4.0	2.0	6.0	6.0		
14	13.0	12.0	11.0	10.0	1.0	0.0	6.0	3.0	6.0	6.0		
15	12.0	11.0	11.0	10.0	1.0	0.0	6.0	5.0	6.0	5.0		
16	13.0	11.0	11.0	10.0	1.0	0.0	6.0	4.0	6.0	6.0		
17	13.0	11.0	11-0	9.0	1.0	0.0	4.0	3.0	7.0	6.0	7.0	6.0
18	12.0	11.0	11.0	10.0	1.0	1.0	3.0	3.0	7.0	6.0	8.0	6.0
19	12.0	11.0	10.0	9.0	1.0	1.0	4.0	3.0	7.0	7.0	8.0	6.0
20	12.0	11.0	11.0	10.0	2.0	1.0	4.0	3.0			9.0	6.0
21	11.0	10.0	10.0	8.0	2.0	1.0	5.0	4-0			9.0	7.0
22	13.0	11.0	8.0	7.0	2.0	2.0	6.0	4-0			9.0	B.0
23 24	12.0 12.0	11.0	7.0 7.0	7.0 6.0	2.0 2.0	2.0 2.0	6.0 4.0	4.0			10.0 10.0	8.0 8.0
25	12.0	11.0	7.0	6.0	2.0	2.0	4.0	4.0			9.0	8.0
26	12.0	10.0	6.0	5.0	3.0	2.0	4.0	3.0			9.0	7.0
27	11.0	9.0	6.0	4.0	3.0	3.0	3.0	2.0			10.0	B-0
28	11.0	10.0	6.0	6.0	3.0	3.0	2.0	2.0			11.0	8.0
29	11.0	9.0	6.0	6.0	3.0	3.0	2.0	0.0			12.0	9.0
30	10.0	8.0	6.0	4.0	3.0	2.0	0.0	0.0			12.0	10.0
31	9.0	8.0			2.0	1.0	0.0	0.0			12.0	10.0
HTMOP	17.0	8.0	11.0	4.0	6.0	0.0	6.0	0.0				
	A	PRIL		MAY	J	UNE	JI	ULY	AU	GUST	SEP.	TEMBER
DAY	A) Max	PRIL Min	MAX	MIN	J: MAX	MIN	IL XAM	MIN	UA XAM	GUST MIN	SEP'	TEMBER MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY 1 2							MAX 24.0	MIN 19.0	MAX 26.0	MIN 22.0	MAX 24.0	MIN 21.0
1 2 3	MAX 11.0 9.0 11.0	MIN 9.0 8.0 8.0	MAX 16.0 16.0 16.0	MIN 12.0 12.0 13.0	MAX 21.0 22.0 20.0	MIN 17.0 18.0 18.0	MAX 24.0 23.0 25.0	MIN 19.0 21.0 21.0	MAX 26.0 27.0 26.0	MIN 22.0 22.0 22.0	MAX 24.0 23.0 23.0	MIN 21.0 21.0 21.0
1 2 3 4	MAX 11.0 9.0 11.0	MIN 9.0 8.0 8.0 9.0	MAX 16.0 16.0 16.0 16.0	MIN 12.0 12.0 13.0 13.0	MAX 21.0 22.0 20.0 21.0	MIN 17.0 18.0 18.0 17.0	MAX 24.0 23.0 25.0 26.0	MIN 19.0 21.0 21.0 22.0	MAX 26.0 27.0 26.0 26.0	MIN 22.0 22.0 22.0 21.0	MAX 24.0 23.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0
1 2 3	MAX 11.0 9.0 11.0 11.0	9.0 8.0 8.0 9.0 10.0	MAX 16.0 16.0 16.0	MIN 12.0 12.0 13.0	MAX 21.0 22.0 20.0	MIN 17.0 18.0 18.0	MAX 24.0 23.0 25.0	MIN 19.0 21.0 21.0	MAX 26.0 27.0 26.0	MIN 22.0 22.0 22.0	MAX 24.0 23.0 23.0	MIN 21.0 21.0 21.0
1 2 3 4 5	MAX 11.0 9.0 11.0 11.0	9.0 8.0 8.0 9.0 10.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 12.0 12.0 13.0 13.0 12.0	MAX 21.0 22.0 20.0 21.0 19.0	MIN 17.0 18.0 18.0 17.0 16.0	MAX 24-0 23-0 25-0 26-0 27-0	MIN 19.0 21.0 21.0 22.0 22.0	MAX 26.0 27.0 26.0 26.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5	MAX 11.0 9.0 11.0 11.0 11.0	9.0 8.0 8.0 9.0 10.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 12.0 12.0 13.0 13.0 12.0	MAX 21.0 22.0 20.0 21.0 19.0	MIN 17.0 18.0 18.0 17.0 16.0	MAX 24-0 23-0 25-0 26-0 27-0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0	MAX 26.0 27.0 26.0 26.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	MAX 11.0 9.0 11.0 11.0 11.0	MIN 9.0 8.0 9.0 10.0 9.0 9.0	MAX 16.0 16.0 16.0 16.0 14.0 14.0	MIN 12.0 13.0 13.0 12.0 11.0	MAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0	MIN 17.0 18.0 18.0 17.0 16.0	MAX 24-0 23-0 25-0 26-0 27-0 27-0 27-0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0	MAX 26.0 27.0 26.0 26.0 24.0 25.0 25.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0	MAX 24-0 23-0 23-0 23-0 23-0 23-0 23-0	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	MAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0	9.0 8.0 8.0 9.0 10.0 9.0 9.0	MAX 16.0 16.0 16.0 16.0 14.0 14.0 14.0	MIN 12.0 12.0 13.0 13.0 12.0 11.0 11.0	MAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0	MAX 24-0 23-0 25-0 26-0 27-0 27-0 27-0 27-0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0	MAX 26.0 27.0 26.0 26.0 26.0 24.0 25.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24-0 23-0 23-0 23-0 23-0 23-0 23-0 22-0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 20.0
1 2 3 4 5 6 7 8 9	MAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0	9.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0	MAX 16.0 16.0 16.0 16.0 14.0 14.0 16.0	HIN 12.0 12.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0	MAX 21.0 22.0 20.0 21.0 19.0 18.0 19.0 20.0 21.0 21.0	MIN 17.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0	MAX 24.0 23.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 19.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0	9.0 8.0 9.0 10.0 9.0 9.0 9.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 14.0 14.0 14.0 16.0	MIN 12.0 12.0 13.0 13.0 12.0 11.0 11.0 12.0 13.0	MAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	MIN 17.0 18.0 17.0 16.0 15.0 16.0 16.0 17.0	MAX 24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0	9.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 17.0	MIN 12.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0	HAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0	MAX 24-0 23-0 25-0 25-0 27-0 27-0 27-0 27-0 27-0 27-0 26-0	MIN 19-0 21-0 21-0 22-0 22-0 23-0 23-0 23-0 23-0 23-0 23	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 24-0 23-0 23-0 23-0 23-0 23-0 22-0 22-0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 11.0 9.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 13.0	9.0 8.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 16.0 17.0	MIN 12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0	#AX 21.0 22.0 20.0 21.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0	MAX 24.0 23.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 26.0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 25.0 24.0 25.0 25.0	MIN 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0	9.0 8.0 9.0 10.0 9.0 9.0 9.0 9.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 17.0	MIN 12.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0	HAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0	MAX 24-0 23-0 25-0 25-0 27-0 27-0 27-0 27-0 27-0 27-0 26-0	MIN 19-0 21-0 21-0 22-0 22-0 23-0 23-0 23-0 23-0 23-0 23	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 24-0 23-0 23-0 23-0 23-0 23-0 22-0 22-0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 10.0 9.0 9.0 9.0 11.0 11.0 12.0 10.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 17.0 16.0 17.0	MIN 12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0	HAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0	MIN 17.0 18.0 17.0 16.0 15.0 16.0 16.0 17.0 17.0 17.0	MAX 24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MAX 26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	HAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 11.0 9.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 9.0 9.0 10.0 9.0 9.0 11.0 11.0 11.0 1	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 17.0 13.0 12.0 13.0 12.0 17.0	MIN 12.0 12.0 13.0 13.0 12.0 11.0 11.0 12.0 12.0 13.0 12.0 10.0 11.0	MAX 21.0 22.0 20.0 21.0 21.0 19.0 19.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0	MIN 17.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0	HAX 24-0 23-0 23-0 25-0 26-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	MAX 26.0 27.0 26.0 26.0 24.0 25.0 25.0 25.0 25.0 22.0 23.0 23.0 22.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21-0 21-0 21-0 21-0 21-0 21-0 20-0 20-0
1 2 3 4 5 6 7 8 9 1 0 1 1 2 1 3 1 4 1 5 1 6 7 1 8 1 6 7 1 7 1 8 1 6 7 1 7 1 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	MAX 11.0 9.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0 12.0 11.0 10.0 10.0 8.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 17.0 13.0 13.0 17.0 17.0 17.0 17.0	MIN 12.0 12.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0 10.0 9.0 11.0	MAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 24.0 24.0 25.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	26.0 27.0 26.0 24.0 24.0 25.0 24.0 25.0 22.0 23.0 22.0 23.0 22.0 22.0 22.0 22	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24-0 23-0 23-0 23-0 23-0 23-0 22-0 22-0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	HAX 11.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 11.0 11.0 11.0	9.0 8.0 8.0 9.0 10.0 9.0 11.0 11.0 11.0 10.0 10.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 14.0 16.0 17.0 13.0 13.0 13.0 13.0 17.0	HIN 12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0	MAX 21.0 22.0 22.0 21.0 21.0 19.0 19.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0	HIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 19.0 20.0 20.0 20.0	24.0 23.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	HIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	26.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21-0 21-0 21-0 21-0 21-0 21-0 21-0 20-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0	9.0 8.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0 12.0 11.0 10.0 10.0 8.0	MAX 16.0 16.0 16.0 16.0 16.0 14.0 16.0 17.0 13.0 13.0 13.0 13.0 17.0	HIN 12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0	MAX 21.0 22.0 20.0 21.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 24.0 24.0 25.0	MIN 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22	26.0 27.0 26.0 24.0 24.0 25.0 24.0 25.0 22.0 23.0 22.0 23.0 22.0 22.0 22.0 22	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 24-0 23-0 23-0 23-0 23-0 23-0 22-0 22-0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 9.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0 10.0 10.0 10.0 10.0 8.0 9.0 9.0 9.0 10.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0	HIN 12.0 13.0 13.0 13.0 11.0 11.0 12.0 13.0 12.0 13.0 10.0 9.0 11.0 12.0 13.0 13.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 19	21.0 22.0 20.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	#1N 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 19.0 20.0 20.0 20.0 20.0 21.0	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	HIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 2	26.0 27.0 26.0 26.0 26.0 24.0 25.0 25.0 25.0 25.0 25.0 22.0 23.0 22.0 23.0 22.0 21.0	WIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21-0 21-0 21-0 21-0 21-0 21-0 21-0 20-0 19-0 19-0 19-0 18-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 4 5 6 7 8 9 9 10 0 11 12 12 13 14 4 15 5 16 17 18 19 20 21 22	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 9.0 8.0 9.0 10.0 9.0 11.0 11.0 10.0 10.0 10.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 16.0 16.0 16.0 16.0 16.0 11.0 11.0 11.0	HIN 12.0 13.0 13.0 13.0 11.0 11.0 12.0 12.0 13.0 13.0 10.0 9.0 9.0 11.0 13.0 14.0 15.0 16.0 17.0 17.0 18.0 19.	21.0 22.0 20.0 21.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0 24.0 25.0 24.0	#1N 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 20.0 20.0 20.0 20.0 20.0 21.0	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0 22.0 23.0 23.0 22.0 21.0 19.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21-0 21-0 21-0 21-0 21-0 21-0 21-0 21-0
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1 2 3 4 4 5 6 7 8 9 9 10 0 11 12 12 13 14 4 15 5 16 17 18 19 20 21 22	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 9.0 8.0 9.0 10.0 9.0 11.0 11.0 10.0 10.0 10.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 16.0 16.0 16.0 16.0 16.0 11.0 11.0 11.0	HIN 12.0 13.0 13.0 13.0 11.0 11.0 12.0 12.0 13.0 13.0 10.0 9.0 9.0 11.0 13.0 14.0 15.0 16.0 17.0 17.0 18.0 19.	21.0 22.0 20.0 21.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0 24.0 25.0 24.0	#1N 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 20.0 20.0 20.0 20.0 20.0 21.0	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	26.0 27.0 26.0 26.0 24.0 25.0 24.0 25.0 24.0 25.0 22.0 23.0 23.0 22.0 21.0 19.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21-0 21-0 21-0 21-0 21-0 21-0 21-0 21-0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 15.0	MIN 9.0 8.0 9.0 10.0 9.0 11.0 12.0 11.0 10.0 10.0 8.0 9.0 9.0 9.0 11.0	MAX 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0	#IN 12.0 13.0 13.0 12.0 11.0 11.0 12.0 12.0 13.0 10.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 14.0 12.0 13.0	21.0 22.0 20.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	#1N 17.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21	24.0 23.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	26.0 27.0 26.0 26.0 24.0 25.0 25.0 25.0 25.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0	24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 9.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0 10.0 10.0 10.0 8.0 9.0 9.0 9.0 11.0	16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 16.0 17.0 17.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HIN 12.0 13.0 13.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 17.0 18.0 19.0 1	21.0 22.0 20.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0 27.0	#1N 17.0 18.0 18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 12.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0 22	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	HIN 19.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	26.0 27.0 26.0 26.0 26.0 24.0 25.0 24.0 25.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	WIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	HAX 11.0 9.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 15.0 16.0 16.0	MIN 9.0 8.0 9.0 10.0 9.0 11.0 11.0 10.0 10.0 8.0 9.0 9.0 8.0 9.0 11.0 10.0	16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HIN 12.0 13.0 13.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 17.0 1	21.0 22.0 20.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	#1N 17.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0 22	24.0 23.0 25.0 26.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	HIN 19.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22	26.0 27.0 26.0 26.0 26.0 24.0 25.0 24.0 25.0 22.0 23.0 22.0 21.0	WIN 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.	24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21	MIN 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20

11409000 MIDDLE YUBA RIVER ABOVE OREGON CREEK, NEAR NORTH SAN JUAN, CALIF .-- Continued SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

		WATER TEM- PERA-		CONCEN-			NT F	INER	THAN	PART THE S	ICLE :		LLIME'	TERS)	INDIC	ATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	-002	-004	-00B	.016	.031	.062	.125	-250	.500	1.00	2.00	SIS
								••••									
OCT 27 1967	0910	9	46	7	•B7												
DEC 13	1330	1	50	2	.27												
FEB 8 196B	1730	7	367	17	17												
FEB 16	1600	6	312	28	24												
FEB 20	1515	7	2560	147	1020	5	12	18	24	28	47	. 59	73	90	99	100	SCBW
MAR 14	1600	7	416	7	7.9												
APR ID	1510	13	360	3	2.9												
MAY B	1540	14	287	5	3.9												
JUN 17	1515	23	88	,	•48												
SEP 25	1400	16	31	ĩ	•D8												

11409500 OREGON CREEK NEAR NORTH SAN JUAN, CALIF.

LOCATION. -- Let 39°24'10", long 121°04'35", in NW 18W 2 sec.27, T.18 M., R.8 E., Nevada County, 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 m1.

PERIOD OF RECORD, -- Water temperatures: February 1965 to September 1968.

EXTREMES, -- 1967-68:

Water temperatures: Maximum, 25.0°C July 6-8, Aug. 3; minimum, freezing point Jan. 3D, 31.

Period of record:
Water temperatures: Maximum, 26.5°C Aug. 17, 18, 1966; minimum, freezing point Jan. 30, 31, 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	OC.	TOBER	NOV	EMBER	DECE	MBER	JAN	WARY	FEBR	UARY	Mi	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	13.0	13.0	9.0	7.0	5.0	6.0	3.0	3.0	1.0	9.0	7.0
2	15.0	13.0	13.0	9.0	6.0	4.0	5.0	3.0	3.0	2.0	9-0	7.0
3	15.0	12.0	13.0	9.0	6.0	4.0	4.0	2.0	5.0	2.0	9-0	7.0
4	15-0	12.0	13.0	10.0	7.0	6.0	8.0	2.0	6.0	4.0	9.0	7.0
5	15.0	12.0	13.0	11.0	6.0	5.0	4.0	2.0	7.0	6.0	10-0	8.0
6	15.0	11.0	13.0	9.0	6.0	4-0	4-0	2.0	7.0	6.0	9-0	7.0
7	16.0	11.0	13.0	10.0	6.0	5.0	4.0	2.0	7.0	6.0	8.0	8.0
8	16-0	12.0	13.0	10.0	6.0	4.0	4.0	3.0	7.0	6.0	8.0	7.0
9	16.0	12.0	12.0	10.0	6.0	4.0	6.0	4.0	8.0	7.0	8.0	6.0
10	16.0	12.0	12.0	9.0	6.0	4.0	6.0	3.0	7.0	6.0	8.0	6.0
11	16.0	12.0	12.0	8.0	6.0	3.0	4.0	3.0	8.0	7.0	8.0	6.0
12	17.0	12.0	11.0	9.0	6.0	3.0	4.0	2.0	8.0	7.0	8.0	6.0
13	16.0	12.0	12.0	11.0	3.0	2.0	6.0	4.0	7.0	6.0	6.0	6.0
14	14.0	11.0	13.0	11.0	3.0	1.0	7.0	6.0	7.0	6.0	7.0	6.0
15	14.0	9.0	13.0	11.0	4.0	2.0	7.0	6 • D	7.0	6.0	8.0	6.0
16	14-0	10.0	13.0	10.0	4. D	2.0	7.0	6.0	7.0	6.0	8.0	6.0
17	15.0	11.0	12.0	11.0	4. D	1.0	6.0	4.0	8.0	7.0	7.0	6.0
18	14-0	9.0	12.0	11.0	3.0	2.0	6.0	4.0	8.0	7.0	8.0	6.0
19	14.0	9.0	11.0	11.0	5.0	3.0	6.0	4.0	8.0	8.0	8.0	6.0
20	14.0	9.0	11.0	9.0	4.0	3.0	7.0	5.0	9.0	7.0	9.0	6.0
21	12.0	9.0	10.0	8.0	5.0	3.0	8.0	6.0	9.0	8.0	9-0	7.0
22	15.0	12.0	9.0	8.0	6.0	4.0	8.D	7.0	9.0	8.0	9.0	7.0
23	14.0	11.0	9.0	7.0	6.0	4.0	8.0	7.0	10.0	9.0	9.0	7.0
24	14-0	9.0	9.0	6.0	6.0	4.0	7.0	6.0	9.0	8.0	10.0	7.0
25	14.0	11.0	8.0	6.0	6.0	4.0	7.0	6.0	10.0	8.0	10.0	8.0
26	13.0	10.0	8.0	6.0	6.0	4.0	6.0	4.0	10.0	8.0	9.0	6.0
27	13.0	9.0	8.0	6.0	6.0	4.0	4.0	3.0	10.0	7.0	10.0	7.0
28	13.0	11.0	8.0	7.0	6.0	4.0	4.0	3.0	9.0	7.0	11.0	8.0
29	12.0	9.0	7.0	6.0	6.0	4.0	3.0	2.0	9.0	7.0	11.0	9.0
30	13.0	8.0	6.0	4.0	6.0	3.0	2-0	0.0			11.0	9.0
31	13.0	9.0			4.0	3.0	3.0	0.0			11-0	9.0
HTMO?	17.0	8.0	13.0	4.0	7.0	1.0	8.0	0.0	10.0	1.0	11.0	6.0

11409500 OREGON CREEK NEAR NORTH SAN JUAN, CALIF .-- Continued

		TEMPER.	ATURE (°C)	OF WATER.	WATER	YEAR OCTOBER	1967	TO SEPTEMBER	1968	Continued		
		APRIL		MAY		JUNE		JULY		GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX		MAX		HAX	MIN	MAX	MIN
1	10.0		17.0	11.0	21.0	14.0	22.0	15.0	24.0	19.0	23.0	18.0
2	9.0	7.0	17.0	11.0	22.0	16.0	21.0	16.0	24.0	19.0	22.0	18.0
3	10.0	7.0	17.0	12.0	19.0		23.0	16.0	25.0	18.0	22.0	17.0
4	10.0	8.0	18.0	12.0	21.0		24.0	17.0	23.0	18.0	22-0	17-0
5	11.0	9.0	17.0	12.0	17.0	14.0	24.0	18.0	23.0	17-0	22.0	17.0
6	11.0	7.0	16.0	9.0	18.0		25.0	18.0	23.0	17.0	21.0	17.0
7	11.0	9.0	16.0	9.0	18.0	14.0	25.0	19.0	22.0	17-0	21.0	17.0
8	12.0	8.0	17.0	10.0	19.0		25.0	19.0	23 + 0	18.0	21.0	16.0
9	13.0	9.0	17.0	11.0	20.0		24.0		23.0	18.0	20.0	17.0
10	13.0	10.0	17.0	11.0	20.0	13.0	24-0	18.0	23.0	16.0	21.0	16.0
11	13.0	11.0	17.0	11.0	20.0		23.0		23.0	16.0	20.0	16.0
12	12.0	10.0	14.0	11.0	18.0		24.0		23.0	18.0	20.0	16.0
13	12.0	9.0	12.0	9.0	19.0		24.0	18.0	21.0	17.0	19.0	15.0
14	13.0	9.0	13.0	8.0	21.0		24.0	16.0	20.0	17.0	20.0	17.0
15	12.0	9.0	15.0	9.0	22.0	14.0	24.0	17.0	21.0	16.0	20.0	16.0
16	11.0	7.0	17.0	11.0	23.0		23.0	17-0	21 •0	17.0	19.0	14.0
17	10.0	6.0	17.0	12.0	23.0		23.0		21.0	16.0	19.0	14.0
18	11.0	6.0	18.0	12.0	23.0		24.0	17.0	19.0	16.0	19.0	16.0
19	13.0	8.0	17.0	14.0	23.0		24.0		17.0	16.0	18.0	14.0
20	12.0	8.0	17.0	14.0	23.0	16.0	24.0	17-0	16.0	14.0	17.0	13.0
21	12.0	7.0	17.0	14.0	23.0		24.0		18.0	14.0	16.0	12.0
22	12.0	7.0	16.0	12.0	24.0		24.0		19.0	13.0	16.0	11.0
23	12.0	8.0	17.0	11.0	23.0		24.0		20.0	14.0	17.0	12.0
24	14.0	8.0	16.0	11.0	24.0		23.0		20.0	15.0	17.0	13.0
25	14.0	9.0	18.0	13.0	24.0	17-0	23.0	17.0	19.0	16.0	18.0	13.0
26	16.0	10.0	19.0	12.0	24.0		23.0	17-0	21.0	16.0	18.0	14.0
27	16.0	11.0	20.0	13.0	24.0		24.0		21.0	16.0	18.0	14.0
28	16.0	10.0	21.0	14.0	23.0		23.0	19.0	22.0	16.0	18.0	14.0
29	17.0	11.0	21.0	14-0	21.0		23.0	19.0	22.0	17.0	18.0	14.0
30	17.0	12.0	20.0	15.0	21.0		23.0	19.0	22.0	17.0	17.0	13.0
31			20.0	14.0			21.0	19.0	22.0	17.0		
MONTH	17.0	6.0	21.0	8.0	24.0	12.0	25.0	15.0	25.0	13.0	23.0	11.0
YEAR	25.0	0.0										

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CALIF.

LOCATION, -- Lat 39°22'48", long 121°08'19", in SW NEZ sec.36, T.18 N., R.7 E., Yuba County, 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.

DRAINAGE AREA, -- 490 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1966 to September 1968.

7.0

8.0

14.0

EXTREMES . ~- 1967-68:

Water temperatures: Maximum, 25.0°C July 7, 9, 21; minimum, 2.0°C on many days during December to February.

MONTĤ

Period of record:
Water temperatures: Maximum, 25.0°C July 7, 9, 21, 1968; minimum, 2.0°C on many days during December 1967 to February 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUAR FEBRUARY MAX MIN MAX MIN MAX MIN DAY MIN 18.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 14.0 14.0 14.0 13.0 11.0 11.0 11.0 8.0 8.0 7.0 8.0 7.0 6.0 7.0 7.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0 3.0 3.0 2.0 2.0 2.0 8.0 8.0 8.0 7.0 7.0 7.0 2.0 2.0 2.0 2.0 2.0 8.0 7.0 2.0 3.0 2.0 8.0 5 14.0 12.0 6.0 7.0 7.0 7.0 7.0 18.0 17.0 18.0 17.0 14.0 14.0 14.0 13.0 12.0 12.0 12.0 12.0 6.0 6.0 6.0 3.0 2.0 2.0 2.0 2.0 3.0 2.0 3.0 3.0 3.0 8.0 8.0 8.0 6.0 7.0 7.0 14.0 6 4.0 2.0 3.0 4.0 14.0 14.0 14.0 6.0 7.0 7.0 8.0 6.0 4.0 3.0 5.0 4.0 10 4.0 4.0 4.0 17.0 18.0 17.0 17.0 15.0 15.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 11.0 11.0 12.0 12.0 11.0 6.0 5.0 4.0 4.0 4.0 3.0 2.0 5.0 8.0 7.0 7.0 11 12 13 14 7.0 5.0 4.0 5.0 6.0 8.0 7.0 7.0 7.0 2.0 6.0 3.0 3.0 5.0 6.0 6.0 4.0 16.0 16.0 16.0 16.0 13.0 13.0 13.0 13.0 5.0 4.0 4.0 3.0 3.0 4.0 3.0 4.0 4.0 3.0 3.0 5.0 6.0 7.0 7.0 7.0 6.0 13.0 12.0 12.0 6.0 11.0 16 17 18 11.0 11.0 11.0 6.0 4.0 3.0 6.0 5.0 4.0 4.0 3.0 6.0 12.0 8.0 6.0 8.0 8.0 8.0 14.0 16.0 16.0 16.0 12.0 11.0 10.0 11.0 9.0 9.0 8.0 9.0 5.0 6.0 6.0 5.0 4.0 4.0 4.0 4.0 5.0 6.0 5.0 4.0 4.0 4.0 4.0 6.0 7.0 7.0 7.0 8.0 6.0 6.0 7.0 7.0 6.0 13.0 21 22 23 24 25 6.0 7.0 13.0 13.0 13.0 5.0 4.0 7.0 8.0 16-0 13.0 10.0 8.0 5.0 9.0 9.0 9.0 9.0 7.0 7.0 7.0 26 27 28 29 8.0 8.0 8.0 7.0 7.0 4.0 4.0 4.0 3.0 4.0 3.0 3.0 3.0 3.0 8.0 7.0 7.0 13.0 9.0 5.0 3.0 16.0 14.0 15.0 14.0 14.0 4.0 4.0 4.0 3.0 3.0 3.0 3.0 2.0 2.0 2.0 8.0 13.0 9.0 7.0 7.0 8.0 3.0 3.0 9.0 12.0 8.0 3.0 10.0 14.0 11.0

6.0

2.0

8.0

2.0

10.0

6.0

11413520 NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM, NEAR NORTH SAN JUAN, CALIF .-- Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 -- Continued

	A	PRIL	1	MAY	J	UNE	J	JLY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN										
1	9.0	9.0	13.0	12.0	17.0	15.0	23.0	21.0	23.0	21.0	21.0	18.0
2	9.0	8.0	13.0	12.0	18.0	16.0	24.0	21.0	22.0	19.0	21.0	18.0
3	9.0	8.0	13.0	12.0	18.0	16.0	24-0	21.0	22.0	20.0	21.0	18.0
4	9.0	8.0	13.0	12.0	18.0	16.0	23-0	20-0	23.0	19.0	21.0	18.0
5	9.0	8.0	13.0	12.0	18.0	16.0	24.0	21.0	23.0	19.0	21.0	18.0
6	10.0	8.0	13.0	11.0	17.0	16.0	24.0	22.0	23.0	18.0	21.0	18.0
7	10.0	8.0	13.0	11.0	17.0	16.0	25.0	22.0	22.0	21.0	21.0	19.0
8	10.0	8.0	13.0	11.0	17.0	15.0	24.0	22.0	23.0	20.0	21.0	19.0
9	10.0	9.0	13.0	12.0	17.0	15.0	25.0	22.0	23.0	21.0	21.0	19.0
10	11.0	9.0	13.0	12.0	17.0	15.0	24.0	21.0	23.0	21.0	22.0	19.0
11	11.0	9.0	13.0	12.0	18.0	15.0	24.0	21.0	23.0	21.0	22.0	19.0
12	11.0	10.0	13.0	11.0	17.0	15.0	24.0	21.0	22.0	21.0	22.0	19.0
13	11.0	9.0	11.0	11.0	18.0	15.0	24-0	21.0	22.0	21.0	22.0	19.0
14	11.0	9.0	12.0	11.0	18.0	16.0	24.0	21.0	21.0	20.0	22.0	19.0
15	10.0	9.0	12.0	10.0	19.0	16.0	23.0	21.0	22.0	19.0	22.0	19.0
16	9.0	9.0	13.0	11.0	20.0	17.0	23.0	21.0	21.0	19.0	22.0	19.0
17	10.0	8.0	13.0	11.0	21.0	17.0	23.0	20.0	21.0	18.0	22.0	19.0
18	10.0	8.0	14.0	12.0	21.0	18.0	24.0	21.0	19.0	18.0	22.0	19.0
19	10.0	8.0	14.0	12.0	22.0	18.0	24.0	20.0	18.0	17.0	21.0	18.0
20	10.0	8.0	14.0	13.0	22.0	18.0	24.0	20.0	18.0	17.0	20.0	18.0
21	10.0	8.0	14.0	13.0	22.0	19.0	25.0	20.0	19.0	17.0	19.0	17.0
22	11.0	9.0	14.0	12.0	24.0	20.0	24.0	19-0	20.0	16.0	19.0	16.0
23	11.0	9.0	14.0	12.0	23.0	19.0	23.0	19.0	20.0	17-0	19-0	17.0
24	11.0	8.0	13.0	12.0	23.0	19.0	22.0	19.0	19.0	17.0	20.0	17.0
25	11.0	9.0	14.0	12.0	24.0	21.0	22.0	19.0	19.0	17.0	20.0	18.0
26	12.0	9.0	14.0	12.0	24.0	21.0	22.0	19.0	19.0	17.0	21.0	18.0
27	13.0	11.0	16.0	13.0	24.0	21.0	23.0	20.0	20.0	17.0	20.0	18.0
28	13.0	11.0	16.0	14.0	24.0	21.0	22.0	19.0	20.0	17.0	20.0	17.0
29	13.0	11.0	16.0	14.0	24.0	21.0	23.0	20.0	21.0	18.0	19.0	17.0
30	13.0	12.0	17.0	14.0	22.0	21.0	21.0	19.0	21.0	18.0	19.0	17.0
31			17.0	15.0			21.0	18.0	21.0	18.0		
HTMOP	13.0	8.0	17.0	10.0	24.0	15.0	25.0	18.0	23.0	16.0	22.0	16.0
YEAR	25.0	2.0										

11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, CALIF.

LOCATION. -- Lat 39°17'32", long 121°06'13", near center of sec.32, T.17 N., R.8 E., Nevada County, temperature recorder at gaging station on left bank at Jones Bar, 100 ft upstream from Rush Creek, 0.9 mile downstream from bridge on State Highway 49, and 5 miles northwest of Grass Valley.

DRAINAGE AREA. -- 308 sq mi.

PERIOD OF RECORD. -- Water temperatures: February 1965 to September 1968. Sediment records: October 1966 to September 1968 (periodic).

EXTREMES, -- 1967-68:

Water temperatures: Maximum, 27.0°C June 27, Aug. 5-7; minimum, freezing point on several days during December and January.

Period of record:
Water temperatures: Maximum, 27.0°C Aug. 2-4, 1966, June 27, Aug. 5-7, 1968; minimum, freezing point on several days during December and January of most years.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	WATER TEM- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED— SEDIMENT DISCHARGE (TONS/DAY)
OCT 26. 1967	145D	12	53	5	.72
DFC 11	1530	3	125	3	1.0
JAN 25. 1968	1115	6	192	21	11
FFB 16	1330	7	409	24	27
FFB 29	1630	9	603	16	26
APR 11	1700	14	320	4 .	3.5
MAY 9	1730	17	153	3	1.2
JUN 19	0920	21	71	2	.38
SEP 25	1100	14	40	1	-11

YEAR 27.0 0.0

SACRAMENTO RIVER BASIN

11417500 SOUTH YUBA RIVER AT JONES BAR, NEAR GRASS VALLEY, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					,							
	OC.	TOBER	NOV	EMBER	DEC	EMBER	JAI	NUARY	FEBI	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	17.0	11.0	9.0								
ž	17.0	16.0	11.0	9.0	4.0 4.0	4.0 3.0	3.0 2.0	2.0 2.0	2.0 4.0	1.0 2.0	9.0 9.0	B.O B.O
3	16.0	13.0	11.0	9.0	5.0	3.0	2.0	1.0	4.0	3.0	9.0	7.0
4	14.0	13.0	11.0	10.0	7.0	5.0	2.0	1.0	5.0	3.0	10.0	8.0
5	16.0	14.0	12.0	11.0	7.0	6-0	2.0	1.0	6.0	4.0	10.0	9.0
		-	-									
6	14.0	12.0	12.0	11.0	6.0	5.0	2.0	1.0	7.0	6.0	9.0	B . O
7	15.0	13.0	12.0	11.0	6.0	6.0	2.0	1.0	7.0	6.0	9.0	8.0
8	16.0	13.0	12.0	11.0	6.0	4.0	2.0	1.0	7.0	5.0	B.0	B.0
9	16.0	13.0	11.0	11.0	4.0	3.0	3.0	2.0	7.0	6.0	9.0	7.0
10	16.0	13.0	11.0	9.0	4.0	3.0	5.0	3.0	7.0	6.0	8.0	7.0
11	16.0	13.0	10.0	9.0	4.0	3.0	4.0	3.0	7.0	6.0	8.0	7.0
12 13	16.0	14.0	11.0	9.0	3.0	2.0	4.0	3.0	8.0	6.0	7.0	7.0
14	16.0	14.0 13.0	11.0 12.0	11.0	2.0 0.0	0.0	5.0 7.0	4.0	7.0	6.0	7-0	7.0
15	13.0	11.0	12.0	11.0	0.0	0.0	8.0	5.0 7.0	7.0	6.0	7.0 8.0	6.0
.,	19.0	11.0	12.0	11.0	0.0	0.0	8.0	7.0	7.0	6.0	8.0	6.0
16	13.0	12.0	12.0	11.0	1.0	0.0	7.0	7.0	7.0	6.0	8.0	7.0
17	14.0	12.0	12.0	11.0	1.0	0.0	7.0	5.0	8.0	7.0	7.0	6.0
18	13.0	12.0	12.0	11.0	1.0	0.0	6.0	4.0	8.0	7.0	8.0	6.0
19	13.0	11.0	12.0	11.0	1.0	1.0	6.0	4.0	8.0	B.O	8.0	6.0
20	13.0	11.0	11.0	10.0	2.0	1.0	6.0	5.0	9.0	7.0	8.0	6.0
21	12.0	11.0	11.0	9.0	2.0	1.0	7.0	6.0	9.0	B.O	9-0	7.0
22	14.0	12.0	9.0	7.0	2.0	2.0	7.0	6.0	9.0	8.0	9.0	8.0
23	14.0	12.0	8.0	7.0	3.0	2.0	7.0	6.0	9.0	9.0	10.0	8.0
24 25	14.0	13.0	7.0	6.0	3.0	2.0	7.0	6.0	9.0	B.O	11.0	8.0
25	14.0	13.0	7.0	6.0	3.0	2.0	6.0	4.0	9.0	8.0	9.0	9.0
26	13.0	12.0	6.0	4.0	3.0	2.0	5.0	4.0				
27	12.0	11.0	6.0	4.0	4.0	3.0	4.0	4.0 3.0	9.0 9.0	B.O B.O	9.0 11.0	7.0 B.O
28	13.0	11.0	6.0	6.0	4.0	3.0	3.0	2.0	9.0	8.0	12.0	9.0
29	12.0	10.0	6.0	6.0	4.0	3.0	3.0	2.0	9.0	8.0	13.0	10.0
30	11.0	9.0	6.0	4.0	3.0	2.0	2.0	0.0			13.0	11.0
31	11.0	9.0			2.0	2.0	2.0	0.0			13.0	11.0
HTMOP	18.0	9.0	12.0	4.0	7.0	0.0	B-0	0.0	9.0	1.0	13.0	6.0
	A	PRIL		YAY	J	UNE	JI	JLY	AUG	SUST	SEP	TEMBER
DAY	A XAM	PRIL Min	MAX	YAY Min	JI	MIN	JU XAM	ULY MIN	AUI MAX	GUST MIN	SEP MAX	TEMBER MIN
	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	MAX 11.0	MIN 9.0	MAX 17.0	MIN 13.0	MAX 22.0	#[N 18.0	MAX 26.0	MIN 21.0	MAX 24+0	MIN 19.0	MAX 24.0	MIN 21.0
1 2	MAX 11.0 9.0	MIN 9.0 8.0	MAX 17.0 17.0	MIN 13.0 13.0	MAX 22.0 22.0	#IN 18.0 19.0	MAX 26.0 26.0	MIN 21.0 22.0	MAX 24.0 23.0	MIN 19.0 20.0	MAX 24.0 23.0	MIN 21.0 21.0
1	MAX 11.0 9.0 10.0	MIN 9.0 8.0 7.0	MAX 17.0 17.0 17.0	MIN 13.0 13.0 13.0	MAX 22.0 22.0 21.0	MIN 18.0 19.0 19.0	MAX 26.0 26.0 26.0	MIN 21.0 22.0 22.0	MAX 24.0 23.0 24.0	MIN 19.0 20.0 20.0	MAX 24.0	MIN 21.0
1 2 3	MAX 11.0 9.0 10.0 11.0	MIN 9.0 8.0 7.0 9.0	MAX 17.0 17.0 17.0 18.0	MIN 13.0 13.0 13.0	MAX 22.0 22.0 21.0 21.0	#IN 18.0 19.0	MAX 26.0 26.0	MIN 21.0 22.0 22.0 21.0	MAX 24.0 23.0 24.0 26.0	MIN 19.0 20.0	MAX 24.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0
1 2 3 4	MAX 11.0 9.0 10.0 11.0	9.0 8.0 7.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0	MIN 18.0 19.0 19.0 19.0	MAX 26.0 26.0 26.0 24.0 23.0	MIN 21.0 22.0 22.0 21.0 20.0	MAX 24-0 23-0 24-0 26-0 27-0	MIN 19.0 20.0 20.0 21.0 22.0	MAX 24-0 23-0 23-0 23-0 23-0	MIN 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5	MAX 11.0 9.0 10.0 11.0 11.0	9.0 8.0 7.0 9.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 13.0 13.0 13.0 14.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0	MIN 18.0 19.0 19.0 19.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0	MIN 21.0 22.0 22.0 21.0 20.0	MAX 24-0 23-0 24-0 26-0 27-0	MIN 19.0 20.0 20.0 21.0 22.0	MAX 24-0 23-0 23-0 23-0 23-0	MIN 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5	MAX 11.0 9.0 10.0 11.0 11.0	9.0 8.0 7.0 9.0 9.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 13-0 13-0 13-0 14-0 14-0	MAX 22.0 22.0 21.0 21.0 20.0	MIN 18.0 19.0 19.0 19.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0	MIN 21.0 22.0 22.0 21.0 20.0	MAX 24-0 23-0 24-0 26-0 27-0 27-0	MIN 19.0 20.0 20.0 21.0 22.0 22.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8	MAX 11.0 9.0 10.0 11.0 11.0	MIN 9.0 8.0 7.0 9.0 9.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 13.0 13.0 14.0 14.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0	MIN 18.0 19.0 19.0 17.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 23.0	MIN 21.0 22.0 22.0 21.0 20.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 22.0 22.0 23.0 23.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0	9.0 8.0 7.0 9.0 9.0 9.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0 16.0 16.0 18.0	MIN 13.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0	MIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0	MAX 26.0 26.0 26.0 26.0 24.0 23.0 24.0 23.0 24.0 24.0	MIN 21.0 22.0 22.0 21.0 20.0 19.0 20.0 21.0 21.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 27.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8	MAX 11.0 9.0 10.0 11.0 11.0	MIN 9.0 8.0 7.0 9.0 9.0 9.0	MAX 17.0 17.0 17.0 18.0 17.0	MIN 13.0 13.0 14.0 14.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0	MIN 18.0 19.0 19.0 17.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 23.0	MIN 21.0 22.0 22.0 21.0 20.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 27.0	MIN 19.0 20.0 20.0 21.0 22.0 22.0 23.0 23.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8 9	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0	9.0 8.0 7.0 9.0 9.0 9.0 9.0 10.0	MAX 17.0 17.0 18.0 17.0 16.0 16.0 16.0 18.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 12.0 14.0	MAX 22.0 22.0 21.0 20.0 19.0 20.0 19.0 20.0 21.0	MIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0	MIN 21.0 22.0 22.0 21.0 20.0 20.0 21.0 21.0	MAX 24.0 23.0 24.0 27.0 27.0 27.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 17.0 17.0 18.0 17.0 16.0 16.0 16.0 18.0 18.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 12.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 21.0	MIN 18.0 19.0 19.0 17.0 17.0 16.0 17.0 17.0 18.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 23.0 24.0 24.0 24.0	MIN 21.0 22.0 22.0 21.0 20.0 19.0 20.0 21.0 21.0 20.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 27.0 26.0 26.0 26.0	MIN 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 22.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 18.0 17.0 16.0 16.0 16.0 18.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 12.0 14.0	MAX 22.0 21.0 21.0 21.0 20.0 19.0 20.0 20.0 21.0 21.0	MIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0	MIN 21.0 22.0 22.0 21.0 20.0 20.0 21.0 21.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 17.0 17.0 17.0 18.0 17.0 16.0 16.0 18.0 18.0 18.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 12.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 21.0	MIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0 17.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 25.0	MIN 21.0 22.0 22.0 21.0 20.0 20.0 21.0 21.0	MAX 24.0 23.0 24.0 27.0 27.0 27.0 26.0 26.0 26.0 24.0 23.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0	9.0 8.0 7.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 18.0 17.0 16.0 16.0 16.0 18.0 18.0	MIN 13.0 13.0 13.0 14.0 14.0 12.0 12.0 14.0 14.0	MAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 19.0 20.0 21.0	MIN 18.0 19.0 19.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0	MAX 26.0 26.0 26.0 26.0 23.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0	MIN 21.0 22.0 22.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 21	MAX 24.0 23.0 24.0 26.0 27.0 27.0 26.0 26.0 26.0 24.0 23.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0 13.0 13.0	9.0 8.0 7.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0	MAX 17.0 17.0 17.0 17.0 16.0 16.0 18.0 18.0 18.0 17.0 16.0 18.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 14.0 14.0 14.0 14.0 11.0	MAX 22.0 22.0 21.0 20.0 19.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 23.0	MIN 18.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0	MAX 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0	MIN 21.0 22.0 22.0 20.0 20.0 21.0 21.0 21.0	MAX 24.0 23.0 24.0 26.0 27.0 27.0 26.0 26.0 26.0 24.0 23.0 22.0 22.0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0 14.0 13.0 13.0	9.0 8.0 7.0 9.0 9.0 9.0 10.0 11.0 12.0 10.0 11.0	MAX 17.0 17.0 17.0 18.0 16.0 16.0 18.0 18.0 19.0 17.0	MIN 13.0 13.0 14.0 14.0 12.0 12.0 12.0 14.0 14.0 14.0 11.0 11.0	HAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0 17.0 18.0 17.0 18.0	HAX 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0	HIN 21.0 22.0 22.0 21.0 21.0 20.0 21.0 21.0	HAX 24-0 23-0 24-0 26-0 27-0 27-0 26-0 26-0 26-0 22-0 22-0 22-0	MIN 19.0 20.0 20.0 21.0 22.0 23.0 23.0 22.0 21.0 21.0 19.0 19.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 11.0 9.0 10.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 9.0 9.0 11.0 12.0 11.0 10.0 11.0	17.0 17.0 17.0 18.0 18.0 17.0 16.0 16.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 18.0	MIN 13.0 13.0 14.0 14.0 14.0 12.0 12.0 14.0 14.0 14.0 11.0 11.0	HAX 22.0 22.0 21.0 21.0 20.0 19.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0	HIN 18.0 19.0 19.0 19.0 17.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0	HAX 26.0 26.0 26.0 24.0 24.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 24.0	HIN 21.0 22.0 22.0 21.0 21.0 20.0 21.0 21.0	HAX 24.0 23.0 24.0 26.0 27.0 27.0 27.0 26.0 26.0 24.0 23.0 22.0 22.0 22.0	MIN 19.0 20.0 20.0 21.0 21.0 22.0 23.0 23.0 22.0 21.0 21.0 19.0 19.0	MAX 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 21.0 21.0 20.0 20.0 20.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0
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11421500 YUBA RIVER AT MARYSVILLE, CALIF.

LOCATION.--Lat 39°08'40", long 121°34'35", 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 south.

DRAINAGE AREA (revised) .-- 1,339 sq mi (at gaging station).

PERIOD OF RECORD, -- Chemical analyses: October 1953 to September 1963. Water temperatures: October 1963 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Minimum. 5.0°C Jan. 3, 11, 12, 18, 19.

Period of record:

Water temperatures: Maximum (1963-67), 29.5°C July 24, 25, 1964, Aug. 3, 4, 6, 17, 1966; minimum, 4.5°C Feb. 17, 1966

REMARKS .-- Recorder malfunctioned June 23 to Sept. 30.

TEMPERATURE (°C) OF WATER, WATER YEAR OUTOBER 1967 TO SEPTEMBER 1968

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OCTOBER																																
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11424000 BEAR RIVER NEAR WHEATLAND, CALIF.

LCCATION.—Lat 39°00'00", long 121°24'20", in SE\\$N\dagger 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 1968.

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

11424000 BEAR RIVER NEAR WHEATLAND, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	MEAN						
	DIS- CHARGE	CAL- CIUM	SODIUM	BICAR- Bonate	CAR- BONATE	CHLO- RIDE	BORON
DATE	(CFS)	(CA)	(NA)	(HC03)	(CO3)	(CL)	(8)
NOV.							
07	18		4.3	51	0	5.4	. 05
MAR.					_		
12 APR.	834	8.2	2.5	34	0	2.8	
09	582	7.5	2.6	34	0	2.7	
JULY							
17	13	18	6.0	79	0	6.6	
AUG.					_		
08	7.0	20	6.2	85	0	6.8	
SEPT.	8.2	19	6.6	87	0	6.6	
00	0.2	19	0.0	67	U	0.0	
				SPEC I -			
		NDN- CAR-	ALKA-	FIC COND-		TEM-	
			LINITY	UCTANCE		PERA-	DIS-
	HARD- NESS	BONATE HARD-	AS	(MICRO-	PH	TURE	SOLVED
DATE	(CA.MG)	NESS	CACO3	MHOS)		10EG C)	DXYGEN
DATE	(CA + MG)	ME 22	CACOS	HIU3 F		1020 01	UNIGER
NOV.							
07	47	5	42	116	7.8	16	10.4
MAR.							
12	32	4	28	80	7.3	11	11.1
APR.							
09	33	5	28	80	7.5	16	10.3
JULY		16	65	184	8.0	32	8.8
17 AUG.	81	10	99	104	3.0	32	0.0
08	84	14	70	190	8.2	24	8.3
SEPT.	34	• •	,,				
06	92	21	71	192	7.9	29	9.5

11425100 FEATHER RIVER NEAR NICOLAUS, CALIF. (Formerly published as 11425000 Feather River at Nicolaus, Calif.)

LOCATION. -- Lat 38°51'39", long 121°37'22", in SWINEI sec.27, T.12 N., R.3 E., Sutter County, temperature recorder on left hank, 3.8 miles downstream from gaging station at Nicolaus, 3.9 miles southwest of Nicolaus, 6.6 miles northeast of Knights Landing, and at mile 5.6.

DRAINAGE AREA .-- 5,921 sq mi (at gaging station).

PERIOD OF RECORD, --Chemical analyses: March 1951 to June 1966.
Water temperatures: March 1951 to September 1958, November 1959 to September 1968.

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 29.0°C July 5, 26, 27, 29; minimum, 3.0°C Dec. 14-18.

Period of record (1951-58, 1959-68):
Water temperatures: Maximum, 34.5°C July 21, 1951; minimum (1951-58, 1959-66, 1957-68), freezing point Jan. 3-6, 1961.

REMARKS...-Prior to 1964 water year thermograph located at gaging station 3.8 milez upstream at highway bridge at Nicolaus, and 2.9 miles downstream from Bear River. Recorder malfunction Oct. 1-3. Clock stopped May 25 to June 26; temperature range, 17.0°C to 28.0°C.

NOVEMBER DECEMBER

OCTOBER

11425100 FEATHER RIVER NEAR NICOLAUS, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY FEBRUARY

MARCH

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
												12.0
1			16.0	14.0	9.0	8.0	7.0	6.0	7.0	6.0	12-0	
2			16.0	14.0	9.0	8.0	7.0	6.0	8.0	7.0	13.0	12.0
3			15.0	13.0	9.0	8.0	6.0	6.0	9.0	8.0	13.0	12.0
4	19.0	17.0	14.0	13.0	11.0	9.0	6.0	5.0	9.0	8.0	13.0	12.0
5	18.0	17.0	15.0	14.0	11.0	10.0	6.0	5.0	9.0	8.0	13.0	12.0
6	18.0	16.0	15.0	13.0	10.0	9.0	6.0	5.0	9.0	8.0	13.0	12.0
7	18.0	16.0	16.0	14.0	9.0	9.0	5.0	4.0	10.0	8.0	12.0	11.0
ė	18.0	17.0	15.0	14.0	9.0	8.0	5.0	4.0	9.0	9.0	12.0	11.0
Ş	16.0							4.0	9.0	8.0	12.0	10.0
	19.0	17.0	15.0	14.0	8.0	8.0	5.0	4.0				
10	19.0	17.0	14.0	13.0	8.0	7.0	7.0	5.0	10.0	9.0	12.0	10.0
11	19.0	17.0	14.0	13.0	8.0	7.0	7.0	6.0	9.0	8.0	12.0	10.0
12	19.0	17.0	14.0	13.0	8.0	6.0	7.0	5.0	10.0	8.0	11.0	10.0
13	19.0	17.0	14.0	13.0	6.0	4.0	7.0	6.0	10.0	9.0	11.0	9.0
14	18.0	16.0		13.0	4.0	3.0	7.0	7.0	11.0	9.0	11.0	9.0
15	17.0	15.0	14.0 14.0	13.0	3.0	3.0	9.0	7.0	11.0	9.0	11.0	10.0
.,	11.0	13.0	14.0	13.0	3.0	340	,,,	,,,	11.00	***	1100	2000
16	17.0	15.0	15.0	13.0	4.0	3.0	9.0	8.0	10.0	9.0	11.0	11.0
17	17.0	15.0	16.0	14.0	4.0	3.0	9.0	8.0	11.0	9.0	11.0	10.0
18	17.0	15.0	15.0	14.0	5.0	3.0	9.0	8.0	11.0	9.0	11.0	10.0
19	17.0	15.0	15.0	14.0	4.0	4.0	8.0	6.0	10.0	9.0	12.0	10.0
20	17.0	15.0	14.0	13.0	5.0		8.0	7.0	11.0	10.0	12.0	10.0
20	14.0	15.0	14.0	13.0	5.0	4.0	0.0	7.0	11.0	10.0	12.0	10.0
21	16.0	15.0	14.0	13.0	6.0	4.0	8.0	7.0	12.0	11.0	12.0	11.0
22	16.0	14.0	13.0	12.0	7.0	6.0	9.0	7.0	12.0	11.0	12.0	11.0
23	17.0	15.0	13.0	12.0	7.0	6.0	9.0	8.0	12.0	12.0	13.0	11.0
24	17.0	16.0	12.0	11.0	7.0	6.0	9.0	8.0	12.0	11.0	13.0	12.0
25	17.0	15.0	12.0	11.0	8.0	7.0	9.0	8.0	11.0	11.0	13.0	12.0
	11.00	17.0	11.00	11.00			,				2500	
26	16.0	15.0	11.0	11.0	9.0	7-0	9.0	7.0	12.0	11.0	13.0	11.0
27	16.0	14.0	11.0	10.0	9.0	8.0	8.0	7.0	12.0	11.0	13.0	11.0
28	16.0	14.0	10.0	9.0	10.0	8.0	7.0	6.0	12.0	12.0	14.0	11.0
								4.0		12.0	15.0	12.0
29	15.0	13.0	9.0	8.0	10.0	8.0	6.0	6.0	13.0	12.0		12.0
30	14.0	13.0	8.0	8.0	9.0	8.0	6.0	6.0			16.0	13.0
31	14.0	13.0			8.0	7.0	7.0	6.0			15.0	13.0
MONTH	19.0	13.0	16.0	8.0	11.0	3.0	9.0	4.0	13.0	6.0	16.0	9.0
								•			_	
	A	PRIL	1	MAY	JI	UNE	JI	ULY	AUG	GUST	SEP	rember -
DAY			MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	MAX	MIN	n no									
								22.0		22.0	26.0	22.0
1	14.0	12.0	19.0	16.0			27.0	22.0	28.0	23.0	26-0	23.0
1 2	14.0 13.0	12.0 12.0	19.0 19.0	16.0 16.0			27.0 26.0	22.0	28.0 28.0	23.0	26.0	23.0
1 2 3	14.0 13.0 14.0	12.0 12.0 12.0	19.0 19.0 19.0	16.0 16.0 16.0			27.0 26.0 26.0	22.0 22.0	28.0 28.0 28.0	23.0 22.0	26.0 26.0	23.0 23.0
1 2 3 4	14.0 13.0 14.0 14.0	12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0	16.0 16.0 16.0 15.0			27.0 26.0 26.0 27.0	22.0 22.0 23.0	28.0 28.0 28.0 27.0	23.0 22.0 22.0	26.0 26.0 25.0	23.0 23.0 23.0
1 2 3	14.0 13.0 14.0	12.0 12.0 12.0	19.0 19.0 19.0	16.0 16.0 16.0			27.0 26.0 26.0	22.0 22.0	28.0 28.0 28.0	23.0 22.0	26.0 26.0	23.0 23.0
1 2 3 4 5	14.0 13.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0	16.0 16.0 16.0 15.0 14.0			27.0 26.0 26.0 27.0 29.0	22.0 22.0 23.0 25.0	28.0 28.0 28.0 27.0 27.0	23.0 22.0 22.0 22.0	26.0 26.0 25.0 26.0	23.0 23.0 23.0 23.0
1 2 3 4 5	14.0 13.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0	16.0 16.0 16.0 15.0 14.0			27.0 26.0 26.0 27.0 29.0	22.0 22.0 23.0 25.0	28.0 28.0 28.0 27.0 27.0	23.0 22.0 22.0 22.0 23.0	26.0 26.0 25.0 26.0	23.0 23.0 23.0 23.0
1 2 3 4 5	14.0 13.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0	16.0 16.0 16.0 15.0 14.0	===		27.0 26.0 26.0 27.0 29.0	22.0 22.0 23.0 25.0 24.0 22.0	28.0 28.0 28.0 27.0 27.0	23.0 22.0 22.0 22.0 23.0 24.0	26.0 26.0 25.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0	16.0 16.0 16.0 15.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 27.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0	26.0 25.0 25.0 26.0 26.0 26.0 25.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 14.0 14.0 14.0 15.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0	19.0 19.0 18.0 17.0 16.0 17.0 18.0	16.0 16.0 15.0 15.0 14.0 14.0	===		27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0 26.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0	26.0 25.0 25.0 26.0 26.0 26.0 25.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0	16.0 16.0 16.0 15.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 27.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0	26.0 25.0 25.0 26.0 26.0 26.0 25.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9	14.0 14.0 14.0 14.0 14.0 15.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0 26.0 27.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 22.0 23.0	26.0 25.0 25.0 26.0 26.0 26.0 25.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9	14.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0 26.0 27.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0 27.0 27.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 16.0 18.0 18.0 18.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0			27.0 26.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 27.0 26.0	22.0 22.0 23.0 25.0 25.0 24.0 22.0 21.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 14.0			27.0 26.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 27.0 26.0 27.0	22.0 22.0 25.0 25.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 24.0	23.0 22.0 22.0 22.0 24.0 24.0 22.0 23.0 22.0 23.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 14.0 14.0 14.0 15.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 16.0 18.0 18.0 18.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0			27.0 26.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 27.0 26.0	22.0 22.0 23.0 25.0 25.0 24.0 22.0 21.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 13.0			27.0 26.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 27.0 26.0 27.0	22.0 22.0 25.0 25.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 28.0 27.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 24.0	23.0 22.0 22.0 22.0 24.0 24.0 22.0 23.0 22.0 23.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 17.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14			27.0 26.0 26.0 27.0 29.0 28.0 28.0 27.0 26.0 27.0 27.0 26.0 27.0 26.0 25.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 24.0 25.0 24.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 20.0 19.0 21.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 14.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 14.0 13.0 14.0	19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0	16-0 16-0 15-0 14-0 14-0 14-0 14-0 14-0 15-0 16-0 14-0 17-0			27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 25.0 25.0 25.0	22.0 22.0 23.0 25.0 24.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 25.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 20.0 19.0 21.0 21.0	26.0 25.0 25.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 14.0 13.0 11.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 20.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 17.0			27.0 26.0 27.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 25.0 25.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 25.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 11.0 12.0 11.0	19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 17.0 20.0 20.0 21.0 20.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0			27.0 26.0 27.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 26.0 26.0 25.0 25.0 27.0 27.0 28.0 28.0 28.0 27.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 24.0 24.0 25.0 25.0 25.0 22.0	23.0 22.0 22.0 22.0 23.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 21.0 20.0	26.0 25.0 25.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 14.0 13.0 11.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 20.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 14.0 17.0			27.0 26.0 27.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 25.0 25.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 25.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 11.0 12.0 11.0	19.0 19.0 18.0 17.0 16.0 17.0 18.0 18.0 18.0 17.0 20.0 20.0 21.0 20.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0			27.0 26.0 27.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 26.0 26.0 25.0 25.0 27.0 27.0 28.0 28.0 28.0 27.0	22.0 22.0 23.0 25.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 24.0 24.0 25.0 25.0 25.0 22.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 23.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0	26.0 25.0 25.0 26.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 11 13 11 4 11 5 16 17 18 19 20	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	19.0 19.0 19.0 18.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 20.0 20.0 20.0 21.0 20.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0			27.0 26.0 27.0 27.0 29.0 28.0 27.0 26.0 27.0 26.0 26.0 25.0 25.0 25.0 27.0 27.0	22.0 22.0 23.0 25.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 25.0 22.0 22.0 21.0	23.0 22.0 22.0 24.0 24.0 22.0 23.0 20.0 21.0 21.0 21.0 21.0 21.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 21 22	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 20.0 20.0 21.0 20.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0			27.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 25.0 27.0 25.0 27.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 23.0 25.0 25.0 24.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 24.0 25.0 26.0 27.0 27.0 28.0	23.0 22.0 22.0 22.0 23.0 24.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	26.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 12.0 13.0 12.0 12.0 13.0 12.0 13.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 19.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 11.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0			27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 27.0 27.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 23.0 25.0 25.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 25.0 25.0 25.0 26.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	26.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 2 13 14 15 16 17 18 19 20 21 22 23 24	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 12.0 11.0 12.0 12.0 12.0 13.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 20.0 20.0 21.0 20.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0			27.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 25.0 27.0 25.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 23.0 25.0 24.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 28.0 25.0 24.0 24.0 25.0 24.0 25.0 21.0 21.0 21.0 22.0 24.0 23.0 24.0 24.0 25.0 24.0 25.0 26.0 27.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 23.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 12.0 13.0 12.0 12.0 13.0 12.0 13.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 19.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 11.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0			27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 27.0 27.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 23.0 25.0 25.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 25.0 24.0 25.0 25.0 25.0 25.0 26.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	26.0 26.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 2 13 14 15 16 18 19 20 21 22 23 24 25	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 12.0 11.0 12.0 12.0 12.0 13.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 11.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0			27.0 26.0 27.0 29.0 28.0 27.0 26.0 27.0 27.0 25.0 27.0 25.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 23.0 25.0 24.0 21.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 25.0 24.0 24.0 25.0 24.0 21.0 21.0 21.0 21.0 24.0 22.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 23.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 11.0 12.0 12.0 12.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 16.0 17.0			27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0	22.0 23.0 25.0 24.0 22.0 21.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 25.0 24.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 28.0 29.0 29.0 29.0 20.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 23.0 24.0 25.0 26.0 27.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 5 6 7 8 9 10 11 2 13 14 15 16 18 19 20 21 22 23 24 25	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 11.0 12.0 12.0 12.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 19.0	16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0		23.0	27.0 26.0 27.0 29.0 28.0 27.0	22.0 23.0 25.0 24.0 21.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 25.0 24.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 28.0 29.0 29.0 29.0 29.0 20.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0	26.0 25.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 22.0 22.0 22.0 22	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
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	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 19.0 19.0 11.0 17.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0		23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0	22.0 23.0 25.0 24.0 22.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 26.0 25.0 24.0 25.0 24.0 22.0 21.0 23.0 24.0 24.0 25.0 25.0 26.0 27.0 26.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 22.0 23.0	26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 112 13 14 5 16 7 18 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 13.0 14.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 21.0 20.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0		23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0	22.0 23.0 25.0 24.0 21.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 22.0 22.0 24.0 22.0 23.0 24.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 23.0	26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
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	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	19.0 19.0 19.0 11.0 17.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0		23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 26.0 24.0 24.0 25.0 24.0 22.0 21.0 21.0 23.0 24.0 25.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 23.0 22.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0	26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 112 13 14 5 16 7 18 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 13.0 14.0	19.0 19.0 19.0 11.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0	22.0 23.0 25.0 24.0 21.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	28.0 28.0 27.0 27.0 28.0 27.0 28.0 28.0 28.0 25.0 24.0 25.0 24.0 22.0 22.0 24.0 22.0 23.0 24.0 23.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 23.0	26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
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	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 13.0 14.0	19.0 19.0 19.0 11.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 21.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 26.0 24.0 24.0 25.0 24.0 22.0 21.0 21.0 23.0 24.0 25.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 22.0 23.0 22.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0	26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 12 22 22 24 2 2 5 2 6 2 7 8 2 9 0 3 1 MONTH	14.0 13.0 14.0 14.0 11.0 11.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 29.0 28.0 28.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 22.0 21.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 24.0 24.0 25.0 24.0 22.0 21.0 24.0 23.0 24.0 24.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 27.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 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	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 19.0 19.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 13.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 29.0 28.0 28.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 22.0 21.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 24.0 24.0 25.0 24.0 22.0 21.0 24.0 23.0 24.0 24.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 27.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 12 22 22 24 2 2 5 2 6 2 7 8 2 9 0 3 1 MONTH	14.0 13.0 14.0 14.0 11.0 11.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 29.0 28.0 28.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 22.0 21.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 24.0 24.0 25.0 24.0 22.0 21.0 24.0 23.0 24.0 24.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 27.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 12 22 22 24 2 2 5 2 6 2 7 8 2 9 0 3 1 MONTH	14.0 13.0 14.0 14.0 11.0 11.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 18.0 17.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0	27.0 25.0 25.0	23.0 23.0 23.0 23.0	27.0 26.0 27.0 29.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 27.0 28.0 27.0 29.0 28.0 28.0 29.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 28.0 28.0 28.0 29.0 29.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0	22.0 23.0 25.0 24.0 22.0 21.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0	28.0 28.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 24.0 24.0 25.0 24.0 22.0 21.0 24.0 23.0 24.0 24.0 23.0 24.0 25.0 26.0 27.0 26.0 27.0 26.0 27.0 28.0	23.0 22.0 22.0 23.0 24.0 22.0 23.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 27.0	26.0 26.0 25.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0

11427000 NORTH FORK AMERICAN RIVER AT NORTH FORK DAM, CALIF.

LOCATION. --Lat 38°56'15", long 121°01'25", in SW\\ 2NV\\ 2 sec.31, T.13 N., R.9 E., Placer County, temperature recorder at gaging station on left bank, 50 ft upstream from spillway of North Fork Dam, 2 miles upstream from Middle Fork, and 4 miles northeast of Auburn.

DRAINAGE AREA. -- 342 sq mi.

PERIOD OF RECORD, -- Water temperatures: November 1959 to September 1968.

NOVEMBER

MAX MIN

DAY

EXTREMES, --1967-68: Maximum, 26.0°C on many days during June and July; minimum, 6.0°C on many days during December and January.

Period of record:

4AX

OCTOBER

Nater temperatures: Maximum, 26.5°C on several days in July and August of most years; minimum, 4.5°C Jan. 21, 1967.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY

MAX MIN

MAX MIN

MARCH

MAX MIN

DECEMBER

MAX MIN

DAT	784	414	754	414	TEA	717	750	MIN	na.	741	пал	W110
1	22.0	22.0	17.0	17.0	12.0	12.0	6.0	6-0	7.0	7.0	12.0	12.0
2	22.0	22.0	17.0	16.0	12.0	12.0	6.0	6.0	7.0	7.0	12.0	12.0
3	22.0	21.0	16.0	16.0	12.0	11.0	6.0	6.0	7.0	7.0	12.0	12.0
á	21.0	21.0	16.0	16.0	11.0	11.0	6.0	6.0	8.0	7.0	12.0	12.0
Ś	21.0	21.0	16.0	16.0	11.0	11.0	6.0	6.0	8.0	8.0	12.0	12.0
•								•••	-	•••		
6	21.0	21.0	16.0	16.0	11.0	11.0	6.0	6.0	8.0	8.0	13.0	12.0
7	21.0	20.0	16.0	16.0	11.0	11.0	6.0	6.0	8.0	8.0	13.0	13.0
ė.	20-0	20.0	16.0	16.0	11.0	10.0	6.0	6.0	8.0	8.0	13.0	13.0
ě	20.0	20.0	16.0	16.0	10.0	10.0	6.0	6.0	8.0	8.0	13.0	12.0
10	20.0	19.0	16.0	15.0	10.0	9.0	6.0	6.0	8.0	8.0	12.0	12.0
10	20.0	17.0	10.0	13.0	10.0	7.0	•••	•••	0.0	040	12.0	1210
11	19.0	19.0	15.0	15.0	9.0	9.0	6.0	6.0	8.0	8.0	12.0	12.0
12	19.0	19.0	15.0	15.0	9.0	8.0	6.0	6.0	8.0	8.0	12.0	12.0
13	19.0	19.0	15.0	15.0	8.0	8.0	6.0	6.0		8.0	12.0	12.0
14	19.0	19.0	15.0	14.0	8.0	8-0	6.0	6.0	9.0 9.0	9.0	12.0	12.0
15	19.0	18.0	14.0	14.0	8.0	8.0	6.0	6.0	10.0	9.0	12.0	12.0
19	17.0	10.0	14.0	14.0	8.0	0.0	0.0	0.0	10.0	7.0	12.0	12.0
	18.0	18.0	14.0	14.0		• •		6.0	10.0	10.0	12.0	12.0
16	18.0	18.0	14.0	14.0	8.0	8.0	7.0 7.0	5.0	10.0	10.0	12.0	12.0
17			14.0		8.0	7.0		7-0	10.0			
18	18.0	18.0	14.0	14-0	7-0	7.0	7.0	7.0	10.0	10.0	12.0	12.0
19	18.0	18.0	14.0	14-0	7.0	7.0	7.0	7.0	10.0	10-0	12.0	12.0
20	18.0	18.0	14.0	14.0	7.0	7.0	7.0	7.0	11.0	10.0	12.0	12.0
21	18.0	18.0	14.0	14-0	7.0	7.0	7.0	7.0	11.0	11.0	13.0	12.0
22	18.0	18.0	14.0	14.0	7.0	7.0	7.0	7.0	11.0	11.0	13.0	13.0
23	18.0	17.0	14.0	14-0	7.0	7.0	7.0	7.0	11.0	11.0	13.0	13.0
24	17.0	17.0	14.0	13.0	7.0	7.0	7.0	7.0	11.0	11.0	13.0	13.0
25	17.0	17.0	13.0	13.0	7.0	6.0	7.0	7.0	11.0	11.0	13.0	13.0
26	17.0	17.0	13.0	13.0	6.0	6.0	7.0	7.0	12.0	11.0	13.0	13.0
27	17.0	17.0	13.0	13.0	6.0	6.0	7.0	7.0	12.0	12.0	13.0	13.0
28	17.0	17.0	13.0	13.0	6.0	6.0	7.0	7.0	12.0	12.0	13.0	13.0
29	17.0	17.0	13.0	12.0	6.0	6.0	7.0	6.0	12.0	12.0	14.0	13.0
30	17.0	17.0	12.0	12.0	6.0	6.0	7.0	6.0			14.0	14.0
31	17.0	17.0			6.0	6.0	7.0	7.0			14.0	14.0
MONTH	22.0	17.0	17.0	12.0	12.0	6.0	7.0	6.0	12.0	7.0	14.0	12.0
	A	PRIL	1	MAY	اق	UNE	JI	JLY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	14.0	17.0	17.0	20.0	20.0	26.0	MIN 26.0	MAX 25.0	25.0	MAX 22.0	MIN 22.0
	14.0 14.0								25.0			22.0
1	14.0 14.0	14.0	17.0 17.0	17.0 17.0	20.0	20.0	26.0 26.0	26.0 26.0	25.0 25.0	25.0 25.0	22.0 23.0	22.0 22.0
1 2 3	14.0	14.0 14.0	17.0 17.0 17.0	17.0	20.0	20.0 20.0 20.0	26.0 26.0 26.0	26.0 26.0 26.0	25.0 25.0 25.0	25.0 25.0	22.0 23.0 23.0	22.0 22.0 23.0
1 2	14.0 14.0 14.0	14.0 14.0 13.0	17.0 17.0	17.0 17.0 17.0	20.0 20.0 21.0 21.0	20.0 20.0 20.0 20.0	26.0 26.0	26.0 26.0	25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0	22.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0
1 2 3	14.0 14.0 14.0	14.0 14.0 13.0 13.0	17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0	20.0 20.0 21.0	20.0 20.0 20.0	26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0	25.0 25.0 25.0	25.0 25.0	22.0 23.0 23.0	22.0 22.0 23.0
1 2 3	14.0 14.0 14.0 13.0 13.0	14.0 14.0 13.0 13.0	17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0	20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0	22.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0
1 2 3 4 5	14.0 14.0 13.0 13.0	14.0 14.0 13.0 13.0 13.0	17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0	20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0	22.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0
1 2 3 4 5	14.0 14.0 13.0 13.0	14.0 14.0 13.0 13.0 13.0	17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0	22.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	14.0 14.0 14.0 13.0 13.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0	20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5	14.0 14.0 14.0 13.0 13.0	14.0 14.0 13.0 13.0 13.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9	14.0 14.0 13.0 13.0 14.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	14.0 14.0 14.0 13.0 13.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9	14.0 14.0 13.0 13.0 14.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0	14-0 14-0 13-0 13-0 13-0 14-0 14-0 14-0 15-0 16-0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14-0 14-0 14-0 13-0 13-0 14-0 14-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	14-0 14-0 14-0 13-0 13-0 14-0 14-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 19 10 10 11 11 12 13 14 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 24.0 24.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 22.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 24.0 24.0 24.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 22.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 22.0 22.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 6 6 7 8 8 9 9 10 0 11 12 13 14 15 15 16 17 18 19 20 21 12 22	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 24.0 24.0 24.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 22.0 22.0	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 22 23	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 22	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 6 6 7 8 8 9 9 10 0 11 12 13 14 15 15 16 17 18 19 20 21 12 22	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 16.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 24.0 24.0 24.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 22	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 5 15 16 17 18 19 20 22 23 24	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 22	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 22 23 24 25	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 24.0 24.0 24.0 25.0 25.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 5 15 16 17 18 19 20 22 23 24	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 9 10 20 21 22 22 23 24 25 26 27	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 24.0 24.0 24.0 25.0 25.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 26.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 24.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0	25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 2 3 4 5 6 7 8 9 10 11 12 13 3 14 5 15 16 17 18 9 20 22 23 24 25 26 26 27 28 8 9 9	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 26.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 27.0 27.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 20.0 21.0 21.0 21.0	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 22 23 24 25 26 27 8 29 30 31	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 24.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	22.0 23.0 22.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 24 25 26 27 28 29 30	14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 24.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 27.0 27.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 20.0 21.0 21.0 21.0	22.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 22 23 24 25 26 27 8 29 30 31	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	22.0 23.0 22.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 22 23 24 25 26 27 8 29 30 31	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	22.0 23.0 22.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0
1 2 2 3 4 4 5 5 6 7 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 1	14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	20.0 20.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0 26.0 26.0 26.0 27.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	26.0 25.0 25.0	25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	22.0 23.0 22.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0

11433400 CANYON CREEK NEAR GEORGETOWN, CALIF.

LOCATION.--Lat 38°56'03", long 120°52'21", in SWiNWi 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 22.0°C on several days during June and July; minimum, 1.0°C Dec. 17, 18.

Period of record: Water temperatures: Maximum, 23.5°C July 22, 1966; minimum, 1.0°C Dec. 17, 18, 1967.

TEMPERATURE	(°C)	OF WATER	WATER	VEAD	OCTORER	1067	TO S	EDTEMBER	1069	

			MPERATURE		MATER, WA	TER IEAR C	CTOBER 15	67 TU 5E				
	oc	TOBER	NOVE	MBER	DEC	EMBER	JAL	WARY	FEBI	RUARY	м	ARCH
DAY	MAX	MIN										
ı	16.0	15.0	9.0	8.0	6.0	6.0	3.0	3.0	4.0	3.0	9.0	8.0
2	15.0	14.0	9.0	8.0	6.0	5.0	3.0	2.0	4.0	4.0	9.0	8.0
3	14.0 14.0	13.0 13.0	9.0 10.0	8.0 9.0	6.0	4.0 6.0	3.0 2.0	2.0 2.0	4.0 5.0	4.0 4.0	9.0 10.0	8.0 B.0
5	14.0	13.0	10.0	9.0	7.0	6.0	2.0	2.0	6.0	5.0	11.0	10.0
	11.0	12.0	10.0				2.0	• •				
6 7	13.0 13.0	12.0 12.0	10.0 10.0	9.0 9.0	7.0 7.0	7.0 7.0	2.0 2.0	2.0	6.0 6.0	4.0	10.0 10.0	9.0 9.0
8	13.0	12.0	10.0	9.0	7.0	6.0	3.0	2.0	6.0	4.0	9.0	9.0
9 10	13.0 13.0	12.0 12.0	9•0 9•0	8.0 8.0	6.0 6.0	6.0 4.0	3.0 3.0	3.0 3.0	6.0 6.0	5.0 5.0	10•0 9•0	9.0 9.0
11 12	13.0 13.0	12.0 12.0	9.0 9.0	8.0 8.0	5.0 5.0	4.0	4.0 3.0	3.0 3.0	6.0 6.0	5.0 4.0	9.0 9.0	9.0 8.0
13	13.0	12.0	9.0	9.0	4.0	3.0	3.0	3.0	6.0	6.0	9.0	9.0
14	12.0	11.0	10.0	9.0	3.0	2.0	4.0	3.0	6.0	5.0	9.0	9.0
15	12.0	11.0	10.0	9.0	2.0	2.0	6.0	4.0	6.0	5.0	9.0	9.0
16	12.0	10.0	9.0	9.0	2.0	2.0	6.0	6.0	6.0	5.0	9.0	9.0
17 18	12.0 12.0	10.0	10.0 10.0	9.0 9.0	2.0 2.0	1.0 1.0	6.0 4.0	4.0	7.0 7.0	6.0	9.0 9.0	9.0 9.0
19	11.0	9.0	10.0	9.0	3.0	2.0	4.0	4.0	8.0	7.0	9.0	8.0
20	11.0	9.0	10.0	9.0	3.0	3.0	4.0	4.0	9.0	8.0	10.0	8.0
21	11.0	9.0	9.0	8.0	3.0	3.0	5.0	4.0	9.0	9.0	10.0	9.0
22	11.0	10.0	9.0	7.0	3.0	3.0	6.0	4.0	9.0	9.0	10.0	9.0
23 24	11.0 11.0	10.0	8.0 8.0	7.0 7.0	3.0 3.0	3.0 3.0	6.0 6.0	5.0	10.0 9.0	9.0 9.0	10.0 10.0	9.0 9.0
25	11.0	9.0	7.0	7.0	3.0	3.0	5.0	4.0	9.0	9.0	10.0	9.0
24												
26 27	11.0 10.0	9.0 9.0	7.0 7.0	6.0 6.0	3.0 4.0	3.0 3.0	5.0 4.0	4.0	9.0 9.0	8.0 8.0	10.0	9.0 9.0
28	10.0	9.0	7.0	7.0	4.0	3.0	4.0	4.0	9.0	8.0	11.0	9.0
29 30	9.0 9.0	8.0 7.0	6.0 6.0	6.0 6.0	4.0 3.0	3.0 3.0	4.0 3.0	3.0 2.0	9.0	8.0	11.0 12.0	10.0 11.0
31	9.0	7.0			3.0	3.0	4.0	3.0			12.0	11.0
MONTH	16.0	7.0	10.0	6.0	7.0	1.0	6.0	2.0	10.0	3.0	12.0	8.0
101111												
	AI	PRIL	*	AY	JL	JNE	JU	IL Y	AUG	SUST	SEP	TEMBER
DAY	MAX	MIN										
1	12.0	11.0	16.0	13.0	18.0	16.0	21.0	17.0	21.0	19.0	19.0	17.0
2	11.0	10.0	16.0	13.0	19.0	16.0	21-0	17.0	21.0	19.0	19.0	17.0
3	11.0	10.0	16.0 17.0	14.0	18.0	17.0	21.0	17.0 18.0	21.0	19.0	18.0 19.0	17.0
5	11.0 12.0	10.0	16.0	14.0 14.0	19.0 17.0	16.0 16.0	21.0 21.0	18.0	21.0 20.0	18.0 18.0	19.0	17.0 17.0
6 7	11.0 11.0	10.0	16.0 16.0	13.0 13.0	17.0 18.0	16.0 16.0	21.0 22.0	19.0 19.0	20.0	18.0 18.0	19.0 19.0	17.0 17.0
8	12.0	10.0	16.0	13.0	18.0	15.0	21.0	19.0	21.0	18.0	18.0	17.0
9 10	12.0	11.0	16.0 16.0	13.0 13.0	18.0	15.0 15.0	21.0 21.0	19.0 18.0	20.0	18.0 18.0	18.0 18.0	17.0 17.0
10	12.0	11.0	10.0	13.0	10.0	15.0	21.0	10.0	20.0	10.0	10.0	
11	12.0	11.0	16.0	13.0	18.0	16.0	21.0	18.0	20.0	18.0	18-0	17.0
12 13	12.0 12.0	11.0 11.0	15.0 14.0	13.0 12.0	17.0 17.0	15.0 14.0	21.0 21.0	18.0 18.0	21.0 19.0	18.0 18.0	17.0 17.0	16.0 16.0
14	12.0	11.0	13.0	12.0	17.0	15.0	21.0	18.0	19.0	17.0	17.0	16.0
15	12.0	11.0	14.0	12.0	18.0	16.0	21.0	18.0	19.0	17.0	17.0	16.0
16	12.0	11.0	14.0	12.0	19.0	16.0	21.0	18.0	19.0	17.0	17-0	15.0
17 18	11.0 11.0	9.0 9.0	15.0 16.0	13.0 14.0	19.0 20.0	17.0 17.0	21.0 22.0	18.0 18.0	18.0 18.0	17.0 17.0	17.0 17.0	15.0 15.0
19	12.0	10.0	16.0	14.0	20.0	17.0	22.0	18.0	18.0	17.0	16.0	14.0
20	12.0	10.0	16.0	15.0	20.0	17.0	22.0	18.0	17.0	16.0	15.0	14.0
21	12.0	9.0	16.0	15.0	20.0	17.0	21.0	17.0	17.0	16.0	14.0	13.0
22	12.0	9.0	17.0	14.0	21.0	17.0	21.0	17.0	17.0	15.0	14.0	12.0
23 24	13.0	11.0	16.0 15.0	13.0 13.0	21.0	17.0 18.0	21.0	17.0 17.0	17.0 17.0	16.0 16.0	14.0 14.0	12.0 12.0
25	13.0	11.0	16.0	14.0	21.0	18.0	21.0	17.0	17.0	16.0	14.0	12.0
26	14.0	12.0	17.0	14.0	22.0	18.0	21.0	18.0	17.0	16.0	14.0	12.0
27	14.0	12.0	18.0	15.0	22.0	18.0	22.0	18.0	17.0	16.0	14.0	12.0
28	14.0	12.0	18.0	16.0	22.0	18.0	22.0	18.0	17.0	16.0	14.0	12.0
29 30	15.0 15.0	13.0 13.0	18.0	16.0 16.0	21.0 21.0	17.0 17.0	22.0 21.0	19.0 19.0	18.0 18.0	16.0 17.0	14.0	13.0 12.0
31			18.0	15.0					18.0	17.0		
MONTH	15.0	9.0	1 B. O	12.0	22.0	14.0	22.0	17.0	21.0	15.0	19.0	12.0
YEAR	22.0	1.0										

11439500 SOUTH FORK AMERICAN RIVER NEAR KYBURZ, CALIF.

LOCATION. --Lat 38°45'49", long 120°19'39", in SW18W1 sec.29, T.11 N., R.15 E., El Dorado County, temperature recorder at gaging station on right hank 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 24.0°C June 26, 27, July 4, 8; minimum, 3.0°C on many days during November to Pebruary.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		TE	MPERATURE	(C) Or	WALLER, WA.	In Inch	CIOBER 15	0, 10 221				
	OC.	TOBER	NOV	MBER	DEC	EMB ER	AAL	IUARY	FEB	RUARY	M	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.0	9.0	7.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	6.0
2	14.0	13.0	9.0	7.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	6.0
3	13.0	12.0	9.0	8.0	4.0	3.0	3.0	3.0	3.0	3.0	6.0	6.0
4	12.0	11.0	9.0	8.0	6.0	4.0	3.0	3.0	3.0	3.0	6.0	6.0
5	12.0	11.0	11.0	9.0	6.0	4.0	3.0	3.0	4.0	3.0	6.0	6.0
6	11.0	9.0	10.0	9.0	4.0	3.0	3.0	3.0	4.0	3.0	6.0	6.0
7	12.0	10.0	10.0	9.0	4.0	3.0	3.0	3.0	4.0	4.0	6.0	6.0
8	13.0 13.0	11.0 11.0	10.0	9.0 B.0	4.0 4.0	3.0	3.0 3.0	3.0	5.0 5.0	4.0 4.0	6.0 6.0	6.0 6.0
10	12.0	11.0	9.0	B.O	4.0	4.0	3.0	3.0	5.0	4.0	6.0	6.0
11 12	13.0 13.0	11.0 11.0	9.0 9.0	8.0 B.0	4.0 4.0	3.0 3.0	3.0 3.0	3.0 3.0	6.0 6.0	4.0 5.0	6.0 6.0	6.0 6.0
13	13.0	11.0	10.0	9.0	3.0	3.0	3.0	3.0	6.0	6.0	6.0	6.0
14	12.0	11.0	11.0	10.0	3.0	3.0	3.0	3.0	6.0	6.0	6.0	5.0
15	11.0	9.0	11.0	10.0	3.0	3.0	3.0	3.0	6.0	5.0	5.0	5.0
16	11.0	9.0	11.0	10.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0
17	12.0	10.0	11.0	10.0	3.0	3.0	3.0	3.0	6.0	5.0	5.0	5.0
18	11.0	9.0	11.0	10.0	3.0	3.0	3.0	3.0	6.0	4.0	5.0	5.0
19	11.0	9.0	11.0	9.0	3.0	3.0	4.0	3.0	6.0	6.0	5.0	5.0
20	11.0	9.0	9.0	9.0	3.0	3.0	4.0	3.0	6.0	5.0	5.0	5.0
21	11.0	9.0	9.0	8.0	3.0	3.0	5.0	4.0	6.0	6.0	5.0	5.0
22	12.0	10.0	8.0	7.0	3.0	3.0	6.0	5.0	6.0	6.0	6.0	5.0
23	12.0	11.0	7.0	6.0	3.0	3.0	6.0	4.0	6.0	6.0	6.0	6.0
24 25	11.0 11.0	10.0 10.0	7.0 7.0	6.0 6.0	3.0 3.0	3.0 3.0	5.0 5.0	4.0 4.0	6.0 6.0	6.0 6.0	6.0 6.0	6.0 6.0
2,	11.0	10.0	***	0.0	3.0	3.0	,,,,	4.0	0.0	•••	0.0	
26	11.0	9.0	7.0	6.0	4.0	3.0	5.0	4-0	6.0	6.0	6.0	6.0
27 28	10.0	8.0 9.0	7.0 6.0	6.0 5.0	4.0	3.0 3.0	4.0	3.0	6.0	6.0 6.0	6.0 6.0	6.0
29	10.0	9.0	5.0	4.0	4.0	3.0	3.0 3.0	3.0 3.0	6.0	6.0	7.0	6.0 6.0
30	10.0	8.0	4.0	3.0	3.0	3.0	3.0	3.0			7.0	7.0
31	9.0	7.0			3.0	3.0	3.0	3.0			8.0	7.0
MONTH	14.0	7.0	11.0	3.0	6.0	3.0	6.0	3.0	6.0	3.0	8.0	5.0
		P R TI		4AV		INE			ALU	THET	SED.	TEMBER
		PRIL		AAY		UNE		ILY		GUST		TEMBER
DAY	AI XAM	PRIL MIN	MAX	AAY Min	IL XAM	UNE MIN	JU MÁX	ILY HIN	AUA Max	GUST HIN	SEP ¹ Max	TEMBER MIN
1	MAX B.O	MIN 7.0	MAX B.O	MIN B.O					MAX 23.0		MAX 20.0	
1 2	MAX B.O 8.O	MIN 7.0 7.0	MAX B.O 8.0	MIN B.0 8.0	MAX 12-0 12-0	MIN 12.0 12.0	MAX 22.0 20.0	MIN 16.0 17.0	MAX 23.0 23.0	MIN 19.0 19.0	MAX 20-0 19-0	MEN 18.0 18.0
1 2 3	MAX B.O 8.O 7.O	MIN 7.0 7.0 7.0	MAX B.O 8.O B.O	MIN B.O 8.0 B.O	MAX 12.0 12.0 13.0	MIN 12.0 12.0 12.0	MAX 22.0 20.0 22.0	MIN 16.0 17.0 16.0	MAX 23.0 23.0 22.0	MIN 19.0 19.0 19.0	MAX 20.0 19.0 19.0	MEN 18.0 18.0 17.0
1 2 3 4	MAX 8.0 7.0 7.0	MIN 7.0 7.0 7.0 7.0	MAX 8.0 8.0 8.0 8.0	MIN 8.0 8.0 8.0 8.0	MAX 12.0 12.0 13.0 13.0	MIN 12.0 12.0 12.0 13.0	MAX 22.0 20.0 22.0 24.0	MIN 16.0 17.0 16.0 17.0	MAX 23.0 23.0 22.0 21.0	MIN 19.0 19.0 19.0 18.0	MAX 20.0 19.0 19.0 19.0	MIN 18.0 18.0 17.0 17.0
1 2 3	MAX 8.0 7.0 7.0 8.0	MIN 7.0 7.0 7.0	MAX B.O 8.O B.O	MIN B.0 8.0 B.0	MAX 12.0 12.0 13.0	MIN 12.0 12.0 12.0	MAX 22.0 20.0 22.0	MIN 16.0 17.0 16.0	MAX 23.0 23.0 22.0	MIN 19.0 19.0 19.0	MAX 20.0 19.0 19.0	MEN 18.0 18.0 17.0
1 2 3 4 5	MAX B. 0 8. 0 7. 0 7. 0 B. 0	MIN 7.0 7.0 7.0 7.0 7.0	MAX B.0 8.0 B.0 9.0	MIN 8.0 8.0 8.0 8.0 8.0	MAX 12.0 12.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0	MAX 23.0 23.0 22.0 21.0 21.0	MIN 19.0 19.0 19.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0	MIN 18.0 18.0 17.0 17.0
1 2 3 4 5	MAX B.O 8.O 7.O 7.O B.O B.O	MIN 7.0 7.0 7.0 7.0 7.0 8.0	MAX B.0 8.0 B.0 B.0 9.0	MIN 8.0 8.0 8.0 8.0 9.0	MAX 12-0 12-0 13-0 13-0 13-0	MIN 12.0 12.0 12.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0	MAX 23.0 23.0 22.0 21.0 21.0	MIN 19.0 19.0 19.0 18.0 18.0 18.0	MAX 20-0 19-0 19-0 19-0 19-0	HIN 18.0 18.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	MAX B. 0 8. 0 7. 0 7. 0 B. 0 B. 0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	MAX 8.0 8.0 8.0 9.0 9.0	B.0 8.0 8.0 8.0 8.0 9.0	MAX 12-0 12-0 13-0 13-0 13-0	MIN 12.0 12.0 12.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 24.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0	MAX 23.0 23.0 22.0 21.0 21.0 21.0 22.0	MIN 19.0 19.0 19.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0	HIN 18.0 18.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	MAX B. 0 8. 0 7. 0 7. 0 B. 0 B. 0 B. 0 B. 0	7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0	B.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0	MAX 23.0 23.0 22.0 21.0 21.0 21.0 21.0 22.0 21.0	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9	MAX 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MAX B.0 B.0 B.0 9.0 9.0 9.0	MIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0	MAX 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0	MAX 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0	HEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	#AX 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MAX B.0 8.0 B.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MAX 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0	MAX 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0	HEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MAX B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	MAX 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0	MAX 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0	HEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	#AX 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MAX B.0 8.0 B.0 9.0 9.0 9.0 9.0 9.0	MIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	MAX 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0	MAX 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0	HEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	B. 0 8. 0 7. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN B.0 B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0	MAX 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	HEN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	B. 0 8. 0 7. 0 7. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	B.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 20.0 22.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0	MAX 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	MAX 8-0 8-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 8-0	MIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	HAX 23.0 23.0 22.0 21.0 21.0 21.0 22.0 22.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX B. 0 8. 0 7. 0 7. 0 B. 0	#IN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	#AX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	HIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	MIN 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 3 4 5 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	MAX B. 0 8. 0 7. 0 7. 0 8. 0 B. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8. 0 8	#IN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 7.0	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX B. 0 8. 0 7. 0 7. 0 B. 0	#IN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	#AX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	HIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16-0 17-0 16-0 17-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 17-0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	NIN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 14.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 7 8 8 9 9 10 11 11 12 13 14 15 15 16 17 18 19 20 21 22	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0 16.0 14.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0	#AX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 16.0 17.0 16.0 17.0 16.0 14.0 14.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 7 8 9 10 11 11 12 13 14 15 17 18 19 20 20 21 22 22 23 24	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 4 5 6 7 7 8 9 10 11 11 11 13 11 15 16 17 18 19 20 21 22 23 24 25	#AX B.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	M1N 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 25 26	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	B.0 B.0 B.0 B.0 P.0 P.0 P.0 P.0 P.0 B.0 B.0 B.0 B.0 B.0 B.0 B.0 B.0	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 27 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	B.0 B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 B.0 B.0 B.0 B.0 B.0 B.0 B.0 B	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	B.0 B.0 B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 B.0 B.0 B.0 B.0 B.0 B.0 B.0 B	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 19.0 1	#AX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 27 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	B.0 B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 B.0 B.0 B.0 B.0 B.0 B.0 B.0 B	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 13.0 13.0 13.0 14.0	MIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	B.0 B.0 B.0 B.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	B.0 B.0 B.0 B.0 P.0 P.0 P.0 P.0 P.0 P.0 P.0 P	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 13.0 14.0 15.0 17.0 1	MAX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 223 224 225 26 27 28 29 30 30	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 18.0 18.0 17.0 18.0	22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	HIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 25 26 27 28 29 30 31	#AX 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	#AX 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	#IN 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	#AX 22.0 20.0 22.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	HIN 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 13.0 13.0 13.0 14.0	MIN 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17

11445500 SOUTH FORK AMERICAN RIVER NEAR LOTUS, CALIF.

LOCATION.--Lat 38°49'05", long 120°56'45", in SW1 sec.11, T.11 N., R.9 E., El Dorado County, temperature recorder at gaging station on left bank, 0.4 mile downstream from Greenwood Creek, 2.4 miles northwest of Lotus, and 3.3 miles northwest of Coloma.

DRAINAGE AREA. -- 673 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1958 to September 1963. Water temperatures: December 1959 to September 1968.

EXTREMES. -- 1967-68:

namno,--lawy--ps: Water temperatures: Maximum, 19.0°C on several days during June and July; minimum, 4.0°C on several days dur-ing January and February.

Period of record: Water temperatures: Maximum, 29.5°C July 20, 1960; minimum, 1.0°C Jan. 2, 6, 1960, Dec. 28-31, 1962.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					•			967 TO SE				
	oc.	TOBER	NOV	EMBER	DEC	EMBER	AL	NUARY	FEBI	RUARY	M	ARCH
DAY	MAX	MEN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIM
1	17.0	17.0	12.0	11.0	9.0	9.0	6.0	5.0	5.0	4.0	9.0	8.0
2	17.0	16.0	11.0	11.0	9.0	8.0	6.0	5.0	5.0	5.0	9.0	8.0
3	17.0 17.0	16.0 16.0	11.0	11.0 11.0	8.0 8.0	8.0 8.0	5.0 5.0	5.0 4.0	6.0 7.0	5.0 6.0	9.0	8.0 8.0
5	18.0	16.0	11.0	11.0	8.0	8.0	5.0	4.0	7.0	6.0	9.0	9.0
6	17.0	16.0	11.0	11.0	8.0	8.0	4.0	4.0	7.0	6.0	9.0	8.0
7	17.0	16.0	11.0	11.0	8.0	8.0	4.0	4.0	8.0	7.0	9.0	8.0
8	17.0	16.0	11.0	11.0	8.0	8.0	4.0	4.0	8.0	7.0	8.0	8.0
9 10	17.0 17.0	15.0 16.0	11.0	11.0 11.0	8.0 7.0	7.0 7.0	4.0 4.0	4.0 4.0	8.0	7.0 7.0	9.0 9.0	8.0 8.0
11 12	17.0 18.0	15.0 16.0	11.0 11.0	10.0	7.0 7.0	7.0 7.0	4.0 4.0	4.0 4.0	8.0 8.0	7.0 6.0	8.0 8.0	8.0 8.0
13	18.0	17.0	11.0	11.0	7.0	6.0	4.0	4.0	8.0	7.0	9.0	8.0
14	17.0	15.0	11.0	11.0	6.0	6.0	5.0	4.0	8.0	7.0	8.0	8.0
15	16.0	14.0	11.0	11.0	6.0	6.0	6.0	5.0	9.0	8.0	8.0	8.0
16	15.0	14.0	11.0	11.0	6.0	6.0	6.0	6.0	8.0	7.0	8.0	8.0
17	15.0	14.0	11.0	11.0	6.0	6.0	6.0	6.0	7.C	7.0	8.0	8.0
18 19	15.0 14.0	14.0 13.0	11.0 11.0	11.0	6.0 6.0	6.0 6.0	6.0 5.0	4.0 4.0	8.C 8.0	7.0 8.0	9.0 9.0	8.0 8.0
20	14.0	13.0	11.0	11.0	6.0	6.0	5.0	5.0	8.0	8.0	9.0	8.0
21	14.0	13.0	11 0	10.0	6.0	6.0	6.0	5.0	9.0	8.0	9.0	8.0
22	14.0	13.0	11.0 11.0	10.0	6.0	6.0	6.0	6.0	9.0	9.0	9.0	8.0
23	14.0	13.0	10.0	10.0	6.0	6.0	6.0	5.0	9.0	9.0	9.0	8.0
24 25	13.0 13.0	13.0 12.0	10.0	10.0 10.0	6.0 6.0	6.0 6.0	6.0 6.0	5.0 5.0	9.0 9.0	9.0 9.0	9.0 9.0	7.0 8.0
	13.0		10.0									
26	13.0	12.0	10.0	10.0	6.0	6.0	5.0	5.0	9.0	9.0	10.0	7.0
27 28	12.0 12.0	12.0 11.0	10.0 10.0	10.0 9.0	6.0 6.0	6.0 6.0	5.0 5.0	5.0 5.0	9.0 9.0	8.0 8.0	10.0 11.0	8.0 8.0
29	12.0	12.0	9.0	9.0	6.0	6.0	5.0	5.0	9.0	8.0	11.0	8.0
30 31	12.0 12.0	11.0 11.0	9.0	9.0	6.0 6.0	6.0 6.0	5.0 5.0	5.0 5.0			12.0 12.0	10.0 11.0
21	12.0	11.0			0.0	0.0	3.0					
MONTH	18.0	11.0	12.0	9.0	9.0	6.0	6.0	4.0	9.0	4.0	12.0	7.0
	A	PRIL		YAY	J	JNE	JL	JLY	AU	GUST	SEP	TEMBER
DAY	MAV	411	MAY	MIN	M4 V	MITS	MAV	MTM	MAV	MIN	444	MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	10.0	14.0	11.0	17.0	14.0	18.0	16.0	16.0	14.0	17.0	14.0
1 2	12.0 10.0	10.0 10.0	14.0 14.0	11.0 11.0	17.0 17.0	14.0 14.0	18.0 16.0	16.0 14.0	16.0	14.0 14.0	17.0 17.0	14.0
1 2 3 4	12.0 10.0 11.0	10.0 10.0 9.0 9.0	14.0 14.0 14.0	11.0	17.0	14.0	18.0	16.0	16.0	14.0	17.0	14.0
1 2 3	12.0 10.0	10.0 10.0 9.0	14.0 14.0 14.0	11.0 11.0 12.0	17.0 17.0 17.0	14.0 14.0 14.0	18.0 16.0 17.0	16.0 14.0 14.0	16.0 16.0 17.0	14.0 14.0 14.0	17.0 17.0 16.0	14.0 16.0 15.0
1 2 3 4 5	12.0 10.0 11.0 10.0 10.0	10.0 10.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0	14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0	16.0 14.0 14.0 14.0 15.0	16.0 16.0 17.0 17.0	14.0 14.0 14.0 14.0 15.0	17.0 17.0 16.0 17.0	14.0 16.0 15.0 15.0 14.0
1 2 3 4 5	12.0 10.0 11.0 10.0 10.0	10.0 10.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0	14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0	16.0 14.0 14.0 14.0 15.0	16.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 15.0	17.0 17.0 16.0 17.0 17.0	14.0 16.0 15.0 15.0 14.0
1 2 3 4 5 6 7 8	12.0 10.0 11.0 10.0 10.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0	14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0	16.0 14.0 14.0 14.0 15.0	16.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 15.0	17.0 17.0 16.0 17.0 17.0	14.0 16.0 15.0 15.0 14.0
1 2 3 4 5 6 7 8	12.0 10.0 11.0 10.0 10.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 18.0 18.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 15.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0	14.0 16.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9	12.0 10.0 11.0 10.0 10.0 11.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0	16.0 14.0 14.0 15.0 14.0 15.0 16.0 15.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0	14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0	14.0 16.0 15.0 15.0 14.0 14.0 14.0 16.0
1 2 3 4 5 6 7 8 9	12.0 10.0 11.0 10.0 10.0 11.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 15.0 16.0	16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9	12.0 10.0 11.0 10.0 10.0 11.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 16.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13	12.0 10.0 11.0 10.0 10.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 16.0 18.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 15.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 14.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	12.0 10.0 11.0 10.0 10.0 11.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 16.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 16.0 16.0	16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 10.0 11.0 10.0 10.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0 18.0 17.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 16.0 17.0 18.0	16.0 14.0 14.0 14.0 15.0 14.0 16.0 16.0 16.0 15.0 14.0 15.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 14.0 14.0 14.0	14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 10.0 11.0 10.0 10.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 16.0 18.0 16.0 18.0 16.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0	16.0 14.0 14.0 15.0 14.0 15.0 16.0 16.0 14.0 16.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 15.0 14.0 17.0 15.0 14.0 17.0	14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0
123345 678910 11213415 14516718	12.0 10.0 11.0 10.0 10.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 14.0 15.0 16.0 18.0 18.0 16.0 18.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	16.0 14.0 14.0 14.0 15.0 14.0 15.0 16.0 15.0 16.0 14.0 16.0 16.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 15.0 14.0 17.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0	17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	14-0 15.0 15.0 14-0 14-0 14-0 14-0 16-0 14-0 14-0 15-0 16-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 10.0 11.0 10.0 10.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 16.0 18.0 16.0 18.0 16.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0	16.0 14.0 14.0 15.0 14.0 15.0 16.0 16.0 14.0 16.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 15.0 14.0 17.0 15.0 14.0 17.0	14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20	12.0 10.0 11.0 10.0 10.0 10.0 11.0 11.0	10.0 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 19.0 18.0 19.0 19.0 19.0	16.0 14.0 14.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 16.0	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 14.0 17.0 15.0 14.0 14.0 14.0 14.0 14.0	14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 16.0 15.0 16.0 15.0 16.0 16.0
1 2 3 4 4 5 6 7 8 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22	12.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 17.0	16.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 14.0 16.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 14.0 17.0 15.0 14.0 14.0 14.0 14.0 14.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 15.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11) 12 12 13 14 15 16 17 18 19 20 21 22 22 23	12.0 10.0 11.0 10.0 11.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 18.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0	16.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	14.0 14.0 14.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 13.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 14.0 14.0 14.0 16.0 14.0 15.0 15.0 15.0 15.0 15.0
1 2 3 4 4 5 6 7 8 9 10 11 11 13 11 14 15 15 16 17 18 19 20 21 22 23 24	12.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 16.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 3 14 5 15 16 17 18 19 20 21 22 23 24 25	12.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	16.0 14.0 14.0 15.0 15.0 16.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0	14.0 16.0 15.0 15.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0
1 2 3 4 4 5 6 7 8 9 10 11 11 12 12 12 12 12 12 12 12 12 12 12	12.0 10.0 10.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 15.0 16.0 18.0 18.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	16.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 16.0 16.0	14.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0
1 2 3 4 4 5 6 7 8 9 10 11 11 13 11 14 15 15 16 17 18 19 20 21 22 23 24 25 26 6 27	12.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 3 11 4 15 1 16 17 17 18 19 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	12.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 13.0	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0
1 2 3 4 5 6 7 8 9 10 11 11 12 12 12 12 12 12 12 12 12 12 12	12.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 16.0 15.0 16.0 18.0 18.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 14.0 14.0 15.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0
1 2 2 3 4 4 5 5 6 7 8 9 9 10 11 11 12 12 12 12 12 12 12 12 12 12 12	12.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 13.0	17.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0	16.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 14.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 13.0	17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 11 12 12 12 12 12 12 12 12 12 12 12	12.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	17.0 17.0 17.0 16.0 14.0 15.0 16.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 17.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 14.0 14.0 15.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0
1 2 2 3 4 4 5 5 6 7 8 9 9 10 11 11 12 12 12 12 12 12 12 12 12 12 12	12.0 10.0 11.0 11.0 11.0 11.0 12.0 12.0	10.0 10.0 9.0 9.0 9.0 9.0 9.0 10.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 13.0	17.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	18.0 16.0 18.0 18.0 18.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0	16.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 14.0 17.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	14.0 14.0 14.0 14.0 15.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16

11446500 AMERICAN RIVER AT FAIR OAKS, CALIF.

LOCATION. -- Lat 38°38'08", long 121°13'36", in SENNE 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.

DRAINAGE AREA, -- 1,888 sq mi.

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 1968.

EXTREMES. — 1967-68:
Water temperatures: Maximum, 21.0°C on many days during July to September; minimum, 6.0°C Jan. 29-31.

ater temperatures: Maximum (1951-58, 1959-64, 1965-68), 27.5°C July 27, Aug. 3, 1954; minimum, freezing point Nov. 25, 26, 1957, Nov. 25-29, 1958. Period of record:

REMARKS .-- Recorder malfunctioned Mar. 8, 25.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	00	TOBER	MOM	EMBER	OEC	MBER		IUARV	cea	WARY		ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	19.0 18.0	18.0 18.0	17.0 17.0	17.0 17.0	14.0 13.0	13.0 13.0	8.0 8.0	8.0 8.0	7.0 7.0	7.0 7.0	9.0 8.0	8.0 8.0
3	18.0	18.0	17.0	17.0	13.0	13.0	8.0	8.0	8.0	7.0	9.0	8.0
•	18.0	18.0	17.0	17.0	13.0	13.0	8.0	8.0	8.0	8.0	9-0	9.0
5	18.0	18.0	17.0	17.0	13.0	13.0	9.0	8.0	8.0	8.0	9-0	9.0
6	18.0	17.0	17.0	17.0	13.0	12.0	8.0	8.0	8.0	8.0		
7 8	17.0 17.0	17.0 16.0	17.0 17.0	17.0 17.0	12.0 12.0	12.0 12.0	8.0 8.0	8.0 8.0	8.0 8.0	7.0 7.0	9•0 9•0	9.0 9.0
ě	17.0	16.0	17.0	17.0	12.0	12.0	8.0	8.0	8.0	7.0	9.0	9-0
10	17.0	16.0	17.0	17.0	12.0	12.0	8.0	8.0	8.0	7.0	9.0	9.0
11	17.0	16.0	17.0	16.0	12.0	12.0	8.0	8.0	7.0	7.0	9.0	9.0
12	17.0	16.0	16.0	16.0	12.0	11.0	8.0	8.0	7.0	7.0	9.0	9.0
13 14	17.0 17.0	16.0	16.0 17.0	16.0 16.0	11.0 11.0	11.0 11.0	8.0 8.0	8.0 8.0	7.0 7.0	7.0 7.0	9.0 9.0	9.0 9.0
15	16.0	16.0	16.0	16.0	11.0	10.0	8.0	8.0	7.0	7.0	9.0	9.0
16	17.0	16.0	16-0	16.0	11.0	11.0	8.0	8.0	8.0	7.0	9.0	9.0
17	17.0	17.0	16.0	16.0	11.0	10.0	8.0	8.0	8.0	8.0	9.0	9.0
18	17.0	17.0	16.0	16.0	10.0	9.0	8.0	8.0	8.0	8.0	9-0	9.0
19	17.0	17.0	16.0	16.0	9.0	9.0	8.0	7.0 7.0	8.0	8.0	10-0	9.0
20	17.0	17.0	16.0	16.0	9.0	9.0	7.0	7.0	9.0	8.0	10.0	10.0
21	17.0	17.0	16.0	16.0	9.0	9.0	7.0	7.0	9.0	9.0	10.0	10-0
22 23	17.0 17.0	17.0 17.0	16.0 16.0	15.0 16.0	9.0 9.0	9.0 9.0	8.0 8.0	7•0 7•0	9.0 8.0	8.0 8.0	10-0 10-0	10.0
24	17.0	17.0	16.0	15.0	9.0	9.0	7.0	7.0	8.0	8.0	10-0	10.0
25	17.0	17.0	15.0	15.0	9.0	9.0	7.0	7.0	9.0	8.0		
26	17.0	17.0	15.0	15.0	9.0	9.0	7.0	7.0	9.0	8.0	11.0	11.0
27	17.0	17.0	15.0	14.0	9.0	9-0	7.0	7.0	9.0	8.0	11.0	11.0
28 29	17.0 17.0	17.0 17.0	14.0 14.0	14.0 14.0	9.0 9.0	9.0 8.0	7.0 7.0	7.0 6.0	9.0 9.0	8.0 8.0	11.0 11.0	11.0
30	17.0	17.0	14.0	14.0	9.0	8.0	6.0	6.0			12.0	11.0
31	17.0	17.0			8.0	8.0	7.0	6.0			12.0	12.0
HONTH	19.0	16.0	17.0	14.0	14.0	8.0	9.0	6.0	9.0	7.0	12.0	8.0
	Á1	PRIL		MAY						SUST		TEMBER
	-	PKIL	,	TAT	31	ME	J	JLY	AUG	3US I	SEP	CHOCK
DAY	MAX	MIN	MAX	MIN	MAX	ME MIN	MAX	JLY MIN	MAX	MIN	MAX	MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY 1 2	MAX 12.0	MIN 12.0	MAX 14.0	MIN 13.0	MAX 17.0	MIN 16.0	MAX 17.0	MIN 17.0	MAX 21.0	MIN 20.0	MAX 21.0	#IN 19.0
1 2 3	MAX 12.0 12.0 12.0	MIN 12.0 11.0 12.0	MAX 14-0 14-0 14-0	MIN 13.0 14.0 13.0	MAX 17.0 17.0 16.0	MIN 16.0 16.0 16.0	MAX 17-0 17-0 17-0	MIN 17.0 17.0 17.0	MAX 21.0 21.0 21.0	MIN 20.0 20.0 20.0	MAX 21.0 21.0 21.0	MIN 19.0 19.0 20.0
1 2 3	MAX 12.0 12.0 12.0 12.0	MIN 12.0 11.0 12.0 12.0	MAX 14.0 14.0 14.0 15.0	MIN 13.0 14.0 13.0 14.0	MAX 17.0 17.0 16.0 16.0	MIN 16.0 16.0 16.0	MAX 17.0 17.0 17.0 18.0	MIN 17.0 17.0 17.0 17.0	MAX 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0	MAX 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 13.0	MIN 12.0 11.0 12.0 12.0	MAX 14-0 14-0 14-0 15-0 16-0	HIN 13-0 14-0 13-0 14-0	MAX 17.0 17.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0	MAX 17.0 17.0 17.0 18.0 18.0	MIN 17-0 17-0 17-0 17-0 18-0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0	MAX 14.0 14.0 14.0 15.0 16.0	HIN 13.0 14.0 13.0 14.0 14.0	MAX 17.0 17.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 17.0 17.0 17.0 18.0 18.0	MIN 17-0 17-0 17-0 17-0 18-0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0
1 2 3 4 5	MAX 12.0 12.0 12.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0	MAX 14-0 14-0 14-0 15-0 16-0	MIN 13-0 14-0 13-0 14-0 14-0	MAX 17.0 17.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 17.0 17.0 17.0 18.0 18.0	MIN 17-0 17-0 17-0 17-0 18-0	MAX 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0 20-0	MAX 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 12.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0 12.0	MAX 14-0 14-0 15-0 16-0 16-0 15-0	HIN 13-0 14-0 13-0 14-0 14-0 14-0 14-0	MAX 17.0 17.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0 14.0 14.0	MAX 17.0 17.0 17.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0	MAX 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	HAX 12.0 12.0 12.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0	MAX 14.0 14.0 15.0 16.0 16.0	MIN 13.0 14.0 13.0 14.0 14.0 14.0	MAX 17.0 17.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 17.0 17.0 17.0 18.0 18.0	MIN 17-0 17-0 17-0 18-0 18-0 18-0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0
1 2 3 4 5 6 7 8 9 10	HAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0	MAX 14.0 14.0 15.0 16.0 16.0 16.0 15.0 16.0	MIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 14.0 14.0 15.0 15.0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	HAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 15-0 16-0	MIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0	MAX 14-0 14-0 15-0 15-0 16-0 15-0 16-0 16-0 16-0	MIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0	MAX 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0	MIN 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	HAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0	MAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 15-0 16-0	MIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0	MAX 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14-0 14-0 14-0 14-0 15-0 16-0 16-0 15-0 16-0 16-0 16-0 16-0 15-0	MIN 13-0 14-0 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 15.0	MAX 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19-0 19-0 20-0 19-0 20-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	HAX 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 16-0 16-0 16-0 16-0	MIN 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0	MAX 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	MIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0	17-0 17-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 19-0	MIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0 20-0 20-0 20-	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 23 45 67 8 90 10 11 12 13 14 15 16 17 18	HAX 12-0 12-0 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0	HIN 13-0 14-0 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 14.0 13.0 15.0 15.0 15.0 16.0 16.0 16.0	17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 19-0 19-0	HIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 14-0 14-0 15-0 15-0 16-0 16-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	HAX 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0	17-0 17-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 19-0	MIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 20-0 20-0 20-0 20-0 20-0 20-0 20-0 20-	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 11 12 13 11 15 16 17 18 19 20 21 12 22	12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HAX 14-0 14-0 14-0 15-0 15-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 17.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	HIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 9 10 11 11 12 13 11 15 16 17 18 19 20 21 22 23 24	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HAX 14-0 14-0 14-0 15-0 15-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0	HIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	HIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0	17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0	HIN 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HIN 12.0 11.0 12.0 12.0 12.0 13.0 1	HAX 14-0 16-0 16-0 16-0 16-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0 17-0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21	HIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0	17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0	HIN 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 12.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	HIN 17-0 17-0 17-0 17-0 18-0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HIN 12.0 11.0 12.0 12.0 12.0 13.0 1	HAX 14-0 14-0 15-0 15-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 17-0 17-0 17-0 17-0 17-0 16-0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21	HIN 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	HIN 12.0 11.0 12.0 12.0 12.0 13.0 1	14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	HIN 17-0 17-0 17-0 17-0 18-0 1	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 25 26 27 28 29 30 31	HAX 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	NIN 12.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	HIN 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 20-0 20-0 20-0 20-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 19.0 19.0 20.0 19.0

11447500 SACRAMENTO RIVER AT SACRAMENTO, CALIF. (International Hydrological Decade River Station)

LCCATION. -- Lat 38°35'20", long 121°30'15", 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 1968. Sediment records: October 1955 to September 1968.

EXTRRMES. -- 1967-68:

Water temperatures: Maximum, 24.0°C June 1, 22-25; minimum, 6.0°C on several days during December and January. Sediment concentrations: Maximum daily, 520 mg/l Feb. 22; minimum daily, 12 mg/l Jan. 1. Sediment discharge: Maximum daily, 83,800 tons Feb. 22; minimum daily, 40 tons Jan. 1.

water temperatures: Maximum (1955-62, 1963-66, 1967-68), 26.5°C June 15, 16, 1961; minimum, 4.0°C Jan. 30, 31, Feb. 1, 1967. Sediment concentrations: Maximum daily, 1,960 mg/l Dec. 24, 1964; minimum daily, 11 mg/l (estimated), Nov. 30, 1959. Sediment discharge: Maximum daily, 525,000 tons Dec. 24, 1964; minimum daily, 200 tons (estimated), Dec. 14,

REMARKS .-- The chemical-quality data and the maximum-minimum temperature record for the auxiliary station approximately 8 miles downstream, 11447650 Sacramento River at Freeport, Calif., are considered as being part of this International Hydrological River Station.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															DA	۱Y																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	17		16	17		16	17		20	18	_	17	18		17	17	16	17	_	16	17	17	17	17	16	16	17	16	16	16	14	17
NOVEMBER.	16	16	16			15	15	15	15				14	15	15	14	16	21	~-	20	15	13	12	13	13			-		10		
DECEMBER.	10	9	9	11	11	9	10	9		9	9	9	7	7	8	6	6	7	6	7	6	8		9	9	9	11	11	12	11	8	9
JANUARY	8	8	7	7	7	6	6	6	6	8	7	7	7	8	9	9	9	9	9		9	9	9	9	9	10	8		7			8
FEBRUARY.	7		8			10	10			10	10	11	11	11	13	12	15	13	12	12	13	13		13	13	14	14	13	13			12
MARCH	13	13		13	13	12	13	12	12	12	12	11	11	12	12	12	12	12	12	13	13	13	16	10	14	19	14	14	13		14	13
APRIL	14	16	11	14	15	16	16	16	17	18	18	17	14	17	16	15	14	14	15	15	14	16	17	17	17	17	17	18	19	17		16
MAY	18	19	18	18	18	17	17	17	17	17	17	17	17	17	17	18	19	20	21	20	19	19	19	19	20	22	21	22	22	23	23	19
JUNE		23	23	22	20	21	21	20	21	21	20	21	21	22		23	23	23	23	23	23	24	24	24	24	23	23	22	20	21		22
JULY	21	21	21	21	24			21	21	21	22	22	21	22	21	21	22	22	22	22	22	22	21	21	22	22	22	22	22	21	21	22
AUGUST	21	23		21	22	23	22	21	23		21	21	20	19	20	19	20	20	18	18	18	18	17		20	19	20	21	23	22	23	20
SEPTEMBER	22	23	22	22	21	22	==	21	22	51	21	21	21		21	21	_	22	19	19		19	17	17	18	21	20	20	18			20

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM MITHORAMAL TUBE: C. CHEMICÁLLY DISPERSED; N. IN MATIVE MATER: P. PIPET: S. SIEVE: V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED MATER)

		WATER	ι							PART	ICLE S	SIZE					
		TEM- PERA- TURE			SUSPENDED - SEDIMENT DISCHARGE		ENT F	INER	THAN	THE S	IZE (EN MI	LLIME	TERS)	INOI	CATED	METHOD OF Analy-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	.250	•500	1.00	2.00	\$15
OCT 31 1967	1100	14	15400	35	1460	19	28	44	57	65	93	99	100				SC8W
NOV 30	0930	10	14600	20	788	10	22	41	53	62	95	99	100				SCBW
JAN 11 1968	0850	6	15500	22	921	12	24	38	48	54	86	98	100				SCBW
JAN 18	1000	8	34500	527	49100	35	48	62	72	81	88	98	100				VPCW
FEB 1	1230	6	37800	601	61300	26	38	52	63	69	90	96	100				VCBW
FEB 28	1310	13	66600	172	3 090n	39	48	59	64	68	71	86	99	100			VPCW
MAY 27	0930	20	13600	47	1730	36	42	61	73	89	96	99	100	~			SPCW

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!

WATER NUMBER PARTICLE SIZE METHOD PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED

		TURE	PLING	DISCHARGE		FERGENI	LIME	N IDAN	THE 3	1126 (1	N MICE	INCIEN	31 1140	LATEU		ANAL Y-
OATE	TIME	(C)	POINTS	(CFS)	.062	.125	•250	•500	1.00	2.00	4.00	B.00	16.0	32.0	64.0	SIS
JAN 18 1968	1000	8	1	34500	50	83	91	96	100							s
JAN 18	1005	8	i	34500		2	22	93	99	100						S
JAN 18	1010	8	1	34500	1	8	38	94	99	100						s
JAN 18	1015	В	1	34500	1	10	39	92	98	100						s
JAN 18	1020	8	1	34500	32	62	82	98	100							S

TOTAL

SACRAMENTO RIVER BASIN

11447500 SACRAMENTO RIVER AT SACRAMENTO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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11447500 SACRAMENTO RIVER AT SACRAMENTO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT DISCHARGE	MEAN DISCHARGE	CONCEN- TRATION	SEDIMENT DISCHARGE
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	21000	54	3060	10200	25	689	10300	42	1170
2	21100	54 52	3060 2960	10200	26	737	10000	35	945
3	21600	50	2920	10900	31	912	9780	28	739
4 5	21200 20000	51 45	2920 2430	11700 12800	43 70	1360 2420	10500 10600	28 32	794 916
,									
6	19200	47	2440	13800	78 88	2910 3350	10500 11900	38 31	1080 996
7 8	18500 18000	54 51	2700 2480	14100 13600	88 84	3350 3080	12700	38	1300
9	16900	45	2050	13500	98	3570	13100	40	1410
10	15800	41	1750	13400	80	2890	13200	47	1680
11	15500	43	1800	13000	79	2770	12900	40	1390
12	15000	37	1500	13300	78	2800	12700	37	1270
13 14	15000 14800	45 36	1820 1440	13700	86 86	3180 3370	11900	43 45	1380 1350
15	14100	35	1330	15800	89	3800	11000	28	832
									72.4
16 17	13200 12400	30 32	1070	15500 14700	86 84	3600 3330	10900 11000	25 27	736 802
18	11600	29	908	14100	78	2970	11200	25	756
19	10900	25	736	14100	68	2590	10900	28	824
20	10300	34	946	14000	68	2570	10700	32	924
21	10200	38	1050	14100	65	2470	10900	34	1000
22 23	10400 10600	30 35	842 1000	13600 14100	67 67	2460 2550	11200 11600	30 18	907 5 6 4
24	10600	35 38	1000	14200	67	2570	11500	22	683
25	10500	40	1130	14200	67	2570	11200	29	877
26	10600	46	1320	13800	76	2830	11400	24	739
27	11300	54	1650	13600	72	2640	11100	23	689
28	11500	71	2200	13100	66	2330	11500	23	714
29 30	11000 10300	47 26	1400 723	12500 11500	66 56	2230 1740	11400 11900	32 31	985 996
31				10900	47	1380			
TOTAL	433100		50735	412800		78668	340580		29448
		JULY			AUGUST			SEPTEMBER	
		MFAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	D1SCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	{ MG/L }	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	12100	36	1180	12900	33	1150	11400	18	554
2	12300 12100	34 36	1130	12900	29	1010 899	11300	25	763
4	12300	23	1180 764	12800 13200	26 24	855	11000	18 16	535 492
5	12600	26	885	13200	23	820	11400	19	585
6	12800	28	968	12800	21	726	11900	24	771
7	13400	32	1160	12800	21	726	12300	28	930
8	13100	34	1200	12900	26	906	12900	30	1040
9 10	12500 12500	30 31	1010 1050	12700 12800	24 25	823 864	13300 13900	34 38	1220 1430
					23		13900	36	1430
11	12500	31	1050	12900	27	940	14300	44	1700
12 13	12500 12500	27 29	911 979	13100 12800	27 27	955 933	14600 15000	47 39	1850 1580
14	12800	36	1240	12900	20	697	14900	45	1810
15	13100	28	990	12700	23	789	15000	57	2310
16	12900	31	1080	13000	26	913	14600	62	2440
17	12500	38	1280	12900	28	975	14400	44	1710
18 19	12200 12000	43 42	1420 1360	13100 13100	28 19	990 672	14200 13800	38	1460 1530
20	12100	42	1370	12600	24	816	13300	41 40	1440
21	12100			*	-		•		
22	12100	31 37	1010 1220	12800 13500	24 30	829 1090	13200 13300	39 40	1390 1440
23	12500	25	844	14800	68	2720	13300	44	1580
24 25	12500 12400	17 25	574 837	14700 13900	61 54	2420 2030	13100 13000	33	1170 842
	12400	27	021	13700	24	2030	13000	24	892
26 27	12600	21	714	13400	49	1770	12700	30	1030
27 28	12900 13200	17 19	592 677	13100 12800	43 26	1520 899	12600 12500	28 22	953 743
29	13400	29	1050	12600	36	1220	12500	26	878
30 31	13000	18	632	11800	27	860	12500	34	1150
		31	1070	11600	17	532			
TOTAL	390400		31427	403100		33349	393600		37326
TAL DISCH	ARGE FOR YE	AR (CFS-D	AYS)						.6749580

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

6749580 1602088

11447650 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 1968. Water temperatures: June 1960 to September 1968,

EXTREMES.--1967-68:
Water temperatures: Maximum, 22.0°C on many days during May to September; minimum, 6.0°C Dec. 19-23.

Period of record:
Water temperatures: Maximum, 24.5°C June 16, 17, 1961; minimum, 5.0°C Jan. 24-27, 1962.

REMARKS.—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 11447500 Sacramento River at Sacramento. Data collected at this site are considered as being part of the International Hydrological River Station 11447500 Sacramento River at Sacramento, Calif.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2)	OIS- SOLVED ERON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SOD I UM	PO- TAS- Sium (K)	LITHIUM (LI)	STRON- TIUM (SR)	BICAR- BONATE (HCQ3)	CAR- BONATE (CD3)	SULFATE (SQ4)
NOV.		18		••							_	
08 DEC.	14700	10	.03	11	5.9	7.5	1.2	.01	•02	66	0	7,0
04 JAN.	15800	17	. 03	11	6.1	10	1.3	.01	.08	69	0	8.0
10	13700	17	.02	12	5.8	7.8	1.5	.00	.10	67	•	7.0
FEB. 14	23900	19	•06	14	7.3	12	1.3	.00	.11	79	0	16
MAR. 13	29400	18	.02	11	5.4	6.4	1.1	.00	.09	62	0	7.0
APR. 10	15800	17	.02	12	6.4	9.1	1.2	.00	.10	72	o	10
MAY 15	15800	16	.02	14	9.0	16	1.5	.01	.13	92	0	19
JUNE 05	10600	16	-00	12	6. 9	9.5	1.2	.00	.10	72	o	8.0
JULY 17	12500	17	.05	11	6.8	12	1.3	.00	.08	73	e	9.0
AUG. 07 SEPT.	12800	18	.01	13	8.6	14	1.1	.00	. 11	89	0	11
04	11400	20	•00	15	10	18	1.6	.01	-12	108	0	14
DATE	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PD4)	BORDN (B)	OIS- SOLVED SOLIOS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOL VEO SOL IDS (TONS PER AC-FT)	PERCENT SODIUM	SOD TAPP AD- SORP- TIEN RATIO	ALKA- EIMITY AS CACO3
	RIDE	RIDE		PHATE		SOLVED SOLIOS (SUM OF CONSTI-	NESS	CAR- SONATE HARD-	SOL VEO SOL IDS (TONS PER		AD- SORP- TIEN	E IMITY AS
NDV. 08	RIDE	RIDE		PHATE		SOLVED SOLIOS (SUM OF CONSTI-	NESS	CAR- SONATE HARD-	SOL VEO SOL IDS (TONS PER		AD- SORP- TIEN	E IMITY AS
NDV. 08 DEC. 04	RIDE (CL)	RIDE (F)	(NO3)	PHATE (PD4)	(8)	SOLVED SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- 8 ONATE HARD- NESS	SOL VEO SOL IDS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	EIMITY AS CACO3
NDV. 08 DEC. 04 JAM.	(CL)	RIDE (F)	(NG3)	PHATE (PD4)	.10	SOLVED SOLIOS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- 8 ONATE HARD- NESS	SOL VEO SOL IDS (TONS PER AC-FT)	SODIUM 24	AD- SORP- TIEN RATIO	LIMITY AS CACO3
NDV. 08 DEC. 04 JAM. 10 FEB. 14	FIDE (CL) 5.0 6.7	**************************************	(NO3) 1.0 1.1	PHATE (PD4) -42 -34	.10 .10	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) 90	NESS (CA,MG) 52 52	CAR- 8 DNATE HARD- NESS	SOL VEO SOL IDS (TONS PER AC-FT)	24 29	AD- SORP- TIEN RATIO	EIMITY AS CACO3 54 57
NDV. 08 DEC. 04 JAM. 10 FEB. 14 MAR. 13	FIDE (CL) 5.0 6.7 3.8	**************************************	1.0 1.1 3.3	.42 .34	.10 .10	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) 90 96	NESS (CA,MG) 52 52 54	CAR- SUNATE HARD- NESS 0	SOL VEO SOL IDS (TONS PER AC-FT) -12 -13	24 29 23	AD- SORP- TIGN RATIO	EIMITY AS CACO3 54 57 55
NDV. 08 DEC. 04 JAM. 10 FEB. 14 MAR. 13 APR. 10	6.7 3.8 6.0	**************************************	1.0 1.1 3.3 1.7	.42 .34 .07	.10 .10 .00	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) 90 96 91	NESS (CA,MG) 52 52 54 65	CAR- BONATE HARD- NESS 0 0	SOL VEO SOL IDS (TONS PER AC-FT) .12 .13 .12	24 29 23 28	AD- SORP- TIGN RATIO .5 .6	54 57 55 65
NOV. 08 DEC. 04 JAM. 10 FEB. 14 MAR. 13 APR. 10 MAY. 15	5.0 6.7 3.8 6.0 3.3	**************************************	1.0 1.1 3.3 1.7	.42 .34 .07 .41	.10 .10 .00	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) 90 96 91 117 85	NESS (CA, MG) 52 52 54 65	CAR- 8 DNATE HARD- NESS 0 0 0	SOL VEO SOL IDS (TONS PER AC-FT) .12 .13 .12 .16	24 29 23 28 22	AD- SORP- TIGN RATIO .5 .6 .5	54 57 55 65 51
NDV. 08 DEC. 04 JAM. 10 FEB. 14 MAR. 13 APR. 10 MAY 15 JUNE 05	5.0 6.7 3.8 6.0 3.3	**************************************	1.0 1.1 3.3 1.7 1.2	.42 .34 .07 .41 .33	.10 .10 .00 .09 .02	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) 90 96 91 117 85	NESS (CA, MG) 52 52 54 65 50 56	CAR- 8 DNATE HARD- NESS 0 0 0	SOL VEO SOL IDS (TONS PER AC-FT) .12 .13 .12 .16 .12	24 29 23 28 22 26	AD- SORP- TIGN RATIO .5 .6 .5 .6	54 57 55 65 51
NOV. 08 08 04 JAM. 10 FEB. 14 MAR. 13 APR. 10 JUNE 05 JULY 17	FIDE (CL) 5.0 6.7 3.8 6.0 3.3 5.6	**************************************	1.0 1.1 3.3 1.7 1.2 2.3	.42 .34 .07 .41 .33	.10 .10 .00 .00 .02 .03	SOL VED SOLIOS (SUM OF CONSTI- TUENTS) 90 96 91 117 85 99	NESS (CA, MG) 52 52 54 65 50 56 72	CAR- 8 UNATE HARD- NESS	SOL VEO SOL IDS (TONS PER AC-FT) .12 .13 .12 .16 .12 .13 .18	24 29 23 28 22 26 32	**************************************	54 57 55 65 51 59
NDV. 08 DEC. 04 JAM. 10 FEB. 14 MAR. 13 APR. 10 MAY 15 JUNE 05	5.0 6.7 3.8 6.0 3.3 5.6	RIDE (F) .1 .1 .1 .1 .1 .1 .1	1.0 1.1 3.3 1.7 1.2 2.3 1.6 2.2	.42 .34 .07 .41 .33 .31	.10 .10 .00 .09 .02 .03 .08	SOL VED SOL 10S (SUM OF CONSTITUENTS) 90 96 91 117 85 99 134 98	NESS (CA, MG) 52 52 54 65 50 56 72 58	CAR- BONATE HARD- NESS O O O O O	SOL VEO SOL IDS (TONS PER AC-FT) .12 .13 .12 .16 .12 .13 .18	24 29 23 28 22 26 32	AD- SORP- TIEN RATIO .5 .6 .5 .6 .4 .5	EINITY AS CACO3 54 57 55 65 51 59 75

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11447650 SACRAMENTO RIVER AT FREEPORT, CALIF .-- Continued

CHEMICAL ANALYSES IN FILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SPECI- FIC COND- UCTANCE (MICRO- MHOS1	PH	TEM- PERA- Ture (DEG C)	TUR- BID- ITY	DIS- SOLVED OXYGEN
NOV.					
08	132	7.6	16	10	9.8
DEC. 04	147	7.6		27	
JAN.	177	7.0		21	
10	136	7.4		4.0	
FEB.					
14	177	7.4		30	
MAR.					
13 APR.	131	7.5	12	35	10.5
10	156	7.6		5.0	
MAY				2.0	
15	216	7.6		10	10.3
JUNE					
05	157	7.3	21	5.0	0.1
JULY 17	164	7.5	20	5.0	
AUG.	104	7.5	20	3.0	0.0
07	189	7.9		100	8.5
SEPT.	•••				0.0
04	230	8.2	22		8.3

TEMPERATURE ("C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOV	EMBER	DEC E	MBER	JAN	UARY	FPA	RUARY		ARCH
	00		NUV		Vece							
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	17.0	14.0	14.0	9.0	9.0	8.0	8.0	9.0	8.0	12.0	12.0
2	17.0	17.0	14.0	14.0	9.0	9.0	8.0	8.0	8.0	8.0	12.0	12.0
3	17.0	16.0	14.0	14.0	9.0	9.0	8.0	7.0	8.0	8.0	12.0	12.0
4	16.0	16.0	14.0	14.0	9.0	9.0	7.0	7.0	8.0	8.0	12.0	12.0
5	16.0	16.0	14.0	14.0	9.0	9.0	7.0	7.0	9.0	8.0	12.0	12.0
6	16.0	16.0	14.0	14.0	9.0	9.0	7.0	7.0	9.0	9.0	12.0	11.0
7	16.0	16.0	14.0	14.0	9.0	9.0	7.0	7.0	9.0	9.0	11.0	11.0
8	16.0	16.0	14.0	14.0	9.0	9.0	7.0	7.0	9.0	9.0	11-0	11.0
9	15.0	15.0	14.0	14.0	9.0	9.0	7.0	7.0	10.0	9.0	11.0	11.0
10	15.0	15.0	14.0	14.0	9.0	9.0	7.0	7.0	10.0	10.0	11.0	11.0
11	15.0	15.0	14.0	14.0	9.0	9.0	7.0	7.0	10.0	10.0	11.0	11.0
12	15.0	15.0	14.0	13.0	9.0	9.0	7.0	7.0	11.0	10.0	11-0	11.0
13	15.0	15.0	13.0	13.0	9.0	8.0	7.0	7.0	11.0	11.0	11.0	11.0
14	15.0	15.0	13.0	13.0	8.0	8.0	7.0	7.0	11.0	11.0	11.0	11.0
15	14.0	14.0	13.0	13.0	8.0	7.0	7.0	7.0	11.0	11.0	11.0	11.0
16	14.0	14.0	13.0	13.0	7.0	7.0	7-0	7.0	11.0	11.0	11.0	11.0
17	14.0	14.0	13.0	13.0	7.0	7.0	7.0	7.0	11.0	11.0	11-0	11.0
18	14.0	14.0	13.0	13.0	7.0	7.0	7.0	7.0	11.0	11.0	11.0	11.0
19	14.0	14.0	13.0	13.0	7.0	6.0	8.0	7.0	11.0	11.0	11.0	11.0
20	14.0	14.0	13.0	13.0	6.0	6.0	8.0	8.0	11.0	11.0	11.0	11.0
21	14.0	14.0	13.0	12.0	6.0	6.0	8.0	8.0	11.0	11.0	11.0	11.0
22	14.0	14.0	12.0	12.0	6.0	6.0	8.0	8.0	11.0	11.0	11.0	11.0
23	14.0	14.0	12.0	12.0	7.0	6.0	B• 0	8.0	15.0	11.0	12.0	11.0
24	14.0	14.0	12.0	12.0	7.0	7.0	9.0	8.0	12.0	12.0	12.0	12.0
25	14.0	14.0	12.0	11.0	7.0	7.0	9.0	9.0	12.0	12.0	12.0	12.0
26	14.0	14.0	11.0	11.0	7.0	7.0	9.0	8.0	12.0	12.0	12.0	12.0
27	14.0	14.0	11.0	11.0	7.0	7.0	8.0	8.0	12.0	12.0	12.0	12.0
28	14.0	14.0	11.0	11.0	8.0	7.0	8.0	8.0	12.0	12.0	12.0	12.0
29	14.0	14.0	11.0	10.0	8.0	8.0	9.0	8.0	12.0	12.0	12.0	12.0
30	14.0	14.0	10.0	9.0	8.0	8.0	9.0	8.0			13.0	12.0
31	14.0	14.0			8.0	8.0	8.0	8.0			13.0	13.0
MONTH	17.0	14.0	14.0	9.0	9.0	6.0	9.0	7.0	12.0	8.0	13.0	11.0

11447650 SACRAMENTO RIVER AT FREEPORT, CALIF, -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 -- Continued

	A	PRIL	1	MÀY	J	JNE	Jt	JLY	AU	GUST	SEP	FEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	13.0	17.0	17-0	22.0	22.0	21.0	21.0	21.0	21.0	22.0	22.0
2	13.0	13.0	17.0	17.0	22.0	22.0	21.0	21.0	21.0	21.0	22.0	22.0
3	13.0	13.0	17.0	17.0	22.0	22.0	21.0	21.0	21.0	21.0	22.0	22.0
4	13.0	13.0	17.0	17.0	22.0	21.0	21.0	21.0	21.0	21.0	22.0	22.0
5	13.0	13.0	17.0	17.0	21.0	21.0	21.0	21.0	21.0	21.0	22.0	22.0
6	13-0	13.0	17.0	17.0	21.0	21.0	21.0	21.0	21.0	21.0	22.0	22.0
7	13.0	13.0	17.0	17.0	21.0	20.0	21.0	21.0	21.0	21.0	22.0	22.0
8	14.0	13.0	17.0	17.0	20.0	20.0	21.0	21.0	21.0	21.0	22.0	22.0
9	14.0	14.0	18.0	17.0	20.0	20.0	21.0	21.0	21.0	21.0	22.0	22.0
10	14.0	14.0	18.0	18.0	20.0	20.0	21.0	21.0	22.0	21.0	22.0	22.0
11	14-0	14.0	18.0	18.0	20.0	20-0	21.0	21.0	22.0	22.0	22.0	22.0
12	15.0	14.0	18.0	18.0	20.0	20.0	21.0	21.0	22.0	22.0	22.0	21-0
13	15.0	15.0	18.0	18.0	20.0	20-0	21.0	21 - 0	22.0	22.0	21.0	21.0
14	15.0	15.0	18.0	18.0	20.0	20-0	21.0	21.0	22.0	21.0	21.0	21.0
15	15.0	15.0	18.0	18.0	20.0	20.0	21.0	21.0	21.0	21.0	21.0	21.0
16	15.0	15.0	18.0	18.0	21.0	20.0	21.0	21.0	21.0	21.0	21.0	21.0
17	15.0	15.0	18.0	18.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
18	15.0	15.0	18.0	18.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0
19	15.0	15.0	19.0	19.0	21.0	21.0	22.0	21.0	21.0	21.0	20.0	20.0
20	15.0	15.0	20.0	19.0	21.0	21.0	22.0	22.0	21.0	21.0	20.0	19.0
21	16.0	16.0	20.0	20.0	22.0	21.0	22.0	22.0	21.0	20.0	19.0	19.0
22	16.0	16.0	20.0	20.0	22.0	22.0	22.0	22.0	20.0	20-0	19.0	18.0
23	16.0	16.0	20.0	20.0	22.0	22.0	22.0	22.0	20.0	20.0	18-0	18.0
24	16.0	16.0	20.0	20.0	22.0	22.0	22.0	22.0	20.0	20.0	18.0	17.0
25	16.0	16.0	20.0	20.0	22.0	22.0	22.0	22.0	21.0	20.0	17.0	17.0
26	16.0	16.0	20.0	20.0	22.0	22.0	22.0	21.0	21.0	21.0	18.0	17.0
27	16.0	16.0	20.0	20.0	22.0	22.0	22.0	21.0	21.0	21.0	18.0	18.0
28	16.0	16.0	21.0	20.0	22.0	22.0	21.0	21.0	21.0	21-0	18.0	18.0
29	16.0	16.0	21.0	21.0	22.0	21.0	21.0	21.0	22.0	21.0	18.0	18-0
30	17.0	16.0	21.0	21.0	21.0	21.0	21.0	21.0	22.0	22.0	18.0	18.0
31			22.0	21.0			21.0	21.0	22.0	22.0		
MONTH	17.0	13.0	22.0	17.0	22.0	20.0	22.0	21.0	22.0	20.0	22.0	17.0
YEAR	22.0	6.0										

11449010 HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.

LOCATION.--Lat 38°58'54", long 122°54'03", in NE4 sec.30, T.13 N., E.8 W., Lake County, at outlet of Highland Creek Dam, 600 ft upstream from gaging station, and 4.0 miles southwest of Kelseyville.

DRAINAGE AREA .-- 14.2 sq mi.

PERIOD OF EECORD, -- Water temperatures: November 1966 to September 1968. Sediment records: December 1965 to September 1968.

EXTREMES. -- 1967-68:

Sediment concentrations: Maximum daily, 127 mg/l Jan. 15; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 144 tons Jan. 30; minimum daily, 0 ton on many days.

Period of record:

Sediment concentrations: Maximum daily, 182 mg/l Jan. 5, 1966; minimum daily, no flow on many days in 1966-68. Sediment discharge: Maximum daily, 270 tons Jan. 5, 1966; minimum daily, 0 ton on many days, 1966-68.

REMARKS.--No flow Nov. 21 to Dec. 2, June 11-24, 27, 28, 30, July 3-10, 12-14, July 16 to Aug. 22, Sept. 25-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

																••																
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																																
NOVEMBER.																																
DECEMBER.				9																3												
JANUARY														9	5										_							
FEBRUARY.								10			11					9			10	10		9				8			8			
MARCH	9	11	9	9	9			10			9				11	8				10	9				9	9			9			
APRIL	8	10	10	10	9			9	8			8			8		8	9				9			9				9	20		
MAY	11							11							9	_																
JUNE					18							20									20								20			
JULY		16				21							20									_									17	
AUGUST																																
SEPTEMBER					19	14							15				~-			21							18					·

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B. BOTTOM WITHORAWAL TUBE; C. CHEMICALLY DISPERSED; N. IN NATIVE WATER; P. PIPET; S. SIEVE;

		WATER								PART!	CLE	IZE					
		TEM- PERA-	CUARCE		SUSPENDED - SEDIMENT DISCHARGE		ENT F	INER	THAN '	THE SI	ZE (1	IN MIL	LIMET	TERS)	INDI	CATED	METHOD DF Analy-
DATE	TIME				(TONS/DAY)	.002	.004	.00B	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
FEB 19 1968 FEB 20	1630 0930	10 10	194 236	77 47	40 30	19 66	41 83	90	46 93	47 95	65 98	76 99	89 100	97 	100	_	SBN SBWC

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11449010 HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Olscharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.4	29	.11	2.0	48	.26	0		0
2	1.3	29	.10	1.6	48	.21	0		0
3	2.3	29	.18	1.6	48	.21	11	17	-B2
4	2.3	29	-18	1.0	45	.12	40	33	4.0
5	2.3	29	.18	1.0	43	•12	64	39	7.0
6	2.3	29	.18	1.0	40	•11	18	31	1.5
7	2.0	29	.16	1.0	40	•11	67	40	7.4
8	2.0	29	.16	1.0	40	.11	20	33	1.8
9	1.6	29	.13	1.3	40	.14	11	27	.80
10	1.6	29	.13	1.6	38	-16	8.4	25	.57
11	1.6	29	•13	1.6	38	.16	5.5	20	•30
12	2.0	29	.16	1.6	38	-16	4.7	20	•25
13	2.0	29	.16	.80	38	•08	4.0	20	•22
14	2.0	29	-16	.56	38	.06	3.3	20	-18
15	2.0	29	-16	.56	47	.07	3.3	20	.18
16	1.6	29	.13	.56	47	•07	3.3	20	.18
17	1.6	29	.13	.56	45	•07	5.2	21	•31
18	1.6	29	.13	.32	45	•04	43	34	4.1
19	2.0	29	•16	.80	45	-10	25	31	2.1
20	2.0	29	.16	.35	18	.04	13	22	.77
21	2.0	29	.16	0		0	10	20	.54
22	2.0	29	•16	0		0	7.3	15	•30
23	2 • 3	30	.19	0		0	5.8	12	•19
24	2.3	35	•22	D		0	5.5	10	• 15
25	2 • 3	38	•24	0		0	5.1	10	.14
26	2.0	40	-22	0		0	4.7	10	.13
27	2.0	40	•22	Ó		0	4.3	10	•12
28	2.3	45	.28	ō		ŏ	4.0	10	-11
29	2.0	45	•24	ŏ		ŏ	3.6	10	.10
30	2.0	46	-25	ŏ		Ď	3.6	10	•10
31	2.0	47	.25				3.3	10	.09
TOTAL	60.7		5 • 42	20.81		2.40	406.9		34.45

		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN DISCHARGE	CONCEN- Tration	SEDIMENT DISCHARGE	MEAN DISCHARGE	CONCEN- TRATION	SEDIMENT DI SCHARGE	MEAN DISCHARGE	CONCEN- TRATION	SEDIMENT Discharge
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	3.3	10	•09	53	35	5.0	18	13	.63
2	3.3	10	•09	121	51	16	17	12	• 55
3	3.3	10	•09	67	35	6.3	15	12	•49
4	2.9	10	.08	47	30	3.8	15	10	-41
5	2.9	10	.08	35	25	2.4	15	10	.41
6	2.6	10	.07	30	22	1.8	14	10	.38
7	2.6	10	•07	25	20	1.4	14	10	• 38
8	2.9	12	.09	22	18	1.1	15	15	.61
9	11	11	.40	20	16	.86	13	12	. 42
10	269	65	41	19	14	.72	13	10	.35
11	39	36	3.9	18	13	.63	12	10	•32
12	20	25	1.4	16	12	•52	95	49	20
13	19	25	1.3	15	îi	.45	65	ží	3.7
14	259	94	102	15	ii	• 45	52	25	3.5
15	248	127	94	14	10	.38	56	25	4.4
16	74	44	8.9	23	32	2.5	209	55	34
17	39	20	2.1	61	111	18	85	20	4.6
18	27	17	1.2	38	70	7.2	53	15	2.1
19	21	14	.79	134	82	42	39	10	1.1
20	18	12	•58	200	47	28	32	7	•60
						_	-	,	•60
21	16	12	.52	151	51	22	28	4	•30
22	14	12	-45	80	25	5.4	24	4	• 26
23	13	12	-42	54	23	3.4	23	3	-19
24	11	11	•33	40	21	2.3	20	2	-11
25	11	10	.30	31	20	1.7	18	2	•10
26	11	10	.30	27	20	1.5	16	2	•09
27	9.9	10	•27	24	20	1.3	15	2	•08
28	19	10	.51	21	20	1.1	15	2	•0B
29	502	88	131	20	19	1.0	13	2	•07
30	562	95	144				12	2	•06
31	331	65	67				12	2	.06
TOTAL	2567.7		603.33	1421		179.21	1043		80.35

11449010 HIGHLAND CREEK BELOW HIGHLAND CREEK DAM, NEAR KELSEYVILLE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	14	3	-11	2.3	3	•02	.53	2	0		
2	16	7	.30	2.3	3	•02	.51	2	0		
3	13	10	.35	2.0	5	.03	-49	2	0		
4	12	5	.16	2.0	5	.03	.47	2	o o		
5	11	4	•12	1.6	5	•02	.45	2	0		
6	11	2	•06	1.6	6	.03	1.3	2	.01		
7	9.9	1	.03	1.6	7	.03	1.6	2	.01		
8	9.5	1	.03	2.0	10	•05	1.6	2	.01		
9	9.2	2	. 05	1.0	5	•01	.80	3	-01		
10	8.8	1	•02	1.3	5	•02	•12	3	0		
11	8.4	1	.02	1.3	5	•02	0		0		
12	8.4	ı	• 02	2.0	4	•02	0		0		
13	8.4	1	•02	2.3	4	•02	0		0		
14	8.0	2	.04	4.0	4	•04	0		0		
15	8.0	2	.04	2.9	4	.03	0		0		
16	7.7	1	•02	2.3	4	•02	0		0		
17	7.7	1	.02	1.6	4	• 02	0		0		
18	7.3	1	.02	1.6	4	•02	0		0		
19	7.7	1	•02	1.6	4	.02	0		0		
20	7.3	1	•02	2.3	4	•02	0		0		
21	6.9	1	-02	2.0	3	-02	0		0		
22	6.6	1	•02	2.0	3	.02	0		0		
23	6.2	1	•02	1.6	3	•01	0		0		
24	5.5	1	.01	1.3	3	-01	0		0		
25	5.5	ı	•01	1.6	3	.01	.79	1	-01		
26	5.1	1	.01	2.0	3	•02	.07	1	0		
27	4.7	2	.03	2.0	3	•02	0				
28	4.0	2	•02	1.6	2	•01	٥.,		0		
29	3.3	5	•02	1.0	2	•01	•12	1	0		
30	2.6	5	.04	.56	2	0	0		0		
31				.55	2	•					
TOTAL	243.7		1.67	55.81		.62	8.85		•05		

		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	•12	1	0	0		0	.56	5	•01
2	.15	3	0	0		0	.56	7	-01
3	0		0	0		0	.56	10	.02
4	0		0	0		Ó	.56	12	• 02
5	0		o	0		o	.56	14	•02
6	0		0	0		0	.32	15	-01
7	0		0	0		0	.32	15	•01
8	0		0	0	·	0	.32	15	•01
9	0		0	0		0	.56	15	•02
10	0		0	0		0	.32	15	•01
11	1.3	1	•01	0		0	.56	15	-02
12	0		0	Ó		ŏ	.32	15	•01
13	0		0	0		o	.56	18	.03
14	0		0	0		0	.56	18	.03
15	.03	1	0	0		0	.56	18	.03
16	0		0	0		0	.56	18	.03
17	0		0	0		0	.80	18	.04
18	0		0	0		0	.80	18	.04
19	0		0	0		0	.80	18	• 04
50	0		0	0		0	1.0	20	-05
21	0		0	0		0	1.0	20	.05
22	0		0	D		0	1.0	20	• 05
23	0		0	.12	1	0	.80	18	•04
24	0		0	•56	1	0	.42	9	• 02
25	0		0	.80	1	0	0		0
26	0		0	.8D	1	0	0		0
27	0		0	.56	1	0	0		0
28	0		0	.32	1	0	0		0
29	0		0	.32	1	0	o		Ö
30	0		0	.56	2	0	0		0
31	0		0	.56	4	.01			
TOTAL	1.60		.01	4.60		.01	14.38		•62

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

5849.05 908.14

11451760 CACHE CREEK ABOVE RUMSEY, CALIF.

LOCATION.--Lat 38°54'47", long 122°16'14", in SE sec. 2, T.12 N., R.4 W., Yolo County, at gaging station 0.4 mile downstream from highway bridge, and 2.5 miles northwest of Rumsey.

PERIOD OF RECORD. -- Water temperatures: January 1960 to September 1968. Sediment records: January 1960 to September 1963, June 1965 to September 1968.

Sediment concentrations: Maximum daily, 4,760 mg/l Jan. 29; minimum daily, 3 mg/l on several days during March and April.

Sediment discharge: Maximum daily, 133,000 tons Jan. 29; minimum daily, 0.18 ton Nov. 26-28.

Period of record:

Water temperatures (1964-66): Minimum, 1,0°C Dec. 17, 1965. Sediment concentrations: Maximum daily, 9,160 mg/l Jan. 29, 1967; minimum daily, 1 mg/l on several days during 1960-62, Dec. 21, 1965. Sediment discharge: Maximum daily, 363,000 tons Jan. 31, 1963; minimum daily, 0.01 ton on many days during 1960-61.

TEMPERATURE (°C) of	WATER,	WATER	YEAR	OCTOBER	1967	TO	SEPTEMBER 19	68
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					•							
DAY	OCT	NOV	CEC	JAN	FEE	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					7.0		14.0			27.0		
2					6.0						25.0	
3		12.0					16.0	16.0		26.0		23.0
4												
5				2.0	8.0	14.0			20.0		27.0	24.0
6		16.0	T.0		11.0							
7			11.0							27-0		
8			4.C		11.0	11.0	19.0				24.0	27.0
9			6.0							28.0		
10			9.0		9.0							27.0
11			7.0			13.0					26.0	
12	27.0		4.0		11-0					27.0		24.0
13			3.0							24.0	24-0	23.0
14			2.0									
15			1.0			12.0						
16				9.0	10.0	11.0		19.0		27.0	20.0	21.0
17					10.0							
18			2.0		12.0						22.0	21.0
19					13.0					28-0	22-0	
20			3.0	7.0	11.0						19.0	23.0
21										27.0		
22										27.0		
23	19.0										26.0	22.0
24	19.0											
25						15.0					22-0	22.0
26										28.0		
27			10-0		12.0				26.0		24.0	
28										25.0		
29				4.0							27.0	
30			7.0	5.C				21.0				22.0
31				6.0							26.0	
PCNTH												

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; F, PIPET; S, SIEVE;

		WATER TEM-			SUSPENDED					PART	ICLE	SIZE					METHOD
		PERA-			SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	IZE (IN MI	LLIME	rers)	INOI	CATED	OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	-004	.008	-016	-031	.062	.125	.250	.500	1.00	2.00	\$15
DEC 6 1967	0930	7	251	102	69	44	57	73	82	87	98	100					VCBW
JAN 16 1968	1420	9	972	209	548	36	48	58	65	68	81	87	100				VCBW
JAN 29	1005	4	6860	7070	131000	36	46	56	68	79	84	90	93	98	100		VPWC
JAN 30	0930	5	5100	2300	31700	33	42	51	63		81	90	95	99	100		VPWC
JAN 31	1405	6	1470	305	1210	47	59				96	98	100				VPCW
FEB 17	0935	10	2990	1490	12000	36	43	57	68	79	84	92	97	100			VPWC
FEB 27	1150	12	3390	359	3290	20	26	36	44	53	61	69	78	84	91	100	VPWC
MAR 16	0920	13	5230	3660	51700	23	29	35	42	50	56	68	88	98	100		VPWC
JUN 5	1335	20	560	19	29	25	41	54	61	63	82	90	94	98	100		SCAW

11451760 CACHE CREEK ABOVE RUMSEY, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	St		EDIMENT DISC			TOBER 1967 T			
		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	108 107 108 86 81	32 32 30 25 21	9.3 9.2 8.7 5.8 4.6	59 58 58 59 60	B 9 9 8 7	1.3 1.4 1.4 1.3	34 37 58 133 400	200 250 460 900 690	18 25 72 323 745
6 7 8 9 10	79 77 76 77 66	18 16 15 14 14	3.8 3.3 3.1 2.9 2.5	60 63 66 54 44	7 7 7 7	1.1 1.2 1.2 1.0	410 323 391 162 109	320 105 55 180 70	354 92 58 79 21
11 12 13 14 15	60 59 58 56 57	14 14 13 13	2.3 2.2 2.0 2.0 1.8	39 32 32 45 47	6 6 6 5	.63 .52 .52 .73	84 73 66 60 46	25 17 8 7 5	5.7 3.4 1.4 1.1 .62
16 17 18 19 20	57 57 57 58 59	12 11 11 10 10	1.8 1.7 1.7 1.6	42 41 39 38 37	5 5 5 5	.57 .55 .53 .51	47 48 67 120 95	7 14 88 50 20	1.8 16 16 5.1
21 22 23 24 25	59 59 59 59 60	9 8 7 7	1.4 1.4 1.3 1.1	33 19 15 14 14	5 5 5 5	.45 .26 .20 .19	72 62 59 56 51	18 15 12 10 9	3.5 2.5 1.9 1.5 1.2
26 27 28 29 30 31	59 59 59 60 59	7 7 7 7 8 8	1.1 1.1 1.1 1.1 1.3	13 13 13 19 27	5 5 5 5 140	.18 .18 .18 2.8	55 60 58 55 52 49	10 14 10 7 4	1.5 2.3 1.6 1.0 .56
TOTAL	2094		85.2	1153		32.15	3392		1857-10
		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 2 3 4 5	49 49 45 40 37	4 4 5 6	.53 .53 .61 .65	1780 4840 4380 3500 1240	1250 306D 1D20 500 230	11400 40200 12100 4730 770	596 1130 1100 956 606	18 62 50 40 18	29 189 149 103 29
6 7 8 9	34 34 34 39 1360	7 8 8 9 400D	.64 .73 .73 .95	1100 999 854 734 663	120 88 70 53 40	356 237 161 105 72	568 349 371 326 272	14 9 6 6 5	21 8.5 6.0 5.3 3.7
11 12 13 14 15	541 257 194 1220 3220	400 20 10 1700 3100	584 14 5.2 5600 2700D	578 514 458 421 379	28 20 18 17 16	44 28 22 19 16	265 390 2080 2550 2440	3 9 304 258 225	2.1 9.5 1710 1780 1480
16 17 18 19 20	1120 694 470 356 288	350 100 40 25 18	1060 187 51 24 14	528 2370 1290 2040 5038	119 1630 258 460 2020	342 10200 899 2530 27400	3560 2910 2680 2820 3230	442 166 184 230 285	425D 1300 133D 1750 249D
21 22 23 24 25	245 212 184 166 155	14 12 10 9 8	9.3 6.9 5.0 4.0 3.3	5010 4280 3990 3720 3500	2670 1500 856 580 470	36100 17300 9220 5830 4440	2970 2560 1500 1450 1430	202 110 92 77 73	1620 760 373 301 282
26 27 28 29 30 31	145 138 135 8970 5740 1590	7 7 7 4760 2120 460	2.7 2.6 2.6 133000 39700 1970	3320 2450 648 561	400 260 18 14	3590 1720 31 21 	1400 1310 374 321 298 280	70 65 37 12 8 7	265 230 37 10 6.4 5.3

TOTAL 27761 -- 223951.57 61177 -- 189883 43092 -- 20534.8

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY		MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	291 333	4 7	3.1	559	34	51	558	47	71
3	274	3	6.3 2.2	553 522	34 34	51 48	514 511	45 35	62 48
4	250	3	2.0	511	35	48	548	25	37
5	237	3	1.9	489	36	48	564	21	32
6	225	3	1.8	484	36	47	558	21	32
7 8	211	3	1.7	507	36	49	549	21	31
9	200 191	:	2•2 2•1	567 544	36 38	55 56	524 493	21 21	30
10	183	4	2.0	512	38	53	481	21	28 27
11	176	.4	1.9	508	36	49	494	21	28
12	224	. <u>4</u> 7	4.2	500	31	42	490	21	28
13	297 294	11 15	8.8 12	470	31	39	482	21	27
15	290	18	14	459 379	28 23	35 24	456 470	21 21	26 27
14	21.0	••							
16 17	318 317	19 20	16 17	423 455	21 22	24 27	475 491	21 22	27 29
18	385	24	25	487	25	33	519	25	35
19 20	428 422	28 27	32 31	472	28	36	579	50	78
-				465	28	35	577	56	87
21 22	387 385	26 27	27 28	433 457	27	32	571	56	86
23	451	28	28 34	513	27 30	33 42	558 518	56 56	84 78
24	490	29	38	521	35	49	483	56	73
25	483	30	39	488	37	49	485	56	73
26	486	31	41	469	35	44	494	56	75
27 28	549 551	32	47	507	38	52	467	56	71
29	527	33 33	49 47	589 604	46 50	73 82	498 506	54 50	73 68
30	544	33	48	583	50	79	497	43	58
31				568	50	77			
TOTAL	10399		585.2	15598		1462	15410		1529
		JULY			AUGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	520	38	53	460	26	32	366	22	22
	505	37 35	50 49	460 461	28 24	35 30	351 348	27 28	26 26
3 4	520 499	32	43	458	12	15	356	21	20
5	481	30	39	430	4	4.6	388	13	14
6	474	29	37	405	6	6.6	362	12	12
7	477	28	36	395	10	11	347	11	10
8	505 544	26 24	35 35	401 432	40 43	43 50	307 276	10 10	8•3 7•5
10	543	24	35	424	43	49	266	iĭ	7.9
.,	557	25	20	394	43	46	247	13	8.7
11 12	566	26	38 40	414	30	34	225	15	9.1
13	621	36	60	438	16	19	212	15	8.6
14 15	598 569	35 35	57 54	410 363	12 10	13 9.8	211 207	16 16	9.1 8.9
16	560	34	51	361 356	8 6	7.8 5.8	190	16 13	8 • 2 6 • 7
17 18	528 495	33 31	47 41	330	4	3.6	186	ii	5.5
19	479	30	39	330	. 8	7.1	186	12	6.0
20	478	28	36	339	13	12	149	14	5.6
21	460	26	32	332	17	15 15	145 144	10 7	3.9 2.7
22 23	455 438	24 24	29 28	276 223	20 22	13	144	7	2.7
24	413	23	26	217	23	13	144	7	2.7
25	428	22	25	244	24	16	156	16	6.7
26	443	22	26	272	24	18	182	20	9.8
27 28	418 431	21 17	24 20	294 293	24	19 18	184 155	20 15	9.9 6.3
29	432	18	21	274	23 22	16	144	12	4.7
30	415	20	22	295	19	15 14	142	10	3.8
31	461	22	27	327	16				
TOTAL	15313		1155	11108		606.3	6909		283.3
TOTAL TOTAL	DISCHARGE F LOAD FOR YE	OR YEAR ((AR (TONS)	CFS-QAYS)						213406 441964.62

11452000 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 upstream from Clear Lake Water Co.'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 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	MEAN		MAG-					
	D1 S-	CAL-	NE-		BICAR-	CAR-	CHLO-	
	CHARGE	CIUM	SIUM	SODIUM	BONATE	BONATE	RIDE	BORON
DATE	(CFS)	(CA)	(MG)	(NA)	(HC03)	(CO3)	(CL)	(8)
DEC.								
01	27			70	266	11	101	1.8
MAR.								
04	1020	27		21	191	0	16	
APR.								
05	284	34	40	42	253	11	43	
MAY								
16	402	26	23	28	208	0	24	
JUNE								
06	535	24	19	17	178	0	14	
JULY								
17	505	26		18	160	5	14	
AUG.								
14	391	28		20	179	0	17	
SEPT.								
13	186	27		22	181	3	19	

DATE	HARD— NESS (CA,MG)	NON- CAR- BONATE HARG- NESS	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
DEC.							
01	257	20	236	800	B-6	8	11.2
MAR.							
04	158	1	157	409	8.2	15	9.4
APR .							
05	248	22	226	643	8.6	14	10.6
MAY							
16 JUNE	161	0	171	449	8.2	21	9.1
JULY	140	0	146	372	8.1	21	9.1
17	134	0	139	350	8.6	24	8.4
AUG.							
14	140	0	147	288	8.2	25	8.9
SEPT.							
13	151	0	153	410	8.4	24	8.9

SPECT-

11453500 PUTAH CREEK NEAR GUENOC, CALIF.

LOCATION, -- Lat 38°46'45", long 122°31'00°, in Guenoc Grant, Lake County, temperature recorder at gaging station on right bank, just upstream from Coyote Valley damsite, 2.8 miles upstream from Soda Creek, and 3.2 miles downstream from highway bridge at Guenoc.

DRAINAGE AREA. -- 113 sq mi.

PERIOD OF RECORD, -- Water temperatures: March 1960 to September 1968.

Sediment records: October 1962 to September 1965 (daily), October 1965 to September 1968 (periodic).

EXTREMES. -- 1967-68:
Water temperatures: Maximum, 28,0°C July 5; minimum, 4,0°C Dec. 14.

Period of record:

Water temperatures: Maximum, 30.0°C July 20, 1960; minimum (1960-65, 1966-68), 4.0°C Dec. 14, 1967.

11453500 PUTAH CREEK NEAR GUENOC, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					,			0. 10 551	TEMBER 19	•••		
	oc.	TOBER	NOV	MBER	DEC	EMB ER	JAP	IUARY	FEBI	RUARY	н	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MA X	MIN	MAX	MIN	XAM	MIN
1	21.0	19.0	18.0	14.0	10.0	8.0	9.0	8.0	9.0	7.0	13.0	12.0
2	20.0	17.0	18.0	14.0	11.0	9.0	9.0	8.0	9.0	8.0	14.0	11.0
3	21.0 19.0	16.0 16.0	17.0 16.0	14.0 14.0	11.0 10.0	9.0 9.0	9.0 8.0	7.0 7.0	11.0 11.0	9.0 8.0	15.0 14.0	12.0 12.0
5	20.0	17.0	17.0	15.0	10.0	9.0	8.0	7.0	11.0	9.0	14.0	12.0
6 7	21.0 21.0	16.0 16.0	17.0 17.0	14.0 14.0	9.0 9.0	8.0	8.0	7.0	11.0	10.0	13.0	11.0
8	21.0	16.0	16.0	15.0	9.0	8.0 8.0	8.0 8.0	7.0 8.0	12.0 11.0	10.0 9.0	12.0 14.0	11.0
9	21.0	17.0	16.0	13.0	9.0	8.0	9.0	8.0	12.0	11.0	14.0	11.0
10	21.0	17.0	16.0	13.0	11.0	9.0	8.0	7.0	12.0	9.0	14.0	11.0
11	22.0	17.0	15.0	13.0	11.0	9.0	8.0	6.0	12.0	9.0	13.0	12.0
12	21.0	17.0	14.0	14.0	9.0	7.0	8.0	7.0	12.0	9.0	12.0	11.0
13	21.0	17.0	14.0	14.0	8.0	6.0	8.0	8.0	11.0	9.0	12.0	9.0
14	19.0	16.0	16.0	14.0	6.0	4.0	9.0	8.0	11.0	9.0	12.0	9.0
15	19.0	16.0	15.0	14.0	8.0	6.0	10.0	8.0	12.0	10.0	12.0	10.0
16	19.0	15.0	16.0	13.0	8.0	7.0	10.0	8.0	11.0	10.0	12.0	10.0
17	19.0	16.0	16.0	13.0	8.0	7.0	9.0	7.0	13.0	10.0	13.0	9.0
18	19.0	16.0	16.0	14.0	8.0	7.0	8.0	7-0	12.0	10.0	13.0	9.0
19 20	19.0 19.0	16.0 16.0	14.0 15.0	14.0 13.0	8.0 8.0	6.0 7.0	9.0 9.0	7.0 7.0	12.0 13.0	11.0 11.0	13.0 13.0	9.0 9.0
20	19.0	10.0	15.0	15.0	0.0	7.0	9.0	7.0	13.0	11.0	13.0	9.0
21	18.0	15.0	14.0	13.0	8.0	7.0	10.0	8.0	13.0	11.0	13.0	10.0
22	19.0	16.0	13.0	12.0	9.0	7.0	11.0	9.0	13.0	12.0	13.0	11.0
23 24	19.0 19.0	16.0 16.0	13.0 13.0	12.0 12.0	9.0 11.0	7.0 8.0	11.0 12.0	9.0 9.0	14.0 14.0	12.0 12.0	15.0 15.0	11.0 12.0
25	19.0	16.0	13.0	12.0	12.0	10.0	11.0	9.0	14.0	12.0	14.0	12.0
26 27	18.0	15.0 15.0	12.0	11.0	12.0	10.0	9.0	8.0	14.0	11.0	14.0	11.0
28	18.0	16.0	12.0	11.0	13.0 12.0	11.0	8.0 7.0	7.0 7.0	14.0 14.0	11.0	16.0 17.0	11.0
29	17.0	14.0	12.0	11.0	11.0	9.0	7.0	6.0	14.0	11.0	18.0	13.0
30	18.0	14.0	11.0	9.0	11.0	9.0	8.0	7.0			18.0	14.0
31	18.0	14.0			10.0	8.0	9.0	7.0			17.0	13.0
MONTH	22.0	14.0	18.0	9.0	13.0	4.0	12.0	6.0	14.0	7.0	18.0	9.0
	AF	PRIL		AY	JU	JNE.	Ju	LY	AUG	SUST	SEP	TEMBER
DAY	MAX		MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY	MAA	MIN	MAA	MIN	MAA	- IN	пах	min.	MAA	714	MAA	71.14
1	14.0	12.0	22.0	16.0	26.0	19.0	24.0	21.0	27.0	25.0	25.0	23.0
2	17.0	12.0	23.0	17-0	24.0	19.0	24.0	22.0	27.0	25.0	25.0	24.0
3	17.0 16.0	13.0	22.0	17.0 17.0	23.0 23.0	20.0 18.0	26.0 26.0	23.0 23.0	26.0 26.0	25.0 24.0	26.0	23.0
5	17.0											24-0
_			21.0	17.0	21.0	18.0	28.0	25.0	26.0	23.0	25.0 25.0	24-0 23-0
		13.0	21.0	17.0			28.0	25.0	26.0	23.0	25.0	23.0
6	17.0	13.0	21.0	16.0	23.0	17.0	28.0 27.0	25.0 25.0	26.0 26.0	23.0 24.0	25.0 25.0	23.0
7	17.0 18.0	13.0 13.0 13.0	21.0 22.0	16.0 16.0	23.0 23.0	17.0 17.0	28.0 27.0 27.0	25.0 25.0 24.0	26.0 26.0 26.0	23.0 24.0 24.0	25.0 25.0 24.0	23.0 23.0 23.0
	17.0 18.0 18.0	13.0 13.0 13.0 13.0	21.0 22.0 22.0	16.0 16.0 16.0	23.0 23.0 23.0	17.0	28.0 27.0 27.0 27.0	25.0 25.0 24.0 24.0	26.0 26.0	23.0 24.0 24.0 24.0 24.0	25.0 25.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0
7 8	17.0 18.0	13.0 13.0 13.0	21.0 22.0	16.0 16.0	23.0 23.0	17.0 17.0 18.0	28.0 27.0 27.0	25.0 25.0 24.0	26.0 26.0 26.0 26.0	23.0 24.0 24.0 24.0	25.0 25.0 24.0 24.0	23.0 23.0 23.0 23.0
7 8 9 10	17.0 18.0 18.0 19.0 20.0	13.0 13.0 13.0 13.0 14.0 15.0	21.0 22.0 22.0 22.0 22.0	16.0 16.0 16.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0	17.0 17.0 18.0 18.0 18.0	28.0 27.0 27.0 27.0 27.0 27.0	25.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0	24.0 24.0 24.0 24.0 24.0 24.0	25.0 25.0 24.0 24.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 23.0
7 8 9 10	17.0 18.0 18.0 19.0 20.0	13.0 13.0 13.0 13.0 14.0 15.0	21.0 22.0 22.0 22.0 22.0 22.0	16.0 16.0 16.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0	17.0 17.0 18.0 18.0 18.0	28.0 27.0 27.0 27.0 27.0 27.0	25.0 25.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0	23.0 24.0 24.0 24.0 24.0 24.0 23.0	25.0 25.0 24.0 24.0 24.0 24.0 25.0	23.0 23.0 23.0 23.0 23.0 23.0 22.0
7 8 9 10 11 12 13	17.0 18.0 18.0 19.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0	21.0 22.0 22.0 22.0 22.0 22.0 21.0	16.0 16.0 16.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 23.0 22.0 23.0	17.0 17.0 18.0 18.0 18.0 18.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0	23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	25.0 25.0 24.0 24.0 24.0 25.0 25.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0
7 8 9 10 11 12 13 14	17.0 18.0 18.0 19.0 20.0 20.0 19.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 17.0	16.0 16.0 16.0 17.0 16.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 23.0 22.0 23.0 24.0	17.0 17.0 18.0 18.0 18.0 18.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0	23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	23.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 23
7 8 9 10 11 12 13	17.0 18.0 18.0 19.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0	21.0 22.0 22.0 22.0 22.0 22.0 21.0	16.0 16.0 16.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 23.0 22.0 23.0	17.0 17.0 18.0 18.0 18.0 18.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0	23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	25.0 25.0 24.0 24.0 24.0 25.0 25.0 24.0 24.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0
7 8 9 10 11 12 13 14	17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0	16.0 16.0 16.0 17.0 16.0 16.0 16.0 15.0	23.0 23.0 23.0 23.0 24.0 23.0 22.0 23.0 24.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0	23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 23
7 8 9 10 11 12 13 14 15	17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0 20.0 19.0	13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0	21.0 22.0 22.0 22.0 22.0 20.0 21.0 17.0 19.0 22.0	16.0 16.0 16.0 17.0 16.0 16.0 15.0 15.0	23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 24.0 25.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0 23.0 23
7 8 9 10 11 12 13 14 15 16 17 18	17.0 18.0 19.0 20.0 20.0 19.0 19.0 20.0 19.0 19.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0	21.0 22.0 22.0 22.0 22.0 20.0 21.0 17.0 19.0 22.0 23.0 23.0	16.0 16.0 16.0 17.0 16.0 16.0 15.0 15.0	23.0 23.0 23.0 23.0 24.0 24.0 22.0 23.0 24.0 24.0 25.0 25.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19	17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0 19.0 18.0 17.0 18.0 19.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0 23.0 23.0 23.0 23.0	16.0 16.0 16.0 17.0 16.0 16.0 16.0 15.0 15.0	23.0 23.0 23.0 23.0 24.0 23.0 22.0 23.0 24.0 25.0 25.0 25.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22	25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18	17.0 18.0 19.0 20.0 20.0 19.0 19.0 20.0 19.0 19.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0	21.0 22.0 22.0 22.0 22.0 20.0 21.0 17.0 19.0 22.0 23.0 23.0	16.0 16.0 16.0 17.0 16.0 16.0 15.0 15.0	23.0 23.0 23.0 23.0 24.0 24.0 22.0 23.0 24.0 24.0 25.0 25.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	17.0 18.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0 23.0 23.0 23.0 21.0	16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 18.0 17.0	23.0 23.0 23.0 24.0 24.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0	28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 27.0 26.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 21.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22
7 8 9 10 11 12 13 14 15 16 17 18 19 20	17.0 18.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 20.0 21.0 17.0 19.0 23.0 23.0 23.0 21.0 22.0	16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 19.0 17.0	23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 24.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0	28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0	25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	17.0 18.0 18.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	13.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0 23.0 23.0 23.0 21.0 21.0 20.0 21.0	16.0 16.0 16.0 17.0 16.0 15.0 15.0 17.0 18.0 17.0 19.0 17.0	23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 23.0	28-0 27-0 27-0 27-0 27-0 26-0 27-0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 21.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 20.0 20.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22
7 8 9 10 11 12 13 14 15 16 17 18 19 20	17.0 18.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 20.0 21.0 17.0 19.0 23.0 23.0 23.0 21.0 22.0	16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 19.0 17.0	23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 24.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0	28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 23.0 22.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	17.0 18.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	16.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 18.0 19.0 17.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	28.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 22.0 22.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 22.0	23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	17.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0 21.0 22.0 21.0 21.0 22.0	16.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 23.0 24.0 22.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0	17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	28.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 23.0 23.0 22.0 22.0 23.0 22.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 22.0	23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	17.0 18.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	21.0 22.0 22.0 22.0 22.0 21.0 17.0 19.0 22.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	16.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 15.0 17.0 18.0 19.0 17.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 27-0	25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 23.0 22.0 23.0 22.0 23.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 23.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	17.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 22.0 21.0 22.0	16.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	23.0 23.0 23.0 23.0 24.0 22.0 22.0 23.0 24.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	28-0 27-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0 27-0 26-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 27-0 27-0 27-0 27-0 26-0	25.0 25.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0 21	25.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 23.0 23.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	17.0 18.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 15.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	16.0 16.0 16.0 16.0 17.0 16.0 16.0 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	28-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 27-0	25.0 24.0 25.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 22.0 22.0 23.0 22.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	17.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 22.0 21.0 22.0	16.0 16.0 16.0 16.0 17.0 16.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	23.0 23.0 23.0 23.0 24.0 22.0 22.0 23.0 24.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	28-0 27-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0 27-0 26-0 27-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 26-0 27-0 27-0 27-0 27-0 26-0	25.0 25.0 24.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	17.0 18.0 19.0 20.0 20.0 19.0 20.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0 20.0 20.0 20.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 13.0 14.0 14.0 15.0 16.0	21.0 22.0 22.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	16.0 16.0 16.0 16.0 17.0 16.0 16.0 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	23.0 23.0 23.0 23.0 24.0 24.0 23.0 24.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	28-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 27-0	25.0 24.0 25.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 23.0 22.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0
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	17.0 18.0 19.0 20.0 19.0 20.0 19.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 20.0	13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	21.0 22.0 22.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	16.0 16.0 16.0 16.0 17.0 16.0 16.0 15.0 17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	23.0 23.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 28.0 28.0 29.0 20.0	17.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	28-0 27-0 27-0 27-0 27-0 26-0 26-0 26-0 26-0 26-0 27-0	25.0 24.0 25.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 22.0 23.0 22.0 23.0 22.0 23.0 25.0	23.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0	25.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 23.0 23.0 23.0 22.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0

11453500 PUTAH CREEK NEAR GUENOC, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(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	CONCEN- TRATION (MG/L)	SUSPENDED — SEDIMENT DISCHARGE (TONS/DAY)	PERCE				THE SI		IN MI				METHOD OF ANALY- SIS
OCT 2 1967 DEC 18 JAN 2 1968 FEB 1	1210 1440 1530 1430 1130	17 8 9 8 12	2.1 227 35 631	1 17 1 18	.01 10 .09	 26	 40	 55	 66	71	 92	 95	 98	100	 	SBWC
APR 1 MAY 1 JUN 3	1220 1445 1045	13 21 20	227 162 32	37 1 2	23 .44 .17	==				==		==	===	==	 	30#0
JUL 1	1315	24 26	16 6.0 4.9	2 1 2	.09 .02 .03					==	==	=			 	
SEP 3	1400	24	1.9	2	.01	~-									 	

11454000 PUTAH CREEK NEAR WINTERS, CALIF.

LOCATION.--Lat 38°30'55", long 122°04'50", in NE NE Sec. 28, T.8 N., R.2 W., Yolo County, temperature recorder at gaging station on left bank, 1,3 miles downstream from Monticello Dam, 6 miles west of Winters, and 8 miles downstream from Capell Creek.

DRAINAGE AREA, -- 574 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1952 to September 1966. Water temperatures: November 1965 to September 1968.

Water temperatures:

EXTREMES.--1967-68:
Water temperatures: Maximum, 16.0°C Apr. 11, 12; minimum, 7.0°C on several days during December and January.

Period of record: Water temperatures: Maximum, 22.5°C May 21, 1967; minimum (1966-68), 7.0°C on several days during December 1967 and January 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	
1	12.0	11.0	12.0	11.0	9.0	8.0	8.0	8.0	8.0	8.0	9.0	9.0	
2	12.0	11.0	12.0	11.0	9.0	8.0	9.0	8.0	9.0	8.0	11.0	9.0	
3	12.0	11.0	12.0	12.0	9.0	8.0	8.0	8.0	9.0	9.0	11-0	10.0	
4	12.0	11.0	12.0	12.0	11.0	9.0	10.0	8.0	9.0	8.0	11.0	10.0	
5	12.0	11.0	12.0	12.0	11.0	10.0	9.0	8.0	9.0	9.0	12.0	11.0	
6	12.0	11.0	12.0	12.0	10.0	9.0	10.0	8.0	9.0	9.0	12.0	11.0	
7	12.0	11.0	12.0	12.0	11.0	10.0	9.0	8.0	9.0	9.0	11.0	11.0	
8	12.0	11.0	12.0	12.0	10.0	9.0	8.0	8.0	9.0	8.0	12.0	11.0	
9	12.0	11.0	12.0	12.0	10.0	9.0	8.0	7.0	9.0	8.0	12.0	11.0	
10	12.0	11.0	12.0	12.0	10.0	9.0	8.0	8.0	9.0	8.0	12.0	11.0	
11	12.0	11.0	12.0	12.0	11.0	10.0	8.0	7.0	9.0	8.0	12.0	11.0	
12	12.0	11.0	12.0	12.0	10.0	9.0	7.0	7.0	8.0	8.0	11.0	11.0	
13	12.0	11.0	12.0	12.0	9.0	8.0	8.0	7.0	8.0	8.0	12.0	11.0	
14	12.0	11.0	13.0	12.0	9.0	8.0	8.0	8.0	8.0	8.0	12.0	11.0	
15	12.0	11.0	12.0	11.0	10.0	9.0	9.0	8.0	8.0	8.0	12.0	11.0	
16	12.0	11.0	12.0	12.0	10.0	9.0	9.0	8.0	9.0	8.0	11.0	11.0	
17	12.0	11.0	12.0	12.0	10.0	9.0	8.0	8.0	10.0	9.0	12.0	11.0	
18	12.0	11.0	12.0	11.0	10.0	9.0	8.0	8.0	11.0	10.0	11.0	11.0	
19	12.0	11.0	12.0	11.0	9.0	8.0	9.0	8.0	10.0	9.0	11.0	11.0	
20	12.0	11.0	12.0	11.0	9.0	8.0	9.0	8.0	10.0	9.0	11.0	11.0	
21	12.0	11.0	12.0	11.0	8.0	7.0	9.0	8.0	11.0	10.0	11.0	11.0	
22	12.0	11.0	11.0	11.0	8.0	7.0	9.0	8.0	12.0	11.0	11.0	11.0	
23	12.0	11.0	11.0	11.0	8.0	7.0	9.0	8.0	12.0	11.0	12.0	11.0	
24	12.0	11.0	11.0	11.0	8.0	7.0	9.0	8.0	11.0	9.0	12.0	12.0	
25	12.0	11.0	11.0	11.0	9.0	7.0	9.0	8.0	9.0	8.0	12.0	12.0	
26	12.0	11.0	11.0	11.0	9.0	9.0	8.0	8.0	9.0	8.0	12.0	12.0	
27	12.0	11.0	11.0	10.0	9.0	9.0	8.0	8.0	9.0	8.0	12.0	11.0	
28	12.0	11.0	11.0	10.0	9.0	9.0	8.0	8.0	10.0	9.0	12.0	11.0	
29	12.0	11.0	11.0	10.0	9.0	8.0	8.0	7.0	9.0	8.0	13.0	11.0	
30	12.0	11.0	10.0	9.0	8.0	8.0	7.0	7.0			13.0	11.0	
31	12.0	11.0			8.0	8.0	8.0	7.0			13.0	12.0	
HONTH	12.0	11.0	13.0	9.0	11.0	7.0	10.0	7.0	12.0	8.0	13.0	9.0	

11454000 PUTAH CRREK NEAR WINTERS, CALIF, -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SZPTEMBER 1968 -- Continued

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.6	12.0	11.0	9.0	11.0	9.0	11.0	11.0	12.0	11.0	12.0	11.0
2	13.0	12.0	10.0	9.0	11.0	9.0	11.0	10.0	12.0	11.0	12.0	11.0
3	13.0	12.0	11.0	9.0	10.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
4	13.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
5	13.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
6 7	13.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
	14.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
8	14.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
9	14.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
10	15.0	14.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
11	16.0	14.0	10.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
12	16.0	15.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
13	15.0	13.0	10.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
14	13.0	13.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
15	13.0	13.0	11.0	9.0	10.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
16	13.0	12.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
17	12.0	11.0	11.0	9.0	11.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0
18	12.0	11.0	11.0	9.0	11.0	11.0	11.0	10.0	12.0	11.0	12.0	11.0
19	11.0	11.0	10.0	10.0	11.0	11.0	11.0	10.0	12.0	11.0	12.0	11.0
20	11.0	10.0	11.0	10.0	11.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
21	11.0	10.0	11.0	10.0	11.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
22	11.0	9.0	11.0	10.0	11.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
23	10.0	9.0	11.0	10.0	11.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0
24	10.0	9.0	10.0	10.0	11.0	10.0	12.0	11.0	12.0	11.0	12.0	11-0
25	11.0	9.0	11.0	10.0	11.0	11.0	12-0	11.0	12.0	11.0	12.0	11.0
26	11.0	9.0	11.0	10.0	11.0	11.0	11.0	10.0	12.0	11.0	12.0	11.0
27	10.0	9.0	11.0	9.0	11.0	11.0	11.0	11.0	12.0	11.0	12.0	11.0
28	10.0	9.0	11.0	9.0	11.0	11.0	11.0	11.0	12.0	11.0	12.0	11.0
29	10.0	9.0	11.0	9.0	11.0	10.0	11.0	11.0	12.0	11.0	12.0	11.0
30	11.0	9.0	11.0	9.0	11.0	11.0	11.0	11.0	12.0	11.0	12.0	11.0
31			10.0	9.0			12.0	11.0	12.0	11.0		
MONTH	16.0	9.0	11.0	9.0	11.0	9.0	12.0	10.0	12.0	11.0	12.0	11.0
YEAR	16.0	7.0										

11455400 SACRAMENTO RIVER AT RIO VISTA, CALIF. (Formerly reported as Sacramento River near Rio Vista, Calif.)

LOCATION (revised).--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 1968.

REMARKS, -- Records furnished by U.S. Bureau of Reclamation and reviewed by Geological Survey.

11455400 SACRAMENTO RIVER AT RIO VISTA, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	CAL- CIUM (CA)	MAG NE STUM (MG)	SOO TUM (AA)	PO- TAS- SIUM (K)	BICAR+ BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (N)	PHO 5- P HAT E (PO4)	HARD- NESS (CA,MG)
JAN.											
11									.02	2.3	
FEB. 26			_						. 40	.67	
MAR.									• 10	•••	
28	13	13	14	1.8	113	0	3.0	12	. 37	.17	86
APR.											
19					_				• 40	.12	
MAY											
21						~~			1.3	•20	
JUNE 18	15	6.9	18	1.6	90	0	25	14	- 30	- 02	65
JULY	.,	0.,		1.0	,,	•					
18							_		.30	.10	
AUG.											
15									-40	.11	
SEPT.				_							
27	13	11	17	1.5	105	0	11	13	-40	. 12	76

DATE	NON- CAR- BONATE HARD- NESS	PERCENT SDDIUM	SODIUM AO- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TUR- BIO- ITY	TEM- PERA- (TURE (DEG C)	DIS- SOLVED DXYGEN	B IO- CHEM- ICAL OXYGEN DE MAND	
JAN. 11			_		140	7.3	12	6	10.9		
FEB.							**	•	,		
26					170	7.1	150	14	9.2		
MAR.											
28	0	26	.7	93	240	7.9	30	14	9.8		
APR.											
19	~-				170	7.8	25	13	9.8		
MAY											
21					220	7.8	20	18	8.6	1-1	
JUNE 18	0	37	1.0	74	270	7.8	20	21	8.7		
JULY	U	21	1.0	/-	210	7.0	20	21	0.1	4.6	
18			_		190	7.6	20	25	8.6	.3	
AUG.					.,,	,,,	20	2.5		• • •	
15					185	7.8	25	21	8.5	.9	
SEPT.											
27	0	32	.8	86	220	8.0	7.0	19	8.1	1.3	

NAPA RIVER BASIN

11456000 NAPA RIVER NEAR ST. HELENA, CALIF.

LOCATION.--Lat 38°29'40", long 122°25'50", in SE{ sec.32, T.8 N., R.5 W., Napa County, temperature recorder at gaging station on right bank, 0.2 mile upstream from highway bridge, 1.3 miles northeast of Zinfandel, and 2.5 miles east of St. Helena.

DRAINAGE AREA. -- 81.4 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1953 to September 1966. Water temperatures: October 1957 to September 1968. Sediment records: December 1956 to June 1952.

EXTREMES.--1967-68:
Water temperatures: Maximum, 33.0°C July 18; minimum, 3.0°C Dec. 14, 15.

Period of record (1961-63, 1964-68):
Water temperatures: Maximum (1961-63, 1964-65, 1966-68), 33.0°C July 18, 1968; minimum (1961-63, 1965-68), 3.0°C Dec. 14, 15, 1967.

REMARKS, -- No flow Sept. 28-30.

209 11456000 NAPA RIVER NEAR ST. HELENA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	FOBER	NOV	EMBER	DEC	EMBER	JAL	UARY	FEBI	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN								
1	17.0	16.0	13.0	13.0	10.0	8.0	7.0	7.0	11.0	7.0	13.0	13.0
2	16.0	15.0	14.0	13.0	10.0	9.0	7.0	6.0	10.0	9.0	14.0	11.0
3	17.0	15.0	14.0	13.0	10.0	9.0	6.0	4.0	11.0	10.0	14.0	12.0
5	17.0 17.0	16.0 16.0	14.0 15.0	13.0 14.0	10.0	10.0	5.0 5.0	4.0	11.0 11.0	11.0	14-0 14-0	12.0 12.0
	-											
6	16-0	14.0	15-0	14.0	9.0	8.0	5.0	5.0	12.0	11.0	13.0	11.0
7 8	16.0 16.0	14.0 14.0	15.0 16.0	13.0 14.0	9.0 8.0	8.0 7.0	6.0 6.0	5.0 6.0	12.0 12.0	11.0 12.0	12.0 14.0	12.0 11.0
9	16.0	14.0	15.0	14.0	7.0	7.0	6.0	6.0	12-0	12.0	13.0	10.0
10	17.0	16.0	14.0	13.0	7.0	7.0	8.0	6.0	12.0	10.0	14.0	10.0
11	17.0	16.0	14.0	13.0	8.0	7.0	8.0	6.0	12.0	10.0	13.0	11.0
12 13	17.0 17.0	16.0 15.0	14.0 14.0	14.0 14.0	7.0 7.0	6.0 5.0	7.0 8.0	6.0 7.0	12.0 12.0	10.0 10.0	12.0 12.0	10.0 10.0
14	16.0	15.0	14.0	14.0	4.0	3.0	9.0	8.0	11.0	10.0	12.0	11.0
15	15-0	15.0	15.0	14.0	4.0	3.0	10.0	9.0	12.0	11.0	12.0	10.0
16	15.0	14.0	14.0	13.0	4.0	4.0	9.0	9.0	12.0	12.0	11.0	10.0
17	16.0	14.0	14.0	13.0	4.0	4.0	9.0	8.0	13.0	12.0	12.0	10.0
18 19	15.0 16.0	14.0	14-0	14.0	5.0 5.0	4.0 4.0	8.0 8.0	7.0 8.0	14.0 13.0	12.0 12.0	12.0 13.0	9.0 9.0
20	16.0	14.0 14.0	14.0 14.0	13.0 13.0	4.0	4.0	9.0	8.0	13.0	12.0	13.0	10.0
21	16.0	15.0	12.0	11.0	4.0	4.0	9.0	8.0	13.0	12.0	13.0	10.0
22	17.0	16.0	11.0	10.0	4.0	4-0	10.0	8.0	13.0	12.0	13.0	12.0
23 24	16.0 16.0	15.0 15.0	11.0 11.0	9.0	5.0 6.0	4.0 5.0	10.0 9.0	9.0 8.0	14.0 14.0	13.0 13.0	15.0 15.0	12.0 12.0
25	16.0	14.0	10.0	9.0	7.0	6.0	10.0	9.0	14.0	13.0	14.0	12.0
26	15.0	14.0	9.0	8.0	7.0	7.0	10.0	9.0	15.0	12.0	15.0	10.0
27	14.0	13.0	9.0	B.0	8.0	7.0	9.0	6.0	14.0	12.0	16.0	11.0
28	15.0	14.0	8.0	8.0	8.0	8.0	8.0	8.0	15.0 15.0	13.0	17.0	12.0
29 30	14.0 13.0	13.0 13.0	9.0 10.0	8.0 9.0	8.0 8.0	8.0 8.0	8.0 8.0	8.0 8.0	15.0	13.0	18.0 18.0	13.0 13.0
31	13.0	13.0			8.0	6.0	9.0	8.0			17-0	13.0
HONTH	17.0	13.0	16.0	8.0	10.0	3.0	10.0	4.0	15.0	7.0	18.0	9.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY.	MAX	MIN	MAX	MIN								
1	14.0	13.0	22.0	17.0	26.0	20.0	24.0	20.0	24.0	18.0	20.0	18.0
2	16.0	12.0	22.0 19.0	16.0	25.0	21.0	24.0 24.0	18.0 19.0	27.0	17.0	19.0 19.0	18.0 18.0
4	16.0 15.0	12.0 12.0	17.0	17.0 16.0	23.0 23.0	22.0 19.0	24.0	19.0	26.0 24.0	17.0 17.0	19.0	18.0
5	16.0	12.0	19.0	16.0	22.0	19.0	26.0	20.0	23.0	16.0	19.0	18.0
6	16.0	12.0	19.0	14.0	24.0	18.0	24.0	20.0	25.0	17.0	19.0	18.0
7	16.0	12.0	19.0	14.0	24.0	18-0	25.0	19.0	23.0	17.0	19.0	18.0
8	18.0 19.0	13.0 14.0	19.0 19.0	15.0 16.0	24.0 24.0	19.0	24.0 27.0	19.0 19.0	23.0 23.0	17.0 17.0	18.0 18.0	17.0 17.0
10	19.0	15.0	19.0	15.0	24.0	18.0	30.0	18.0	23.0	17.0	18.0	17.0
11	19.0	14.0	18.0	15.0	24.0	19.0	28.0	17.0	23.0	15.0	18.0	17.0
12	17.0	16.0	19.0	16.0	22.0	18-0	28.0	17.0	21.0	16.0	18.0	17.0
13 14	18.0 19.0	14.0 14.0	18.0 18.0	16.0	23.0 25.0	17.0 18.0	29.0 29.0	17.0 17.0	22.0	16.0 17.0	18.0 19.0	18.0 18.0
15	18.0	14.0	21.0	14.0 15.0	26.0	19.0	30.0	16.0	21.0	18.0	18.0	17.0
16	17.0	12.0	21.0	16.0	26.0	21.0	30.0	16.0	20.0	18.0	18.0	17.0
17	16.0	12.0	21.0	17.0	26.0	21.0	31.0	16.0	20.0	17.0	18.0	18.0
18 19	17.0 18.0	12.0 13.0	22.0 21.0	17.0 18.0	26.0 24.0	21.0 20.0	33.0 32.0	17.0 18.0	19.0	18.0 18.0	19.0 19.0	18.0 17.0
20	18.0	13.0	22.0	18.0	26.0	20.0	28.0	17.0	17.0	17.0	17.0	14.0
21	17.0	12.0	21.0	18.0	28.0	19.0	26.0	18.0	18.0	17.0	15.0	14.0
22	18.0	12.0	21.0	17.0	27.0	21.0	27.0	17.0	19.0	16.0	14.0	12.0
23	18.0 19.0	13.0 14.0	21.0 19.0	17.0	27.0 27.0	21.0 21.0	26.0 27.0	17.0 17.0	18.0 19.0	17.0 17.0	15.0 15.0	12.0 12.0
25	20.0	14.0	23.0	17.0 18.0	26.0	21.0	27.0	17.0	19.0	17.0	15.0	13.0
26	21.0	16.0	24.0	19.0	25.0	20.0	28.0	17.0	19.0	17.0	15.0	13.0
27	21.0	16.0	25.0	20.0	25.0	19.0	28.0	17.0	18.0	17.0	16.0	13.0
28 29	21.0	16.0	25.0 25.0	21.0 20.0	24.0 22.0	18.0 18.0	23.0 28.0	17.0 18.0	19.0 19.0	17.0 17.0		
	21.0											
30	21.0 22.0	16.0 19.0	25.0	20.0	24.0	20.0	27.0	18.0	20.0	17.0		
30 31	22.0	19.0	25.0 24.0	20.0 19.0		20.0	27.0 25.0	18.0 18.0	20.0 20.0	17.0 18.0		==
	22.0	12.0	25.0	20.0		17.0	27.0			17.0 18.0 15.0	20.0	12.0

210 BOLINAS LAGOON BASIN

11460170 PINE CREEK AT BOLINAS, CALIF.

LCCATION.--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 m1.

PERIOD OF RECORD, -- Water temperatures: May 1967 to September 1968. Sediment records: June 1967 to September 1968.

(Mans), --1907-68: Minimum, 4.0°C Dec. 14. Water temperatures: Minimum, 4.0°C Dec. 14. Sediment Concentrations: Maximum daily, 320 mg/l Feb. 21; minimum daily, no flow Sept. 22. Sediment discharge: Maximum daily, 15 tons Feb. 21; minimum daily, 0 ton Sept. 22.

ifiod of record: Water temperatures: Minimum, 4.0°C Dec. 14, 1967. Sediment concentrations: Maximum daily, 320 mg/l Feb. 21, 1968; minimum daily, no flow Sept. 22, 1968. Sediment decharge: Maximum daily, 75 tons Feb. 21, 1968; minimum daily, 0 ton on many days each year.

REMARKS .-- No flow Sept. 22.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

													-		Đ,	AY																	
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 NOVEMBER. DECEMBER.		13				15			13				13	13	13	14	14	13	12	13	13	12	11	11	11	11	10	10		9		7	
JANUARY FEBRUARY. MARCH	8	10	11	11	10	9	11	11	9	9	9	11	11	11	12	11	12	11	12	12	12	12	12	12	14	15	13	13	13		9 13	8 11 12	
APRIL MAY JUNE			12		15		13			13				13			13		_		14			13				16			17	==	
JULY AUGUST SEPTEMBER		15				14			14				15			16					-				_						==	==	

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;

		WATER								PART	ICLE S	SIZE					
		TEM- PERA- TURE			SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (1	IN MII	LL IME1	rers)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
JAN 29 1968	1300	9	40	290	31	26	37	48	54	56	73	77	86	100			SBWC
JAN 30	1200	9	44	77	9.1	44	48	60	70	76	81	91	99	100			VPWC
FE8 20	1700	12	45	188	23	6	24	40	50	57	81	87	93	100			SBWC

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11460170 PINE CREEK AT BOLINAS, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OC TOBER NOVEMBER DECEMBER MEAN MEAN MEAN SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TDNS/DAY) CONCEN-TRATION (MG/L) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) MEAN DISCHARGE MEAN DISCHARGE DAY (CFS) .76 .84 .76 .76 3.8 2.5 5.0 10 6.0 1.1 1.1 1.0 1.0 0.01 0 0 0 0 3 2 13 25 15 .03 .01 .18 .68 1 2 2 2 3 1 2 3 2 2 2 3 4 5 .01 .01 1.0 1.0 1.0 .92 .01 .01 .01 0 .80 .60 .50 .42 .01 0 0 0 2.7 7.0 2.7 2.2 1.9 6 22 3 3 3 .04 .42 .02 .02 3 2 2 2 2 6 7 8 9 2 2 2 2 .60 .84 1.3 3.9 1.2 0 0 •01 •12 •01 .03 .02 .02 .05 .84 .76 .76 .68 11 12 13 14 15 2 5 5 4 2 0 2 2 3 1.6 1.5 1.5 1.8 1.4 6 4 10 11 .01 .01 .01 11 .90 .80 1.0 1.5 9 6 16 6 .68 .68 .68 2 2 1 1 0000 0 1.5 1.7 4.4 2.8 2.2 .04 16 17 18 19 20 1 2 1 1 ,01 0 .03 .19 -04 .85 1.0 1.3 1.6 1.8 .84 1.1 1.2 1.1 0 0 0 0 .07 .03 .02 .01 21 22 23 24 25 2 3 2 1 0 1.8 1.6 1.4 1.2 15 7 4 2 3 1 1 1 1 .01 0.01 1.1 1.1 .92 1.0 .84 2.1 2.4 3.0 4.2 6.2 .01 .01 .06 .14 1.1 1.0 1.1 1.3 1.4 2 8 12 16 26 27 28 29 30 31 000000 1 2 1 2 0 111 0.01 0 .01 TOTAL 27.70 .13 44.52 .66 78.4 2.33

		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
						,	10.57		(10,10,241)
1	1.1	1	0	16	15	.65	14	13	.49
2	.98	1	0	22	36	2.6	13	11	.39
3	1.0	1	0	26	37	2.6	12	10	•32
4	1.1	4	•01	18	16	.78	11	8	. 24
5	1.1	3	•01	14	10	.38	11	8	•24
6	.95	3	.01	11	10	.30	9.8	7	-19
7	.90	2	0	8.2	10	.22	12	ė ė	• 26
8	1.0	3	.01	7.0	10	.19	ii	9	.27
9	3.5	1	•01	6.2	9	.15	9.5	9	. 23
10	25	56	3.8	5.4	8	.12	8.8	7	.17
11	5.2	14	.20	4.7	8	.10	8.3	5	•11
12	3.8	7	.07	4.4	7	.08	40	133	26
13	3.4	3	•03	3.7	6	•06	42	152	17
14	6.9	3	.06	3.4	6	.06	24	98	6.4
15	21	48	2.7	3.1	6	•05	18	65	3.2
16	11	29	.86	6.9	26	-63	32	96	8.9
17	8.2	10	•22	64	308	55	23	48	3.0
18	7.8	4	-08	43	90	11	20	25	1.4
19	7.8	6	-13	56	145	22	16	20	.86
20	7.4	3	.06	45	230	28	14	15	.57
21	6.6	3	•05	87	320	75	13	14	.49
22	6.2	3	• 05	56	205	31	12	14	. 45
23	5.8	3	.05	45	125	15	12	13	.42
24	5.8	3	- 05	37	81	8.1	ii	12	.36
25	5.8	3	.05	32	48	4.1	11	10	.30
26	5.4	3	.04	24	32	2.1	9.8	7	.19
27	5.8	3	• 05	20	23	1.2	9.0	6	.15
28	5.8	4	.06	17	15	•69	8.5	7	.16
29	24	147	15	15	15	.61	8.0	5	.11
30	48	113	17				7.6	3	•06
31	25	31	2.1				7.2	5	.10
TOTAL	263.33		42.76	701.0		262.77	458.5		73.03

BOLINAS LAGOON BASIN

11460170 PINE CREEK AT BOLINAS, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
DAY	MEAN OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN OISCHARGE (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	7	.14	2.7	2	•01	1.4	2	.01
2	6.8	6	• 11	2.7	2	.01	1.4	2	.01
3	6.4	6	.10	2.8	2	•02	1.4	2	.01
4	6.4	5	.09	2.8	2	•02	1.4	1	0
5	6.2	5	•08	2.5	2	•01	1.4	1	0
6	6.0	5	.08	2.4	2	•01	1.4	2	•01
7	5.8	5	.08	2.3	3	•02	1.3	2	•01
8	5.8	3	•05	2.3	3	•02	1.3	2	•01
9	5.4	2	.03	2.3	2	•01	1.3	2	•01
10	5.4	2	•03	2.3	2	•01	1.3	1	0
11	5.2	2	.03	2.2	2	•01	1.3	1	0
12	5.0	2	.03	2.2	2	.01	1.2	1	0
13	4.8	2	•03	2.3	2	•01	1.2	1	0
14	4.8	2	.03	2.2	2	•01	1.1	ī	ō
15	4.8	2	•03	2.1	2	•01	1.1	ī	ō
16	4.6	2	.02	2.0	3	-02	1.1	1	0
17	4.0	2	.02	2.0	3	.02	1.1	1	ō
18	4.0	2	•02	1.9	2	•01	1.1	1	0
19	4.0	2	• 02	2.0	ž	.01	1.2	ī	ō
20	3.9	2	•02	2.0	2	•01	.83	2	0
21	3.9	2	•02	2.0	2	•01	-65	4	•01
22	3.6	2	• 02	1.9	2	.01	.98	4	•01
23	3.4	2	.02	1.8	2	.01	•75	4	.01
24	3.4	2	.02	1.8	2	•01	.83	4	•01
25	3.3	2	•02	2.5	2	.01	•98	4	.01
26	3.1	2	.02	1.6	2	.01	•90	3	.01
27	3.1	2	•02	1.5	1	0	.98	2	.01
28	3.0	2	•02	1.5	1	0	-98	2	.01
29	2.8	2	•02	1.4	1	0	•98	2	•01
30	2.8	2	.02	1.4	2	.01	•90	2	0
31				1.4	2	-01			
TOTAL	139.3		1.24	64.8		•34	33.76		.16
		JULY			AUGUST			SEPTEMBER	

		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	.40	2	0	.40	2	0	.16	1	0
2	.43	2	0	.21	3	0	.23	1	0
3	.50	2	0	.35	3	0	.18	1	0
4	. 44	2	0	•21	3	0	•21	1	0
5	.50	2	0	.21	3	0	.21	2	0
6	.25	2	0	.35	3	0	.18	3	0
7	.60	2	0	.21	2	0	•07	1	0
8	.92	2	0	•35	4	0	.14	2	0
9	.54	2	0	• 35	7	.01	-16	2	0
10	.25	2	0	.18	2	0	.10	3	0
11	-21	2	0	.25	2	0	.18	5	0
12	.19	2	0	.40	2	0	.10	3	0
13	.18	2	0	•40	2	0	.14	2	0
14	.16	3	0	• 40	2	0	.21	2	0
15	.15	4	0	.23	2	0	.12	1	0
16	.15	6	0	.21	2	0	.10	1	0
17	.14	5	0	.30	2	0	•03	1	0
18	-14	4	0	.30	2	0	.07	2	0
19	•13	3	0	.83	2	0	.05	3	0
20	.13	2	0	.65	2	0	.05	3	0
21	.13	2	0	.50	2	0	•05	3	0
22	.12	2	0	.35	2	0	0		0
23	.15	2	0	.18	2	0	•05	4	0
24	-21	2	0	.21	2	0	•10	5	0
25	•25	2	0	.30	2	0	.07	5	0
26	•25	2	0	.14	1	0	•03	5	0
27	-30	2	0	.21	1	0	•05	5	0
28	•40	2	0	.10	1	0	.16	4	0
29	.40	2	Ō	.12	1	Ö	.23	4	ō
30	.23	2	ō	.12	1	ō	.16	4	ō
31	• 30	2	ō	.07	1	ō			
TOTAL	9.15		0	9.09		•01	3.59		0

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

1833.14 383.43

SALMON CREEK BASIN

YSAHIARL

MIN

MAX

FERRILARY

MIN

MAX

213

MARCH

MIN

MAX

11460920 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.

OCTOBER

MIN

MAX

PERIOD OF RECORD .-- Water temperatures: October 1964 to September 1968.

NOVEMBER

MIN

MAX

EXTREMES. --1967-68:
Water temperatures: Maximum, 19.0°C Aug. 29; minimum, freezing point on several days during December and January.

DAY

Period of record:
Water temperatures: Maximum, 23.5°C Apr. 26, 1965; minimum (1964-66, 1967-68), freezing point on many days during winter periods.

REMARKS, -- No flow June 14, July 19-30, Aug. 13-19, 30, Sept. 1-3, 13, 15-30. Clock stopped Mar. 9-11.

MAX

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 OECEMBER

MIN

UAT	TAA	7174	784	MIN	HAA	W Tut	HAA	414	MAA	Lat M	HAA	414
1	16.0	12.0	13.0	6.0	7.0	2.0	7.0	4.0	7.0	3.0	12.0	11.0
2	13.0	11.0	12.0	5.0	7.0	2.0	7.0	3.0	9.0	6.0	15.0	7.0
3	15.0	10.0	9.0	5.0	11.0	7.0	5.0	0.0	12.0	8.0	16.0	9.0
4	15.0	10.0	9.0	8.0	11.0	9.0	4.0	0.0	13.0	8.0	14.0	9.0
5	16.0	12.D	11.0	8.0	11.0	7.0	9.0	0.0	11.0	9.0	15.0	10.0
-	1000	****	11.0	•••	41.0	,,,,	7.0	•••	11.0	,	23.0	10.0
6	16.0	11.0	14.0	9.0	8.0	3.0	3.0	1.0	14.0	8.0	12.0	8.0
ž	16.0	10.0	12.0	B.0	10.0	8.0	3.0	1.0	12.0	9.0	10.0	8.0
ė	16.0	10.0	12.0	11.0	8.0	3.0	2.0	2.0	10.0	9.0	12.0	7.0
ş	16.0	10.0	13.0	9.0	8.0	3.0	4.0	2.0	11.0		12.0	7.0
10	16.0	11.0	12.0	10.0	7.0	3.0	9.0	5.0	12.0	8.0 6.0		
10	10.0	11.0	12.0	10.0	7.0	3.0	7.0	9+ U	12.0	0.0		
11	16.0	11.0	13.0	11.0	9.0	6.0	7.0	2.0	11-0	4.0		
12											8.0	
	16.0	11.0	12.0	11.0	7.0	3.0	6.0	2.0	11.0	4.0		7.0
13	16.0	10.0	12.0	11.0	4.0	1.0	7.0	5.0	11.0	7.0	12.0	7.0
14	17.0	8.0	15.0	12.0	2.0	0.0	8.0	7.0	11.0	6.0	13.0	7.0
15	16.0	7.0	14.0	11.0	2.0	0.0	11.0	8.0	12.0	8.0	12.0	7.0
• •												
16	15.0	7.0	15.0	11.0	3.0	0.0	10.0	6.0	10.0	9.0	10.0	7.0
17	15.0	7.0	13.0	10.0	3.0	0.0	9.0	3.0	12.0	10.0	11.0	4.0
18	12.0	7.0	14.0	11.0	6.0	3.0	9.0	3.0	14.0	11.0	11.0	3.0
19	13.0	8.0	14.0	10.0	4.0	0.0	9.0	4.0	12.0	11.0	13.0	3.0
20	13.0	7.0	14.0	10.0	3.0	0.0	9.0	3.0	13.0	11.0	13.0	3.0
21	11.0	8.0	13.0	8.0	4.0	0.0	10.0	5.0	13.0	11.0	13.0	5.0
22	13.0	10.0	13.0	8.0	6.0	1.0	11.0	4.0	13.0	11.0	11.0	6.0
23	15.0	11.0	11.0	6.0	7.0	1.0	11.0	4.0	15.0	12.0	13.0	8.0
24	14.0	10.0	10.0	4.0	7.0	1.0	11.0	4-0	17.0	11.0	14.0	7.0
25	13.0	9.0	11.0	5.0	8.0	2.0	10.0	6.0	17.0	9.0	14-0	9.0
26	14.0	9.0	9.0	3.0	10.0	2.0	7.0	4.0	18.0	9.0	13.0	4.0
27	13.0	9.0	7.0	3.0	10.0	5.0	6.0	3.0	14.0	12.0	15.0	5.0
28	13.0	10.0	8.0	4-0	10.0	3.0	5.0	2.0	16.0	11.0	17.0	7.0
29	14.0	8.0	8.0	5.0	10.0	6.0	7.0	5.0	16.0	11.0	18.0	8.0
30	13.0	6.0	7.0	4.0	9.0	4.0	7.0	6.0			17.0	9.0
31	13.0	6.0			7.0	3.0	9.0	4.0			14.0	10.0
								•			•	••••
MONTH	17.0	6.0	15.0	3.0	11.0	0.0	11.0	0.0	18.0	3.0	18.0	3.0
								•••			••••	
	A1	PRIL		MAY	- 11	JNE	**	JL Y	ALBE	SUST	SEPT	TEMBER
			,		•	J.4C	•	,		,,,,	GC .	
DAY	MAY	MIN	MAY	MIN	MAY	MIN	MAY	MIN	MAY	MIN	MAX	MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
											MAX	MIN
1	14.0	9.0	15.0	9.0	17.0	12.0	14.0	11.0	13.0	11.0	MAX	MIN
1 2	14.0 13.0	9.0 8.0	15.0 14.0	9.0 10.0	17.0 17.0	12.0 13.0	14.0 14.0	11.0 11.0	13.0 14.0	11.0		
1 2 3	14.0 13.0 14.0	9.0 8.0 6.0	15.0 14.0 13.0	9.0 10.0 11.0	17.0 17.0 17.0	12.0 13.0 15.0	14.0 14.0 15.0	11.0 11.0 11.0	13.0 14.0 14.0	11.0 11.0 11.0		
1 2 3 4	14.0 13.0 14.0 12.0	9.0 8.0 6.0 7.0	15.0 14.0 13.0 12.0	9.0 10.0 11.0 10.0	17.0 17.0 17.0 16.0	12.0 13.0 15.0 13.0	14.0 14.0 15.0 16.0	11.0 11.0 11.0	13.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0	14.0	13.0
1 2 3	14.0 13.0 14.0	9.0 8.0 6.0	15.0 14.0 13.0	9.0 10.0 11.0	17.0 17.0 17.0	12.0 13.0 15.0	14.0 14.0 15.0	11.0 11.0 11.0	13.0 14.0 14.0	11.0 11.0 11.0		
1 2 3 4 5	14.0 13.0 14.0 12.0 14.0	9.0 8.0 6.0 7.0 8.0	15.0 14.0 13.0 12.0 12.0	9.0 10.0 11.0 10.0 9.0	17.0 17.0 17.0 16.0 15.0	12.0 13.0 15.0 13.0 12.0	14.0 14.0 15.0 16.0 16.0	11.0 11.0 11.0 11.0	13.0 14.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0 9.0	14.0 15.0	13.0 13.0
1 2 3 4 5	14.0 13.0 14.0 12.0 14.0	9.0 8.0 6.0 7.0 8.0	15.0 14.0 13.0 12.0 12.0	9.0 10.0 11.0 10.0 9.0	17.0 17.0 17.0 16.0 15.0	12.0 13.0 15.0 13.0 12.0	14.0 14.0 15.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0	13.0 14.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0 9.0	14.0 15.0	13.0 13.0
1 2 3 4 5	14.0 13.0 14.0 12.0 14.0	9.0 8.0 6.0 7.0 8.0	15.0 14.0 13.0 12.0 12.0	9-0 10-0 11-0 10-0 9-0 7-0 8-0	17.0 17.0 17.0 16.0 15.0	12.0 13.0 15.0 13.0 12.0	14.0 14.0 15.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0	13.0 14.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0 9.0	14.0 15.0 16.0	13.0 13.0 14.0 14.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 12.0 14.0 15.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0	7-0 10-0 11-0 10-0 7-0 8-0 11-0	17.0 17.0 17.0 16.0 15.0	12.0 13.0 15.0 13.0 12.0 12.0	14.0 14.0 15.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0	13.0 14.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0	14.0 15.0 16.0 16.0	13.0 13.0 14.0 14.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 12.0 14.0 15.0 17.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 14.0	9-0 10-0 11-0 10-0 9-0 7-0 8-0 11-0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0	12.0 13.0 15.0 13.0 12.0 11.0	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 14.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0	14.0 15.0 16.0 16.0 16.0	13.0 13.0 14.0 14.0 13.0
1 2 3 4 5 6 7 8	14.0 13.0 14.0 12.0 14.0 15.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0	7-0 10-0 11-0 10-0 7-0 8-0 11-0	17.0 17.0 17.0 16.0 15.0	12.0 13.0 15.0 13.0 12.0 12.0	14.0 14.0 15.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0	13.0 14.0 14.0 14.0 14.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0	14.0 15.0 16.0 16.0	13.0 13.0 14.0 14.0
1 2 3 4 5 6 7 8 9	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0	14.0 15.0 16.0 16.0 14.0 14.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0	16.0 15.0 16.0 16.0 17.0	13.0 13.0 14.0 14.0 13.0 13.0
1 2 3 4 5 6 7 8 9	14.0 13.0 14.0 12.0 14.0 15.0 17.0 18.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0	12.0 13.0 15.0 13.0 12.0 12.0 11.0 11.0	14.0 14.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0 14.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0	16.0 15.0 16.0 16.0 17.0	13.0 13.0 14.0 14.0 13.0 13.0
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0	12.0 13.0 15.0 13.0 12.0 12.0 11.0 11.0	14.0 14.0 15.0 16.0 15.0 14.0 15.0 15.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 13.0 13.0 13.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 8.0 10.0 9.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0	12.0 13.0 15.0 13.0 12.0 12.0 11.0 11.0 11.0	14.0 15.0 16.0 15.0 14.0 15.0 15.0 15.0 16.0	11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0 14.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0	14.0 14.0 15.0 16.0 15.0 14.0 15.0 15.0 15.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 13.0 13.0 13.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 16.0 15.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 8.0 10.0 9.0	17.0 17.0 17.0 15.0 15.0 15.0 14.0 14.0 14.0	12.0 13.0 15.0 12.0 12.0 11.0 11.0 11.0 11.0 9.0 8.0	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0 15.0 16.0 16.0	11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 15	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 16.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0 6.0 10.0 11.0 9.0 8.0 9.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 8.0 9.0	17.0 17.0 17.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 9.0 8.0 10.0	14.0 14.0 15.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 14.0 15.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 13.0	9.0 8.0 6.0 7.0 8.0 6.0 7.0 8.0 10.0 11.0 9.0 8.0 9.0	15.0 14.0 13.0 12.0 12.0 14.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0	9-0 10-0 11-0 10-0 9-0 7-0 8-0 11-0 10-0 8-0 8-0 8-0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0 14.0 14.0 14.0 14.0	12.0 13.0 15.0 12.0 12.0 11.0 11.0 11.0 11.0 9.0 8.0 10.0	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0 11.0	14.0 15.0 16.0 16.0 17.0 16.0 17.0	13.0 13.0 14.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 11 11 11 11 11 11 11 11 11 11 11 11	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 14.0 15.0	9.0 8.0 6.0 6.0 6.0 6.0 6.0 10.0 11.0 9.0 8.0 9.0	15.0 14.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 10.0 9.0 10.0 9.0 10.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0 12.0 14.0 12.0 14.0 12.0 14.0	12.0 13.0 15.0 13.0 12.0 11.0 10.0 11.0 9.0 8.0 	14.0 14.0 15.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 14.0 15.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0 11.0	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 14.0 13.0	9.0 8.0 7.0 8.0 6.0 7.0 8.0 10.0 11.0 9.0 8.0 9.0 9.0	15.0 14.0 12.0 12.0 12.0 14.0 14.0 13.0 14.0 13.0 15.0 16.0 15.0 16.0	9.0 10.0 11.0 10.0 9.0 8.0 11.0 8.0 10.0 9.0 10.0 8.0 8.0 8.0	17.0 17.0 17.0 16.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 9.0 10.0 11.0	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	14.0 15.0 16.0 16.0 17.0 16.0 17.0	13.0 13.0 14.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 11 11 11 11 11 11 11 11 11 11 11 11	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 14.0 15.0	9.0 8.0 6.0 6.0 6.0 6.0 6.0 10.0 11.0 9.0 8.0 9.0	15.0 14.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 11.0 9.0 10.0 9.0 10.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0 12.0 14.0 12.0 14.0 12.0 14.0	12.0 13.0 15.0 13.0 12.0 11.0 10.0 11.0 9.0 8.0 	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 14.0 15.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0 11.0	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	14.0 13.0 14.0 12.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	9.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 10.0 11.0 8.0 9.0 7.0 8.0 9.0	15.0 14.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 16.0	9.0 10.0 11.0 10.0 9.0 8.0 11.0 8.0 10.0 9.0 10.0 8.0 8.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 14.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 11.0 8.0 	14.0 14.0 15.0 16.0 16.0 15.0 14.0 15.0 15.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 14.0 15.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0
1 2 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 22 1	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 14.0 12.0 12.0 13.0 12.0 13.0	9.0 8.0 7.0 8.0 6.0 7.0 8.0 10.0 11.0 8.0 9.0 7.0 5.0 8.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 8.0 10.0 8.0 11.0 9.0 11.0 8.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0	12.0 13.0 15.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	14-0 14-0 15-0 16-0 16-0 14-0 14-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 12.0 11.0 11.0 11.0	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 13.0 14.0 14.0 13.0 12.0 12.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 13.0 12.0 12.0 12.0 12.0	9.0 8.0 7.0 8.0 7.0 8.0 10.0 11.0 9.0 8.0 9.0 7.0 8.0 9.0	15.0 14.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 15.0 16.0 17.0	9.0 10.0 11.0 10.0 9.0 8.0 11.0 8.0 10.0 8.0 9.0 10.0 8.0 9.0 11.0 13.0 13.0	17.0 17.0 17.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0	12.0 13.0 15.0 12.0 12.0 11.0 11.0 11.0 11.0 10.0 11.0 11	14.0 14.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 12.0 13.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 17 18 19 20 21 22 22 23	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 14.0 12.0 12.0 13.0 12.0 13.0 13.0 13.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0 7.0 8.0 10.0 8.0 9.0 8.0 9.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0	9-0 10-0 11-0 9-0 7-0 8-0 11-0 8-0 10-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 11-0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 11.0 8.0 8.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0	9.0 8.0 7.0 6.0 6.0 6.0 8.0 10.0 11.0 9.0 8.0 8.0 8.0 8.0 8.0 7.0 6.0 6.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	9.0 10.0 11.0 11.0 9.0 7.0 8.0 11.0 8.0 10.0 8.0 10.0 8.0 11.0 13.0 13.0 13.0 13.0 11.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11	14.0 14.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 12.0 13.0 13.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 17 18 19 20 21 22 22 23	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 14.0 12.0 12.0 13.0 12.0 13.0 13.0 13.0	9.0 8.0 6.0 7.0 8.0 6.0 6.0 7.0 8.0 10.0 8.0 9.0 8.0 9.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0	9-0 10-0 11-0 9-0 7-0 8-0 11-0 8-0 10-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 11-0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 11.0 8.0 8.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 8.0 7.0 6.0 6.0 6.0 8.0 10.0 11.0 9.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 10.0 9.0 11.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 16.0 15.0 17.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 16.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0	9.0 8.0 7.0 8.0 6.0 6.0 6.0 7.0 8.0 10.0 8.0 9.0 9.0 8.0 9.0 9.0 9.0 8.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	9.0 10.0 11.0 9.0 7.0 8.0 11.0 9.0 10.0 9.0 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 15.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25 26 27	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 18.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 8.0 7.0 8.0 6.0 7.0 10.0 11.0 9.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0 7.0 8.0 8.0 8.0 9.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 17.0	9.0 10.0 11.0 10.0 9.0 11.0 11.0 11.0 10.0 8.0 10.0 8.0 11.0 11	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 16.0 15.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 11.	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 12.0 13.0
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	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 16.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	9.0 8.0 7.0 8.0 6.0 6.0 6.0 8.0 10.0 8.0 8.0 9.0 9.0 9.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	9.0 10.0 11.0 10.0 9.0 7.0 8.0 11.0 9.0 10.0 9.0 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 14 4 15 5 16 7 18 19 20 21 22 23 24 25 26 27 28 8 29	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 8.0 7.0 8.0 8.0 10.0 11.0 9.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0	9.0 10.0 11.0 10.0 9.0 11.0 11.0 11.0 10.0 8.0 10.0 8.0 11.0 11	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 16.0 15.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	11.0 11.0 11.0 10.0 9.0 9.0 9.0 11.0 11.	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 0	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 16.0 16.0 16.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	9.0 8.0 7.0 8.0 6.0 6.0 6.0 8.0 10.0 8.0 8.0 9.0 9.0 9.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	9-0 10-0 11-0 11-0 9-0 11-0 8-0 11-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 13-0 13-0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	12.0 13.0 15.0 13.0 12.0 11.0 11.0 11.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 14 4 15 5 16 7 18 19 20 21 22 23 24 25 26 27 28 8 29	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 8.0 7.0 8.0 8.0 10.0 11.0 9.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0	9.0 10.0 11.0 10.0 9.0 11.0 11.0 11.0 10.0 8.0 10.0 8.0 11.0 11	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 16.0 15.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 18.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 14.0 15.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	9.0 8.0 7.0 8.0 10.0 8.0 11.0 9.0 8.0 8.0 9.0 7.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 11.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	9-0 10-0 11-0 10-0 9-0 11-0 8-0 11-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 13-0 13-0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 8.0 8.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 18.0 19	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 0	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 8.0 7.0 8.0 8.0 10.0 11.0 9.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	9-0 10-0 11-0 11-0 9-0 11-0 8-0 11-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 13-0 13-0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 3 4 4 5 6 7 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 40NTH	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 14.0 15.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 17.0	9.0 8.0 7.0 8.0 6.0 6.0 6.0 8.0 10.0 8.0 9.0 8.0 9.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 11.0 9.0 10.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	9-0 10-0 11-0 10-0 9-0 11-0 8-0 11-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 13-0 13-0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 8.0 8.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 18.0 19	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	14.0 13.0 14.0 12.0 14.0 15.0 17.0 19.0 18.0 16.0 16.0 14.0 15.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	9.0 8.0 7.0 8.0 10.0 8.0 11.0 9.0 8.0 8.0 9.0 7.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 11.0 9.0	15.0 14.0 13.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	9-0 10-0 11-0 10-0 9-0 11-0 8-0 11-0 9-0 10-0 9-0 11-0 13-0 13-0 13-0 13-0 13-0 13-0 13	17.0 17.0 17.0 16.0 15.0 15.0 16.0 12.0 14.0 12.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 15.0 12.0 11.0 11.0 11.0 11.0 11.0 8.0 8.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 18.0 19	14.0 14.0 15.0 16.0 16.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	13.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0	11.0 11.0 11.0 10.0 9.0 9.0 11.0 11.0 11	16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 12.0

11461000 RUSSIAN RIVER NEAR UKIAH, CALIF.

LOCATION.--Lat 39°12'07", long 123°11'55", in Yokayo Rancho Grant, Mendocino County, at gaging station 200 ft downstream from York Creek, 0.7 mile upstream from East Fork, and 3.6 miles north of Ukiah.

DRAINAGE AREA. -- 99.7 sq mi.

PERIOD OF RECORD. — Water temperatures: October 1964 to September 1968 (discontinued). Sediment records: January 1964 to September 1968 (discontinued).

Sediment concentrations: Maximum daily, 1,170 mg/l Jan. 14; minimum daily, 1 mg/l on many days. Sediment discharge: Maximum daily, 10,300 tons Jan. 14; minimum daily, 0 ton on many days.

Period of record:
Sediment Concentrations: Maximum daily, 9,480 mg/l Dec. 22, 1964; minimum daily, no flow on many days
in 1964.
Sediment discharge: Maximum daily, 352,000 tons Dec. 22, 1964; minimum daily, 0 ton on many days in 1964,
1967-68.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	UA1														41150																		
MUNTH	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 NOVEMBER. DECEMBER.	20		19			17				16			14	17	16	16				11		12		12			9		10	8			
JANUARY FEBRUARY. MARCH	7	9	9	8	11		13	_	12			11		12		15	16	14	12	12	14	14	14	12	11	16	12	13	11			12	
APRIL MAY JUNE		15						13							17	25										_			_			==	
JULY AUGUST SEPTEMBER				_											22														=			==	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

PARTICLE SIZE

SUSPENDED—

PERA—

CONCEN— SEDIMENT PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED

TURE DISCHARGE (C) (CFS) (MG/L) (TRUESCHER) WATER TEM-METHOD PFRA-DE .002 .004 .008 .016 .031 .062 .125 .250 .500 1.00 2.00 (CFS) (MG/L) (TONS/DAY) DATE TIME (C) SIS 478 457 76 57 DEC 3 1967 0830 SBWC 29 33 47 29 DEC 18..... DEC 18..... JAN 10 1968 585 402 746 790 594 536 974 40 47 57 42 75 78 85 68 98 98 96 97 SBWC SBWC SBWC 0900 1315 500 547 68 73 80 99 99 97 ----100 61 71 56 100 100 1620 0935 266 331 99 1090 100 SAME JAN 15.... JAN 16.... JAN 30.... FEB 19.... MAR 12.... 1830 1040 5140 42 57 45 55 65 77 64 81 98 11 33 47 36 43 59 39 54 42 52 67 100 VSWC 1315 32 24 25 33 38 30 33 92 97 100 471 477 1240 SBWC VBWC VBWC 1315 9 7 12 1020 1590 1300 2050 85 76 95 100 == <u>--</u> 1100 830 290 2780

RUSSIAN RIVER BASIN 215 11461000 RUSSIAN RIVER NEAR UKIAH, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTORER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	.32 .51 .80 1.3 1.3	1 1 1 3 6	0 0 0 •01 •02	2.8 2.8 2.8 2.8 2.8	2 1 1 1 2	.02 .01 .01 .01	27 4.4 266 245 451	52 12 206 167 183	4.9 •14 192 193 245
6 7 8 9 10	2.1 1.3 1.3 1.3	6 7 8 7 8	.03 .02 .03 .07	2.8 2.8 2.8 2.1 2.1	1 1 1 1	.01 .01 .01	113 408 126 64 47	24 185 23 10 6	9.0 244 8.7 1.7 .76
11 12 13 14 15	1.3 1.3 2.1 2.1	2 2 3 2 1	.01 .01 .02 .01	2.1 2.1 2.1 6.8 7.1	1 1 1 17 8	.01 .01 .01 .31	38 32 25 19 16	10 15 21 11 6	1.0 1.3 1.4 .56
16 17 18 19 20	1.3 1.3 1.3 2.1 2.1	1 1 2 2	0 0 0 •01	2.1 2.1 2.1 2.1 2.1	8 9 9 7 5	.05 .05 .05 .04	16 18 323 134 65	4 2 317 40 76	.17 .10 365 16 13
21 22 23 24 25	2.1 1.3 1.3 2.1 2.1	2 1 2 1	.01 .01 0 .01	2.1 2.1 2.1 2.1 2.1	4 4 3 1 2	.02 .02 .02 .01	48 40 36 34 30	66 108 87 20 11	8.6 12 8.5 1.8 .89
26 27 28 29 30 31	.80 .80 1.3 1.3 2.1	2 1 2 1	0 0 0 •01	2.1 2.1 1.3 10 34	1 2 2 24 147	.01 .01 .01 .65	26 22 18 16 16	14 19 18 7 2 2	.98 1.1 .87 .30 .09
TOTAL	44.53		.30	112.3		16.49	2739.4		1333.21
		JANUARY			FERRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	16 17	1 2	.04 .09	433 1110	65 160	80 501	137 121	19 19	7.0 6.2
3	17	2	.09	644	71	123	111	18	5.4
5	17 17	5 9	.23 .41	398 287	35 27	38 21	101 103	17 12	4.6 3.3
6 7 8 9	18 18 18 58	9 9 9 35 441	.44 .44 .44 27 2270	224 178 151 131 118	20 18 18 17 16	12 8.7 7.3 6.0 5.1	96 113 108 92 83	10 10 10 10	2.6 3.1 2.9 2.5 2.2
11	310	83	77	103	15	4.2	78	9	1.9
12	187	24	12	87	14	3.3	338	214	388
13 14 15	190 2070 1870	52 1170 1110	27 10300 6000	83 79 74	11 10 10	2.5 2.1 2.0	366 398 262	149 90 34	162 102 24
16 17 18	903 487 294	436 101 28	1090 142 22	103 151 115	56 42 19	18 17 5.9	1120 666 398	575 161 76	1930 315 82
19 20	224 184	17 13	10 6.5	1470 1770	1000 426	6460 2330	280 214	49 28	37 16
21 22 23 24 25	151 134 126 115 108	11 10 9 7 6	4.5 3.6 3.1 2.2 1.7	1490 910 674 464 334	195 250 116 45 30	797 632 216 57 27	178 157 169 137 140	12 11 12 12 17	5.8 4.7 5.5 4.4 6.4
26 27	103 96	4	1.1	262 214	27 22	19 13	118 105	27 33	8.6 9.4

TOTAL 13082 -- 28557.18 12393 -- 11426.5 6545 --

3153.7

11461000 RUSSIAN RIVER NEAR UKIAH, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL JUNE MEAN MEAN MEAN SEDIMENT DISCHARGE (TONS/DAY) SEDIMENT MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) CONCEN-TRATION MEAN DISCHARGE CONCEN-TRATION CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) DISCHARGE (TONS/DAY) DAY (CFS) (MG/L) (MG/L) (MG/L) 2.2 1.6 .87 .78 .66 .15 .17 92 11 8.0 10 .30 2 83 81 11 .21 9.0 7 8 7 6 7.2 8.0 6 7 8 72 61 12 14 .23 .14 •17 •15 •12 •09 .62 .44 .42 .42 .45 .56 .64 .56 8.8 8.0 7.2 6.5 5.8 57 54 52 52 50 16 14 13 13 11 13 17 7 7 4 3 3 3 4 8 9 10 6 5 6 16 .52 .50 .83 l.1 l.4 11 48 46 44 41 39 12 15 25 20 17 12 13 14 11 8 .39 5.2 .07 4 4 7 5 5 5 5 .53 .95 .59 4.1 3.7 3.3 .06 .05 .04 12 14 15 10 13 3.0 1.2 1.1 .97 1.0 12 12 12 •32 •25 •19 2.6 2.1 1.9 1.7 .04 .03 .03 38 33 30 15 13 10 16 17 18 19 20 8 7 7 5 5 5 5 5 31 27 12 12 . 8 12 .26 .02 .74 .65 .68 .59 .38 .29 .22 .24 .36 1.3 1.2 1.1 .98 14 12 10 11 .02 21 22 23 24 25 25 22 21 20 19 10 9 8 8 55555 .02 .01 .01 11 12 10 17 .46 .48 .42 .42 .34 .29 .27 .01 26 27 28 29 30 31 14 .73 .66 .60 .51 10 9 9 8 16 13 11 11 12 11 10 .01 14 12 9.4 .20 .01 8 TOTAL 1206 23.35 414.0 11.35 115.95 1.95

		JULY			AUGUST			SEPTEMBER	ŧ.
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	-41	5	.01	•02	5	0	.13	7	0
2	•37	5	0	•02	5	0	•12	8	0
3	• 33	5	0	•02	5	0	•11	9	Ō
4	•30	5	0	•02	5	0	•10	8	ō
5	•27	5	0	•02	5	ō	•09	7	ō
6	• 25	5	0	•02	5	0	.08	5	0
7	•22	5	0	•02	5	0	•07	5	0
8	• 20	5	0	•02	5	0	•06	5	0
9	•19	5	0	•02	5	0	•06	5	0
10	-18	5	0	•02	5	0	•06	5	0
11	.16	5	o	.02	5	o	.05	4	o
12	•14	5	0	•02	5	0	•05	4	0
13	•13	5	0	• 02	5	0	•05	4	0
14	•11	5	0	•02	5	0	•05	4	0
15	•10	5	0	• 02	5	0	•04	4	0
16	•09	5	o	• 02	5	0	.04	3	0
17	•08	5	0	•02	5	0	•04	3	0
18	• 08	5	0	• 02	5	0	•04	3	0
19	•07	5	0	•02	5	0	•04	3	0
20	• 06	5	0	•02	5	0	•04	3	0
21	• 06	5	0	•03	5	0	•04	2	0
22	•05	5	0	3.6	15	.15	•04	2	0
23	• 05	5	0	2.0	12	•06	•04	2	0
24	•04	5	0	1.2	9	.03	•03	2	0
25	•04	5	O	•70	8	• 02	•03	2	0
26	•04	5	0	•40	8	•01	.03	2	0
27	•03	5	0	•26	7	0	.03	2	0
28	.03	5	0	.20	7	0	•03	2	0
29	•03	5	0	.18	6	0	•03	2	0
30	.03	5	0	.16	6	0	, .03	1	0
31	•03	5	0	.14	6	0			
TOTAL	4.17		.01	9.27		.27	1.65		0

AUGUST

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

1111 V

36667.27 44524.31

CCOTCMBCO

11461000 RUSSIAN RIVER NEAR UKIAH, CALIF, -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PERIODIC DETERMINATION	S OF SUSPENDED-SE	DIMENT CONCENTRATION	AND TURBIDITY, WATER YEAR	OCTOBER 1967 TO	SEPTEMBER 1968
	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 4, 1967	3	2	JAN. 31	135	87
DCT. 5	6	3	FEB. 1	55	42
OCT. 10	8	2	FE8. 2	145	135
DCT- 11	2	1	FE8. 3	72	80
DCT. 18	1	1	FEB. 4	36	44
DCT. 21	2	1	FEB. 5	23	71
DCT. 25	1	1	FE8. 9	17	14
	1	1	FEB. 12	16	13
NOV. 1	2	1	FEB. 14	64	5 40
NDV. 3	1	1	FEB. 16		
NOV. 6	1	1	FE8. 17	60 10	44
NDV. 10	1	1	FEB. 18		10
NOV. 13	1	1	FE8. 19	1240	480 125
NOV. 14	17	19	FEB. 20	251	
NOV. 15	В	11	FE8. 21	185	115
NDV- 17	9	5	FE8. 22	258	87
NDV. 20	5	1	FEB. 23	101	86
NDV. 22	4	ī	FEB. 24	35	37
NDV. 24	i	ī	FEB. 25	33	37
NOV. 27	ž	ī	FEB. 26	24	29
NDV- 29	47	43		23	27
NDV . 30	204	126	FEB. 27		
DEC. 1	17	19	FEB. 28	23 19	20 20
DEC. 2	9	3	MAR. 1		
DEC. 3	457	206	MAR. 6	10 8	5 7
DEC. 4	34	40			
DEC. 5	204	144	MAR. 11	8	3
DEC. 6	В	29	MAR. 12	542	135
DEC. 7	176	150	MAR. 13	26	37
DEC. B	22	36	MAR. 14	70 667	55 335
0	10	13			
DEC. 9	12 6	7	MAR. 17	109	92
DEC. 10	11	านั่	MAR. 18	80	42
DEC. 11	17	24	MAR. 19	34	20
DEC. 12	25	34	MAR. 20	32	25
DEC. 13	25	34	MAR. 21	9	2
DEC. 14	2	2	MAR. 22	11	10
DEC. 18	500	130	MAR. 23	13	
DEC. 19	25	19	MAR. 24	ií	8
DEC. 20	87	53	MAR. 25	19	19
DEC. 21	54	39	MAR. 27	34	22
DEC. 22	119	87	MAR. 29	7	3
DEC. 24	9	8	MAK. 29	'	
DEC. 25	11	7	APR. 1	4	3 2
DEC. 27	20	24	APR. 5	4	
DEC. 29	2	2	APR. 8	3	2 1
JAN. 1, 1968	1	1		_	
JAN. 3	ź	i	APR. 10	*	1
JAN. 5	9	10	APR. 12	. 4	1
JAN. 8	ģ	10	APR. 15	13	6 8
JAN. 9	4	2	APR. 17	12	
			APR. 26	10 14	5 2
JAN- 10	266	290			
JAN. 11	49	86	MAY 2	7	1
JAN- 12	31	45 89	MAY 8	17	8
JAN. 13	70		MAY 15	В	2
JAN. 14	331	275	JUNE 12	5 5	1
JAN. 15	1040	480	JULY 10		
JAN. 16	471	320	AUG. 15	5	2 2
JAN. 17	90	84	SEPT. 3	y	2
JAN- 18	28	40			
JAN. 20	13	17			
JAN. 22	10	14			
JAN. 24	7	6			
JAN. 26	4	3			
JAN- 29	509	350			
JAN. 30	477	245			
		=			

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF.

NTION.--Lat 39°14'48", long 123°07'45", in NW4 sec.18, T.16 N., R.11 W., Mendocino County, at gaging station 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 1968. Sediment records: March to September 1964, October 1966 to September 1968 (discontinued).

KEMES, --1997-95: Maximum, 28.0°C June 16, 18, 19. Water temperatures: Maximum, 28.0°C June 16, 18, 19. Sediment concentrations: Maximum daily, 604 mg/l Jan. 29; minimum daily, 3 mg/l Sept. 27-30. Sediment discharge: Maximum daily, 4,340 tons Jan. 14; minimum daily, 0.36 ton June 16.

of record:

Water temperatures: Maximum (1965-66, 1967-68), 26.0°C June 16, 18, 19, 1968; minimum (1965-67), 4.0°C

Dec. 16-20, 1965.

Sediment concentrations (1966-68): Maximum daily, 1,490 mg/l Jan. 20, 1967; minimum daily, 3 mg/l

Sept. 27-30, 1968.

Sediment discharge (1966-68): Maximum daily, 16,900 tons Jan. 20, 1967; minimum daily, 0.38 ton June 18,

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

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

									-	-			•																			
															D#	Y																
																																AVER-
MONTH	1	2	3	4	5	6	7	В	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																																
MUMIXAM																																
MUMINIM																																
NOVEMBER.																														9		
MUMIXAM																																
MINIMUM																																
DECEMBER.																																
MUM I X AM																																
MINIMUM																																
JANUARY																														7		
MUMIXAM																																
MINIMUM																																
FEBRUARY.																																11
MAXIMUM																																
MINIMUM																																
MARCH																																
MAXIMUM																																
PUMINIM																																
APRIL																																
MAXIMUM																														19		
MINIMUM																													16	15		
MAY																																
MUMIXAM	19	20	21	20	19	19	19	20	20	20	18	19	16	18	19	19	20	21	18	18	17	18	19	17	20	21	22	23	22	22	21	19
MINIMUM	15	15	16	16	15	14	15	15	15	16	14	14	14	13	13	14	16	16	17	17	16	14	14	14	16	15	17	18	18	17	17	15
JUNE																																
MAX1MUM	22	21	21	21	18	21	21	22	22	22	22	22	22	23	24	26	25	26	26	25	24	24	24	24	24	23	23	22	21	21		23
MINIMUM	17	18	18	17	16	16	16	17	17	18	18	17	16	17	1.7	19	19	19	19	21	19	19	19	19	19	18	18	18	17	16		17
JULY																																
MAXIMUM	21	22	22	23	23	24	23	23	22	21	21	21	19	20	20	20	20	21	21	21	21	21	21	21	21	21	21	21	21	22	22	21
MINIMUM	17	17	17	1.8	18	19	19	18	18	17	17	17	17	17	17	16	16	16	17	17	17	17	17	17	17	17	17	17	18	17	18	17
AUGUST																														_		
MUMIXAM																														22		21
MINIMUM	18	18	18	18	17	17	17	18	17	17	17	17	17	17	17	17	16	17	17	16	15	16	16	37	17	17	17	18	18	18	19	17
SEPTEMBER						~-																										
MUMIXAM	22	22	23	23	23	23	23	23	23	22	22	22	22	22	22	22	23	23	21	20	19	19	20	21	21	21	21	21	21	20		21
MINIMUM	19	19	19	21	21	21	21	21	20	19	19	20	20	19	19	19	19	20	18	17	17	17	17	18	18	18	18	18	18	18		19

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8. BOTTOM WITHDRAMAL TUBE; C. CHEMICALLY DISPERSED; N. IN MATIVE MATER; P. PIPET; S. SIEVE; V. VISHAL ACCUMULATION TUBE; W. IN DISTILLED MATER)

		WATER TEM- PERA-					ENT F	INER 1	THAN '	PART!	ICLE S		LLIME	rers)	INDIC	CATED	METHDD DF ANALY-
DATE	TIME	TURE (C)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	.002	.004	.008	.016	.031	-062	.125	.250	.500	1.00	2.00	SIS
DEC 3 1967	1410	9	406	306	335	53	64	72	77	79	92	96	99	100			SBWC
DEC 5	0915	Ŕ	527	196	279	60	72	83	88	89	96	98	100				SBWC
JAN 10 1968	1925	6	496	218	292	53	64	74	83	87	93	95	98	99	100		SBWC
JAN 14	1015	ŏ	1270	337	1160	33	46	54	59	62	82	92	99	100			VBWC
JAN 30	1030	ź	1210	480	1570						89	99	100				٧
FEB 14	1630	11	351	67	63	74	81	88	91		97	99	99	100			SBWC
FEB 19	1205	12	2380	675	4340	31	43	53	60	62	91	99	100				VBWC
FEB 19	1710	12	2440	663	4370	29	40	53	59	62	92	99	100				VBMC
APR 29	1520	16	85	6	1.4	77	87	90	93	94	97	98	100				SBMC

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF. -- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER		,	NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
1 ? 3 4 5	328 203 182 182 184	11 10 10 9 22	9.7 5.5 4.9 4.4 11	302 302 279 216 218	10 10 10 10	8.2 8.2 7.5 5.8 5.3	160 171 454 351 455	77 33 303 167 231	33 15 433 184 283
6 7 8 9 10	182 181 178 178 199	18 15 12 10 9	8.8 7.3 5.8 4.8 4.4	216 216 216 182 170	9 9 6 5	5.2 5.2 5.2 2.9 2.3	287 483 341 288 299	87 209 90 100 115	72 294 83 78 93
11 12 13 14 15	295 302 304 304 304	4 4 5 5 6	3.2 3.3 4.1 4.1 4.9	168 170 173 191 184	5 4 4 23 43	2.3 1.8 1.9 12 21	297 281 302 302 302	110 100 100 100 99	88 76 82 82 81
16 17 18 19 20	302 297 302 297 295	6 7 8 9	4.9 5.6 6.5 7.2 8.0	171 166 164 167 166	37 23 18 16 13	17 10 8.0 7.2 5.8	304 309 451 364 320	97 91 162 78 65	80 76 205 77 56
21 22 23 24 25	302 302 306 309 302	12 12 10 10	9.8 9.8 8.3 8.3	166 159 164 162 163	10 9 8 8 8	4.5 3.9 3.5 3.5 3.5	315 318 313 311 309	68 65 68 70 70	58 56 57 59 58
26 27 28 29 30 31	147 288 306 304 304 299	8 10 9 9 8 8	3.4 7.6 7.4 7.4 6.6 6.5	166 162 118 177 189	7 6 6 14 60	3.1 2.6 1.9 7.6 30	309 306 299 292 302 304	63 58 58 57 57 55	53 48 47 45 46 45
TOTAL	8168		201.7	5663		206.9	9899		3043
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	JANUARY MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 304 304 295 304	MEAN CONCEN- TRATION (MG/L) 53 53 52 53	DISCHARGE (TONS/DAY) 44 44 41 44	DISCHARGE (CFS) 584 1240 681 534	MEAN CONCEN- TRATION (MG/L) 157 193 100 94	DISCHARGE (TONS/DAY) 257 710 184 136	DISCHARGE (CFS) 410 400 395 393	MEAN CONCEN- TRATION (MG/L) 52 50 49 48	DISCHARGE (TONS/DAY) 58 54 52 51
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 304 304 295 304 304 304 273 366	MEAN CONCEN- TRATION (MG/L) 53 53 53 53 53 53 60 89	DISCHARGE (TONS/DAY) 44 44 44 44 44 44 44 44 41	DISCHARGE (CFS) 584 1240 681 534 479 445 419 403 390	MEAN CONCEN- TRATION (MG/L) 157 193 100 94 90 88 80 72 69	DISCHARGE (TONS/DAY) 257 710 184 136 116 106 91 78 73	DISCHARGE (CFS) 410 400 395 393 398 390 405 408 395	MEAN CONCEN- TRATION (MG/L) 52 50 49 48 52 70 77 74 70	DISCHARGE (TONS/DAY) 58 54 52 51 56 74 84 82 75
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 304 304 295 304 304 304 304 304 305 310 310 310 310 310 310 310 310 310 310	MEAN CONCENTRATION (MG/L) 53 52 53 53 53 53 60 89 397 155 112 149 537	DISCHARGE (TONS/DAY) 44 44 44 44 44 46 117 1970 161 97 200 4340	DISCHARGE (CFS) 584 1240 681 534 479 445 419 403 390 385 377 367 359 349	MEAN CONCEN- TRATION (MG/L) 157 193 100 94 90 88 80 72 69 69 69	DISCHARGE (TONS/DAY) 257 710 184 136 116 91 78 73 72 71 74 66 63	DISCHARGE (CFS) 410 400 395 393 398 390 405 408 395 388 388 667 677	MEAN CONCENTRATION (MG/L) 50 49 48 52 70 77 74 70 62 56 157 125	DISCHARGE (TONS/DAY) 58 54 52 51 56 74 84 82 75 65 59 396 247
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 304 304 295 304 304 304 304 304 304 307 306 1300 385 320 466 2520 1370 785 496 424 388	MEAN CONCENTRATION (MG/L) 53 53 52 53 53 60 89 397 1155 112 149 537 382 220 170 160	DISCHARGE (TONS/DAY) 44 44 44 44 44 44 47 1970 161 197 200 4340 1510 466 230 195 168	DISCHARGE (CFS) 584 1240 681 534 479 445 419 403 389 385 377 367 359 349 341 372 427 380 1890	MEAN CONCENTRATION (MG/L) (MG/L) (157 193 100 94 90 88 80 72 69 69 70 75 68 67 70 72 68 67 469 469 469 469 469 469 469 469 469 469	DISCHARGE (TONS/DAY) 257 710 184 136 116 106 91 78 73 72 71 74 66 63 64 72 78 69 2970	DISCHARGE (CFS) 410 400 305 309 309 309 408 395 388 388 607 677 524	MEAN CONCENTRATION (MG/L) 52 50 49 48 52 70 77 74 74 75 105 2 56 157 125 105 2 70 325 93 60 35	DISCHARGE (TONS/DAY) 58 58 58 54 52 51 56 74 84 82 75 65 59 396 247 193 99 1450 188 93 48
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 304 304 295 304 304 304 304 304 305 306 1300 385 320 466 2520 1370 785 496 424 388 372 364 354 343	MEAN CONCENTRATION (MG/L) 53 53 52 53 53 53 54 55 54 55 56 60 89 397 1152 149 537 538 2 220 170 160 150 155 155 155 155 155	DISCHARGE (TONS/DAY) 44 44 44 44 44 44 47 1970 161 97 2000 4340 1510 466 230 195 168 151 149 149 148 144	DISCHARGE (CFS) 584 1240 681 534 479 445 419 403 380 385 377 367 367 367 367 367 372 427 380 1890 1170 1330 768 586	MEAN CINCENTRATION (MG/L) 157 193 100 94 490 72 69 70 75 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 72 68 67 70 70 72 68 67 70 70 72 68 67 70 70 72 68 67 70 70 72 68 67 70 70 72 68 67 70 70 72 68 67 70 70 70 70 70 70 70 70 70 70 70 70 70	DISCHARGE (TONS/DAY) 257 710 184 136 116 106 91 78 73 72 71 74 66 63 64 72 78 69 2970 719 998 233 182 92	DISCHARGE (CFS) 410 400 395 393 398 390 405 408 395 398 388 695 667 672 524 1480 748 748 748 445 408 445	MEAN CONCENTRATION (MG/L) 52 50 49 48 52 70 77 74 76 70 62 56 157 125 102 70 325 93 33 4 32 22 29 31	DISCHARGE (TONS/DAY) 58 58 59 51 56 74 84 82 75 65 59 396 247 193 99 1450 188 93 48 43 38 37

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE; WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MEAN MFAN MEAN SEDIMENT DISCHARGE (TONS/DAY) SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION SEDIMENT DISCHARGE MEAN CONCEN CONCEN-DISCHARGE TRATION DISCHARGE TRATION DISCHARGE DAY (CFS) (MG/L) (CFS) (CFS) (MG/L) (TONS/DAY) 388 380 375 373 347 1.3 1.3 1.2 1.1 26 25 23 23 24 27 97 5 1.3 97 1 2 3 4 5 .84 .72 .81 26 23 23 22 62 93 90 85 5 53 5 5 5 60 75 81 1.1 370 368 347 360 23 23 22 22 19 23 23 21 21 21 .91 .87 .71 .57 75 84 81 1.0 444 .93 .85 .84 69 63 9 66 53 59 62 70 330 16 13 10 9.5 9.5 58 37 38 35 .78 .40 .41 18 16 15 14 53 66 97 4 .57 11 12 13 14 15 325 54444 300 250 250 4444 1.0 110 1.2 250 104 1.1 40 .43 8.6 7.9 8.1 8.7 4.3 16 17 18 19 13 12 13 14 10 97 91 91 91 91 1.0 . 43 4 4 4 40 .39 .36 244 .98 .98 36 33 232 230 4 .98 .98 34 94 2.8 2.2 1.8 1.7 2.0 108 122 122 146 190 2.3 2.6 2.6 3.2 4.6 114 104 88 97 21 22 23 24 25 9 8 7 .95 88889 1.0 93 96 96 97 104 1.0 100 2.2 1.0 190 194 200 200 4.6 4.7 4.9 4.9 26 27 28 29 30 31 44 85 81 85 •92 •87 •92 91 94 5 1.5 85 1.4 4.9 1.1 102 200 9 TOTAL 7108 339.9 2596 29-23 2902 55.62 JUL Y AUGUST SEPTEMBER MEAN MEAN MFAN MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) DAY (MG/L) (MG/L) (MG/L) 192 196 190 198 4.8 4.9 4.2 4.7 4.8 4.6 4.7 4.7 224 196 188 5.4 4.2 3.6 3.7 3.4 9 200 196 194 9 8 8 8 9 4.2 192 194 194 182 200 ģ 3.3 3.4 3.6 3.1 3.1 202 194 4.7 176 8 8 8 8 9 9 9 9 4.2 3.9 3.8 182 162 170 194 4.4 3.9 4.1 182 190 192 180 8 6 10 204 5.0 190 4.6 190 202 204 206 194 212 214 214 218 3.1 3.4 3.5 2.9 2.9 9999 4.6 11 12 13 14 15 4.9 190 9999 66655 5.0 5.0 5.2 5.2 190 192 184 192 190 4.5 212 4.6 5.2 5.1 5.5 5.6 5.8 226 224 224 220 206 9999 216 210 16 17 18 19 3.0 3.0 3.0 2.6 212 210 210 5.2 5.1 5.1 5.1 999 226 210 238 196 254 226 226 226 224 6.2 5.5 5.5 5.4 2.2 2.3 2.3 2.3 208 5.1 5.0 4.6 4.6 21 22 23 24 25 9999 9 9 9 202 216 214 210 196 204 188

222

222 222

224

200

6386

4.6 4.6

4.4

145.8

999

9

9

9

9

5.4 5.4 5.4 5.2 4.9

155.2

196 196

208 228

228

6150

6132 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

188 190

182 188

192

26 27

28 29

30 31

TOTAL

TOTAL LOAD FOR YEAR (TONS)

2 • 1

1.6

1.8

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PERIODIC DETERMINATION	S OF SUSPENDED-SE	DIMENT CONCENTRATION	AND TURBIDITY, WATER YEAR	OCTUBER 1967 TO	SEPTEMBER 1968
	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	SEDIMENT (MG/L)	TURBIDITY (MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
DATE OF COLLECTION	(1107)	(MO) E STEICH	DATE OF COLLECTION	(110) 27	(110) 2 314104
			JAN. 31	127	115
OCT. 4, 1967	9	8	FEB. 1	144	105
OC7. 5	22	18	FEB. 2	90	B9
067. 10	8	7	FEB. 3	95	93
OCT. 11	4	5	FEB. 4	96	93
OC7. 18	8	5			
			FEB. 5	90	98
OCT. 21	12	5	FEB. 7	75	94
OCT. 25	10	11	FEB. 9	68	86
OCT. 31	8	6	FEB. 12	78	58
NOV. 1	10	3	FEB. 14	67	87
NOV. 3	10	3	FEB. 16	73	78
NOV. 6	9	3	FEB. 17	68	82
NOV. 10	5	1	FEB. 18	66	80
NOV. 13	4	1	FEB. 19	663	360
NOV. 14	43	29	FEB. 20	142	115
NOV. 15	44	37	FEB. 21	131	110
NOV. 17	20	20	FEB. 22	87	91
NOV. 20	13	-8	FEB. 23	76	80
NOV. 22	9	5	FEB. 24	59	77
NOV. 24	В	7	FEB. 25	56	79
NOV. 27	6	3	FEB. 26	53	76
NOV. 29	6	í	FEB. 27	59	83
NOV. 30	87	116	FEB. 28	54	79
OEC. 1	84	115	FEB. 29	56	79
DEC. 2	16	14	MAR. 1	52	77
DEC. 3	306	214	MAR. 4	48	79
OEC. 4	116	116	MAR. 5	54	87
DEC. 5	196	176	MAR. 6	68	77
DEC. 6	76	104	MAR. 8	72	91
DEC. 7	189	204	MAR. 11	55	77
			MAR. 12	349	255
OEC - 8	86	116		~-	
DEC. 9	94	140	MAR. 13	73	77
DEC. 10	120 103	164	MAR. 14	76	42
	99	164 140	MAR. 16	348	210 75
OEC. 12	"	140	MAR. 17	67 61	53
DEC. 13	88	154	MAR. 10	01	95
DEC. 15	96	160	MAR. 19	33	24
OEC. 18	157	150	MAR. 20	34	4D
DEC. 19	70	93	MAR. 21	31	40
DEC. 20	68	105	MAR. 22	32	40
			MAR. 23	29	37
DEC- 21	68	115			
DEC. 22	63 70	110 110	MAR. 24	32	34
DEC. 24	69	110	MAR. 25	28	35
DEC. 25	69 57	87	MAR. 27	27	25
DEC. 27	51	67	APR. 3	26 23	32 37
DEC. 29	57	83			
JAN. 1, 1968	53	79	APR. 5	24	37
JAN. 3	52	83	APR. 8	22	35
JAN. 5	53	77	APR. 9	22	30
JAN. 8	60	79	APR. 10	19	24
			APR. 12	16	20
JAN. 9	59	70	APR. 15	14	20
JAN. 10	218	240			
JAN. 12	111	140	APR. 17	12	11
JAN. 13	196	245	APR. 19	14	17
JAN. 14	337	265	APR. 22	8	8
			APR. 24	6	3
JAN- 15	386	275	APR. 26	8	6
JAN. 16	206	185	APR. 29	5	3
JAN. 17	171	200		_	
JAN. 18	169	200	MAY	5	2
JAN. 20	149	200	MAY 8	3 4	2 1
(AN 22	155	205	MAY 16	4	i
JAN. 22	152	215	JUNE 7	•	i
JAN. 26	153	215	AUG. 15	ģ	7
JAN. 29	701	360	SEPT. 3	í	6
JAN. 30	480	360		•	-

11461800 LAKE MENDOCINO NEAR UKIAH, CALIF.

LOCATION. -- Lat 39°11'53", long 123°10'50", in Yokayo Rancho Grant, Mendocino County, tesperature recorder at gaging station, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River, and 3.6 miles northeast of Utiah.

DRAINAGE AREA. -- 105 sq mi.

PERIOD OF RECORD, --Water temperatures: December 1965 to September 1968 (discontinued). Sediment records: February 1964 to September 1968 (discontinued).

MAX

22.0 21.5 21.0 20.5 20.5

DAY

CCTCBER

MIN

21.5 21.0 20.5 20.5 20.5

REMES.--Period of record: Water temperatures: Maximum, 29.0°C July 1, 1967.

NCVEMBER

MIN

17.5 17.5 17.5 17.0 17.0

MAX

17.5 17.5 17.5 17.5 17.5

REMARKS, --- Recorder malfunction Nov. 21 to Dec. 18, Feb. 22 to Mar. 18; recorder stopped June 23 to July 7. Where no maximum or minimum is shown, temperature is once-daily reading.

DECEMBER

MAX

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MIN

JANUARY

HIN

9.5 9.5 9.0 9.0

MAX

MIN

9.0 9.0 9.0 9.0 6.5

MAX

MIN

MAX

9.5 9.5 9.5 9.0 9.0

6	20-5	20.0	17.0	17.0			9.0	9.0		8.5		
7	20.5	20.0	17.0				7.0	7.0	8.5			
				17.0			9.0	9.0	8.5	8.5		
8	20-5	20.0	17.C	17.0			9.0	9.0	8.5	7.5		
9	20-0	20.0	17-0	16.5			9.0	9.0	9.0	7.5		
10	20.0	20.0	16.5	16.5			9.0	9-0	9.5	9.0		
11	20-0	20.0	16.5	16.5		Ξ	9.0	8.5	10.0	9.0		
12	20-0	20.0	16.5	16.5			9.0	8.5	10.0	9.0		
13	20.0	20.0										
			16.5	16.5			9.0	8.5	10-0	9.0		
14	20-0	20.0	16.5	16.5			9.0	8.5	9.5	9.0		
15	20-0	19.5	16.5	16.5			9.0	9.0	8.5	7.0	=	
16	20.0	19.5	16.5	16.5			9.0	9.0	8.5	7.5		
17	19.5	19.5	16.5	16.5			9.0	9.0	9.5	8.5		
îé	19.5	19.0	16.5	16.0				9.0		9.5		
19	19.5	19.0	16.0				9.0		10.5			
				16.0	10.0	10.0	9.0	9.0	10.5	10-0	12.0	11-0
20	19.0	19.0	16.0	16.C	10.0	10.0	9.0	9.0	11.0	10.5	12.5	10.5
21	19.0	19.0			10.0	10-0	9.0	9.0	11.0	9.5	11.0	10.5
22	15.0	19.0			10.0	10.0	9.0	9.0			10.5	10.5
23	19-0	18.5			10.0	9.5	9.0	9.0			11.0	10.5
24	16.5	18.5			9.5	9.5					11.0	
							9.0	9.0			13.5	11.D
25	18.5	18.5			10.0	9.5	9.0	9.0			12.0	11.5
26	18-5	18.5			10.0	9.5	9.0	9.0			12.0	11.5
27	18.5	17.5			10.0	9.5	9.5	9-0			12.0	11.5
28	17.5	17.5			10.0	10.0	9.5	9.0			14.0	11.0
29	18.5	17.5			10.0							12.0
						10.0	9.5	9+0			14.5	13.5
30	17-5	17.5			10.0	9.5	9.5	9.0			15.0	14.0
31	17.5	17.5			9.5	9.5	9.5	9.0			15.5	12.5
MONTH	22.0	17.5					9.5	8.5				
	AF	PRIL		1AY	JL	JNE	JU	JLΥ	AUG	UST	SEPT	EMBER
CAY	MAX	PIN	MAX	MIN	MAX	MIN	XAM	MIN	MAX	MIN	MAX	MIN
1	13.5	11.5	18.5	17.5	21.0	20.0			25.0	23.5	23.5	22.0
		12.0	19.0	17.5	21.5	21.0			25.0	23.5	24-0	21.5
2	12.5					21.00						
3	13.5	12.5	19.0	17.5	21.5	20.5			24.5	23.5	23.5	22.0
4	13.5 14.0	12.5 13.5	19.0 19.0	17.5 17.0	21.0	20.5			25.5	23.5	23.5	21.5
	13.5	12.5 13.5	19.0	17.5		20.5		==				22.0 21.5 21.5
4	13.5 14.0	12.5	19.0 19.0	17.5 17.0	21.0	20.5 20.5 20.5		=	25.5	23.5 23.5	23.5	21.5
5	13.5 14.0 14.0	12.5 13.5 14.0	19.0 19.0 17.5	17.5 17.0 17.5	21.0 21.0	20.5 20.5		==	25.5 25.0	23.5 23.5	23.5 21.5	21.5 21.5
4 5 6	13.5 14.0 14.0	12.5 13.5 14.0	19.0 19.0 17.5	17.5 17.0 17.5	21.0 21.0 20.5	20.5 20.5 19.5	=		25.5 25.0 24.5	23.5 23.5 23.5	23.5 21.5 21.5	21.5 21.5 21.0
4 5 6 7	13.5 14.0 14.0 14.0 14.5	12.5 13.5 14.0 14.0	19.0 19.0 17.5 19.0 18.5	17.5 17.0 17.5 17.0	21.0 21.0 20.5 20.0	20.5 20.5 19.5 19.0		===	25.5 25.0 24.5 25.0	23.5 23.5 23.5 24.0	23.5 21.5 21.5 21.5	21.5 21.5 21.0 21.0
4 5 6 7 8	13.5 14.0 14.0 14.0 14.5 15.5	12.5 13.5 14.0 14.0 13.5 14.0	19.0 19.0 17.5 19.0 18.5 19.5	17.5 17.0 17.5 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0	20.5 20.5 19.5 19.0 19.0	27.0	24.5	25.5 25.0 24.5 25.0 25.5	23.5 23.5 23.5 24.0 23.5	23.5 21.5 21.5 21.5 22.0	21.5 21.5 21.0 21.0 21.5
4 5 6 7 8 9	13.5 14.0 14.0 14.0 14.5 15.5	12.5 13.5 14.0 14.0 13.5 14.0	19.0 19.0 17.5 19.0 18.5 19.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5	20.5 20.5 19.5 19.0 19.0	27.0 24.5	24.5	25.5 25.0 24.5 25.0 25.5 24.0	23.5 23.5 23.5 24.0 23.5 22.5	23.5 21.5 21.5 21.5 22.0 21.5	21.5 21.5 21.0 21.0 21.5 21.0
4 5 6 7 8	13.5 14.0 14.0 14.0 14.5 15.5	12.5 13.5 14.0 14.0 13.5 14.0	19.0 19.0 17.5 19.0 18.5 19.5	17.5 17.0 17.5 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0	20.5 20.5 19.5 19.0 19.0	27.0	24.5	25.5 25.0 24.5 25.0 25.5	23.5 23.5 23.5 24.0 23.5	23.5 21.5 21.5 21.5 22.0	21.5 21.5 21.0 21.0 21.5
4 5 6 7 8 9	13.5 14.0 14.0 14.0 14.5 15.5	12.5 13.5 14.0 14.0 13.5 14.0	19.0 19.0 17.5 19.0 18.5 19.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5	20.5 20.5 19.5 19.0 19.0 19.5	27.0 24.5 25.0	24.5 24.0 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5	23.5 23.5 23.5 24.0 23.5 22.5 22.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5	21.5 21.5 21.0 21.0 21.5 21.0
4 5 6 7 8 9	13.5 14.0 14.0 14.5 15.5 16.0	12.5 13.5 14.0 14.0 13.5 14.0 14.0	19.0 19.0 17.5 19.0 18.5 19.5 19.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5	27.0 24.5 25.0	24.5 24.0 23.5 23.5	25.5 25.0 24.5 25.0 25.5 24.0	23.5 23.5 23.5 24.0 23.5 22.5	23.5 21.5 21.5 21.5 22.0 21.5	21.5 21.5 21.0 21.0 21.5 21.0
4 5 6 7 8 9 10	13.5 14.0 14.0 14.5 15.5 16.0 16.5	12.5 13.5 14.0 14.0 13.5 14.0 14.0 14.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5	27.0 24.5 25.0 24.0	24.5 24.0 23.5 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5	23.5 23.5 23.5 24.0 23.5 22.5 22.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 21.5	21.5 21.0 21.0 21.0 21.5 21.0 21.0
4 5 6 7 8 9 10	13.5 14.0 14.0 14.0 14.5 15.5 16.0 16.5	12.5 13.5 14.0 14.0 13.5 14.0 14.0 14.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5	27-0 24-5 25-0 24-0 24-5	24.5 24.0 23.5 23.5 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5	23.5 23.5 23.5 24.0 23.5 22.5 22.5 23.5 23.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 22.5	21.5 21.0 21.0 21.0 21.5 21.0 21.0
4 5 6 7 8 9 10 11 12 13	13-5 14-0 14-0 14-0 14-5 15-5 16-0 16-5	12.5 13.5 14.0 14.0 14.0 14.0 14.5 15.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5	27.0 24.5 25.0 24.0 24.5 24.0	24.5 24.0 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 24.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 23.5 23.5 23.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 21.5 21.5	21.5 21.0 21.0 21.0 21.5 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13	13.5 14.0 14.0 14.0 15.5 16.0 16.5 17.0 17.0 16.5	12.5 13.5 14.0 14.0 14.0 14.5 15.0 15.5 16.0	19.0 19.0 17.5 19.0 18.5 19.5 17.5 17.5 18.5 17.0 16.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0	24.5 24.0 23.5 23.5 23.5 23.5 22.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 24.5 23.5 23.5	23.5 23.5 24.0 23.5 22.5 22.5 23.5 23.5 23.5 23.5 23.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 21.5 21.5 21.0 21.0	21.5 21.0 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13	13-5 14-0 14-0 14-0 14-5 15-5 16-0 16-5	12.5 13.5 14.0 14.0 14.0 14.0 14.5 15.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5	27.0 24.5 25.0 24.0 24.5 24.0	24.5 24.0 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 24.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 23.5 23.5 23.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 21.5	21.5 21.0 21.0 21.0 21.5 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15	13-5 14-0 14-0 14-5 15-5 16-5 17-0 17-0 16-5 17-5	12.5 13.5 14.0 14.0 13.5 14.0 14.0 14.5 15.0 16.0 16.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.5 17.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0 20.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 22.5 22.0	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 24.5 24.5 23.5 23.5 23.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 23.5 22.5 22.5 23.5 22.5 22	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 21.0 22.0	21.5 21.0 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15 16	13-5 14-0 14-0 14-5 15-5 16-5 17-0 16-5 17-0 16-5 17-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.5 16.5 17.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.0 24.0 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 22.5 22.0	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 24.5 23.5 23.5 23.5 23.5	23.5 23.5 24.0 23.5 22.5 22.5 23.5 22.5 22.5 22.0 21.5	23.5 21.5 21.5 21.5 22.0 21.5 21.5 21.0 21.0 22.0 22.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15	13-5 14-0 14-0 14-5 15-5 16-5 17-0 17-0 16-5 17-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.5 17.5	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0 20.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 22.0 22.0	25.5 25.0 24.5 25.5 24.0 24.5 24.5 24.5 23.5 23.5 23.5	23.5 23.5 23.5 23.5 22.5 22.5 23.5 22.5 23.5 22.5 22	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 21.0 22.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15 16	13-5 14-0 14-0 14-5 15-5 16-0 16-5 17-0 16-5 17-0 16-5 17-0	12.5 13.5 14.0 14.0 14.5 14.0 14.5 15.5 16.0 16.0 15.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.5 16.5 17.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.0 24.0 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 23.5 22.0 22.0	25.5 25.0 24.5 25.0 25.5 24.5 24.5 24.5 23.5 23.5 22.5	23.5 23.5 24.5 24.5 22.5 22.5 22.5 23.5 22.5 22.5 22.5 22	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 21.0 22.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	13-5 14-0 14-0 14-5 15-5 16-0 17-0 16-5 17-0 16-5 17-0 16-5 17-0	12.5 13.5 14.0 14.0 14.0 14.5 15.0 15.5 16.0 15.5 15.5 15.5	19.0 17.5 19.0 17.5 19.5 19.5 17.5 17.5 16.5 16.5 19.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.5 20.0 20.5	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 22.5 23.5 24.0	24.5 24.0 23.5 23.5 23.5 23.5 23.5 22.0 22.0	25.5 25.0 24.5 25.0 25.5 24.5 24.5 24.5 23.5 23.5 22.5	23.5 23.5 24.5 24.5 22.5 22.5 22.5 23.5 22.5 22.5 22.5 22	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 21.0 22.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	13-5 14-0 14-0 14-5 15-5 16-0 17-0 16-5 16-5 16-5 16-5 16-5 16-5 16-5 16-5	12.5 13.5 14.0 13.5 14.0 14.5 15.0 16.0 15.5 16.0 16.0 15.5	19.0 17.5 19.0 18.5 19.5 19.5 17.5 16.5 16.5 16.5 16.5 16.5 16.5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 19.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 22.5 23.5 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 22.0 22.0 22.0 23.5	25.5 25.0 24.5 25.0 25.5 24.0 24.5 24.5 23.5 23.5 23.5 22.5	23.5 23.5 24.0 23.5 22.5 22.5 23.5 22.5 23.5 22.5 21.5 21.5 21.5 21.5	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 21.0 22.0 21.0 21.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	13-5 14-0 14-0 14-5 15-5 16-0 17-0 16-5 17-0 16-5 17-0 16-5 17-0	12.5 13.5 14.0 14.0 14.0 14.5 15.0 15.5 16.0 15.5 15.5 15.5	19.0 17.5 19.0 17.5 19.5 19.5 17.5 17.5 16.5 16.5 19.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 20.0 20.0 20.5 20.0 20.5	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 19.5 20.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 22.5 23.5 24.0	24.5 24.0 23.5 23.5 23.5 23.5 23.5 22.0 22.0	25.5 25.0 24.5 25.0 25.5 24.5 24.5 24.5 23.5 23.5 22.5	23.5 23.5 24.5 24.5 22.5 22.5 22.5 23.5 22.5 22.5 22.5 22	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 21.0 22.0	21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
4556789910	13-5 14-0 14-0 14-0 14-5 15-5 16-0 17-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 16.0 15.5 15.5 15.5 15.5 14.0 14.0	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.5 17.0 16.5 19.0	17.5 17.0 17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 18.5 17.0	21.0 21.0 20.5 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0 20.5 21.5 20.0 20.5 20.0 20.5 20.0 20.0 20.0 20	20.5 20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 20.5 20.0 22.0 22.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 22.0	25.5 25.0 25.0 25.5 24.5 24.5 24.5 23.5 23.5 23.5 23.5 23.5 23.5 22.0 21.5	23.5 23.5 24.0 23.5 22.5 22.5 23.5 22.5 22.5 22.5 22.5	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	13.5 14.0 14.0 14.0 14.5 15.5 16.5 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	12.5 13.5 14.0 14.0 14.0 14.0 14.0 15.5 15.0 15.5 16.0 15.5 16.0 15.5 15.5 15.0 13.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.5 17.0 16.5 19.0 19.5 18.5 21.0 19.5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 19.5 20.0 20.5 21.5 22.5 24.0 24.5 24.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 20.5 20.0 22.0 22.0 23.5	27.0 24.5 25.0 24.0 24.0 24.0 23.5 22.5 23.5 24.0 23.5 24.0 23.5	24.5 24.0 23.5 23.5 23.5 23.5 22.5 22.0 22.0 23.5 22.0 22.0 23.5 22.5	25.5 25.0 24.5 25.5 24.5 24.5 24.5 23.5 23.5 22.5 23.5 22.0 22.0 22.0 21.5	23.5 23.5 24.0 23.5 22.5 22.5 23.5 22.5 23.5 22.0 21.5 21.5 21.5 21.5 21.5 21.5	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
45 677 89 10 11 12 13 14 15 16 17 18 19 20 21 22	13.5 14.0 14.0 14.0 15.5 15.5 16.5 17.0 17.0 16.5 16.5 17.0 16.5 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 16.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	12.5 13.5 14.0 14.0 14.0 14.5 15.0 16.0 15.5 16.0 15.5 16.0 15.5 15.0 14.0 13.5	19.0 19.0 17.5 19.0 18.3 19.3 19.5 17.5 16.5 16.5 19.0 18.5 18.5 18.5 18.5 18.5	17.5 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 17.0 16.5 17.0 16.5 17.5	21.0 21.0 20.5 20.0 20.5 21.0 20.0 20.0 20.0 20.0 20.0 20.5 21.5 20.0 20.5 20.0 20.5 20.0 20.0 20.0 20	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 20.0 21.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 24.0 23.5 24.0 23.5 25.0 25.0	24.0 23.5 23.5 23.5 22.0 22.0 22.0 22.0 22.0 22.0 22.3 23.5 22.5 22.5 22.5 22.5 22.5 22.5	25.5 25.0 24.5 25.0 24.5 24.5 24.5 24.5 23.3 23.5 23.5 22.5 22.0 21.3	23.5 23.5 24.0 23.5 22.5 22.5 22.5 22.5 22.5 21.5 21.5 21	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
45 66 78 89 10 11 12 13 14 15 16 17 18 19 20 21 22 23	13-5 14-0 14-0 14-0 14-5 15-5 16-5 17-0 16-5 16-5 17-0 16-5 17-0 16-0 15-5 14-0 15-0 15-0 15-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5 16.0 15.5 16.0 13.5 15.5 15.5 15.5 15.0 14.0 14.0	19.0 19.0 19.0 19.0 18.5 19.5 19.5 17.5 18.5 17.5 18.3 19.0 19.5 18.3 19.0 19.5 18.5 19.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 17.5 17.5 17.5 17.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 19.5 20.0 20.5 21.5 24.0 24.5 24.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 20.0 21.0 22.5 23.5 23.5	27.0 24.5 25.0 24.5 24.0 24.0 24.0 23.5 22.5 23.5 24.0 25.0 25.0 25.0 25.0	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 22.5 23.5 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 25.0 24.5 24.5 24.5 23.5 23.5 23.5 22.5 22.0 22.0 21.3 21.0 21.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 22.5 22.5 22.5 21.5 21	23.5 21.5 21.5 22.0 21.5 21.5 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	13-5 14-0 14-0 14-1 15-5 16-5 17-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	12.5 13.5 14.0 14.0 14.0 14.0 14.5 15.0 16.0 16.0 15.5 16.0 15.5 15.0 14.0 13.5	19.0 19.0 19.0 19.0 18.5 19.5 19.5 17.5 18.5 17.5 18.3 19.0 19.5 18.3 19.0 19.5 18.5 19.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 16.5 16.5 16.5 16.5 17.5 17.5 17.5 17.5	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 19.5 20.0 20.5 21.5 24.0 24.5 24.0	20.5 20.5 19.5 19.0 19.5 19.5 19.5 19.5 20.5 20.0 22.0 22.0 23.5	27.0 24.5 25.0 24.5 24.0 24.0 24.0 23.5 22.5 23.5 24.0 25.0 25.0 25.0 25.0	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 22.5 23.5 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 25.0 24.5 24.5 24.5 23.5 23.5 23.5 22.5 22.0 22.0 21.3 21.0 21.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 22.5 22.5 22.5 21.5 21	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	13-5 14-0 14-0 14-5 15-5 16-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 15-5 15-5 15-0 15-0 15-0 15-0 15-0 15	12.5 13.5 14.0 14.0 14.0 14.5 15.5 15.5 15.5 15.3 14.0 14.0 14.5 14.0 14.5 14.0 14.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.5 17.0 16.3 19.0 19.5 18.5 21.0 19.0 17.5 17.5 17.5 19.0 17.5 17.5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.5 21.0 20.0 19.5 20.0 20.5 21.5 24.0 24.5 24.0	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 20.0 21.0 22.5 23.5 23.5	27-0 24-5 25-0 24-5 24-0 24-0 23-5 22-5 23-5 24-0 23-5 25-0 25-0 25-0 24-5 24-0 24-5 24-0 24-5 24-0 24-0 24-0 24-0 24-0 24-0 24-0 24-0	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 22.5 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 24.0 24.5 24.5 24.5 23.5 23.5 23.5 22.0	23.5 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.5 22.5 22.5	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
45 67 78 99 10 11 122 134 145 15 16 17 18 19 20 21 22 23 24 25 27	13-5 14-0 14-0 14-1 15-5 16-5 17-0 16-5 16-5 17-0 16-5 16-5 17-0 16-5	12.5 13.5 14.0 14.0 13.5 14.0 14.0 14.5 15.0 15.5 16.0 15.5 15.5 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19-0 19-0 17-2 19-2 18-5 19-5 19-5 17-5 18-2 17-5 18-2 19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 19.5 20.0 21.0 22.5 23.5 23.5	27-0 24-5 25-5 25-0 24-0 24-5 24-0 23-5 24-0 23-5 23-5 25-0 25-0 25-0 25-0 24-5 24-5 24-5 24-5 24-5 24-5 24-5 24-5	24.5 24.5 23.5 23.5 23.5 23.5 22.0 22.0 22.0 22.0 22.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 24.5 25.0 24.5 24.5 24.5 24.5 23.5 23.5 23.5 22.0 22.0 21.5 21.0 20.5 21.0 20.5	23.5 23.5 24.0 23.5 22.5 22.5 22.5 22.5 22.5 22.5 22.5	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	13-5 14-0 14-0 14-5 15-5 16-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 15-5 15-5 15-0 15-0 15-0 15-0 15-0 15	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5 16.0 14.0 14.5 15.5 16.0 14.0 14.5 14.0 14.5 14.5 14.5 14.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.3 19.0 19.5 18.5 18.5 18.5 18.5 19.0 19.0 19.0 20.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.5 16.5 17.0 18.5 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0	20.5 19.5 19.0 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27-0 24-5 25-0 24-5 24-5 24-0 23-5 23-5 23-5 23-5 23-5 23-5 23-5 23-0 23-5 23-0 23-5 24-0 24-0 24-0 24-0 24-0 24-0 24-0 24-5	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 24.5 25.0 25.5 24.0 24.5 24.5 23.5 23.5 23.5 22.0 22.0 22.0 21.0 21.0 21.0 20.5	23.5 23.5 24.0 23.3 22.5 20.5	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29	13-5 14-0 14-0 14-1 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 15-5 15-0 16-0	12.5 13.5 14.0 14.0 13.5 14.0 14.0 14.5 15.0 15.5 16.0 15.5 15.5 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19-0 19-0 17-2 19-0 18-5 19-5 19-5 17-5 18-1 17-0 16-5 16-5 16-5 18-1 19-0 19-0 19-0 17-5 19-0 19-0 17-5 19-0 19-0 19-0 19-0 19-5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 24.0 23.5 23.5 25.0 25.0 25.0 24.5 25.0 24.5 25.0 24.5 25.0 24.5 25.0 24.5 25.0 25.0 24.5 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	24.5 24.5 23.5 23.5 23.5 23.5 22.0 22.0 22.0 22.5 22.5 22.5 22.5 22	25.5 24.5 25.0 24.5 24.5 24.5 24.5 23.5 23.5 23.5 23.5 22.0 21.0 21.0 21.0 20.5 20.5	23.5 23.5 23.5 24.0 23.3 22.5 22.5 23.5 22.5 21.5 21.5 21.5 21.5 21.5 20.0 20.0 20.0 20.0 20.0	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	13-5 14-0 14-0 14-5 15-5 16-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 15-5 15-5 15-0 15-0 15-0 15-0 15-0 15	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5 16.0 14.0 14.5 15.5 16.0 14.0 14.5 14.0 14.5 14.5 14.5 14.5	19.0 19.0 17.5 19.0 18.5 19.5 19.5 17.5 18.3 19.0 19.5 18.5 18.5 18.5 18.5 19.0 19.0 19.0 20.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.5 16.5 17.0 18.5 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 24.0 23.5 24.0 23.5 25.0 25.0 25.0 25.0 24.0 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 24.5 25.0 25.5 24.0 24.5 24.5 23.5 23.5 23.5 22.0 22.0 22.0 21.0 21.0 21.0 20.5	23.5 24.0 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.5 22.0 21.5 21.3 21.5 21.5 21.0 20.0	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
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 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	13-5 14-0 14-0 14-1 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 15-5 15-0 16-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.0 15.5 16.0 15.5 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0 16.3 19.0 19.5 18.5 21.0 19.0 17.5 17.5 19.0 17.5 19.0 20.0 20.0 20.0 19.5 21.5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.3 16.5 17.0 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0	20.5 19.5 19.0 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 24.0 23.5 23.5 25.0 25.0 25.0 24.5 25.0 24.5 25.0 24.5 25.0 24.5 25.0 24.5 25.0 25.0 24.5 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	24.5 24.5 23.5 23.5 23.5 23.5 22.0 22.0 22.0 22.5 22.5 22.5 22.5 22	25.5 24.5 25.0 24.5 24.5 24.5 24.5 23.5 23.5 23.5 23.5 22.0 21.0 21.0 21.0 20.5 20.5	23.5 23.5 23.5 24.0 23.3 22.5 22.5 23.5 22.5 21.5 21.5 21.5 21.5 21.5 20.0 20.0 20.0 20.0 20.0	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29	13-5 14-0 14-0 14-1 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 15-5 15-0 16-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.0 15.5 16.0 15.5 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19-0 19-0 17-2 19-0 18-5 19-5 19-5 17-5 18-1 17-0 16-5 16-5 16-5 18-1 19-0 19-0 19-0 17-5 19-0 19-0 17-5 19-0 19-0 19-0 19-0 19-5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 24.0 23.5 24.0 23.5 25.0 25.0 25.0 25.0 24.0 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 24.5 25.0 25.5 24.0 24.5 24.5 24.5 23.5 23.5 23.5 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	23.5 24.0 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.5 22.0 21.5 21.3 21.5 21.5 21.0 20.0	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
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 31	13-5 14-0 14-0 14-5 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 15-5 15-5 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5 15.0 14.0 14.5 15.5 16.0 16.0 13.5 14.0 14.5 14.5 14.5 16.5 16.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0 16.3 19.0 19.5 18.5 18.5 18.5 19.0 19.0 20.0 20.0 20.0 20.0 19.5 21.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.5 16.5 17.0 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 24.0 23.5 24.0 23.5 24.0 23.5 25.0 25.0 25.0 25.0 24.0 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 24.0 24.5 24.5 23.5 23.5 23.5 22.0 22.0 21.0	23.5 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.0 21.5 21.5 21.5 21.5 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
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 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	13-5 14-0 14-0 14-1 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 16-5 17-0 15-5 15-0 16-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.0 15.5 16.0 15.5 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0 16.3 19.0 19.5 18.5 21.0 19.0 17.5 17.5 19.0 17.5 19.0 20.0 20.0 20.0 19.5 21.5	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.3 16.5 17.0 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 24.0 23.5 23.5 24.0 23.5 25.0 25.0 25.0 24.0 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 24.5 25.0 25.5 24.0 24.5 24.5 24.5 23.5 23.5 23.5 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	23.5 24.0 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.5 22.0 21.5 21.3 21.5 21.5 21.0 20.0	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0
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 31	13-5 14-0 14-0 14-5 15-5 16-5 17-0 16-5 17-0 16-5 17-0 16-5 15-5 15-5 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-5 15-0 15-0	12.5 13.5 14.0 14.0 13.5 14.0 14.5 15.5 16.0 15.5 15.0 14.0 14.5 15.5 16.0 16.0 13.5 14.0 14.5 14.5 14.5 16.5 16.5	19.0 19.0 17.5 19.0 18.5 19.5 17.5 18.5 17.0 16.3 19.0 19.5 18.5 18.5 18.5 19.0 19.0 20.0 20.0 20.0 20.0 19.5 21.0	17.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.3 16.5 16.5 17.0 18.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.0 20.5 20.0 20.0 20.0 20.5 21.0 20.0 20.5 21.5 20.5 21.5 22.5 24.0 24.5 24.5 24.5 24.5	20.5 20.5 20.5 19.5 19.0 19.0 19.5 19.5 19.5 20.0 21.0 22.0 22.0 22.5 23.5 23.5	27.0 24.5 25.0 24.0 24.5 24.0 23.5 24.0 23.5 23.5 24.0 23.5 25.0 25.0 25.0 24.0 24.5 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	24.5 24.0 23.5 23.5 23.5 22.5 22.0 22.0 22.0 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	25.5 25.0 24.5 25.0 24.0 24.5 24.5 23.5 23.5 23.5 22.0 22.0 21.0	23.5 23.5 24.0 23.3 22.5 22.5 22.5 22.5 22.0 21.5 21.5 21.5 21.5 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20	23.5 21.5 21.5 22.0 22.0 21.5 21.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	21.5 21.5 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0

11461800 LAKE MENDOCINO NEAR UKIAH, CALIF .-- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1969

	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	YURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 4, 1967	8	3	FEB. 28	15	30
OCT. 11	11	4	MAR. 6	24	39
OCT. 18	10	7	MAR. 13	18	33
OCT. 19	ĩ	1	MAR. 19	9	20
OCT. 25	Ā	4	MAR. 21	20	40
22.1	•	•	MAR. 27	23	32
NOV. 1	9	5			
NOV. 15	á	á	APR. 3	10	25
NOV. 20	2	3	APR. 11	9	30
NGV. 22	14	10	APR. 17	11	22
NOV. 24	ii	ii	APR. 18	4	2
		==	APR. 24	12	20
DEC. 5	7	7	MAY 1	8	14
DEC. 8	8	7			
DEC. 13	9	10	MAY 8	4	10
DEC. 19	10	14	MAY 15	4	7
DEC - 20	9	11	MAY 23	5	4
			JULY 8	1	1
DEC. 27	24	48	AUG. 22	1	5
JAN. 3, 1968	22	40	SEPT. 26	1	2
JAN. 11	8	8			
JAN. 13	7	5			
JAN. 16	7	2			
0,000	•	-			
JAN. 24	10	14			
JAN. 31	39	78			
FE8. 5	30	55			
FE8. 7	22	44			
FE8. 14	22	22			
FFR. 21	33	43			

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF.

LOCATION.--Lat 39°11'45", long 123°11'30", in Yokayo Rancho Grant, Mendocino County, at gaging station 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 miles northeast of Ukiah.

DRAINAGE AREA .-- 105 sq mi.

PERIOD OF RECORD, -- Chemical analyses: December 1952 to March 1955.
Water temperatures: December 1952 to March 1955, October 1964 to September 1968 (discontinued).
Sediment records: December 1982 to March 1955, January 1964 to September 1968 (discontinued).

EXTREMES . -- 1967-68:

Sediment concentrations: Maximum daily, 220 mg/l Jan. 20; minimum daily, 1 mg/l Oct. 3, 4, 19. Sediment discharge: Maximum daily, 404 tons Jan. 16; minimim daily, 0.63 ton May 22.

Period of record (1964-68):
Sediment concentrations: Maximum daily, 1,900 mg/l (estimated) Dec. 25, 1964; minimum daily, 1 mg/l on several days in 1965 and 1967.
Sediment discharge: Maximum daily, 22,000 tons (estimated) Dec. 25, 1964; minimum daily, 0.4 ton Nov. 29, 1964, Jnn. 5, 1966.

REVISIONS, -- Revised figures for water temperatures for 1967 water year, superseding those previously published, are given herewith:

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

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 DC TOBER .. JANUARY... MARCH... APRIL MAY.... JULY.... AUGUST... SEPTEMBER

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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				16	19				19		19							19			18				19						19	
NOVEMBER.	18		19			18				16			16	16	17		17			16	_	16		16			13		13	13		
DECEMBER.	11	13	13	13	12	11	12	11	11	11	11	11	10	9				9	9	9	9	8		6	9		9		8			
JANUAKY	8		8		7			7	7	7	8	8	8	8	8	8	8	6		9		9		9		7			8	7	7	
FEBRUARY.																																9
MARCH	9			9		8		8			9	9	9	9	9	9	9	8	9	9	10	10	10	10	10		11		10			
APRIL	10		11		11			11	10	12		11			12		11		12			12		11		12			12			
MAY	11							9							13	12			_				11									
JUNE							11					12	11												-	_						
JULY										12																_						
AUGUST																																
SEPTEMBER			19																			-										

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

		WATER								PART	ICLE :	SIZE					
		TEM- PERA- TURE	D1 SCHARGE		SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (IN MII	LLIME	TERS)	1ND [CATED	METHOO OF Analy-
DATE	TIME	(C)	(CFS)	(MG/L)	(TDNS/DAY)	•002	.004	.008	.016	.031	-062	.125	.250	•500	1.DO	2.00	515
JAN 12 1968	1700	8	300	126	102	56	72	80	84	87	99	99	99	100			SBWC
JAN 20	1125	9	19	215	11	79	90	94	95	97	99	99	100				SBWC
JAN 22	1705	9	19	186	9.5	48	67	83	88	92	100						SBWC
JAN 24	1655	9	16	136	5.9	83	90	94	98	99	99	100					SBWC
MAY 23	1715	11	61	6	.99	56	67	81	91	95	100						SBWC

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF.--Continued

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SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	315	2	1.7	330	7	6.2	172	16	7.4
?	315	2	1.7	335 336	9	8.1	172 172	19 20	8.8 9.3
3	315 315	1	.85 .85	335	10	9.1 8.1	172	19	8.8
5	315	2	1.7	336	ģ	8.2	172	46	21
6 7	315	2	1.7	336	9	8.2	172	46	21
7 8	315	2	1.7	336 336	9	8.2 8.2	174 176	50 51	23 24
9	315 315	2	1.7 1.7	244	8	5.3	176	42	20
10	315	7	1.7	179	8	3.9	176	46	22
11	315	?	1.7	179	9	4.3	176	39	19
12	320	5	4.3	178 176	9	4.3	176 176	35 30	17 14
13 14	313 310	3	3.4 2.5	176	9	4.3 4.3	173	52	24
15	310	3	2.5	176	9	4.3	172	50	23
16	310	3	2.5	176	11	5.2	172	40	19
17 18	310 315	3 5	2.5	176 176	13 14	6.2	172 432	38 35	18 41
19	277	1	4.3 .75	174	14	6.7 6.6	432 684	25	46
20	315	4	3.4	172	14	6.5	684	28	52
21	315	6	5.1	172	13	6.0	444	34	41
22	312	4	3.4	172	13	6.0	228	33	20
23	316	4	3.4	172	13	6.0	133	32	11
24 25	316	4	3.4	172 172	13	6.0	133 133	32 31	11 11
	316		3.4		13	6.0			
26 27	318 317	4	3.4 3.4	172 172	14 14	6.5 6.5	224 305	29 26	18 21
28	320	4	3.5	172	14	6.5	224	25	15
29	325	4	3.5	172	12	5.6	162	24	10
30 31	325 328	4	3.5 3.5	172	12	5.6	162 162	24 23	10 10
		4		4502		104.0			
TOTAL	9753		82.65	6582		186.9	7061		616.3
		JANUARY			FFRRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT Discharge	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE
DAY		MEAN CONCEN-		MEAN	MEAN CONCEN-			MEAN CONCEN-	
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 223	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 162 248	MEAN CONCEN- TRATION (MG/L) 23 23	DISCHARGE (TONS/DAY) 10 15	MEAN DISCHARGE (CFS) 972 618	MEAN CONCEN- TRATION (MG/L) R5 74	DISCHARGE (TONS/DAY) 223 118	DISCHARGE (CFS) 351 350	MEAN CONCEN- TRATION (MG/L) 21 20	DISCHARGE (TONS/DAY) 20 19
1 ? 3	DISCHARGE (CFS) 162 248 305	MEAN CONCEN- TRATION (MG/L) 23 23 22	DISCHARGE (TONS/DAY) 10 15 18	MEAN DISCHARGE (CFS) 972 618 1160	MEAN CONCEN- TRATION (MG/L) R5 74 63	DISCHARGE (TONS/DAY) 223 118 197	DISCHARGE (CFS) 351 350 350	MEAN CONCEN- TRATION (MG/L) 21 20 20	DISCHARGE (TONS/DAY) 20 19 19
1 2	DISCHARGE (CFS) 162 248	MEAN CONCEN- TRATION (MG/L) 23 23	DISCHARGE (TONS/DAY) 10 15	MEAN DISCHARGE (CFS) 972 618	MEAN CONCEN- TRATION (MG/L) R5 74	DISCHARGE (TONS/DAY) 223 118	DISCHARGE (CFS) 351 350	MEAN CONCEN- TRATION (MG/L) 21 20	DISCHARGE (TONS/DAY) 20 19
1 2 3 4 5	01SCHARGE (CFS) 162 248 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23	DISCHARGE (TONS/DAY) 10 15 18 19 20	MEAN D1SCHARGE (CFS) 972 618 1160 1160 1790	MEAN CONCENTRATION (MG/L) 85 74 63 54 46	DISCHARGE (TONS/DAY) 223 118 197 169 222 347	DISCHARGE (CFS) 351 350 350 351 353 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19	DISCHARGE (TONS/DAY) 20 19 19 18 18
1 2 3 4 5	01SCHARGE (CFS) 162 248 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23 24	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18	MEAN DISCHARGE (CFS) 972 618 1160 1160 1790 2470 1250	MEAN CONCEN- TRATION (MG/L) R5 74 63 54 46	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222	DISCHARGE (CFS) 351 350 350 351 363 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19	DISCHARGE (TONS/DAY) 20 19 19 18 18 18
1 ? 3 4 5 6 7 8	01SCHARGE (CFS) 162 248 305 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23 24	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18	MEAN DISCHARGE (CFS) 972 618 1160 1160 1790 2470 1250 21	MEAN CONCEN- TRATION (MG/L) 85 74 63 54 46 52 68 75	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3	DISCHARGE (CFS) 351 350 350 351 353 354 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19 21 20 17	DISCHARGE (TONS/DAY) 20 19 19 18 18 18 20 19 16
1 2 3 4 5	01SCHARGE (CFS) 162 248 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23 24	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18	MEAN DISCHARGE (CFS) 972 618 1160 1160 1790 2470 1250	MEAN CONCEN- TRATION (MG/L) R5 74 63 54 46	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222	DISCHARGE (CFS) 351 350 350 351 363 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19	DISCHARGE (TONS/DAY) 20 19 19 18 18 18
1 2 3 4 5 6 7 8 9 10	01 SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23 24 23 22 20 10	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20	MEAN CONCEN- TRATION (MG/L) 85 74 63 54 46 52 68 75 82 90	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3 4.4 4.9	DISCHARGE (CFS) 351 350 350 351 363 354 354 354 354 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19 21 20 17 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 18 20 19 16 14 14
1 2 3 4 5 6 7 8 9 10	01 SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 22 23 22 23 24 23 22 20 10	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 20 20 20 20	MEAN CONCEN- TRATION (MG/L) 85 74 63 54 46 52 68 75 82 90	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2	DISCHARGE (CFS) 351 350 350 351 353 354 354 354 354 354 354 354	MEAN CONCEN- TRATION (MG/L) 20 20 20 19 19 21 20 17 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 14 14 14
1 2 3 4 5 6 7 8 9 10	01 SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 23 22 23 24 23 24 23 22 20 10	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20	MEAN CONCEN- TRATION (MG/L) 85 74 63 54 46 52 68 75 82 90	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5	DISCHARGE (CFS) 351 350 350 351 363 354 354 354 354 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 19 21 20 17 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 18 20 19 16 14 14
1 2 3 4 5 6 7 8 9 10	01SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCEN- TRATION (MG/L) 23 22 23 24 23 22 22 22 20 10	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94	MEAN DISCHARGE (CFS) 972 618 1160 1190 2470 1250 21 20 20 20	MEAN CONCEN- TRATION (MG/L) 85 74 46 52 68 75 82 90 93 96 83	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2	DISCHARGE (CFS) 351 350 350 350 351 363 354 354 354 354 354 354 354 3554	MEAN COMCEN- TRATION (MG/L) 21 20 19 19 21 20 17 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 18 20 19 16 14 14 13 14 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 23 24 22 20 10 42 116 136 153 70	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293	MEAN DISCHARGE (CFS) 972 61R 1140 1150 1250 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCEN- TRATION (MG/L) A5 74 63 54 64 65 26 88 75 82 90 93 94 64 69 70	DISCHARGE (TONS/DAY) 23 118 1197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7	DISCHARGE (CFS) 351 350 350 350 351 354 354 354 354 354 354 354 364 3754 3754 3754 3754 3754 3754 3754 375	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 21 21 20 17 15 15 16 20 20 19	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 20 37 31
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	01SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 1630 2240 534 300 104 894	MEAN CONCENTRATION (MG/L) 23 23 22 23 22 23 24 29 20 10 42 122 116 136 153 70 50	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94 293 404 306	MEAN D1SCHARGE (CFS) 972 618 1160 1160 11790 2410 1250 21 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/LI) 85 74 63 54 46 52 68 82 90 93 96 83 64 69 70	DISCHARGE (TONS/DAY) 23 118 197 169 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5	DISCHARGE (CFS) 351 350 350 350 351 353 354 354 354 354 3554 3554 368 612 280 285	MEAN CONCENTRATION (MG/L) 21 20 20 19 21 20 17 15 15 16 20 17	DISCHARGE (TONS/DAY) 20 19 18 18 20 19 16 14 14 20 37 31 11 12
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 24 23 22 20 10 42 116 136 153 70 50 50	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385	MEAN DISCHARGE (CFS) 972 61R 1140 1150 1250 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCEN- TRATION (MG/L) A5 74 63 54 64 65 26 88 82 90 93 94 64 69 70 65 59	DISCHARGE (TONS/DAY) 223 118 1197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.5 3.7	DISCHARGE (CFS) 351 351 350 350 351 354 354 354 354 354 354 354 354 354 354	MEAN CONCEN- TRATION (MG/L) 21 20 20 19 21 20 17 15 15 16 20 19 19	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 20 37 31
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	01SCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 1630 2240 534 300 104 894	MEAN CONCENTRATION (MG/L) 23 23 22 23 22 23 24 29 20 10 42 122 116 136 153 70 50	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94 293 404 306	MEAN DISCHARGE (CFS) 972 61R 1160 11790 2470 1250 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/LI) 85 74 63 54 46 52 68 82 90 93 96 83 64 69 70	DISCHARGE (TONS/DAY) 23 118 197 169 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5	DISCHARGE (CFS) 351 350 350 350 351 353 354 354 354 354 3554 3554 368 612 280 285	MEAN CONCENTRATION (MG/L) 21 20 20 19 21 20 17 15 15 16 20 17	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 13 14 20 37 31 11 12 55
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 11 15 16 17 18 19 20 21	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 23 24 23 22 20 10 136 159 50 50 169 220 198	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 52 90 93 64 66 67 67 67 67 67 67 67 67 67 67 67 67	DISCHARGE (TONS/DAY) 233 118 1197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5 3.7 3.8 3.5 3.2 3.1 32	DISCHARGE (CFS) 351 351 350 350 350 354 354 354 354 354 354 354 354 354 354	MEAN CONCENTRATION (MG/L) 21 20 20 19 19 21 20 17 15 15 16 20 19 19 19 21 20 17 15 15 16 20 19 20 17 21 21 21 21 21 21 21 21 22 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TONS/DAY) 20 19 19 18 18 18 20 19 16 14 14 12 20 37 31 11 12 55 95 53 25
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 23 24 29 10 10 15 16 15 3 70 50 169 220 188	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11 10 9.6	MEAN D1SCHARGE (CFS) 972 618 1160 1160 11790 2410 1250 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 82 90 93 96 83 64 69 70 65 59 52 39 266 25	DISCHARGE (TONS/DAY) 223 138 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.9 3.7 3.8	DISCHARGE (CFS) 351 350 350 350 351 354 354 354 354 354 354 354 359 319 319 319 319 319 319 319 319 319 31	MEAN CONCENTRATION (MG/L) 21 20 19 19 21 20 17 15 15 15 16 20 19 19 21 20 20 19 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 13 14 20 37 37 31 11 12 55 55 53 25 24
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 22 24 23 22 20 10 42 125 116 136 50 169 220 188 188 164 140	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 16 163 175 94 23 293 404 306 385 244 11 10 9.6 5.8	MEAN DISCHARGE (CFS) 972 618 1160 1160 11790 24170 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 87 82 90 93 96 83 64 69 70 65 59 52 39 26 25 23 36	DISCHARGE (TONS/DAY) 223 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5 3.7 3.8 3.5 3.7 3.8 3.5 3.7 3.8 3.5 3.7	DISCHARGE (CFS) 351 350 350 351 353 354 354 354 354 354 354 354 359 452 682 280 285 1190 1860 936	MEAN CONCENTRATION (MG/L) 21 20 19 19 21 20 17 15 15 15 15 16 20 19 21 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 13 14 20 37 37 37 37 11 11 12 55 55 53 25 27 27 23
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 23 24 29 20 10 40 153 70 50 169 220 169 188 164 140 105	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11 10 9.6 5.8	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 52 68 75 82 90 93 64 65 59 59 92 65 59 22 39 926 25 23	DISCMARGE (TONS/DAY) 233 118 1197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5 3.1 32 95 88 33	DISCHARGE (CFS) 351 351 350 350 351 353 354 354 354 354 354 354 354 364 378 3190 378	MEAN CONCENTRATION (MG/L) 21 20 20 19 19 21 55 15 15 15 15 16 20 20 19 19 21 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 20 37 31 11 12 55 95 53 25 24 27
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 14 15 16 17 17 18 19 20 21 22 3 24 25 26	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/LI) 23 23 24 23 24 23 22 20 10 42 122 116 136 153 70 00 169 220 198 188 164 140 105 75	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11 10 9.6 5.8 3.6 4.3	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 52 68 75 82 90 93 84 69 90 65 59 92 26 25 34 66 36 67 27	DISCHARGE (TONS/DAY) 233 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.7 3.8 3.5 3.1 32 95 88 33 1.7 1.7	DISCHARGE (CFS) 351 351 350 350 350 351 354 354 354 354 354 354 354 354 360 285 1190 1860 936 378 378 378 378 378 384	MEAN CONCENTRATION (MG/L) 21 20 20 19 19 17 15 15 15 16 20 20 19 19 22 20 22 22 23	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 12 20 37 37 31 11 12 55 95 53 25 24 27 23 23
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 114 15 16 17 18 119 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 22 24 23 22 20 10 42 125 116 136 50 169 220 199 220 199 220 199 220 199 220 199 250 169 260 169 260 165 75 65 65	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 16 16 163 175 944 233 293 404 306 385 244 11 10 9.6 5.8 3.6 4.3	MEAN D1SCHARGE (CFS) 972 618 1160 1160 11790 2410 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 46 52 68 83 64 69 70 65 59 23 39 26 25 23 36 36 36 27 72 72	DISCHARGE (TONS/DAY) 223 118 1197 169 222 347 222 34-4 4.9 5.0 5.2 3.5 3.7 3.8 3.5 3.2 3.1 32 95 88 33 1.7 1.7	DISCHARGE (CFS) 351 350 350 351 353 354 354 354 354 354 354 354 359 319 319 319 319 319 319 319 319 319 31	MEAN CONCENTRATION (MG/L) 21 20 20 199 19 21 20 17 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 13 14 20 37 31 11 12 55 95 53 25 24 27 23 23 24 25
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 12 13 11 15 11 15 17 18 19 20 21 22 23 24 25 26 27 28 29 29	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 22 24 23 22 20 10 42 122 126 136 153 70 50 169 220 169 164 164 164 165 75 65 65 65	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11 10 9.6 5.8 3.6 4.3 3.0 2.6 2.8	MEAN DISCHARGE (CFS) 972 618 1160 1160 11790 2410 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 52 68 75 82 90 93 84 69 90 65 59 92 26 25 34 66 36 67 27	DISCHARGE (TONS/DAY) 223 118 1197 169 222 347 222 34-4 4.9 5.0 5.2 3.5 3.7 3.8 3.5 3.2 3.1 32 95 88 33 1.7 1.7 48 85 81 42	DISCHARGE (CFS) 351 350 350 351 353 354 354 354 354 354 354 354 354 359 318 319 319 319 319 319 319 318 318 318 318 318 318 318 318 318 318	MEAN CONCENTRATION (MG/L) 21 20 20 19 19 21 20 17 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 13 14 20 37 31 11 12 55 95 93 25 24 27 23 23 24 25 25 15
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 23 24 23 22 20 10 42 126 136 153 70 169 220	DISCHARGE (TONS/DAY) 10 10 15 18 19 20 19 18 18 16 40 163 175 23 293 404 306 385 244 11 10 9.6 4.3 3.0 2.6 4.3 3.0 2.6 2.8 3.0 3.1	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20 20 20 20 20 20 20 20 20 20 21 20 20 20 20 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCEND (MG/L) 85 74 46 63 54 46 52 68 75 82 90 93 64 69 70 65 59 23 36 64 67 27 22 33 26 27 22 33 23 23 23 23 23 23 23 24 64 64 64 64 64 64 64 64 64 64 64 64 64	DISCMARGE (TONS/DAY) 233 118 197 169 222 347 222 4.3 4.4 4.9 5.0 5.2 4.5 3.5 3.7 3.8 3.5 3.1 32 95 88 33 1.7 1.7	DISCHARGE (CFS) 351 351 350 350 350 351 354 354 354 354 354 354 354 354 354 378 378 378 378 378 378 384 384 384 384 232	MEAN CONCENTRATION (MG/L) 21 20 19 19 17 15 15 15 16 20 19 21 20 22 24 24 24 25	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 14 12 20 37 31 11 12 55 95 53 25 24 27 23 23 23 24 25 25 15 9,5
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 12 13 11 15 11 15 17 18 19 20 21 22 23 24 25 26 27 28 29 29	DISCHARGE (CFS) 162 248 305 305 305 305 305 305 305 305 305 305	MEAN CONCENTRATION (MG/L) 23 23 22 22 24 23 22 20 10 42 122 126 136 153 70 50 169 220 169 164 164 164 165 75 65 65 65	DISCHARGE (TONS/DAY) 10 15 18 19 20 19 18 18 16 40 163 175 94 23 293 404 306 385 244 11 10 9.6 5.8 3.6 4.3 3.0 2.6 2.8	MEAN DISCHARGE (CFS) 972 618 1160 11790 2470 1250 21 20 20 20 20 20 20 20 20 20 20 20 20 20	MEAN CONCENTRATION (MG/L) 85 74 46 63 54 46 85 82 90 93 96 83 64 69 70 65 59 23 9 26 65 23 36 36 27 72 23 23 23 23 23	DISCHARGE (TONS/DAY) 223 118 1197 169 222 347 222 34-4 4.9 5.0 5.2 3.5 3.7 3.8 3.5 3.2 3.1 32 95 88 33 1.7 1.7 48 85 81 42	DISCHARGE (CFS) 351 350 350 351 353 354 354 354 354 354 354 354 354 359 318 319 319 319 319 319 319 318 318 318 318 318 318 318 318 318 318	MEAN CONCENTRATION (MG/L) 21 20 20 19 19 21 20 17 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 20 19 19 18 18 20 19 16 14 14 13 14 20 37 31 11 12 55 95 93 25 24 27 23 23 24 25 25 15

TOTAL

2714

102.7

2365

RUSSIAN RIVER BASIN

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MFAN MEAN MEAN MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) SEDIMENT CONCEN-TRATION (MG/L) SEDIMENT MEAN SEDIMENT DI SCHARGE (TONS/DAY) DISCHARGE (CFS) DISCHARGE (TONS/DAY) DISCHARGE (TONS/DAY) DAY 141 144 144 92 56 10 10 10 159 158 160 160 159 76 76 77 76 76 2.1 2.1 2.1 2.1 18 16 12 8 11 1 2 3 4 5 24 14 13 9.3 5.4 3.2 2.3 6.8 5.2 3.5 2.6 10 6 2.3 2.3 2.4 2.4 2.6 2.1 1.8 1.8 1.8 162 161 159 159 159 2.2 2.2 2.1 2.1 2.1 57 58 59 63 65 76 75 10 9 9 6 15 15 15 14 5 9 74 76 76 66 77 14 12 13 2.5 2.5 3.5 3.5 76 76 76 78 162 162 162 182 11 1.8 1.7 9 8 8 7 7 4 3 6 8 1.3 2.6 3.9 5.2 12 13 14 1.6 1.6 1.5 100 78 100 13 3.5 193 10 3.5 3.6 3.6 3.6 3.6 1.7 1.6 1.4 1.1 193 213 224 244 256 5.2 6.3 7.3 7.9 9.0 100 16 17 18 19 20 13 13 13 13 77 74 72 70 69 8 8 7 6 6 10 100 102 102 103 104 11 12 104 104 106 106 89 11 3.1 2.8 3.1 3.1 2.9 .89 .63 .66 .66 274 285 285 285 285 267 21 22 23 24 25 66 58 61 61 63 5 4 4 4 4 15 16 16 16 11 12 12 12 12 11 .67 .66 .67 13 12 11 10 2.6 2.3 2.2 2.1 2.1 62 62 99 26 27 28 29 30 31 4 4 13 15 252 252 252 252 252 252 8.8 8.8 8.8 8.8 73 72 75 76 76 13 13 13 13 123 5.0

55.02

6243

		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	269	14	10	302	17	14	230	15	9.3
2	280	15	11	310	18	15	230	15	9.3
3	280	15	11	310	18	15	229	15	9.3
4	280	15	11	310	18	15	228	15	9.2
5	271	12	-8.8	298	17	14	228	15	9.2
6	264	10	7.1	275	16	12	211	13	7.4
7	264	9	6.4	260	15	11	204	12	6.6
8	264	7	5.0	260	15	11	204	12	6.6
9	264	5	3.6	260	15	11	157	7	3.0
10	264	3	2.1	260	15	11	133	8	2.9
11	264	3	2.1	260	15	11	133	8	2.9
12	264	3	2.1	260	15	11	133	8	2.9
13	264	3	2.1	260	15	11	133	8	2.9
14	264	3	2.1	260	15	11	135	8	2.9
15	274	8	5.9	260	15	11	133	8	2.9
16	280	14	11	260	15	11	133	8	2.9
17	279	14	11	260	15	11	151	9	3.7
18	288	15	12	260	15	11	180	9	4.4
19	285	14	11	237	15	9.6	190	10	5.1
20	270	14	10	224	14	8.5	193	11	5.7
21	268	14	10	207	12	6.7	193	11	5.7
22	284	14	11	183	11	5.4	193	11	5.7
23	295	16	13	180	11	5.3	193	11	5.7
24	304	17	14	179	11	5.3	120	14	4.5
25	310	18	15	176	10	4-8	220	14	8.3
26	310	18	15	176	10	4.8	220	14	8.3
27	310	18	15	193	11	5.7	224	14	8.5
28	310	18	15	204	12	6.6	224	12	7.3
29	297	17	14	222	14	8.4	224	9	5.4
30	290	16	13	234	15	9.5	202	6	3.3
31	290	16	13	230	15	9.3			
TOTAL	8700		293.3	7570		306.9	5581		171.8

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

106452.5

187.9

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF .-- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PERIODIC DETERMINATION	S OF SUSPENDED-SET	DIMENT CONCENTRATION	AND TURBIDITY, WATER YEAR	OCTOBER 1967 TO	SEPTEMBER 1968
	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
	SEDIMENT	TURBIDITY	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(1107.27	(NG/L SILION/
	1	2	FEB. 4	51	120
OCT. 4, 1967	2	í	FEB. 5	42	100
OCT. 9	5	7	FEB. 7	71	180
OCT. 18	6	5	FEB. 9	88	195
OCT. 21	4	4	FEB. 12	95	140
	4	6	FEB. 14	62	84
OCT. 31	10	7	FEB. 16	70	95
NOV. 3	9	7	FEB. 17	6B	105
	8	10	FE8. 18	54	100
NOV. 10	9	7	FE8. 19	55	105
NOV. 15	9	10	FEB. 20	34	70
NOV. 17	13	15	FEB. 21	26	44
NOV. 20	14	14	FEB. 22 FEB. 23	25	55
NOV. 22	13	14		23	53
NOV. 24	13	13	FEB. 24	39	82
NOV. 27	14	14	FEB. 25	37	82
NOV. 29	12	14	FEB. 26	26	60
NOV. 30	12	13	FEB. 27	22	53
DEC. 1	16	15	FEB. 28	23	50
DEC. 2	19	26	FEB. 29	23	47
050 3	21	24	MAR. 1	21	47
0EC. 3	19	24	MAR - 4	19	50
DEC. 5	46	71	MAR. 6	22	29
DEC. 6	46	71	MAR. 8	16	38
DEC. 7	50	83	MAR. 11	14	40
DEC. 8	51	87	MAR. 12	15	37
DEC. 9	42	66		16	37
DEC. 10	46	77	MAR. 13	19	30
DEC. 11	39	60	MAR. 15	19	24
DEC. 12	35	58	MAR. 16	14	32
	30	43	MAR. 17	16	34
DEC. 13	50 52	50	MAR. 18	19	24
UEC- 14	36	47	MAR. 19	19	20
DEC. 18	25	29	MAR. 20	20	35
DEC. 20	28	30	MAR. 21	24	44
DEC. 21	34	52	MAR. 22	24	30
		49	MAR. 23	26	44
DEC. 22	33		MAR. 24	23	40
DEC. 24	32	44	MAR. 25	22	45
DEC. 25 DEC. 27	31 26	44 47	MAR. 27	24	36
DEC. 27					
DEC. 29	24	44	MAR. 29	24	44
JAN. 1, 1968	23	35	APR. 1	30	24 34
JAN. 3	22	34	APR. 3	13	30
JAN. 5	24	36	APR. 5	15 15	30 37
JAN. 8	22	37		•	
JAN. 9	20	33	APR. 9	14	34
JAN. 10	9	13	APR. 10	15	30
JAN. 11	88	140	APR. 12	12	25
JAN. 12	126	205	APR. 15	13	29 29
JAN. 13	113	185	APR. 17	13	29
JAN. 14	53	52	APR. 19	13	22
JAN. 15	171	280	APR. 22	10	19
JAN. 16	72	135	APR. 24	11	22
JAN. 17	46	76	APR. 26	13	19
JAN. 18	51	105	APR. 29	10	15
JAN. 20	215	390	MAY 1	10	19
JAN. 22	186	345	MAY B	9	9
JAN. 24		250	MAY 15	7	8
JAN. 26	64	140	MAY 6	8	19
JAN. 29	65	120	MAY 23	5	5
JAN. 30	69	150	JUNE 12	3	3
JAN. 31	85	160	JUNE 13	6	3
FE8. 1	82	175	JULY 10	3	1
FEB. 2	71	140	AUG. 15	15	9
FEB. 3	64	130	SEPT. 3	15	4

11462500 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, 4 miles north of Hopland, and 17 miles upstream from Sulphur Creek,

DRAINAGE AREA, -- 362 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1953 to September 1965, Water temperatures: September 1965 to September 1968,

EXTREMES.--1967-68:
Water temperatures: Minimum, 7.0°C Jan. 6, 7.

Period of record:

Nater temperatures: Maximum (1965-66), 22.0°C Aug. 20, Sept. 3, 4, 7, 8, 1968; minimum, 6.0°C Feb. 8, 9, 1966.

REMARKS. -- Recorder malfunction Oct. 4, 6-12; probe out of water Feb. 23 to Mar. 4, Apr. 10 to Sept. 3.

TEMPERATURE (°	(C)	0F	WATER.	WATER	YEAR	OCTOBER	1967	TO	SEPTEMBER	1968
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		1.00	PERATURE	(C) OF W	ALEK, MAL		CTOBER 19	S7 TO SEP				
	OC.	TOBER	NOV	EMBER	DEC	EMB ER	JAN	IUARY	FEBR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.0	18.0	17.0	16.0	12.0	12.0	9.0	8.0	10.0	9.0		
2	18.0 21.0	17.0 18.0	17.0	16.0 16.0	12.0 12.0	12.0 10.0	9.0 9.0	8.0 8.0	10.0	10.0		
4	21.0	18.0	17.0 17.0	16.0	12.0	10.0	9.0	8.0	10.0 10.0	9.0		
5	20.0	18.0	17.0	16.0	11.0	9.0	8.0	8.0	10.0	9.0	13.0	10.0
-				1000			000			,,,,		1000
6			18.0	16.0	11.0	9.0	8.0	7.0	10.0	9.0	11.0	10.0
7			17.0	16.0	11.0	9.0	8.0	7.0	11.0	9.0	11.0	10.0
8			18.0	17.0	11.0	9.0	8.0	8.0	11.0	11.0	10.0	9.0
9 10			17.0 17.0	16.0 16.0	11.0	11.0	9.0	8.0	11.0	11.0	10.0 10.0	9.0
10			17.0	10.0	12.0	11.0	9.0	8.0	11.0	11.0	10.0	9.0
11			17-0	16.0	11.0	11.0	8.0	8.0	11.0	11.0	10.0	9.0
12			17.0	16.0	11.0	10.0	9.0	8.0	11.0	11.0	9.0	9.0
13	21.0	18.0	16.0	16.0	10.0	9.0	11.0	10.0	13.0	11.0	9.0	9.0
14	20.0	17.0	17-0	16.0	10.0	9.0	11.0	10.0	13.0	13.0	9.0	9.0
15	20.0	17.0	16.0	16.0	10.0	9.0	11.0	9.0	13.0	13.0	10.0	9.0
16	20.0	17.0	17.0	16.0	10.0	9.0	9.0	9.0	13.0	13.0	10.0	9.0
17	20.0	17.0	17.0	16.0	9.0	9.0	9.0	9.0	13.0	13.0	10.0	9.0
18	20.0	18.0	16.0	16.0	9.0	8.0	9.0	8.0	13.0	13.0	9.0	8.0
19	19.0	17.0	16.0	16.0	9.0	8.0	9.0	9.0	13.0	13.0	10.0	8.0
20	19.0	17.0	16.0	16.0	9.0	8.0	9.0	9.0	14.0	13-0	10.0	9.0
21	19.0	17.0	16.0	15.0	9.0	9.0	10.0	9.0	14.0	13.0	10.0	9.0
22	19.0	18.0	16.0	14.0	9.0	8.0	10.0	9.0	14.0	13.0	10.0	9.0
23 24	19.0 19.0	17.0 17.0	15.0 14.0	14.0 14.0	10.0	9.0 9.0	10.0	9.0 9.0			10.0	9.0
25	19.0	17.0	14.0	14.0	10.0	9.0	10.0	9.0			11.0	9.0
.,	1,,,,	1.40	1400	14.0	10.0	7.0	2000	7.0			*****	,.,
26	19.0	17.0	14.0	13.0	10.0	9.0	10.0	9.0			11.0	9.0
27	19.0	17.0	13.0	13.0	10.0	9.0	10.0	10.0			11.0	9.0
28	19.0	17.0	13.0	13.0	9.0	9.0	10.0	10.0			11.0	9.0
29	17.0	16.0	13.0	12.0	10.0	9.0	10.0	8.0			11.0	10.0
30 31	18.0	16.0	12.0	12.0	10.0	9.0	9.0	9.0		=======================================	11.0	10.0
31	18.0	16.0			9.0	9.0	10.0	9.0			11.0	11.0
MONTH			18.0	12.0	12.0	8.0	11.0	7.0			13.0	8.0
	¥.	5011							A116			
0.44		PRIL	,	MAY	J	JNE	JU	LY		GUST	SEP	TEMBER
OAY	ĀI Max	PRIL Min							MAX	GUST MIN		
	MAX	MIN	,	MAY	J	JNE MIN	JU MAX	MIN	MAX	MIN	SEP	TEMBER
0AY 1 2	MAX 12.0 12.0		MAX	MIN	MAX	JNE MIN	JU MAX	MIN	MAX	MIN	SEP Max	TEMBER
1 2 3	MAX 12.0 12.0 12.0	MIN 11.0 12.0 12.0	MAX	MIN	MAX	JNE MIN	JU MAX	MIN	MAX	MIN	SEP MAX	TEMBER MIN
1 2 3 4	MAX 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0	MAX	MIN	MAX	JNE MIN	JU MAX	MIN	MAX	MIN	SEP MAX 21.0	TEMBER MIN
1 2 3	MAX 12.0 12.0 12.0	MIN 11.0 12.0 12.0	MAX	MIN	JI MAX	JNE	JU	LY			SEP MAX	TEMBER MIN
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0	MAX	MIN	MAX	JNE MIN	MAX	MIN	MAX	HIN	SEP MAX 21.0 22.0	TEMBER MIN 18.0 18.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0	MAX	MIN	MAX	MIN	MAX	MIN	MAX	HIN	SEP MAX 	TEMBER MIN 18.0 18.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0	MAX	MIN	MAX	MIN	MAX	MIN	MAX	HIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0	HAX	MIN	HAX	MIN	MAX	MIN	MAX	HIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0	MAX	MIN	MAX	JNE MIN	JU MAX	MIN	MAX	MIN	SEP MAX 	TEMBER HIN 18.0 18.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9	MAX 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	MIN	JU MAX	HIN	HAX	MIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	MIN	JU MAX	HIN	HAX	MIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX	#AY #IN	JI MAX	MIN	JU MAX	HIN	HAX	MIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 18.0 19.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX	#AY #IN	JI MAX	MIN	JU MAX	HIN	HAX	MIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	HAX	MIN	JU MAX	HIN	HAX	MIN	SEP MAX 	TEMBER MIN 18.0 18.0 19.0 18.0 19.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX	#AY #IN	JI MAX	JNE MIN	JU HAX	HIN	MAX	#IN	SEP MAX	TEMBER MIN 18.0 18.0 18.0 18.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX	#IN	JI MAX	JNE MIN	JU HAX	HIN	MAX	#IN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	JNE MIN	JU HAX	HIN	MAX	#IN	SEP MAX	TEMBER MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	JNE MIN	JU HAX	HIN	MAX	#IN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	JNE MIN	JU HAX	HIN	MAX	#IN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	MAX	#IN	JI MAX	JNE MIN	JU MAX	HIN	MAX	HIN	SEP MAX	TEMBER MIN
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	HAX	#IN	JI MAX	JNE MIN	JU MAX	HIN	MAX	HIN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	HAX	#IN	JI MAX	JNE MIN	JU MAX	HIN	MAX	HIN	SEP MAX	TEMBER MIN
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	HAX	#IN	JI MAX	JNE MIN	JU MAX	HIN	MAX	HIN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 18 19 20 21 22 23 24	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	HAX	#IN	JI MAX	JNE MIN	JU MAX	HIN	MAX	HIN	SEP MAX	TEMBER MIN
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0	HAX	MIN	JI MAX	JNE MIN	JU HAX	HIN	HAX	#IN	SEP MAX	TEMBER MIN
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	HAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	HAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN 18.00 18.00 18.00 18.00 18.00 18.00 19.00 18.00 19
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 22 5 26 27 28	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	HAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 18 19 20 21 22 23 24 25 26 27 28 29	HAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	HAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN
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	HAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	MAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 18 19 20 21 22 23 24 25 26 27 28 29	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.	HAX	#IN	HAX	JNE MIN	JU MAX	HIN	HAX	HIN	SEP MAX	TEMBER MIN
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	HAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 11:0 12:0 12:0 12:0 11:0 11:0 11:0 11:0	HAX	#IN	MAX	JNE MIN	JU MAX	HIN	MAX	MIN	SEP MAX	TEMBER MIN

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CALIF. LOCATION. -- Lat 38°52'55", long 123°03'15", in SW4 sec.14, T.12 N., R.11 W., Mendocino County, at gaging station at Lambert Ranch, 400 ft downstream from Cummisky Creek, and 5 miles northwest of Cloverdale.

DRAINAGE AREA. -- 502 sq mi.

PERIOD OF RECORD, -- Water temperatures: November 1963 to September 1968.

Sediment records: November 1963 to September 1966, January 1967 to September 1968 (discontinued).

EXTREMES . -- 1967-68:

KEMES, --1997-68: Maximum, 26.0°C May 28; minimum, 4.0°C Jan. 3, 12.
Sediment concentrations: Maximum daily, 2,350 mg/l Jan. 29; minimum daily, 4 mg/l on several days during January, February, and May.
Sediment discharge: Maximum daily, 56,800 tons Jan. 29; minimum daily, 1.0 ton May 29.

Period of record:

Water temperatures (1966-68): Maximum, 26.0°C Mmy 28, 1968; minimum, 4.0°C Jan. 3, 12, 1968. Sediment concentrations (1964-66, 1967-68): Maximum daily, 4,600 mg/l Dec. 23, 1964; minimum daily, 3 mg/l Oct. 20-22, 1964, Jan. 13-15, 1967. Sediment discharge (1964-66, 1967-68): Maximum daily, 495,000 tons Dec. 22, 1964; minimum daily, 0.9 ton Jan. 15, 1967.

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

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	A Y																
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																																
MUMIXAM																																
MINIMUM	17	17	17	18	18	18	18	18	18	18	18		18																			
NOVEMBER.						10																	14									16
MINIMUM																							12									14
DECEMBER.		11	10	11	- 6	- 8	*;		10		10	10		10	10	19						13		12								
MAXIMUM														7	8	8	R	8	8	В	R	9	9	-0	10	10	9	9	9	A		
MINIMUM														6	7	7	ž	6	7	7	7	á	á	8	-8	- 9	8	8	7	6		
JANUARY	9		4			6		7		7	6	٠ 4		8	10	8		7								7			6	7	7	
MAXIMUM																							9									
MINIMUM																							8									
FEBRUARY.	6	7			8	9	8		11			9	10	11		11	8		12	12	13	11	14		13		10		11			
MAXIMUM																																
MINIMUM																																
MARCH		9		11		10				8	10	9	10		11	10		9							12		14		10			
MUMIXAM																																
MINIMUM																																
APRIL MAXIMUM																							16									
MINIMUM																							13									
MAYAGAGA																							13									
MAXIMUM	21	21	20	20	20	20	20	20	21	22	20	20	17	19	21	22	23	23	22	21	21	21	22	20	23	24	25	26	25	26	24	21
MINIMUM																							18									18
JUNE																												==	==			
MUMIXAM	24	23	22	22	20	22	22	23	23	23	23	22	22	22	23	24	23	23	23	23	23	22	23	23	22	23	23	22	21	22		22
MINIMUM	19	21	20	18	18	17	18	19	19	19	19	18	18	18	19	20	20	19	19	19	19	19	20	19	19	19	19	19	17	18		19
JULY																																
MAXIMUM																							22									22
MINIMUM	18	19	18	19	20	20	19	19															19									18
AUGUST																																
MUM I X AM																							22									21
MINIMUM	19	19	19	19	18	19	19	19	19	19	19	18	18	18	18	18	18	18	18	17	37	17	18	19	19	19	19	19	20	20	20	18
SEPTEMBER MAXIMUM						22												22			10		21		21							22
MINIMUM																							17									18
MINIMUM	21	20	20	20	20	20	20	20	14	*4	72	14	.,	41	19	10	14	20		٠,	10	, D	. /	18	10	10	18	40	70	10		10

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAMAL TUBE: C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE: W, 10 DISTILLED WATER)

			WATER								PART	ICLE :	SIZE					
			TEM-			SUSPENDED-												METHOD
			PERA-		CONCEN-	SEDIMENT	PERC	ENT F	INER	THAN	THE S	IZE (EN MII	LLIMET	(ERS	INDI	CATED	OF
			TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
1	DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	•062	.125	.250	•500	1.00	2.00	SIS
DEC	3 1967	1030	9	1880	919	4660	40	45	59	69	76	84	93	100				VPWC
DEC	7	1300	9	D 1750	500	2360	41	53	64	71	74	91	95	99	100		~	VBWC
JAN	10 1968	0800	7	7480	4060	82000	28	35	45	55	64	69	79	90	99	100		VPWC
JAN	10	1730	7	3760	945	9590	34	45	59	70	80	86	93	98	100			VPWC
JAN	15	0845	10	8100	1460	31900	18	24	29	33	35	53	65	81	98	100		VBWC
	29	0830	6	5960	1320	21200		32		49		65	75	87	96	100		VPWC
FEB	20	0815	12	7000	1210	22900	20	28	36	45	55	61	68	82	97	100		VPWC
D	Daily me	an di:	charge	э.														

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER		•	NOVEMBER			DECEMBER	
	MFAN	MEAN	SEDIMENT	MFAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN	\$53.1ma
544	DISCHARGE	CONCEN- TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE (TONS/DAY)	DISCHARGE	TRATION	SEDIMENT DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)		(CFS)	(MG/L)	(TONS/DAY)
1 2	328 347	10 12	8.9 11	335 335	15 13	14 12	270 231	22 22	16 14
3	355	15	14	330	11	9.8	1210	382	1560
5	350 348	15 15	14 14	330 330	14 17	12 15	776 2100	197 345	500 1960
6	347	15	14	330	20	18	950	90	231
7 8	346 346	14 14	13 13	325 330	22 25	19 22	1750 1000	297 98	1400 265
9	346	13	12	325	21	18	650	67	118
10	345	13	12	231	18	11	490	41	54
11 12	345 345	12 12	11 11	209 204	13	7.3 5.0	400 340	35 35	38 32
13	345	12	11	209	6	3.4	295	30	24
14 15	346 345	12 12	11 11	275 222	54 23	40 14	279 266	25 20	19 14
	345				17	•			
16 17	345	12 12	11 11	204 200	12	9.4 6.5	256 255	18 15	12 10
18	345 342	12	11	200	9	4.9	880 1080	235	691 337
20	342 319	12 12	11 10	195 195	8	4.7 4.2	1080 848	112 52	119
21	344	12	11	195	11	5.8	736	38	76
22	348	13	12	191	14	7.2	470	35	44
23 24	340 339	13 13	12 12	191 191	12 10	6.2	335 295	32 29	29 23
25	337	13	12	191	8	5.2 4.1	275	25	19
26	336	13	12	191	7	3.6	260	25	18
27	336	14	13	191	6	3.1	350	40	38
28 29	336 335	14 14	13 13	191 218	10 16	5.2 9.4	350 265	39 36	37 26
30	335	14	13	270	34	25	245	33	22
31	335	15	14				236	26	17
TOTAL	10601		371.9	7334		325.0	18143		7763
		JANUARY			FERRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN Discharge	MEAN CONCEN-	SEDIMENT DISCHARGE	MEAN	MEAN CONCEN-	SEDIMENT DISCHARGE	MEAN Discharge	MEAN CONCEN-	SEDIMENT Discharge
DAY	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)		MEAN	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT Discharge (Tons/Day)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 3430	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 ?	DISCHARGE (CFS) 231 231	MEAN CONCEN- TRATION (MG/L) 30 24	DISCHARGE (TONS/DAY) 19 15	MEAN DISCHARGE (CFS) 3430 3780	MEAN CONCEN- TRATION (MG/L) 346 414	DISCHARGE (TDNS/DAY) 3460 4460	DISCHARGE (CFS) 1080 970	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 117 94
1 ? 3 4	DISCHARGE (CFS) 231 231 310 320	MEAN CONCEN- TRATION (MG/L) 30 24 38 34	DISCHARGE (TONS/DAY) 19 15 32 29	MEAN DISCHARGE (CFS) 3430 3780 3720 2950	MEAN CONCEN- TRATION (MG/L) 346 414 300 120	DISCHARGE (TONS/DAY) 3460 4460 3010 956	DISCHARGE (CFS) 1080 970 890 849	MEAN CONCEN- TRATION (MG/L) 40 36 35 35	DISCHARGE (TONS/DAY) 117 94 84 80
1 ? 3	DISCHARGE (CFS) 231 231 310 320 325	MEAN CONCEN- TRATION (MG/L) 30 24 38	DISCHARGE (TONS/DAY) 19 15 32	MEAN DISCHARGE (CFS) 3430 3780 3720	MEAN CONCEN- TRATION (MG/L) 346 414 300	DISCHARGE (TDNS/DAY) 3460 4460 3010	DISCHARGE (CFS) 1080 970 890	MEAN CONCEN- TRATION (MG/L) 40 36 35	DISCHARGE (TONS/DAY) 117 94 84
1 ? 3 4 5	DISCHARGE (CFS) 231 231 310 320 325	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29	DI SCHARGE (TONS/DAY) 19 15 32 29 25	MEAN DISCHARGE (CFS) 3430 3780 3720 2950 2740	MEAN CONCEN- TRATION (MG/L) 346 414 300 120 140	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040	D1SCHARGE (CFS) 1080 970 890 849 834	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35	DISCHARGE (TONS/DAY) 117 94 84 80 79
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 231 231 310 320 325 325 325 325	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24	DI SCHARGE (TONS/DAY) 19 15 32 29 25	MEAN DISCHARGE (CFS) 3430 3780 3720 2950 2740	MEAN CONCEN- TRATION (MG/L) 346 414 300 120	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040	DISCHARGE (CFS) 1080 970 890 849 834	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35	DISCHARGE (TONS/DAY) 117 94 84 80 79
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 410	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24 38	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70	MEAN D1 SCHARGE (CFS) 3430 3780 3720 2950 2740 3510 3020 872 665	MEAN CONCEN- TRATION (MG/L) 346 414 300 120 140 200 153 48 24	DISCHARGE (TDNS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 35 32 26 23	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 76 79 50
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS) 231 231 310 320 325 325 325 410 5230	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500	MEAN DISCHARGE (CFS) 3430 3780 3720 2950 2740 3510 3020 872 665 576	MEAN CONCEN- TRATION (MG/L) 346 414 300 120 140 200 153 48 24 17	DISCHARGE (TDNS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 35 22 26 23 22	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 69 50 45
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 310 327 3970 1670	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70	MEAN D1 SCHARGE (CFS) 3430 3780 3720 2950 2740 3510 3020 872 665	MEAN CONCEN- TRATION (MG/L) 346 414 300 120 140 200 153 48 24	DISCHARGE (TDNS/DAY) 3460 4460 4010 956 1040 1900 1280 119 43 26	DI SCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 35 32 26 23 22	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 327 327 3970 1670 956	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 27 25 24 38 1880 318	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 245	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2750 2740 3510 3020 872 665 576 512 470 439	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 5.1 27	D1SCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 35 32 26 23 22 22 23 331	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 76 79 69 50 45 43 4990 2350
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 310 327 3970 1670	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 245 54800	MEAN DI SCHARGE (CFS) 3430 3780 3780 2950 2740 3510 3020 872 665 576 512 470	MEAN CONCEN- TRATION (MG/L) 346 414 300 120 140 200 153 48 24 17	DISCHARGE (TONS/DAY) 3460 3010 956 1040 1900 1280 119 43 26 12 5.1 27 30	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310 2500	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 32 22 26 23 22 22 22 536 331 98	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 69 50 45 43 4990 2350 662
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 327 327 3970 1670 956 6130 7600	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880 318 146 95 2110 1480	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 245 54800 34200	MEAN DISCHARGE (CFS) 3430 3780 3770 2950 2740 3510 3020 872 665 576 512 470 439 409 386	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17	DISCHARGE (TONS/DAY) 3460 3010 956 1040 1980 1199 43 26 12 5.1 27 30 25	D1SCHARGE (CFS) 1080 970 899 849 834 801 920 980 808 760 728 1960 2310 2500 2140	MEAN CDNCEN- TRATION (MG/L) 40 36 35 35 35 32 26 23 22 22 536 331 98	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 69 50 45 43 4990 2350 662 462
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 231 231 310 320 325 325 325 410 5230 3970 1670 956 6130	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880 318 146 95 2110	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 245 54800	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 23 27 24 49	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 5.1 27 30 25	D1SCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310 2500 2140	MEAN CONCENTRATION (MG/L) 40 36 35 35 35 32 22 23 22 23 331 98 80 1130	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 462
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 410 5230 3970 1670 956 6130 7600 5060 4470 4150	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880 318 146 95 2110 1480 256 258	DISCHARGE (TONS/DAY) 19 19 15 32 29 25 24 21 70 30500 3490 699 245 54800 34200 7790 3110 2300	MEAN DISCHARGE (CFS) 3430 3780 3720 2950 2740 3510 3020 875 470 439 409 386 500 864 624	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 23 27 24 49 121 40	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 5.1 27 30 25 75 282 67	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310 2500 2140 4270 3340 2610	MEAN CONCENTRATION (MG/L) 40 36 35 35 35 32 26 23 22 25 36 391 98 80 1130 250 190	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 462
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 410 5230 3970 1670 956 6130 7600	MEAN CONCEN- TRATION (MG/L) 30 24 38 34 29 27 25 24 38 1880 318 146 910 1480	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 70 30500 3490 699 245 54800 34200 7790 3110	MEAN DISCHARGE (CFS) 3430 3780 37720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 23 27 24	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 129 43 26 12 73 30 25 75 282	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 760 728 1960 2310 22140 4270 3340	MEAN CONCEN- TRATION (MG/L) 40 36 35 35 35 32 26 23 22 22 536 331 98 80	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 69 90 45 43 4990 2350 662 462
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 325 327 327 3970 1670 956 6130 7600 5060 4470 4150 3280 790	MEAN CONCENTITATION (MG/L) 30 24 42 38 34 29 27 25 24 38 1880 318 146 95 2110 1480 599 258 205 189 95	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 21 30500 3490 699 245 54600 34200 7790 3110 2300 1700 203	MEAN DISCHARGE (CFS) 3430 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 3210 6180	MEAN CONCENTRATION (MG/L) 346 414 300 120 150 150 150 150 150 150 150 150 150 15	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 129 26 12 7 30 25 75 282 67 18800 29500	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 608 760 728 1986 2310 2310 2140 4270 3340 2610 3310 2660	MEAN CDNCENTRATION (MG/LI) 40 36 35 35 35 32 26 23 22 22 22 25 36 331 98 80 1130 250 190 175 127	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 76 79 50 69 2350 662 462 15000 2250 1340 1560 953
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 325 327 327 3970 1670 956 6130 7600 5060 4470 4150 3280 790 534 429	MEAN CONCENTRATION (MG/L) 30 24 29 27 25 24 38 1880 318 146 95 2110 1480 569 95 258 205 189 95 35 524	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 21 30500 3490 699 245 54600 34200 7790 3110 2300 1700 203	MEAN DISCHARGE (CFS) 3430 3780 3770 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 3210 6180 5360 5360	MEAN CONCENTRATION (MG/L) 346 414 9140 200 153 24 17 9 4 23 27 24 49 121 40 1160 1520 700 460	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 51 27 30 25 75 282 67 18800 29500 10100 6680	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 2310 2310 2310 2420 4270 3340 2610 3310 2660	MEAN CDNCENTRATION (MG/L) 40 36 35 35 35 32 26 23 32 22 22 22 22 25 36 331 98 80 1130 250 190 175 127	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 462 15000 2250 1340 1560 953
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 410 5230 3970 1670 956 6130 7600 4470 4450 3280 790 534 429 366	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 31 81 186 195 2110 1480 25 26 27 28 29 2110 2110 2110 2110 2110 2110 2110 2	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 70 30500 3490 699 245 54800 34200 7790 3110 2300 1700 203 50 28 18	MEAN DISCHARGE (CFS) 3430 3780 3780 2950 2740 3510 3020 872 470 439 409 386 624 3210 6180 5380 53120	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 9 4 23 27 24 49 121 49 1160 1520 700 460 260	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1280 119 43 26 12 5.1 27 30 25 75 282 67 18800 29500 10100 6680 2190	DISCHARGE (CFS) 1080 1080 970 849 834 801 920 980 808 760 728 1960 2310 2500 2140 4270 3340 2610 3310 2660	MEAN CDNCENTRATION (MG/L) 40 36 35 35 35 32 26 23 22 22 22 25 36 331 130 250 175 127 55 45 41	DISCHARGE (TONS/DAY) 117 94 84 84 80 79 76 79 50 45 43 4990 2350 662 462 15000 2250 1340 1560 953
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 325 327 327 3970 1670 956 6130 7600 5060 4470 4150 3280 790 534 429	MEAN CONCENTRATION (MG/L) 30 24 29 27 25 24 38 1880 318 146 95 2110 1480 569 95 258 205 189 95 35 524	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 21 30500 3490 699 245 54600 34200 7790 3110 2300 1700 203	MEAN DISCHARGE (CFS) 3430 3780 3770 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 3210 6180 5360 5360	MEAN CONCENTRATION (MG/L) 346 414 9140 200 153 24 17 9 4 23 27 24 49 121 40 1160 1520 700 460	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 51 27 30 25 75 282 67 18800 29500 10100 6680	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 2310 2310 2310 2420 4270 3340 2610 3310 2660	MEAN CDNCENTRATION (MG/L) 40 36 35 35 35 32 26 23 32 22 22 22 22 25 36 331 98 80 1130 250 190 175 127	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 462 15000 2250 1340 1560 953
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 16 19 20 21 223 224 5 26	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 410 5230 3970 1670 956 6130 7600 4470 4450 3280 790 534 429 366 313 280 253	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 81 880 1465 2110 1480 258 189 95 24 189 95 24 189 189 189 189 189 189 189 189 189 189	DISCHARGE (TONS/DAY) 19 19 15 32 29 25 24 21 70 30500 3490 699 245 54800 34200 7790 3110 2300 1700 203 50 28 18 14 9.8	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 621 6180 5360 5380 5380 5380 5380 5380 5380 5380 538	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 4 23 7 24 49 121 460 1520 1520 1521 655	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1280 119 43 26 12 5.1 27 30 25 75 282 67 18800 29500 10100 6680 2190 836 288	DISCHARGE (CFS) 1080 1080 849 834 801 920 980 808 760 728 1960 2310 2500 2140 4270 3340 2610 3310 2660 11340 1110 1080 918 865	MEAN CDNCENTRATION (MG/L) 40 35 35 35 32 26 23 22 22 22 25 36 6 80 193 130 175 127 55 41 137 37 33	DISCHARGE (TONS/DAY) 117 94 84 84 80 79 76 79 50 45 43 4990 2350 662 462 15000 2250 1340 1560 953
1 2 3 4 5 6 7 8 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 25	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 325 327 3970 1670 956 6130 7600 5060 4470 4150 3280 790 534 429 366 313 280	MEAN CONCENTRATION (MG/L) 30 24 29 27 25 24 38 1880 318 146 95 2110 1480 569 259 25 189 16 16 13 10 4	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 21 70 30500 3490 699 699 545 54800 34200 7790 3110 2300 1700 203 50 28 18 14 9.8 6.8	MEAN DISCHARGE (CFS) 3430 3780 3770 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 3210 6180 5380 3120 2010 1500 1380 2400	MEAN CONCENTRATION (MG/L) 346 414 9140 200 153 327 24 49 121 40 1160 1520 700 460 260 154 171 65 131	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1900 1280 119 43 26 12 5.1 27 30 25 75 282 67 1800 29500 10100 6680 2190 836 288 272 849	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2510 2500 2140 4270 3340 2610 3310 2660 1340 1110 1080 918 865	MEAN CONCENTRATION (MG/L) 40 36 35 35 35 32 26 23 32 22 22 22 22 22 25 36 331 98 80 1130 1250 175 127 55 45 41 37 34 30 28	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2250 662 15000 2250 1340 1566 953 199 1155 120 92 79
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 327 410 956 6130 5060 4470 4150 3280 5060 5060 5060 5060 5060 5060 5060 50	MEAN CONCENTRATION (MG/L) 30 24 29 27 25 24 8 1880 318 146 95 2110 1480 569 205 189 95 35 4 18 16 13 10 4 7 2350	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 243 54800 7790 3110 2300 1700 2303 50 28 18 14 9.8 6.8 2.7 56800	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 621 6180 5360 5380 5380 5380 5380 5380 5380 5380 538	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 4 23 7 24 49 121 460 1520 1520 1521 655	DISCHARGE (TONS/DAY) 3460 4460 3010 956 1040 1280 119 43 26 12 5.1 27 30 25 75 282 67 18800 29500 10100 6680 2190 836 288	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310 23500 2140 4270 3340 2610 3310 2600 1130 1180 1180 918 865	MEAN CONCEND (MG/L) 40 36 35 35 35 32 26 26 331 80 1130 1250 1975 127 55 45 41 37 34 30 28 28 29	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 45 43 4990 15000 2250 1540 1540 1560 953 199 1155 120 92 79 67 59 55
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 11 4 15 16 17 16 19 20 21 22 23 24 5 26 27 28	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 410 5230 3970 1670 956 6130 7600 4470 4450 3280 790 534 429 366 313 280 253 227 285 7900 6410	MEAN CONCENTRATION (MG/L) 30 24 38 34 29 27 25 24 8 1880 318 146 915 2110 1480 95 258 205 95 524 18 9 95 524 18 16 13 10 4 7 2350	DISCHARGE (TONS/DAY) 19 19 15 32 29 25 24 22 21 70 30500 3490 699 245 54800 34200 7790 3110 2300 1700 203 18 14 9.8 6.8 2.6 27 56800 16400	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 5210 6180 5380 5380 3120 2010 1500 1800 2400 2290	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 23 7 24 49 121 40 160 1520 700 460 265 65 131 85	DISCHARGE (TONS/DAY) 3460 3460 3010 956 1040 1280 119 43 26 12 5.1 27 30 25 75 282 67 18800 29500 10100 6680 2190 836 288 272 849 526	DISCHARGE (CFS) 1080 1080 849 834 801 920 980 808 760 728 1960 2310 2500 2140 4270 3340 2610 3310 2660 11340 1110 1080 918 865 826 776 728 664	MEAN CDNCENTRATION (MG/L) 40 40 35 35 35 32 26 23 22 22 22 25 36 23 31 30 28 80 190 175 127 55 45 45 45 45 45 45 45 45 45 45 45 45	DISCHARGE (TONS/DAY) 117 94 84 84 80 79 76 79 50 45 43 4990 2350 662 462 15000 2250 1340 1560 953 199 135 120 92 79 67 59 55 52 41
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26 27 28 29 30	DISCHARGE (CFS) 231 231 310 320 325 325 325 325 325 327 410 956 6130 5060 4470 4150 3280 5060 5060 5060 5060 5060 5060 5060 50	MEAN CONCENTRATION (MG/L) 30 24 29 27 25 24 8 1880 318 146 95 2110 1480 569 205 189 95 35 4 18 16 13 10 4 7 2350	DISCHARGE (TONS/DAY) 19 15 32 29 25 24 22 21 70 30500 3490 699 243 54800 7790 3110 2300 1700 2303 50 28 18 14 9.8 6.8 2.7 56800	MEAN DISCHARGE (CFS) 3430 3780 3780 3720 2950 2740 3510 3020 872 665 576 512 470 439 409 386 500 864 624 5210 6180 5380 5380 3120 2010 1500 1800 2400 2290	MEAN CONCENTRATION (MG/L) 346 414 300 120 140 200 153 48 24 17 9 4 23 7 24 49 121 40 160 1520 700 460 265 65 131 85	DISCHARGE (TONS/DAY) 3460 3460 3010 956 1040 1280 119 43 26 12 5.1 27 30 25 75 282 67 18800 29500 10100 6680 2190 836 288 272 849 526	DISCHARGE (CFS) 1080 970 890 849 834 801 920 980 808 760 728 1960 2310 23500 2140 4270 3340 2610 3310 2600 1130 1180 1180 918 865	MEAN CONCEND (MG/L) 40 36 35 35 35 32 26 26 331 80 1130 1250 1975 127 55 45 41 37 34 30 28 28 29	DISCHARGE (TONS/DAY) 117 94 84 80 79 76 79 50 45 43 4990 2350 662 45 43 4990 15000 2250 1540 1540 1560 953 199 1155 120 92 79 67 59 55

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

344976•3

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CALIF, -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		SEDIMENT	TURBIDITY		OF SUSPENDED SEDIMENT	TURBIDITY
DATE	OF COLLECTION	(MG/L)	(MG/L SILICA	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
007	5. 1967	15	11	FEB. 5	118	96
	11	ii	10	FEB. 6	182	135
	18	12	īī	FEB. 7	168	125
	1	16	12	FEB. 9	24	17
	3	ii	7	FEB. 12	4	9
NOV.	6	20	20	FEB. 13	23	10
NOV.	8	25	24	FEB. 14	26	12
	10	18	20	FEB. 16	22	20
NOV.	13	6	3	FEB. 17	112	75
NOY.	14	54	50	FEB. 19	1600	450
NOV.	15	23	21	FEB. 20	1210	415
NOV.	18	9	В	FEB. 21	696	295
NDV.	20	В	5	FEB. 22	472	114
NOV.	22	14	5	FEB. 23	234	100
NOV.	27	6	3	FEB. 25	71	53
NOV.	29	16	20	FEB. 27	134	ВО
NOV.	30	34	34	FEB. 29	67	65
	1	22	29	MAR. 2	36	38
	3	919	120	MAR. 4	39	23
	4	249	120	MAR. 6	35	30
DEC-	5	242	146	MAR. 9	23	29
	6	73	70	MAR. 11	22	22
	7	500	178	MAR. 12	945	345
DEC.	B	91	78	MAR. 13	106	74
DEC.	11	33	30	MAR. 15	75	57
DEC.	13	31	39	MAR. 16	932	385
	15	20	26	MAR. 18	191	87
DEC.	18	152	115	MAR. 21	53	45
	19	107	83	MAR. 23	41	34
DEC.	20	51	30	MAR. 25 MAR. 27	34 28	30 26
OEC.	22	33	29			
DEC.	27	43	38	MAR. 29	29	30
DEC.	30	34	38	APR. 1	44	35
JAN.	1, 1968	19	20	APR. 3	18	20
JAN.	3	42	45	APR. 6	28 11	14 6
JAN.	6	26	29	APR. 10	21	30
	B	24	26			
	10	4060	865	APR. 15	9	6
JAN.	11	320	130	APR. 17	8	3
	12	149	130	APR. 19	.6	.5
				APR. 22 APR. 24	12 16	13 14
	13	93	155	APR. 26	11	13
	14	774	210	AFRE ZOTTITUTE	•••	,
	15	1460	280	APR. 29	7	3
	16	586	200	MAY 14	4	ž
JAN.	17	224	140	JUNE 14	15	5
JAN.	18	209	72	JULY 12	16 12	6
JAN.	19	194	84	SEPT. 9	12	ž
	. 22	24	_ B		14	~
	24	16	13			
JAN.	26	10	8			
JAN.	29	1320	140			
	30	769	200			
	31	230	120			
	1	329	150			
FEB.	2	526	180			

11463200 BIG SULPHUR CREEK WEAR CLOVERDALE, CALIF.

LOCATION. --Lat 38°49'21", long 122°59'07", in SW 45 W 4 sec. 4, T.11 M., R.10 W., Mendocino County, at gaging station 0.5 mile downstream from unnamed tributary, 1.9 miles upstream from mouth, and 2.0 miles northeast of Cloverdale.

DRAINAGE AREA. -- 82.3 sq mi.

PERIOD OF RECORD, --Water temperatures: October 1966 to September 1968 (discontinued). Sediment records: October 1966 to September 1968 (discontinued).

EXTREMES 1967..68:

Sediment concentrations: Maximum daily, 3,030 mg/l Jan. 29; minimum daily, 1 mg/l on several days during October and November.
Sediment discharge: Maximum daily, 51,100 tons Jan. 29; minimum daily, 0.02 ton on several days during October and November.

Period of record:
Sediment concentrations: Meximum daily, 5,570 mg/l Jan. 21, 1967; minimum daily, 1 mg/l on many days in
1966-67.
Sediment discharge: Maximum daily, 88,900 tons Jan. 21, 1967; minimum daily, 0.02 ton on several days in 1967.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

																••																	
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-	•
UCTOBER																																	
NUVEMBER.	17					13		14		13			13		12		12			13		12					7		10	9			
DECEMBER.	7		10	11	9	6	9	6			6	4	4		3			6	4	3		7					9			6		~-	
JANUARY			3			4		5		8	4		9	9	11	9	6	6	9			11		7		6			6	8	8		
FEBRUARY.	7	8			10		10		10			8	12	12		LO			11	12	13	12	13	13			11		11				
MAKCH		10		13		9			8		9	9	10		u	10		8			13		14		13		17			13			
APRIL	11		16		14			13		-		13			12		9		10					19		20			13				
MAY			-											15																			
JUNE										24																							
JULY																																	
AUGUST														24																			
SEPTEMBER									23																			_					

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER TEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B. BOTTOM MITHORAMAL TURE; C. CHEMICALLY DISPERSED; N. IN MATIVE MATER; P. PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W. IN DISTILLED MATER)

		WATER	١.							PART	ICLE	SIZE					
		TEM- PERA- TURE			SUSPENDED- SEDIMENT DISCHARGE		ENT F	INER	THAN	THE S	12E (IN MI	LLIME	rers)	INDI	CATED	METHOO OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•005	.004	.ODB	.016	.031	•062	.125	.250	.500	1.00	2.00	SIS
NOV 30 1967	1500	9	70	226	43	72	85	91	95	96	99	100					SBWC
DEC 18	0850	6	144	435	169	52	66	78	85	88	98	99	100				SBWC
JAN 10 1968	1900	8	1760	1280	6080	30	38	51	62	76	84	95	98	100			VPWC
JAN 29	0915	6	4540	4110	50400	24	32	40	53	62	71	89	97	100			VPWC
JAN 30	1130	8	2300	1070	6640		35		57		78	91	99	100			ABMC
JAN 31	1100	8	1100	362	1080	18	26	37	42	45	74	84	92	98	100		VBWC
FEB 19	0830	11	360	159	155	16	35	54	63	70	94	97	100		-		SBWC

TOTAL

16852

71663.89

13827

10848.2

8330

RUSSIAN RIVER BASIN

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	50	OCTOBER	EDIMENT DISC		NOVEMBER	TOBER 1967 1		DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN OISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	9.5 22	1 4	.03 .24	7.4 6.0	1	•02 •02	53 33	45 40	6.4 3.6
3	41	12	1.3	6.7	1	•02	680	1970	5050
4 5	23	8 9	•50	6.0	1	•02 •03	782 531	1290	5570 2510
	26		-63	6.0	2	• • • •		1360	
6 7	19 15	8	.41 .24	6.0 6.0	2	•03 •03	142 546	45 470	17 1050
8	13	6	.21	8.8	6	.14	189	55	28
9	12	4	.13	12	6	.19	120	32	10
10	12	4	.13	12	4	.13	89	17	4.1
11	10	3	.08	11	4	-12	73	11	2.2
12 13	9.5 8.1	2	.05 .04	11 13	4 11	•12 •48	58 52	8 6	1.3
14	6.7	2	.04	88	1200	326	48	9	1.2
15	7.4	2	• 04	35	480	45	47	17	2.2
16	6.7	1	.02	20	100	5.4	46	11	1.4
17 18	6.0 6.0	1	.02 .02	15 13	14 9	•57 •32	45 141	5 376	•61 175
19	6.0	1	.02	13	5	.18	104	26	7.3
20	6.0	1	.02	12	4	.13	74	25	5.0
21	6.0	1	.02	11	4	.12	62	15	2.5
22 23	9.5 10	2	•05 •05	11 10	4	•12 •11	56 52	27 23	4•1 3•2
24	9.5	2	.05	9.5	4	.10	.52	17	2.4
25	8.1	1	•02	9.5	4	•10	50	13	1.8
26	8.1	1	.02	8.8	3	.07	48	11	1.4
27 28	8.1 8.1	1 1	•02 •02	8.1 8.1	2 2	.04 .04	46 45	10 13	1.2 1.6
29	7.4	1	•02	77	414	217	44	20	2.4
30	7.4	1	.02	79	365	83	43	23	2.7
31	7.4	1	-02		****		43	14	1.6
TOTAL	354.5		4.48	539.9		679.65	4394		14471.05
		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN 01SCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	43	6	.70	696	170	319	220	15	8.9
2 3	42 42	6	.45 .68	828 642	320 90	715 156	200 185	13 10	7.0 5.0
4	41	11	1.2	496	50	67	170	8	3.7
5	40	15	1.6	424	43	49	155	7	2.9
6	40	18	1.9	376	32	32	140	6	2.3
7 8	40 40	14 5	1.5	340 312	25 19	23 16	148 142	6	2.4 2.3
9	41	2	•22	284	15	12	128	6	2.1
10	842	370	3100	260	11	7.7	120	5	1.6
11	1090	303	1530	240	9	5.8	116	5	1.6
12 13	304 186	80 100	66 50	225 210	8 9	4.9 5.1	482 480	540 325	1250 442
14	1010	504	2350	195	10	5.3	504	100	136
15	1190	488	1710	183	11	5.4	376	60	61
16	700	447	929	242	44	32	1150	873	3300
17 18	404 296	95 46	104 37	544 380	175 50	279 51	635 440	163 55	293 65
19	244	32	21	1020	717	3560	356	39	37
20	204	22	12	1170	495	1970	300	26	21
21 22	177	15 12	7.2	1370 800	611	2620	264	26	19
23	150 136	12	4.9 4.4	610	160	432 264	240 220	11 9	7.1 5.3
24	126	11	3.7	460	70	87	200	8	4.3
25	118	9	2.9	400	53	57	081	7	3.4
26	112 107	6	1.8	340 280	35 23	32 17	170 150	5	2.3 1.6
27									

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		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	200	27	15	48	4	•52	25	4	.27
2	170	13	6.0	47	4	.51	24	4	.26
3	145	5	2.0	46	5	.62	24	4	• 26
4	132	4	1.4	46	5	.62	24	4	-26
5	120	3	.97	45	5	.61	23	4	. 25
6	117	3	.95	44	6	.71	24	4	• 26
7	112	3	.91	43	6	.70	23	3	.19
8	108	3	.87	43	6	.70	22	3	.18
9	100	3	.81	42	T	.79	20	3	-16
10	95	4	1.0	41	7	.77	19	3	. 15
11	91	4	.98	42	7	.79	20	3	.16
12	88	5	1.2	45	8	.97	19	3	-15
13	84	5	1.1	48	8	1.0	18	3	•15
14	81	4	.87	49	8	1.1	17	3	.14
15	77	4	.83	46	8	•99	16	3	.13
16	73	3	•59	44	8	.95	16	3	•13
17	71	2	.38	40	8	.86	16	3	.13
18	68	2	•37	37	8	.80	16	3	.13
19	66	2	.36	36	7	.68	15	3	•12
20	64	2	- 35	36	7	.68	15	3	•12
21	62	3	-50	35	7	.66	14	3	.11
22	61	4	.66	34	7	.64	12	3	•10
23	59	5	.80	34	6	.55	12	3	-10
24	57	6	•92	34	6	•55	11	3	•09
25	56	4	-60	35	6	.57	10	2	• 05
26	55	3	.45	34	6	.55	11	2	• 06
27	54	3	.44	31	5	•42	11	2	.06
28	52	4	•56	29	5	.39	9.8	2	• 05
29	50	4	.54	27	5	.36	9.8	2	.05
30	49	4	.53	26	5	. 35	9.8	2	. 05
31				25	4	.27			
TOTAL	2617		42.94	1212		20.68	506.4		4.32

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT D1SCHARGE (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	9.8	2	.05	5.6	3	.05	5.8	5	.08
2	9.8	2	•05	5.6	3	•05	5.9	5	•08
3	10	2	• 05	5.6	3	.05	5.6	5	.08
4	9.8	2	•05	5.6	3	•05	6.1	5	•08
5	9.2	2	•05	5.0	4	•05	6.1	5	.08
6	8.0	2	.04	5.0	4	.05	6.8	5	.09
7	8.0	2	.04	4.7	4	•05	6.7	5	•09
8	8.0	2	•04	4.7	4	.05	6.5	5	• 09
9	8.0	2	-04	4.7	4	•05	6.6	5	•09
10	7.4	2	.04	4.7	4	.05	6.6	5	.09
11	7.4	2	.04	4.7	4	.05	6.1	5	.08
12	7.4	2	.04	5.0	4	•05	5.7	5	•08
13	7.4	2	-04	5.6	4	•06	6.0	5	.08.
14	7.4	2	.04	6.2	4	•07	6.4	5	•09
15	8.0	2	.04	6.2	4	.07	6.5	5	• 09
16	7.4	2	.04	6.8	4	.07	5.9	4	• 06
17	7.4	2	.04	6.2	4	-07	5.0	4	•05
18	6.8	3	.06	6.2	4	.07	4.7	4	.05
19	6.2	3	•05	7.4	5	•10	4.7	4	-05
20	6.2	3	•05	14	10	.38	5.0	4	• 05
21	6.2	3	•05	24	15	.97	5.0	4	.05
22	6.2	3	•05	13	12	•42	5.0	4	-05
23	5.6	3	• 05	9.2	9	•22	5.0	4	• 05
24	6.2	3	•05	7.4	7	•14	4.7	4	•05
25	6.2	3	.05	7.4	5	.10	4.7	4	• 05
26	5.0	3	•04	7.4	5	-10	4.7	4	.05
27	5.0	3	.04	7.4	5	-10	4.4	4	.05
28	4.7	3	.04	7.4	5	.10	4.4	3	• 04
29	5.0	3	.04	6.8	5	•09	4.4	3	.04
30	5.0	3	.04	5.6	5	.08	4.7	3	- 04
31	5.0	3	-04	5.0	5	.07			
TOTAL	219.7		1.38	220.1		3.88	165.7		2.00

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

49238.3 103434.31

11463200 BIG SULPHUR CREEK NEAR CLOVERDALE, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
DCT. 5, 1967	9	11	JAN- 30	1070	500
OCT. 11	3	2	JAN. 31	362	215
OCT. 13	ž	ō	FE8. 1	190	130
OCT. 18	ĭ	i	FE8. 2	401	205
NOV. 1	i	î	FEB. 5	43	37
NOV. 6	2	1	FEB. 7	26	23
NOV. 8	6	3	FE8. 9	15	12
NOV. 10	2	1	FE8. 12	8	8 7
NOV. 13	4	1	FEB. 13	9	
NOV. 15	550	168	FEB. 14	11	10
NOV. 17	16	22	FE8. 16	28	27
NOV. 20	4	3	FEB. 19	159	113
NOV. 22	4	3	FEB. 20	454	275
NOV. 27	2	1	FEB. 21	323	140
NOV. 29	78	80	FEB. 22	199	115
NOV. 30	226	320	FEB. 23	169	95
DEC. 1	43	55	FEB. 24	80	55
DEC. 3	4460	1250	FEB. 27	24	22
DEC. 4	323	198	FEB. 29	17	12
DEC. 5	144	128	MAR. 2	13	8
			MAR. 4	7	4
DEC. 6	49	53	MAR. 6	6	3
DEC. 7	228	182	MAR. 9	6	4
DEC. 8	59	71		5	3
DEC. 11	11	11	MAR. 11	1410	540
DEC. 12	9	12	MAR. 13	181	115
DEC. 13	6	7			
DEC. 15	19	20	MAR. 15	57	55
OEC. 18	435	260	MAR. 16	668	330
DEC. 19	27	29	MAR. 18	58	52
DEC. 20	16	17	MAR. 21	16	17
			MAR. 23	10	12
DEC. 22	29	30	MAR. 25	7	8
DEC. 27	10	8			
DEC. 30	24	24	MAR. 27	4	7
JAN. 1, 1968	3	3	MAR. 30	3	3
JAN. 3	6	2	APR. 1	19	19
			APR. 3	4	6
JAN. 6	19	23	APR. 5	3	3
JAN. 8	5	3	APR. 8	2	3
JAN. 10	1280	730			
JAN. 11	124	82			_
JAN. 13	111	105	APR. 12	6	2 2
JAN. 14	359	215	APR. 17	2	1
JAN. 15	553	250	APR. 19	2	1
JAN. 16	901	365	APR. 24	6	1
JAN. 17	98	82	APR. 26	3	2
JAN. 18	49	40		4	1
144 10			APR. 29	8	3
JAN. 19	34	24	MAY 14	3	í
JAN- 22	12	92	JUNE 10	2	1
JAN. 24	12	12	AUG. 14	4	2
JAN. 26	6	5	SEPT 9	5	2
JAN. 29	4110	935	JCF1 7	,	2

JANUARY

MIN

MAX

MIN

MAX

MIN

MAX

11464000 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 1963 to September 1965. Water temperatures: October 1965 to September 1968.

NOVEMBER

MIN

MAX

MAX

EXTREMES . -- 1967-68:

אמרים - באורים - איניים - אמרים - אמר

MAX

MIN

DAY

Period of record: Water temperatures: Maximum, 26.0°C on several days in 1966-68; minimum, 6.0°C Dec. 21-23, 1965, Jan. 26, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 MIN

							• •	• •				
1	19.0	17.0	16.0	13.0	9.0	8.0	9.0	8.0	9.0	8.0	13.0	12.0
2	17.0	14.0	16.0	14-0	11.0	8.0	8.0	B.O	10.0	9.0	14.0	12.0
3	17.0	14.0	16.0	13.0	12.0	11.0	8.0	7.0	11.0	10.0	14.0	13.0
4	18.0	14.0	16.0	15.0	12.0	12.0	8.0	7.0	11.0	11.0	15.0	14.0
5	18.0	16.0	16.0	15.0	12.0	11.0	8.0	7.0	11.0	11.0	15.0	14.0
	10.0	1000	1000	1200	12.0	11.0	0.0			11.0		****
_												
6	18.0	15.0	17.0	14.0	11.0	10.0	8.0	8.0	11.0	11.0	14.0	13.0
7	18.0	16.0	17.0	14.0	11.0	11.0	8.0	8.0	11.0	11-0	14.0	13.0
8	19.0	16.0	17.0	16.0	11.0	9.0	8.0	8.0	12.0	11.0	14.0	12.0
ğ	19.0	16.0	16.0	14.0		7.0	9.0	8.0		11.0		
					11.0	9.0			12.0	12.0	14.0	12.0
10	19.0	17.0	16.0	13.0	11.0	9.0	10.0	9.0	12.0	12.0	13.0	12.0
11	19.0	17.0	16.0	14.0	11.0	10.0	9.0	8.0	12.0	11.0	13.0	12.0
12	19.0	17.0	16.0	14.0	10.0	9.0	8.0	7.0	12.0	11.0	13.0	12.0
13	19.0	16.0	16.0	14.0	9.0	8.0	10.0	8.0	12.0	12.0	12.0	11.0
14	18.0	15.0	16.0	15.0	8.0	7.0	11.0	10.0	12.0	11.0	12.0	12.0
15	17.0	14.0	16.0	14.0	8.0	7.0	12.0	11.0	13.0	12.0	13.0	12.0
					•••							
16		14.0	10.0					10.0			12.0	12.0
	17.0		15.0	13.0	8-0	7.0	11.0		13.0	13.0	12.0	
17	17.0	14.0	16.0	14.0	9.0	7.0	10.0	9.0	13.0	12.0	12.0	11.0
18	17.0	14.0	16.0	14.0	9.0	8.0	10.0	9.0	13.0	13.0	12.0	11.0
19	18.0	15.0	14.0	13.0	8.0	8.0	10.0	9.0	13.0	13.0	12.0	11.0
žó	18.0	15.0	14.0	13.0	8.0	8.0	11.0	9.0	14.0	13.0	13.0	12.0
	10.0	1740	1440	1.700	540	0.0	1110	7.0	1400		1340	
21	17.0	16.0	14.0	12.0	9.0	8.0	11.0	10.0	14.0	14.0	13.0	12.0
22	18.0	17.0	13.0	11.0	9.0	8.0	11.0	11.0	14.0	13.0	13.0	13.0
23	17.0	16.0	12.0	10.0	9.0	8.0	12.0	11.0	15.0	13.0	14.0	13.0
24	18.0	16.0	12.0	10.0	9.0	8.0	11.0	11.0		14.0	15.0	13.0
					9.0				16.0			
25	17.0	15.0	12.0	10.0	10.0	9.0	11.0	11.0	16.0	14.0	15.0	14.0
26	17.0	14.0	11.0	9.0	11.0	10.0	11.0	9.0	16.0	14.0	14.0	13.0
27	17.0	14.0	11.0	9.0	12.0	11.0	10.0	9.0	16.0	13.0	15.0	13.0
				200				7.0				
28	17-0	16.0	11.0	9.0	11.0	10.0	9.0	8.0	13.0	13.0	16.0	14.0
29	16.0	13.0	12.0	11.0	11.0	9.0	9.0	8.0	13.0	13.0	17.0	15.0
30	16.0	13.0	11.0	9.0	9.0	8.0	9.0	9.0			17.0	16.0
31	16.0	13.0			9.0	8.0	9.0	9.0			17.0	16.0
	10.0	2300			7.0	0.0	7.0	/•0			17.0	10.0
MONTH	19.0	13.0	17.0	9.0	12.0	7.0	12.0	7.0	16.0	8.0	17.0	11.0
	Al	PRIL		YAY	JI	UNE	Ji	JLY	AUI	GUST	SEP.	TEMBER .
DAY	MAY	MIM	MAV	MIN	MAY	MIN	MAV	MIN	MAY	MIN		MIM
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	M AX	MIN	MAX	MIN
DAY 1		MIN 14.0	MAX 21.0	MIN 15.0	MAX 23.0		MAX 23.0	MIN 22.0		MIN 21.0	MAX 24.0	M1N 23.0
1	16.0	14.0	21.0	15.0	23.0	21.0	23.0	22.0	24.0	21.0	24.0	23.0
1 2	16.0 16.0	14.0 13.0	21.0	15.0 16.0	23.0 23.0	21.0 22.0	23.0 23.0	22.0 22.0	24.0 24.0	21.0 22.0	24.0 23.0	23.0 22.0
1 2 3	16.0 16.0 16.0	14.0 13.0 14.0	21.0 21.0 18.0	15.0 16.0 17.0	23.0 23.0 23.0	21.0 22.0 22.0	23.0 23.0 24.0	22.0 22.0 22.0	24.0 24.0 24.0	21.0 22.0 22.0	24.0 23.0 23.0	23.0 22.0 22.0
1 2 3	16.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0	21.0 21.0 18.0 18.0	15.0 16.0 17.0 16.0	23.0 23.0 23.0 22.0	21.0 22.0 22.0 21.0	23.0 23.0 24.0 25.0	22.0 22.0 22.0 22.0	24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0	23.0 22.0 22.0 22.0
1 2 3	16.0 16.0 16.0	14.0 13.0 14.0	21.0 21.0 18.0	15.0 16.0 17.0	23.0 23.0 23.0	21.0 22.0 22.0	23.0 23.0 24.0	22.0 22.0 22.0	24.0 24.0 24.0	21.0 22.0 22.0	24.0 23.0 23.0	23.0 22.0 22.0
1 2 3	16.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0	21.0 21.0 18.0 18.0	15.0 16.0 17.0 16.0	23.0 23.0 23.0 22.0	21.0 22.0 22.0 21.0	23.0 23.0 24.0 25.0	22.0 22.0 22.0 22.0	24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0	23.0 22.0 22.0 22.0
1 2 3 4 5	16.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 21.0 18.0 18.0	15.0 16.0 17.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0	21.0 22.0 22.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0	22.0 22.0 22.0 22.0 24.0	24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0	24.0 23.0 23.0 23.0 22.0	23.0 22.0 22.0 22.0 21.0
1 2 3 4 5	16.0 16.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 21.0 18.0 18.0 19.0	15.0 16.0 17.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0	21.0 22.0 22.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0	22.0 22.0 22.0 22.0 24.0	24.0 24.0 24.0 24.0 24.0 25.0	21.0 22.0 22.0 22.0 21.0	24.0 23.0 23.0 23.0 22.0	23.0 22.0 22.0 22.0 21.0
1 2 3 4 5	16.0 16.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 21.0 18.0 18.0 19.0	15.0 16.0 17.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0	21.0 22.0 22.0 21.0 21.0 20.0	23.0 23.0 24.0 25.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0	24.0 23.0 23.0 23.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0
1 2 3 4 5 6 7 8	16.0 16.0 16.0 16.0 16.0 17.0	14.0 13.0 14.0 14.0 14.0 13.0 14.0	21.0 21.0 18.0 18.0 19.0	15.0 16.0 17.0 16.0 14.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 23.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0	21.0 21.0 18.0 19.0 19.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0	23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0	21.0 22.0 21.0 21.0 20.0 20.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	16.0 16.0 16.0 16.0 16.0 17.0	14.0 13.0 14.0 14.0 14.0 13.0 14.0	21.0 21.0 18.0 18.0 19.0	15.0 16.0 17.0 16.0 14.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 23.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0	21.0 21.0 18.0 19.0 19.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0	23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0	21.0 22.0 21.0 21.0 20.0 20.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0	14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0 21	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 23.0 23.0 23.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0 21	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0 24.0 24.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 21.0 23.0 23.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 15.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0 21	23.0 23.0 24.0 25.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0 21	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0	21.0 21.0 18.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 14.0 15.0 15.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 25.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 23.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 15.0	21.0 21.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	15.0 16.0 17.0 14.0 14.0 14.0 16.0 14.0 15.0 13.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 22.0 21.0 21.0 20.0 20.0 21.0 21	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 15.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 18.0 20.0 19.0 19.0 19.0 19.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0 15.0 14.0 15.0 14.0	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0	22.0 22.0 22.0 24.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 15.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 20.0 19.0 19.0 19.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 15.0 13.0 14.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 15.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 18.0 20.0 19.0 19.0 19.0 19.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0 15.0 14.0 15.0 14.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0	22.0 22.0 22.0 24.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0	21.0 21.0 18.0 19.0 20.0 18.0 20.0 19.0 20.0 19.0 19.0 19.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 15.0 14.0 15.0 14.0 17.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 22.0 22.0 22.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 22.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 12.0 13.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 17.0 16.0 17.0	23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 22.0 22.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0	21.0 21.0 18.0 19.0 20.0 18.0 20.0 19.0 20.0 19.0 19.0 19.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 15.0 14.0 15.0 14.0 17.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	22.0 22.0 22.0 22.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 22.0 24.0 24.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20	16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0	14.0 13.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 15.0 12.0 12.0 12.0 13.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 14.0 15.0 13.0 14.0 14.0 15.0 16.0 17.0 18.0 18.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 24.0 22.0 22.0	24.0 24.0 24.0 24.0 25.0 25.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 22.0 22.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 12.0 13.0 12.0 13.0 12.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 14.0 15.0 14.0 15.0 14.0 17.0 18.0 17.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 24.0 25.0 26.0 26.0 23.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 23.0 23	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 20.0 21.0 20.0 21.0 20.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 15.0 12.0 12.0 13.0 13.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 22.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 16.0 14.0 14.0 16.0 14.0 15.0 14.0 14.0 15.0 13.0 14.0 17.0 18.0 18.0 18.0 16.0 16.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 24.0 22.0 22.0	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 22.0 22.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 12.0 13.0 12.0 13.0 12.0	21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0	15.0 16.0 17.0 16.0 14.0 14.0 16.0 14.0 15.0 14.0 15.0 14.0 17.0 18.0 17.0	23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 24.0 25.0 26.0 26.0 23.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 23.0 23	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	21.0 22.0 22.0 21.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 20.0 21.0 20.0 21.0 20.0
1 2 3 4 4 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	21.0 21.0 18.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 14.0 14.0 16.0 16.0 17.0 13.0 14.0 15.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22.0 23.0 24.0 23.0 24.0 25.0 26.0 27.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 22.0 22.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 11 4 15 16 17 18 19 20 21 22 23 24	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	21.0 21.0 21.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	15.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 15.0 11.0 11.0 11.0 11.0 11.0 11.0 11	23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 24.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 22.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 23.0	21.0 22.0 22.0 22.0 21.0 22.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 4 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	21.0 21.0 18.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 14.0 14.0 16.0 16.0 17.0 13.0 14.0 15.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22.0 23.0 24.0 23.0 24.0 25.0 26.0 27.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23	24.0 24.0 24.0 24.0 24.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	21.0 22.0 22.0 22.0 21.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22	15.0 16.0 17.0 14.0 14.0 16.0 16.0 15.0 11.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 27.0	21.0 22.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 22.0	23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0	21.0 21.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	15.0 16.0 17.0 14.0 14.0 16.0 14.0 16.0 14.0 15.0 13.0 14.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 27.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 25.0 26.0 27.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22	15.0 16.0 17.0 16.0 14.0 14.0 16.0 15.0 13.0 13.0 14.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 26.0 27.0	21.0 22.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 4 25 26 27	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 17.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 16.0 14.0 14.0 16.0 15.0 13.0 13.0 14.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 26.0 27.0	21.0 22.0 21.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 24.0 25.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 22.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 24.0 25.0 26.0	21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 21.0 21.0 21.0 22.0 22.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0	21.0 21.0 21.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 27.0 26.0 27.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 22.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0	23.0 23.0 24.0 25.0 26.0 24.0	22.0 22.0 22.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 22.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 21.0 20.0 21.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 14 15 16 7 18 19 20 21 22 23 24 25 26 27 28 8 29	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 17.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 14.0 14.0 16.0 16.0 15.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0 24.0 24.0 25.0 26.0 27.0	21.0 22.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 24.0 25.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0	22.0 22.0 22.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0	21.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 21.0 21.0 21.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 223 24 5 26 27 28 29 30 31	16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 17.0 17.0	21.0 21.0 21.0 18.0 18.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0 22.0 22.0 22.0 22.0 22.0 22.0 2	15.0 16.0 17.0 16.0 14.0 16.0 16.0 15.0 13.0 14.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 26.0 26.0 27.0 26.0 27.0	21.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 22.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0	23.0 23.0 24.0 25.0 26.0 24.0	22.0 22.0 22.0 24.0 24.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22.0 22.0 23.0 22.0 23.0 22.0 23.0	24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 26.0	21.0 22.0 22.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 22.0 23.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 21.0 20.0 21.0 22.0	23.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0
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11464500 DRY CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°44'59", long 123°05'28", in NRANE 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 29.0°C June 24; minimum, 3.0°C on several days during December and January.

Period of record: Water temperatures: Maximum (1965-66, 1967-68), 33.5°C Aug. 6, 7, 1966; minimum (1966-68), 3.0°C on several days in 1967 and 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OAY Max													
1		oc	TOBER	NOV	EMBER	DEC	EMBER	JAN	NUARY	FEB	RUARY	M	ARCH
2 21.0 17.0 17.0 13.0 10.0 8.0 7.0 3.0 10.0 8.0 16.0 11.0 12.0 10.0 5.0 12.0 10.0 12.0 10.0 5.0 12.0 10.0 5.0 12.0 10.0 5.0 12.0 10.0 12.0 10.0 5.0 12.0 10.0 10.0 12.0 10.0 10.0 12.0 10.0 12.0 10.0 12.0 10.0 10.0 12.0 10	DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
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7 22-0 16-0 17-0 13-0 11-0 9-0 8-0 5-0 13-0 10-0 12-0 11-0 10-0 10-0 10-0 10-0 10	5	23.0	17.0	17.0	14.0	11.0		9.0	4.0	12.0	10.0	17.0	12.0
8 23-0 16-0 17-0 14-0 10-0 8-0 7-0 6-0 12-0 11-0 15-0 10-0 10-0 8-0 7-0 6-0 12-0 11-0 15-0 10-0 10-0 10-0 10-0 10-0 12-0 11-0 15-0 10-0 10-0 10-0 10-0 12-0 11-0 15-0 10-0 10-0 10-0 10-0 12-0 11-0 15-0 10-0 10-0 10-0 11-0 12-0 11-0 15-0 10-0 10-0 11-0 12-0 11-0 11-0 11-0 10-0 11-0 11	6	22.0	16.0	18.0	14.0	10.0	8.0	8.0	4.0	12.0	10.0	14.0	11.0
9 23-0 17-0 17-0 13-0 14-0 18-0 18-0 8-0 8-0 7-0 12-0 11-0 14-0 9-0 9-0 10 23-0 17-0 14-0 14-0 9-0 9-0 11-0 12-0 14-0 9-0 14-0 9-0 11-0 11-0 14-0 9-0 9-0 11-0 12-0 14-0 14-0 9-0 11-0 11-0 12-0 11-0 14-0 11-0 11-0 11-0 11-0 11-0 11				17.0	13.0				5.0	13.0	10.0	12.0	
10	8	23.0	16-0		14.0			7.0	6.0	12.0	11-0	15.0	10.0
12					14.0								9.0
12	11	26.0	17.0	16.0	14-0	11.0	7.0	8.0	4.0	12.0	9.0	14.0	10.0
13 22.0 19.0 15.0 14.0 7.0 3.0 9.0 8.0 12.0 11.0 11.0 12.0 13.0	12	21.0	19.0	16.0	14.0	9.0	5.0	8.0	4.0	13.0	9.0	11.0	10.0
15		22.0	19.0	15.0	14.0	7.0	3.0	9.0		12.0	10.0	11.0	10.0
17		21.0					3.0					13.0	10.0
17	16	20.0	14-0	17.0	12.0	7.0	3.0	10-0	8.0	12.0	12.0	12.0	10-0
19	17	21.0	14.0	17.0	12.0	7.0	4.0	9.0	7.0	14.0	12.0	13.0	9.0
20		20.0	14-0	16.0	12.0	7.0	6-0	9.0	7.0		13-0	13.0	9.0
22 21.0 17.0 14.0 9.0 8.0 6.0 11.0 7.0 14.0 13.0 13.0 10.0 23.0 10.0 24 20.0 15.0 14.0 9.0 9.0 6.0 10.0 7.0 16.0 14.0 14.0 16.0 11.0 25 17.0 15.0 14.0 9.0 9.0 6.0 10.0 7.0 17.0 17.0 13.0 16.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12		19.0	14.0	16.0	12.0	6.0	4.0		8.0	14.0	13.0	13.0	9.0
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25 19.0 15.0 14.0 9.0 10.0 6.0 10.0 7.0 17.0 17.0 13.0 16.0 12.0 26 17.0 13.0 14.0 12.0 26 17.0 13.0 16.0 12.0 26 17.0 13.0 16.0 12.0 26 17.0 13.0 16.0 12.0 26 17.0 13.0 16.0 17.0 10.0 27.0 17.0 13.0 16.0 17.0 10.0 28 17.0 13.0 16.0 17.0 10.0 28 18.0 13.0 14.0 14.0 14.0 14.0 17.0 10.0 28 18.0 13.0 11.0 11.0 9.0 9.0 5.0 8.0 6.0 16.0 14.0 14.0 17.0 11.0 12.0 30 18.0 13.0 11.0 8.0 9.0 4.0 9.0 8.0 7.0 16.0 13.0 12.0 12.0 12.0 13.0 18.0 13.0 18.0 13.0 18.0 13.0 18.0 13.0 18.0 13.0 18.0 13.0 18.0 13.0 12.0 10.0 8.0 9.0 4.0 9.0 8.0 7.0 16.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12				14.0	9.0	9.0		10.0	7.0		14.0		
26		20.0	15.0		9.0	9.0	6.0	10.0	7.0		14.0	16.0	11.0
27													
28			14-0										9.0
29			14.0		9.0		6.0						
18.0 13.0 13.0 18.0 8.0 12.0 3.0 11.0 8.0 17.0 8.0 19.0 9.0		18.0	13.0	11.0	9.0	9.0	5.0	8.0	7.0			19.0	12.0
MONTH 26.0 13.0 18.0 8.0 12.0 3.0 11.0 3.0 17.0 8.0 19.0 9.0			13.0	10.0	8.0	9.0	4.0						12.0
DAY MAX NIN MAX MIN												-	
DAY MAX MIN	MONTH	26.0	13.0	18.0	8.0	12.0	3.0	11.0	3.0	17.0	8.0	19.0	9.0
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\$\begin{array}{c c c c c c c c c c c c c c c c c c c		13.0	11.0	23.0	13.0		16.0	26.0	17.0		19.0		
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7 18.0 11.0 22.0 13.0 25.0 15.0 27.0 19.0 26.0 19.0 26.0 21.0 9 21.0 12.0 22.0 14.0 24.0 16.0 26.0 19.0 26.0 19.0 26.0 21.0 10 21.0 13.0 23.0 14.0 24.0 16.0 27.0 18.0 26.0 19.0 26.0 20.0 10 21.0 13.0 23.0 14.0 26.0 16.0 27.0 18.0 26.0 19.0 26.0 19.0 26.0 18.0 11 21.0 13.0 21.0 13.0 23.0 14.0 26.0 16.0 27.0 19.0 26.0 19.0 26.0 18.0 12 19.0 13.0 21.0 13.0 23.0 16.0 28.0 25.0 26.0 19.0 26.0 18.0 12 19.0 13.0 21.0 13.0 23.0 16.0 28.0 25.0 26.0 19.0 26.0 18.0 13 21.0 12.0 23.0 12.0 25.0 16.0 28.0 25.0 26.0 19.0 26.0 18.0 13 21.0 12.0 23.0 12.0 25.0 15.0 27.0 18.0 24.0 18.0 24.0 18.0 26.0 18.0 15 18.0 12.0 23.0 12.0 25.0 15.0 27.0 19.0 24.0 19.0 26.0 26.0 20.0 15 18.0 12.0 23.0 12.0 27.0 17.0 26.0 18.0 24.0 18.0 24.0 18.0 18.0 18.0 19.0 26.0 18.0 18.0 19.0 26.0 18.0 18.0 19.0 26.0 18.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 26.0 18.0 19.0 19.0 26.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	1 2 3	13.0 18.0 18.0	11.0 11.0 11.0	23.0 23.0 21.0	13.0 14.0 15.0	27.0 24.0 24.0	16.0 17.0 17.0	26.0 26.0 26.0	17.0 18.0 18.0	27.0 26.0 26.0	19.0 19.0 19.0	28.0 27.0 26.0	21.0 21.0 21.0
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18	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	13-0 18-0 18-0 16-0 18-0 18-0 21-0 21-0 21-0 21-0 21-0 21-0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 21.0 23.0	13.0 14.0 15.0 15.0 13.0 12.0 13.0 14.0 14.0 13.0 12.0 12.0 12.0	27.0 24.0 24.0 26.0 20.0 25.0 26.0 26.0 26.0 23.0 25.0 27.0	16.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 16.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0	17.0 18.0 18.0 26.0 19.0 19.0 19.0 19.0 19.0 25.0 19.0	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
19	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	13.0 18.0 18.0 16.0 18.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0	11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 21.0 21.0 23.0	13.0 14.0 15.0 15.0 13.0 12.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0	27.0 24.0 24.0 26.0 20.0 25.0 24.0 26.0 26.0 24.0 26.0 27.0 28.0	16.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 14.0 15.0 17.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 28.0 26.0 27.0 26.0	17.0 18.0 18.0 26.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 25.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
21	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	13-0 18-0 18-0 16-0 18-0 18-0 19-0 21-0 21-0 21-0 21-0 19-0 21-0	11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 21.0 21.0 23.0 23.0	13.0 14.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0	27.0 24.0 24.0 26.0 20.0 24.0 25.0 26.0 26.0 26.0 27.0 27.0	16.0 17.0 17.0 16.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 14.0 17.0	26.0 26.0 26.0 27.0 28.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 26.0 26.0	17.0 18.0 18.0 26.0 19.0 19.0 19.0 19.0 25.0 19.0 25.0 18.0	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
22	1 2 3 4 5 6 7 8 9 10 11 12 13 145 16 17 18	13.0 18.0 18.0 18.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23	13.0 14.0 15.0 15.0 13.0 12.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0	27.0 24.0 24.0 26.0 20.0 24.0 25.0 26.0 26.0 26.0 27.0 28.0 27.0	16.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 17.0 14.0 17.0 18.0 18.0	26.0 26.0 26.0 27.0 27.0 28.0 26.0 27.0 26.0 27.0 28.0 28.0 26.0 27.0 28.0 26.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0	17.0 18.0 18.0 18.0 26.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 25.0 26.0 24.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 18.0 18.0 18.0 18.0
23	1 2 3 4 4 5 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19	13.0 18.0 18.0 16.0 18.0 18.0 19.0 21.0 21.0 21.0 21.0 19.0 21.0 19.0 21.0 19.0 21.0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	13.0 14.0 15.0 15.0 13.0 12.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 17.0	27.0 24.0 24.0 26.0 20.0 25.0 25.0 26.0 24.0 27.0 27.0 27.0 27.0 27.0 26.0	16.0 17.0 16.0 16.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0	17.0 18.0 18.0 18.0 26.0 19.0 19.0 19.0 19.0 25.0 19.0 18.0 18.0 18.0 19.0	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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28	1 2 3 4 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24	13.0 18.0 18.0 16.0 18.0 18.0 18.0 19.0 21.0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	13.0 14.0 15.0 15.0 13.0 12.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 15.0 17.0 16.0 16.0 14.0	27.0 24.0 24.0 26.0 20.0 25.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 27.0 28.0 27.0 28.0 27.0	16.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	27.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 27.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 28.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 24 25 26 27 28 29 30	13.0 18.0 18.0 18.0 18.0 18.0 18.0 21.0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0	13.0 14.0 15.0 15.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	27.0 24.0 24.0 26.0 25.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	16.0 17.0 16.0 17.0 16.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 28.0 27.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 27.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0 27.0 26.0 27.0	17.0 18.0 18.0 18.0 26.0 26.0 19.0 19.0 19.0 25.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 23.0 22.0 26.0 27.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0
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	1 2 3 4 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	13.0 18.0 18.0 16.0 18.0 16.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 21.0 19.0 21.0 19.0 21.0	11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0	23.0 23.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 26.0 27.0	13.0 14.0 15.0 15.0 13.0 13.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	27.0 24.0 24.0 26.0 20.0 25.0 26.0 26.0 27.0 27.0 27.0 27.0 28.0 27.0 27.0 28.0 27.0	16.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	26.0 26.0 27.0 28.0 27.0 26.0 27.0 26.0 27.0 28.0 27.0 26.0 27.0 27.0 26.0 27.0	17.0 18.0 18.0 18.0 26.0 26.0 26.0 19.0 19.0 19.0 25.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 27.0 28.0 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	28.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0

11465200 DRY CREEK NEAR GEYSERVILLE, CALIF.

LOCATION.--Lat 36°41'55", long 122°57'25", in Tzabaco Grant, Sonoma County, at gaging station 0.3 mile downstream from Pena Creek, and 3 miles west of Geyserville.

DRAINAGE AREA, -- 162 sq mi.

PERIOD OF RECORD, -- Water temperatures: March 1964 to September 1968, Sediment records: March 1964 to Setember 1968,

MEMEN, --1997-98:
Water temperatures: Maximum, 23.5°C on several days during June; minimum, 6.0°C Dec. 20, Jan. 12.
Sediment concentrations: Maximum daily, 3,020 mg/l Jan. 29; minimum daily, 1 mg/l on many days.
Sediment discharge: Maximum daily, 44,600 tons Jan. 29; minimum daily, 1 on on many days during July to September.

Period of record:

eriod of record:
Water temperatures: Maximum, 25.0°C Sept. 15, 30, Oct. 6, 1965; minimum (1964-66, 1967-68), 6.0°C on several
days in 1965, 1967-68. Maximum daily, 15,000 mg/l (estimated) Dec. 22, 1964; minimum daily, no flow on many
days in 1964, minimum daily, 830,000 tons (estimated) Dec. 22, 1964; minimum daily, 0 ton on many days
in 1964, 1966, and 1968.

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

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: 8, BOTTOM NITHORANAL TUBE; C, CHEMICALLY DISPERSED: N, IN NATIVE MATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN OISTILLED WATER)

		WATER	₹							PART	ICLE :	SIZE					
		TEM- PERA- TURE	DISCHARGE		SUSPENDED - SEDIMENT DISCHARGE		ENT F	INER '	THAN	THE S	IZE (IN MI	LLIMET	TERS)	INDIC	ATED	METHOD OF ANALY-
CATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.DD2	.004	.008	.016	.031	•062	.125	•250	•500	1.00	2.00	SIS
DEC 3 1967	1000	11	2010	3780	20500	35	44	60	81	84	92	97	100				VPNC
DEC 7	0845	10	1520	1660	6810	38	52	66	80	92	96	97	98	100			SPWC
DEC 18	1040	8	330	380	339	55	69	79	85	87	94	94	95	95	100		SBNC
JAN 29 1968	1610	9	5000	3600	48600	21	23	30	42	55	63	86	96	99	100		VPNC
FEB 20	1005	13	3130	813	6870	23	33	43	50	53	79	88	98	100			SBNC
MAR 12	1630	11	924	2850	7110	24	32	43	56	72	81	90	99	100			VPNC
MAR 16	0825	12	1960	2540	13400	24	33	43	54	67	77	88	98	99	99	100	VPWC

11465200 DRY CREEK NEAR GEYSERVILLE, CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	ос	TOBER	NCV	EMBER	CEC	EMBER	JA	NUARY	FE8	RUARY	×	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	17.0	17.5	15.5	11.0	9.0	11.0	9.5	11.0	10.5	14.0	12.5
2	17.0	15.5	17.5	15.0	12.0	10.0	10.5	9.0	11.0	10.0	15.5	11.5
3	19.5 19.0	15.0 15.5	17.0 16.5	15.0 16.0	12.0	10.0 11.0	10.5	8.5 7.5	12.0	10.5	16.0 15.5	12.0
5	20.0	16.0	17.5	16.0	10.0	8.5	10.5	8.5	12.0 12.5	10.5 11.0	16.0	12.5 12.5
6 7	20-0	16.0 16.0	17.5 17.5	15.5 15.5	11.0 10.0	9.0 9.0	10.0 10.0	7.5 9.0	13.5	11.0	14.0	11.5
á	20.0	16.5	17.5	16.0	10.5	9.0	10.5	9.5	14.0 12.0	11.5 11.5	11.5	12.5 10.5
9	20.5	17.0	17.0	15.5	11.0	8.5	10.5	9.5	12.5	11.5	14.0	9.5
10	21.0	17-5	17.5	15.5	11.5	10.0	10.5	9.0	14.0	11.5	14.0	9.5
11	21.0	17.5	17.5	15.5	12.0	10.5	10.0	7.5	12.5	10.5	13.5	10.5
12	20.5	15.0	16.5	15.5	11.0	9.5	9.0	6.0	12.5	10.0	11.0	10.0
13 14	20-5	17.0 16.5	16.5 16.5	15.5 15.5	10.0	7.5 7.0	10.5	9.0 10.0	12.0 13.5	10.0 11.0	11.5 12.0	9.5
is	19.5	16.0	16.5	15.0	10.0	7.0	11.5	10.5	14.0	11.5	12.0	10.0
16	19.5	16.0	17.0	14.5	10.0							
17	19.5	16.5	17.0	14.5	10.0	7.5 8.5	11.5 10.5	10.0 8.5	12.0 14.5	11.5 11.5	11.5 12.5	10.0 9.0
18	19.5	16.5	17.0	15.5	10.0	8.5	10.0	7.5	14.0	12.5	12.5	9.0
19	19.5	17.0	16.5	14-5	7.5	6.5	10.0	9.0	13.5	13.5	12.5	9.0
20	19.5	16.5	16.5	14.5	8.5	6.0	10.5	8.5	13.5	12.5	12.5	8.5
21	16.5	17.0	16.5	14.5	9.0	6.5	11.0	9.0	13.5	12.5	12.5	9.5
22 23	20.0 19.5	17.5 17.0	15.5 15.5	13.5 12.5	9.5 10.0	7.5 7.5	11.0	9.0 9.0	14.5	14.0	12.0	10.0
24	19.5	17.0	15.5	12.5	10.5	8.5	11.0 11.0	9.0	14.5 15.5	14.0 13.5	15.0 15.0	10.5 10.5
25	19.0	16.0	15.0	12.5	11.0	9.5	11.0	9.0	15.5	12.5	15.0	11.0
26	18.5	15.5	15.0	12.0	11.5	10.0	10.5	8.5	16.5	12.5	15.0	9.5
27	18.5	15.5	14.5	12.0	12.0	10.0	9.5	7.5	15.0	14.0	15.5	10.0
28	18.5	15.5	14.5	12.0	11.5	10.0	8.5	7.0	16.0	13.5	16.5	11.0
29 30	17.0 17.5	15.0 15.0	13.5 11.5	10.0	11.0 11.0	9.5 9.0	9.0 10.0	7.0 9.0	15.5	13.5	17.5 17.5	11.5 12.0
31	17.5	15.0			10.5	9.0	10.0	9.5			16.5	12.5
MONTH	21.0	15.0	17.5	9.5	12.0	6.0	11.5	6.0	16.5	10.0	17.5	8.5
					_					SUST		TEMBER .
	A	PRIL		4AY	J	UNE	JU	JLY	AUI	3U2 I	SEP	CWDCK
DAY	AF Pax	PRIL	MAX	MIN	IL XAM	MIN	JL KAX	JLY MIN	MAX	MIN	MAX	MIN
	PAX	MIN	MÁX	MIN	MAX	MIN	HAX	MIN			НАХ	
DAY L 2		MIN 11.0	MAX 21.5 19.5	MIN 14.0 15.5	=				MAX	MIN	MAX 21.5 21.0	
l 2 3	MAX 13.5 16.0 16.5	MIN 11.0 11.0	MAX 21.5 19.5 19.5	MIN 14.0 15.5 15.5	MAX 21.5 21.0 20.5	MIN 16.0 16.5 17.0	MAX 21.5 21.0 21.0	MIN 17.0 18.5 18.5	MAX	MIN	MAX 21.5 21.0 21.0	
1 2 3 4	PAX 13.5 16.0 16.5 14.5	MIN 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0	MIN 14.0 15.5 15.5 14.5	MAX 21.5 21.0 20.5 21.0	MIN 16.0 16.5 17.0 16.0	MAX 21.5 21.0 21.0 21.5	MIN 17.0 18.5 18.5 17.5	MAX		MAX 21.5 21.0 21.0 21.0	
l 2 3	13.5 16.0 16.5 14.5	MIN 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14.0 15.5 15.5 14.5 14.0	MAX 21.5 21.0 20.5 21.0 19.0	MIN 16.0 16.5 17.0 16.0 15.0	MAX 21.5 21.0 21.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0	HIN
1 2 3 4 5	PAX 13.5 16.0 16.5 14.5 16.5	MIN 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14-0 15-5 15-5 14-5 14-0	MAX 21.5 21.0 20.5 21.0 19.0	MIN 16.0 16.5 17.0 16.0 15.0	MAX 21.5 21.0 21.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0	MIN
1 2 3 4 5	PAX 13.5 16.0 16.5 14.5 16.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14-0 15-5 15-5 14-5 14-0 14-0	MAX 21.5 21.0 20.5 21.0 19.0	MIN 16.0 16.5 17.0 16.0 15.0	MAX 21.5 21.0 21.0 21.5 22.0 22.0	MIN 17.0 18.5 18.5 17.5 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0	HIN
1 2 3 4 5 6 7 8	MAX 13-5 16-C 16-5 14-5 16-5 16-5 17-5 17-0 18-5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14-0 15-5 15-5 14-5 14-0 14-0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.0 21.5	MIN 16.0 16.5 17.0 16.0 15.0 15.0 15.5 16.0	MAX 21.5 21.0 21.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0	MIN
1 2 3 4 5 6 7 8	PAX 13.5 16.0 16.5 14.5 16.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14-0 15-5 15-5 14-5 14-0 14-0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.0	MIN 16.0 16.5 17.0 16.0 15.0 15.0	MAX 21.5 21.0 21.0 21.5 22.0 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	MAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0	MEN
1 2 3 4 5 6 7 8	MAX 13-5 16-C 16-5 14-5 16-5 16-5 17-5 17-0 18-5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 21.5 19.5 19.5 20.0 20.5 20.5	MIN 14.0 15.5 15.5 14.5 14.0 14.0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.0 21.5	MIN 16.0 16.5 17.0 16.0 15.0 15.5 15.5 16.5	MAX 21.5 21.0 21.0 21.5 22.0 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0	MIN
1 2 3 4 5 6 7 8 9 10	MAX 13-5 16-5 16-5 14-5 16-5 16-15 16-15 18-5 18-5 18-5	MIN 11.0 11.0 11.0 11.0 11.0 11.5 11.5 12.5 12.5	MAX 21.5 19.5 19.5 20.0 20.5	MIN 14.0 15.5 15.5 14.5 14.0 14.0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 21.5	MIN 16.0 16.5 17.0 16.0 15.0 15.5 16.5 16.5 16.5	MAX 21.5 21.0 21.0 21.5 22.0 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 20.0 20.5	#EN
1 2 3 4 5 6 7 8 9 10	PAX 13.5 16.5 14.5 14.5 16.0 17.5 17.0 18.5 18.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 12.5 12.0 12.5	MAX 21.5 19.5 19.5 20.0 20.5 20.5	MIN 14.0 15.5 15.5 14.0 14.0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 21.5 20.5	MIN 16.0 16.5 17.0 16.0 15.0 15.5 15.5 16.5 15.5	MAX 21.5 21.0 21.0 21.5 22.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.0 20.5	#EN
1 2 3 4 5 6 7 8 9 10	MAX 13-5 16-5 16-5 14-5 16-5 16-15 16-15 18-5 18-5 18-5	MIN 11.0 11.0 11.0 11.0 11.0 11.5 11.5 12.5 12.5	MAX 21.5 19.5 19.5 20.0 20.5 20.5	MIN 14.0 15.5 15.5 14.5 14.0 14.0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 21.5	MIN 16.0 16.5 17.0 16.0 15.0 15.5 16.5 16.5 16.5	MAX 21.5 21.0 21.0 21.5 22.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 20.0 20.5	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	PAX 13-5 16-C 16-5 16-5 16-0 17-5 18-5 18-5 18-5 19-5 19-5 19-5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 12.5 12.0 12.5 12.5 12.5 14.0 13.5	MAX 21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.5	MIN 14.0 15.5 15.5 14.5 14.0 14.0 14.0 14.0	MAX 21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.0 21.5 21.5 21.5 20.0 20.5 21.5	MIN 16.0 16.5 17.0 15.0 15.5 16.0 15.5 16.5 16.5 15.5	MAX 21.5 21.0 21.0 21.5 22.0 21.5 22.0	MIN 17.0 18.5 18.5 17.5 19.0 19.0	MAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.0 20.5 20.5 20.5 20.5	#EN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13-5 16-C 16-5 16-5 16-5 16-5 17-0 18-5 17-0 18-5 17-0 18-5 17-5 17-5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 12.5 12.0 12.5 12.0 13.5 14.0 13.5	HAX 21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	HIN 14.0 15.5 15.5 14.5 14.0 14.0 14.0 12.5 13.5	MAX 21.5 21.0 20.5 21.0 20.5 21.0 21.5 21.5 21.5 21.5 21.5 21.5 21.5 21.5	MIN 16.0 16.5 17.0 15.0 15.0 15.5 16.5 16.5 15.5 15.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.0 20.5 20.5 20.5 20.5 20	#EN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PAX 13.5 16.C 16.5 14.5 14.5 16.5 16.5 17.0 18.5 18.5 20.0 18.5 19.3 20.0 17.5 17.5 17.5 17.5 17.5 18.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.0 12.5 12.5 14.0 13.5 14.0 13.5 14.0 11.5	21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	HIN 14-C 15-5 15-5 14-5 14-0 14-0 14-0 12-5 13-5 13-5 13-5 15-C	MAX 21.5 21.0 20.5 21.0 21.0 21.0 21.5 21.5 21.5 20.5 21.5 22.0	MIN 16.0 16.5 17.0 15.0 15.0 15.5 16.5 15.5 16.5 15.5 16.5 17.5 17.5 17.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.0 19.0 19.0	20.0 20.0 20.5	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5	MEN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	FAX 13.5 16.C 16.5 14.5 14.5 14.5 16.7 17.0 18.5 18.5 20.0 17.5 17.5 17.5 17.5 17.5 18.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.5 20.0 20.5 20.0 20.0	HIN 14.0 15.5 15.5 14.5 14.0 14.0 14.0 12.5 13.5 13.5 15.0 15.0 15.0	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 21.5 21.5 21.5 22.5 22.0 22.0 22.0 22.0	HIN 16.0 16.5 17.0 15.0 15.0 15.5 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5 17.5	21.5 21.0 21.0 21.0 22.0 22.0 22.0 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	HAX	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PAX 13.5 16.C 16.5 14.5 14.5 16.5 16.5 17.0 18.5 18.5 20.0 18.5 19.3 20.0 17.5 17.5 17.5 17.5 17.5 18.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.0 12.5 12.5 14.0 13.5 14.0 13.5 14.0 11.5	21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	HIN 14-C 15-5 15-5 14-5 14-0 14-0 14-0 12-5 13-5 13-5 13-5 15-C	MAX 21.5 21.0 20.5 21.0 21.0 21.0 21.5 21.5 21.5 20.5 21.5 22.0	MIN 16.0 16.5 17.0 15.0 15.0 15.5 16.5 15.5 16.5 15.5 16.5 17.5 17.5 17.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.0 19.0 19.0	20.0 20.0 21.0 20.0 20.0	HIN	21.5 21.0 21.0 21.0 21.0 21.0 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	MEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 11 18 19 20 21	PAX 13.5 16.5 16.5 16.5 16.5 17.5 17.5 18.5 18.5 20.0 18.5 20.0 17.5 17.5 17.5 17.5 18.5	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 14.0 14.0 14.0 15.0 16.0 1	21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0	NIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 15.5 15.5 15.0 15.5 15.5	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 20.5 21.5 20.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0	MIN 16.0 16.0 16.0 16.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.5 19.0 19.0	20.0 20.0 20.0 21.0 20.0 20.0 20.0 20.0	NIN	21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.5 20.0 20.5 20.5 20.5 20	HIN
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 20 21 1 22	PAX 13.5 16.C 16.5 16.5 16.5 16.5 17.0 18.5 20.0 18.5 20.0 17.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	21.5 19.5 19.5 20.0 20.5 20.5 20.9 18.5 20.0 21.0 17.5 19.0	HIN 14.0 15.5 14.5 14.0 14.0 14.0 12.5 13.5 13.5 15.0 15.5 15.5 15.0 15.5	21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 20.5 21.5 20.5 22.0 22.0 22.0 22.0 22.0 22.5 22.5	MIN 16.0 16.5 17.0 15.0 15.5 15.5 16.5 15.5 16.5 17.5 17.5 17.5 17.5 17.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0	NIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20	HEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 11 18 19 20 21	PAX 13.5 16.5 16.5 16.5 16.5 16.5 17.0 18.5 20.0 18.5 20.0 17.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 19.3 20.0	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 14.0 14.0 14.0 15.0 16.0 1	21.5 19.5 19.5 20.0 20.5 20.5 20.5 20.5 20.7 20.6 18.5 20.0 21.0 19.0 19.0 20.0 21.0 19.0 21.0	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 14.0 14.0 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 20.5 21.5 20.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0	MIN 16.0 16.0 16.0 16.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.0 20.5 20.1 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5	HIN
1 2 3 3 4 5 5 6 6 7 8 9 10 11 12 13 14 15 16 11 12 12 22 23	13.5 16.5 16.5 16.5 16.5 17.5 17.5 17.5 18.5 18.5 19.5 20.0 18.5 19.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 18.5	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 14.0 14.0 15.0 16.0 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.1 18.5 20.0 20.5 20.0 20.5 20.0 20.0 20.0 20	NIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 15.5 15.5 15.0 15.5 15.0 14.5	21.5 21.0 20.5 21.0 19.0 21.5 21.0 21.5 21.5 20.5 21.5 22.0 22.5 22.0 22.0 22.0 22.0 22.5 22.0 22.5 22.0 22.5 22.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	MIN 16.0 16.0 16.0 15.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.5 19.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NIN	21.5 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.0 20.5 20.5 20.5 20.5 20	HEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 12 13 14 15 16 11 18 119 20 20 21 22 23 24 25 26	PAX 13.5 16.5 16.5 16.5 16.5 17.5 17.5 17.5 18.5 18.5 19.5 20.0 17.5 17.5 17.5 19.0 17.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 13.5 14.0 13.5 12.0 13.5 14.0 14.0 14.0 15.0 16.0 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 19.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 15.5 15.5 15.5 15.0 16.5 15.5 15.0 16.5 16.5 16.5 17.5 1	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 20.5 21.5 20.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 16.0 15.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 17	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.0 19.0 19.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NIN	21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	HEN
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 15 17 18 19 20 22 23 24 25 26 27	PAX 13.5 16.5 16.5 16.5 16.5 16.5 17.0 18.5 20.0 18.5 20.0 18.5 19.5 20.0 17.5 17.5 17.5 17.5 18.5 19.0 20.5 20.0 20.5	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.5 12.5 14.5 13.5 13.5 14.0 13.5 12.0 13.5 13.5 14.0 13.5 13.5 14.0 13.5 14.0 14.0 14.0 15.0 1	21.5 19.5 20.0 20.5 20.5 20.5 20.5 20.7 20.6 20.7 20.6 20.7 20.6 20.7 20.6 20.7 20.6 20.7 20.6 20.7 20.7 20.7 20.7 20.7 20.7 20.7 20.7	NIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	21.5 21.0 20.5 21.0 20.5 21.0 21.5 21.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 17.0 15.0 15.0 15.5 16.5 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 18.5 18.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.0 19.0 19.0 19.0	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	MIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.0 20.5 20.1 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 11 12 20 20 21 22 23 24 25 26 27 7 28	PAX 13.5 16.0 16.5 16.5 16.5 17.0 17.5 17.5 18.5 18.5 19.5 20.0 17.5 17.5 17.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 13.5 12.0 12.5 14.0 13.5 12.0 13.5 14.0 13.5 12.0 13.5 14.0 14.5 14.0 14.5 14.0 14.5 14.0 14.5 14.0 14.5 15.5 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.0	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 15.5 15.0 15.5 15.0 14.5 14.5 14.5 15.0 15.5 15.0	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 16.0 15.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 18.5 18.5 18.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	HAX	NIN	21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.0 20.5 20.5 20.5 20.5 20.5 20.5 20	HEN
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 15 17 18 19 20 22 23 24 25 26 27	PAX 13.5 16.5 16.5 16.5 16.5 16.5 17.0 18.5 20.0 18.5 20.0 18.5 19.5 20.0 17.5 17.5 17.5 17.5 18.5 19.0 20.5 20.0 20.5	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.5 12.5 14.5 13.5 13.5 14.0 13.5 12.0 13.5 13.5 14.0 13.5 13.5 14.0 13.5 13.5 14.0 13.5 14.0 14.0 14.0 14.0 15.0 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 20	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 14.0 15.5 15.0 15.5 15.0 14.5 14.5 14.5 15.5 15.0 15.5 15.5	21.5 21.0 20.5 21.0 20.5 21.0 21.5 21.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 17.0 15.0 15.0 15.5 16.5 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 18.5 18.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 17.0 19.0 19.0 19.0	HAX	NIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.5 20.1 20.0 20.5 20.1 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NEN
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 20 22 23 24 25 26 27 28 29	PAX 13.5 16.5 16.5 16.5 16.5 17.0 18.5 17.0 18.5 19.3 20.0 18.5 17.5 17.5 17.5 17.5 17.5 20.0 20.5 20.5 20.5 21.0	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.5 12.5 13.5 13.5 13.5 13.5 13.5 12.0 13.5 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 17.0 19.0 19.0 19.0 20.5 21.5 21.5 21.0	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 14.0 14.0 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 17.0 15.0 15.0 15.5 16.5 15.5 16.5 17.5 1	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	20.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0	NIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.1 20.5 20.1 20.0 20.1 20.0 20.1 20.0 20.0 20.0	NEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 12 13 14 15 16 11 18 19 20 20 21 22 23 24 25 26 27 28 29 30 30	PAX 13.5 16.5 16.5 16.5 16.5 17.0 18.5 17.0 18.5 19.3 20.0 18.5 17.5 17.5 17.5 17.5 17.5 20.0 20.5 20.5 20.5 21.0	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.5 12.5 12.5 13.5 13.5 13.5 13.5 13.5 12.0 13.5 1	21.5 19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 20	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 14.0 15.5 15.0 15.5 15.0 14.5 14.5 14.5 15.5 15.0 15.5 15.5	21.5 21.0 20.5 21.0 19.0 20.5 21.0 21.5 21.5 20.5 21.5 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 17.0 15.0 15.0 15.5 16.5 15.5 16.5 17.5 1	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	HAX	NIN	MAX 21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.1 20.5 20.1 20.0 20.1 20.0 20.1 20.0 20.0 20.0	NEN
1 2 3 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 15 16 17 17 17 20 20 21 22 23 24 25 26 27 27 28 29 30 31	PAX 13.5 16.0 16.5 16.5 16.5 16.5 17.5 17.5 18.5 19.5 20.0 18.5 17.5 19.5 19.5 19.5 19.0 17.5 17.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18	HIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12.5 14.0 13.5 14.0 13.5 12.0 12.5 14.0 13.5 14.0 14.5 14.5 15.5 15.5	21.5 19.5 20.5 20.5 20.5 20.5 20.5 20.5 20.0 21.5 20.0 21.5 20.0 21.5 20.0 21.5 20.0 21.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20	HIN 14.0 15.5 14.5 14.0 14.0 14.0 14.0 15.5 15.0 15.5 15.0 16.5 16.5 15.5 15.5	21.5 21.0 20.5 21.0 19.0 21.5 21.5 21.5 20.5 21.5 20.5 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16.0 16.0 16.0 15.0 15.0 15.5 16.0 15.5 16.5 17.5 17.5 17.5 17.5 17.5 17.5 17.5 18.5 18.5 18.5 18.5	21.5 21.0 21.0 21.5 22.0 22.0 22.5 21.5 21.5	HIN 17.0 18.5 18.5 17.5 19.0 19.0 19.0	HAX	NIN	21.5 21.0 21.0 21.0 21.0 21.0 21.0 20.5 21.0 20.5 20.0 20.5 20.5 20.5 20.5 20.1 20.5 21.0 20.1 20.5 20.0 20.0 20.0 20.0 20.0 20.0 20.0	NEN

11464200 DRY CREEK MEAR GETSERVILLE, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER		Annus, Wall	NOVEMBER			DECEMBER	
		MEAN			MEAN	SEDIMENT	MFAN	MEAN CONCEN-	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	2.8 3.2	3 4	.02 .03	4.6	4	.05 .04	66 37	17	3.0 .70
3	4.0	5	•05	4.6	1	.01	827	1480	5410
5	4.1 4.3	5	.06 .06	4.6	1 2	•01 •02	535 820	518 598	1690 2000
6 7	4.2 4.1	5 5	.06 .06	4.6	2 2	•02 •02	230 941	55 1110	34 3940
8	4.1	5	.06	4.6	2	•02	300	92	75
10	4.0	5 5	.05 .06	4.6 4.9	2	•02 •03	188 140	21 12	11 4.5
11	4.1	5	•06	4.9	3	.04	100	9	2.4
12	4.0	5	.05	4.9	2	•03	80 66	11 9	2.4
13 14	4.1 4.1	5	.06 .04	6.2 58	3 28	.05 5.7	52	7	1.6 .98
15	4.1	4	-04	39	25	2.6	50	7	.95
16 17	4.3	4	.05	25 20	26 13	1.8 .70	49 49	7	.93 .79
18	4.3	3	.03 .03	16	4	•17	273	325	280
19 20	4.3	3	.03	13	3	-11	222 160	190 120	114 52
	4.1	_	***	12		.16			
21 22	4.1 4.1	3	.03 .03	12 9.3	7	•23 •10	120 97	110 110	36 29
23	4.3	3	.03	8.4	2	.05	82	100	22
24 25	4.3 4.3	3	.03 .03	8.0 7.7	3 5	.06 .10	73 67	100 100	20 18
26	4.3	3	.03	7.7	3	•06	60	100	16
27	4.3	3	.03	7.4	1	•02	55	95	14
28 29	4.3 4.3	3 3	.03 .03	7.4 16	1 3	.02 .21	50 45	95 90	13 11
30	4.3	3	.03	78	59	13	42	90	10
31	4.6	4	.05				38	85	8.7
TOTAL	128.0		1.28	407.2		25.45	5914		13821.95
		JANUARY			FEBRUARY			MARCH	
	MEAN	MEAN	SEDIMENT	MFAN	MEAN	SEDIMENT	MFAN	MEAN	CE DI MENT
DAV	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE
DAY	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 8.5	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3	DI SCHARGE (CFS) 37 36 33	MEAN CONCEN- TRATION (MG/L) 85 80 80	DISCHARGE (TONS/DAY) 8.5 7.8 7.1	DISCHARGE (CFS) 1180 1560 1340	MEAN CONCEN- TRATION (MG/L) 200 610 270	DISCHARGE (TONS/DAY) 637 2570 977	DISCHARGE (CFS) 424 368 330	MEAN CONCEN- TRATION (MG/L) 58 51 38	DISCHARGE (TONS/DAY) 66 51 34
1 2	DISCHARGE (CFS) 37 36	MEAN CONCEN- TRATION (MG/L) 85 80 80 80	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9	DISCHARGE (CFS) 1180 1560 1340 1060	MEAN CONCEN- TRATION (MG/L) 200 61D 270 195	DISCHARGE (TONS/DAY) 637 2570 977 558	DISCHARGE (CFS) 424 368 330 309	MEAN CONCEN- TRATION (MG/L) 58 51	DISCHARGE (TONS/DAY) 66 51 34 26
1 2 3 4 5	DI SCHARGE (CFS) 37 36 33 32 31	MEAN CONCEN- TRATION (MG/L) 85 80 80 80 75	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9	DISCHARGE (CFS) 1180 1560 1340 1060 870	MEAN CONCEN- TRATION (MG/L) 200 61D 270 195 110	DISCHARGE (TONS/DAY) 637 2570 977 558 258	DISCHARGE (CFS) 424 368 330 309 294	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25	DISCHARGE (TONS/DAY) 66 51 34 26 20
1 2 3 4 5	DISCHARGE (CFS) 37 36 39 32 31 31	MEAN CDNCEN- TRATION (MG/L) 85 80 80 80 75	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605	MEAN CONCEN- TRATION (NG/L) 200 61D 270 195 110 80 60	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98	DISCHARGE (CFS) 424 368 330 309 294 270 252	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25	DISCHARGE (TONS/DAY) 66 51 34 26 20
1 2 3 4 5	DI SCHARGE (CFS) 37 36 33 32 31	MEAN CONCEN- TRATION (MG/L) 85 80 80 75	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3	DISCHARGE (CFS) 1180 1560 1340 1060 870	MEAN CONCEN- TRATION (MG/L) 200 61D 270 195 110	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60	DISCHARGE (CFS) 424 368 330 309 294 270 252 252	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25	DISCHARGE (TONS/DAY) 66 51 34 26 20 15 14
1 2 3 4 5	DISCHARGE (CFS) 37 36 33 32 31 31 31	MEAN CDNCEN- TRATION (MG/L) 85 80 80 80 75 72 65 60	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516	MEAN CONCEN- TRATION (MG/L) 200 610 270 195 110 80 60 43	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98	DISCHARGE (CFS) 424 368 330 309 294 270 252	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25	DISCHARGE (TONS/DAY) 66 51 34 26 20
1 2 3 4 5 6 7 8 9 10	DI SCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450	MEAN CONCEN- TRATION (MG/L) 85 80 80 80 75 72 65 60 101 1960	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388	MEAN CONCEN- TRATION (MG/L) 200 610 270 195 110 80 60 43 36 30	DI SCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 252 206 192	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25 21 22 18 13	DISCHARGE (TONS/DAY) 66 51 34 26 20 15 14 15 11 7.2
1 2 3 4 5 6 7 8 9 10	DI SCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309	MEAN CONCEN- TRATION (MG/L) 85 80 80 75 72 65 60 101 1960 800 360 270	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388	MEAN CONCEN- TRATION (MG/L) 200 610 270 195 110 80 60 43 36 30	DI SCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15	DISCHARGE (CFS) 424 368 330 309 294 270 252 226 206 192 639 1340	MEAN CONCEN- TRATION (MG/L) 58 51 38 31 25 21 21 22 18 13	DISCHARGE (TONS/DAY) 66 51 34 26 20 15 14 15 11 7.2 5220
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DI SCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250	MEAN CDNCENTRATION (MG/L) 85 80 80 75 72 65 60 101 1960 800 360 270	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300 1360 341 225	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 43 36 30 22 18 18 18 17	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 226 206 192 639 1340 1090	MEAN CONCENTRATION (MG/L) 58 51 38 31 25 21 21 21 21 490 600 250	DISCHARGE (TONS/DAY) 66 51 34 26 20 15 14 15 11 7-2 5220 2490 736
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450 630 351 309 2250 2740	MEAN CDNCENTRATION (MG/L) 85 80 80 80 75 72 65 60 101 1960 800 270 1370 1250	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 1360 341 225 12500 9790	DISCHARGE (CFS) 1180 1560 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 60 43 36 30 22 18 18 17 16	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 15	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 266 206 192 639 1340 1090 924	HEAN CONCENTRATION (MG/L) 58 51 38 31 25 21 21 22 18 13 1490 600 250 135	DISCHARGE (TONS/DAY) 66 51 34 26 20 15 14 15 11 7-2 5220 2490 736 337
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740	MEAN CDNCEN- TRATION (MG/L) 85 80 80 75 72 65 60 101 1960 800 360 270 1270	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 10300 1360 341 225 12500 9790 2460	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 546	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 43 36 30 22 18 17 16 378	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12	DISCHARGE (CFS) 454 368 330 309 294 270 252 252 226 206 192 639 1340 1090 924	MEAN CONCENTRATION (MG/L) 58 51 38 31 25 21 21 21 22 18 31 32 52 52 18 70 600 250 135 1870	DISCHARGE (TONS/DAY) 66 66 67 67 26 20 15 14 15 11 7 62 5220 2490 736 337
1 2 3 4 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625	MEAN CONCENTRATION (MG/L) 85 80 80 80 75 72 65 60 101 1960 270 1370 1250 650 290 180	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 10300 1360 341 225 12500 9790 2460 681 304	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 30 22 18 17 16 378 856 150	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392	DISCHARGE (CFS) 454 368 330 309 294 270 252 252 226 206 192 639 1340 1090 924	MEAN CONCENTRATION (MG/L) 58 51 38 31 25 21 21 21 21 22 18 13 12 1490 600 250 135 1870 350 250	DISCHARGE (TONS/DAY) 66 66 67 51 34 26 20 15 14 15 11 7.2 62 5220 2490 736 337
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450 630 351 309 2250 2740	MEAN CDNCENTRATION (MG/L) 85 80 80 80 75 72 65 60 101 1960 800 270 1250 650 650 650 650 650 650 650 650 650 6	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300 1360 1360 225 12500 9790 2460 681	DISCHARGE (CFS) 1180 1560 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 60 43 36 30 22 18 18 17 16 378 856	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 15 17 17 17 17 17 17 17 17 17 17 17 17 17	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 266 206 192 639 1340 1090 924 1740 1590	MEAN CONCENTRATION (MG/L) 58 51 13 25 21 22 22 18 13 12 190 600 250 135	DISCHARGE (TOMS/DAY) 100
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450 630 351 309 2250 2740 1400 1400 1400 1400 1500 1500 1500 15	MEAN CONCENTRATION (MG/L) 85 80 80 80 875 72 65 60 101 1960 800 270 1370 1250 650 290 180 140 95	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300 1360 225 12500 9790 2460 681 304 172 92	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100	MEAN CONCENTRATION (MG/L) 200 610 610 770 195 110 80 60 30 22 18 18 17 16 378 856 150 933 1100	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 155 13 12 711 3200 392 10400 10600	DISCHARGE (CFS) 424 368 330 309 294 270 252 226 206 192 639 1340 1090 924 1740 17590 1090 864 685	MEAN CONCENTRATION (MG/L) 58 51 13 8 31 125 22 12 12 18 13 125 1490 600 250 135 1870 250 130 130	DISCHARGE (TOMS/DAY) 100
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450 630 339 2250 22740 1400 625 456 357 282 288	MEAN CONCENTRATION (MG/L) 85 80 80 80 875 72 65 60 101 1960 800 270 1250 650 290 180 197 70 60 60 60 60 60 60 60 60 60 60 60 60 60	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 1360 225 12500 9790 2460 681 304 172 92	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 310 279 270 546 1290 967 2220 3100 2500 1740	MEAN CONCENTRATION (MG/L) 200 610 610 770 195 110 80 60 30 22 18 18 17 16 378 856 150 933 1100 902 340	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600	DISCHARGE (CFS) 424 368 330 309 294 270 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685	MEAN CONCENTRATION (MG/L) 51 38 51 25 21 22 18 13 25 21 22 18 13 13 15 10 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TOMS/DAY) 100
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282	MEAN CDNCENTRATION (MG/L) 85 80 80 75 72 65 60 101 1960 270 1370 1250 650 290 140 95 70 60 40	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300 1360 341 225 12500 9790 2460 681 304 172 92 53 39 23	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1740	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 43 36 30 22 18 8 17 16 150 933 1100 902 340 220	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600 6440 1600 778	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685	MEAN CONCENTRATION (MG/L) 51 38 31 25 21 22 18 13 12 14 90 000 250 1350 130 130 150 160 70	DISCHARGE (TONS/DAY) 66 66 67 51 34 26 20 15 14 15 11 7-2 6-2 5220 2490 736 337 10300 1500 736 303 240 225 199 80
1 2 3 4 5 6 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216	MEAN CONCENTRATION (MG/L) 85 80 80 80 875 72 65 60 101 1960 800 270 1250 650 290 180 197 70 60 60 60 60 60 60 60 60 60 60 60 60 60	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 1360 225 12500 9790 2460 681 304 172 92	DISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 310 279 270 546 1290 967 2220 3100 2500 1740	MEAN CONCENTRATION (MG/L) 200 610 610 770 195 110 80 60 630 22 18 18 17 16 378 856 150 933 1100 902 340	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600	DISCHARGE (CFS) 424 368 330 309 294 270 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685	MEAN CONCENTRATION (MG/L) 51 38 51 25 21 22 18 13 25 21 22 18 13 13 15 10 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TOMS/DAY) 100
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 16 17 18 19 20 21 22 23 24 25 26	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216 194 176	MEAN CONCENTRATION (MG/L) 85 80 80 75 72 26 65 60 101 1960 800 270 1370 1250 650 290 180 95 75 70 660 400 22 18 18 17	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 18 16300 1360 341 225 12500 9790 2460 681 304 172 92 53 39 23 12 8.6	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1740 1310 1040	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 43 36 50 150 150 150 150 150 150 150 150 150	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600 6440 1600 778 421 253	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685 555 460 424 331 315	MEAN CONCENTRATION (MG/L) 51 38 31 25 21 22 18 13 1490 600 250 1350 130 130 150 160 70 65 32	DISCHARGE (TONS/DAY) 66 66 67 51 34 26 20 15 14 15 11 7.2 6.2 5220 2490 736 337 10300 1500 736 303 240 225 199 80 62 27
1 2 3 4 4 5 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216 194 176 168 166 183	MEAN CONCENTRATION (MG/L) 85 80 80 75 72 265 60 101 1960 800 270 1370 1250 650 290 140 95 70 600 40 422 18	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 5.4 5.0 18 16300 1360 341 225 12500 9790 2460 681 304 172 92 53 39 23 12 8.6 7.7 5.4	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1740 1310 1040	MEAN CONCENTRATION (MG/L) 200 610 610 700 710 710 710 710 710 710 710 710 7	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 200 392 10400 10600 6440 10600 778 421 253	DISCHARGE (CFS) 424 368 330 309 294 270 252 225 226 192 639 1340 1090 844 685 555 460 424 331	MEAN CONCENTRATION (MG/L) 58 51 13 8 31 125 22 121 22 18 13 125 1490 600 250 135 1870 250 130 130 150 600 70 65 32	DISCHARGE (TOMS/DAY) 6 66 66 66 20 15 14 15 11 7 * 2 6 * 2 5 2 20 2 490 7 36 3 37 10 3 0 0 15 10 2 40 2 5 2 5 2 7 1 6 9 8 0 6 2 2 7 1 5 1 9 9 8 0 6 2 2 7 1 5 1 1 9 9 8 0 6 2 2 7 1 1 1 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 37 36 33 32 31 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216 194 176 168 166 183 4240	MEAN CONCENTRATION (MG/L) 85 80 80 80 80 875 72 65 60 101 1960 800 270 1370 1250 650 40 95 70 60 140 95 70 130 140 140 140 140 140 140 140 140 140 14	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 6.0 5.4 5.0 1360 341 225 12500 9790 2460 681 304 172 92 8.6 7.7 5.4	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1510 1040 852 720 615 525 468	MEAN CONCENTRATION (MG/L) 200 610 610 700 710 710 710 710 710 710 710 710 7	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600 6440 1600 778 421 253	DISCHARGE (CFS) 424 368 330 309 294 270 252 226 206 192 639 1340 1090 1740 1590 1090 804 685 555 460 424 3315 279 228 232 218	MEAN CONCENTRATION (MG/L) 58 51 13 8 31 11 25 21 22 21 8 13 13 125 25 20 135 130 130 150 160 160 65 32 20 16 11 9	DISCHARGE (TOMS/DAY) 666 667 51 34 26 20 15 14 15 11 7-2 6-2 5220 2490 736 337 10300 1500 736 303 240 225 199 80 62 27 15 11 6-9 5-3
1 2 3 4 4 5 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	DISCHARGE (CFS) 37 36 33 32 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216 194 176 168 166 183	MEAN CONCENTRATION (MG/L) 85 80 80 75 72 265 60 101 1960 800 270 1370 1250 650 290 140 95 70 600 40 422 18	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 5.4 5.0 18 16300 1360 341 225 12500 9790 2460 681 304 172 92 53 39 23 12 8.6 7.7 5.4	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1740 1310 1040 852 720 615 525	MEAN CONCENTRATION (MG/L) 200 610 270 195 110 80 60 43 36 30 22 18 18 17 16 15 15 15 15 15 15 15 15 15 15 15 15 15	DISCHARGE (TONS/DAY) 6377 2570 977 558 258 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600 6440 1600 778 421 253 156 116 92	DISCHARGE (CFS) 424 368 369 309 294 270 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685 555 460 424 3315 279 258 232	MEAN CONCENTRATION (MG/L) 58	DISCHARGE (TONS/DAY) 66 66 67 68 20 15 14 15 11 7.2 6.2 5220 2490 736 337 10300 1500 736 303 240 225 199 80 62 27 15 11 6.9
1 2 3 4 4 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	DISCHARGE (CFS) 37 36 39 39 31 31 31 44 2450 630 351 309 2250 2740 1400 870 625 456 357 282 238 216 194 176 168 166 183 4240 3750	MEAN CONCENTRATION (MG/L) 85 80 80 75 72 26 65 60 101 1960 270 1370 1250 650 40 40 422 18 81 3020 1490	DISCHARGE (TONS/DAY) 8.5 7.8 7.1 6.9 6.3 5.4 5.0 18 16300 1360 341 225 12500 9790 2460 681 304 172 92 53 39 23 12 8.6 7.7 5.4	OISCHARGE (CFS) 1180 1560 1340 1060 870 720 605 516 456 388 336 312 300 279 270 546 1290 967 2220 3100 2500 1510 1040 852 720 615 525 468	MEAN CONCENTRATION (MG/L) 200 610 610 700 710 710 710 710 710 710 710 710 7	DISCHARGE (TONS/DAY) 637 2570 977 558 258 156 98 60 44 31 20 15 15 13 12 711 3200 392 10400 10600 6440 1600 778 421 253	DISCHARGE (CFS) 424 368 330 309 294 270 252 252 226 206 192 639 1340 1090 924 1740 1590 1090 864 685 555 460 424 3315 279 258 232 218 210	MEAN CONCENTRATION (MG/L) \$81 \$31 25 21 22 18 13 125 250 135 150 150 150 150 150 160 70 665 322 20 16 16 19 7	DISCHARGE (TONS/DAY) 66 66 67 68 26 20 15 14 15 11 7.2 6.2 5220 2490 736 337 10300 1500 736 303 240 225 199 80 62 27 15 11 6.9 5.3 4.0

11465200 DRY CREEK NEAR GEYSERVILLE, CALIF. ~- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRII MAY JUNE MEAN CONCEN-MEAN CONCEN-TRATION MEAN CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) SEDIMENT DISCHARGE (TONS/DAY) SEDIMENT DISCHARGE (TONS/DAY) MEAN MEAN MEAN DISCHARGE (CFS) TRATION DISCHARGE DISCHARGE (CFS) DAY (MG/L) (CFS) (MG/L) 18 18 16 •29 •15 •26 •17 •20 48 47 47 47 7 7 7 .91 6 3 6 .89 .89 1.0 240 10 3.3 2 16 6 4 186 3.0 16 15 8 4 4 5 164 152 144 138 130 •75 •50 •95 •54 •53 15 15 15 8 7 6 5 8 3.5 2.9 2.3 1.9 2.8 46 5 6 .20 6 7 8 64855 46 44 .24 .24 .19 6 5 6 10 40 14 39 12 12 12 10 9.0 118 116 116 108 94 •92 •50 •70 •74 •63 1.9 2.5 2.2 1.7 1.3 38 37 37 .16 .13 .16 .14 11 12 13 14 15 68765 9 5 7 7 6 4 5 5 5 39 39 2.2 1.1 .89 1.1 1.1 .41 .72 .60 .38 8.7 8.4 8.0 8.4 8.0 16 17 18 19 20 91 85 82 79 79 95455 38 47644 -14 66666 38 37 35 30 .14 .13 .14 .79 .78 .95 1.5 .14 .11 .09 21 22 23 24 25 73 72 70 70 68 32 7 8 7 7.4 •69 •60 •49 6.0 4.8 3.9 4.4 32 32 7779 30 6 6 32 .11 •53 •55 •36 •47 •19 5.0 4.6 4.1 3.5 3.3 .15 .12 .09 1.5 1.1 1.2 11 10 8 7 26 27 28 29 30 68 60 55 50 49 33 29 27 25 24 21 .95 .93 .07 _6 __ 31 TOTAL 3387 83.79 1136 18.79 298.5 4.54

		JULY			AUGUS Ţ			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	3.3	5	.04	•56	1	0	•50	2	0
2	3.2	5	.04	.49	1	0	.35	1	0
3	3.4	8	.07	.44	1	0	•24	1	0
4	3.5	10	.09	.41	1	0	.24	1	0
5	3.5	12	•11	. 36	1	0	.35	2	0
6	3.3	10	.09	.34	1	0	.35	3	0
7	3.0	8	.06	.30	1	0	.24	1	0
8	2.7	6	.04	.27	1	0	.35	2	0
9	2.5	5	.03	.25	1	0	.35	2	0
10	2.2	4	.02	.24	1	0	.30	3	0
11	2.0	4	•02	•22	1	0	-27	4	0
12	1.8	3	.01	•20	1	0	•25	2	0
13	1.7	3	.01	.17	1	0	.23	1	ō
14	1.6	2	.01	.16	1	Ó	•22	ì	ó
15	1.7	2	.01	.15	1	ō	•22	1	ō
16	1.7	2	.01	.14	1	0	.21	2	0
17	1.6	2	.01	.13	i	Ö	.19	2	ō
18	1.5	2	.01	.14	1	ō	.18	2	Ö
19	1.4	2	•01	.20	ī	ō	.17	ī	ŏ
20	1.3	2	.01	1.3	1	ō	.17	ī	ō
21	1.2	1	0	1.7	1	o	.16	1	0
22	1.1	1	0	1.5	1	0	•16	1	0
23	1.0	1	0	.77	1	0	.15	2	0
24	• 90	1	0	.95	1	0	.15	1	0
25	.86	1	0	.77	1	0	.15	1	0
26	.80	1	0	-64	1	0	.14	1	0
27	. 75	1	0	.64	1	0	.13	1	0
28	.70	1	0	.64	1	0	.13	1	Ō
29	•66	1	0	.50	1	0	.13	1	0
30	•65	1	0	.64	3	-01	•12	2	ō
31	-61	1	Ō	.64	3	-01			
TOTAL	56.13		.70	15.86		•02	6.80		0

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

80148.49 186695.02

11465200 DRY CREEK NEAR GEYSERVILLE, CALIF .-- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE	OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
ост.	12, 1967	5	1	FEB. 15	16	5
007.	12	ź	î	FEB. 16	198	75
OCT.	25	3	i	FEB. 17	1290	235
NOV.	1	4	ī	FEB. 18	137	85
NDV.	3	1	i	FEB. 19	167	100
NOV.	6	2	1	FEB. 20	813 1240	440 500
NOV.	7	2 2	1 1	FEB. 22	350	155
NOV.	9	2	i	FEB. 23	228	130
NOV.	10	2	i	FEB. 24	230	135
NDV.	11	3	1	FEB. 25	102	85
		2	1	FEB. 26 FEB. 28	79 59	65 45
NDV.	13	3 38	1 48	FEB. 29	60	45
NOV.	14	24	48	MAR. 1	59	30
NOV.	16	28	20	MAR. 2	51	19
NOV.	17 18	12	11	MAR. 3	38	19
NOV.	1B	3	1	MAR. 4	30	8 9
NOV.	19	3	1 3	MAR. 5	17 21	9
		5	-			
NOV.	21	8	ı	MAR. 7	36	10
NBV.	22	4	1	MAR. 8	23 34	13 14
NDV.	23	2	<u> </u>	MAR. 9	11	4
NOV.	24	2 6	1 1	MAR. 10	12	6
						535
NOV.	26	2	1	MAR. 12	2850	260
NOV.	27	1 15	1	MAR. 13 MAR. 14	286 272	195
NOV.	29	1	i	MAR. 15	132	90
NDV.	30	74	100	MAR. 16	2540	435
	1	7	1	MAR. 17	290	130
DEC.	2	7	3	MAR. 18	274	130 90
DEC.	3 5	3780 243	2050 155	MAR. 19 MAR. 20	116 131	85
DEC.	6	56	60	MAR. 22	184	53
DEC.	7	1660	730	MAR. 23	60	40
DEC.	8	59	54	MAR. 24	72	37
DEC.	9	81	45	MAR. 25	28	20
DEC.	10	12 7	9 5	MAR. 26	20 15	19 11
				MAR. 28	11	9
	12	11 9	4	MAR. 29	11	7
DEC.	14	20	4	MAR. 30	21	6
DEC.	15	10	3	MAR. 31	5	3
DEC.	16	11	4	APR. 1	8	5
DEC.	17	6	2	APR. 2	15	13
DEC.	18	380	215	APR. 3	6	6
JAN.	6, 1968	72 62	56 36	APR. 4	6 7	5 4
JAN.	7 18	182	115	APR. 5	8	3
	19	153	115	APR. 7	7	5
JAN.	20	84	29	APR. 8	6	á
JAN.	21	70	29	APR. 9	5	4
JAN.	22	62	11	APR. 10	8	5
	23	39	15	APR. 11	6	2
JAN.	24	18	5	APR. 12	В	2
JAN.	25	20	6	APR. 13	7	4
JAN.	26	19	4	APR. 14	10	1
JAN.	27	11 21	3	APR. 15	5 9	1 3
140	20	3600	790	APR. 17	5	О
JAN.	29	1270	480	APR. 17	4	0
JAN-	31	409	220	APR. 19	5	0
₹E8.	1	196	120	APR. 20	5	ŏ
FEB.	2	1020	480	APR. 21	4	ō
FEB.	3	261	170	APR. 22	11	0
·€B.	5	201 116	130 83	APR. 23	5 8	0
TED.	8	41	24	APR. 25	8	0
FEB.	9	37	22	APR. 26	8	ő
FEB.	10	29	15	APR. 27	7	o
₹ĘB.	11	21	12	APR. 28	8	0
FEB.	12	17	10	APR. 29 APR. 30	18	1
EEB.	13	30	13	APR. 30	.7	1
FEB.	14	17	6	MAY 1	13	0

11465200 DRY CREEK NEAR GEYSERVILLE, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
MAY 2	10	0	JUNE 28	8	1
MAY 3	7	1	JULY 1	5	0
MAY 4	8	0	JULY 5	12	4
MAY 5	4	0	JULY 8	6	1
MAY 6	6	0	JULY 10	4	0
MAY 7	4	0	JULY 12	3	0
MAY B	8	0	JULY 15	2	0
MAY 9	5	O	JULY 17	2	O
MAY 10	5	0	JULY 19	2	0
MAY 11	9	0	JULY 22	1	0
MAY 12	5	2	JULY 24	1	0
MAY 13	2	O	JULY 26	1	0
MAY 14	10	1	JULY 29	1	O
MAY 15	6	2	JULY 31	1	0
MAY 16	4	1	AUG. 2	1	ō
MAY 17	7	1	AUG. 5	1	0
MAY 18	6	2	AUG. 9	ī	ō
MAY 19	4	ì	AUG. 14	ĩ	ō
MAY 20	4	î	AUG. 16	ĩ	ŏ
	7	1	AUG. 19	î	ŏ
MAY 21	•	1			
MAY 22	8	1	AUG. 21	1	σ
MAY 23	7	2	AUG. 23	5	0
MAY 24	10	ī	AUG. 26	1	0
MAY 25	14	ī	AUG. 28	1	0
MAY 26	6	ī	AUG. 30	3	0
			SEP1. 2	1	0
MAY 27	7	2			_
MAY 28	5	1	SEPT. 4	1	o
MAY 29	7	3	SEPT. 6	3	0
MAY 30	3	1	SEP1. 9	2	0
MAY 31	7	1	SEPT. 11	2	1
			SEPT. 13	1	o
JUNE 1	6	1	SEPT. 16	2	0
JUNE 2	3	1			
JUNE 3	6	1	SEPT. 18	7	0
JUNE 4	4	1	SEPT. 20	1	0
JUNE 5	5	1	SEP1. 23	4	0
			SEPT. 25	1	0
JUNE 6	5	1	SEP1. 27	1	0
JUNE 7	6	ī	SEPT. 30	2	0
JUNE 10	5	ì			•
JUNE 12	4	î			
JUNE 14	5	2			
JUNE 17	6	2			
JUNE 19	6	1			
JUNE 21	7	0			
JUNE 24	7	1			
JUNE 26	11	2			

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.

LOCATION. -- Lat 38°30'00", long 122°56'05", in NE¹/₄ 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 (monthly), October 1965 to September 1967 (miscellaneous).
Water temperatures: January 1964 to September 1968.
Sediment records: October 1966 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 28.0°C on several days during June and July; minimum, 4.0°C Dec. 15, Jan. 12.

Mater temperatures: Maximum, 28.5°C June 24, 1964; minimum (1965-68), 4.0°C Dec. 15, 1967, Jan. 12, 1968.

NOVEMBER

OCTOBER

245 11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CALIF. -- Continued

JANUARY FEBRUARY

MARCH

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 DECEMBER

DAY	MAX	MEN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			17.0	16.0	9.0	9.0	9.0	8.0	8.0	8.0	13.0	13.0
ž	17.0	17.0	17.0	17.0	9.0	9.0	8.0	8.0	9.0	8.0	13.0	13.0
3	18-0	17.0	17.0	17.0	9.0	9.0	8.0	7.0	9.0	9.0	14-0	13.0
4	18.0	17.0	17.0	17.0	9.0	9.0	7.0	6.0	10.0	9.0	14.0	14.0
5	19.0	18.0	17.0	17.0	9.0	9.0	7.0	6.0	11.0	9.0	14-0	14.0
6	19.0	18.0	17.0	17.0	9.0	8.0	6.0	6.0	11-0	11.0	14.0	13.0
7	19.0 19.0	18.0 18.0	17.0 17.0	17.0 17.0	8.0 8.0	8.0 8.0	6.0	6.0 6.0	11.0 11.0	11.0	13.0 13.0	13.0 12.0
8 9	19.0	18.0	17.0	17.0	8.0	8.0	6.0 6.0	6.0	11.0	11.0	13.0	12.0
10	20.0	19.0	17.0	16.0	8.0	8.0	7.0	6.0	11.0	11.0	13.0	12.0
11	20.0	19.0	16.0	16.0	8.0	8.0	6.0	6.0	11.0	11.0	13.0	12.0
12	21.0	19.0	16.0	16.0	8.0	8.0	7.0	4.0	11.0	11.0	13.0	12.0
13	21.0	19.0	15.0	15.0	8.0	6.0	8.0	7.0	11.0	11.0	12.0	10-0
14 15	19.0 18.0	18.0 17.0	15.0 15.0	15.0 15.0	6.0 5.0	5.0 4.0	9.0 10.0	8.0 9.0	11.0	11.0	11.0 12.0	11.0
16	18-0	17.0	15.0	15.0	6.0	5.0	10.0	10.0	12.0	12.0	12.0	11.0
17 18	18.0 18.0	17.0 17.0	15.0 15.0	15.0 15.0	6.0 7.0	6.0 6.0	10.0 9.0	9.0 9.0	13.0 12.0	12.0 11.0	12.0 12.0	11.0
19	18.0	18.0	16.0	15.0	6.0	6.0	9.0	9.0	14.0	12.0	12.0	12.0
20	18.0	18.0	15.0	14.0	6.0	6.0	9.0	9.0	14.0	14.0	13-0	11.0
21	18-0	18.0	14.0	14.0	6.0	6.0	10-0	9.0	14.0	14.0	13.0	12.0
22	18.0	18.0	14.0	13.0	7.0	6.0	11-0	9.0	14.0	14.0	13.0	13.0
23	19.0	18.0	13.0	12.0	7.0	7.0	11.0	10.0	14.0	14.0	14-0	13.0
24 25	19.0 18.0	18.0 18.0	13.0 12.0	12.0 12.0	8.0 8.0	7.0 8.0	11.0	11.0 11.0	15.0 15.0	14.0 15.0	14.0 15.0	14.0 14.0
26 27	18.0 18.0	18.0	12.0	11.0	9.0 9.0	8.0 9.0	11.0	11.0 9.0	15.0 15.0	15.0 14.0	14.0 15.0	14-0 14-0
28	18.0	17.0 17.0	11.0	11.0 11.0	10.0	9.0	11.0	9.0	14.0	13.0	16.0	14.0
29	17.0	17.0	11.0	11.0	10.0	9.0	9.0	8.0	13.0	13.0	17.0	16.0
30	17.0	16.0	11.0	11.0	9.0	9.0	9.0	8.0			17.0	17.0
31	16.0	16.0			9.0	8.0	8.0	8.0			17.0	16.0
HTMOP	21.0	16.0	17.0	11.0	10.0	4.0	11.0	4.0	15.0	8.0	17.0	10.0
	A	PRIL		MAY	J	UNE	.10	ULY	AU	SUST	SEP	TEMBER
					-		-				•••	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	14.0	21.0	19.0	26.0	23.0	MAX 26.0	MIN 22.0	25.0	MIN 22.0	MAX 26.0	MIN 23.0
1 2	17.0 14.0	14.0 13.0	21.0	19.0 19.0	26.0	23.0 23.0	26.0 26.0	22.0 22.0	25.0 26.0	22.0 22.0	26.0 26.0	23.0 23.0
1 2 3	17.0 14.0 16.0	14.0 13.0 14.0	21.0 22.0 21.0	19.0 19.0 20.0	26.0 26.0 26.0	23.0 23.0 24.0	26.0 26.0 26.0	22.0 22.0 22.0	25.0 26.0 24.0	22.0 22.0 22.0	26.0 26.0 24.0	23.0 23.0 22.0
1 2 3 4	17.0 14.0 16.0 16.0	14.0 13.0 14.0 14.0	21.0 22.0 21.0 19.0	19.0 19.0 20.0 18.0	26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0	26.0 26.0 26.0 27.0	22.0 22.0 22.0 22.0	25.0 26.0 24.0 25.0	22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0	23.0 23.0 22.0 21.0
1 2 3 4 5	17.0 14.0 16.0 16.0	14.0 13.0 14.0 14.0	21.0 22.0 21.0 19.0 20.0	19.0 19.0 20.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0	23.0 23.0 24.0 22.0 21.0	26.0 26.0 26.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0	25.0 26.0 24.0 25.0 25.0	22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0	23.0 23.0 22.0 21.0 21.0
1 2 3 4 5	17.0 14.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 22.0 21.0 19.0 20.0	19.0 19.0 20.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0	23.0 23.0 24.0 22.0 21.0	26.0 26.0 26.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0	25.0 26.0 24.0 25.0 25.0	22.0 22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0	23.0 23.0 22.0 21.0 21.0
1 2 3 4 5	17.0 14.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 22.0 21.0 19.0 20.0	19.0 19.0 20.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0	23.0 23.0 24.0 22.0 21.0	26.0 26.0 26.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0	22.0 22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	17.0 14.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 21.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0	22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 22.0	23.0 23.0 22.0 21.0 21.0 21.0
1 2 3 4 5	17.0 14.0 16.0 16.0 16.0	14.0 13.0 14.0 14.0 14.0	21.0 22.0 21.0 19.0 20.0	19.0 19.0 20.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0	23.0 23.0 24.0 22.0 21.0	26.0 26.0 26.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0	22.0 22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 18.0 19.0 19.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 26.0 25.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 20.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 26.0 25.0 25.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 22.0 21.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 26.0	22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 22.0 22.0 23.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 26.0 25.0 25.0 24.0 24.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 20.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 26.0 25.0 25.0 24.0 25.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 20.0 21.0 21	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 23.0 23.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 22.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17-0 14-0 16-0 16-0 16-0 17-0 18-0 19-0 18-0 18-0 18-0 18-0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 25.0 25.0 24.0 25.0 27.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 20.0 21.0 21.0 21	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 18.0 17.0 18.0 17.0	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	26.0 26.0 26.0 24.0 24.0 26.0 26.0 25.0 25.0 24.0 24.0 27.0	23.0 23.0 24.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0 21	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0	22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0 23.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17-0 14-0 16-0 16-0 16-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 19.0 18.0	26.0 26.0 26.0 24.0 24.0 24.0 26.0 25.0 25.0 24.0 25.0 27.0 27.0 27.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 21.0 21	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0	22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 24.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 18.0 17.0 18.0 17.0	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0	21.0 22.0 21.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	26.0 26.0 26.0 26.0 24.0 24.0 26.0 25.0 25.0 25.0 27.0 27.0 28.0 27.0 28.0	23.0 23.0 24.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0 21	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0	22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	25.0 26.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0	22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 1 0 1 1 1 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 22.0 21.0 20.0 20.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 18.0	26.0 26.0 26.0 24.0 24.0 24.0 26.0 25.0 25.0 24.0 25.0 27.0 27.0 27.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 20.0 21.0 21	26.0 26.0 27.0 27.0 28.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 24.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0	14.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	21.0 22.0 21.0 21.0 20.0 20.0 21.0 21.0	19.0 20.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 17.0 12.0 21.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 24.0 24.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	26.0 26.0 27.0 28.0 27.0 28.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 17.0 18.0 17.0 17.0 17.0 17.0	14.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	21.0 22.0 21.0 20.0 20.0 21.0 21.0 21.0	19.0 19.0 20.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0 21.0 21.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 20.0 21.0 21	26.0 26.0 27.0 27.0 28.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 22.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 22.0 23.0 22.0 23.0 23.0 23	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 23	17.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	26.0 26.0 27.0 28.0 27.0 28.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 24.0 23.0	22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0	26.0 26.0 24.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 9 10 16 17 18 19 20 21 22 23 24	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 17.0 11.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	21.0 22.0 21.0 21.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 20.0 21.0 21.0 21.0 22.0 23.0	26.0 26.0 27.0 27.0 26.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 26.0 26.0 26.0 23.0 24.0 23.0 24.0 24.0 22.0 22.0 22.0 22.0 23.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 24.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 12 22 23 24 25	17.0 14.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0 21.0 21.0 22.0 23.0	26.0 26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 26.0 26.0 26.0 23.0 24.0 23.0 24.0 24.0 22.0 22.0 22.0 23.0 22.0 23.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 23.0 22.0 23.0 23.0 23.0 24.0 23.0 24.0 24.0 24.0 21.0 20.0 20.0 21.0 22.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22
1 2 2 3 4 5 5 6 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	17.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 21.0 21.0 22.0 21.0 22.0 22.0 20.0 21.0 21.0 22.0 23.0	26.0 26.0 27.0 28.0 27.0 28.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 21.0	26.0 26.0 24.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 4 25 26 27	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 21.0 20.0 19.0	26.0 26.0 26.0 26.0 24.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 23.0	26.0 26.0 27.0 27.0 28.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 26.0 26.0 26.0 23.0 24.0 23.0 24.0 24.0 22.0 22.0 21.0 22.0 23.0 22.0 23.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 21.0 22.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 21.0 22.0 20.0 21.0 21.0 21.0 22.0 23.0	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 20.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 5 6 7 7 8 9 10 11 12 13 11 4 15 16 7 18 19 20 21 22 23 24 25 26 27 28 29	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 23.0	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 26.0 26.0 26.0 23.0 24.0 23.0 24.0 24.0 22.0 21.0 22.0 21.0 22.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 25.0 26.0	22.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 24.0 21.0 20.0 21.0 22.0 22.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 27.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 21.0 22.0 20.0 21.0 21.0 21.0 22.0 23.0	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 20.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	26.0 26.0 24.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 5 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 30	17.0 14.0 16.0 16.0 16.0 17.0 18.0 19.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0	26.0 26.0 26.0 26.0 24.0 26.0 26.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	23.0 23.0 24.0 22.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 23.0	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 26.0 27.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0	26.0 26.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 24.0 21.0 20.0 21.0 22.0 22.0 23.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 2 3 4 5 6 6 7 7 8 9 9 10 11 12 13 14 15 16 17 8 19 20 21 22 3 24 25 26 27 28 29 30 31	17.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 13.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0	21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 27.0	19.0 19.0 20.0 18.0 18.0 19.0 19.0 19.0 19.0 10.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 27.0 28.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 28.0 27.0 28.0 28.0 28.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	23.0 23.0 24.0 22.0 21.0 21.0 22.0 21.0 22.0 20.0 21.0 23.0	26.0 26.0 27.0 28.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 20.0	22.0 22.0 22.0 22.0 23.0	25.0 26.0 24.0 25.0 25.0 26.0 26.0 26.0 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 25.0 27.0	22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 23.0	26.0 26.0 24.0 22.0 23.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22

RUSSIAN RIVER BASIN

1146 7000 RUSSIAN RIVER NEAR GUERNEVILLE, CALIF .-- Continued

MONTHLY AND ANNUAL SUMMARY OF SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DISCHARGE (CFS)	Suspended-sed in ent (Tons)
OCTOBER 1967	10,527	630
NOVEMBER	8,614	1,422
DECEMBER	36,276	44,912
JANUARY 1968	176,154	747,461
FEBRUARY	190,220	253,717
MARCH	118,990	97,089
APRIL	24,370	917
MAY	6.940	252
JUNE	4.531	152
JULY	5,207	210
AUGUST	5.927	208
SEPTEMBER	4,665	99

TOTAL FOR YEAR... 592,421 1,147,069

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: 8, BOTTON WITHDRAWAL TUBE; C. CHENICALLY DISPERSED; N. IN MATIVE WATER; P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE: W. IN DISTILLED WATER)

DATE T	TIME	WATER TEM- PERA- TURE (C)			SUSPENDED- SEDIMENT DISCHARGE (TONS/DAY)	PERC				PARTI		IN MIL					METHOD OF ANALY- SIS
JAN 12 1 MAR 4 1 MAR 21 1	900 1605 1500 1515	7 6 14 12 23	13700 4600 2350 4300 89	2600 236 29 136 15	96200 2930 184 1580	32 20 24 24 71	43 27 40 34 79	56 33 57	69 38 65 57	82 41 70	89 67 95 95	98 91 100 98	100 100 99	100	=======================================	==	VPWC VBWC SBWC SBWC SBWC

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TENTOSTO SETENTIALIZA	CONCENTRATION OF SUSPENDED		AND TORBIDITY, WATER TEAR	CONCENTRATION OF SUSPENDED	
	SEDIMENT	TURBIDITY	**** or on	SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
007 2 1047	27	25	JULY 5	16	13
OCT. 2, 1967	15	8	JULY B	14	13
OCT. 4				15	13
OCT. 11	16	10	JULY 10		13
OCT. 18	42	10	JULY 12	16	
OCT. 25	23	9	JULY 15	16	11
NOV. 1	28	91	JULY 17	13	12
NOV. 8	27	87	JULY 19	14	12
NOV. 9	24	18	JULY 22	15	13
NOV. 13	26	90	JULY 24	17	11
NOV. 20	28	96	JULY 26	12	13
NO. 22	24	94	JULY 29	14	12
NOV. 22				14	ii
NOV. 24	28	93	JULY 31		10
NOV. 27	32	88	AUG. 2	13	
OEC. 15	14	7	AUG. 5	14	9
JAN. 3, 1968	30	90	AUG. 7	12	9
	24.00	1500	AUG. 9	15	10
JAN. 10	2600	1520	AUG. 12	12	9
JAN. 12	236	160	AUG. 14	15	11
FEB. 12	74	65		14	10
FEB. 14	64	66	AUG. 16	15	ii
FEB. 16	162	100	AUG. 19	10	••
FEB. 21	598	230	AUG. 21	13	12
MAR. 4	29	27	AUG. 23	13	10
MAR. 6	10	7	AUG. 26	15	12
MAR. 8	9		AUG. 28	6	7
	í	8	AUG. 30	11	5
MAR. 11	'	ь	SEPT. 2	8	7
MAR. 21	134	85			
MAR. 29	31	13	SEPT. 4	7	7
APR. 1	29	9	SEPT. 6	4	7
APR. 23	9	4	SEPT. 9	4	6
MAY 1	14	6	SEPT. 11	5	5
			SEPT. 13	9	6
MAY 2	13	6	SEPT. 16	8	8
MAY 28	14	5	0E: 10 100000000000000000000000000000000		
JUNE 5	25	13	SEPT. 18	9	7
JUNE 7	13	12	SEPT. 20	Ŕ	7
JUNE 10	10	13	SEPT. 23	10	6
Come tottititititi			SEPT. 25	å	6
JUNE 12	13	14		ž	ž
JUNE 14	11	18	SEPT. 27		13
	13	14	SEPT. 30	16	13
JUNE 17					
JUNE 18	16	15			
JUNE 21	13	13			
JUNE 24	12	15			
JUNE 26	11	10			
JUNE 28	10	11			
JULY 1	16	12			
JULY 3	16	13			

11467600 GARCIA RIVER NEAR POINT ARENA, CALIF.

LCCATION. -- Lat 38°55'35", long 123°37'45", in SW2SW2 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 Garcia River, 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 22.0°C Aug. 29, 30; minimum, 5.0°C Dec. 14-16.

Period of record: Water temperatures: Maximum, 22.0°C June 22, 1964, Aug. 29, 30, 1968; minimum, 5.0°C Dec. 14-16, 1967.

REMARKS. -- Recorder stopped Feb. 6-28; temperature range, 9.0°C to 14.0°C.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	nc	TOBER	NOV	MBER	DEC:	EMBER	JAN	UARY	FFRF	UARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	17.0 16.0	15.0 14.0	16.0 16.0	13.0 12.0	10.0 11.0	8-0 9-0	9.0 8.0	7.0 7.0	9.0 10.0	8.0 9.0	12.0 13.0	11.0 11.0
ž	17.0	14.0	16.0	13.0	12.0	11.0	7.0	6.0	11.0	10.0	14.0	11.0
4	17.0	14.0	15.0	13.0	12.0	11.0	8.0	6.0	11.0	10.0	13.0	11.0
5	18.0	15.0	16.0	14.0	11.0	10.0	8.0	7.0	12.0	10.0	13.0	11.0
6	17.0	14.0	17.0	14.0	11.0	9.0	8.0	7.0			12.0	10.0
7 8	17.0 17.0	14.0 14.0	16.0 16.0	14.0 15.0	11.0 11.0	10.0 10.0	10.0 10.0	8.0 9.0			11.0 13.0	11.0 10.0
9	18.0	14.0	16.0	14.0	10.0	9.0	10.0	9.0			12.0	10.0
10	17.0	16.0	16.0	14.0	11.0	10.0	10.0	9.0			12.0	9.0
11	18.0	15.0	16.0	14.0	11.0	9.0	9.0	7.0			13.0	10.0
12	18.0	16.0	14.0	14.0	9.0	8-0	9-0	7.0			11.0 11.0	10.0 10.0
13 14	17.0 17.0	14.0 13.0	16.0 16.0	14.0 13.0	B.O 6.0	6.0 5.0	10.0 11.0	9.0 10.0			12.0	11.0
15	17.0	13.0	15.0	14.0	7.0	5.0	12.0	11.0			12.0	11.0
16	17.0	13.0	15.0	13.0	7.0	5.0	11.0	10.0			11.0	10.0
17	17.0	13.0	15.0	13.0	8.0	7.0	10.0	9.0			12.0	10.0
18	17.0	14.0	15.0	14-0	7.0	7.0	9.0	8.0			12.0 12.0	9.0 9.0
19 20	17.0 16.0	14.0 14.0	14.0 14.0	12.0 13.0	8.0 8.0	7.0 6.0	10.0 10.0	9-0 8-0			12.0	9.0
21	15.0	14.0	14.0	12.0	8.0	7.0	11.0	9.0			12.0	10.0
22	17.0	15.0	13.0	11.0	9.0	7.0	11.0	9.0			12.0	10.0
23	17.0	15.0	13.0	11.0	9.0	7.0	11.0	9.0			14.0	11.0
24 25	17.0 16.0	14.0 14.0	13.0 13.0	11.0 11.0	9.0 9.0	7.0 8.0	11.0 11.0	8.0 9.0			14.0 14.0	11.0 12.0
26 27	16.0 17.0	14.0 13.0	13.0 12.0	11.0 11.0	9.0 B.0	8.0 7.0	10.0 10.0	8.0 9.0			14.0 14.0	10.0 11.0
28	16.0	14.0	12.0	11.0	7.0	6.0	9.0	8.0			16.0	11.0
29	16.0	13.0	11.0	10.0	8.0	7.0	9.0	8.0	13.0	12.0	16.0	12.0
30	16.0	12.0	10.0	9.0	8.0	7.0	9.0	9.0			16-0	12.0
31	16.0	13.0			8.0	7.0	9.0	8.0			15.0	12.0
HTMOP	18.0	12.0	17.0	9.0	12.0	5.0	12.0	6.0			16.0	9.0
	A	PRIL	ı	MAY	J	UNE	JI	ULY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	12.0	16.0	12.0	19.0	14.0	20.0	14.0	19.0	16.0	19.0	17.0
2	14.0	11.0	17.0	12.0	19.0	16.0	19-0	16.0	19.0	16.0	18.0	16.0
3	14.C	10.0	14.0	12.0	17.0	16.0	20-0	15.0	18.0	16.0	20.0	16.0
5	13.0 15.0	11.0 12.0	16.0 21.0	12.0 17.0	16.0 14.0	14.0 13.0	20.0 20.0	15.0 15.0	18.0 19.0	15.0 14.0	18.0 18.0	17.0 17.0
6 7	14.0 14.0	11.0 11.0	16.0 17.0	11.0 11.0	17.0 17.0	12.0 13.0	21.0 21.0	15.0 16.0	20.0 21.0	14.0 14.0	18.0 18.0	16.0 16.0
8	16.0	11.0	17.0	12.0	18.0	13.0	20.0	16.0	21.0	16.0	18.0	16.0
9	17.0	11.0	14.0	13.0	18.0	13.0	20.0	16.0	21.0	16.0	19.0	15.0
10	17.0	12.0	16.0	12.0	19.0	14.0	21.0	16.0	19.0	16.0	19.0	15.0
11	16.0	12.0	13.0	12.0	18.0	14.0	20.0	16.0	19.0	16.0	19.0	15.0
12	14.0	12.0	14.0	11.0	18.0	13.0	21.0	16.0	17.0	16.0	19.0	16.0
13 14	16.0 16.0	11.0 11.0	14.0 16.0	12.0 11.0	18.0 19.0	13.0 14.0	20-0	16.0 16.0	18.0 21.0	15.0 16.0	20.0 19.0	16.0 17.0
15	14.0	11.0	17.0	12.0	19.0	14.0	20.0	15.0	19.0	15.0	19.0	16.0
16	13.0	10.0	17.0	12.0	19.0	14.0	19.0	15.0	19.0	15.0	19.0	15.0
17	14.0	10.0	17.0	13.0	20.0	14.0	20.0	15.0	19.0	14.0	20.0	16.0
18 19	14.0	10.0	18.0	14.0	20.0	15.0	20.0	16.0	19.0	16-0	19.0	16.0
20	14.0 14.0	11.0 11.0	17.0 17.0	15.0 14.0	20.0 20.0	16.0 15.0	20.0 20.0	15.0 16.0	19.0 19.0	16.0 16.0	17.0 17.0	14.0 14.0
21	14.0	10.0	18.0	14.0	20.0	14.0	20.0	16.0	18.0	16.0	17.0	13.0
22	15.0	11.0	18.0	14.0	18.0	14.0	19.0	15.0	19.0	16.0	18.0	13.0
23	15.0	11.0	17.0	14.0	19.0	14.0	20.0	14.0	20.0	16.0	19.0	14.0
24 25	16.0	12.0	16.0	13.0	20.0	15.0	19.0	16.0	21.0	17.0	18.0	14.0
	16.0	12.0	17.0	14.0	21.0	16.0	21.0	15.0	19.0	18-0	18-0	14.0
						15.0	21.0	16.0	20.0	17.0	17.0	14.0
26	17.0	12-0	19-0	13.0	21.0	15.0	10.5	17.	21.0		17.0	
27	18.0	13.0	19.0	15.0	19.0	15.0	19.0	17-0	21.0	17.0	17.0	14.0
		13.0 13.0 13.0		15.0 14.0 14.0	19.0 18.0	15.0 14.0	19.0 20.0	17-0 16-0	21.0 21.0	17.0 17.0	17.0 18.0	14.0 14.0
27 28 29 30	18.0 17.0	13.0	19.0 18.0 18.0 18.0	15.0 14.0 14.0 13.0	19.0	15.0	19.0	17-0	21.0	17.0	17.0	14.0
27 28 29	18.0 17.0 17.0	13.0 13.0 13.0	19.0 18.0 18.0	15.0 14.0 14.0	19.0 18.0 19.0	15.0 14.0 13.0	19.0 20.0 20.0	17.0 16.0 16.0	21.0 21.0 22.0	17.0 17.0 16.0	17.0 18.0 16.0	14.0 14.0 15.0
27 28 29 30	18.0 17.0 17.0	13.0 13.0 13.0	19.0 18.0 18.0 18.0	15.0 14.0 14.0 13.0	19.0 18.0 19.0	15.0 14.0 13.0	19.0 20.0 20.0 20.0	17.0 16.0 16.0 17.0	21.0 21.0 22.0 22.0	17.0 17.0 16.0 17.0	17.0 18.0 16.0	14.0 14.0 15.0 15.0

NAVARRO RIVER BASIN 248

11468000 NAVARRO RIVER NEAR NAVARRO, CALIF.

LOCATION.--Lat 39°10'15", long 123°39'55", in SE¹/₄ 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.

DRAINAGE AREA. -- 303 sq mi.

PERIOD OF RECORD, -- Chemical analyses: January 1959 to July 1965. Water temperatures: October 1965 to September 1968.

NOVEMBER

EXTR EMES . -- 1967-68:

Period of record:
Water temperatures: Maximum, 25.0°C Aug. 20, 1966, June 30, 1967; minimum (1967-68), 6.0°C on several days in 1967 and 1968.

JANUARY

FEBRUARY

MARCH

REMARKS . -- Recorder malfunction Dec. 13-18.

OCTOBER

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DECEMBER

	00	OBER	1404	LADER	DEC	CHDLK	JA	TOAKI	FEDI	COART		HRUT
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	MIN	MAX	MIN
UAT	HAA	m t in	MAA	HIN	TAA	n I N	TAA	HIN	MAA	HIM	MAA	MIM
1	20.0	18.0	14.0	13.0	10.0	10.0	7.0	6.0	8.0	8.0	13.0	
2	18.0	17.0	14.0	13.0	10.0	10.0	7.0	6.0	9.0		12.0	12.0
3	18.0	17.0	14.0		10.0	10.0				8.0		12.0
				13.0	10.0		6.0	6.0	10.0	9.0	13.0	12.0
5	18.0 19.0	17.0 17.0	15.0	14.0	10.0	10.0	6.0	6.0	10.0	10.0	13.0	12.0
,	19.0	17.0	17.0	14.0	10.0	10.0	6.0	6.0	11.0	10.0	13.0	13.0
6	18.0	17.0	17-0	16.0	11.0	10.0	7.0	6.0	11.0	11.0	13.0	13.0
7	18.0	16.0	17.0	16.0	10.0	9.0	7-0	7.0	11.0	11.0	13.0	13.0
8	18.0	16.0	17.0	16.0	9.0	8.0	8.0	7.0	11.0	11.0	13.0	13.0
9	18.0	17.0	17.0	16.0	8.0	7-0	9.0	8.0	11.0	11.0	13.0	13.0
10	19.0	18.0	17.0	16.0	7.0	7.0	7.0	6.0	11.0	11.0	13.0	12.0
11	19.0	17.0	17.0	16.0	7.0	7.0	8.0	6.0	11.0	11.0	12.0	12.0
12	19.0	17.0	16.0	16.0	7.0	7.0	9.0	8.0	11.0	10.0	12.0	12.0
13	18.0	16.0	16.0	16.0			10.0	9.0	10.0	10.0	12.0	12.0
14	17.0	15.0	16.0	15.0			11.0	10.0	11.0	10.0	12.0	12.0
15	17.0	14.0	16.0	15.0			10.0	10.0	11.0	10.0	12-0	11.0
16	16.0	13.0	16.0	14.0			10.0	10.0	11.0	11.0	11.0	11.0
17	16.0	13.0	15.0	11.0			10.0	9.0	12.0	11.0	12.0	11.0
18	17.0	14.0	12.0	11.0			9.0	B-0	12.0	12.0	12.0	11.0
19	17.0	16.0	12.0	11.0	7.0	7.0	9.0	9.0	12.0	12.0	12.0	11.0
20	17.0	15.0	12.0	11.0	7.0	7.0	9.0	9.0	13.0	12.0	12.0	10.0
21	17.0	16.0	11.0	10.0	7.0	7.0	9.0	9.0	13.0	13.0	11.0	10.0
22	18.0	16.0	11.0	10.0	7.0	7.0	9.0	9.0	13.0	13.0	12.0	11.0
23	18.0	17.0	11.0	11.0	7.0	7.0	9.0	9.0	13.0	13.0	12.0	11.0
24	18.0	16.0	11.0	10.0	7.0	7.0	9.0	9.0	14.0	13.0	12.0	11.0
25	17.0	16.0	11.0	9.0	7.0	7.0	9.0	8.0	14.0	13.0		
	11.0	10.0	11.0	7.0	1.0	,.0	7.0	8.0	14.0	13.0	12.0	12.0
26	17.0	16.0	9.0	9.0	7.0	7.0	8.0	8.0	13.0	13.0	13.0	12.0
27	17.0	14.0	10.0	9.0	7.0		8.0					12.0
28	17.0	16.0		10.0	7.0	7.0		7.0	13.0	12.0	13.0	13.0
29	17.0	14.0	11.0	10.0	7.0	7.0	7.0 8.0	6.0	12.0	12.0	14-0	13.0
30	16.0		11.0		7.0	7.0		6.0	13.0	12.0	14.0	13.0
31	15.0 14.0	13.0 13.0	11.0	10.0	7.0 7.0	7.0 6.0	8.0 8.0	8.0 8.0			14.0 14.0	14-0
31	14.0	13.0			7.0	6.0	8.0	8.0			14.0	14.0
MONTH	20.0										• • •	
MONTH	20.0	13.0	17.0	9.0	11.0	6.0	11.0	6.0	14.0	8.0	14.0	10.0
	40	PRIL		YAY		JNE		JLY		UST		TEMBER
	Ar.	RIL	,	TAT	J1	JNE	30	JL T	AUG	0051	254	EMBER
244		M					444		444		444	4.74
OAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN

1	14.0	13.0	17.0	14.0	20.0	17.0	21.0	19.0	20.0	19.0	21.0	20.0
1 2	14.0 14.0	13.0 13.0	17.0 16.0	14.0	20.0	17.0 19.0	21.0 20.0	19.0 19.0	20.0 21.0	19.0 19.0	21.0 21.0	20.0
1 2 3	14.0 14.0 13.0	13.0 13.0 13.0	17.0 16.0 16.0	14.0 14.0 14.0	20.0 19.0 19.0	17.0 19.0 18.0	21.0 20.0 21.0	19.0 19.0 19.0	20.0 21.0 21.0	19.0 19.0 19.0	21.0 21.0 21.0	20.0 20.0 19.0
1 2 3 4	14.0 14.0 13.0 13.0	13.0 13.0 13.0	17.0 16.0 16.0	14.0 14.0 14.0	20.0 19.0 19.0 18.0	17.0 19.0 18.0 17.0	21.0 20.0 21.0 22.0	19.0 19.0 19.0 20.0	20.0 21.0 21.0 21.0	19.0 19.0 19.0	21.0 21.0 21.0 20.0	20.0 20.0 19.0 19.0
1 2 3	14.0 14.0 13.0	13.0 13.0 13.0	17.0 16.0 16.0	14.0 14.0 14.0	20.0 19.0 19.0	17.0 19.0 18.0	21.0 20.0 21.0	19.0 19.0 19.0	20.0 21.0 21.0	19.0 19.0 19.0	21.0 21.0 21.0	20.0 20.0 19.0
1 2 3 4 5	14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0	17.0 19.0 18.0 17.0	21.0 20.0 21.0 22.0 22.0	19.0 19.0 19.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0	20.0 20.0 19.0 19.0
1 2 3 4 5	14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0	17.0 19.0 18.0 17.0 14.0	21.0 20.0 21.0 22.0 22.0	19.0 19.0 19.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0	20.0 20.0 19.0 19.0 19.0
1 2 3 4 5	14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0	17.0 19.0 18.0 17.0 14.0	21.0 20.0 21.0 22.0 22.0	19.0 19.0 19.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0	20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7	14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0	17.0 19.0 18.0 17.0 14.0	21.0 20.0 21.0 22.0 22.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0	20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	14.0 14.0 13.0 13.0 14.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0	20.0 20.0 19.0 19.0 19.0 17.0
1 2 3 4 5 6 7	14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0	14.0 14.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0	17.0 19.0 18.0 17.0 14.0	21.0 20.0 21.0 22.0 22.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0	20.0 20.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9	14.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0	14.0 14.0 14.0 13.0 13.0 13.0 14.0	20.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9	14.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 16.0 15.0 16.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0	20.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 15.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 18.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 14.0 14.0	14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 13.0 13.0 14.0 13.0 14.0 15.0 15.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 14.0 14.0 15.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 14.0 14.0	14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14-0 14-0 13-0 13-0 14-0 13-0 14-0 15-0 15-0 15-0 14-0 14-0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0	14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 18.0 20.0 21.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 13.0 13.0 14.0 13.0 14.0 15.0 15.0 14.0 15.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 15.0 14.0 15.0 16.0	14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14-0 14-0 13-0 13-0 14-0 13-0 14-0 15-0 15-0 15-0 14-0 14-0 14-0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 15.0 14.0 14.0 16.0 16.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 21.0 21.0	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 145 167 18	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 15.0 16.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	14.0 14.0 13.0 13.0 14.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 21.0 21.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 145 167 18	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 15.0 16.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 21.0 21.0 21.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 20.0	20.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0
1 2 3 4 4 5 6 6 7 7 8 8 9 9 10 0 11 12 13 14 15 16 17 18 19 20	14.0 14.0 13.0 13.0 14.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 16.0 14.0 15.0 16.0 17.0 16.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 20.0 20	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 19.0 18.0 17.0 17.0 18.0 19.0
1 2 3 3 4 5 5 6 6 7 8 9 10 11 12 12 11 14 15 16 16 17 18 19 20 21	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0	14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 18.0 17.0 18.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 3 11 4 15 5 16 17 18 19 20 21 22	14.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 16.0 14.0 15.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 19.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 20.0 20	19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 20.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 17.0 18.0
1 2 3 3 4 5 5 6 6 7 8 9 10 11 12 12 11 14 15 16 16 17 18 19 20 21	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0	14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	20.0 19.0 19.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 11 4 15 5 16 17 18 19 20 21 22 23 24	14.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 6 7 8 9 10 11 12 12 11 14 14 15 16 16 17 18 19 20 21 22 22 23	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 16.0 15.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	19.0 19.0 20.0 20.0 20.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 11 4 15 5 16 17 18 19 20 21 22 23 24	14.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 16.0	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 21.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 22	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 2 3 4 4 5 5 6 7 7 8 9 10 11 11 12 13 3 11 4 15 5 16 17 18 19 20 22 23 24 25	14.0 14.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0 22.0 21.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 114 15 5 16 17 18 19 20 22 23 24 25 26 27	14.0 14.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0	14.0 14.0 14.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0	20.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 20.0 20.0	21.0 20.0 21.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 6 7 7 8 9 10 11 12 2 13 3 14 5 15 16 17 18 19 20 22 23 24 25 26 27 28 8 29	14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 15.0 15.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0	14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 20.0 20.0 21.0 20.0	21.0 20.0 21.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 21.0	19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0 21.0 22.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 20.0 20.0 21.0 20.0	21.0 20.0 21.0 22.0 22.0 21.0 22.0 21.0 22.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0 22.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	14.0 14.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 21.0 20.0 20.0 21.0 20.0	21.0 20.0 21.0 22.0 22.0 21.0 22.0 21.0 22.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0 22.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	20.0 20.0 19.0 19.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 8 9 10 11 12 12 13 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0 22.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 18.0 18.0 19.0	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 7 18 19 20 21 22 3 24 25 26 27 28 29 30 31 1 MONTH	14.0 14.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0	17.0 16.0 16.0 16.0 15.0 15.0 14.0 15.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	20.0 19.0 19.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	17.0 19.0 18.0 17.0 14.0 16.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	21.0 20.0 21.0 22.0 22.0 21.0 21.0 22.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 20.0 20.0 21.0 22.0	19.0 19.0 19.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	21.0 21.0 21.0 20.0 20.0 20.0 18.0 18.0 19.0	20.0 20.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
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11468500 NOYO RIVER NEAR FORT BRAGG, CALIF. LOCATION.--Lat 39°25'42", long 123°44'12" (revised), in NE4 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 1968.

NOVEMBER

EXTREMES.--1967-68:
Water temperatures: Maximum, 22.0°C July 24, 25, Aug. 29; minimum, 3.0°C Dec. 13, 14, Jan. 3.

OCTOBER

Period of record:
Water temperatures: Maximum, 22.0°C on several days in 1966-68; minimum, 2.0°C Dec. 17-21, 1965.

REMARKS.--Recorder stopped Oct. 1 to Nov. 15; temperature range, 10.0°C to 19.0°C. Recorder malfunction Dec. 18, 19.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANHARY

FERRUARY

DECEMBER

MARCH

	oc	TOB ER	NOV	MBER	DECI	MBER	JAR	IUARY	FER	UAKT	, n	KCH
			444	M 7 L	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY	MAX	MIN	MAX	MIN	MAA	m i m	MAX	77.14	MAA	414	HAA	7.14
1					10.0	9.0	7.0	4.0	9.0	8.0	12.0	11.0
2					11.0	9.0	6.0	4.0	9.0	8.0	12.0	11.0
3					10.0	8.0	4.0	3.0	10.0	9.0	12.0	11.0
4					9.0	8.0	6.0	4.0	10.0	10.0	12.0	11.0
5					10.0	9.0	6.0	4.0	11.0	10.0	11.0	9.0
6					9.0	8.0	7.0	6.0	11.0	11.0	11.0	9.0
7					9.0	8.0	8.0	7.0	11.0	11.0	11.0	9.0
8					9.0	8.0	8.0	8.0 8.0	11.0	11.0 10.0	11.0 11.0	9.0 8.0
9 10					9.0 8.0	8.0 7.0	9.0 9.0	8.0	11.0 11.0	10.0	11.0	9.0
10					8.0		7.0	8.0	11.0			,
11					7.0	4.0	8.0	7.0	11.0	9.0	11.0	9.0
12					4.0	4.0	9.0	8.0	10.0	9.0	11.0	9.0
13					4.0	3.0	10.0	9.0	10.0	9.0	11.0	10.0
14					4.0	3.0	11.0	10.0	10.0	9.0	11.0	10.0
15					6.0	4.0	11.0	10.0	10.0	9.0	11.0	10.0
								9.0		9.0	11.0	10.0
16			13.0 13.0	11.0 12.0	7.0 6.0	6.0 5.0	10.0 9.0	9.0	11.0 12.0	11.0	10.0	9.0
17 18			13.0	10.0			9.0	8.0	12.0	11.0	10.0	9.0
19			11.0	9.0			9.0	8.0	12.0	11.0	10.0	9.0
20			10.0	8.0	7.0	6.0	9.0	9.0	12.0	11.0	11.0	9.0
21			10.0	8.0	7.0	6.0	9.0	8.0	12.0	12.0	11.0	9.0
22			10.0	8.0	7.0	6.0	9.0	8.0	12-0	12.0	12.0	10.0
23			10.0	8.0	7.0	6-0	9.0	7.0	12-0	12.0	12.0	10.0 11.0
24 25			9.0 9.0	7.0 8.0	7.0 7.0	6.0 6.0	9.0 9.0	8.0 7.0	12.0 12.0	12.0 12.0	12.0 12.0	9.0
23			9.0	8.0	7.0	0.0	7.0		12.0	12.0		,,,
26			9.0	8.0	7.0	6.0	7.0	6.0	12.0	11.0	12.0	9.0
27			9.0	8.0	7.0	6.0	6.0	5.0	12.0	11.0	13.0	9.0
28			8.0	7.0	7.0	6.0	8.0	6.0	12.0	11.0	13.0	10.0
29			8.0	7.0	6.0	4.0	9.0	8.0	12.0	11.0	13.0	11.0
30			9.0	7.0	6-0	5.0	9.0	8.0			13.0	11.0
31					7.0	6.0	9.0	8.0			13.0	11.0
HONTH					11.0	3.0	11.0	3.0	12.0	8.0	13.0	8.0
					11.0	300		,,,	1245	•••		
	A	PRIL		MAY	J	UNE	Ji	JLY	AU	SUST	SEP	TEMAFR
		PRIL		MAY		UNE		JLY	AU	GUST	SEP	TEMBER
OAY	A MAX	PRIL Min	MAX	MAY	JI MAX	UNE MIN	IL XAM	JLY MIN	MAX	GUST MIN	SEP Max	TEMBER MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	MAX 13.0	MIN 11.0	MAX 16.0	MIN 11.0	MAX 19.0	MIN 16.0	MAX 19.0	MIN 16.0	MAX 18.0	MIN 16.0	MAX 20.0	MIN 17.0
	MAX 13.0 13.0	MIN 11.0 9.0	MAX 16.0 16.0	MIN 11.0 12.0	MAX 19.0 18.0	MIN 16.0 16.0	MAX 19.0 19.0	MIN 16.0 16.0	MAX 18.0 19.0	MIN 16.0 16.0	MAX 20.0 20.0	MIN 17.0 17.0
1 2	MAX 13.0 13.0 12.0	MIN 11.0 9.0 11.0	MAX 16.0 16.0 16.0	MIN 11.0 12.0 13.0	MAX 19.0 18.0 17.0	MIN 16.0 16.0 14.0	MAX 19.0 19.0 20.0	MIN 16.0 16.0 16.0	MAX 18.0 19.0 19.0	MIN 16.0 16.0 16.0	MAX 20.0 20.0 20.0	MIN 17.0 17.0 18.0
1 2 3	MAX 13.0 13.0	MIN 11.0 9.0 11.0	MAX 16.0 16.0 16.0 16.0	MIN 11.0 12.0	MAX 19.0 18.0 17.0 17.0	MIN 16.0 16.0 14.0 14.0	MAX 19.0 19.0 20.0 19.0	MIN 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0	MIN 16.0 16.0 16.0 15.0	MAX 20.0 20.0 20.0 18.0	MIN 17.0 17.0 18.0
1 2 3 4 5	MAX 13.0 13.0 12.0 14.0	MIN 11.0 9.0 11.0 11.0 9.0	MAX 16.0 16.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0	MAX 19.0 18.0 17.0 17.0	MIN 16.0 16.0 14.0 14.0	MAX 19.0 19.0 20.0 19.0 20.0	MIN 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0	MIN 16.0 16.0 16.0	MAX 20.0 20.0 20.0	MIN 17.0 17.0 18.0
1 2 3 4 5	MAX 13.0 13.0 12.0 14.0 13.0	MIN 9.0 11.0 11.0 9.0	MAX 16.0 16.0 16.0 15.0	MIN 11.0 12.0 13.0 11.0	MAX 19.0 18.0 17.0 17.0	MIN 16.0 16.0 14.0 14.0 12.0	MAX 19.0 19.0 20.0 19.0 20.0	MIN 16.0 16.0 16.0 15.0	MAX 18.0 19.0 19.0 19.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0	MAX 20.0 20.0 20.0 18.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0
1 2 3 4 5	MAX 13.0 13.0 12.0 14.0 13.0	MIN 11.0 9.0 11.0 11.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0	MIN 11.0 12.0 13.0 11.0 10.0	MAX 19.0 18.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 14.0 12.0	MAX 19.0 19.0 20.0 19.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0	MAX 18.0 19.0 19.0 20.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0	MAX 20.0 20.0 20.0 18.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0
1 2 3 4 5 6 7 8	MAX 13.0 13.0 12.0 14.0 13.0	MIN 11.0 9.0 11.0 9.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0	MIN 11.0 12.0 13.0 11.0 10.0	MAX 19.0 18.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 12.0 13.0 13.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0 16.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0	MIN 16-0 16-0 16-0 15-0 16-0 17-0 17-0 17-0	MAX 20.0 20.0 20.0 18.0 18.0 17.0	HIN 17.0 17.0 18.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	MAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0	9.0 11.0 9.0 11.0 9.0 9.0 9.0 10.0 12.0	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 14.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0 20.0 19.0 21.0	MIN 16.0 16.0 16.0 15.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0	MIN 16.0 16.0 16.0 15.0 15.0 17.0 17.0 17.0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 17.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8	MAX 13.0 13.0 12.0 14.0 13.0	MIN 11.0 9.0 11.0 9.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0	MIN 11.0 12.0 13.0 11.0 10.0	MAX 19.0 18.0 17.0 17.0 17.0	MIN 16.0 16.0 14.0 12.0 13.0 13.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0 16.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0	MIN 16-0 16-0 16-0 15-0 16-0 17-0 17-0 17-0	MAX 20.0 20.0 20.0 18.0 18.0 17.0	HIN 17.0 17.0 18.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	HAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0 14.0	MIN 11.0 9.0 11.0 9.0 9.0 9.0 10.0 12.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 14.0 14.0 12.0 13.0 13.0 14.0 15.0	MAX 19.0 20.0 19.0 20.0 20.0 20.0 20.0 21.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0 16.0 17.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0	MIN 16.0 16.0 15.0 15.0 17.0 17.0 17.0 16.0	MAX 20-0 20-0 18-0 18-0 17-0 17-0 19-0 18-0	MIN 17.0 17.0 18.0 17.0 17.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	9.0 11.0 9.0 11.0 9.0 10.0 9.0 10.0 12.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0 14.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0 12.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	MIN 16.0 14.0 14.0 12.0 13.0 13.0 14.0 15.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0 20.0 21.0 20.0 20.0	MIN 16.0 16.0 16.0 15.0 16.0 16.0 17.0 16.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0	MIN 16-0 16-0 15-0 15-0 17-0 17-0 16-0 16-0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0	9.0 11.0 9.0 11.0 9.0 9.0 9.0 10.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0	MIN 11.0 12.0 13.0 11.0 10.0 12.0 13.0 12.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0	MAX 19-0 19-0 20-0 19-0 20-0 20-0 20-0 21-0 20-0	MIN 16.0 16.0 16.0 15.0 16.0 16.0 17.0 16.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0	MIN 16-0 16-0 15-0 16-0 17-0 17-0 16-0 16-0	MAX 20.0 20.0 20.0 18.0 17.0 17.0 17.0 19.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	HAX 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0	MIN 11.0 9.0 11.0 11.0 9.0 9.0 10.0 12.0 11.0	MAX 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 15.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MIN 16.0 16.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0 20.0 21.0 20.0 20.0 20.0 20	MIN 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 16.0 16.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10	13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0	9.0 11.0 9.0 11.0 9.0 9.0 9.0 10.0 11.0	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 13.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	MIN 16.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 21.0 20.0 20.0 20	MIN 16.0 16.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 17.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 17.0 18.0	MIN 16.0 16.0 15.0 15.0 17.0 17.0 16.0 16.0 16.0	MAX 20.0 20.0 20.0 18.0 17.0 17.0 17.0 19.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	HAX 13.0 12.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	MIN 11.0 9.0 11.0 9.0 10.0 9.0 10.0 12.0 10.0 9.0 10.0 9.0 10.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0	MIN 11.0 12.0 13.0 10.0 10.0 11.0 12.0 12.0 12.0 12.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 21.0	MIN 16.0 16.0 14.0 12.0 13.0 13.0 14.0 15.0 13.0 14.0 14.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 20.0 20	MIN 16.0 16.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 17.0 16.0 17.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 18.0 18.0 19.0	MIN 16.0 16.0 16.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 13.0 12.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	9.0 11.0 9.0 11.0 9.0 11.0 9.0 9.0 10.0 12.0 11.0 10.0 9.0 9.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 16.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 15.0 15.0 15.0 14.0 15.0	MAX 19.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 17.0 19.0	MIN 16.0 16.0 16.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MAX 20.0 20.0 20.0 18.0 17.0 17.0 17.0 19.0 18.0	MIN 17-0 18-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 15-0 16-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 13.0 13.0 12.0 14.0 13.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0	9.0 11.0 9.0 11.0 9.0 10.0 10.0 10.0 10.	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0 17.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 12.0 11.0 12.0 11.0 12.0 11.0	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 21.0	MIN 16.0 16.0 14.0 12.0 13.0 13.0 13.0 15.0 13.0 14.0 14.0 14.0 14.0	HAX 19.0 19.0 20.0 20.0 20.0 20.0 21.0 20.0 20.0 20	MIN 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 14.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0	MIN 16.0 16.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 18.0	MIN 17-0 18-0 17-0 18-0 17-0 16-0 16-0 16-0 16-0 17-0 16-0
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	HAX 13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	9.0 11.0 9.0 11.0 9.0 11.0 9.0 9.0 10.0 12.0 11.0 10.0 9.0 9.0 9.0	16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 12.0 11.0 12.0 12	MAX 19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 15.0 15.0 15.0 14.0 15.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	16.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 19.0 19.0	MIN 16-0 16-0 15-0 15-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0
1 2 3 4 4 5 6 7 8 9 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MAX 13-0 13-0 12-0 14-0 13-0 14-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	9.0 11.0 9.0 11.0 9.0 12.0 12.0 12.0 12.0 10.0 9.0 10.0 9.0 10.0 9.0	MAX 16.0 16.0 16.0 15.0 15.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0 17.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 12.0 11.0 12.0 11.0 12.0 11.0	19.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 21.0 20.0	HIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 14.0 15.0 13.0 14.0 14.0	HAX 19.0 19.0 20.0 20.0 20.0 20.0 21.0 20.0 20.0 20	MIN 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 14.0	MAX 18.0 19.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0	MIN 16.0 16.0 15.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 18.0	MIN 17-0 18-0 17-0 18-0 17-0 16-0 16-0 16-0 16-0 17-0 16-0
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20	HAX 13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	MIN 11.0 9.0 11.0 9.0 9.0 9.0 12.0 11.0 9.0 10.0 12.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 16.0 16.0 16.0 16.0 15.0 16.0 16.0 14.0 14.0 14.0 15.0 17.0 17.0	MIN 11.0 12.0 13.0 11.0 10.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 12	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 21.0 21.0 20.0 20.0 20.0	MIN 16.0 14.0 14.0 12.0 13.0 13.0 13.0 15.0 15.0 14.0 15.0 14.0 14.0	19.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 19.0 19.0 19.0 20.0 21.0 18.0 18.0 18.0 17.0 19.0 19.0 19.0 19.0	MIN 16-0 16-0 16-0 15-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 20.0 20.0 20.0 18.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	HAX 13.0 13.0 12.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 11.0 9.0 11.0 11.0 9.0 10.0 10.0 10.0 1	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 21.0 20.0 20.0 20.0 20.0	MIN 16.0 16.0 16.0 14.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 15.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	MAX 18.0 19.0 19.0 20.0 20.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 17.0 17.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	HAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0 14.0 14.0 13.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 13.0	11.0 9.0 11.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 10.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0	MAX 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 21.0 20.0 20.0 20.0 20.0	HIN 16.0 14.0 14.0 12.0 13.0 13.0 13.0 15.0 12.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 19-0 19-0 20-0 20-0 20-0 20-0 21-0 20-0 20-0 20	MIN 16.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	18.0 19.0 19.0 20.0 21.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0	MIN 16-0 16-0 16-0 15-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 17.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 18.0 17.0 18.0
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1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 22 5 26 27 28 8 29	HAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0	#IN 11.0 9.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	MAX 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	MIN 11.0 12.0 13.0 11.0 12.0 13.0 11.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 15.0 13.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 20.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0 21	MIN 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0	MAX 20.0 20.0 20.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 25 26 27 28 29 30	HAX 13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0	MIN 11.0 9.0 11.0 9.0 10.0 10.0 10.0 10.0 9.0 10.0 9.0 9.0 9.0 9.0 10	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0 12.0 12.0 12.0 11.0 12.0 12.0 12	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 14.0 12.0 13.0 13.0 13.0 15.0 15.0 15.0 16.0 15.0 16.0 17.0 15.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 15.0 14.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX 18.0 19.0 19.0 20.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 17.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 11.0 17.0 11.0 11.0 11.0 11
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 22 5 26 27 28 8 29	HAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0	#IN 11.0 9.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	MAX 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	MIN 11.0 12.0 13.0 11.0 12.0 13.0 11.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 15.0 13.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 20.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 21.0 21.0 21	MIN 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAX 20.0 20.0 20.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 25 26 27 28 29 30	HAX 13.0 13.0 12.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 16.0 16.0 16.0	#IN 11.0 9.0 11.0 11.0 11.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0 12.0 12.0 12.0 11.0 12.0 12.0 12	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 13.0 13.0 15.0 13.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 15.0 14.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HAX 18.0 19.0 19.0 20.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 22.0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	MAX 20.0 20.0 20.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 17.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 25 26 27 28 29 30 31	HAX 13.0 13.0 12.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 9.0 11.0 9.0 9.0 9.0 10.0 11.0 11.	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 11.0 12.0 13.0 11.0 12.0 12.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 14.0 14.0 12.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 15.0 14.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 19.0 19.0 20.0 21.0 21.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0	MAX 20.0 20.0 20.0 18.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 17.0 17.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 17.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19

250 TENMILE RIVER BASIN

11468600 MIDDLE FORK TERMILE RIVER NEAR FORT BRAGG, CALIF.

LCCATION. -- Lat 39°34'20", long 123°41'45", in NEINEI sec. 25, T. 20 N., R.17 W., Mendocino County, temperature recorder at gaging station on right bank, 0.9 mile upstream from confluence with North Fork Tenmile River, and 10.4 miles northeast of Fort Brage.

DRAINAGE AREA .-- 32.9 sq mi.

OCTOBER

PERIOD OF RECORD, -- Water temperatures: October 1964 to September 1968.

NOVEMBER

EXTREMES, --1967-68:
Water temperatures: Maximum, 20.0°C June 24; minimum, 4.0°C on several days during December and January.

DECEMBER

Period of record:

Mater temperatures: Maximum, 20.5°C June 14, 18, 1966; minimum (1964-65, 1966-68), 4.0°C on several days in 1967 and 1968.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY

FEBRUARY

MARCH

	OC.	TOBER	NOV	EMBER	DECI	EMBER	JAR	IUARY	FEBI	RUARY	n/	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
UAT	пил		nev.	-114	700	Litte	men	77.10	DAN		770	
1	16.0	14.0	12.0	11.0	9.0	9.0	6.0	6.0	9.0	9.0	11.0	11.0
ž	14.0	14.0	12.0	11.0	9.0	9.0	6.0	6.0	10.0	9.0	12.0	11.0
3	15.0	14.0	12.0	11.0	10.0	9.0	6.0	4.0	10.0	10.0	12.0	11.0
4	14.0	13.0	12.0	12.0	10.0	10.0	4.0	4-0	10.0	9.0	12.0	11.0
5	15.0	14.0	13.0	12.0	10.0	9.0	4.0	4.0	10.0	9.0	11.0	11.0
6	14.0	13.0	13.0	13.0	9.0	9.0	5.0	4.0	10.0	10.0	11.0	10.0
7	14.0	14.0	13.0	13.0	9.0	9.0	6.0	5.0	10.0	10.0	11.0	11.0
8	16.0	13.0	14.0	13.0	9.0	9.0	7.0	6.0	10.0	10.0	11.0	10.0
9	14.0	13.0	13.0	13.0	9.0	8.0	B.O	7.0	10.0	10.0	11.0	9.0
10	15.0	14.0	13.0	13.0	8.0	8.0	8.0	8.0	10.0	10.0	10.0	8.0
11	16.0		13-0	13.0	8.0		8.0	8.0	10.0	9.0	11.0	9.0
		13.0				8.0			10.0	9.0		10.0
12 13	16.0 15.0	14.0 13.0	13.0 13.0	13.0 13.0	8.0 7.0	7.0 5.0	8.0 9.0	8.0 8.0	11.0	10.0	10.0 10.0	9.0
14	14.0	13.0	14.0	13.0	5.0	4.0	9.0	9.0	11.0	11.0	11.0	10.0
15	13.0	12.0	14.0	13.0	5.0	4.0	10.0	9.0	11.0	10.0	11.0	10.0
			2.00	1,44		•••						
16	13.0	12.0	13.0	13.0	4.0	4.0	9.0	9.0	12.0	11.0	11.0	11.0
17	13.0	12.0	13.0	12.0	5.0	4.0	9-0	9.0	12.0	11.0	11.0	10-0
18	13.0	12.0	12.0	12.0	6.0	5.0	9.0	8.0	12.0	12.0	10.0	9.0
19	14.0	13.0	13.0	12.0	6.0	6.0	9.0	8.0	12.0	12.0	11.0	9.0
20	13.0	12.0	12.0	11.0	6.0	5.0	8.0	8-0	12.0	12.0	10.0	9.0
21	13.0	13.0	12.0	11.0	6.0	5.0	8.0	8.0	12.0	12.0	11.0	9.0
22	14.0	13.0	11.0	10-0	6-0	6.0	9.0	9.0	12.0	12.0	11.0	10.0 10.0
23	14.0	14.0 13.0	10.0	10.0	6.0 6.0	6.0	9.0 9.0	8.0 8.0	12.0 12.0	12.0 12.0	12.0 12.0	10.0
24 25	14.0		10.0	9.0 10.0	6.0	6.0 6.0	9.0	8.0	12.0	11.0	12.0	11.0
25	17.0	13.0	10.0	10.0	0.0	0.0	7.0	8.0	12.0	11.0	12.0	11.0
26	13.0	13.0	10.0	9.0	6.0	6.0	8.0	7.0	12.0	11.0	11.0	10.0
27	14.0	13.0	9.0	8.0	6.0	6.0	7.0	7.0	12.0	11.0	12.0	10.0
28	13.0	13.0	8.0	8-0	6.0	6.0	7.0	7.0	12.0	11.0	13.0	11.0
29	13.0	12.0	9.0	8.0	6.0	6.0	8.0	7.0	12.0	11.0	13.0	11.0
30	12.0	12.0	9.0	9.0	6.0	5.0	10.0	8.0			13.0	12.0
31	12.0	11.0			6.0	5.0	9.0	9.0			13.0	11.0
MONTH	16.0	11.0	14.0	8.0	10.0	4.0	10.0	4.0	12.0	9.0	13.0	8.0
	A	PRIL	1	MAY	J	JNE	JL	JLY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	15.0	12.0	18.0	14.0	17.0	14.0	16.0	14-0	18.0	17.0
1 2	12.0 13.0	11.0	15.0 15.0	12.0	18.0 17.0	14.0 16.0	17.0 17.0	14.0 15.0	16.0 17.0	14-0 15-0	18.0 18.0	17.0 17.0
1	12.0 13.0 13.0	11.0 11.0 11.0	15.0 15.0 15.0	12.0 11.0 13.0	18.0 17.0 17.0	14.0 16.0 16.0	17.0 17.0 18.0	14.0 15.0 15.0	16.0 17.0 17.0	14-0 15-0 14-0	18.0 18.0 18.0	17.0 17.0 16.0
1 2 3	12.0 13.0	11.0	15.0 15.0	12.0	18.0 17.0	14.0 16.0	17.0 17.0	14.0 15.0	16.0 17.0	14-0 15-0	18.0 18.0	17.0 17.0 16.0 17.0
1 2 3 4	12.0 13.0 13.0 12.0	11.0 11.0 11.0	15.0 15.0 15.0 14.0 14.0	12.0 11.0 13.0 13.0	18.0 17.0 17.0 16.0	14.0 16.0 16.0 15.0	17.0 17.0 18.0 18.0	14.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0	18.0 18.0 18.0 17.0	17.0 17.0 16.0
1 2 3 4 5	12.0 13.0 13.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0	15.0 15.0 15.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0	18.0 17.0 17.0 16.0 16.0	14.0 16.0 16.0 15.0 14.0	17.0 17.0 18.0 18.0 18.0	14.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0	14.0 15.0 14.0 14.0 13.0	18.0 18.0 18.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0
1 2 3 4 5	12.0 13.0 13.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0	15.0 15.0 15.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0	18.0 17.0 17.0 16.0 16.0	14.0 16.0 16.0 15.0 14.0	17.0 17.0 18.0 18.0 18.0	14.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0 13-0	18.0 18.0 18.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8	12.0 13.0 13.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0	15.0 15.0 15.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0	18.0 17.0 17.0 16.0 16.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0	17.0 17.0 18.0 18.0 18.0 17.0	14.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0 19.0 18.0	14-0 15-0 14-0 14-0 13-0 13-0 15-0	18.0 18.0 18.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8	12.0 13.0 13.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0	14-0 15-0 14-0 14-0 13-0 15-0 16-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8	12.0 13.0 13.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0	15.0 15.0 15.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0	18.0 17.0 17.0 16.0 16.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0	17.0 17.0 18.0 18.0 18.0 17.0	14.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0 19.0 18.0	14-0 15-0 14-0 14-0 13-0 13-0 15-0	18.0 18.0 18.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0
1 2 3 4 5 6 7 8 9	12-0 13-0 13-0 12-0 12-0 12-0 12-0 14-0	11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 11.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0	14.0 15.0 14.0 14.0 13.0 15.0 16.0 16.0	18.0 18.0 17.0 17.0 16.0 16.0 16.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0
1 2 3 4 5 6 7 8 9	12.0 13.0 13.0 12.0 12.0 12.0 12.0 14.0 14.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 16.0 15.0 15.0 14.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0 13-0 13-0 15-0 16-0 15-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10	12-0 13-0 13-0 12-0 12-0 12-0 12-0 14-0 14-0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0 13-0 15-0 16-0 16-0 16-0 14-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 14.0
1 2 3 4 5 6 7 8 9	12-0 13-0 13-0 12-0 12-0 12-0 14-0 14-0 14-0	11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 11.0 12.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0 13-0 13-0 16-0 16-0 16-0 16-0	18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	12-0 13-0 13-0 12-0 12-0 12-0 12-0 14-0 14-0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0	14-0 15-0 14-0 14-0 13-0 15-0 16-0 16-0 16-0 14-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10	12.0 13.0 13.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 13.0	11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 12.0 11.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0	14.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0 15.0 15.0	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0 16.0 16.0	14-0 15-0 14-0 13-0 13-0 15-0 16-0 16-0 16-0 16-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 18.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12-0 13-0 13-0 12-0 12-0 12-0 12-0 14-0 14-0 13-0 13-0 13-0	11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0	12.0 11.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 16.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 18.0	14-0 15-0 14-0 13-0 13-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 18.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12-0 13-0 13-0 12-0 12-0 12-0 12-0 14-0 13-0 13-0 13-0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 15.0	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 18.0	14.0 16.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 16.0 16.0 17.0	14-0 15-0 14-0 13-0 13-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 18.0 17.0 17.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 145 167 18	12.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 14.0 15.0 15.0 16.0	12.0 11.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 12.0 11.0 11	18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 19.0	14.0 16.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 13.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0	18.0 18.0 17.0 17.0 17.0 16.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	12.0 13.0 13.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 15.0 15.0	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0	14.0 16.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0	14.0 15.0 14.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 145 167 18	12.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 14.0 15.0 15.0 16.0	12.0 11.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 12.0 11.0 11	18.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 19.0	14.0 16.0 15.0 15.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0	17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 13.0 16.0 16.0 16.0 16.0 14.0 16.0 16.0	18.0 18.0 17.0 17.0 17.0 16.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 4 5 6 7 7 8 9 9 10 0 11 12 13 14 15 16 17 18 19 20 0	12.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 11.0 12.0 11.0 12.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 15.0	12.0 11.0 13.0 12.0 11.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 18.0 19.0 18.0 18.0 18.0	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 14.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 20 21	12.0 13.0 12.0 12.0 12.0 12.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 15.0 15.0 15.0	12.0 11.0 13.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 11.0 11	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 16.0 15.0 15.0 13.0 13.0 13.0 14.0 15.0 13.0 14.0 15.0 16.0 16.0 16.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0 18.0 18.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 17.0 16.0 16.0 18.0 17.0 17.0 17.0	14.0 15.0 14.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 17.0 16.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 2 13 11 4 11 5 11 6 11 7 18 19 20 21 12 22	12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	12.0 11.0 13.0 12.0 10.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0	14.0 16.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 11.0
1 2 3 3 4 5 5 6 7 7 8 9 10 11 12 12 11 15 16 17 17 18 19 20 21 22 23	12.0 13.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 12.0 11.0 11.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 16.0 16.0 16.0 15.0 16.0 16.0 17.0	17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 16.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0 11.0 11.0 11.0 12.0
1 2 3 4 4 5 6 7 7 8 9 9 10 11 11 2 13 11 4 11 5 11 6 11 7 18 19 20 21 12 22	12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0	15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	12.0 11.0 13.0 12.0 10.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0	14.0 16.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 14.0 15.0 15.0 15.0 15.0 11.0 11.0 12.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 4 15 16 17 18 19 20 22 23 24	12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 12.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0	15.0 15.0 14.0 14.0 14.0 14.0 13.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 18.0 18.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0	17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0 11.0 11.0 11.0 12.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 12 12 14 15 16 17 17 18 19 20 21 22 22 22 22 22 24 25 26	12.0 13.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 12.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 18.0	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 17.0 16.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 114 15 16 17 18 19 20 22 23 24 25 26 27	12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 12.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 13.0 15.0 15.0 16.0 15.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	12.0 13.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 16.0 16.0 15.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 114 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30	12.0 13.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 114 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 10.0 11.0 11.0 12.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 3 4 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	12.0 13.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30	12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 12.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 7 8 9 9 10 11 12 12 13 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31 MONTH	12.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	11.0 11.0 11.0 11.0 11.0 11.0 10.0 9.0 10.0 12.0 12.0 12.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11	15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	12.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 19.0 18.0 19.0	14.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	14.0 15.0 14.0 13.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0	17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
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251

11469000 MATTOLE RIVER NEAR PETROLIA, CALIF.

LOCATION (revised),--Lat 40°18'42", long 124°15'48", in NW\u00e4 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 1968. Water temperatures: November 1965 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 27.0°C on several days during June and August; minimum, 4.0°C Jan. 3, 4, 6.

Period of record (1968-68): Water temperatures: Maximum, 27.0°C on several days in 1968; minimum, 4.0°C Jan. 3, 4, 6, 1968.

REMARKS. -- Probe buried Oct. 12-26; recorder stopped Dec. 4-20.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (AA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO31	CAR- BONATE (CO3)	SULFATE (SC4)	CHLO- RIDE (CL)	NITRATE (NO31	BORON (B)
ост.											
93	583			8.6		BO	0		5.5		•06
NOV. 07	55			11		121	0		6.2		•10
DEC.											
05 JAN.	4320			6.1		51	0		4.7		.11
09	3300			5.6		26	0		6.7		.20
FER. 06	2650			4.8		56	0		3.9		.07
MAR. 05	1160			6.0		64	0		3.8		•02
APR. 02	733			5.8		69	0		4.3		.10
MAY 07	185	26	3.6	7.5	1.0	84	2	1.6	3.8	•0	.05
JUNE 04	145			7.7		94	0		3.7		.07
JULY C9	61			6.7		111	0		3.9		.13
AUG. 06	49			10		116	0		4.7		-08
SEPT.											
10	57	38	7.3	9.8	1.6	127	0	32	4.8	•0	.09
	015-			nts-				SPFCI-			
CATE	SOLVED SOLIDS (KESI- DUE AT 190 C)	HARD- NESS (CA,MG)	NON- CAR- BCNATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PFRCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	рн	TEM- PERA- TURE (DEG C1	DIS- SOLVED OXYSEN
CCT.	SOLIDS (RESI- DUE AT	NESS (CA,MG)	CAR- BCNATE HARD- NESS	SOLIDS (TUNS PER	SUDIAM	AO- SORP- TION RATIO	LINITY	COND- UCTANGE (MICRO- MHOS)	рн 7.7	PERA- TURE	SOLVED
03 NUV.	SOLIDS (KESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BCNATE HARD- NESS	SOLIDS (TONS PER AC-FT)	\$001UM	AO- SORP- TION RATIO	AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.7	PERA- TURE (DEG C)	SOLVED OXYSEN
CCT.	SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG)	CAR- BCNATE HARD- NESS	SOLIDS (TUNS PER AC-FT)	SUDIAM	AO- SORP- TION RATIO	LINITY AS GACO3	COND- UCTANCE (MICRO- MHOS) 243	7.7 8.1	PERA- TURE (DEG C)	SOLVED OXYGEN 9.2 10.6
CCT. 03 NOV. C7 DEC. 05	SOLIDS (KESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BCNATE HARD- NESS	SOLIDS (TONS PER AC-FT)	\$001UM	AO- SORP- TION RATIO	AS CACO3	COND- UCTANCE (MICRO- MHOS)	7.7	PERA- TURE (DEG C)	SOLVED OXYSEN
CCT. 03 NUV. C7 EEC. 05 JAN.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 94 123	CAR- BCNATE HARD- NESS 28	SOLIDS (TONS PER AC-FT)	SDDIUM 17 16	AO- SORP- TION RATIO	LINITY AS CACO3	COND- UCTANCE (MICRO- MHOS) 243	7.7 8.1	PERA- TURE (DEG C)	SOLVED OXYGEN 9.2 10.6
CCT. 03 NUV. C7 EEC. 05 JAN. 09 FER. C6	SOLIDS (KESI- DUE AT 190 C)	NESS (CA, MG) 94 123 52	CAR- BCNATE HARD- NESS 28 24	SOLIDS (TONS PER AC-FT)	\$001UM 17 16 20	AO- SORP- TION RATIO	66 99	COND- UCTANCE (MICRO- MHOS) 243 297	7.7 8.1 7.6	PERATURE (DEG C)	9.2 10.6
CCT. 03 NUV. C7 DEC. 05 JAN. 09 FER. C6	SOLIDS (RESI- DUE AT 180 C)	NESS (CA, MG) 94 123 52 32	CAR- BCNATE HARD- NESS 28 24 10	SOLIDS (TONS PER AC-FT)	\$001UM 17 16 20 28	AO- SORP- TION RATIO	66 99 42	COND- UCTANCE (MICRO- MHOS) 243 297 134	7.7 8.1 7.6	PERATURE (DEG C)	9.2 10.6 11.0
CCT. 03 NUV. C7 EEC. 05 JAN. 09 FEB. C6 MAK. 05 APR.	SOLIDS (KESI- DUE AT 190 C)	NESS (CA, MG) 94 123 52 32 47	CAR- BC NATE HARD- NESS 28 24 10 11	SOLIDS (TONS PER AC-FT)	\$101UM 17 16 20 28 18	AO- SORP- TION RATIO	66 99 42 21	COND- UCTANCE (MICRO- MHOS) 243 297 134 80	7.7 8.1 7.6 7.0	PERATURE (DEG C1	9.2 10.6 11.0 11.3
CCT. 03 NUV. C7 EEC. 05 JAN. 09 FER. C6 MAK. 05 APR. 02 MAY C7	SOLIDS (KESI- DUE AT 130 C)	NESS (CA, MG) 94 123 52 32 47 64	CAR- BCNATE HARD- NESS 28 24 10 11	SOLIDS (TONS PER AC-FY)	\$101UM 17 16 20 28 18	AO- SORP- TION RATIO .4 .4 .4 .4 .4 .3	66 99 42 21 46	COND- UCTANCE (MICRO- MHOS) 243 297 134 80 129	7.7 8.1 7.6 7.0 7.9	PERATURE (DEG C)	9.2 10.6 11.0 11.3 11.2
CCT. 03 NUV. C7 EEC. 05 JAN. 09 FER. C6 MAK. 05 APR. 02 MAY C7 JUNE	SOL 19S (RESI- DUE AT 180 C)	NESS (CA, MG) 94 123 52 32 47 64 63	CAR- BCNATE HARD- NESS 28 24 10 11 1	SOLIDS (TONS PER AC-FT)	\$001UM 17 16 20 28 18 17	AD- SORP- TION RATIO .4 .4 .4 .4 .4 .3 .3	LINITY AS CACO3 66 99 42 21 46 52	COND- UCTANCE (MICRO- MHOS) 243 297 134 80 129 150	7.7 8.1 7.6 7.0 7.9 7.9	PERA- TURE (DEG C) 18 10 0 11 12	9.2 10.6 11.0 11.3 11.2 10.8
CCT. O3 NUV. C7 EEC. O5 JAN. O9 FER. C6 MAK. O5 APR. O2 MAY C7 JUEY O9	SOLIOS (RESI-DUE AT 190 C)	NESS (CA, MG) 94 123 52 32 47 64 63 80	CAR- BCNATE HARD- NESS 28 24 10 11 1	SOLIDS (TUNS PER AC-FT)	\$001UM 17 16 20 28 18 17 17	AO- SORP- TION RATIO .4 .4 .4 .3 .3 .3	LINITY AS CACCO3 66 99 42 21 46 52 57 72	COND- UCTANCE (MICRO- MHOS) 243 297 134 80 129 150	7.7 8.1 7.6 7.0 7.9 7.9 8.0	PERA- TURE (DEG C) 18 10 0 11 12 12	9.2 10.6 11.0 11.3 11.2 10.8 11.1
CCT. 03 NOV. C7. CEC. 05 JAN. 09 FER. C6 APR. 05 APR. 02 JUNE 04 JULY 09 AUG.	SOLIOS (KESI- DUE AT 190 C)	NESS (CA.MG) 94 123 52 32 47 64 63 80 86	CAR- BC NATE HARD- NESS 28 24 10 11 1 1 16 8 9 9	SOLIDS (TUNS PER AC-FT)	\$DDIUM 17 16 20 28 18 17 17 17	AO- SORP- TION RATIO .4 .4 .4 .4 .3 .3 .3	LINITY AS CACO3 66 99 42 21 46 52 57 72	COND- UCTANCE (MICRO- MHOS) 243 297 134 PC 129 150 151	7.7 8.1 7.6 7.0 7.9 7.9 8.0 8.4	PERA- TURE (DEG C) 18 10 0 11 12 12 18	9.2 10.6 11.0 11.3 11.2 10.8 11.1
CCT. 03 NOV. C7 EEC. 05 JAN. 09 FER. C6 MAR. 05 APR. 02 MAY C7 JUNE 04 JULY 09	SOLIOS (KESI- DUE AT 140 C) 118	NESS (CA, MG) 94 123 52 32 47 64 63 80 86 105	CAR- BC NATE HARD- NESS 28 24 10 11 1 1 16 8 9 14	SOLIDS (TUNS) PER AC-FT1	\$00104 17 16 20 28 18 17 17 17 16	AO- SORP- TION RATIO .4 .4 .4 .4 .3 .3 .3 .4	EINITY AS CACO3 66 99 42 21 46 52 57 72 77	COND- UCTANCE (HICRO- MHOS) 243 297 134 PC 129 150 151 194 210	7.7 8.1 7.6 7.9 7.9 8.0 8.4	PERATURE (DEG C)	9.2 10.6 11.0 11.3 11.2 10.8 11.1

MATTOLE RIVER BASIN

11469000 MATTOLE RIVER NEAR PETROLIA, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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 79 30 31 OCTOBER MUMIXAM MINIMUM NDVEMBER MAXIMUM MINIMUM DECEMBER 17 18 17 14 16 16 17 17 15 16 16 17 15 14 14 15 14 14 14 13 13 12 12 12 12 10 13 13 13 13 14 14 14 14 13 14 14 14 15 13 13 13 12 12 11 11 11 9 9 10 9 8 MUMIXAM MUMINIM 8 9 11 -- -- -- 6 **JANUARY** MUMIXAM MUMINIM 7 6 7 8 9 9 8 8 11 11 11 12 9 9 9 9 5 4 6 7 8 8 7 7 8 11 11 9 9 8 8 9 11 10 9 FEBRUARY MAXIMUM 12 MAXIMUM MINIMUM APRIL MAXIMUM MINIMUM 13 12 14 13 13 14 14 15 17 17 17 15 15 16 15 14 15 16 16 15 16 16 13 16 17 18 20 20 19 19 ---MAY MUMIXAM MUMINIM 18 19 18 19 18 18 20 20 20 21 16 17 17 19 21 21 20 23 19 19 20 21 18 16 19 19 23 23 22 23 21 13 13 14 14 13 12 14 13 14 14 13 13 14 14 13 14 16 16 16 16 16 16 17 16 14 15 17 17 18 17 16 16 JUNE MAXIMUM MINIMUM 24 21 23 23 18 18 22 22 23 23 22 22 24 25 26 27 27 27 27 26 26 27 26 27 26 27 25 22 23 24 -- 17 19 18 17 15 15 14 16 16 17 18 17 16 16 18 18 18 18 19 18 19 19 19 19 19 18 19 20 18 16 15 16 --JULY MAXIMUM MINIMUM 24 26 26 26 25 26 24 26 24 26 23 22 71 24 24 23 23 24 73 19 22 22 24 24 26 24 24 24 21 24 24 17 18 18 19 19 19 19 19 19 18 18 18 18 19 18 18 17 17 18 19 19 18 18 18 18 18 19 17 17 23 AUGUST MAXIMUM MINIMUM SEPTEMBER 24 26 26 26 26 26 26 26 24 26 25 24 26 25 25 25 25 24 26 26 27 27 26 26 25 26 27 27 23 24 26 22 25 19 19 18 18 18 18 18 18 19 19 19 19 19 20 18 18 18 17 18 19 19 18 18 18 18 19 19 19 19 20 20 24 18 MAXIMUM 26 26 25 25 24 23 22 23 24 24 24 26 21 24 23 23 26 22 20 21 20 27 23 23 23 22 23 22 21 19 --23

KRI. RIVER BASIN

11470000 LAKE PILLSBURY NEAR POTTER VALLEY. CALIF.

LOCATION. -- Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., Mendocino County, temperature recorder at gaging station at Scott Dam, near right bank of Eel River, 0.3 mile downstream from Rice Fork, and 10.2 miles northeast of town of Potter Valley.

DRAINAGE ARRA, -- 289 sq mi.

PERIOD OF RECORD, -- Water temperatures: December 1965 to September 1968 (discontinued). Sediment records: October 1966 to September 1967 (periodic).

EXTREMES.--1967-68:
Water temperatures: Maximum, 26.0°C on several days in July and August; minimum, 4.0°C on several days during
December and January.

Period of record:

Water temperatures: Maximum, 27.5°C July 1, 2, 4, 5, 1967; minimum (1967-68), 4.0°C on several days during 1967 and 1968.

REMARKS, -- Recorder malfunction Mar. 8-19, May 13-23, June 25 to July 8, Sept. 11-27.

11470000 LAKE PILLSBURY NEAR POTTER VALLEY, CALIF. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc1	FOBER	NOVI	EMBER	DEC	EMBER	JAL	IUARY	FEBR	UAR Y	Mi	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	21.0	17.0	16.0	9.0	9.0	7.0	6.0	7.0	7.0	11.0	10.0
2	21.0	20.0	16.0	16.0	9.0	9.0	6.0	6.0	7.0	7.0	12.0	10.0
3	20.0	20.0	16.0	15.0	9.0	9.0	7.0	6.0	7.0	7.0	12.0	10.0
4	20.0	19.0	15.0	15.0	9.0	8.0	6.0	6.0	7.0	7.0	12.0	9.0
5	19.0	19.0	15.0	15.0	8.0	7.0	6.0	6.0	7.0	7.0	10.0	9.0
6	19.0	19.0	15.0	15.0	8.0	7.0	6.0	6.0	7.0	6.0	10.0	9.0
7	20.0	19.0	16.0	15.0	7.0	7.0	6.0	5.0	7.0	6.0	10.0	9.0
8	19.0	19.0	15.0	15.0	7 • Q	7.0	6.0	5.0	7.0	5.0		
9	19.0	19.0	15.0	15.0	7.0	7.0	5.0	5.0	7.0	6.0		
10	19.0	18.0	15.0	14.0	7.0	7.0	6.0	4.0	7.0	5.0		
11	19.0	18.0	15.0	14.0	8.0	7.0	5.0	4.0	7.0	6.0		
12	19.0	19.0	14.0	14.0	7.0	6.0	5.0	5.0	7.0	6.0		
13	19.0	18.0	14.0	14.0	7.0	6.0	6.0	5.0	6.0	6.0		
14	19.0	18.0	14.0	14.0	6.0	5.0	7.0	6.0	6.0	6.0		
15	18.0	18.0	14.0	14.0	6.0	6.0	8.0	7.0	6.0	6.0		
16	18.0	18.0	14.0	14.0	6.0	6.0	9.0	B.0	7.0	6.0		
17	18.0	18.0	14.0	14.0	6.0	6.0	9.0	8.0	7.0	7.0		
18	18.0	17.0	14.0	13.0	6.0	6.0	9.0	8.0	9.0	7.0		
19	18.0	17.0	13.0	13.0	6.0	5.0	8.0	7.0	8.0	8.0		
20	18.0	17.0	14.0	13.0	5.0	4.0	8.Q	7.0	9.0	8.0	12.0	9.0
21	17.0	17.0	13.0	12.0	4.0	4.0	8.0	7.0	9.0	8.0	10.0	9.0
22	17.0	17.0	13.0	12.0	4.0	4.0	8.0	7.0	9.0	8.0	9.0	9.0
23	17.0	17.0	12.0	12.0	4.0	4.0	9.0	8.0	10.0	9.0	9.0	9.0
24	17.0	17.0	12.0	12.0	5.0	4.0	9.0	8.0	11.0	9.0	9.0	9.0
25	17.0	17.0	12.0	11.0	5.0	4.0	9.0	8.0	13.0	10.0	9.0	9.0
26	17.0	16.0	12.0	11.0	6.0	4.0	8.0	8.0	12.0	9.0	12.0	9.0
27	17.0	16.0	11.0	11.0	5.0	4.0	8.0	8.0	12.0	9.0	11.0	11.0
28	16.0	16.0	11.0	11.0	7.0	5.0	8.0	8.0	12.0	9.0	12.0	11.0
29	16.0	16.0	11.0	10.0	6.0	6.0	8.0	7.0	11.0	9.0	12.0	11.0
30	16.0	16.0	10.0	9.0	7.0	6.0	B.O	7.0			13.0	11.0
31	16.0	16.0			6.0	6.0	7.0	7.0			13.0	11.0
MONTH	21.0	16.0	17.0	9.0	9.0	4.0	9.0	4.0	13.0	5.0		
	A	PRIL	1	MAY	J	JNE	Ju	JLY	AUG	SUST	SEP	FEMBER
DAY	AA MAX	PRIL Min	MAX	MAY	JI	UNE H I N	JL XAM	MIN	AUA XAM	SUST MIN	SEP MAX	TEMBER Min
	MAX	MIN	MAX	MIN	MAX	MIN			MAX	MIN	MAX	MIN
1	MAX 12.0	MIN 11.0	MAX 16.0	MIN 14.0	MAX 21.0	MEN 18.0		MIN	MAX 26.0	MIN 24.0	MAX 24.0	MIN 22.0
	MAX 12.0 12.0	MIN 11.0 11.0	MAX 16.0 17.0	MIN 14.0 14.0	MAX 21.0 19.0	MIN 18.0 19.0		MIN	MAX 26.0 26.0	MIN 24.0 24.0	MAX 24.0 23.0	MIN 22.0 22.0
1 2	MAX 12.0 12.0 12.0	MIN 11.0 11.0 11.0	MAX 16.0 17.0 17.0	MIN 14.0 14.0 16.0	MAX 21.0 19.0 20.0	MIN 18.0 19.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0	MIN 24.0 24.0 24.0	MAX 24.0 23.0 24.0	MIN 22.0 22.0 22.0
1 2 3	MAX 12.0 12.0	MIN 11.0 11.0	MAX 16.0 17.0	MIN 14.0 14.0	MAX 21.0 19.0	MIN 18.0 19.0		MIN	MAX 26.0 26.0	MIN 24.0 24.0	MAX 24.0 23.0	MIN 22.0 22.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 11.0	MIN 11.0 11.0 11.0 11.0	MAX 16.0 17.0 17.0 17.0	MIN 14.0 14.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0	MIN 18.0 19.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 26.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 23.0 23.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 11.0	MIN 11.0 11.0 11.0 11.0	MAX 16.0 17.0 17.0 17.0	MIN 14.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0	MIN 18.0 19.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 25.0 26.0	MIN 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 23.0 23.0
1 2 3 4 5	MAX 12.0 12.0 12.0 12.0 11.0	MIN 11-0 11-0 11-0 11-0 11-0	MAX 16.0 17.0 17.0 17.0 17.0	MIN 14.0 14.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0	MIN 18.0 19.0 18.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 25.0 26.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0
1 2 3 4 5	MAX 12.0 12.0 12.0 11.0 11.0	MIN 11.0 11.0 11.0 11.0 11.0	MAX 16.0 17.0 17.0 17.0 17.0 16.0	MIN 14.0 14.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0	MIN 18.0 19.0 18.0 18.0 18.0	#AX	MIN	MAX 26.0 26.0 26.0 25.0 26.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 12.0 12.0 11.0	MIN 11-0 11-0 11-0 11-0 11-0	MAX 16.0 17.0 17.0 17.0 17.0	MIN 14.0 14.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0	MIN 18.0 19.0 18.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 25.0 26.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 13-0 14-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 13-0 14-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 21.0 21.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0	#IN 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 14-0 17-0 15-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 17.0	MIN 14-0 14-0 15-0 15-0 16-0 15-0 15-0 15-0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 19.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	26.0 26.0	MIN	MAX 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0	#IN 22.0 22.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 13-0 14-0 17-0 16-0 15-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 19.0 20.0 20.0 20.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX	MIN	MAX 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 25.0 24.0 24.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0	MIN 22.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 14-0 17-0 15-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	26.0 26.0 26.0 24.0 24.0	MIN	MAX 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	#IN 22.0 22.0 23.0 23.0 23.0 23.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 13-0 13-0 14-0 15-0 16-0 14-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0	MAX 21.0 19.0 20.0 18.0 19.0 19.0 21.0 19.0 21.0 20.0 20.0 20.0 21.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	26.0 26.0 26.0 24.0 24.0	MIN	HAX 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 25.0 24.0 24.0 23.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 12-0 12-0 11-0 13-0 13-0 13-0 14-0 17-0 16-0 15-0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	MIN 14.0 14.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 15.0 16.0	MAX 21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 19.0 20.0 20.0 20.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX	MIN	HAX 26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 25.0 24.0 24.0 23.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0	22.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12-0 12-0 12-0 12-0 11-0 11-0 13-0 13-0 14-0 15-0 14-0 14-0 14-0	M1N 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MIN 14.0 16.0 15.0 16.0 15.0 15.0 16.0 15.0	MAX 21.0 19.0 20.0 20.0 19.0 19.0 21.0 19.0 21.0 20.0 20.0 21.0 20.0 21.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 26.0 26.0 26.0 24.0 24.0 24.0	MIN	MAX 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	MIN 22.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15	12.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	HIN 14.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0	19.0 20.0 18.0 19.0 19.0 19.0 19.0 21.0 19.0 20.0 20.0 20.0 21.0 24.0 23.0	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAX 26.0 26.0 25.0 24.0 24.0	MIN	26.0 26.0 26.0 26.0 25.0 26.0 25.0 26.0 25.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	#IN 22.0 22.0 23.0 23.0 23.0 22.0 21.0 22.0 20.0 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 12.0 12.0 12.0 11.0 11.0 13.0 13.0 13.0 14.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0	21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 21.0 20.0 21.0 23.0 23.0 23.0	18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	#AX 26.0 26.0 25.0 24.0 24.0 24.0 24.0 24.0	MIN	26.0 26.0 26.0 26.0 26.0 25.0 26.0 25.0 25.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	#IN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	24.0 23.0 24.0 24.0 24.0 24.0 22.0 22.0 23.0	#IN 22.0 22.0 23.0 23.0 23.0 22.0 21.0 22.0 20.0 20
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1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 4 15 5 16 17 18 19 20 22 23 24 25	12.0 12.0 12.0 12.0 11.0 11.0 13.0 13.0 13.0 14.0 15.0 16.0 15.0 12.0 12.0 13.0	MIN 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	MAX 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	HIN 14.0 16.0 16.0 15.0 16.0 15.0 15.0 15.0 14.0 	21.0 19.0 20.0 20.0 18.0 19.0 19.0 21.0 19.0 20.0 20.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0	26.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	MIN	26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0 22.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 24.0 23.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	#IN 22.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 22
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YEAR 26.0 4.0

11470500 EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CALIF.

LCCATION.--Lat 39°24'30", long 122°58'15", in SE¹/₄ sec.15, T.18 N., R.10 W., Lake County, 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 1968. Sediment records: October 1965 to September 1967 (periodic).

EXTREMES,--1967-68:
Water temperatures: Maximum, 22.0°C Oct. 1; minimum, 5.0°C Dec. 27, 28.

Period of record:
Water temperatures: Maximum, 23.0°C on several days in September 1987; minimum (1986-68), 5.0°C on several days in 1967.

	days in 196	57.				-	-	•				
		TE	MPERATURE	(°C) OF	WATER, WA	TER YEAR (OCTOBER 19	967 TO SE	PTEMBER 19	96.8		
	oc:	TOBER		MBFR		MRER		HIARY		UARY		ARCH
							•	•••••				
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	55.0	21.0	17.0	17.0	11.0	11.0	6.0	6.0	7.0	7.0	10.0	9.0
2	21.0 21.0	21.0 20.0	17.0 17.0	17.0 17.0	11.0	11.0 9.0	6.0 6.0	6.0 6.0	7.0 7.0	7.0 7.0	11.0 11.0	10.0
4	20.0	20.0	17.0	17.0	9.0	9.0	6.0	6.0	7.0	7.0	10.0	9.0
5	20.0	20.0	17.0	17.0	9.0	9.0	6.0	6.0	7.0	7.0	9.0	9.0
6	20.0	19.0	17.0	17.0	9.0	9.0	6.0	6.0	7.0	7.0	9.0	8.0
7	19.0	19.0	17.0	17.0	9.0	8.0	6.0	6.0	7.0	7.0	8.0	8.0
8	19.0 19.0	19.0 19.0	17.0 17.0	17.0 16.0	9.0 B.0	8.0 B.0	6.0 6.0	6.0 6.0	7.0 7.0	7•0 7•0	8.0 8.0	8.0 8.0
10	19.0	19.0	16.0	16.0	8.0	8.0	6.0	6.0	7.0	7.0	B.0	B.0
11	19.0	19.0	16.0	16.0	8.0	8.0	6.0	6.0	7.0	7.0	8.0	8.0
12	19.0	19.0	16.0	16.0	8.0	7.0	6.0	6.0	7.0	7.0	9.0	8.0
13	19.0 19.0	19.0 18.0	16.0	15.0	7.0	7.0	6.0	6.0	7.0	7.0	8.0	8.0
14 15	18.0	18.0	15.0 15.0	15.0 14.0	7.0 7.0	7.0 7.0	7.0 7.0	6.0 6.0	7.0 7.0	7.0 7.0	9.0 9.0	8.0 9.0
				• • •								
16 17	18.0 18.0	18.0 17.0	14.0 14.0	14.0 14.0	7.0 7.0	7.0 6.0	7.0 7.0	7.0 7.0	8.0 8.0	7.0 7.0	9.0 9.0	9.0 9.0
18	18.0	17.0	14.0	14.0	6.0	6.0	7.0	7.0	8.0	7.0	9.0	9.0
19 20	17.0 17.0	17.0 17.0	14.0 14.0	14.0	6.0 6.0	6.0 6.0	7.0 7.0	7.0 7.0	8.0 8.0	8.0 8.0	10.0	9.0 9.0
21	17.0	17.0	14.0	14.0	6.0	6.0	7.0	7.0	8.0	B+0	10.0	9.0
22 23	17.0 17.0	17.0 17.0	14.0 13.0	13.0 13.0	6.0 6.0	6.0	7.0 8.0	7.0 7.0	8.0 9.0	8.0 8.0	9.0 9.0	9.0 9.0
24	17.0	17.0	13.0	13.0	6.0	6.0	8.0	7.0	10.0	9.0	10.0	9.0
25	17.0	17.0	13.0	13.0	6.0	6.0	B. O	7.0	10.0	9.0	9.0	9.0
26	17.0	17.0	13.0	13.0	6.0	6.0	7.0	7.0	10.0	9.0	10.0	9.0
27	17.0	17.0	13.0	12.0	6.0	5.0	7.0	7.0	10.0	9.0	11.0	10.0
28 29	17.0 17.0	17.0 17.0	12.0 12.0	12.0	6.0 6.0	5.0 6.0	7.0 7.0	7.0 7.0	11.0 11.0	10.0	11.0	10.0
30	17.0	17.0	12.0	11.0	6.0	6.0	7.0	7.0			11.0	10.0
31	17.0	17.0			6.0	6.0	7.0	7.0			11.0	10.0
MONTH	22.0	17.0	17.0	11.0	11.0	5.0	8.0	6.0	11.0	7.0	11.0	B.0
		PRIL		MAY	J	JNE	JL	JLY	AU	SUST	SEP.	TEMBER
DAY	A	PRIL			-		JL XAM					
	A: Max	PRIL Min	MAX	MAY Min	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY	A Max 10.0	PRIL MIN	MAX 14.0	MAY MIN 12.0	MAX 15.0	MIN 13.0	MAX 14.0	MIN 13.0	MAX 16.0	MIN 15.0	MAX 19.0	MIN 19.0
1 2 3	MAX 10-0 10-0 10-0	PRIL MIN 10.0 9.0 9.0	MAX 14.0 14.0 14.0	MIN 12.0 12.0 12.0	MAX 15.0 14.0 14.0	MIN 13.0 13.0 13.0	MAX 14.0 14.0 14.0	MIN 13.0 14.0 14.0	MAX 16.0 16.0 16.0	MIN 15.0 15.0 15.0	MAX 19.0 19.0 20.0	MIN 19.0 19.0 19.0
1 2 3 4	MAX 10-0 10-0 10-0 9-0	PRIL MIN 10-0 9-0 9-0 9-0	MAX 14.0 14.0 14.0	MIN 12.0 12.0 12.0	MAX 15.0 14.0 14.0	MIN 13.0 13.0 13.0	MAX 14.0 14.0 14.0 14.0	MIN 13.0 14.0 14.0	MAX 16.0 16.0 16.0	MIN 15.0 15.0 15.0	MAX 19.0 19.0 20.0 20.0	HIN 19.0 19.0 19.0 20.0
1 2 3 4 5	MAX 10-0 10-0 10-0 9-0 10-0	PRIL MIN 10-0 9-0 9-0 9-0	MAX 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0	MAX 15.0 14.0 14.0 15.0	NIN 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0	MIN 13-0 14-0 14-0 14-0	MAX 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0	MAX 19.0 19.0 20.0 20.0 20.0	HIN 19.0 19.0 19.0 20.0 20.0
1 2 3 4 5	MAX 10-0 10-0 10-0 9-0 10-0	PRIL MIN 10.0 9.0 9.0 9.0 9.0	MAX 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0	MAX 15.0 14.0 14.0 15.0 13.0	MIN 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0	MIN 13.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0	MAX 19.0 19.0 20.0 20.0 20.0	NIN 19.0 19.0 19.0 20.0 20.0
1 2 3 4 5	MAX 10-0 10-0 10-0 9-0 10-0	PRIL MIN 10-0 9-0 9-0 9-0 9-0 9-0 9-0	MAX 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0	MAX 15.0 14.0 15.0 13.0 15.0 15.0	NIN 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0	MIN 13-0 14-0 14-0 14-0	MAX 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0	MAX 19.0 19.0 20.0 20.0 20.0	HIN 19.0 19.0 19.0 20.0 20.0
1 2 3 4 5 6 7 8 9	MAX 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-	PRIL MIN 10-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 15.0	MIN 13.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	MIN 19.0 19.0 19.0 20.0 20.0 20.0 20.0
1 2 3 4 5	MAX 10-0 10-0 10-0 10-0 10-0 10-0 10-0	PRIL MIN 10-0 9-0 9-0 9-0 9-0 9-0 9-0	MAX 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 15.0 14.0 15.0 13.0 15.0 15.0	MIN 13.0 13.0 13.0 13.0 13.0	MAX 14-0 14-0 14-0 15-0 15-0	MIN 13.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0	MIN 19.0 19.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	MAX 15.0 14.0 15.0 13.0 15.0 15.0 15.0 15.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0	MIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	10.0 10.0 10.0 10.0 9.0 10.0 10.0 10.0 1	PRIL MIN 10-0 9-0 9-0 9-0 9-0 9-0 10-0 10-0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	MAX 15.0 14.0 15.0 13.0 15.0 15.0 15.0 15.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0
12 3 4 5 6 7 8 9 10 11 12 13 14	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	MAX 15.0 14.0 15.0 13.0 15.0 15.0 15.0 15.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0	MIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	#IN 19-0 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 6 7 8 9 10 11 12 13	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	PRIL MIN 10-0 9-0 9-0 9-0 9-0 9-0 10-0 10-0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12-	MAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15	MAX 10-0 10-0 10-0 9-0 10-0 10-0 10-0 11-0 11	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	MAX 15.0 14.0 15.0 13.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0	MIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 10.0	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HAX 14-0 14-0 14-0 15-0 15-0 15-0 14-0 14-0 14-0 14-0 14-0	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 10.0	PRIL HIN 10-0 9-0 9-0 9-0 10-0 10-0 10-0 10-0 10	HAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	HIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 10.0	PRIL HIN 10-0 9-0 9-0 9-0 9-0 9-0 10-0 10-0 10-0	MAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0	HIN 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0	HAX 14-0 14-0 14-0 15-0 15-0 15-0 14-0 14-0 14-0 14-0 14-0	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 8 19 20	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 10.0	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	HIN 13-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 11.0 11	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2
1 2 3 4 5 5 6 6 7 8 8 9 10 11 12 13 14 4 15 16 17 18 19 20 21 22 23	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0	HAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	NIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22	MAX 10.0 10.0 10.0 9.0 10.0 10.0 10.0 11.0 11	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0	HIN 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 11 15 15 16 17 18 19 20 21 22 23 24 25	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 13.0 1	HAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	HAX 15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0	HIN 13.0 1	HAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 15.0 16.0	HIN 13.0 14.0	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 3 4 4 5 5 6 7 7 8 8 9 9 10 0 11 12 13 14 15 16 17 1 18 18 9 20 0 21 22 23 3 24 25 5 26 27 28 8	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0	HAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	HIN 13.0 1	HAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 4 5 6 7 7 8 8 9 9 10 112 13 114 115 117 118 119 20 21 22 23 24 25 26 27	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 13.0 1	HAX 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 4 4 5 5 6 7 7 8 9 9 10 0 11 12 13 14 15 16 11 17 18 19 9 20 21 22 22 32 22 5 26 27 28 8 29	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0	HAX 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	HIN 13.0 1	HAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 3 4 4 5 5 6 7 7 8 8 9 9 10 0 11 12 13 3 14 4 15 5 16 17 7 18 18 19 20 0 21 22 23 3 24 25 5 26 27 28 29 30 0 31	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	PRIL MIN 10.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	HIN 13.0 1	HAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2
1 2 3 3 4 4 5 5 6 7 7 8 8 9 9 10 0 11 12 13 14 15 16 17 1 17 12 22 23 3 24 25 5 26 27 28 8 29 30 0	MAX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	PRIL MIN 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	HAX 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.	MAY MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.	15.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	HIN 13.0 1	HAX 14.0 14.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	HIN 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MIN 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	HIN 19-0 19-0 20-0 20-0 20-0 20-0 20-0 20-0 20-0 2

11471000 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°21'42", long 123°07'38", in SW\nw\dagger sec.6, T.17 N., R.11 W., Mendocino County, at gaging station 100 ft downstream from powerhouse of Pacific Gas and Electric Co., 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 1968. Sediment records: March 1964 to May 1968 (discontinued),

EXTREMES . -- 1967-68:

ISBMS, --1967-08: Maximum, 23.0°C June 19; minimum, 4.0°C on many days during December and January. Sediment concentrations: Maximum daily, 764 mg/l Jan. 3; minimum daily, 2 mg/l Nov. 5-8. Sediment discharge: Maximum daily, 631 tons Jan. 3; minimum daily, 1.0 ton May 3.

eriod of record:
Water temperatures (1964-65, 1966-68): Maximum (1967-68), 23.0°C June 19, 1968; minimum, 4.0°C on many days in 1967-68.
Sediment concentrations: Maximum daily, 3,970 mg/l Jan. 4, 1965; minimum daily, 1 mg/l Nov. 3, 1965.
Sediment discharge: Maximum daily, 3,280 tons Jan. 4, 1965; minimum daily, less than 0.05 ton Oct. 19, Nov. 2-4, 1965.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

	ac	TOBER	NOV	EMBER	DEC	EMBER	JAL	NUARY	FEB	RUARY	м	ARCH
DAY	MAX	MIN										
1							6.0	4.0	6.0	5.0	11.0	9.0
ž							6.0	4.0	6.0	6.0	11.0	9.0
3							5.0	4.0	6.0	6.0	11.0	9.0
4					9.0	B+0	5.0	4.0	7.0	6.0	11.0	9.0
5					9.0	8.0	5.0	4.0	7.0	6.0	11.0	9.0
6 7					8.0	7.0	5.0	4.D	7.0	6.0	10.0	9.0
8					8.0 8.0	B.0	6.0	4.0	7-0	6.0	10.0	9.0
å					8.0	7.0 7.0	6+0 7-0	6.0 6.0	8.0 8.0	7.0 7.0	10.0	8.0 8.0
10					8.0	7.0	7.0	6.0	8.0	7.0	10.0	8.0
11					8.0	6.0	7.0	4.0	8.0	7.0	10.0	8.0
îż					7.0	6.0	6.0	4.0	8.0	6.0	8.0	8.0
13					7.0	5.0	7.0	6.0	8.0	6.0	9.0	8.0
14					5.0	4.0	9.0	7.0	8.0	7.0	9.0	8.0
15					6.0	4.0	9.0	8.0	8.0	7.0	10.0	9.0
16					6.0	4.0	8.0	7.0	8.0	7-0	10.0	9.0
17					6.0	4.0	8.0	7.0	9.0	7.0	10.0	9.0
18					6.0	5.0	8.0	7-0	8.0	7.0	11.0	9.0
19 20					6.0	4-0	7.0	7.0	9.0	B.0	11.0	9.0
20					6.0	4.0	8.0	7.0	9.0	8.0	11.0	8.0
21					6.0	4.0	8.0	7.0	9.0	9.0	11.0	8.0
22					6.0	5.0	8.0	7.0	10.0	9.0	10.0	9.0
23					6.0	5.0	8.0	7.0	10.0	10.0	12.0	9.0
24 25					6.0	4.0	8.0 8.0	6.0 7.0	11.0	10.0	12.0	9.0
					6.0	5.0	8.0	7.0	11-0	10.0	12.0	9.0
26					7.0	5.0	7.0	6.0	11.0	10.0	12.0	9.0
27					7.0	6.0	7.0	6.0	11.0	9.0	12.0	9.0
28 29					6.0	5.0	6.0	5.0	11.0	9.0	13.0	9.0
30					6.0 6.0	6.0 4.0	6.0 6.0	4.0 5.0	11.0	9.0	13.0 13.0	10.0
31					6.0	4.0	6.0	6.0			12.0	9.0
HTMOP	AF	RIL		144	9.0	4.0 UNE	9.0	4.0 JLY	11.0 AUG	5.0 SUST	13.0 SEP	8.0 TEMBER
DAY	MAX	MIN										
1	11.0	9.0	17.0	14.0	21.0	16.0	19.0	16.0	20.0	17.0	22.0	19.0
2	12.0 12.0	9.0 9.0	18.0 17.0	15.0 15.0	21.0 19.0	18.0 17.0	19.0 19.0	17.0 16.0	20.0 20.0	18.0 17.0	22.0 22.0	19.0 19.0
4	12.0	11.0	18.0	17.0	19.0	17.0	19.0	17.0	20.0	17.0	22.0	19.0
5	12.0	10.0	18.0	17.0	19.0	16.0	21.0	17.0	19.0	17.0	22.0	19.0
6	12.0	9.0	17.0	15.0	18.0	15.0	21.0	18.0	20.0	17.0	21.0	18.0
7	13.0	9.0	17.0	14.0	19.0	17.0	20.0	17.0	20.0	17.0	22.0	18.0
ė	13.0	10.0	18.0	16.0	19.0	17.0	20.0	17.0	19.0	18.0	21.0	18.0
9	13.0	10.0	18.0	16.0	20.0	18.0	20.0	17.0	20.0	18.0	21.0	18.0
10	14.0	11.0	18.0	16.0	20.0	18.0	20.0	17.0	20.0	18.0	21.0	18.0
11	14.0	11.0	17.0	16.0	20.0	18.0	20.0	17.0	19.0	17.0	21.0	18.0
12	13.0	11.0	17.0	15.0	19.0	17.0	19.0	16.0	19.0	17.0	21.0	18.0
13	14.0	11.0	17.0	14.0	19.0	17.0	19.0	16.0	18.0	17-0	20.0	18.0
14 15	14.0	11.0	16.0 17.0	13.0	20.0	18.0 18.0	19.0 20.0	16.0 16.0	19.0 19.0	17.0 17.0	21.0 20.0	18-0
15	13.0	11.0	17.0	14.0	21.0			10.0		17.0		18.0
16	13.0	10.0	18.0	15.0	22.0	19.0	20.0	16.0	19.0	17.0	20.0	17.0
17	13.0	10.0	18.0	16.0	22.0	20.0	20.0	16.0	19.0	16.0	21.0	17.0
18 19	13.0	10.0	19.0	17.0	22.0	20.0 20.0	20.0	16.0 17.0	19.0 18.0	17.0 17.0	21.0 19.0	18.0
20	14.0 13.0	11.0 11.0	19.0 17.0	17.0 16.0	23.0 21.0	19.0	21.0 21.0	17.0	17.0	16.0	18.0	17.0 16.0
21	14.0	11.0	17.0	16.0	21.0	18.0	21.0	17.0	17.0	16.0	18.0	16.0
22	14.0	11.0	17.0	14.0	21.0	18.0	21.0	17.0	19.0	16.0	18.0	16.0
23	14.0	11.0	18.0	16.0	21.0	19.0	20.0	17.0	20.0	17.0	19.0	16.0
24	15.0	12.0	18.0	16.0	21.0	18.0	20.0	17.0	20.0	17-0	19.0	16.0
25	16.0	12.0	17.0	14.0	20.0	17.0	20.0	17.0	20.0	18.0	19.0	16.0
26	17.0	13.0	19.0	17.0	20.0	17.0	21.0	17.0	20.0	17.0	19.0	16.0
27	17.0	14-0	20.0	18.0	20.0	17.0	21.0	18.0	21.0	18.0	18.0	16.0
28	17-0	14.0	21.0	18.0	19.0	17.0	21.0	18.0	21.0	18.0	18.0	16.0
29	18.0	14.0	20.0	18.0	18.0	16.0	21.0	18.0	21.0	18.0	18.0	15.0
30 31	18-0	14.0	20.0	17.0 16.0	18.0	16.0	22.0 21.0	18.0 19.0	22.0 22.0	18.0 19.0	18.0	16.0
MONTH	18.0	9.0	21.0	13.0	23.0	15.0	22.0	16.0	22.0	16.0	22.0	15.0
			21.0	13.0	23.0	19.0	22.0	10.0	66.0	10.0	22.0	15.0
YEAR	23.0	4.0										

11471000 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF. -- Continued

NOVEMBER

DECEMBER

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1967 TO MAY 1965

OCTOBER

TOTAL 9431 -- 8571 8812

		OCHOREK			MUAFWREK			DECEMBER	
	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	(CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
1	309	8	6.7	318	3	2.6	109	94	28
2	173	7	3.3	317	3	2.6	126	95	32
3	162	6	2.6	284	3	2.3	315	98	83
4	164	6	2.7	218	3	1.8	266	95	68
5	166	6	2.7	218	2	1.2	293	95	75
6	166	6	2.7	217	2	1.2	263	95	67
7	163	6	2.6	218	2	1.2	315	96	82
8	162	6	2.6	214		1.2	316	98	84
9	162	6	2.6	164	3	1.3	276	112	83
10	213 313	6	3.5	151 151	3 8	1.2	302	114	93
12	313	6	5.1 5.1	155	12	3.3 5.0	302 283	126	103 115
13	313	6	5.1	158	20	8.5	312	151 126	106
14	315	6	5.1	188	24	12	313	124	105
15	315	6	5.1	163	29	îã	315	116	99
16	313	6	5.1	156	72	30	316	74	63
17	312	6	5.1	146	98	39	313	67	57
18	312	6	5.1	146	68	27	299	68	55
19	317	6	5.1	149	42	17	312	70	59
20	314	6	5.1	152	21	8.6	302	77	63
21	317	6	5.1	148	15	6.0	313	77	65
27	317	6	5.1	146	15	5.9	316	72	61
23	317	6	5.1	148	15	6.0	313	58	49
24	315	6	5.1	147	14	5.6	312	60	51
25	276	5	3.7	150	12	4.9	312	61	51
26	155	4	1.7	150	9	3.6	312	61	51
27	299	4	3.2	137	7	2.6	309	63	53
28 29	315 315	3	2.6	95 183	9 43	?.3 25	300 300	62	50
30	314	3	2.6 2.5	146	95			62 60	50 49
31	315	3	2.6	140		37	304 310	60	50
TOTAL	8227		122.3	5333		278.9	9049		2100
		JANUARY			FFRRUARY			MARCH	
		JANUARY			FFRUARY MEAN			MARCH MEAN	
	MEAN		SEDIMENT	MEAN		SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
	DISCHARGE	MEAN CONCEN- TRATION	DI SCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
NAY		MEAN CONCEN-			MEAN CONCEN-		MEAN DISCHARGE (CFS)	MEAN CONCEN-	
DAY 1	DISCHARGE	MEAN CONCEN- TRATION	DI SCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3	01SCHARGE (CFS) 310 310 306	MEAN CONCEN- TRATION (MG/L) 164 718 764	DISCHARGE (TONS/DAY) 137 601 631	DISCHARGE (CFS) 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101	DISCHARGE (TONS/DAY) 93 88 83	DISCHARGE (CFS) 306 304 303	MEAN CONCEN- TRATION (MG/L) 71 67 70	DISCHARGE (TONS/DAY) 59 55 57
1 2 3 4	01SCHARGE (CFS) 310 310 306 312	MEAN CONCEN- TRATION (MG/L) 164 718 764 660	DISCHARGE (TONS/DAY) 137 601 631 556	DISCHARGE (CFS) 303 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101 96	DISCHARGE (TONS/DAY) 93 88 83 79	DISCHARGE (CFS) 306 304 303 303	MEAN CONCEN- TRATION (MG/L) 71 67 70 72	DISCHARGE (TONS/DAY) 59 55 57 59
1 2 3 4	01SCHARGE (CFS) 310 310 306 312 312	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636	DISCHARGE (TONS/DAY) 137 601 631 556 536	01SCHARGE (CFS) 303 303 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90	DISCHARGE (TONS/DAY) 93 88 83 79 74	306 304 303 303 303 302	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68	DISCHARGE (TONS/DAY) 59 55 57 59 55
1 2 3 4 5	01SCHARGE (CFS) 310 310 306 312 312	MEAN CONCENTRATION (MG/L) 164 718 764 660 636	DISCHARGE (TONS/DAY) 137 601 631 556 536	DISCHARGE (CFS) 303 303 303 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90	DISCHARGE (TONS/DAY) 93 88 83 79 74 68	306 304 303 303 303 302	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68	DISCHARGE (TONS/DAY) 59 55 57 59 55
1 2 3 4 5	DISCHARGE (CFS) 310 310 306 312 312 312	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636	DISCHARGE (TONS/DAY) 137 601 631 556 536 566	DISCHARGE (CFS) 303 303 303 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65	306 304 303 303 303 302 302 304	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51
1 2 3 4 5 6 7 8	01SCHARGE (CFS) 310 310 306 312 312 312 312 270	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636 672 672 672	DISCHARGE (TONS/DAY) 137 601 631 556 536 566 566 484	DISCHARGE (CFS) 303 303 303 303 303 303 303 300 300	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83 80 79	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65 64	306 304 303 303 303 302 302 304 310	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64 62	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51 52
1 2 3 4 5	DISCHARGE (CFS) 310 310 306 312 312 312	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636	DISCHARGE (TONS/DAY) 137 601 631 556 536 566	DISCHARGE (CFS) 303 303 303 303 303 303	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65	306 304 303 303 303 302 302 304	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 310 310 310 310 312 312 312 312 312 319 319 310 310 310 310 310 310 310	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636 672 672 664 677 470	DISCHARGE (TONS/DAY) 137 601 631 556 536 566 566 484 575 530	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83 80 79 78 80	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65 64 67	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64 62 62 67 63	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51 52 56 53 49
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 310 310 306 312 312 312 317 316 270 316 293	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636 672 672 674 674 674	DISCHARGE (TONS/DAY) 137 601 631 556 536 566 566 484 575 530	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65 64 64 67	DISCHARGE (CFS) 306 309 303 302 302 304 310 310 310 310	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51 52 56 53 49 40
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 310 310 306 312 312 312 312 270 316 293 303 273 307	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636 672 672 664 670 201 165 283	DISCHARGE (TONS/DAY) 137 601 631 556 536 566 484 575 530 162 122 235	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 80	DISCHARGE (TONS/DAY) 93 88 87 74 68 65 64 67 66 70 63	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 310	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 62 67 63 58 48 51	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51 52 51 52 65 53 49 40 40
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 310 310 306 312 312 312 317 316 270 316 293	MEAN CONCEN- TRATION (MG/L) 164 718 764 660 636 672 672 674 674 674	DISCHARGE (TONS/DAY) 137 601 631 556 536 566 566 484 575 530	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCEN- TRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80	DISCHARGE (TONS/DAY) 93 88 83 79 74 68 65 64 64 67	DISCHARGE (CFS) 306 309 303 302 302 304 310 310 310 310	MEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48	DISCHARGE (TONS/DAY) 59 55 57 59 55 52 51 52 56 53 49 40
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 310 310 306 312 317 317 317 316 293 303 273 307 304 306	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 672 674 670 201 165 283 282 241	DISCHARGE (TONS/DAY) 137 601 601 603 556 536 566 566 484 575 530 162 122 235 231	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 101 90 90 83 80 79 78 80 80 80 80 79 80 80	DISCHARGE (TONS/DAY) 93 88 83 79 74 66 65 64 67 66 70 63 64 76	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 306 300	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 51 52 53	DISCHARGE (TOMS/DAY) 55 57 59 55 51 52 51 52 53 49 40 42 42 43
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 310 310 306 312 312 312 312 312 312 310 306 301 300 300 300	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 672 674 674 674 670 201 165 283 282 241	DISCHARGE (TONS/DAY) 137 601 601 631 556 536 566 566 568 484 575 530 162 122 235 231 199	DISCHARGE (CFS) 303 303 303 303 302 300 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 879 78 80 84 76 78 94 154	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 67 66 70 63 64 76	DISCHARGE (CFS) 306 304 303 302 302 302 304 310 310 310 310 310 320 300 3299	MEAN CONCENTRATION (MG/L) 71 67 70 00 72 68 62 67 63 58 48 51 52 53 51	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 52 51 52 66 53 49 40 42 42 43 41
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 310 310 310 310 312 312 312 312 312 316 293 303 273 307 306 303 303	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 672 674 670 201 165 287 241 234	DISCHARGE (TONS/DAY) 137 601 631 556 566 566 566 575 601 162 122 235 231 199 191	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 109 90 90 83 80 79 78 80 80 84 76 78	DISCHARGE (TONS/DAY) 93 88 83 79 74 66 65 64 67 66 70 63 64 76	DISCHARGE (CFS) 306 304 303 303 302 302 302 304 310 310 310 310 306 300 300	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 51 52 53	DISCHARGE (TOMS/DAY) 59 59 55 57 59 52 51 52 51 56 56 40 40 42 43 41 42
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 310 310 310 306 312 312 312 312 312 317 316 293 303 273 304 306 303 303 306	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 674 674 674 674 201 165 282 241 234 234 234	DISCHARGE (TONS/DAY) 137 601 601 603 556 566 566 566 484 575 330 162 127 235 231 199 191 191	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 84 76 78 94 158 158 158	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 66 70 63 64 76 125 128	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 320 306 399 297	MEAN CONCENTRATION (MG/L) 71 67 72 68 64 62 67 63 58 48 51 52 53 51 52 44	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 52 51 56 53 49 40 42 42 42 43 41 42 35
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 310 310 310 310 312 312 312 312 312 316 293 303 273 307 306 303 303	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 672 674 670 201 165 287 241 234	DISCHARGE (TONS/DAY) 137 601 631 556 566 566 566 575 601 162 122 235 231 199 191	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 109 90 90 83 80 79 78 80 80 84 76 78	DISCHARGE (TONS/DAY) 93 88 83 79 74 66 65 64 67 66 70 63 64 76	DISCHARGE (CFS) 306 304 303 303 302 302 302 304 310 310 310 310 306 300 300	HEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 62 67 63 58 51 52	DISCHARGE (TOMS/DAY) 59 59 55 57 59 52 51 52 51 56 56 40 40 42 43 41 42
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 310 310 310 310 312 312 312 270 316 293 303 273 304 306 303 309 309	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 271 165 283 284 234 234 230 200 204	DISCHARGE (TONS/DAY) 137 601 631 556 566 566 566 484 575 30 162 122 123 199 191 191 190 167	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 84 76 78 94 158 158 158	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 67 66 70 66 170 63 64 67 128 127 128	DISCHARGE (CFS) 306 309 303 303 302 302 304 310 310 310 310 300 300 297 297 297 296	MEAN CONCENTRATION (MG/L) 71 77 70 77 70 77 70 70 70 70 70 70 70 70	DISCHARGE (TOMS/DAY) 59 59 55 57 59 52 51 57 56 57 59 40 40 42 42 43 41 42 35 18
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 310 310 310 310 312 312 312 270 316 293 303 303 306 300 300 300	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 271 165 283 284 234 230 200	DISCHARGE (TONS/DAY) 137 601 631 556 566 660 684 577 530 162 122 235 231 199 191 191 190 167	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCENTATION (MG/L) 114 104 101 96 90 83 80 79 78 80 80 80 84 76 78 94 158	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 67 70 66 70 62 125 128 127	DISCHARGE (CFS) 306 309 303 303 302 302 304 310 310 310 310 300 300 299 297 297 296	HEAN CONCEN- TRATION (MG/L) 71 67 70 72 68 64 62 62 67 63 58 48 51 52 53 51 52 44	DISCHARGE (TOMS/DAY) 59 59 55 57 59 52 51 52 51 52 53 40 40 42 43 41 42 43 51 18
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	DISCHARGE (CFS) 310 310 310 306 312 312 312 312 270 316 293 303 273 307 304 306 309 309	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 664 674 670 201 165 287 241 234 230 200 200	DISCHARGE (TONS/DAY) 137 601 631 556 566 664 6484 577 530 162 122 235 231 199 191 191 191 191 191 191 191 191 1	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 80 81 85 85 86 86 86 86 86 86 86 86 86 86 86 86 86	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 64 67 66 70 63 64 76 125 128 127 128	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 320 306 307 299 297 296 296	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48 91 52 53 51 51 52 44 -22 27	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 52 51 56 53 49 40 42 42 42 43 41 42 35 18 22 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 23 24	DISCHARGE (CFS) 310 310 310 310 312 312 312 317 317 316 793 303 273 307 306 309 309 309 307 309 307	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 271 165 283 284 234 230 200 204 222 228 196 207	DISCHARGE (TONS/DAY) 137 601 631 556 566 666 664 577 162 127 235 731 199 191 191 190 167 170 185 189 164 172	DISCHARGE (CFS) 3003 3003 3003 3003 3003 3003 3003 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 81 154 158 156 156 157	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 67 66 70 66 70 66 125 128 128 128 130 138 138	DISCHARGE (CFS) 306 309 303 303 302 302 304 310 310 310 310 310 299 297 297 296 296 296	MEAN CONCENTRATION (MG/L) 71 77 70 77 70 77 70 70 70 70 70 70 70 70	DISCHARGE (TOMS/DAY) 59 59 55 57 59 52 51 52 51 52 54 40 40 42 42 43 41 42 43 58 18 19
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22 23	DISCHARGE (CFS) 310 310 310 310 312 312 312 312 270 316 293 303 273 307 304 306 309 309 309	MEAN CONCENTRATION (MG/L) 164 714 764 660 636 672 664 674 670 201 165 283 284 230 200 204 222 228	DISCHARGE (TONS/DAY) 137 601 601 603 556 566 566 484 575 530 162 127 235 231 199 191 190 167 170 185 189 164	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 109 90 83 80 79 78 80 80 80 80 81 54 158 158 158 156 156	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 64 67 66 70 63 64 76 125 128 127 128 130 138	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 320 306 300 299 297 296 296 296 297 297	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48 51 51 52 44 42 22 27 21 23	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 52 51 56 53 49 40 42 42 42 43 41 42 35 18 22 17 18 18
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 23 24	DISCHARGE (CFS) 310 310 310 310 312 312 312 317 317 316 793 303 273 307 306 309 309 309 307 309 307	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 271 165 283 284 234 230 200 204 222 228 196 207	DISCHARGE (TONS/DAY) 137 601 631 556 566 666 664 577 162 127 235 731 199 191 191 190 167 170 185 189 164 172	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 81 154 158 156 156 157	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 67 66 70 63 64 125 128 128 130 138 138 136 117	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 320 306 307 297 297 297 297	MEAN CONCENTRATION (MG/L) 71 77 70 77 70 77 70 70 70 70 70 70 70 70	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 52 51 52 66 53 49 40 42 42 42 43 41 42 35 18 19 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CFS) 310 310 310 310 312 312 312 317 270 316 293 303 273 307 306 309 309 309 309 309 307 309 307 304 303	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 770 201 165 283 284 234 230 200 204 222 228 196 207 192 167 137	DISCHARGE (TONS/DAY) 137 601 631 556 566 566 566 568 484 575 30 162 122 735 731 199 191 190 167 170 185 189 164 172 158 137 108	DISCHARGE (CFS) 303 303 303 303 303 300 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 78 80 80 80 81 154 158 156 156 157 163 165 167 143	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 667 663 67 125 128 128 130 138 138 136 117 72 64	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 299 297 297 297 296 296 297 297 297 297 297	MEAN CONCENTRATION (MG/L) 71 77 70 77 77 77 77 78 8 64 62 62 67 63 58 8 51 52 53 51 52 52 54 64 62 62 62 62 62 62 62 62 62 62 62 62 62	DISCHARGE (TOMS/DAY) 59 59 55 57 59 55 52 51 52 51 52 54 40 40 42 43 41 42 43 51 18 18 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23 24 25 27 27 28 27 27 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28	DISCHARGE (CFS) 310 310 310 310 3112 312 312 312 270 316 293 303 273 304 306 309 309 307 309 307 304 309 307 304 309 307 304 309 307 304 309 307 300	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 664 674 670 201 165 283 287 241 230 200 204 222 228 196 197 192	DISCHARGE (TONS/DAY) 137 137 601 601 603 556 566 566 484 575 530 162 127 235 231 199 191 190 167 170 185 189 164 172 158 137 108	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 106 90 83 80 79 78 80 80 80 156 156 156 156 157 163 165 167 143 87 78	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 64 67 66 70 63 64 76 125 128 128 127 128 130 138 136 117 72 64 63	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 306 300 299 297 297 296 296 297 297 297 297 297 297	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48 51 52 53 51 52 44 22 27 21 23 23 24 22 22 24 22 22 24 22 22 24 22 24 22 22	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 57 56 53 49 40 42 42 43 41 42 35 18 19 18 18 18 18
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 27 3 24 5 25 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CFS) 310 310 310 310 312 312 312 312 270 316 293 303 303 303 300 300 300 300 300 300 3	MEAN CONCENTRATION (MG/L) 164 718 660 636 672 672 674 776 776 776 776 777 777 777 777 777	DISCHARGE (TONS/DAY) 137 601 6031 556 566 566 566 566 568 484 575 30 162 122 235 231 199 191 100 167 170 185 189 164 172 158 137 108 109 108	DISCHARGE (CFS) 3003 3003 3003 3003 3003 3003 3000 3000 3000 3007	MEAN CONCENTRATION (MG/L) 114 108 101 96 90 83 80 79 80 80 80 80 81 154 158 156 156 157 163 165 167 143 87	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 667 663 664 125 128 128 130 138 138 136 117 72 64 63 664	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 320 299 297 297 297 296 297 297 297 297 297 297 297 297 297	MEAN CONCENTRATION (MG/L) 71 77 70 77 77 77 77 78 8 64 62 62 67 63 58 8 51 52 53 53 51 52 52 54 64 52 77 21 23 23 23 24 22 24 26 26	DISCHARGE (TOMS/DAY) 59 59 55 57 59 55 52 51 52 56 53 49 40 42 42 43 41 42 35 18 22 17 18 18 18 18 18 20 22 22
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23 24 25 27 27 28 27 27 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28	DISCHARGE (CFS) 310 310 310 310 3112 312 312 312 270 316 293 303 273 304 306 309 309 307 309 307 304 309 307 304 309 307 304 309 307 304 309 307 300	MEAN CONCENTRATION (MG/L) 164 718 764 660 636 672 664 674 670 201 165 283 287 241 230 200 204 222 228 196 197 192 167 133	DISCHARGE (TONS/DAY) 137 137 601 601 603 556 566 566 484 575 530 162 127 235 231 199 191 190 167 170 185 189 164 172 158 137 108	DISCHARGE (CFS) 303 303 303 303 303 303 300 300 300 30	MEAN CONCENTRATION (MG/L) 114 106 90 83 80 79 78 80 80 80 156 156 156 156 157 163 165 167 143 87 78	DISCHARGE (TOMS/DAY) 93 88 83 79 74 68 65 64 64 67 66 70 63 64 76 125 128 128 127 128 130 138 136 117 72 64 63	DISCHARGE (CFS) 306 304 303 303 302 302 304 310 310 310 310 310 306 300 299 297 297 296 296 297 297 297 297 297 297	MEAN CONCENTRATION (MG/L) 71 67 70 72 68 64 62 67 63 58 48 51 52 53 51 52 44 22 27 21 23 23 24 22 22 24 22 22 24 22 22 24 22 24 22 22	DISCHARGE (TOMS/DAY) 59 55 57 59 55 52 51 57 56 53 49 40 42 42 43 41 42 35 18 19 18 18 18 18

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11471000 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF. -- Continued SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1967 TO MAY 1968

		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY
1	304	24	20	83	6	1.3			
2	304	24	20	69	6	1.1			
3	304	24	20	62	6	1.0			
4	304	22	18	70	6	1.1			
5	284	25	19	71	6	1.2			
6	307	23	19	72	6	1.2			
7	307	22	18	72	6	1.2			
8	286	18	14	69	6	1.1			
9	304	10	8.2	67	6	1.1			
10	266	8	5.7	70	6	1.1			
11	269	9	6.5	70	6	1.1			
12	232	10	6.3	70	6	1.1			
13	188	10	5.1	70	6	1.1			
14	188	10	5.1	72	6	1.2			
15	185	12	6.0	74	6	1.2			
16	184	10	5.0	68	6	1.1			
17	184	10	5.0	68	6	1.1			
18	176	19	9.0	68	6	1.1			
19	177	14	6.7	70	6	1.1			
50	94	9	2.3	79	7	1.5			
21	94	8	2.0	75	8	1.6			
22	91	7	1.7	71	9	1.7			
23	93	7	1.8	70	10	1.9			
24	94	7	1.8	72	12	2.3			
25	98	7	1.9	70	10	1.9			
26	91	8	2.0	68	10	1.8			
27	91	9	2.2	68	10	1.8			
28	91	8	2.0	62	10	1.7			
29	91	8	2.0	103	10	2.8			
30	91	6	1.5	104	10	2.8			
31				106	10	2.9			
OTAL	5772		237.8	2283		46.2			

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)

		WATER															
		TEM- PERA- TURF	DISCHARGE		SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (IN MII	LIME	TERS)	INDI	CATED	METHOD OF
DATE	TIME		(CFS)		(TONS/DAY)	•002	•004	•008	.016	.031	•062	.125	.250	•500	1.00	2.00	SIS
DEC 20 1967	0845	4	302	79	64	85	92	94	96	97	100						SBWC
JAN 6 1968	0800	5	312	671	565	54	66	77	85	87	96	96	98	100			SBWC
MAR 20	0845	11	296	30	24	49	67	78	84	89	99	100					SBWC

11471000 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 20, 1967	6	1	JAN. 13	278	340
NOV. 1	3	i	JAN. 14	298	320
NOV. 8	2	4	JAN. 15	242	310
NOV. 14	25	30	JAN. 16	238	340
NOV. 15	24	32	JAN. 17	230	340
NOV. 16	68	32	JAN. 18	238	390
NOV. 17	101	34	JAN. 19	201	350
NOV. 21	14	12	JAN- 20	203	290
NOV. 23	15	13	JAN- 21	220	315
NOV. 24	13	13	JAN. 22	236	315
NOV. 25	12	7	JAN. 23	196	285
NOV. 26	8	7	JAN. 24	211	315
NOV. 27	6	7	JAN. 25	196	290
NOV. 28	8	7	JAN. 26	178	245
NOV. 29	12	В	JAN. 27	132	180
NOV. 30	95	136	JAN. 28	133	220
DEC. 1	94	136	JAN. 29	134	210
DEC. 2	92	136	FEB. 6	78	115
DEC. 3	98	136	FEB. 7	80	115
0EC. 4	96	125	FEB. 8	80	115
	94	124	FEB. 9	78	115
0EC. 5			FEB. 10	80	115
DEC. 6	96 93	126 120	FEB. 11	80	115
OEC. 7			FE8. 12	84	110
DEC. 9	96 115	120 168	FEB. 13	7 7	105
			FEB. 14	78	110
OEC. 10	114	162	FE8. 15	82	75
DEC. 11	120	146	FEB. 16	154	135
DEC. 12	156	160 120	FEB. 17	158	130
DEC. 20	79 121	130	FEB. 18	156	130
			FEB. 19	158	130
DEC. 14	124	150	FE8. 20	156	130
OEC. 15	128	140	FEB. 21	158	130
DEC. 16	72	93	FE8. 22	164	130
DEC. 17	67	98	FEB. 23	164	130
DEC. 18	70	71	FEB. 24	164	130
OEC. 19	68	59	FEB. 25	160	130
DEC. 20	79	120	FEB. 26	88	96
DEC. 21	76	97	FE8. 27	78	98
DEC. 22	67	79	FEB. 28	78	95
DEC. 23	58	74			
DEC. 24	60	74	FEB. 29	80	97
DEC. 25	62	72	MAR. 1	75	97
DEC. 26	62	72	MAR. 2	66	97
DEC. 27	65 62	77 70	MAR. 3	69 72	90 95
DEC. 29	63	77	MAR. 6	66	100
DEC. 30	61	75	MAR. 7	64	100
DEC. 31	62	69	MAR. B	63 66	105
JAN. 1, 1968	60 700	78 600	MAR. 9	64	105 105
JAN. 2					
JAN. 3	784	640	MAR. 11	65	105
JAN. 4	668	675	MAR. 12	50	76
JAN. 5	625	675	MAR. 13	51	76
JAN. 6	671	560	MAR. 14	51	75
JAN. 7	674	570	MAR. 15	53	75
JAN. B	664	605	MAR. 16	50	75
JAN. 9	674	570	MAR. 17	50	75
JAN. 10	670	600	MAR. 18	54	75
JAN. 11	152	170	MAR. 19	21	37
JAN. 12	134	180	MAR. 20	30	58

11471000 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF, -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	SEDIMENT (MG/L)	TURBIDITY (MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
24,2 0. 002220.000					
MAR. 21	21	37	APR. 16	9	6
MAR. 22	24	35	APR. 17	8	7
MAR. 23	22	22	APR. 18	20	5
MAR. 24	24	37	APR. 19	19	22
MAR. 25	22	37	APR. 20	8	4
		37	APR. 21	8	4
MAR. 26	24		APR. 22	ž	4
MAR. 27	22	36	APR. 23	ż	á
MAR. 28	24	37	APR. 24	÷	ă.
MAR. 29	27	37	APR. 25	,	ā
MAR. 30	25	37	APR. 23	•	-
MAR. 31	23	37	APR. 26	10	3
APR. 1	24	36	APR. 27	8	3
APR. 2	24	34	APR. 28	8	2
APR . 3	24	37	APR. 29	7	3
APR. 4	25	37	APR. 30	6	3
APR. 6	23	37	MAY 1	6	2
APR. 7	22	37	MAY 8	6	3
	24	35	MAY 24	12	3
APR. 8	10	9	JULY 9	3	1
APR. 9		6		_	
APR. 10	8	6			
APR. 11	9	4			
APR. 12	10	4			
APR. 13	10	7			
APR. 14	10	5			
APR. 15	12	7			

11472150 EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°37'30", long 123°20'25", in SW38W4 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 '968. Water temperatures: October 1966 to September 1968. Sediment records: October 1966 to September 1968.

EXTREMES . -- 1967-68:

Sediment concentrations: Maximum daily, 1,740 mg/l Dec. 7; minimum daily, 1 mg/l on many days. Sediment discharge: Maximum daily, 55,800 tons Feb. 20; minimum daily, 0.01 ton on many days.

of record.

Mater temperatures (1966-67): Minimum, 1.5°C Dec. 29, 1966.

Sediment concentrations: Maximum daily, 3,590 mg/l Jan. 21, 1967; minimum daily, 1 mg/l on many days in Sediment discharge: Maximum daily, 204,000 tons Jan. 21, 1967; minimum daily, 0.01 ton on many days in 1966-68.

REMARKS, --Chemical-quality records furnished by California Department of Water Resources and reviewed by Geologi-cal Survey. During period October 1955 to September 1956, chemical quality station located at lat 35°37'35', long 12°20'36''. Flow partly regulated by Lake Plilsbury and by diversion through Potter Valley powerhouse.

11472150 EEL RIVER NEAR DOS RIOS, CALIF. -- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

BTAS	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	MUIDOS (AA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR+ BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PO4)
cct.												
C4	41			12		116	0		8.4	-4	.44	-01
060. C6	7.9			12		128	o	24	9.2	.8	.43	
C5	2530			5.7		66	0		4.1	1.6	.15	.27
10	4500			3.9		47	0		3.1	1.6	.30	.44
FEE. C7 MAR.	2110			3.4		65	0		2.4	.9	-12	. 24
Cé	509			3.8		74	0		1.1	•2	.17	.03
04 MAY	258			4.2		84	0		3.1	-0	.23	•06
Ce	53	29	8.1	8.8	1.1	111	4	16	4.2	.0	. 29	
C5	33			8.6		109	0		4.2	.0	.38	•00
1C	7.6			8.6		120	0		4.8	•0	•50	-00
(7 SEPT.	5.8			12		104	0		6.1	•1	- 48	-08
12	2.8	28	9.5	12	1.6	111	0	29	7.7	•0	.57	.07

CATE	DIS- SOLVED SOLIOS (RESI- DUE AT 180 CJ	HARD- NESS (CA, MG)	NON- CAR- BUNATE HARD- NESS	DIS- SCLVED SOLIOS (TONS PER AC-FT)	PERCENT SDOIUM	SCOIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
CCT.											
04 NGV.		112	17		19	.5	95	270	8 - 2	18	9.6
(8		120	15		18	.5	105	276	8.2	17	10.3
CEC.		62	8		17	.3	54			_	
JAN.		02	•		17	• 3	24	144	7.9	6	11.7
10		31	0		22	• 3	39	97	7.6	7	11.6
f E B . C 7		55	2		12	•2	. 53	128	8.0	7	11.7
MAR.											
C6 APR.		68	7		11	•2	61	149	8.1	11	10.8
04		78	9		10	•2	69	166	8.2	12	10.4
PAY											
C8 JUNE	137	106	8	.19	15	•4	98	239	8.6	21	9.7
05 JLLY		97	8		16	.4	89	232	8 - 2	19	9.8
10		107	9		15	.4	98	260	8.1	29	9.4
AUG.											
(7 SEPT.		99	14		21	.5	85	250	8.2	27	10.5
12	152	109	18	-21	19	. 5	91	272	8.2	21	8.5

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

AVER-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 JULY.... 21 -- 22 -- 24 -- -- 26 -- 24 -- 23 -- -- 21 -- 22 -- 23 -- -- 24 -- 22 -- 28 -- -- 26 -- 27 AUGUST... -- 24 -- -- 28 -- 27 -- 29 -- -- 26 -- 26 -- 26 -- 23 -- 18 -- 25 -- -- 23 -- 27 -- 28

11472150 EEL RIVER NEAR DOS RIOS, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
						(Collo, DAI)			(1011072717
1	3.0	2	.02	6.5	3	•05	108	54	16
2	20	20	1.1	5.8	3	.05	298	272	757
3	59	15	2.4	6.5	3	•05	1900	865	4640
4	41	В	.89	7.2	3	•06	1800	732	5850
5	31	4	.33	6.5	3	.05	2530	433	3390
6	27	2	.15	7.9	3	.06	832	130	292
7	24	2	.13	10	3	• OB	2210	1740	11000
8	15	1	.04	7.9	3	•06	799	430	928
9	12	1	.03	8.6	3	•07	270	120	87
10	13	1	.04	7.9	3	•06	178	18	B.7
11	13	1	.04	7.2	3	.06	133	13	4.7
12	27	1	.07	7.2	3	•06	105	10	2.8
13	13	1	.04	7.9	3	•06	83	6	1.3
14	9.3	1	.03	96	100	26	73	4	•79
15	8.6	1	•02	86	35	8.1	68	4	•73
16	7.9	1	•02	31	6	•50	63	4	.6B
17	7.2	1	.02	22	6	.36	61	4	•66
18	5.8	1	.02	17	6	.28	786	33	74
19	7.2	2	.04	13	6	•21	526	24	34
20	7.2	2	•04	12	6	•19	199	18	9.7
21	7.9	2	.04	10	6	.16	129	16	5.6
22	10	2	.05	9.3	6	.15	105	14	4.0
23	9.3	2	.05	8.6	6	.14	108	13	3.8
24	8.6	2	.05	8.6	6	•14	146	11	4.3
25	7.9	2	.04	8.6	6	.14	178	11	5.3
26	7.2	2	.04	7.9	6	.13	192	13	6.7
27	6.5	2	.04	7.9	6	.13	167	14	6.3
28	7.9	2	.04	9.3	6	•15	143	15	5.8
29	17	3	.14	73	44	14	129	14	4.9
30	12	3	.10	126	62	21	108	13	3.8
31	7.9	3	.06				86	11	2.6
TOTAL	453.4		6.12	643.3		72.55	14513		27151.16
		JANUARY			FERRUARY			MARCH	
		MEAN			MEAN			MEAN	

		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	73	8	1.6	1880	135	685	1220	18	59
2	65	5	.88	4280	672	8260	1060	25	72
3	59	4	•64	4930	530	7050	916	34	84
4	54	3	.44	3260	225	1980	793	32	69
5	56	2	.30	2480	180	1210	730	30	59
6	52	2	.28	2190	140	828	509	27	37
7	52	2	.28	2110	120	684	350	19	18
8	52	2	.28	1940	100	524	298	15	12
9	637	87	797	1750	90	425	246	13	8.6
10	4500	860	10400	1620	80	350	202	12	6.5
11	1480	220	879	1450	75	294	174	10	4.7
12	610	50	82	1270	75	257	1140	164	786
13	716	55	106	1130	60	183	1340	72	260
14	5000	795	10700	1030	45	125	1440	118	471
15	5800	850	13300	929	35	88	1470	60	238
16	4800	620	8040	962	65	169	3760	365	3850
17	3300	375	3340	2000	355	2030	3640	185	1820
18	2110	245	1400	2650	350	2500	2200	110	653
19	1370	170	629	6960	701	19500	1800	75	365
20	870	115	270	13100	1550	55800	1360	60	220
21	550	85	126	10100	1220	33700	1240	51	171
27	380	80	82	7660	580	12000	1130	47	143
23	251	85	58	5860	420	6650	1030	40	111
24	172	85	39	4110	320	3550	962	39	101
25	141	80	30	3300	237	2110	786	32	68
26	123	75	25	2600	160	1120	773	28	58
27	122	70	23	2100	99	561	786	28	59
28	133	60	22	1800	72	350	767	20	41
29	2900	390	3050	1600	43	186	712	15	29
30	3650	530	5220				688	12	22
31	2380	170	1090				688	10	19
TOTAL	42458		59712.70	97051		163169	34210		9914.8

TOTAL

4473

EEL RIVER BASIN

11472150 EEL RIVER NEAR DOS RIOS, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APR1L MAY JUNE MEAN MEAN MEAN MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) DAY (CFS) (CFS) (MG/L) 686 370 385 258 220 9.3 5.0 5.2 3.5 3.0 .33 .32 .20 .18 .18 .09 62 60 58 55 2 2 2 2 2 12345 5 5 5 5 5 2 2 1 1 33 33 33 33 .30 171 157 150 153 136 2.3 2.1 2.0 2.1 1.8 .29 .29 .29 .27 .09 .09 5 5 5 5 5 53 54 53 50 49 33 33 31 31 25 6 7 8 9 2 2 2 2 1 1 1 1 .08 11 12 13 126 123 117 111 1.7 1.7 1.6 1.5 .25 .25 .30 .39 .08 47 47 55 72 69 2 2 2 2 29 27 27 27 28 1 .07 .07 102 .08 31 27 24 22 16 17 18 19 20 99 96 93 88 88 5 4 4 4 4 1.3 56 49 46 44 66 2 2 2 2 .30 .08 .26 .25 .24 1111 1.0 .95 .06 20 • 05 .05 .04 .05 .05 .95 .90 .63 .63 .37 .37 .32 .29 18 16 17 21 22 23 24 25 88 83 78 78 75 4 4 3 3 3 2 2 2 2 2 1 68 69 60 53 56 18 18 1 3 3 2 2 .61 .57 .55 .35 .30 .27 .25 .22 .21

55 50

1674

55.55

22222

17 15

11 10 11

735

9.03

	JULY				AUGUST			SEPTEMBER				
		MEAN			MEAN			MEAN				
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT			
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION		DISCHARGE	TRATION	DISCHARGE			
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)			
1	12	1	•03	7.2	1	-02	5.3	2	.03			
2	15	1	.03	6.9	1	•02	4.1	2	• 02			
3	10	1	.03	6.5	1	•02	3.7	?	•02			
4	9.1	1	•02	6.3	1	•02	3.2	3	•03			
5	8.6	1	•02	5.8	2	•03	3.7	3	.03			
6	9.2	1	•02	5.8	2	•03	3.3	2	•02			
7	8.6	1	•02	5.8	2	.03	3.0	2 2	•02			
8	8.6	1	•02	5.2	1	.01	3.0	2	•02			
9	8.4	1	• 02	5.6	1	• 02	3.5	2	+02			
10	7.6	1	•02	6.8	1	•02	3.0	1	-01			
11	7.2	1	-02	5.6	1	•02	2.8	1	-01			
12	7.2	2	• 04	5.7	1	•02	2.8	1	-01			
13	6.8	2	-04	5.8	1	•02	3.3	1	-01			
14	6.5	1	•02	5.8	2	.03	5.3	1	•01			
15	6.9	1	•02	5.8	2	•03	5.3	1	-01			
16	7.2	3	•06	4.8	3	•04	5.1	1	-01			
17	7.2	2	• 04	4.9	2	•03	5.8	1	• 02			
18	7.2	1	•02	6.4	1	•02	5.4	1	-01			
19	7.2	ì	•02	7.4	1	•02	5.1	1	.01			
20	7.2	1	•02	23	2	•12	4.5	1	•01			
21	7.2	2	.04	40	7	•76	4.4	1	.01			
22	7.5	2	•04	32	3	•26	4.4	1	• 01			
23	7.2	1	•02	18	1	•05	4.4	1	-01			
24	7.2	1	.02	11	1	•03	4.4	1	•01			
25	7.2	1	.02	9.6	1	•03	5.1	1	•01			
26	7.9	5	•11	12	ı	•03	5.1	1	.01			
27	7.2	3	•06	12	1	•03	4.8	8	•10			
28	6.6	2	•04	11	2	•06	4.2	1	.01			
29	7.2	1	•02	9.3	2	• 05	3.7	1	-01			
30	7.2	1	.02	7.6	2	•04	3.7	1	-01			
31	7.2	2	-04	5.4	2	.03						
TOTAL	244.3		•96	305.0		1.94	125.4		•52			

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

196885.4 260096-82

.05 .04 .18 .08

2.49

11472150 EEL RIVER NEAR DOS RIOS, CALIF. -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: 8, ROTTOM WITHDRAMAL TUBE: C. CHEMICALLY DISPERSED; N, IN NAMIVE MATER: P, PIPET; S, SIEVE; V, V, VISUAL ACCUMULATION TUBE: W, IN DISTILLED MATER)

			• • •				-, .,										
		WATER								PART	ICLE	SIZE					
		TEM-			SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	1ZE (IN MI	LIME	rers)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	•062	.125	.250	•500	1.00	2.00	SIS
DEC 3 1967	1430	9	2060	590	3280	42	52	62	70	73	94	99	100				VB WC
DEC 7	0715	6	2620	2250	15900	42	56	71	85	95	98	100					VPWC
JAN 15 1968	1545	9	5800	732	11500	28	42	51	58	60	87	95	99	100			VBWC
FEB 20	1205	9	12800	1490	51500	17	24	30	35	38	5B	75	90	100			VBWC
FEB 21	0655	9	10600	1580	45200	15	19	25	28	29	46	64	84	99	100		VBWC
FEB 23	1130	10	6100	411	6770	29	40	50			77	86	97	100			VBWC
FEB 27	1255	11	20B0	796	539	36	55	65	73	77	91	94	97	100			SBWC

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED SEDIMENT	YTIGIBAUT		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
NOV. 17, 1967	6	9	JUNE 14	1	D
NOV. 30	63	66	JUNE 17	1	0
DEC. 3	590	174	JUNE 19	1	1
DEC. 4	95	112	JUNE 21	1	0
DEC. 5	382	198	JUNE 24	1	0
DEC. 6	96	127			
			JUNE 26	1 6	0
OEC. 7	2250	1090	JUNE 28		
DEC. 10	17	25	JULY 1	1	0 0
DEC. 12	11	13	JULY 3	1	
DEC. 13	5	7	JULY 5	1	0
OEC. 17	4	3			
			JULY B	1	0
DEC. 21	17	36	JULY 10	1	0
DEC. 29	14	14	JULY 12	2	0
JAN. 1, 1968	7	11	JULY 15	1	0
JAN. 4	3	2	JULY 16	3	1
JAN. 7	2	3			
	_	_	JULY 17	2	0
JAN. 9	2	1	JULY 19	1	0
JAN. 12	42	57	JULY 22	2	0
JAN. 15	732	445	JULY 24	1	1
JAN. 18	241	280	JULY 26	5	2
JAN. 20	102	120			
			JULY 29	1	1
JAN. 23	82	115	JULY 31	2	1
JAN. 25	84	115	AUG. 2	1	1
JAN. 27	74	98	AUG. 5	2	3
JAN. 29	440	240	AUG. 7	2	1
JAN. 30	416	245			
			AUG. 9	1	1
JAN. 31	172	170	AUG. 12	1	2
FEB. 7	130	120	AUG. 14	2	1
FEB. 9	98	100	AUG. 16	3	ī
FEB. 11	70	90	AUG. 19	1	1
FEB. 13	64	85			
			AUG. 21	7	8
FEB. 17	466	130	AUG. 23	1	1
FEB. 19	168	110	AUG. 26	1	1
FEB. 20	1490	380	AUG. 28	2	1
FEB. 21	1580	340	AUG. 30	1	1
FEB. 23	411	245			
			SEPT. 4	3	1
FEB. 26	140	100	SEPT. 6	2	1
FEB. 27	96	125	SEPT. 9	2	1
FEB. 28	73	70	SEPT. 11	1	1
MAR. 1	17	25	SEPT. 13	1	1
MAR. 3	35	49	SEPT. 16	1	1
MAR. 5	30	9	SEPT. 18	1	1
MAR. 7	24	ź	SEPT. 20	i	ī
MAR. 18	109	60	SEPT. 23	ī	î
MAY 1	ž	1	SEPT. 25	î	i
JUNE 3	2	ō	SEPT. 27	B	i
			SEPT. 30	ì	i
JUNE 4	1	0			
JUNE 5	1	0			
JUNE 7	1	0			
JUNE 10	1	0			
JUNE 12	1	0			

11472200 OUTLET CREEK NEAR LONGVALE, CALIF.

LOCATION.--Lat 39°37'05", long 123°21'20", in NE¹/₄ 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 Longwale.

DRAINAGR AREA. -- 161 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1958 to September 1966, Water temperatures: October 1967 to September 1968, Sediment records: October 1966 to September 1968,

MONTH

EXTREMES. -- 1967-68:
Sediment concentrations: Maximum daily, 330 mg/l Feb. 20; minimum daily, 1 mg/l on many days.
Sediment discharge: Maximum daily, 4,480 tons Jan. 14; minimum daily, 0 ton on many days during November, July, and August.

		T	MPERATURE	(°C) OF	WATER, W	ATER YEAR	OCTOBER :	1967 TO SE	PTEMBER 1	968		
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	HAY	JUN	JUL	AUG	SEP
1								19.0		21.0		
2											24.0	
3		16.0	9.0			12-0			21.0			
4			9.0	4.0					21.0			29.0
5			7.0			12.0			19.0	26.0	26.0	
6		17.0	6.0									28.0
7			6.0	6.0		12.0			18.0		27.0	
8		16.0								26.0		
9	19.0	16.0		4.0							27.0	27.0
10			8.0						21.0	24.0		
11	21.0											21.0
12		15.0	6.0	6.0					20.0	24.0	26.0	
13			3.0		9.0							22.0
14	17.0	10.0	2.0						21.0		24.0	
15										23.0		
16		14.0		9.0						26.0	26.0	20.0
17	17.0	11.0	2.0		8.0				25.0	23.0		
18				9.0		11.0						22.0
19		13.0		6.0	9.0				24.0	25.0	22.0	
20	17.0	9.0		9.0	9.0							18.0
21		10.0	2.0		9.0				23.0		17.0	
22										24.0		
23	18.0	11.0		6.0	12-0						23.0	18.0
24	16.0	12.0							26.0	24.0		
25		7.0		7.0								19.0
26		9.0			13.0				24.0	28.0	23.0	
27				7.0								20.0
28	14.0	6.0			12.0	13.0			24.0		27.0	
29			4.0	6.0						24.0		
30		7.0		5.0							23.0	19.0
31	18.0			4.0						26.0		

11472200 OUTLET CREEK NEAR LONGVALE, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.1	8	.02	2.1	4	•02	184	38	19
2	16	36	1.6	2.1	3	•02	586	74	273
3	35	28	2.6	1.9	3	•02	2020	165	1000
4	16	8	.35	1.B	3	.01	2210	160	1600
5	20	6	.32	1.7	3	-01	2190	170	1120
6	16	5	-22	1.7	3	-01	787	52	118
7	12	6	.19	1.7	2	.01	2040	248	1460
8	9.4	4	-10	1.7	1	0	745	110	221
9	7.2	2	.04	2.5	1	.01	346	35	33
10	5.6	5	. DB	2.8	1	-01	222	12	7.2
11	4.7	3	.04	2.6	1	-01	162	10	4.4
12	3.6	5	.05	2.9	1	•01	122	8	2.6
13	3.0	5	.04	3.7	5	.05	88	7	1.7
14	2.7	4	.03	113	138	52	71	4	.77
15	2.8	5	.04	58	45	7.0	60	3	-49
16	2.2	5	.03	28	7	.53	54	2	.29
17	2.1	2	.01	19	6	.31	56	3	.45
18	2.0	3	.02	15	4	16	1070	45	136
19	1.9	2	-01	13	3	•11	668	24	45
20	1.8	2	.01	11	3	•09	326	13	11
21	3.2	2	•02	8.9	1	•02	219	10	5.9
22	6.4	3	-05	7.7	1	-02	180	7	3.4
23	5.7	4	.06	7.7	1	•02	168	5	2.3
24	4.7	3	•04	6.5	3	•05	159	4	1.7
25	5.0	3	-04	5.3	2	.03	142	*	1.5
26	4.4	3	-04	4.3	4	- 05	122	4	1.3
27	3.8	4	•04	4.3	3	•03	103	3	-83
28 29	3.3 2.8	4	.04	5.0	. 1	01	88	3	•71
30	2.8	:	.03	219 25B	129 101	123	77 65	3	.62 .53
31	2.2	•	.03	258	101	70 	60	3	.49
		,						,	
TOTAL	209.0		6,22	812.9		253,62	15390		6073.18

		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE		DI SCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
									(1013/241)
1	54	2	.29	1180	34	130	298	1	-80
2	50	2	.27	2820	237	1810	262	1	.71
3	45	2	•24	1910	130	699	229	1	•62
4	41	2	•22	1090	67	197	198	1	.53
5	38	2	.21	6B2	43	79	226	1	-61
6	38	1	-10	510	30	41	205	1	.55
7	35	1	•09	395	20	21	208	1	-56
8	39	1	-11	326	12	11	194	ı	•52
9	925	137	943	282	7	5.3	162	1	.44
10	4230	292	3790	25B	7	4.9	142	1	.38
11	1530	118	508	219	7	4.1	129	1	•35
12	696	56	105	191	5	2.6	1190	133	666
13	808	54	127	171	4	1.8	1240	160	536
14	5040	271	44B0	153	4	1.7	1300	151	530
15	5750	240	4090	140	4	1.5	787	138	293
16	3030	178	1500	165	12	5.3	2400	169	1110
17	1720	72	334	362	46	45	1870	53	268
18	882	24	57	318	15	13	1110	16	48
19	544	11	16	3960	169	3120	696	10	19
20	385	11	11	4300	330	3950	510	10	14
21	310	10	8.4	3680	277	2840	410	10	11
22	254	10	6.9	2590	147	1030	346	10	9.3
23	215	9	5.2	2070	78	436	362	10	9.8
24	180	9	4.4	1290	29	101	306	10	8.3
25	162	9	3.9	858	8	19	395	32	34
26	147	6	2.4	654	8	14	346	17	16
27	147	4	1.6	500	6	8.1	270	13	9.5
28	156	4	1.7	410	3	3.3	229	10	6.2
29	2860	225	2850	342	1	•92	203	9	4.9
30	30B0	234	2060				182	6	3.9
31	1780	74	372				163	7	3.1
TOTAL	35171		21279.03	31826		14595.52	16568		3606.07

11472200 OUTLET CREEK NEAR LONGVALE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY MEAN MEAN MEAN MEAN CONCEN-MEAN CONCEN-MEAN DISCHARGE CONCEN-SEDIMENT SEDIMENT SEDIMENT DISCHARGE TRATION DISCHARGE TRATION TRATION DISCHARGE (TONS/DAY) DISCHARGE (TONS/DAY) DISCHARGE (TONS/DAY) (CFS) NAY (CFS) (MG/L) (CFS) (MG/L) (MG/L) 158 159 140 125 116 3.0 3.0 2.3 2.0 1.9 .16 .16 .16 .15 14 14 15 13 .08 .08 30 29 29 28 27 1 2 3 4 5 2 2 5 2 5 5 6 .07 2 12 11 11 11 9.3 106 96 1.4 1.3 1.2 1.1 25 25 24 23 23 2 2 2 2 2 .14 .14 .13 .12 .03 .03 .03 .03 1 1 1 1 90 84 79 10 .85 .80 .75 .51 .49 23 22 27 31 11 74 69 63 61 59 2 5 5 4 .12 8.5 .02 12 13 14 15 .12 .36 .42 8.0 7.7 7.4 6.8 .04 .02 3 3 2 112 - 04 2 16 17 56 54 .30 25 23 •20 •19 6.6 6.5 5.8 5.1 4.7 3 4 3 3 2 .05 3 2 2 5 51 49 47 •28 •26 •25 21 21 28 .11 .11 .05 .04 .03 18 2 2 20 45 2 2 2 2 . 24 32 30 .35 .24 .21 .19 4.2 3.7 3.4 3.2 2.5 .01 .01 .02 .02 21 22 23 24 25 3 3 6 1 2 2 2 .23 .22 .22 43 41 40 40 26 24 29 26 27 28 29 30 31 .21 .19 .19 .17 34 28 23 20 .46 .30 .19 .11 2.4 2.1 2.0 1.9 .01 .01 .02 .01 38 36 35 32 31 2 3 2 1 2 18 .08 TOTAL 2117 793 6.46 216.7 1.03 24.36

		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	2.0	ı	•01	.57	4	.01	2.3	2	•01
2	1.8	1	0	•59	4	•01	2.0	2	.01
3	1.7	1	0	.58	5	.01	1.9	3	• 02
4	1.9	1	.01	.71	7	.01	1.8	3	.01
5	1.9	1	.01	.68	9	•02	1.8	4	•02
6	1.9	1	.01	.57	6	.01	1.7	5	•02
7	1.7	1	0	.56	5	.01	1.6	6	.03
8	1.3	1	0	.57	4	.01	1.6	8	.03
9	1.3	1	0	•52	3	0	1.5	9	.04
10	1.5	1	0	.49	3	0	1.4	7	.03
11	1.4	1	o	.45	2	0	1.4	3	10.
12	1.5	1	0	.47	2	0	1.4	3	.01
13	1.6	1	0	.52	3	0	1.5	3	•01
14	1.6	1	0	.68	3	.01	1.9	3	.02
15	2.0	1	.01	.65	4	.01	1.7	4	• 02
16	1.3	1	0	.61	5	•01	1.7	4	• 02
17	1.3	1	0	•62	5	.01	1.6	3	.01
18	1.3	1	0	.79	6	•01	1.5	3	.01
19	1.2	1	0	1.6	6	.03	1.5	2	.01
20	1.0	1	0	10	6	.16	1.4	2	•01
21	.93	2	•01	25	17	1.1	1.4	3	.01
22	.96	2	.01	12	12	•39	1.4	4	•02
23	.81	3	.01	7.3	9	.18	1.4	5	.02
24	•91	5	.01	5.3	7	•10	1.4	6	•02
25	•90	6	• 01	4.7	6	.08	1.5	7	• 03
26	.76	7	.01	6.5	4	•07	1.4	6	•02
27	.77	6	•01	6.1	4	.07	1.5	5	.02
28	. 69	6	•01	4.7	4	-05	1.5	6	•02
29	.71	6	.01	4.1	2	•02	1.2	7	•02
30	.78	5	.01	3.4	4	•04	1.5	9	• 04
31	-67	4	.01	2.8	2	.02			
TOTAL	40.09		.16	104.13		2.45	47.4		.57

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

103295.22 45848.67

11472200 OUTLET CREEK NEAR LONGVALE, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

	WATER TEM- PERA- TURE DISCHARGE TRATION						NT C	THED	TUAN	PART	ICLE :		1 1461	repel	INDI	ATEN	METHOD OF
DATE	TIME																ANALY-
NOV 30 1967	1200	7	262	95	67	78	89	94	96	96	99	100					SBWC
JAN 16 1968	1545	9	2660	171	1230	29	46	57	65	69	84	90	95	99	100		SBWC
FEB 21	0720	9	4440	30B	3690	29	40	49	57	60	7B	BB	9B	100			VBWC
FEB 23	1220	12	2050	67	371	40	47	61	. 70	75	B7	92	97	100			SBWC

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PERIODIC DETERMINATION	IS OF SUSPENDED-S	EDIMENT CONCENTRAT	ION AND TURBIDITY, WATER YEAR	DCTOBER 1967 TO	SEPTEMBER 1968
	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED	TURBIDITY
DATE OF COLLECTION	SEDIMENT (MG/L)	TURBIDITY (MG/L SILICA)	DATE OF COLLECTION	SEDIMENT (MG/L)	(MG/L SILICA)
OCT. 9, 1967	2	0	FEB. 26	9	9
	3	i	FEB. 2B	2	6
OCT. 11	4		MAR. 3	ī	ī
OCT. 14		1	MAR. 5	i	į
OCT. 17	2	1	MAR. 7	i	2
OCT. 20	2	1		=	
DCT. 23	4	2	MAR. 1B	14	30
OCT. 24	3	1	MAY 1	2	1
OCT. 28	4	ī	JUNE 3	2	0
DCT. 31	5	3	JUNE 4	1	1
NOV. 3	á	i	JUNE 5	3	0
	3	1	JUNE 7	1	0
NOV. 6			JUNE 10	ĭ	i
NOV. B	1	1	JUNE 12	2	ō
NOV. 9	1	1	JUNE 14	ĩ	í
NOV. 12	1	1	JUNE 17	4	ò
NOV. 14	158	152		•	
NOV. 16	В	7	JUNE 19	3	1
NOV. 17	6	5	JUNE 21	1	0
NOV. 19	ă	ž	JUNE 24	2	0
NOV. 20	3	2	JUNE 26	2	0
NOV. 21	ĩ	2	JUNE 28	3	0
			1111 V 1	1	0
NOV. 23	1	2	JULY 1	i	ĭ
NOV. 24	3	2		i	ò
NOV. 25	1	1	JULY 5		ő
NOV. 26	4	2	JULY B	1	
NOV. 28	1	1	JULY 10	1	0
Nov. 34	95	129	JULY 12	1	0
NOV. 30	132	120	JULY 15	1	0
DEC- 3			JULY 17	1	0
DEC. 4	66	100	JULY 19	ī	ŏ
DEC. 5	168	128	JULY 22	ž	i
DEC. 6	53	90	JULT 22	2	
DEC. 7	275	200	JULY 24	5	1
DEC- 10	12	20	JULY 26	7	1
DEC. 12	8	11	JULY 29	6	1
OEC. 13	7	7	JULY 31	4	1
DEC. 14	4	5	AUG. 2	4	1
			AUG. 5	9	1
DEC. 17	2	4			
DEC. 21	10	22	AUG. 7	5	1
DEC. 29	3	5	AUG. 9	3	1
JAN. 4, 1968	2	2	AUG. 12	2	2
JAN. 7	1	1	AUG. 14	3	2
			AUG. 16	5	1
JAN. 9	48	6	AUG. 19	6	1
JAN. 12	52	82			
JAN. 16	171	115	AUG. 21	17	62
JAN. 19	11	29	AUG. 23	9	2
JAN. 20	10	20	AUG. 26	4	1
			AUG. 28	. 4	1
	_		AUG. 30	6	i
JAN. 23	9	10	SEPT. 4	3	ì
JAN. 25	9	10		-	•
JAN. 27	4	4	SEPT. 6	5	2
JAN. 29	446	130	SEPT 9	9	2
JAN. 30	289	270	SEPT. 11	3	ī
. ,			SEPT. 13	3	
IAN - 31	B 2	100	SEPT. 16	3	1
JAN. 31 FEB. 7	19	13			
FEB. 9	1	B	SEPT. 1B	3	1
FEB. 11	i	8	550T 00	•	
FEB. 13	4	3	SEPT. 20	2	1
FED. 13	•	-	SEPT. 23	5	2
FEB. 17	40	37	SEPT. 25	7	2
FEB. 19	25	27	SEPT. 27	5	1
FEB. 20	311	270	SEPT. 30	9	1
	30B	215			
FEB. 21	67	66			
-co. 23	01	00			

11472500 EEL RIVER ABOVE DOS RIOS, CALIF.

LOCATION.--Lat 39°41'20", long 123°21'30", in SW 2 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 1966 to September 1968.

Sediment records: October 1957 to September 1965.

EXTREMES.--1962-65, May to September 1966:
Water temperatures: Maximum, 29.0°C June 15, 1966; minimum (1962-65), 3.5°C Nov. 23, 1964.

REMARKS. -- No records available for Dec. 14 to Sept. 30; probe broken by high water of Dec. 14.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

				, 01	,					•••		
	oc.	TOBER	NOV	EMBER	DECE	MBER	JAN	IUARY	FEBR	UARY	MA	RCH
DAY	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	17.0	19.0	12.0	7.0	4.0						
2	17.0	13.0	19.0	12.D	7.0	6.0						
3	17.0	13.0	19.0	12.0	9.0	7.0						~ -
4	17.0	15.0	16.0	13.0	9.0	8.0						
5	18.0	15.0	19.0	14.0	9.0	7.0						
6	18.0	15.0	19.0	14.0	7.0	6.0						
7	21.0	15.0	19.0	14.0	8.0	7.0						
8	20.0	16.0	17.0	14.0	7.0	6.0						
9	21.0	17.0	17.0	13.0	7.0	4.0						
10	22.0	16.0	18.0	14.0	7.0	6.0						
11	23.0	17.0	17.0	13.0	7.0	4.0						
12	22.0	17.0	16.0	14.0	6.0	4.0						
13	22.0	16.0	16.0	14.0	4.0	2.0						
14	21.0	14.0	16.0	14.0								
15	20.0	12.0	16.0	14.0								
16	20.0	13.0	15.0	12-0								
17	20.0	13.0	15.0	12.0								
18	20.0	13.0	14.0	12.0								
19	21.0	14.0	14.0	12.0								
20	20.0	14.0	14.0	11.0								
21	17.0	14.0	14.0	11.0								
22	20.0	16.0	13.0	9.0								
23	21.0	16.0	12.0	8.0								
24	20.0	16.0	12.0	8.0								
25	20.0	15.0	12.0	8.0								
26	19.0	13.0	10.0	7.0								
27	19.0	14.0	9.0	6.0								
28	19.0	13.0	9.0	7.0								
29	19.0	12.0	8.0	7.0								
30	18.0	12.0	7.0	6.0								
31	19.0	12.0										
HONTH	23.0	12.0	19.0	6.0								

11472800 MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.

ATION.--Lat 39°49'45", long 123°04'11", in SEASWA 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 1966 to September 1968. Sediment records: October 1967 to September 1968.

namas, --1x97--0s: Maximum, 29.0°C July 5; minimum, 1.0°C Jan. 29.

Sediment concentrations: Maximum daily, 7,150 mg/l Jan. 14; minimum daily, 1 mg/l on many days.

Sediment discharge: Maximum daily, 264,000 tons Jan. 14; minimum daily, 0.02 ton Oct. 1.

Period of record: Water temperatures: Maximum, 29.0°C July 5, 1968; minimum (1967-68), 1.0°C Jan. 29, 1968.

REMARKS.--Temperature recorder stopped Dec. 13 to Jan. 22; probe out of water Aug. 27 to Sept. 30. Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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-
OCTOBER																																
MUM] XAM	18	17	14	14	15	15	16	16	17	17	17	17	18	17	17	17	18	17	17	17	16	17	17	17	17	16	16	16	16	16	17	16
MINIMUM																												12	11	12	12	13
NOVEMBER.																																
MAXIMUM																													9	8		12
MUPINIM															11															7		11
DECEMBER.																																
MAXIMUM			6																													
MINIMUM																																
JANUARY																																
MUP 1 XAM																							6	6	6	4	3	3	2	3	4	
MINIMUM																													1	2	3	
FEBRUARY.																																
MUP IX AM	3	3	5	6	6	7	7	6	6	6	6	7	7	7	7	7	7	7	7	8	8	7	7	8	8	8	8	7	7			7
MINIMUM	2	3	3	3	5	6	5	5	5	5	5	5	6	5	5	7	6	6	7	7	8	7	7	7	8	7	7	7	7			6
MARCH																																
MUMIXAM	7	7	7	7	9	8	8	8	8	8	В	8	8	8		7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
MINIMUM	7	7	7	7	7	8	8	8	8	В	8	8	8	8	7	7	7	7	8	8	8	7	8	8	8	R	8	7	7	7	7	7
APRIL																																
MAXIMUM			8																										11			9
MINIMUM	8	8	в	В	8	8	8	8	8	8	8	9	8	9	9	a	9	9	9	9	9	9	9	9	9	9	9	9	9	9		9
MAY																																
MAXIMUM																													13			12
MINIMUM																													13			12
JUNE				-					_	-					_				_													
MUMIXAM																													25			21
MINIMUM																													13			15
JULY																																
MAXIMUM																													26			25
MINIMUM																													22			18
AUGUST																																
PUP I XAM	26	26	26	25	24	25	24	26	24	24	23	23	21	22	21	21	20	20	19	17	17	20	22	22	19	22						22
MUM IN 1M																																19
SEPTEMBER																																
MAXIMUM																																

11472800 MIDDLE FORK EEL RIVER ABOYE BLACK BUTTE RIVER, NEAR COVELO, CALIF. --Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

				, "				. 1500	
		OCTOBER			NOVEMBER			OECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	9.0 105 112 53 40	1 6 2 2 2	.02 1.7 .60 .29	15 14 14 14 14	2 2 2 1 1	.08 .08 .08 .04	51 424 2080 1940 1630	3 166 361 300 294	-41 62B 2030 2510 1780
6 7 8 9	35 29 24 21 19	2 2 2 2 2	.19 .16 .13 .11	14 14 13 16	1 1 1 1	.04 .04 .04 .04	418 740 345 287 310	35 124 17 9 B	40 309 16 7.0 6.7
11 12 13 14	18 17 15 15	2 2 2 2 2	.10 .09 .08 .08	17 17 17 17 890 177	1 1 1 295 18	.05 .05 .05 1050 8.6	282 260 215 174 177	6 4 4 4	4.6 2.8 2.3 1.9
16 17 18 19 20	13 12 12 12 12	2 2 2 2 2	.07 .06 .06 .06	85 58 45 41 37	4 2 1 1	.92 .31 .12 .11	177 162 187 150 135	4 6 20 4 2	1.9 2.6 10 1.6
21 22 23 24 25	15 28 27 23 21	2 2 2 2 2	.08 .15 .15 .12	33 32 30 28 27	1 2 2 2 2	.09 .17 .16 .15	103 121 159 215 430	1 2 3 5 8	.28 .65 1.3 2.9 9.3
26 27 28 29 30 31	19 18 17 17 17 17	2 2 2 2 2 2	.10 .10 .09 .09	25 26 28 70 65	2 2 50 16	.14 .14 .15 13	830 1460 1020 637 436 340	62 141 77 18 13	154 558 229 31 15 8•3
TOTAL	B05.0		5.43	1893		1077.79	15895		8367.17

		JANUARY			FEBRUARY		0	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	291	7	5.5	235	52	4B	1680	110	499
2	243	7	4.6	1890	915	51B0	1390	72	270
3	198	6	3.2	3000	726	5960	1220	55	181
4	180	6	2.9	2230	410	2470	1140	50	154
5	159	6	2.6	1860	215	1080	1180	45	143
6	145	5	2.0	1690	165	753	920	38	94
7	140	4	1.5	1990	135	725	736	30	60
8	148	3	1.2	1830	110	544	615	22	37
9	474	177	678	1390	87	327	530	19	27
10	4800	444	6290	1250	68	230	466	17	21
11	2860	50	386	972	52	136	427	15	17
12	2150	32	186	B10	42	92	780	132	399
13	5200	1410	23900	619	35	58	662	68	122
14	12400	7150	264000	554	32	48	72B	во	157
15	6170	6150	117000	418	30	34	680	23	42
16	2760	1920	14300	760	126	371	1270	161	5B3
17	2100	900	5100	2780	907	7280	1080	113	330
18	1250	490	1650	2740	460	3400	B00	90	194
19	720	322	626	6860	3270	105000	674	78	142
20	619	235	393	8420	3570	92500	6B8	65	121
21	880	210	499	8460	3280	76600	712	52	100
22	1010	178	485	6700	2640	47800	68B	42	78
23	860	108	251	8020	2080	45000	680	31	57
24	810	80	175	5700	1450	22300	720	25	49
25	730	80	158	3340	762	6870	1640	293	1420
26	602	80	130	2190	425	2510	1500	115	466
27	412	73	81	5000	285	1540	1180	45	143
85	315	57	48	2030	215	1180	1240	34	114
29	467	96	143	1850	155	774	1570	40	170
30	375	60	61				1610	43	187
31	300	33	27				1360	41	151
TOTAL	49768		436590.5	82588		430810	30566		6528

11472800 MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAT	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TUNS/ DAY)
1	1190	34	109	333	6	5.4	125	3	1.0
2	920	27	67	331	5	4.5	120	3	•97
3	704	20	38	337	5	4.5	112	3	.91
4	650	18	32	340	5	4.6	105	4	1.1
5	595	16	26	333	5	4.5	100	4	1.1
6	525	14	20	305	4	3.3	98	4	1.1
7	492	13	17	294	4	3.2	96	4	1.0
8	484	11	14	275	4	3.0	92	5	1.2
9	516	11	15	265	4	2.9	87	5	1.2
10	590	11	18	255	4	2.8	81	5	1.1
11	644	10	17	245	3	2.0	76	5	1.0
12	595	10	16	235	3	1.9	72	5	.97
13	504	9	12	225	3	1.8	69	5	.93
14	463	9	11	250	3	2.0	66	5	.89
15	449	9	11	230	3	1.9	64	5	.86
16	418	9	10	215	3	1.7	61	5	.82
17	375	В	8.1	200	3	1.6	58	5	.78
18	346	В	7.5	195	3	1.6	56	5	•76
19	337	8	7.3	195	3	1.6	53	5	•72
20	325	В	7.0	370	В	8.0	51	5	.69
21	313	В	6.8	290	4	3.1	49	5	.66
22	303	7	5.7	245	4	2.6	47	6	.76
23	299	7	5.7	215	3	1.7	45	8	.97
24	294	7	5.6	185	3	1.5	43	12	1.4
25	294	7	5.6	170	2	•92	41	9	1.0
26	302	7	5.7	165	2	.89	39	6	.63
27	315	6	5.1	158	2	.85	37	3	• 30
28	316	6	5.1	150	2	.81	36	3	-29
29	325	6	5.3	145	2	.78	35	2	.19
30	340	6	5.5	135	3	1.1	34	2	.18
31				130	3	1.1			
TOTAL	14223		519.0	7416		78.15	2048		25.48

		JULY			AUGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CF3)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	33	2	.18	10	1	.03	19	1	-05
2	31	2	-17	10	1	.03	17	1	.05
3	3D	2	.16	9.9	2	•05	15	1	•04
4	29	2	.16	9.8	2	+05	14	1	• 04
5	27	2	-15	9.7	2	•05	13	1	-04
6	26	2	.14	9.6	2	.05	12	1	.03
7	25	2	-14	9.5	2	-05	12	1	.03
В	24	2	.13	9.5	2	.05	11	1	.03
9	23	2	.12	9.4	2	•05	11	1	.03
10	22	2	.12	9.2	2	.05	11	1	.03
11	21	1	•06	9.0	2	•05	10	1	.03
12	20	1	.05	8.9	2	.05	10	i	.03
13	19	1	•05	8.9	2	.05	9.8	1	•03
14	18	1	.05	8.9	2	.05	11	2	• 06
15	18	1	.05	8.9	2	.05	13	3	•11
16	17	1	.05	8.9	2	-05	14	3	•11
17	17	ī	.05	8.9	2	.05	13	ā	•11
18	16	1	.04	9.0	2	•05	12	3	.10
19	15	1	.04	9.8	2	.05	11	3	• 09
20	15	1	-04	26	190	13	10	3	.08
21	14	1	.04	130	31	11	10	3	.08
22	14	ī	.04	93	В	2.0	io	3	•08
23	13	ĩ	.04	60	5	.81	10	3	• 0B
24	13	ī	.04	43	3	.35	10	3	.08
25	12	ī	•03	36	1	.10	10	2	.05
26	12	1	•03	38	1	•10	10	2	•05
27	ii	î	.03	38	î	.10	, 9,9	2	.05
28	îî	î	.03	35	î	•09	9.8	2	.05
29	îî	î	.03	29	i	.08	9.7	ž	• 05
30	10	i	•03	21	î	.06	9.6	2	.05
31	10	î	.03	22	i	.06			
TOTAL	577		2.32	748.8		28.66	347.8		1.74

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

206875.6 884034.24

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CONCENTRATION

11472800 MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.--Continued SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

		WATER TEM- PERA-			SUSPENDED -		NT F	INER	THAN "	PARTI	ICLE S		LLIMET	(ERS)	INDIC	ATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	(CFS)	TRATION (MG/L)	(TONS/DAY)	.002	.004	.008	.016	•031	•062	.125	.250	.500	1.00	2.00	SIS
JAN 13 1968	0955	6	5540	812	12100	18	25	31	37	40	57	71	88	100			SBWC
JAN 13	1600	Š	6950	2020	37900	10	15	21	27	30	48	60	77	96	100		VBWC
JAN 14	0815	5	12000	6590	214000	17	23	32	41	51	53	74	89	98	100		VPWC
JAN 15	0850	ź	7190	6820	132000	10	16	23	28	36	41	67	88	99	100		VPWC
JAN 17	1555	6	1910	907	4680	20	28	37	48	57	64	72	79	86	100		VPWC
FEB 2	1500	3	2200	1220	7250	16	24	31	36	39	53	66	82	100			VBWC
FEB 19	1235	7	4800	1700	22000	13	20	27	33	35	61	74	87	99	100		VBWC
FEB 19	1725	7	6470	5860	102000	15	22	25	39	50	58	75	92	100			VPWC
FF8 22	1230	7	6740	2640	48000	13	19	25	29	30	46	54	65	79	99	100	V8WC

PARTICIE SIZE DE RED MATERIAL, WATER YEAR DICTORER 1967 TO SEPTEMBER 1968 (METHOD DE ANALYSIS: H. HYDROMETER: D. OPTICAL ANALYZER: S. SIEVE: V. VISUAL ACCUMULATION TURE)

		WATER	NUMBER						PART	TOLF S	17E					
			OF SAM- PLING	DISCHARGE		PERCEN	T FINE	R THAN	THE S	17E (1	N MILL	IMFTFR	S) IND	ICATED		METHOD OF ANALY-
DATE	TIME	(c)	POINTS	(CFS)	.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	212
JAN 17 1968 FFR 22	1640 1530	6	5 6	2030 6700	1	2	4 7	1 <i>?</i> 19	25 34	37 50	54 65	58 78	74 87	100	100	S S

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CONCENTRATION

	CONCENTRATION			CONCENTRATION	
	OF SUSPENDED SEDIMENT	TURBIDITY		OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
			JAN. 29	78	66
OCT. 22, 1967	2	1	JAN. 30	46	47
Nov. 11	407	1 310	JAN. 31	32	32
NOV. 14			FER. 2	1220	345
NOV. 19	1	1	FEB. 3	728	290
NOV. 27	2	1			
NOV. 29	68	87	FEB. 5	198	150
NOV. 30	16	22	FEB. 6	160	120
DEC. 1	4	5	FFB. 8	108	78
DEC. 2	1	1	FE8. 10	62	54
DEC. 3	375	115	FEB. 13	37	29
DEC. 4	127	58	FEB. 16	114	85
DEC. 5	378	108	FE8. 17	932	290
DEC. 6	28	25	FEB. 18	433	220
DEC. 7	128	99	FEB. 19	5860	320
DEC. 8	17	22	FEB. 20	3290	870
DEC. 9	8	13	FEB. 21	3480	780
DEC. 10	8	7	FE8. 22	2720	580
DEC. 12	4	7	FEB. 24	1560	620
DEC. 17	4	3	FEB. 25	784	320
DEC. 18	26	4ó	FEB. 26	444	245
DEC. 19	2	2	FEB. 28	216	150
DEC. 24	5	5	MAR. 2	64	48
DEC. 25	38	29	MAR. 8	20	17
DEC. 26	46	27	MAR. 12	114	100
DEC. 27	146	66	MAR. 13	27	30
		00			
DEC. 28	78	37	MAR. 14	62	66
JAN. 1, 1968	7	4	MAR. 16	163	150
JAN. 4	6	4	MAR. 17	118	125
JAN. 8	3	2	MAR. 24	20	11
JAN. 9	76	95	MAR. 25	276	155
JAN. 10	410	290	MAR. 27	36	29
JAN. 11	50	44	MAR. 31	42	34
JAN. 12	22	21	APR. 3	20	17
JAN. 13	2020	460	APR. 9	11	8
JAN. 14	6590	2600	APR. 14	9	4
JAN. 15	6820	1760	MAY 4	4	3
JAN. 16	1880	750	MAY 7	4	3
JAN. 17	906	630	MAY 14	3	1
JAN. 18	482	300	MAY 19	3	1
JAN. 19	329	155	MAY 20	16	8
JAN. 20	235	130	MAY 21	4	2
JAN. 21	212	155	MAY 26	ż	1
JAN. 22	168	100	JUNE 11	5	ī
JAN. 23	92	70	JULY 17	1	ō
JAN . 28	54	44	AUG. 27	i	ĭ
	, ,	77		•	•

11472900 BLACK BUTTE RIVER NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'15", long 123°04'50", in SE¹₂ 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 February 1968, Water temperatures: May 1964 to September 1968, Sediment records: October 1965 to September 1968,

EXTREMES, -- 1967-68:

Water temperatures: Maximum, 31.0°C July 6; minimum, freezing point on several days during December and January.

Sediment concentrations: Maximum daily, 5,830 mg/l Jan. 14; minimum daily, 1 mg/l on many days.
Sediment discharge: Maximum daily, 80,200 tons Jan. 14; minimum daily, 0.01 ton on many days during October,
August, and September.

Period of record:

or record: Water temperatures: Maximum, 31.5°C Aug. 23, 1984, Aug. 2, 1987; minimum (1985-88), freezing point on several days in 1985-88. Sediment concentrations: Maximum daily, 10,800 mg/l Jan. 4, 1986; minimum daily, 1 mg/l on many days in

Sediment Concentrations: maximum daily, 10,000 mg/l Jan. 4, 1886; minimum daily, 1 mg/l on many days 1867-88. Sediment discharge: Maximum daily, 143,000 tons Jan. 4, 1866; minimum daily, 0.01 ton on many days in 1867-88.

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

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), OCTOBER 1967 TO FEBRUARY 1968

	OCTOR	ER	NOVE	IBER	DECEM	BER	JANUA	AR Y	FEBRU	ARY	MARC	н
DAY	MAXIMUM	MINIMUM	MAX I MUM	MUMINIM	NUMIXAM	MINIMUM	MUM I XAM	NUNININ	PUM 1 XAM	MINIMUM	MUM IXAM	MINIMUM
1	504	486	477	445					195	135		
2	505	482	482	446					136	119		
3	532	494	477	445					142	119		
4	537	512	478	448					147	116		
5	534	493	474	443					135	118		
6	532	489	4 T1	439					122	97		
7	532	483	473	440					112	85		
8	520	473	473	447					114	90		
9	514	467	474	443					114	100		
10	510	463	472	449					114	97		
11	504	453	473	439					117	94		
12	503	454	463	438					120	93		
13	672	465	462	345					118	109		
14	571	476	448	317					119	103		
15	549	470	443	397					119	104		
16	535	463	464	431			126	108	114	103		
17	525	453	475	447			134	115	118	88		
18	515	456	504	472			141	121	121	109		
19	513	449	506	455			147	122	121	64		
20	507	447	476	425			150	125	107	89		
21	509	482	471	401			148	132				
22	503	464	414	354			152	105				
23	488	462	388	229			156	125				
24	483	454					158	131				
25	485	450					160	135				
26	477	453					164	160				
27	484	445					169	163				
28	485	454					172	164				
29	476	449					173	101				
30	475	438					178	150				
31	476	436					188	178				
AVER AGE	514	465										

MUNIXAM

11472900 BLACK BUTTE RIVER NEAR COVELO, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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 JCTOBER.. 19 MAXIMUM 19 18 11 10 18 MUMINIM 11 11 11 11 NOVEMBER. 14 MAXIMUM 14 13 12 15 14 14 13 13 15 14 13 13 13 12 12 11 11 6 10 9 9 10 9 9 0 8 6 6 6 6 5 __ DECEMBER. --7 6 6 7 5 6 6 3 6 6 1 9 1 4 6 6 MAXIMUM 8 3 3 2 3 6 2 7 8 2 2 MINIMUM 3 ó ---7 3 7 JANUAFY. . 7 --5 3 5 2 7 5 2 1 9 8 4 4 8 --MAXIMUM 6 5 2 1 4 5 5 6 3 4 6 6 6 6 8 7 8 8 4 3 2 1 1 Ö MINIMUM _1 6 7 ٠ -- 6 7 6 = == FEBRUARY. 6 В 4 4 2 3 7 8 8 0 8 7 ---- ---- 10 10 MINIMUM 3 --3 4 4 0 MARCH.... MAXIMUM MINIMUM 11 11 10 11 5 5 4 6 17 17 16 11 11 13 -- -- 18 18 --7 10 11 9 8 9 11 12 12 11 11 5 6 6 6 8 13 14 13 13 14 17 9 8 8 7 6 9 7 7 8 8 В ė , t 6 6 6 6 6 5 4 -6 6 6 6 6 6 8 6 APRIL.... 12 14 13 11 11 11 13 13 13 13 14 15 17 16 11 9 9 7 8 8 9 9 16 14 15 10 9 7 16 14 13 13 14 14 13 13 14 11 8 8 6 5 5 7 6 5 5 7 15 16 17 17 17 14 8 6 5 5 -- -- --15 14 18 12 11 9 MUMIFIM 8 MUMIXAM 17 18 13 17 18 19 18 19 11 9 8 8 9 11 11 19 19 21 21 22 21 11 11 11 13 12 17 18 17 16 14 10 7 7 18 19 15 13 18 10 19 10 18 13 10 9 21 22 18 16 MINIMUM 9 7 JUNE 23 18 20 22 14 14 14 19 16 21 21 22 22 13 12 12 13 13 23 22 22 13 16 13 27 18 23 25 26 26 13 14 15 17 27 27 28 27 28 18 18 18 19 24 16 22 13 28 18 29 29 18 19 28 27 19 18 26 17 27 MINIMUM 17 JULY.... MAXIMUM --MINIMUM 20 20 20 20 20 21 21 22 20 AUGUST... 30 30 30 29 29 29 21 21 21 21 20 20 28 27 28 27 28 27 18 18 18 18 18 19 27 28 26 MINIMUM 18

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

23 ---

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IMETHOOS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE: C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;

			٧,	VISUAL A	ICCOMOLATIO	1 1000		1.4 0.									
		WATER	;		SUSPENDED -					PART	ICLE :	SIZE					METHOO
		TEM-			SEDIMENT		ENT F	INER	THAN	THE S	IZE (IN MI	LLIMET	rers)	INDI	CATED	OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	DISCHARGE (TONS/DAY)	.002	.004	•008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
NOV 14 1967	0910	12	315	383	326	55	69	76	86	90	98	99	100				VBWC
JAN 14 1968	1045	7	2950	4100	32700	19	27	37	48	59	68	80	93	99	100		VPWC
JAN 14	1505	ż	5300	8150	117000	21	26	35	45	56	64	82	95	99	100		VPWC
JAN 16	1450	6	1370	1810	6700	17	22	32	40	47	53	57	64	76	97	100	VPWC
FEB 19	1705	8	7300	6630	131000	21	29	35	50	63	69	85	95	100			VPWC
EEB 20	1120	8	3450	3830	35700	17	24	31	44	. 54	60	73	85	97	100		VPWC

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

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

			MUMBER						PART	ICLE S	IZE					
		TFM-	NF													METHOD
		PERA-	SAM-			PERCENT	FINER	THAN	THE S	12E (I	N MILL	1METER	S) INC	ICATED		DF
		THRE	PLING	DISCHARGE												ANALY-
DATE	TIME	(C)	POINTS	(CFS)	•062	.125	.250	•500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	SIS
DCT 31 1967	0930		5	7.1	1	1	3	10	17	25	35	49	66	85	100	s
NOV 14	1200		3	220		1	2	7	16	3.0	44	56	74	83	100	Š
DFC 14	1230		3	39	1	2	5	29	35	42	50	86	86	100		S
JAN 16 1968	1400		6	1320				5	19	33	45	57	76	100		S
FFR 20	1030		5	3450	1	2	5	18	36	54	72	92	100			S

11472900 BLACK BUTTE RIVER NEAR COVELO, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OC TOBER		•	NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.2	1	•01	7.1	2	.04	19	2	-10
2	9.3 52	16	.57	6.8	2	.04	26	10 356	2.4
3	21	11	1.6 .11	6.B 6.B	2	.04 .04	313 422	266	303 638
5	16	ž	.09	6.5	2	.04	334	316	376
6	15	2	.08	6.5	1	.02	93	32	8.0
7	13	2	•07	6.5	1	•02	260	387	297
8	11 10	2	.06 .05	6.5 6.5	1 1	.02	128 93	42 11	15 2.8
10	9.4	2	.05	6.8	i	.02	100	10	2.7
11	9.4	3	.08	6.8	1	.02	86	4	.93
12	9.0	3	•07	6.B	1	•02	78	2	•42
13 14	7.7	3	•06 •06	7.4 166	1 238	.02 12B	64 43	1 2	•17 •23
15	7.4 7.1	3	.06	38	98	10	50	ž	.27
16	6.8	3	•06	19	32	1.6	50	3	•41
17	6.8	3	.06	13	5	.18	46	7	.87
18	6.B	3	.06	11	1	.03	69	40	7.5
19 20	6.5 6.5	3	.05 .05	11 9.9	1	.03	52 43	5 4	•70 •46
		_			_	*			
21	7-1	3	• 06	9.9	5	.13	40	5	• 54
22 23	13 13	3	•11 •11	9.0 8.1	4	.10 .09	41 55	6 10	.66 1.5
24	10	3	•08	7.7	3	.06	93	23	5.8
25	9.0	3	.07	7.4	3	•06	176	128	61
26	8.1	3	.07	7.4	3	.06	213	117	67
27 28	7.4 7.4	3	.06 .06	7.4 8.6	2 2	.04 .05	246 184	136 48	90 24
29	7.4	2	.04	35	167	17	133	28	10
30	7.4	2	.04	31	34	2.9	89	17	4.1
31	7.4	2	.04				69	10	1.9
TOTAL	332.1		4.04	487.2		160.77	3708		1923.46
		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	•	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 56 46	MFAN CONCEN- TRATION	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 45B 1690	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 243 7100	DISCHARGE (CFS) 760 600	MEAN CONCEN- TRATION (MG/L) 224 180	DISCHARGE (TONS/DAY) 460 292
1 2 3	DISCHARGE (CFS) 56 46 37	MFAN CONCEN- TRATION (MG/L) 7 7	DISCHARGE (TONS/DAY) 1.1 .87	MEAN DISCHARGE (CFS) 45B 1690 1260	MEAN CONCEN- TRATION (MG/L) 160 1520 860	D1SCHARGE (TONS/DAY) 243 7100 2930	760 600 500	MEAN CONCEN- TRATION (MG/L) 224 180 155	DISCHARGE (TONS/DAY) 460 292 209
1 2 3 4	DISCHARGE (CFS) 56 46 37 32	MFAN CONCEN- TRATION (MG/L) 7 7 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52	MEAN DISCHARGE (CFS) 45B 1690 1260 875	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405	D1SCHARGE (TONS/DAY) 243 7100 2930 957	760 600 500 460	MEAN CONCEN- TRATION (MG/L) 224 180 155 140	DISCHARGE (TONS/DAY) 460 292 209 174
1 2 3 4 5	DISCHARGE (CFS) 56 46 37 32 28	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45	MEAN DISCHARGE (CFS) 45B 1690 1260 875 853	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315	D1SCHARGE (TONS/DAY) 243 7100 2930 957 725	760 600 500 460 440	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135	DISCHARGE (TONS/DAY) 460 292 209 174 160
1 2 3 4 5	DISCHARGE (CFS) 56 46 37 32 28	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45	MEAN DISCHARGE (CFS) 458 1690 1260 875 863	MEAN CONCEN- TRATIDN (MG/L) 160 1520 860 405 315	D1SCHARGE (TONS/DAY) 243 7100 2930 957 725	DISCHARGE (CFS) 760 600 500 460 440	MEAN CONCEN- TRATIDN (MG/L) 224 180 155 140 135	DISCHARGE (TONS/DAY) 460 292 209 174 160
1 2 3 4 5	D1SCHARGE (CFS) 56 46 37 32 28 23	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31	MEAN DISCHARGE (CFS) 45B 1690 1260 875 863 990 864	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315	D1SCHARGE (TONS/DAY) 243 7100 2930 957 725	DISCHARGE (CFS) 760 600 500 460 440 425 395	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135	DISCHARGE (TONS/DAY) 460 292 209 174 160
1 2 3 4 5 6 7 8	D1SCHARGE (CFS) 56 46 37 32 28 23 23 26 150	MEAN CONCENTRATION (MG/L) 7 7 6 6 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315 380 310 270 238	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 56 46 37 32 28 23 23	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31	MEAN DISCHARGE (CFS) 45B 1690 1260 875 853 990 864	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315 380 310 270	D1SCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598	DISCHARGE (CFS) 760 600 500 460 440 425 395 365	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135 108 75 55 44 39	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 56 46 37 32 28 23 26 150 1020	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 5 5 5 5 4 24 2000	DISCHARGE (TONS/DAY) 1-1 -87 -60 -52 -45 -31 -31 -35 763 8340	MEAN DISCHARGE (CFS) 45B 1690 1260 A75 853 990 864 820 800 702	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315 380 310 270 238 209	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135 108 75 55 44 39	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 56 46 37 32 28 23 23 25 150 1020	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 424 2000 270	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 .8340 .104 .30	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 800 702 614	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315 380 310 270 238 209	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135 108 75 55 44 39 38 418	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 56 46 37 32 28 23 26 150 1020 143 111 374	MFAN CONCENTRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 100 526	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 763 8340	MEAN DISCMARGE (CFS) 458 1690 1260 875 863 990 864 820 820 800 702 614	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 270 238 209 184 150 110	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 275 1400 660	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135 108 75 55 44 39 38 418 152	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 56 46 37 32 28 23 23 25 150 1020	MFAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 424 2000 270	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 .8340 .104 .30	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 800 702 614	MEAN CONCEN- TRATION (MG/L) 160 1520 860 405 315 380 310 270 238 209	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400	MEAN CONCEN- TRATION (MG/L) 224 180 155 140 135 108 75 55 44 39 38 418	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580
1 2 3 4 4 5 6 7 8 9 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 56 46 37 32 28 23 23 26 150 1020 143 111 374 4610 3620	MFAN CONCENTRATION (MG/L) 77 76 66 66 65 55 5424 2000 270 1000 526 5830 3730 1750	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 30 588 80200 38100 7460	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 800 702 614 519 508 1200	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 270 238 209 184 150 75 52 348	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 597 451 349 249 119 71 1130	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400 660 700 510	MEAN CONCEN- TRATIDM (MG/L) 124 180 155 140 135 108 75 55 44 39 38 418 152 175 100	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 56 46 37 32 28 23 26 150 1020 143 111 374 4610 3620	MEAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 424 2000 270 100 526 5830 3730 1750 800	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 820 800 702 614 614 590 508	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 310 270 238 209 184 150 110 75 52 348 1380	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400 660 700 510	MEAN CONCEN- TRATIDN (MG/L) 185 140 135 108 75 544 39 38 418 152 175 100 561	DISCHARGE (TONS/DAY) 460 292 299 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 56 46 37 32 28 23 25 150 1020 143 111 374 4610 3620	MEAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 5 5 5 5 4 24 2000 270 100 526 5830 3730 1750 800 480	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 .30 .588 .80200 .38100 .7460 .1460 .658	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 800 702 614 614 5190 508	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 3270 238 209 184 150 755 22 348 1380 770	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960 2180	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400 660 700 510 2300 1150 920	MEAN CONCEN- TRATIDM (MG/L) 224 180 155 140 135 108 75 55 44 39 38 418 152 175 100 561 205	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 56 46 37 32 28 23 26 150 1020 143 111 374 4610 3620	MEAN CONCEN- TRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 424 2000 270 100 526 5830 3730 1750 800	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 820 800 702 614 614 590 508	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 310 270 238 209 184 150 110 75 52 348 1380	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 330 300 275 1400 660 700 510 2300 1150	MEAN CONCEN- TRATIDN (MG/L) 185 140 135 108 75 544 39 38 418 152 175 100 561	DISCHARGE (TONS/DAY) 460 292 299 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 56 46 37 32 28 23 24 150 1020 143 111 374 4610 3620 1520 675 508 515	MFAN CONCENTRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 100 526 52 52 52 52 52 52 52 52 52 52 52 52 52	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 30 588 80200 38100 7460 1460 658 423 347 285	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 800 702 614 500 508 1200 1650 3800 2850 3370	MEAN CONCENTRATION (MG/L) 1620 8600 405 315 3800 2780 1520 1520 3800 7750 3870 3870 3870 2860 2860 2860	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 597 451 349 249 119 71 1130 5960 2180 39700 28300 26000	DISCHARGE (CF5) 760 600 500 460 440 425 395 365 330 300 275 1400 660 700 510 2300 1150 920 700 610	MEAN CONCENTRATION (MG/L) 224 180 155 140 135 140 155 140 155 140 155 140 155 160 160 160 160 160 160 160 160 160 160	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173
1 2 3 3 4 5 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 27	DISCHARGE (CFS) 56 46 37 32 28 23 23 24 150 1020 143 111 374 4610 3620 1520 675 508 515 558	MFAN CONCENTRATION (MG/L) 7 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 5830 3730 1750 800 480 304 230 192 142	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 820 820 8100 702 614 614 590 508 1200 1050 13800 2850	MEAN CONCENTATION (MG/L) 160 1520 860 405 315 380 270 238 150 110 75 52 348 1380 770 3680 2860 2860 2860 2860 2860 2860 2860 2	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 162 119 1130 5960 2180 39700 28300 26000 14500	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 2300 1150 700 610 550 5525	MEAN CONCENTRATION (MG/L) 224 180 135 140 135 140 135 140 155 140 155 140 155 140 155 155 155 150 150 150 150 150 150 15	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173
1 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 7 23	DISCHARGE (CFS) 56 46 37 32 28 23 24 150 1020 143 111 374 4610 3620 1520 675 508 515 558	MFAN CONCENTRATION (MG/L) 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 526 526 526 526 526 526 526 526 526	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 30 588 80200 38100 7460 1460 658 423 347 285 138 80	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 800 702 614 590 508 1050 3800 2850 3370 2950 3170	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 315 380 700 238 209 184 150 110 75 52 348 1380 770 3870 3680 2860 1820 1520	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960 2180 39700 28300 26000 14500 14500	DISCHARGE (CFS) 760 600 500 460 440 425 395 330 300 275 1400 660 700 510 2300 1150 920 700 610 550 525 410	MEAN CONCENTRATION (MG/L) 224 180 155 140 135 108 75 55 44 39 38 418 152 175 100 561 120 105 75 50 35	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173
1 2 3 3 4 5 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 27	DISCHARGE (CFS) 56 46 37 32 28 23 23 24 150 1020 143 111 374 4610 3620 1520 675 508 515 558	MFAN CONCENTRATION (MG/L) 7 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 5830 3730 1750 800 480 304 230 192 142	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 820 820 8100 702 614 614 590 508 1200 1050 13800 2850	MEAN CONCENTATION (MG/L) 160 1520 860 405 315 380 270 238 150 110 75 52 348 1380 770 3680 2860 2860 2860 2860 2860 2860 2860 2	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 162 119 1130 5960 2180 39700 28300 26000 14500	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 2300 1150 700 610 550 5525	MEAN CONCENTRATION (MG/L) 224 180 135 140 135 140 135 140 155 140 155 140 155 140 155 155 155 150 150 150 150 150 150 15	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173
1 2 3 3 4 4 5 6 6 7 7 8 8 9 9 10 11 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 56 46 37 32 28 23 23 25 150 1020 143 111 374 4610 3620 1520 675 508 515 558 550 360 321 260 250	MFAN CONCENTRATION (MG/L) 77 77 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 5830 3730 1750 800 480 304 230 192 92 67 7 57	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 820 820 8100 702 614 614 590 508 1200 1050 3800 2850 3370 2950 3170 2440	MEAN CONCENTRATION (MG/L) 160 1520 1520 270 238 150 110 75 52 348 1380 770 3680 2860 1900 1900 1900 1900 1900 1900 1900 19	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 249 249 219 219 2190 22000 28300 20000 14500 13000 8300	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 710 2300 1150 700 610 550 5525 410 500	MEAN CONCENTRATION (MG/L) 224 180 135 140 135 140 135 140 135 155 140 135 155 140 155 155 155 155 155 155 155 155 155 15	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173 111 71 39 38 510
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 56 46 37 32 28 23 23 25 150 1020 143 111 374 4610 3620 1520 675 508 515 558 550 360 371 260 250 240 215	MFAN CONCENTRATION (MG/L) 7 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 5830 3730 1750 800 480 304 230 192 142 92 67 7 57 57 54 44 44 44 44 44 44 44 44 44 44 44 44	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 820 820 8100 702 614 614 590 508 1200 1050 3800 2850 3370 2950 3170 2440 1890 1560	MEAN CONCENTATION (MG/L) 160 1520 1520 1520 1520 1520 1520 1520 152	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 2180 2180 2180 2180 2180 2180 2180 218	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 710 2300 1150 920 700 610 550 5525 410 500 645	MEAN CONCENTRATION (MG/L) 224 180 135 140 135 140 135 140 135 140 135 140 135 155 140 155 140 155 140 155 140 155 140 155 140 155 140 155 150 150 150 150 150 150 150 150 15	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 338 3480 637 358 227 173 111 39 38 510
1 2 3 4 4 5 6 7 8 9 9 10 11 12 12 14 14 15 14 14 15 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	DISCHARGE (CFS) 56 46 37 32 28 23 24 150 1020 143 111 374 4610 3620 1520 675 508 515 558 550 360 321 260 250 240 215 360	MFAN CONCENTRATION (MG/L) 77 76 6 6 6 6 6 5 5 5 5 424 2000 270 100 526 37330 1750 800 4800 304 230 192 142 92 92 95 75 54 43 39	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 30 588 80200 38100 7460 1460 658 423 347 285 138 80 47 38	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 800 702 614 614 590 508 1200 1650 3800 2850 3370 2950 3170 2440 1890 1550 1260 1260 1260 1260 1260 1260 1260 126	MEAN CONCENTRATION (MG/L) 1620 1620 8660 4.05 315 380 315 270 278 209 184 1500 3870 3870 3870 3870 3680 1620 1620 1626 1626 445 346	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960 2180 39700 28300 26000 14500 13000 8300 5560 2750 1510 927	DISCHARGE (CFS) 7600 600 5000 4400 440 425 395 330 300 275 1400 660 700 510 2300 1150 920 700 610 550 525 410 500 645	MEAN CONCENTRATION (MG/L) (MG/L) (224 180 135 140 135	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173 111 71 39 38 510 105 61 54
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 56 46 37 32 28 23 23 25 150 1020 143 111 374 4610 3620 1520 675 508 515 558 550 360 371 260 250 240 215	MFAN CONCENTRATION (MG/L) 7 7 7 6 6 6 6 6 5 5 5 5 424 2000 270 1000 526 5830 3730 1750 800 480 304 230 192 142 92 67 7 57 57 54 44 44 44 44 44 44 44 44 44 44 44 44	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 853 990 864 820 820 820 8100 702 614 614 590 508 1200 1050 3800 2850 3370 2950 3170 2440 1890 1560	MEAN CONCENTATION (MG/L) 160 1520 1520 1520 1520 1520 1520 1520 152	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 2180 2180 2180 2180 2180 2180 2180 218	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 710 2300 1150 920 700 610 550 5525 410 500 645	MEAN CONCENTRATION (MG/L) 224 180 135 140 135 140 135 140 135 140 135 140 135 155 140 155 140 155 140 155 140 155 140 155 140 155 140 155 150 150 150 150 150 150 150 150 15	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173 111 39 38 510
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS) 56 46 37 32 8 23 23 25 150 1020 143 111 374 4610 3620 1520 675 508 515 558 560 371 260 250 240 215 360 688	MFAN CONCENTRATION (MG/L) 77 77 6 6 6 6 6 5 5 5 4 24 2 0000 2700 1000 526 58300 3730 1750 8000 480 3004 230 192 142 92 67 7 57 54 43 3 3 9 600	DISCHARGE (TONS/DAY) 1.1	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 920 800 702 614 614 590 508 1200 1050 3800 2850 3370 2950 3170 2440 1890	MEAN CONCENTRATION (MG/L) 160 1520 1520 150 150 177 552 348 1380 770 3680 2660 1690 652 445 340 278	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960 2180 39700 28300 26000 14500 13000 8300 5560 2750 1510 927	DISCHARGE (CFS) 760 600 500 460 440 425 395 365 3300 275 1400 660 700 710 2300 1150 920 700 610 550 555 440 500 645	MEAN CONCENTRATION (MG/L) (MG/L) (224 180 135 140 135 140 135 140 135 140 135 140 135 155 140 135 155 140 135 155 140 135 155 144 120 135 155 144 120 135 155 144 120 135 155 144 120 135 155 144 120 135 144 144 144 144 144 144 144 144 144 14	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 39 32 28 1580 271 331 138 3480 637 358 227 173 111 71 39 38 510 105 61 54
1 2 3 4 4 5 6 7 8 9 9 10 11 12 12 12 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	DISCHARGE (CFS) 56 646 37 32 28 23 23 26 150 1020 143 111 374 4610 3620 1520 675 508 515 558 550 360 321 260 2250 240 215 360 688 550	MFAN CONCENTRATION (MG/L) 77 76 6 6 6 6 6 5 5 5 5 424 2000 270 100 526 52830 3730 1750 4800 4800 290 2 67 57 57 54 43 39 600 260 600 2	DISCHARGE (TONS/DAY) 1.1 .87 .60 .52 .45 .31 .31 .35 .763 8340 104 30 588 80200 38100 7460 1460 658 423 347 285 138 80 47 38 35 25 38 1110 386	MEAN DISCHARGE (CFS) 458 1690 1260 875 863 990 864 820 800 702 614 614 590 508 1200 1050 3800 2850 3370 2950 3170 2440 1890 1550 1260 1260 1260 1260 1260 1260 1260 126	MEAN CONCENTRATION (MG/L) 160 1520 860 405 315 380 315 380 315 380 315 380 315 380 1270 3870 3870 3870 3870 3870 3870 3870 38	DISCHARGE (TONS/DAY) 243 7100 2930 957 725 1020 723 598 527 451 349 249 182 119 71 1130 5960 2180 39700 28300 26000 14500 13000 8300 5560 2750 1510 927	DISCHARGE (CFS) 7600 600 5000 4400 440 425 395 330 300 275 1400 660 700 510 2300 1150 920 700 610 550 525 410 500 645	MEAN CONCENTRATION (MG/L) (MG/L) (224 180 135 140 135 140 135 120 135 140 135 140 140 155 144 155 155 144 155 155 144 155 155	DISCHARGE (TONS/DAY) 460 292 209 174 160 124 80 54 339 28 1580 271 331 138 3480 637 358 227 173 111 71 39 36 510 105 61 54 56

11472900 BLACK BUTTE RIVER NEAR COVELO, CALIF, -- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	410	30	33	113	3	•92	44	2	-24
2	385	24	25	106	3	.86	44	2	.24
3	355	22	21	106	3	.86	43	2	• 23
4	330	19	17	106	3	.86	42	2	.23
5	297	14	11	104	3	.84	42	ž	.23
6	254	11	7.5	95	2	.51	42	2	•23
7	234	10	6.3	84	2	.45	42	2	•23
8	210	8	4.5	B2	2	. 44	39	2	•21
9	199	7	3.8	79	2	.43	39	2	•21
10	199	7	3.8	79	2	.43	37	2	.20
11	203	7	3.8	75	2	-41	35	2	.19
12	199	7	3.8	73	1	•20	34	2	-18
13	193	7	3.6	77	1	.21	33	2	.18
14	176	7	3.3	86	1	.23	32	ī	•09
15	170	7	3.2	75	i	.20	29	i	.08
16	159	7	3.0	62	1	.17	29	1	• 08
17	156	7	2.9	62	1	-17	26	1	•07
18	143	6	2.3	59	1	.16	26	1	• 07
19	143	6	2.3	59	4	.64	24	1	.06
20	140	6	2.3	113	3	. 92	22	1	•06
21	125	6	2.0	75	2	•41	51	2	.11
22	123	5	1.7	BB	2	.48	20	3	.16
23	118	5	1.6	72	1	.19	20	4	• 22
24	115	5	1.6	62	1	.17	19	5	.26
25	108	5	1.5	75	1	.20	18	5	•24
26	106	5	1.4	69	2	.37	16	5	•22
27	106	4	1.1	59	2	.32	15	5	.20
28	106	4	1.1	58	2	.31	15	4	.16
29	106	4	1.1	54	2	•29	14	4	•15
30	115	4	1.2	51	2	•28	13	4	•14
31				48	2	.26			
TOTAL	5683		177.7	2406		13.19	875		5.17

		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	13	4	.14	5.6	1	•02	7.7	1	•02
2	13	3	-11	5.6	1	•02	6.B	1	•02
3	12	3	.10	5.3	1	.01	6.2	1	•02
4	12	3	.10	5.3	1	•01	6.2	1	•02
5	11	3	.09	5.0	1	•01	5.9	1	•02
6	11	2	•06	4.7	1	.01	5.9	1	•02
7	11	2	•06	4.5	1	•01	5.3	1	•01
8	11	2	.06	4.5	1	.01	5.3	1	•01
9	10	2	.05	4.5	1	•01	5.0	1	•01
10	9.9	2	.05	4.5	1	-01	4.7	1	•01
11	9.4	2	•05	4.2	1	.01	4.7	1	-01
12	9.0	2	.05	4.2	1	•01	4.7	1	•01
13	8.6	1	.02	4.2	1	•01	5.0	1	•01
14	8.6	1	•02	4.0	1	.01	5.9	1	•02
15	8.6	1	•02	4.2	1	.01	5.9	1	• 02
16	8.6	1	•02	4.2	1	-01	5.6	1	.02
17	8 - 1	1	•02	4.5	1	•01	5.3	1	•01
18	B.1	1	• 02	5.0	1	.01	4.7	1	-01
19	8.1	1	-02	6.5	1	•02	4.5	1	.01
20	7.7	1	• 02	12	3	-10	4.0	1	•01
21	7.4	1	•02	27	4	•29	3.7	1	.01
22	7.1	1	•02	22	2	•12	3.7	1	.01
23	6.8	1	•02	15	1	.04	3.7	1	-01
24	6.5	1	•02	12	1	•03	3.7	1	.01
25	6.2	1	• 02	11	ı	•03	3.7	1	•01
26	6.2	1	.02	13	1	.04	3.7	1	-01
27	6.2	1	•02	15	1	•04	3.7	1	.01
28	6.2	1	•02	11	1	.03	3.3	1	•01
29	5.9	1	•02	10	1	.03	3.3	1	•01
30	5.9	1	•02	9.0	1	.02	3.0	1	▶01
31	5.6	1	•02	8.1	1	•02			
TOTAL	268.7		1.30	255.6		1.01	144.8		.39

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

93311.4 319896.54

11472900 BLACK BUTTE RIVER NEAR COVELO, CALIF .-- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		DF SUSPENDED			DF SUSPENDED SEDIMENT	TURBIDITY
DATE D	F COLLECTION	SEDIMENT (MG/L)	TURBIDITY (MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 2	. 1967	18	20	JAN. 31	132	100
	3	3	o	FEB. 2	1360	545
	2	3	i	FEB. 3	887	330
		ī	ī	FEB. 5	314	210
	4	383	334	FEB. 6	429	200
NOV. 1	9	1	1	FEB. 8	276	175
	1	5	ī	FEB. 10	202	135
	9	230	220	FEB. 13	116	80
	0	28	30	FEB. 16	432	145
	•••••	2	2	FEB. 17	1760	690
OEC. 2		2	1	FEB. 18	770	310
DEC. 3		451	375	FEB. 19	6630	2000
	• • • • • • • • • • • • • • • • • • • •	46	42	FEB. 20	3830	1180
		440	128	FEB. 21	2900	1030
		31	30	FEB. 22	1850	820
ner 7		530	120	FEB. 24	1280	545
		41	42	FEB. 25	1130	350
		10	11	FEB. 26	680	280
	0	ř	10	FEB. 28	345	210
	2	ż	3	MAR. 2	176	120
050 1		4	1	MAR. 8	48	30
	7 · · · · · · · · · · · · · · · · · · ·	58	68	MAR. 12	582	290
	9	4	4	MAR. 13	92	70
		17	23	MAR. 14	180	110
	4	120	92	MAR. 16	472	280
UEC. 2		120	42	MAR. 17	212	130
DEC. 2	6	58	47		•	24
	7	106	77	MAR. 24	26 256	115
	8	48	39	MAR. 25	49	37
JAN. 1	, 1968	7	2	MAR. 27 MAR. 29	37	30
JAN. 4	• • • • • • • • • • • • • • • • • • • •	6	1	MAR. 31	33	29
14M 0		5	1	APR. 3	22	13
JAN O		157	120			
	0	2380	850	APR. 9	7	3
	1	286	155	APR. 14	7	4
	2	96	45	MAY 4	3	1
•		-		MAY 7	2	1
JAN- 1	3	494	340	MAY 14	1	1
JAN. 1	4	8150	3200	MAY 19	4	ī
	5	4080	1900			
JAN. 1	6	1660	640	MAY 20	3	1
JAN. 1	7	872	400	MAY 21	2	1
				MAY 28	2	1
	8	474	275	JUNE 11	2	o
JAN. 1	9	309	225	JUNE 17	1	1
JAN. 2	0	227	170	AUG. 27	1	2
JAN. 2	1	181	135			
JAN. 2	2	143	115			
IAN. 2	3	88	70			
		56	40			
JAN. 2	8					
JAN. 2 JAN. 2	8 9	39 1220	30 645			

11473000 MIDDLE FORK EEL RIVER BELOW BLACK BUTTE RIVER, NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'35", long 123°05'30", in NW 2 sec.28, T.23 N., R.11 W., Mendocino County, temperature recorder at site of former gaging station, 0.2 mile downstream from Black Butte River, and 8.6 miles east of Covelo.

DRAINAGE AREA. -- 367 sq mi.

PERIOD OF RECORD, --Chemical analyses: November 1964 to September 1966. Water temperatures: July to November 1961, October 1962 to September 1968. Sediment records: October 1962 to September 1967.

EXTREMES. --1967-68:
Water temperatures: Maximum, 27.0°C on several days during July and August.

Period of record (1962-63, 1965-66, 1967-68):
Water temperatures: Maximum, 27.0°C on several days during July and August 1968.

REMARKS, -- No record Oct. 1-25; recorder stopped Dec. 17 to Jan. 22.

11473000 MIDDLE FORK EEL RIVER BELOW BLACK BUTTE RIVER, NEAR COVELO, CALIF. -- Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc.	TOBER	NOV	FMBER	DEC	EMBER	1A L	NUARY	FEB	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			17.0	13.0	8.0	8.0			4.0	3.0	8.0	8.0
2			17.0	13.0	8.0	7.0			4.0	4.0	9.0	8.0
3			17.0	13.0	7.0	6.0			5.0	4.0	9.0	7.0
4			15.0	14.0	7.0	7.0			6.0	4.0	9.0	8.0
5			17.0	14.0	7.0	6.0			6.0	5.0	8.0	8.0
6			16.0	14.0	6.0	6.0			7.0	6.0	8.0	7.0
7			16.0	14.0	7.0	6.0			7.0	6.0	8.0	7.0
Ą			16.0	14.0	6.0	6.0			7.0	6.0	8.0	7.0
9 10			16.0 16.0	14.0 14.0	7.0 6.0	6.0 6.0			7.0 7.0	6.0 6.0	8.0 8.0	7.0 7.0
11			14.0	13.0	6.0	6.0			6.0	6.0	8.0	7.0
12			14.0	14.0	6.0	3.0			7.0	6.0	7.0	7.0
1.3			14.0	14.0	3.0	2.0			7.0	6.0	7.0	7.0
14			14.0	12.0	2.0	1.0			7.0	6.0	7.0	7.0
15			12.0	12.0	3.0	2.0			7.0	6.0	8.0	7.0
16			12.0	11.0	3.0	2.0			7.0	6.0	7.0	7.0
17			12.0	12.0					7.0	6.0	8.0	7.0
18 19			12.0	12.0					7.0 7.0	6.0 7.0	8.0 8.0	6.0 6.0
20			12.0	12.0 12.0					8.0	7.0	8.0	6.0
									8.0		8.0	6.0
21 27			12.0 11.0	11.0 11.0					8.0	8.0 8.0	7.0	7.0
23			11.0	10.0			6.0	5.0	9.0	8.0	9.0	7.0
24			11.0	10.0			6.0	5.0	9.0	8.0	9.0	7.0
25			11.0	10.0			6.0	6.0	9.0	8.0	9.0	8.0
26	17.0	14.0	10.0	9.0			6.0	4.0	10.0	8.0	8.0	7.0
27	17.0	14.0	9.0	9.0			4.0	4.0	10.0	8.0	9.0	7.0
28	17.0	14.0	10.0	9.0			3.0	2.0	10.0	8.0	9.0	8.0
29 30	16.0	13.0	9.0	8.0			2.0	2.0	9.0	8.0	9.0 9.0	8.0 7.0
31	17.0 17.0	14.0	8.0	8.0			3.0 3.0	3.0			8.0	7.0
MONTH			17.0	8.0					10.0	3.0	9.0	6.0
	41	0011		MAV		INE		14 V	ALL	TOUR	CE D'	TEMBED.
		PRIL		MAY	_	INE	-	JLY		GUST	_	TEMBER
DAY	AA XAM	PRIL Min	MAX	MAY	JL XAM	JNE MIN	JL XAM	JLY MIN	AUA XAM	GUST MIN	SEP'	TEMBER Min
DAY 1	MAX B. O	MIN 7.0	MAX 14.0		MAX 19.0	MIN 15.0	MAX 24.0	MIN 19.0	MAX 26.0	MIN 22.0	MAX 25.0	MIN 20.0
1 2	MAX 8.0 9.0	MIN 7.0 7.0	MAX 14.0 14.0	MIN 11.0 11.0	MAX 19.0 17.0	MIN 15-0 16-0	MAX 24.0 24.0	MIN 19.0 20.0	MAX 26.0 27.0	MIN 22.0 22.0	MAX 25.0 25.0	MIN 20.0 20.0
1 2 3	MAX 8.0 9.0 9.0	MIN 7.0 7.0 7.0	MAX 14.0 14.0 15.0	MIN 11.0 11.0 12.0	MAX 19.0 17.0 17.0	MIN 15-0 16-0 15-0	MAX 24.0 24.0 25.0	MIN 19.0 20.0 20.0	MAX 26.0 27.0 27.0	MIN 22.0 22.0 22.0	MAX 25.0 25.0 25.0	MIN 20.0 20.0 21.0
1 2	MAX 8.0 9.0	MIN 7.0 7.0	MAX 14.0 14.0	MIN 11.0 11.0	MAX 19.0 17.0	MIN 15-0 16-0	MAX 24.0 24.0	MIN 19.0 20.0	MAX 26.0 27.0	MIN 22.0 22.0	MAX 25.0 25.0	MIN 20.0 20.0
1 2 3 4 5	MAX 8.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 8.0	MAX 14.0 14.0 15.0 15.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0	MIN 15-0 16-0 15-0 16-0 14-0	MAX 24.0 24.0 25.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0	MIN 22.0 22.0 22.0 22.0 22.0	MAX 25.0 25.0 25.0 25.0 26.0	MIN 20.0 20.0 21.0 21.0 21.0
1 2 3 4 5	MAX 8.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 8.0 8.0	MAX 14.0 14.0 15.0 15.0 13.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0	MIN 15-0 16-0 15-0 16-0 14-0	MAX 24.0 24.0 25.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0	MIN 22.0 22.0 22.0 22.0 22.0	MAX 25.0 25.0 25.0 25.0 26.0	MIN 20.0 20.0 21.0 21.0 21.0
1 2 3 4 5	MAX 8.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 8.0 8.0 8.0	MAX 14.0 14.0 15.0 15.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 19-0 17-0 17-0 19-0 16-0	MIN 15-0 16-0 15-0 16-0 14-0	MAX 24.0 24.0 25.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0 26.0	MIN 22-0 22-0 22-0 22-0 22-0 22-0 22-0	MAX 25.0 25.0 25.0 25.0 26.0 26.0	MIN 20.0 20.0 21.0 21.0 21.0
1 2 3 4 5	MAX 8.0 9.0 9.0 9.0 10.0	MIN 7.0 7.0 7.0 8.0 8.0	MAX 14.0 14.0 15.0 15.0 13.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0	MIN 15.0 16.0 15.0 16.0 14.0	MAX 24.0 24.0 25.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0	MAX 25.0 25.0 25.0 25.0 26.0	MIN 20.0 20.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	MAX 8.0 9.0 9.0 9.0 10.0 10.0	MIN 7.0 7.0 7.0 8.0 8.0 7.0 8.0	MAX 14.0 14.0 15.0 15.0 13.0	MIN 11.0 11.0 12.0 12.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0	MIN 15-0 16-0 15-0 16-0 14-0	MAX 24.0 24.0 25.0 26.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0	MIN 22-0 22-0 22-0 22-0 22-0 22-0 22-0	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9	MAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 9.0	MAX 14.0 14.0 15.0 15.0 13.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	MAX 19.0 17.0 17.0 19.0 16.0 18.0 18.0 19.0 20.0	MIN 15.0 16.0 16.0 14.0 14.0 15.0 15.0 16.0	MAX 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0	MIN 7.0 7.0 7.0 8.0 8.0 7.0 8.0 9.0 10.0 9.0	MAX 14.0 14.0 15.0 15.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 12.0 11.0 10.0 11.0 12.0 12	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 19.0 20.0	MIN 15.0 16.0 15.0 16.0 14.0 14.0 15.0 15.0 16.0	MAX 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 11.0	MIN 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	MAX 14.0 15.0 15.0 13.0 14.0 	MIN 11.0 12.0 12.0 12.0 11.0 10.0 11.0 12.0 12	MAX 19-0 17-0 17-0 19-0 16-0 18-0 18-0 19-0 20-0 20-0 20-0 19-0	MIN 15.0 16.0 15.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0	MAX 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.
1 2 3 4 5 6 7 8 9 10	MAX 8.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 11.0 11.0	MIN 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 9.0 8.0	MAX 14.0 15.0 15.0 15.0 13.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	MAX 19.0 17.0 17.0 19.0 18.0 18.0 19.0 20.0 20.0 20.0 21.0	MIN 15.0 16.0 15.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0	MAX 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 9.0 9.0 9.0 10.0 10.0 12.0 12.0 12.0 11.0 11.0 11	MIN 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 10.0 9.0 8.0 9.0	MAX 14.0 14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 19.0 20.0 20.0 20.0 21.0 22.0	MIN 15.0 16.0 15.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0	MAX 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 12.0 12.0	MIN 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	MAX 14.0 14.0 15.0 15.0 13.0 14.0 16.0 15.0 14.0 12.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12.0 12.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 20.0 21.0 22.0 23.0	HIN 15.0 16.0 15.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0	MAX 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	HAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 9.0 9.0 10.0 10.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 9.0 10.0 9.0 8.0 9.0	HAX 14.0 14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	HAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0	HIN 15.0 16.0 16.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0	MAX 24.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	HAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 145 15	#AX 8.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 11.0 12.0 11.0 10.0 11.0 11	MIN 7.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 10.0 9.0 8.0 8.0 9.0	HAX 14.0 14.0 15.0 15.0 13.0 14.0 16.0 14.0 12.0 14.0 14.0 16.0 16.0 16.0	HIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	19.0 17.0 17.0 19.0 19.0 18.0 19.0 19.0 20.0 20.0 21.0 22.0 23.0 23.0 23.0	HIN 15-0 16-0 15-0 16-0 14-0 14-0 15-0 16-0 16-0 16-0 17-0 17-0 18-0	24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	M1N 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8.0 9.0 9.0 10.0 10.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 9.0 10.0 9.0 8.0 9.0	HAX 14.0 14.0 15.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12	HAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0	HIN 15.0 16.0 16.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0	MAX 24.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	HAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	MAX 25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	HAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 8.0 8.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	HAX 14.0 15.0 15.0 15.0 13.0 14.0 	MIN 11.0 11.0 12.0 12.0 11.0 10.0 11.0 12.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0	19.0 17.0 17.0 19.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 22.0 22.0 23.0 23.0 23	HIN 15-0 16-0 16-0 16-0 16-0 14-0 15-0 16-0 16-0 16-0 16-0 17-0 17-0 18-0 18-0 19-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 8-0 9-0 9-0 9-0 10-0 11-0 12-0 12-0 11-0 11-0 11-0 11-0 11-0 11-0 11-0	MIN 7.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	HAX 14.0 15.0 15.0 15.0 13.0 14.0 	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 21.0 22.0 21.0 22.0 23.0 24.0 24.0 23.0	HIN 15-0 16-0 15-0 16-0 14-0 15-0 16-0 15-0 16-0 16-0 17-0 18-0 18-0 19-0 19-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 8.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 8.0 6.0 9.0 8.0 8.0 9.0 8.0 9.0 8.0 9.0	HAX 14.0 14.0 15.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 21.0 22.0 23.0 22.0 23.0 24.0 24.0 23.0 24.0	HIN 15-0 16-0 15-0 16-0 14-0 15-0 15-0 16-0 16-0 17-0 18-0 19-0 19-0 19-0 19-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MAX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20.
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24	MAX 8.0 9.0 9.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 10.0 9.0 10.0 8.0 7.0 8.0 8.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	HAX 14.0 14.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 24.0 24.0 25.0	HIN 15.0 16.0 15.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 22.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 8.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 8.0 6.0 9.0 8.0 8.0 9.0 8.0 9.0 8.0 9.0	HAX 14.0 14.0 15.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 21.0 22.0 23.0 22.0 23.0 24.0 24.0 23.0 24.0	HIN 15-0 16-0 15-0 16-0 14-0 15-0 15-0 16-0 16-0 17-0 18-0 19-0 19-0 19-0 19-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	MAX 8.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 9.0 10.0 8.0 8.0 7.0 8.0 8.0 9.0 9.0 8.0 7.0 8.0 8.0 9.0 9.0	HAX 14.0 14.0 15.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 25.0 25.0	HIN 15-0 16-0 15-0 16-0 14-0 15-0 15-0 15-0 16-0 17-0 18-0 19-0 19-0 19-0 19-0 20-0 21-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20.
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27	MAX 8.0 9.0 9.0 10.0 11.0 12.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	HAX 14.0 14.0 15.0 15.0 13.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 18.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22	HIN 15.0 16.0 15.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 20.0 21.0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.
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	MAX 8.0 9.0 9.0 9.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0 11	MIN 7.0 7.0 8.0 8.0 8.0 9.0 9.0 10.0 8.0 7.0 8.0 8.0 9.0 9.0 10.0 8.0 7.0 8.0 8.0 9.0 9.0 10.0 10.0 10.0	HAX 14.0 14.0 15.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	19.0 17.0 17.0 19.0 16.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0 23.0 22.0 23.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25	HIN 15-0 16-0 15-0 16-0 14-0 15-0 15-0 16-0 17-0 18-0 17-0 18-0 19-0 19-0 19-0 20-0 21-0 21-0 20-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0 23	MIN 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20.
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27	MAX 8.0 9.0 9.0 10.0 11.0 12.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0	MIN 7.0 7.0 8.0 8.0 8.0 9.0 10.0 9.0 10.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	HAX 14.0 14.0 15.0 15.0 13.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 18.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22	HIN 15.0 16.0 15.0 16.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	#AX 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27 28 29	MAX 8.0 9.0 9.0 10.0 10.0 11.0 12.0 11.0 12.0 11.0 11	MIN 7.0 7.0 8.0 8.0 8.0 9.0 10.0 9.0 10.0 8.0 8.0 8.0 9.0 8.0 8.0 8.0 9.0 8.0 8.0 9.0 10.0 10.0 10.0 11.0	HAX 14.0 14.0 15.0 15.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	MAX 19.0 17.0 17.0 19.0 18.0 18.0 19.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22	HIN 15-0 16-0 15-0 16-0 14-0 15-0 15-0 16-0 17-0 18-0 17-0 18-0 19-0 19-0 19-0 20-0 21-0 21-0 20-0	24.0 24.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	#IN 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	25.0 25.0 25.0 25.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 20.0 20.0 21.0 21.0 21.0 21.0 20.0 20.

MARCH

11473800 ELK CREEK NEAR HEARST, CALIF.

LOCATION.--Lat 39°38'57", long 123°07'12", in NE¹/₄ 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 1968. Sediment records: October 1965 to September 1968 (periodic).

EXTREMES.--1965-67:
Water temperatures: Maximum, 34.5°C Aug. 2, 1967; minimum (1966-67), 3.0°C Feb. 19-22, 1967.

REMARKS. -- Recorder stopped Oct. 1 to Jan. 31, Feb. 20 to Mar. 11, Apr. 8-23, June 26 to Aug. 29.

	TEMPERATURE (°C)	OF WATER, WATER	YEAR OCTOBER 1967 TO	SEPTEMBER 1968
GCTOBER	NOVEMBER	DECEMBE	R JANUARY	FEBRUARY

	GC.				500.		•				,,,,	
DAY	MAX	MIN	` MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1									7.0	7.0		
2									8.0	7.0		
3									8.0	7.0		
4 5									8.0 9.0	6.0 7.0		
,									,			
6									9.0	8.0		
7									9.0	7.0		
8									10.0	7.0		
9									9.0	7.0		
10									9.0	B.O		
									9.0			
11									9.0	7.0	9.0	7.0
12 13									10.0	7.0 8.0	9.0	7.0
14									10.0	7.0	10.0	7.0
15									8.0	7.0	10.0	7.0
•												
16									9.0	7.0	9.0	8.0
17									7.0	2.0	8.0	7.0
18									3.0	2.0	8.0	7.0
19									6.0	1.0	10.0	6.0
20											10.0	5.0
21											9.0	6.0
22										===	9.0	7.0
23											12.0 12.0	7.0 6.0
24 25											9.0	7.0
25											7.0	***
26											11.0	6.0
27											11.0	5.0
28											12.0	6.0
29											13.0	6.0
30											13.0	6.0
31			===								12.0	6.0
MONTH												
	4.0											
	AP	RTL	1	MAY	J	UNE	Ju	ILY	AUC	GUST	SEP	TEMBER
DAY												
DAY	MAX	PRTL MIN	MAX	MAY	JI	MIN	JU Max	MIN	MAX	GUST MIN	SEP Max	TEMBER MIN
	MAX	MIN	MAX	MIN	MAX 26.0	MIN	MAX	MIN	MAX	MIN	MAX	HIN
1 2					MAX 26.0	MIN 19.0	MAX	MIN	MAX	MIN	MAX 26.0	
1 2 3	MAX 9.0 10.0 11.0	MIN 5-0 6-0 4-0	MAX 14.0 16.0 16.0	MIN 8.0 8.0 9.0	MAX 26.0 26.0 24.0	MIN 19.0 20.0 21.0	MAX	MIN	MAX	MIN	MAX 26.0 25.0 26.0	MIN 24.0 23.0 24.0
1 2 3 4	9.0 10.0 11.0 11.0	MIN 6.0 6.0 4.0 6.0	MAX 14.0 16.0 16.0	MIN 8.0 8.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0	MIN 19.0 20.0 21.0 19.0	MAX	MIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0	MIN 24.0 23.0 24.0 24.0
1 2 3	MAX 9.0 10.0 11.0	MIN 5-0 6-0 4-0	MAX 14.0 16.0 16.0	MIN 8.0 8.0 9.0	MAX 26.0 26.0 24.0	MIN 19.0 20.0 21.0					MAX 26.0 25.0 26.0	MIN 24.0 23.0 24.0
1 2 3 4 5	9.0 10.0 11.0 11.0	MIN 6.0 6.0 4.0 6.0	MAX 14.0 16.0 16.0 16.0	#IN 8.0 8.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0 26.0	MIN 19.0 20.0 21.0 19.0 20.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0	MIN 24.0 23.0 24.0 24.0 24.0
1 2 3 4 5	9.0 10.0 11.0 11.0	MIN 6-0 6-0 6-0 6-0	MAX 14.0 16.0 16.0 16.0 14.0	#IN 8.0 8.0 9.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0 26.0	MIN 19.0 20.0 21.0 19.0 20.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0	MIN 24.0 23.0 24.0 24.0 24.0
1 2 3 4 5	9.0 10.0 11.0 11.0 11.0	MIN 6-0 6-0 6-0 6-0 6-0	MAX 14.0 16.0 16.0 14.0 14.0	MIN 8.0 8.0 9.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0
1 2 3 4 5 6 7 8	9.0 10.0 11.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 15.0 16.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0
1 2 3 4 5 6 7 8	9.0 10.0 11.0 11.0 11.0	MIN 6-0 6-0 6-0 6-0 6-0	MAX 14.0 16.0 16.0 16.0 14.0 14.0 15.0 16.0	8.0 8.0 9.0 9.0 9.0 7.0 8.0 8.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0
1 2 3 4 5 6 7 8	9.0 10.0 11.0 11.0 11.0	6.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 15.0 16.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0	MAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0
1 2 3 4 5 6 7 8 9	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14-0 16-0 16-0 14-0 14-0 15-0 16-0 22-0	#IN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0 18.0 19.0	MAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 4.0 6.0 6.0 6.0	MAX 14-0 16-0 16-0 14-0 14-0 15-0 16-0 22-0	#IN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0 18.0 19.0	MAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 4.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 15.0 16.0 22.0 22.0	MIN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0 19.0 20.0	MAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0 24.0 24.0 24.0 23.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 4.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 16.0 22.0 22.0 21.0	MIN 8.0 8.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0 16.0 16.0 16.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0 19.0 20.0 19.0 21.0	MAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0 24.0 24.0 23.0 23.0 23.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 15.0 16.0 22.0 22.0	MIN 8.0 9.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0	MIN 19.0 20.0 21.0 19.0 20.0 19.0 18.0 18.0 19.0 20.0	MAX	HIN	MAX	MIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 25.0 24.0 24.0 24.0 23.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	9-0 10-0 11-0 11-0 11-0 11-0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 16.0 16.0 22.0 22.0 21.0 21.0 21.0	#IN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 16.0 14.0	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 25.0 26.0 28.0	MIN 19.0 20.0 21.0 21.0 20.0 19.0 18.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0	MIN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 23-0 21-0 22-0 21-0 22-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9-0 10-0 11-0 11-0 11-0 11-0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 14.0 14.0 15.0 16.0 22.0 22.0 21.0 21.0 21.0 22.0	# N I N # S	MAX 26.0 26.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0 28.0	MIN 19.0 20.0 21.0 21.0 20.0 19.0 18.0 18.0 18.0 19.0 21.0 21.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 25.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0	MIN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 21-0 21-0 21-0 20-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9-0 10-0 11-0 11-0 11-0 11-0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 14.0 16.0 16.0 22.0 22.0 21.0 21.0 21.0 21.0	#IN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 16.0 14.0 14.0	MAX 26.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0 28.0	HIN 19.0 20.0 21.0 19.0 19.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0 21.0 23.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 24.0 24.0 23.0 23.0 23.0 22.0	MIN 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9-0 10-0 11-0 11-0 11-0 11-0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 15.0 15.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	8.0 8.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0 16.0 14.0	MAX 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 27.0 28.0 28.0 28.0 29.0	MIN 19.0 20.0 21.0 21.0 19.0 20.0 19.0 18.0 18.0 19.0 21.0 21.0 22.0 23.0 23.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	MIN 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 19	9-0 10-0 11-0 11-0 11-0 11-0	MIN 5.0 6.0 4.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 16.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21	8.0 8.0 9.0 9.0 9.0 9.0 9.0 15.0 16.0 16.0 14.0 14.0	MAX 26.0 26.0 24.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0 28.0 28.0 29.0	MIN 19.0 20.0 21.0 21.0 19.0 20.0 19.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 23.0 24.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 22.0 22.0 22.0	MIN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 21.0 21.0 22.0 20.0 21.0 21.0 21.0 21
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9.0 10.0 11.0 11.0 11.0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 15.0 15.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	8.0 8.0 9.0 9.0 7.0 8.0 8.0 9.0 15.0 16.0 14.0	MAX 26.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 27.0 28.0 28.0 28.0 29.0	MIN 19.0 20.0 21.0 21.0 19.0 20.0 19.0 18.0 18.0 19.0 21.0 21.0 22.0 23.0 23.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	MIN 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20	9.0 10.0 11.0 11.0 11.0 11.0 11.0	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 12.0 22.0 22.0 22.0 21.0 21.0 21.0 21	MIN 8.0 9.0 9.0 9.0 9.0 9.0 15.0 16.0 16.0 16.0 14.0 17.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 21.0 19.0 20.0 18.0 18.0 19.0 20.0 21.0 22.0 21.0 23.0 23.0 24.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 26.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0	MIN 24.0 23.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21
1 2 3 4 5 5 6 7 8 9 10 0 11 12 13 14 15 16 17 18 19 20 21	9.0 10.0 11.0 11.0 11.0 11.0 11.0	5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 14.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 24.0 26.0 27.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 20.0 18.0 18.0 18.0 18.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	HIN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 19.0 21.0 19.0 19.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20	9.0 10.0 11.0 11.0 11.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 16.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 24.0 26.0 27.0 28.0 28.0 28.0 29.0 29.0 29.0	MIN 19.0 20.0 19.0 21.0 19.0 18.0 18.0 18.0 19.0 21.0 22.0 23.0 24.0 24.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	HIN 24.0 23.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 21.0 2
1 2 3 3 4 5 5 6 7 8 9 9 10 11 12 13 14 6 15 15 16 17 18 19 20 20 21 22 23 24	9.0 10.0 11.0 11.0 11.0 11.0 11.0 	#IN 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAX 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	MAX 26.0 26.0 24.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 27.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 19.0 21.0 19.0 18.0 18.0 18.0 19.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	#IN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 21-0 21-0 20-0 19-0 19-0 19-0 17-0 17-0 17-0 17-0 17-0
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 10.0 11.0 11.0 11.0 11.0	MIN 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 20.0 18.0 18.0 18.0 18.0 21.0 22.0 23.0 24.0 24.0 24.0 26.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	#IN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 17.0 17.0 17.0
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 6 15 15 16 17 18 19 20 20 21 22 23 24 25	9.0 10.0 11.0 11.0 11.0 11.0 11.0 	MIN 5.0 6.0 6.0 6.0 6.0 6.0	MAX 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 19.0 21.0 19.0 18.0 18.0 18.0 19.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	#IN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 23-0 21-0 20-0 19-0 19-0 17-0 17-0 17-0 17-0
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26	MAX 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 5-0 6-0 6-0 6-0 6-0 6-0 6-0 7-0 7-0 7-0 6-0 6-0 6-0 6-0 6-0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 22.0 19.0 18.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	#IN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 23-0 21-0 20-0 19-0 19-0 17-0 17-0 17-0 17-0
1 2 3 4 5 6 7 8 9 10 11 12 13 11 4 15 15 16 17 18 19 20 22 23 24 25 26 27	9.0 10.0 11.0 11.0 11.0 11.0 11.0 	MIN 5.0 6.0 6.0 6.0 6.0 4.0	MAX 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 22.0 19.0 18.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	#IN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 23-0 21-0 20-0 19-0 20-0 19-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 23 24 25 26 27 28	MAX 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 5-0 6-0 6-0 6-0 6-0 6-0 7-0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 21.0 22.0 21.0 21.0 22.0 21.0 21.0 22.0 22	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 19.	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 22.0 19.0 18.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	#IN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 11 4 15 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 1	MIN 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAX 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 19.0 19.0 18.0 18.0 18.0 19.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0 21.0 19.0 19.0 19.0 19.0 19.0	#IN 24-0 23-0 24-0 24-0 24-0 22-0 23-0 23-0 23-0 21-0 20-0 19-0 20-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 1
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 25 26 27 28 29 30	MAX 9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 5-0 6-0 6-0 6-0 6-0 6-0 7-0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 22.0 19.0 18.0 18.0 18.0 19.0 20.0 19.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	MAX 26.0 25.0 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	#IN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 11 4 15 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 1	MIN 5-0 6-0 6-0 6-0 6-0 7-0 7-0 7-0 8-0	MAX 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.	MAX 26.0 26.0 24.0 26.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 27.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 21.0 19.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0 21.0 19.0 19.0 19.0 19.0	#IN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 1
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 25 26 27 28 29 30	9.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 1	MIN 5-0 6-0 6-0 6-0 6-0 7-0 7-0 7-0 8-0	MAX 14.0 16.0 16.0 16.0 14.0 15.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 2	MIN 8.0 8.0 9.0 9.0 9.0 7.0 8.0 9.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.	MAX 26.0 26.0 24.0 24.0 26.0 24.0 24.0 24.0 24.0 25.0 25.0 27.0 28.0 28.0 29.0 29.0 29.0 29.0	MIN 19.0 20.0 21.0 19.0 21.0 19.0 18.0 18.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 24.0 25.0 25.0	HAX	HIN	HAX	HIN	26.0 25.0 26.0 26.0 26.0 22.0 22.0 23.0 23.0 23.0 23.0 22.0 21.0 22.0 21.0 19.0 19.0 19.0 19.0	#IN 24.0 23.0 24.0 24.0 24.0 24.0 22.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 1

11473800 ELK CREEK NEAR HEARST, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B. ROTTOM MITHORAMAL TURE; C. CHEMICALLY DISPERSED; N. IN NATIVE WATER; P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE; W. IN DISTILLED WATER)

		WATER	₹							PART	ICLE :	SIZE					
			DISCHARGE		SUSPENDED SEDIMENT DISCHARGE	PERCI	ENT F	INER	THAN	THE S	ize (IN MI	LL IME	TERS)	1001	CATED	METHOD OF ANALY-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	-00B	.016	.031	•062	.125	-250	•500	1.00	2.00	515
OCT 11 1967	0845	15	4.7	1	.01												
NOV 2	1410	14	4.0	4	•04												
DEC 14	0845	1	35	4	. 38							~-					
JAN 25 1968	1100	6	115	34	11							~-					
JAN 31	1245	6	265	158	113	32	41	51	56	58	69	72	77	91	100		VBWC
MAR 12	1130	7	196	265	140	24	30	38	43	44	64	73	87	96	100		VBWC
APR B	1630	11	101	4	1.1												
MAY 10	1055	15	36	1	.10												
JUN 13	1205	19	16	5	.22												
JUL 18	1145	24	4 • D	2	.02							~-					
AUG 29	1230	23	4.6	4	.05							~-					

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

DATE JAN 25 1968 JAN 31 MAR 12		TEM- OF	R		PARTICLE SIZE											
		PERA- SAM- TURE PLING		PERCENT	FINE	R THAN	THE S	12F (1	N MITL	IMFTFR	S) IND	ICATED	1	METHOD OF ANALY-		
	TIME	(C) POINT	S (CFS)	•062	.125	.250	•500	1.00	2.00	4.00	B • 00	16.0	32.0	64.0	515	
JAN 25 1968	0915	3	118	1	1	3	R	16	27	39	53	72	88	100	s	
JAN 31	1320	3	260		1	2	7	14	27	42	5 H	79	86	100	5	
		3	310		1	4	14	40	47	65	84	96	100		S	

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.

ATION.--Lat 39°42'23", long 123°19'27", in NEISE4 sec.5, T.21 N., R.13 W., Mendocino County, at gaging sta-tion 0.6 mile upstream from Eastman Creek, 1.7 miles southeast of Dos Rios, and 1.9 miles upstream from

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 1968. Sediment records: October 1957 to September 1968.

Sediment concentrations: Maximum daily, 7,670 mg/l Jan. 14; minimum daily, 1 mg/l on many days.
Sediment discharge: Maximum daily, 585,000 tons Jan. 14; minimum daily, 0.04 ton on several days during August and September.

Period of record (1965-68):
Sediment concentrations: Maximum daily, 11,800 mg/l Jan. 4, 1966; minimum daily, 1 mg/l on many days in 1965-68.
Sediment discharge: Maximum daily, 1,430,000 tons Jan. 4, 1966; minimum daily, 0.04 ton on several days in 1966 and 1968.

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF .-- Continued

		7	EMPERATUR	R (°C) OF	WATER,	WATER YEAR	OCTOBER	1967 TO S	EPTEMB KR	1968		
DAY	OCT	NDV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		14.0	7.0	4.5		10.0	10.0	16.0		20.0		
2	16.5		7.5		6.0		10.0				22.0	
3		12.5	7.0	2.0	6.C	9.0		19.5	18.5	21.0		
4	16.5		7.0			11.5	10.0					27.5
5	16.Q		6.5	2.0	7.0	10.0	10.0		17.0	22.5	27.0	
6	16.5	14.5	4.5			9.5	9.5	14.0				27.5
7			6.5		9.0	8.5			16.0		26.0	
8		14.5		4.5		11.5	10.5	15.0		24.0		
9	20.0		6.0	5.0	7.0						27.0	25.5
10		14-5		6.0		7.0	12.0	19.0	19.0	22.5		
11	19.5		5.5	4.5		11.0						21.5
12					9.0	8.5	11.5		22.5	22.0	26.0	
13	14.5	14.5	2.5	6.5		7.0		14.0				21.0
14		15.0		7.5	9.0	7.5	10.5	16.5	19.5		25.0	
15		12.5	1.5	9.C		8.5	12.0	19.0		21.0		
16	15.5			7.0	7.5	8.5					24.0	19.0
17		12.5			9.5	7.0	10.0	16.5	22.0	21.0		
18	14.5		2.5	5.0		6.5				26.5		21.0
19				4.5	10.0	7.0	11.0	17.5	21.0	23.5	22.5	
20	15.0	12.5	3.5		10.0	7.5		16.0				16.0
21					9.5	7.0		13.5	21.5		17-5	
22	15.5	10.0	4.0	9.0	10.0	8.5	10.5	16.5		22.5		
23	15.5				10.5	9.5					24-0	18.5
24		10.0		6.0	10.0	10.0	15.5	14.5	24.0	21.0		
25	17.0		5.C		9.5	11.0		20.0				18.5

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

18.5

21.0

21.5

23.5

27.5

(METHODS OF ANALYSIS: 8. BOTTOM MITHORAMAL TUBE: C. CHEMICALLY DISPERSED; N. IN NATIVE MATER; P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE: M. IN DISTILLED MATER)

			WATER TEM-	2		PARTICLE SIZE												METHOD
			PERA-	_	CONCEN-			ENT F	INER '	THAN '	THE SI	IZE (1	N MI	LL IME	TERS)	INDI	CATED	OF
				DISCHARGE		DISCHARGE												ANALY-
Đ	ATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	•002	•004	•008	.016	.031	• 062	.125	•250	•500	1.00	2.00	515
DEC	2 1967	1820	8	210	2230	1260		31		55		76	88	96	100			VPWC
DEC	5	0935	7	6800	1650	30300		26		41		61	74	89	98	100		VPWC
DEC	6	1055	4	1290	236	822	14	25	34	39	42	59	70	91	100			VBWC
	10 1968	1015	6	14300	3750	145000	20	27	34	45	53	63	75	87	97	100		VPWC
JAN	15	1150	9	27400	5090	377000	19	26	33	45	55	63	80	91	97	100		VPWC
JAN	15	1445	в	22200	4470	268000	18	26	34	45	56	66	82	92	98	99	100	VPWC
	15	1730	8	17900	4480	217000	17	25	33	42	51	61	75	86	92	98	100	VPWC
	16	1135	7	9860	2670	71100	18	27	35	43	53	61	74	88	96	97	100	VPWC
	18	1040	5	3750	966	9780	21	29	38	45	51	58	66	78	91	100		VPWC
JAN	29	1615	4	2980	3660	29400	18	22	31	39	47	56	70	84	94	98	100	VPWC
.IAN	30	0920	4	6020	1010	16400	18	23	29	33	33	48	55	69	83	92	100	VBWC
	2	0915	6	8530	1640	37800	24	25	34	43	53	60	70	87	98	100		VPWC
	19	1655	10	18200	5700	280000	16	18	30	39	49	57	73	93	99	100		VPWC
FEB	20	1715	10	14300	3190	123000	17	28	34	45	55	64	78	89	95	100		VPWC
FEB	21	1420	9	17000	3850	177000	17	23	26	39	49	56	69	80	89	96	100	VPWC
FEB	27	1220	10	D 4200	677	7680	15	24	35	40	44	60	68	79	99	100		VBWC
	D Daily	mean d	ischa	rge.														

PARTICLE SIZE OF RED MATERIAL, WATER YEAR OCTORER 1967 TO SEPTEMBER 1968 (MFTHOD OF ANALYSIS: H. HYDROMFTER; O. OPTICAL ANALYZER; S. SIEVE; V. VISHAL ACCUMULATION TUBE)

		WATER	NUMBER			PARTICLE SIZE												
		TEM- PFRA- TURF	OF SAM- PLING	DISCHARGE		PERCENT	FINE	R THAN	THE	SIZE (1	N MILL	IMETER	S) IND	ICATED		METHOD OF		
DATE	TIME	(()	POINTS		.062	.125	.250	•500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	ANALY- SIS		
JAN 18 1968	0945		5	3780				2	6	16	28	41	57	100		s		
JAN 22	1600		3	1730					2	6	11	16	22	72	100	S		
FEB 21	1040		5	19200	1	2	4	7	14	22	28	35	64	70	100	s		

TOTAL

1549

IANUADY

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.--Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OCTOBER NOVEMBER DECEMBER MEAN MEAN MEAN MEAN DISCHARGE (CFS) MEAN OISCHARGE (CFS) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TONS/DAY) CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) DAY IMG/L1 23 39 163 123 80 .10 .11 210 213 4500 14 1240 2970 1820 2640 7.9 .06 38 39 38 37 37 1 1 2.4 17 3.3 1.5 19 35 1130 33000 10 .10 3640 6110 29100 61700 1250 3500 1220 749 658 250 1500 143 96 71 .18 .16 .14 .13 .10 .10 .10 .10 844 17300 471 194 126 67 67 59 53 47 43 37 37 37 37 38 1 1 1 1 1 1 1 1 8 9 10 .10 .11 .11 .11 240 106 •11 •11 •11 •11 39 39 40 677 646 616 538 410 380 53 34 20 9 6 92 57 29 10 40 40 40 39 11 12 13 14 15 1 1 90 77 484 234 183 160 148 138 332 360 640 544 395 3.6 4.9 178 12 6.4 16 17 18 19 20 37 37 37 36 36 .10 16 3.5 2.6 2.8 2.6 26 7 6 7 7 1 .10 96 B 6 i .10 38 41 50 50 45 .10 .11 .14 .14 2.1 2.1 2.6 8.6 4.3 352 304 380 562 910 21 22 131 6 8 27 14 127 122 118 114 20 38 62 209 16 39 94 514 .12 .11 .11 .11 1.8 1.2 .94 95 109 1300 1870 1600 267 375 198 151 128 87 937 1910 855 473 301 110 26 27 28 29 30 31 44 41 41 40 40 6 4 3 1 1 1 1 1 110 116 190 304 1160 870 721 134 115 169

602.48

36940

149590.0

MARCH

27.32

3959

		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	OISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	652	27	48	2100	420	2380	2850	458	3520
2	592	15	24	8350	1880	43700	2450	475	3140
3	526	10	14	8320	1530	37200	2100	45B	2600
4	466	9	11	4970	760	10200	1800	395	1920
5	445	6	7.2	3930	640	6790	1600	278	1200
6	420	2	2.3	3930	650	6900	1390	187	702
7	375	1	1.0	3980	720	7740	1250	182	614
8	395	1	1.1	3650	590	5810	1130	126	384
9	826	262	1950	3430	420	3890	1060	90	258
10	11000	3340	118000	3300	400	3560	980	76	201
11	2350	180	1140	3000	400	3240	930	68	171
12	1360	100	367	2740	420	3110	2080	1090	6120
13	2860	1380	13900	2660	415	2980	3900	615	6480
14	24300	7670	585000	2580	340	2370	4700	841	10700
15	25400	5620	419000	2300	280	1740	3900	620	6530
16	9720	2150	56400	2680	360	2600	9000	1900	46200
17	5480	1300	19200	5510	1710	26200	7000	651	12300
18	3650	1000	9860	5330	523	8210	5400	368	5370
19	2740	970	7180	12600	3990	205000	4000	292	3150
50	2080	795	4460	20600	3900	233000	3100	316	2640
21	1890	500	2550	15900	3520	156000	2600	380	2670
22	1740	270	1270	12100	2150	70200	2100	302	1710
23	1630	215	946	12700	2080	71300	1800	285	1390
24	1520	262	1080	9100	948	23300	1650	285	1270
25	1440	228	886	6700	1040	18800	2080	462	2590
26	1320	172	613	5200	830	11700	2190	425	2510
27	1220	140	461	4200	675	7650	1830	374	1850
28	1070	125	361	3750	585	5920	1750	346	1630
29	3490	1650	23300	3400	472	4330	1980	431	2300
30	6400	1070	18500				2000	208	1120
31	2820	440	3350				1900	224	1150
TOTAL	120177	~-	1289882.6	179010		985820	82500		134390

FERRIMANY

JUNE

BEL RIVER BASIN

MAY

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF .-- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	1740 1540 1410 1280 1190	278 241 183 152 128	1310 1000 697 525 411	567 566 568 575 568	11 13 14 15 15	17 20 21 23 23	283 263 249 242 223	5 4 4 5 6	3.8 2.8 2.7 3.3 3.6
6 7 8 9 10	1100 986 931 934 996	78 73 75 86 98	232 194 189 217 264	526 489 462 444 436	15 13 10 12 15	21 17 12 14 18	220 216 204 191 182	4 3 3 3 3	2.4 1.7 1.7 1.5 1.5
11 12 13 14 15	1080 1060 942 833 799	110 119 116 101 82	321 341 295 227 177	426 410 406 435 385	15 13 10 6 6	17 14 11 7.0 6.2	179 169 153 149 143	2 2 2 2 2	.97 .91 .83 .80
16 17 18 19 20	756 698 643 614 591	65 57 45 24 19	133 107 78 40 30	356 345 340 346 662	5 6 7 139	4.8 4.7 5.5 6.5 301.	140 133 130 126 121	2 2 3 3 3	.76 .72 1.1 1.0 .98
21 22 23 24 25	564 529 504 502 494	23 30 21 11 14	35 43 29 15 19	533 506 426 391 397	33 20 18 24 11	47 27 21 25 12	117 115 110 108 105	3 3 2 2 2	.95 .93 .59 .58
26 27 28 29 30 31	505 531 525 535 571	13 10 8 8	18 14 11 12 14	389 364 354 337 322 305	7 8 12 15 13 5	7.4 7.9 11 14 11	99 95 92 89 86	3 3 2 2 1	.80 .77 .50 .48 .23
TOTAL	25383		6998	13636		751.1	4732		40-24
		JULY			AUGUS T			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	JULY MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	AUGUST MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	SEPTEMBER MEAN CONCENT TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CDNCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DI SCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 82 76 70 68	MEAN CDNCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) -22 -21 -38 -37	DISCHARGE (CFS) 18 18 17 17	MEAN CONCEN- TRATION (MG/L) 2 4 3	DI SCHARGE (TONS/DAY) -10 -19 -14 -09	DISCHARGE (CFS) 35 31 28 26	MEAN CONCEN- TRATION (MG/L) 2 1 1	DISCHARGE (TONS/DAY) -19 -08 -08 -07
1 2 3 4 5 6 7 8	D1SCHARGE (CFS) 82 76 70 68 64 58 56 54	MEAN CDNCEN- TRATION (MG/L) 1 1 2 2 2 2 2	DISCHARGE (TONS/DAY) -22 -21 -38 -37 -35 -31 -15 -15 -13	DISCHARGE (CFS) 18 18 17 17 16 15 15 15	MEAN CONCEN- TRATION (MG/L) 2 4 3 2 2 2	DISCHARGE (TONS/DAY) -10 -19 -14 -09 -09 -04 -04 -08	DISCHARGE (CFS) 35 31 28 26 24 22 22 20 19	MEAN CONCEN- TRATION (MG/L) 2 1 1 1 1 1 2	DISCHARGE (TONS/DAY) -19 -08 -08 -07 -06 -06 -06 -05
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS) 82 76 70 68 64 58 56 54 48 47 44 42 40 39	MEAN CDNCEN- TRATION (MG/L) 1 1 2 2 2 2 1 1 1 2 2 2 2 2 1 1 1 2 2 2 2 2 2 1 1 1 2 2 2 2 1 1 1 1 2 2 1 1 1 2 2 1 1 1 2 2 1 2 1 1 1 2 1 2 1 2 1 2 1 2 1 1 2 1 2 1 2 1 1 1 1 2 1 2 1 1 1 2 1 1 1 1 1 1 2 1 2 1 2 1 1 1 2 1 1 1 1 2 1 2 1 2 1 2 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	DISCHARGE (TONS/DAY) -22 -21 -38 -37 -35 -15 -15 -15 -15 -11 -25 -24 -11 -11	DISCHARGE (CFS) 18 17 16 15 15 15 14 14 13 13 13	MEAN CONCENTRATION (MG/L) 2 4 3 2 2 2 2 2 2 2 2 1 1 1 2 2 2 2 2 1	DI SCHARGE (TONS/DAY) -10 -19 -14 -09 -09 -09 -04 -04 -08 -08 -08	DISCHARGE (CFS) 35 31 28 26 24 22 22 20 19 19 19 19 19	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) .19 .08 .08 .07 .06 .06 .05 .10 .10 .10 .10 .12
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 82 76 70 68 64 58 56 54 48 47 44 42 40 39 38 38 37 34	MEAN CDNCENTRATION (MG/L) 1 1 2 2 2 2 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) -22 -21 -38 -37 -35 -15 -15 -13 -25 -24 -11 -11 -11 -10 -10 -10	DISCHARGE (CFS) 18 18 18 17 16 15 15 15 14 14 13 13 14 14 14 13 17	MEAN CONCENTRATION (MG/L) 2 4 3 2 2 2 1 1 1 2 2 2 2 2 1 1 1 1 1 1 1 1	DI SCHARGE (TONS/DAY) -10 -19 -14 -09 -04 -04 -08 -08 -08 -04 -04 -04 -04 -04 -04 -04 -04 -04 -04	DISCHARGE (CFS) 35 31 28 26 24 22 22 29 19 19 19 25 26 24 23 21	MEAN CONCENTRATION (MG/L) 2 1 1 1 1 1 1 1 2 2 2 2 2 3 2 2 1 1 1 1	DISCHARGE (TONS/DAY) .19 .08 .08 .07 .06 .06 .06 .10 .10 .10 .10 .10 .12 .11 .07
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CCFS) 82 76 70 68 64 58 56 54 48 47 44 42 40 39 38 38 37 34 33 31 30 28 26	MEAN CDNCENTRATION (MG/L) 1 1 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) -22 -21 -38 -37 -35 -31 -15 -13 -25 -24 -11 -11 -11 -10 -10 -10 -09 -09 -08 -08 -08	DISCHARGE (CFS) 18 18 18 17 16 15 15 15 14 13 13 14 14 13 13 17 49 263 206 124 90	MEAN CONCENTRATION (MG/L) 2 4 3 2 2 2 1 1 1 2 2 2 2 2 1 1 1 1 1 1 1 1	DI SCHARGE (TONS/DAY) -10 -19 -14 -09 -09 -04 -08 -08 -08 -08 -04 -04 -04 -04 -05 -15 -40 -18 -17 -67 -24	DISCHARGE (CFS) 35 31 28 26 22 22 29 19 19 19 19 19 19 19 19 19 19 19 19 19	MEAN CONCENTRATION (MG/L) 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY) .19 .08 .08 .07 .06 .06 .05 .10 .10 .10 .10 .07 .07 .07 .06 .06 .06 .09 .09 .09 .00 .00 .00 .00 .00 .00 .00

1271 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS) 4.97

1439

TOTAL

471231 2568133•15

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PERIODIC DETERMINATION		SEDIMENT CONCENTRATION	N AND TURBIDITY, WATER YEAR		SEPTEMBER 1968
	CONCENTRATION OF SESPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 2, 1967	33	51		5700	1250
OCT. 4	3	1	FEB. 19 FEB. 20	3190	1280
OCT. 5	7	î	FEB. 21	3850	1380
DCT. 6	1	0	FEB. 22	2180	921
OCT. 9	1	0	FEB. 23	2850	1000
OCT. 11	1	0	FE8. 24	946	720
OCT. 13	1	0	FEB. 25	1180 835	640 360
OCT. 16	1	1	FEB. 26 FEB. 27	677	320
OCT. 20	ĩ	ī	FE8. 28	599	240
OCT. 22	1	1	FEB. 29	469	270
OCT. 23	1	1	MAR. 1	448	215
OCT. 25	1	ļ	MAR. 3	463	155
OCT. 27	1 1	1	MAR. 4 MAR. 5	278 288	130 124
					-
NOV. 1	1	1	MAR. 6	183	105
NOV. 3	1 1	1	MAR. 7 MAR. 8	186	93 75
NOV. 6	1	i	MAR. 10	116 78	59
NOV. 10	ĩ	ī	MAR. 11	68	50
NOV. 13	1	1	MAR. 12	2510	650
NOV. 14	72	70	MAR. 13	516	220
NOV. 15	82	50	MAR. 14	954	355
NOV. 15	6	3	MAR. 14 MAR. 15	608	195
NOV. 20	7	7	MAR. 16	2960	1000
NOV. 22	7	4	MAR. 17	758	280
NOV. 24	31	7	MAR. 18	313	190
NOV. 27	3	1	MAR. 19	288	150
NOV. 29 NOV. 30	149 120	140 124	MAR. 20 MAR. 21	312 400	120 110
NOTE SOLUTIONS	120	***			
DEC. 1	15	5	MAR. 22	299	90
DEC. 2	2230	1160	MAR. 23 MAR. 24	320 283	85 88
DEC. 3	2720 1360	1160 896	MAR. 25	590	190
DEC. 5	1650	920	MAR. 26	416	180
	-		M4D 27	373	130
DEC. 6	236	125 984	MAR. 27 MAR. 28	348	125
DEC. 7	1580 138	984 54	MAR. 29	532	150
DEC. 11	52	24	MAR. 30	204	115
DEC. 13	22	16	MAR. 29 MAR. 30 MAR. 31	241	115
DEC. 15	6	5	APR. 1	280	105
DEC. 18	196	136	APR. 2	249	86
OEC. 20	7	10	APR. 4	154	60
DEC. 22	19 228	5 117	APR. 5	130 74	58
DEC. 25	228		APR. 6	14	48
DEC. 27	448	180	APR. 8	76	39
DEC. 29	152	80	APR. 10	96	42
JAN. 1, 1968	22 11	20 11	APR. 12	118 116	55 37
JAN. 3	16	3	APR. 14	82	33
		_			
JAN- 8	1 8	5 3	APR. 17	57	23
JAN. 9	3750	1530	APR. 19 APR. 22	23 30	20 4
JAN. 11	614	270	APR. 24	11	8
JAN. 13	897	190	APR. 26	12	6
JAN. 14	8020	2900	APR. 29	8	5
JAN. 15	5090	2000	MAY 1	11	5
JAN. 16	2670 982	1170 435	MAY 3	14 16	2
JAN. 18 JAN. 19	982	280	MAY 6	10	5 4
JAN. 22	246	185	MAY 10	15	4
JAN. 24	264	145	MAY 13	10	7
JAN. 26	173	87	MAY 14	6	2
JAN. 29	3660	1050	MAY 15	6	1
JAN. 30	1010	425	MAY 17	5	1
JAN. 31	437	200	MAY 19	7	1
FEB. 2	1640	690 625	MAY 20	314	37
FEB. 3	1400 614	625 270	MAY 21	26 20	3 2
FEB. 7	706	240	MAY 24	20 27	2
FEB. 9	426 429	230 130	MAY 25	9 8	3 1
FEB. 14	338	110	MAY 29	15	i
FE8. 16	221	90	MAY 31	3	1
FE8. 17	1930	500	JUNE 3	4	1

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TENTODIC DETENTION					
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)
				_	_
JUNE 5	6	,	JULY 31	1	1
JUNE 7	ă	ñ	AUG. 2	4	1
JUNE 10	ă	ĭ	AUG. 5	2	3
JUNE 12	2	î	AUG. 7	1	1
JUNE 14	5	ń	AUG. 9	2	1
DONC 14	-	· ·			
JUNE 17	2	0	AUG. 12	1	1
JUNE 19	5	ů.	AUG. 14	1	1
JUNE 21	3	Ÿ	AUG. 16	1	1
	,	1	AUG. 19	1	2
JUNE 24	2	0	AUG. 21	40	73
JUNE 26	3	0			
			AUG. 23	2	1
JUNE 28	2	0	AUG. 26	1	2
JULY 1	ı	1	AUG. 28	i	2
JULY 3	2	0	AUG. 30	á.	3
JULY 5	2	0	SEPT. 4	i	2
JULY 8	1	1	30,110 4000000000000000000000000000000000	•	-
			SEPT. 6	•	2
JULY 10	2	0	SEPT. 9	÷	5
JULY 12	ī	ñ	SEPT. 11	-	•
JULY 15	i i	ŏ	SEPT. 13		<u>,</u>
JULY 17	ĭ	ň		?	4
JULY 18	ī	ň	SEPT. 16	1	1
	•	•			-
JULY 19		•	SEPT. 18		
JULY 22		ŏ	SEPT. 20	1	1
JULY 24	•	·	SEPT. 23	2	<u>.</u>
JULY 26			SEPT. 25	I	1
	8	<u> </u>	SEPT. 27	1	1
JULY 29	1	1	SEPT. 30	2	1

11475000 EEL RIVER AT FORT SEWARD, CALIF.

LOCATION. -- Lat 40°13'05", long 123°37'54", in SE NE 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.

DRAINAGE AREA. -- 2,107 sq mi.

PERIOD OF RECORD. -- Water temperatures: November 1960 to September 1968. Sediment records: October 1965 to September 1968.

EXTREMES . -- 1967-68:

KEMES, --1997-98: Water temperatures: Maximum, 34.0°C June 25, July 7; minimum, freezing point Dec. 14-17. Sediment concentrations: Maximum daily, 5,850 mg/l Jan. 10; minimum daily, 1 mg/l on mmny da Sediment discharge: Maximum daily, 945,000 tons Jan. 15; minimum daily, 0.09 ton Aug. 13-18.

Period of record: priou of record:
Maximum, 34.0°C June 25, July 7, 1968; minimum, freezing point
Dec. 14-17, 1968.
Sediment concentrations: Maximum daily, 13,900 mg/l Jan. 4, 1966; minimum daily, 1 mg/l on many days in
1965-68.

Sediment discharge: Maximum daily, 4,270,000 tons Jan. 4, 1966; minimum daily, 0.09 ton Aug. 13-16, 1968.

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

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	۱Y																
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																_																
MUM 1 XAM	24	20	23	25	21	23	24	22	24	25	24	24	23	17	24	23	24	21	23	23	18	22	22	21	20	19	19	19	19	19	19	22
MINIMUM	19	17	17	17	17	17	17	17	17	19	19	19	17	16	16	14	14	14	17	17	16	17	16	17	16	16	15	14	13	13	13	16
NOVEMBER.	_			_																												
MAXIMUM	20	21	20	16	18	18	18	17	16	18	16	17	15	17	16	16	15	12	14	13	14	12	12	12	12	u	7	10	8	6		15
MINIMUM	14	14	14	14	14	14	14	15	14	14	14	8	14	14	13	12	12	11	9	9	9	8	7	8	8	7	6	6	6	4		11
DECEMBER.								_																_								
MAXIMUM	6	6	7	7											3										7	7	8	8	8	7	6	6
MUMINIM	3	5	5	6	6	5	5	5	5	5	5	3	ı	0	٥	0	0	2	2	2	2	3	3	4	4	4	5	5	5	4	3	3
JANUARY																																
MUMIXAM			6																												4	7
MINIMUM	3	3	3	2	3	2	2	4	4	6	3	2	4	8	8	7	5	4	4	5	6	7	6	6	6	4	3	2	2	2	3	4
FEBRUARY.																																
MUMIXAM			8																													11
MINIMUM	4		6																													8
MARCH																																
MUM I X AM			16																													13
MI NI MUM	10	9	9	11	11	9	9	8	8	В	9	8	7	7	7	7	7	6	7	7	8	8	9	9	10	9	9	11	12	13	12	9
APRIL																																
MUM 1XAM	13	14	17	15	16	10	16	18	20	22	19	18	18	18	17	16	16	16	17	16	17	18	17	18	19	21	23	23	24	22		18
MINIMUM	12	11	11	12	11	Lu	10	LI	13	14	4	13		H	12	10	9	10	11	10	11	11	12	13	12	14	14	15	10	18		12
MAY																														~		
MAXIMUM MINIMUM			24 16																													22 17
JUNE	10	13		1,																												11
MAXIMUM	20	26	28	24	20	22	22	24																								28
MINIMUM			21																													19
JULY																																
MAXIMUM			31																													
MINIMUM	18	īó	20	20	10	10	10	21	20		_																					
AUGUST																																
MAXIMUM																																
MI NI MUM									_																							
SEPTEMBER			27			27			26				26				24			19			23									
MAXIMUM																																
MI NI MUM																																
																											-0					

11475000 EEL RIVER AT FORT SEWARD, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	80								
		OCTORER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
1	76	4	.82	98	1	.26	1140	152	468
2 3	118 190	8 18	2.5 9.2	97 94	1 1	•26 •25	1520 14400	245 1220	1500 49700
4	310	16	13	92	1	.25	10100	1090	30100
5	510	10	14	90	1	. 24	18200	2590	134000
6	380	7	7.2	90	1	. 24	7000	686	14100
7 8	275 195	5 3	3.7 1.6	90 88	2 2	.49 .48	11400 6980	1590 630	52800 11900
9	143	3	1.2	88	2	.48	3850	160	1660
10	122	2	.66	88	2	.48	2650	61	436
11	123	2	•66	88	2	.48	2170	44	258
1 <i>2</i> 13	123 123	2	.66	88 93	2	•48 •50	1800 1490	31 25	151 101
14	123	2	•66	336	6	7.3	1210	25	82
15	127	2	.66	1300	53	193	972	15	39
16 17	119 119	2	.64 .64	622 342	31 21	52 19	895 855	11	27 18
18	118	i	.32	246	14	9.3	2370	157	1290
19	115	1	.31	200	8	4.3	3590	180	1740
20	115	1	.31	174	4	1.9	2090	80	451
21 22	118 118	1	•32 •32	158 144	2	.85 .39	1460 1190	29 16	114 51
23	117	1	.32	137	1	.37	1150	14	43
24 25	117	1	-3?	128	1	•35	1460	19 37	75 191
	114	1	•31		1	.33	1910		
26	114	1	•31	115	1	.31	2530 2870	86 190	587 1520
27 28	107 105	1	•29 •28	114 118	1	•31 •32	3000	137	1110
29	102	1	.28	230	34	26	2400	70	454
30 31	98 97	1	.26 .26	1250	301	1110	1910 1540	43 27	222 112
TOTAL	4726		62.67	6920		1430.92	116102		305300
		JANUARY			FEBRUARY			MARCH	
		MFAN			MEAN			ME AN	
	MEAN DISCHARGE	MFAN CONCEN-	SEDIMENT Discharge	MEAN DISCHARGE	MEAN CONCEN-	SEDIMENT DISCHARGE	MEAN DISCHARGE	ME AN CONCEN-	SEDIMENT DISCHARGE
DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN-	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	ME AN	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1	DISCHARGE (CFS)	MFAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY) 9980	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 1320 1170	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 68 41	DISCHARGE (CFS) 8800 18700	MEAN CONCEN- TRATION (MG/L) 420 1820	DISCHARGE (TONS/DAY) 9980 108000	DISCHARGE (CFS) 5730 5150	MEAN CONCEN- TRATION (MG/L) 228 182	DISCHARGE (TONS/DAY) 3530 2530
1	DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 8800	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 9980	DISCHARGE (CFS) 5730	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 3530
1 ? 3	DISCHARGE (CFS) 1320 1170 1020	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 68 41 25	DISCHARGE (CFS) 8800 18700 23700	MEAN CONCEN- TRATION (MG/L) 420 1820 1920	DISCHARGE (TONS/DAY) 9980 108000 128000	DISCHARGE (CFS) 5730 5150 4620	MEAN CONCEN- TRATION (MG/L) 228 182 150	DISCHARGE (TONS/DAY) 3530 2530 1870
1 2 3 4 5	DISCHARGE (CF5) 1320 1170 1020 890 800	MEAN CONCEN- TRATION (MG/L) 19 13 9 10 7	DISCHARGE (TONS/DAY) 68 41 25 24 15	DISCHARGE (CFS) 8800 18700 23700 16300 12500	MEAN CONCEN- TRATION (MG/L) 420 1820 1920 990 680	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000	DISCHARGE (CFS) 5730 5150 4620 4210 4040	MEAN CONCEN- TRATION (MG/L) 228 182 150 122 105	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150
1 2 3 4 5	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694	MFAN CONCEN- TRATION (MG/L) 19 13 9 10 7	DISCHARGE (TONS/DAY) 68 41 25 24 15	BISCHARGE (CFS) 8800 18700 23700 16300 12500	MEAN CONCEN- TRATION (MG/L) 420 1820 1920 990 680 510 438	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900	01SCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530	MEAN CONCEN- TRATION (MG/L) 228 182 150 122 105 91	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772
1 2 3 4 5	DISCHARGE (CF5) 1320 1170 1020 890 800	MEAN CONCEN- TRATION (MG/L) 19 13 9 10 7	DISCHARGE (TONS/DAY) 68 41 25 24 15	DISCHARGE (CFS) 8800 18700 23700 16300 12500	MEAN CONCEN- TRATION (MG/L) 420 1820 1920 990 680	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000	DISCHARGE (CFS) 5730 5150 4620 4210 4040	MEAN CONCEN- TRATION (MG/L) 228 182 150 122 105	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694 658	MEAN CONCENTRATION (MG/L) 19 13 9 10 7	DISCHARGE (TONS/DAY) 68 41 25 24 15	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10100 8930	MEAN CONCEN- TRATION (MG/L) 420 1920 1920 990 680 510 438 347	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370	01SCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120	ME AN CONCEN- TRATION (MG/L) 228 182 150 122 105 91 81 68	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694 658 2520 28600	MFAN CONCEN- TRATION (MG/L) 19 13 9 10 7 5 4 6 345 5850	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 490000 68000	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10100 8930 7800 7180	MEAN CONCEN- TRATION (MG/L) 420 1920 990 680 510 438 347 272 222	DISCHARGE (TONS/DAY) 9980 108000 128000 23000 14900 11900 8370 5730 4300	01SCHARGE (CF5) 5730 5150 4620 4210 4040 4000 3530 3120 2470	MEAN CONCEN- TRATION (MG/L) 228 182 150 122 105 91 81 68 55 41	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CES) 1370 1170 1020 890 800 750 694 658 2520 28600	MFAN CONCEN- TRATION (MG/L) 19 13 9 10 7 5 4 6 345 5850	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 680000 7300	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750	MEAN CONCEN- TRATION (MG/L) 420 1920 1920 680 510 438 347 272 222 186 158	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450	DISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220	MEAN CONCEN- TRATION (MG/L) 228 180 122 105 91 81 68 55 41 35 540	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CES) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 6 6 345 5850 1780 438 730 4470	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 490000 68000 7300 15300 496000	DISCHARGE (CFS) 8800 18700 23700 16300 12500 INBOD 10100 8930 7800 7180 6550 5750 5490	MEAN CONCENTRATION (MG/L) 420 1820 1920 680 510 438 347 272 222 186 158 134 114	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1950	DISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 81 68 55 40 1140 527	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 16600
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 7 5 4 6 345 5850 1780 438 730	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 490000 68000 7300 15300	DISCHARGE (CFS) 8800 18700 23700 16300 12500 INBOO 10100 8930 7800 7180 6550 5750 5400	MEAN CONCENTRATION (MG/L) 420 1920 990 680 510 438 347 277 222 186 158 134	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950	DISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250	MEAN CONCENTRATION (MG/L) 228 150 122 105 91 81 68 55 41 35 540 1140	DI SCHARGE (TONS/DAY) 3530 2530 1870 1150 983 772 573 413 273 213 8890 30800
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CES) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 6 5 5850 1780 438 730 4470 5390 2390 2390	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 590000 68000 7300 496000 945000 186000	DISCHARGE (CFS) 8800 18700 18700 23700 16300 12500 10800 10100 8930 7180 6550 5750 5400 4980 4410	MEAN CONCENTRATION (MG/L) 420 1820 1920 1920 680 510 438 347 272 222 186 158 134 114 102 98	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1530 1260	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9550	MEAN CONCENTRATION (MG/L) 228 180 150 122 105 91 68 55 41 35 540 1140 1140 1140 1140 1140 1140 1140	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 16600 11900 58800
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 1320 1170 1020 890 890 694 658 2520 28600 12500 6030 6830 33400 61700	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 6 345 5850 1780 438 730 4470 5390	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 490000 680000 193000 493000 193000 186000 1860000 1860000	DISCHARGE (CFS) 8800 18700 23700 16300 16300 10100 8930 7800 7180 6550 54900 4980 4580	MEAN CONCENTRATION (MG/L) 420 1820 1920 990 680 680 1510 438 347 272 222 186 158 134 114 102 98 8 345	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1170 6780	DISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2470 2250 4220 9250 10800 9550	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 81 68 55 41 35 640 1140 527 460 1310 890	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 11900 58800 38900
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 1320 1170 1020 890 750 694 658 2520 28600 12500 6030 661700 28800 19700 13500 9220	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 6 345 5850 1780 437 730 4470 5390 2390 1500 1000 680	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 490000 68000 7300 153000 496000 945000 186000 79800 36500	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4580 4410 6630 9850 14600	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 272 222 186 158 134 114 1102 98 345 51190 1270	9980 108000 128000 43600 43600 14900 11900 11900 13000 14900 11900 32900 3290 2450 11950 11950 1170 6780 32200 77600	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9550 14500 11100 8530	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 81 68 55 41 1327 460 1140 482 310	DISCHARGE (TONS/DAY) 3530 2530 1870 1150 983 772 573 413 273 213 8890 38800 11900 58800 58800 14400 7140
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 1320 1170 1020 890 750 694 658 2520 28600 12500 6030 66700 28800 19700 13500 9220 7180	MFAN CONCENTRATION (MG/L) 19 13 3 9 10 0 7 7 5 4 6 3 45 5 5850 1780 4390 2390 1500 1000 680 390	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5490 68000 75000 155000 496000 155000 1560000 156000 156000 156000 156000 156000 156000 156000 156000 1560000 1560000 1560000 1560000 1560000 1560000 1560000 1560000 15600000 1560000 1560000 1560000 15600000 1560000 1560000 1560000 156	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5760 5760 4980 4580 4410 6630 9850 14600 47200	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 272 222 186 158 134 1102 98 345 1190 1270 4500	9980 108000 128000 43600 43600 43600 14900 11900 8370 5730 4300 3290 2450 11950 11260 1170 6780 32200 77600 597000	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9550 10800 10500 11500 16500 11000 8530 6700	MEAN CONCENTRATION (MG/L) 228 189 189 129 129 105 91 81 68 55 41 35 540 1140 527 460 1310 890 482 310 202	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 58800 14400 7140 33650
1 2 3 4 5 6 7 8 9 10 11 12 13 145 16 17 18 19 20	DISCHARGE (CES) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 345 5850 17A0 437 730 4470 5390 2390 1500 1000 680 390	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 496000 945000 186000 79800 36500 16900 7560 3790	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4410 6630 9850 14600 47200	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 438 347 272 222 186 158 134 114 102 98 8 345 1190 1270 4500 2530	DISCHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1170 6780 32200 77600 597000	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9550 14500 16200 11100 85300 58800	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 68 55 41 35 540 1140 527 460 1810 890 482 310 202	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3650 2320
1 2 3 4 5 6 7 8 9 10 11 12 13 145 16 17 18 19 20 21 22 22 23	DISCHARGE (CEFS) 1320 1170 1020 890 890 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 5 4 345 5850 17A0 437 730 4470 5390 2390 1500 1000 680 390 230 180	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 15300 496000 945000 186000 7860 16900 7560 3790 2620 1920	DISCHARGE (CFS) 88800 18700 23700 16300 16300 10500 10800 10100 8930 7800 7180 6550 5750 54900 4980 4410 6630 9850 14600 47200 35600 30100 26900	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 272 222 186 158 134 114 102 98 R 265 1900 1270 4500 1270 4500 1790 1640	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 2290 2450 1950 1170 6780 32200 77600 245000 145000 115000	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9550 14500 16100 8530 6700 58800 5250	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 88 55 41 35 540 1140 1247 460 1140 1140 1140 1140 1140 1140 1140	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3050 2220 1730 1370
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22 23 24 24 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 33400 61700 28800 12500 9220 7180 6100 5400 4750 4230	MFAN CONCENTRATION (MG/L) 19 13 3 9 10 0 7 7 5 4 6 3 45 5 5850 1780 4370 4370 4370 4370 5390 2390 1500 1000 680 390 230 180 150 1150 1150 1150 1150 1150 1150	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 68000 68000 7300 68000 7300 496000 945000 15300 496000 15500 15900 37500 15900 37500 15900 37500 15900 3790 2620 1920 1920 1920	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10900 18930 7800 7180 6550 5750 57400 4980 4580 4410 6630 9850 14600 47200 35600 30100 26900 27100	MEAN CONCENTRATION (MG/L) 420 1920 1920 9900 680 510 438 347 272 222 186 158 134 111 102 98 345 5190 4500 1270 4500 1590 1640 1480	9980 108000 128000 43600 43600 43600 14900 11900 8370 5730 4300 3290 24500 1150 1170 6786 32200 77660 597000 245000 145000 119000 88300	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 15500 11500 8530 6700 5800 5250 4850 4890	MEAN CONCENTRATION (MG/L) 228 182 122 125 125 126 127 127 127 127 127 127 127 127 127 127	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 16600 11900 58800 38900 14400 7140 3050 2220 1730 1370 1100
1 2 3 4 4 5 5 6 7 7 8 9 10 11 12 11 13 14 15 16 11 17 18 19 20 20 21 22 23 24 25	DISCHARGE (CES) 1320 1170 1020 890 890 750 694 658 2520 28600 12500 6030 6430 33400 61700 28800 19700	MFAN CONCENTRATION (MG/L) 19 13 3 9 10 0 7 7 5 4 6 345 5 850 0 1780 4390 4370 4370 4370 1500 1500 1500 1500 1500 1500 1500 15	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 15300 496000 945000 186000 73600 16900 7360 19900 186000 37600	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10900 18930 7800 7180 6550 5750 57400 4980 4580 4410 6630 9850 14600 47200 35600 30100 26900 27100	MEAN CONCENTRATION (MG/L) 420 1920 1920 9900 680 510 438 347 272 222 186 158 134 111 102 98 345 5190 4500 1270 4500 1270 4500 1640 1000	9980 108000 128000 43600 43600 14900 11900 8370 5730 4300 3290 24500 11500 1170 6780 32200 77600 597000 245000 145000 119000 88300 43200	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 15200 11500 8530 6700 58600 5250 4850 4850 4290 4710	MEAN CONCENTRATION (MG/L) 228 182 122 125 125 126 68 55 41 35 540 1140 527 460 1310 890 482 310 202 148 122 105 95 118	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 16600 11900 58800 38900 14400 7140 3650 2220 1730 1370 1100 1500
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	DISCHARGE (CFS) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180 6100 5400 4750 4230 3990	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 54 4345 5850 17A0 4470 5390 2390 1000 680 390 1100 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500 1100 1500	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 4.90000 6.8000 7.300 4.96000 94.5000 18.6000 7.800 3.6500 16.900 7.800 3.700 3.700 1.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700 3.700	DISCHARGE (CFS) 88800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4410 6630 9850 14600 47200 35600 30100 26900 27100 12100	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 272 222 186 158 134 114 102 98 1270 4500 1270 4500 1270 4500 1400 1400 1710	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1530 1260 1170 6780 32200 77600 245000 145000 145000 119000 88300 43200 23200	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9550 14500 16200 11100 8530 65700 58800 5250 4850 4290 4710 5550	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 88 55 41 35 540 1140 1247 460 1140 1240 1240 1240 1240 1240 1240 1240	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3650 2320 1730 11300 1500
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 24 25 26 27 7 28	DISCHARGE (CES) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180 6100 5400 4750 4230 33900 3470 3240	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 54 6345 55850 1780 4470 5390 2390 1500 1500 1500 1500 1500 1500 1500 15	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 496000 945000 186000 7980 36500 16900 7560 3790 2620 1920 1260 1000 750 612 3780	DISCHARGE (CFS) 88800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4410 6630 9850 14600 47200 35600 30100 26900 27100 12100 9610 7950	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 277 222 186 158 134 114 102 98 8 1270 4500 1270 4500 1400 1400 1400 1400 1520 390	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1530 1260 1170 6780 32200 77600 245000 145000 145000 145000 145000 13500 8370	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9250 11100 8530 6700 5800 5250 4850 4290 4710 5550 4600	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 88 55 41 35 540 1140 1247 460 1310 202 148 122 105 148 125 105 118 250 1148 129 105 118 118 119 119 119 119 119 119 119 119	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3650 2320 1730 1130 1500 3750 1660 1100
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 4 25 26 27 28 8 29	DISCHARGE (CFS) 1320 1170 1020 890 750 694 658 2520 28600 12500 6030 33400 61700 28800 12500 61700 27800 12500 61700 28800 33400 61700 3200 34700 3200 3470 3200 3470 3240 3050 6750	MFAN CONCENTRATION (MG/L) 19 13 3 9 9 10 0 7 7 5 4 6 6 345 5 850 0 1780 1500 1500 1500 1500 1500 150 110 95 80 70 70 413 1000	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11,5 490000 680000 7300 496000 945000 945000 15300 496000 15300 496000 15300 496000 7560 3790 2620 1920 1260 11000 750 612 3780 21700	DISCHARGE (CFS) 8800 18700 23700 16300 12500 10800 10900 18930 7800 7180 6550 5750 57400 4980 4580 4410 6630 9850 14600 47200 35600 30100 26900 27100 16000	MEAN CONCENTRATION (MG/L) 420 1920 1920 9900 680 510 438 347 272 222 186 158 134 114 102 98 345 5190 1270 4500 1270 4500 1290 1640 1000 710 520 390 290	9980 108000 128000 43600 43600 14900 11900 8370 5730 4300 3290 24500 1170 6780 32200 77600 597000 245000 145000 119000 88300 43200 22200 23200 8370 51900	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 11500 11500 11500 15300 6700 5800 5250 4850 4290 4710 5550 4860 4300 4080	MEAN CONCENTRATION (MG/L) 228 182 122 125 150 122 125 150 122 125 168 55 41 35 540 1140 1140 1140 1140 1140 1140 1140	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 30800 16600 11900 58800 38900 14400 7140 3650 2220 1730 1370 1100 1500 3750 1660 1040 969
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 24 25 26 27 7 28	DISCHARGE (CES) 1320 1170 1020 890 800 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180 6100 5400 4750 4230 33900 3470 3240	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 54 6345 55850 1780 4470 5390 2390 1500 1500 1500 1500 1500 1500 1500 15	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 496000 945000 186000 7980 36500 16900 7560 3790 2620 1920 1260 1000 750 612 3780	DISCHARGE (CFS) 88800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4410 6630 9850 14600 47200 35600 30100 26900 27100 12100 9610 7950	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 277 222 186 158 134 114 102 98 8 1270 4500 1270 4500 1400 1400 1400 1400 1520 390	9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1530 1260 1170 6780 32200 77600 245000 145000 145000 145000 145000 13500 8370	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9250 11100 8530 6700 5800 5250 4850 4290 4710 5550 4600	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 88 55 41 35 540 1140 1247 460 1310 202 148 122 105 148 125 105 118 250 1148 129 105 118 118 119 119 119 119 119 119 119 119	DI SCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3650 2320 1730 1130 1500 3750 1660 1100
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 24 25 26 27 28 29 30	DISCHARGE (CFS) 1320 1170 1020 890 890 750 694 658 2520 28600 12500 6030 6830 33400 61700 28800 19700 13500 9220 7180 6100 5400 4750 4230 33900 3470 3240 3050 6750 18600	MFAN CONCENTRATION (MG/L) 19 13 9 10 7 54 4345 5850 17A0 4470 5390 2390 1900 1900 1900 1900 1900 1900 1900 1	DISCHARGE (TONS/DAY) 68 41 25 24 15 10 7.5 11 5.90 490000 68000 7300 496000 945000 15300 496000 79800 36500 16900 7560 3790 2620 1920 1260 1000 750 612 3780 21770 21770	DISCHARGE (CFS) 88800 18700 23700 16300 12500 10800 10100 8930 7800 7180 6550 5750 5400 4980 4580 4410 6630 9850 14600 47200 35600 30100 26900 27100 12100 9610 7950 6630	MEAN CONCENTRATION (MG/L) 420 1920 1920 990 680 510 438 347 277 222 186 158 134 114 102 98 8 1270 4500 1270 4500 1270 4500 1400 1400 1400 1400 1400 290 290 290 290	918CHARGE (TONS/DAY) 9980 108000 128000 43600 23000 14900 11900 8370 5730 4300 3290 2450 1950 1530 1260 1170 6780 32200 77600 597000 245000 145000 145000 145000 119000 88300 43200 23200 13500 8370 5190	OISCHARGE (CFS) 5730 5150 4620 4210 4040 4000 3530 3120 2780 2470 2250 4220 9250 10800 9250 11100 8530 6700 5800 5250 4850 4290 4710 5550 4600 4300 4080	MEAN CONCENTRATION (MG/L) 228 182 150 122 105 91 88 55 41 35 540 1140 1247 460 1310 202 148 122 105 148 125 105 118 250 134 90 88 91	DISCHARGE (TONS/DAY) 3530 2530 1870 1390 1150 983 772 573 413 273 213 8890 16600 11900 58800 38900 14400 7140 3650 2320 1730 11730 11500 3750 1660 1040 969 988

11475000 EEL RIVER AT FORT SEWARD, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JUNE MEAN
CONCEN- SEDIMENT
TRATION DISCHARGE
(MG/L) (TONS/DAY) MEAN CONCEN-TRATION (MG/L) MEAN CONCEN- SEDIMENT TRATION DISCHARGE (MG/L) (TONS/DAY) SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) MEAN DISCHARGE (CFS) DAY 7.4 9.7 12 19 562 347 254 195 414 405 399 369 2.3 2.2 2.2 2.2 2.2 3530 910 59 43 35 29 3 4 5 8 2 2 2 2 1 2 3 4 5 2690 2490 885 880 2.8 1.9 .92 .86 15 9.7 7.4 7.1 2100 2040 1950 1910 770 720 686 345 342 318 300 113 110 116 119 20 20 22 23 1 1 1 7 7 5 4 4 9 1920 1850 1700 1620 .77 .73 .70 .68 114 145 138 83 634 646 686 702 5.2 5.1 5.2 5.6 5.7 272 258 252 246 12 13 14 15 22 29 30 19 3 3 3 3 3 1460 1340 1280 1220 578 547 540 606 226 222 214 194 5.1 4.7 4.4 4.4 8.2 .65 .61 .60 .58 13 16 21 21 51 58 73 69 17 18 19 20 38 17 9.3 6.8 •50 •46 •45 •44 1110 1040 996 960 875 800 171 167 162 22 23 24 25 25 32 39 8 9 12 15 16 8 5 l l 30 23 17 622 570 529 484 459 5.2 5.0 4.6 4.3 2.6 2.5 .42 .38 .32 .31 925 935 915 905 141 119 115 113 27 28 29 30 31 12 9 7 8 3 3 3 2 2 TOTAL 332.2 28.71

		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	113	1	.31	50	1	.14	99	1	•27
?	112	2	.60	50	1	.14	87	1	.23
3	110	2	.59	48	1	.13	87	2	. 47
4	109	2	.59	48	1	.13	85	2	•46
5	107	2	.58	48	1	.13	82	2	.44
6	106	1	•29	46	1	.12	72	1	.19
7	105	1	.28	44	1	•12	70	1	•19
8	104	1	.28	42	1	-11	66	í	.18
9	84	1	.23	42	1	•11	64	1	-17
10	81	1	.2?	42	1	.11	60	1	.16
11	81	1	.22	42	1	.11	58	1	.16
12	81	1	.22	41	1	.11	54	1	-15
13	81	1	•22	34	1	• 09	54	1	. 15
14	81	1	.22	34	1	•09	52	1	.14
15	80	1	.22	34	1	.09	52	1	.14
16	80	1	.22	34	1	•09	52	1	.14
17	76	1	.21	34	2	.18	52	1	.14
18	76	1	.21	34	2	.18	52	Ž	. 28
19	76	1	.21	34	2	.18	52	2	•28
20	72	1	.19	44	2	. 24	52	3	.42
21	70	1	.19	147	26	10	52	2	.28
22	68	1	.18	501	20	27	52	1	.14
23	66	1	.18	390	15	16	52	1	.14
24	62	1	•17	252	14	9.5	48	1	.13
25	60	1	.16	179	11	5.3	44	i	.12
26	58	1	.16	158	9	3.8	42	2	•23
27	58	i	.16	146	2	.79	42	- 2	.23
28	58	ī	.16	144	2	.78	42	ĩ	.11
29	58	1	.16	137	2	.74	41	ī	.11
30	54	ī	.15	126	ž	.68	42	i	•11
31	52	ī	.14	108	ī	.29			•==
TOTAL	2479		7.92	3113		77.48	1759		6.36

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

4830898.76

11475000 EEL RIVER AT FORT SEWARD, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(METHODS OF ANALYSIS: B, ROTTOM MITHORAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE MATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; M, IN DISTILLED MATER)

		WATER TEM- PERA-		CONCEN- TRATION	SUSPENDED- SEDIMENT DISCHARGE	PERCI	ENT F	INER 1	THAN '		ICLE S		LIME1	ERS)	INDIC	CATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.008	.016	.031	•062	.125	.250	•500	1.00	2.00	SIS
DEC 3 1967 JAN 10 1968 JAN 14 JAN 15 JAN 16 JAN 18 JAN 29 JAN 30	1425 1600 1400 0730 1655 1655 1645 1610	7 7 9 9 9 8 7 3	19000 32300 37000 71900 53400 26100 12500 6930 15900	3890 7380 4340 5830 4030 2090 819 827 1410	200000 644000 434000 1130000 581000 147000 27600 15500 60500	22 17 21 19 25 27	25 32 24 29 28 30 34 36 29	31 41 36 43 45	49 55 43 53 50 54 50 53 46		77 77 67 76 74 75 75 82 72	92 91 87 90 88 87 84 93	98 99 98 99 98 97 96 99	100 100 100 100 100 99 99	100	=======================================	VPHC VPWC VPHC VPHC VPHC VBHC VBHC VBHC VBHC
FEB 2 FEB 21 FEB 22 MAR 12	1600 1400 1655 1600 1410	7 9 11 11 10	23300 10900 38700 29600 4080	2180 588 2740 1710 544	137000 17300 286000 137000 5990	23 19 22 31	25 27 28 31 41	37 34 41	47 45 49 48 62	59 53 60 51 66	62 59 73 76 93	85 66 86 86 98	99 82 95 95 100	99 100 99	100	=======================================	VPWC VPWC VBWC VBWC

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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, 1967	9	6		22	16	20
OCT - 3	20	29		23	12	14
DET. 4	14	10		28	122	120
OCT. 8	3	3		. 29	67	75
OCT. 11	2	3	DEC	30	38	47
OCT. 15	2	1	DEC	31	26	30
OCT. 18	1	1		1, 1968	18	20
OCT. 22	1	1		2	12	15
OCT. 25	2	1		3	9	ii
OCT. 29	1	1		4	ıí	10
	_					
NOV. 1	1	1		5	6	8
NOV. 5	1	1		6	5	7
NOV. 8	2	1		7	4	5
NOV. 10	3	1		8	6	7
NOV. 19	8	10	JAN.	9	230	224
NOV. 22	1	3	JAN.	10	7380	2360
NDV. 26	1	1	JAN.	11	1010	600
NOV. 29	94	174	JAN.	12	378	235
NOV. 30	451	388	JAN	13	699	370
DEC. 1	110	100	JAN.	14	4340	1380
DEC. 2	318	264	JAN.	15	5830	2820
OEC. 3	3890	1410		16	2090	870
DEC. 4	1120	880		17	1330	680
DEC. 5	2500	1300		18	819	570
DEC. 6	626	316		19	528	358
DEC. 7	2090	1230				
DEC. 8	384	264		20	328	220
DEC. 9	192	148		21	224	160
OEC. 10	57	63		22	182	140
DEC. 11	42	40		23	142	125
000 11	42	40	JAN.	24	112	110
DEC. 12	29	28	JAN.	25	95	120
DEC. 13	24	24		26	77	72
DEC. 14	25	20		27	70	73
DEC. 15	13	14		28	60	67
DEC. 16	12	11		29	827	445
DEC. 17	8	7	JAN.	30	1410	745
DEC. 18	276	276		31	572	370
DEC. 19	162	200	FEB.	1	327	215
DEC. 20	65	63	FEB.	2	2180	1030
DEC. 21	27	34	FEB.	3	2040	920
0000 0100000000000000000000000000000000	2.	34				

11475000 EEL RIVER AT FORT SEWARD, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	SEDIMENT (MG/L)	TURBIDITY (MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
FEB. 4	884	430	APR. 5	27	40
FEB. 5	572	315	APR. 6	37	45
			APR. 7	19	33
FE8. 6	474	275	APR. 9	23	20
FEB. 7	418	285	APR. 11	20	22
FE8. 8	326	240			
FE8. 9	259	325	APR. 13	31 16	22 20
FEB. 10	238	165	APR. 15	13	10
FE8. 11	192	155	APR. 17	22	13
FEB. 12	150	135	APR. 19		
FE8. 13	129	115	APR. 21	13	11
			APR. 24	13	10
FEB. 14	114	100	APR. 28	8	2
FEB. 15	100	92	APR. 30	8	3
FEB. 16	98	90	MAY 5	8	3
FER. 17	448	240	MAY 8	5	3
FE8. 18	913	405			
			MAY 12	3	1
FEB. 19	1380	410	MAY 15	3	2
FEB. 20	3420	1200	MAY 19	3	1
FEB. 21	2740	1100	MAY 22	13	13
FEB. 22	1710	800	MAY 26	3	1
FE8. 23	1780	640			
			MAY 30	2	1
FE8. 24	1400	650	JUNE 2	2	1
FEB. 25	960	5 0 0	JUNE 5	2	1
FEB. 26	660	345	JUNE 6	3	1
FEB. 27	496	290	JUNE 9	1	1
FEB. 28	379	260			
			JUNE 13	l	1
FE8. 29	265	210	JUNE 17	1	1
MAR. 1	219	180	JUNE 20	i	ī
MAR. 2	178	130	JUNE 24	i	i
MAR. 3	158	130	JUNE 27	1	i
MAR. 4	114	115	JUNE 21	•	•
			JUNE 30	1	1
MAR. 5	106	90	JULY 3	2	ī
MAR. 6	94	88	JULY 7	ī	1
MAR. 7	78	77	JULY 10	ĩ	ī
MAR. 8	68	61	JULY 14	ī	1
MAR. 9	56	57			_
			JULY 22	1	1
MAR. 10	42	45	JULY 25	1	1
MAR. 11	35	39	JULY 28	1	1
MAR. 12	538	350	JULY 31	1	1
MAR. 13	B27	137	AUG. 4	1	1
MAR. 14	92B	360	**** 3	1	1
			AUG. 7		
MAR. 15	384	235	AUG. 10	1	3
MAR. 16	1980	610	AUG. 13	1	2
MAR. 17	854	410	AUG. 17	2	2
MAR. 18	448	265	AUG. 20	2	2
MAR. 19	277	205	4116 21	83	82
			AUG. 21	83 19	20
MAR. 20	188	115	AUG. 22	19	20 35
MAR. 21	148	100	AUG. 23	14	
MAR. 22	120	90	AUG. 26		3 2
MAR. 23	104	85	AUG. 27	2	2
MAR. 24	88	72	4110 21	1	2
			AUG. 31 SEPT. 3	2	2
MAR. 25	127	93	SEPT. 6	1	2
MAR. 26	252	205	SEPI . 0	í	í
MAR. 27	111	74	SEPT. 9	1	2
MAR. 28	86	79	SEPT. 13	1	2
MAR. 30	92	80	SEPT. 17	1	1
			SEPT. 20	3	2
MAR. 31	86	80	SEPT. 23	1	1
APR. 1	80	68	SEPT. 27	2	i
APR. 2	53	56			2
	53 42 34	56 9 30	SEPT. 30	1	2

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11475250 EEL RIVER AT SOUTH FORK, CALIF. (Formerly published as Eel River at McCann, Calif.)

LOCATION, -- Lat 40°21'04", long 123°54'48", in SERNEY sec.26, 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 1968,

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. Prior to October 1967, samples collected 5.5 miles upstream. Records of daily discharge are given for station 11475000 Eel River at Fort Seward.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SOD IUM (AN)	PO- TAS- SIUM (K)	BICAR- BONATE (HCD3)	CAR- BONATE (CO3)	SULFATE (SN4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
CCT.							_				
04 NOV.	310			8 • 4		146	0		6.7		•12
C8	88			9.0		156	0		8.8		.21
06 JAN.	7000			4.3		65	0		3.5		•15
10 FEB.	28600			4.1		54	0		3.0		-28
C7	10100			3.2		73	0		1.6		.09
06 APR.	4000			3.9		84	0				•09
03 MAY	2990			3.8		84	0		2.8		.19
08 JUNE	720	30	5.8	8.3	1.0	100	4	15	7.4	• 0	.07
05 JULY	369			6.1		122	0		3.3		.13
10 AUG.	81			6.4		147	0		4.6		-21
C7 SEPT.	44			9.2		162	0		5.6		.15
11	58	43	14	9.8	1.6	158	0	38	7.4	•0	•12
	DIS-			DIS-				SPECI-			
CATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATID	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICPO- MHOS)	РН	TEM- PERA- TURE (DFG C)	DIS- SOLVED OXYGEN
CATE CCT.	SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOL VED SOLIDS (TONS PER	SUDIUM	AD- SORP- TION RATID	LINITY AS CACO3	FIC COND- UCTANCE (MICPO- MHOS)		PERA- TURE (DFG C)	SOLVED OXYGEN
	SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOL VED SOLIDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICPO-	PH 8 • 2	PERA- TURE (DEG C)	SOLVED OXYGEN
04 04 NOV. 08	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOL VED SOLIDS (TONS PER AC-FT)	SUDIUM	AD- SORP- TION RATID	LINITY AS CACO3	FIC COND- UCTANCE (MICPO- MHOS)		PERA- TURE (DFG C)	SOLVED OXYGEN
CCT. 04 NOV. C8 DEC.	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	\$001UM	AD- SORP- TION RATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICPO- MHOS)	8.2	PERA- TURE (DEG C)	SOLVED OXYGEN
CCT. 04 NGV. C8 DEC. 06 JAN.	SOL VED SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 146 162	CAR- BONATE HARD- NESS 26 34	SOLVED SOLIDS (TONS PER AC-FT)	\$001UM 11 11	AD- SORP- TION RATID	LINITY AS CACO3 120	FIC COND- UCTANCE (MICPO- MHOS) 321 373	8.2	PERA- TURE (DEG C)	SOLVED OXYGEN 9.1 9.2
CCT. 04 NOV. C8 DEC. 06 JAN. 10 FER.	SOL VED SOL IDS (RESI- DUC AT 180 C)	NESS (CA,MG) 146 162 63	CAR- BONATE HARD- NESS 26 34	SOL VED SOL IDS (TONS PER AC-FT)	11 11 13	SORP- TION RATID	LINITY AS CACO3 120 128 53	FIC COND- UCTANCE (MICPO- MHOS) 321 373	8.2 8.2 8.1	PERATURE (DEG C)	9.1 9.2
CCT. 04 NDV. C8 DEC. 06 JAN. 10 FER. 07 MAR.	SOLVED SOLIDS (RESI- DUC AT 180 C)	NESS (CA,MG) 146 162 63 63	CAR- BONATE HARD- NESS 26 34 10	SOL VED SOL IDS (TONS PER AC-FT)	11 11 13 12	AD- SORP- TION RATIO -3 -3 -2	LINITY AS CACO3 120 128 53 52	FIC COND- UCTANCE (MICPO- MHOS) 321 373 14.	8.2 8.2 8.1	PERATURE (DFG C) 16 17 7	9.1 9.2 11.9
CCT. 04 NOV. C8 DEC. 06 JAN. 10 FER. 07 MAR. 06 APR.	SOLVED SOLIDS (KESI- DUE AT 180 C)	NESS (CA+MG) 146 162 63 63	CAR- BONATE HARD- NESS 26 34 10	SOL VED SOLIDS (TONS PER AC-FT)	\$001UM 11 11 13 12	AD- SORP- TION RATID .3 .3 .2 .2 .2	LINITY AS CACO3 120 128 53 52 60	FIC COND- UCTANCE (MICPO- MHOS) 321 373 14. 119	8.2 8.2 8.1 7.8 8.2	PERA- TURE (DFG C) 16 17 7 7	9.1 9.2 11.9 12.1
CCT. 04 NOV. CB DEC. 06 JAN. 10 FER. 07 MAR. 06 APR. 03 MAY 08	SOLVED SOLIDS (KESI- DUE AT 180 C)	NESS (CA.MG) 146 162 63 63 63	CAR-BONATE HARD-NESS 26 34 10 10 3	SOL VED SOLIDS (TONS PER AC-FT)	\$001UM 11 11 13 12 10	AD- SORP- TION RATIO .3 .3 .2 .2 .2	120 128 53 52 60	FIC COND- UCTANCE (MICPO- MHOS) 321 373 14. 119 142	8.2 8.2 8.1 7.8 8.2 9.1	PERA- TURE (DFG C) 16 17 7 7	9.1 9.2 11.9 12.1 11.8
CCT. 04 NGV. C8 DEC. 06 JAN. 10 FER. 07 MAR. 06 APR. 03 MAY 08 JUNE	SOL VED SOL IDS (NESI- DUC AT 180 C)	NESS (CA.MG) 146 162 63 63 63 81	CAR-BONATE HARD-NESS 26 34 10 10 3 12	SOL VFD SOL IDS (TONS PER AC-FT)	\$001UM 11 11 13 12 10 9	AD- SORP- TION RATIO -3 -3 -2 -2 -2 -2	120 128 53 52 60 69	FIC COND- UCTANCE (MICPO- MHOS) 321 373 14. 119 142 170	8.2 8.2 8.1 7.8 8.2 9.1	PERA- TURE (DFG C) 16 17 7 8 11	9.1 9.2 11.8 12.1 11.8 11.0
CCT. 04 NOV. C8 DEC. 06 JAN. 10 FER. 07 MAR. 08 JUNE 055 JULY	SOL VED SOL IDS (RESI-DUE AT 180 C)	NESS (CA,MG) 146 162 63 63 63 81 78	CAR- BONATE HARD- NESS 26 34 10 10 3 12 9 10	SQL VFD SQL IDS (TONS PER AC-FT)	\$NDIUM 11 13 12 10 9 10	3 .3 .2 .2 .2 .2 .2 .2 .4	LINITY AS CACO3 120 128 53 52 60 69 69 89	FIL COND. CO	8.2 8.1 7.8 8.2 9.1 8.1	PERA- TURE (DFG C) 16 17 7 7 8 11 12	9.1 9.2 11.9 12.1 11.8 11.0
CCT. 04 NGV. C8 DEC. 06 JAN. 10 FER. 07 MAR. 08 09 JUNE 05 JUNE	SOL VED SOL IDS (RESIT DUE AT 190 C)	NESS (CA.MG) 146 162 63 63 63 81 78 99 113	CAR- BONATE HARD- NESS 26 34 10 10 3 12 9 10	SOL VED SOL IDS SOL IDS SOL IDS SOL IDS (TONS PER AC-FT)	SODIUM 11 11 13 12 10 9 10 15 11	3 .3 .2 .2 .2 .2 .2 .2 .2 .2 .2	LINITY AS CACO3 120 128 53 52 60 69 69 89	FIT COND- COND- UCTANGE (MICPO- MHOS) 321 373 14. 119 142 170 217 249	8.2 8.2 8.1 7.8 8.2 9.1 8.5	PERA- TURE (DFG C) 16 17 7 8 11 12 17	9.1 9.2 11.9 12.1 11.8 11.0

ERI. RIVER BASIN 292

11475500 SOUTH FORK REL RIVER NEAR BRANSCOMB, CALIF.

LOCATION -- Lat 39°43'09", long 123°39'06", in NW 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 1968, Sediment records: October 1962 to September 1968.

NOVEMBER

EXTREMES. -- 1967-68:

Water temperatures: Maximum, 26.0°C Aug. 2, 3, 7, 8; minimum, 7.0°C on many days during December to Febru-

ary.

Sediment concentrations: Maximum daily, 750 mg/l Jan, 15; minimum daily, 1 mg/l on many days.

Sediment discharge: Maximum daily, 3,630 tons Jan. 15; minimum daily, 0.01 ton on several days during October and September.

Period of record:

OCTOBER

DECEMBER

Priod or record:

Water temperatures: Maximum (1960-61, 1962-68), 28.0°C Aug. 7, 1961; minimum (1961-65, 1966-68), 3.0°C

Nov. 17, 18, 1961.

Sediment concentrations: Maximum daily, 4,900 mg/l (estimated) Dec. 22, 1964; minimum daily, 1 mg/l on many days during 1963-68.

Sediment discharge: Maximum daily, 230,000 tons (estimated) Dec. 22, 1964; minimum daily, 0 ton on many days in 1964-65, 1967.

TEMPERATURE ("C) OF WATER,	WATER YEAR OCTOBER	1967 TO SEPTEMBER 1968
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JANUARY

FEBRUARY

MARCH

	OC.	TOBER	NOV:	EMBER	DEC	EMBER	JAI	NUARY	FEBR	RUARY	M.	ARCH .
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	14.0	11.0	11.0	11.0	11.0	7.0	7-0	7.0	7.0	9.0	9.0
2	14.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
3	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
4	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
5	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
6	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
7	13.0	13.0	11.0	11.0	11.0	10.0	7.0	7.0	7.0	7.0	9.0	9.0
8	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
9	13.0	12.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7-0	9.0	9.0
10	14.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
11	14.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
12	14.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	7.0	9.0	9.0
13	13.0	13.0	11.0	11.0	11.0	11.0	7.0	7.0	9.0	7.0	9.0	9.0
14	13.0	12.0	11.0	11.0	11.0	10.0	7.0	7.0	9.0	9.0	9.0	9.0
îś	12.0	12.0	11.0	11.0	10.0	10.0	7.0	7.0	9.0	9.0	9.0	9.0
										,,,,		,,,,
16	12.0	11.0	11.0	11.0	10.0	10.0	7.0	7.0	9.0	9.0	9.0	9.0
17	11.0	11.0	11.0	11.0	10.0	10.0	7.0	7.0	9.0	9.0	9.0	9.0
18	11.0	11.0	11.0	11.0	10.0	9.0	7.0	7-0	9.0	9.0	9.0	9.0
19	12.0	11.0	11.0	11.0	9.0	9.0	7.0	7.0	9.0	9.0	9.0	9.0
20	12.0	11.0	11.0	11.0	9.0	9.0	7.0	7.0	9.0	9.0	9.0	8.0
					7.0	,	,		,	,	,	0.0
21	11.0	11.0	11.0	11.0	9.0	9.0	7-0	7.0	9.0	9.0	9.0	9.0
22	11.0	11.0	11.0	11.0	9.0	8.0	7.0	7.0	9.0	9.0	9.0	9.0
23	12.0	11.0	11.0	11.0	8.0	8.0	7.0	7.0	9.0	9.0	9.0	8.0
24	12.0	12.0	11.0	11.0	8.0	8.0	7.0	7.0	9.0	9.0	8.0	8.0
25	12.0	12.0	11.0	11.0	8.0	8.0		7.0	9.0	9.0	8.0	8.0
25	12.0	12.0	11.0	11.0	0.0	8.0	7.0	7.0	9.0	9.0	8.0	0.0
26	12.0	12.0	11.0	11.0	8.0	8.0	7.0	7.0	9.0	• •	8.0	8.0
27	12.0	12.0	11.0	11.0	8.0	8.0	7-0			9.0	8.0	
				11.0			7.0	7.0	9.0	9.0		8.0
28	12.0	12.0	11.0	11.0	8.0	8.0	7.0	7.0	9.0	9.0	9.0	8.0
29	12.0	11.0	11.0	11.0	8.0	8.0	7.0	7.0	9.0	9.0	9.0	9.0
30	11.0	11.0	11.0	11.0	8.0	7.0	7.0	7.0			9.0	9+0
31	11.0	11.0			7.0	7.0	7.0	7.0			9.0	9.0
HONTH	16.0	11.0	11.0	11.0	11.0	7.0	7.0	7.0	9.0	7.0	9.0	8.0
			_									
		PRIL		HAY		JNE	JU	JL Y	AUG	SUS T	SEPI	EMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	9.0	18.0	17.0	18.0	17.0	21.0	16.0	24.0	21.0	25.0	22.0
ž	9.0	9.0	18.0	17.0	18.0	18.0	21.0	17.0	26.0	21.0	24.0	21.0
3	9.0	9.0	17.0	14.0	18.0	17.0	22.0	17.0	26.0	21.0	24.0	21.0
4	9.0	9.0	16.0	14.0	17.0	16.0	23.0	18.0	25.0	21.0	23.0	21.0
Š	9.0		16.0	14.0	17.0	15.0	24.0	18.0	24.0	20.0	24.0	21.0
-				1,00			2.40	.,		2040	2	
		9.0										
				13.0	15.0	14.0	24-0	19.0	25-0	20-0	22-0	21.0
6	9.0	9.0	14.0	13.0 13.0	15.0 16.0	14.0 14.0	24.0	19.0	25.0	20.0	22.0	21.0
7	9.0 9.0	9.0 9.0	14.0 14.0	13.0	16.0	14.0	24.0	18.0	26.0	21.0	23.0	21.0
	9.0 9.0 11.0	9.0 9.0 9.0	14.0 14.0 14.0	13.0 13.0	16.0 17.0	14.0 15.0	24.0 23.0	18.0 18.0	26.0 26.0	21.0 23.0	23.0 22.0	21.0 20.0
7 8 9	9.0 9.0 11.0 12.0	9.0 9.0 9.0 10.0	14.0 14.0 14.0 15.0	13.0 13.0 14.0	16.0 17.0 17.0	14.0 15.0 15.0	24.0 23.0 22.0	18.0 18.0 17.0	26.0 26.0 25.0	21.0 23.0 21.0	23.0 22.0 21.0	21.0 20.0 20.0
7 8	9.0 9.0 11.0	9.0 9.0 9.0	14.0 14.0 14.0	13.0 13.0	16.0 17.0	14.0 15.0	24.0 23.0	18.0 18.0	26.0 26.0	21.0 23.0	23.0 22.0	21.0 20.0
7 8 9 10	9.0 9.0 11.0 12.0 12.0	9.0 9.0 9.0 10.0 12.0	14.0 14.0 14.0 15.0 15.0	13.0 13.0 14.0 14.0	16.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0	24.0 23.0 22.0 22.0	18.0 18.0 17.0 17.0	26.0 26.0 25.0 24.0	21.0 23.0 21.0 21.0	23.0 22.0 21.0 21.0	21.0 20.0 20.0 19.0
7 8 9 10	9.0 9.0 11.0 12.0 12.0	9.0 9.0 9.0 10.0 12.0	14.0 14.0 14.0 15.0 15.0	13.0 13.0 14.0 14.0	16.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0	24.0 23.0 22.0 22.0	18.0 18.0 17.0 17.0	26.0 26.0 25.0 24.0	21.0 23.0 21.0 21.0	23.0 22.0 21.0 21.0	21.0 20.0 20.0 19.0
7 8 9 10 11	9.0 9.0 11.0 12.0 12.0	9.0 9.0 9.0 10.0 12.0	14.0 14.0 14.0 15.0 15.0	13.0 13.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0	14.0 15.0 15.0 15.0 16.0 16.0	24.0 23.0 22.0 22.0 22.0 20.0	18.0 18.0 17.0 17.0 19.0	26.0 26.0 25.0 24.0 25.0 24.0	21.0 23.0 21.0 21.0 21.0	23.0 22.0 21.0 21.0 21.0	21.0 20.0 20.0 19.0
7 8 9 10 11 12 13	9.0 9.0 11.0 12.0 12.0 13.0	9.0 9.0 9.0 10.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0	13.0 13.0 14.0 14.0 14.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0	14.0 15.0 15.0 15.0 16.0 16.0 14.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0	18.0 18.0 17.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 26.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0
7 8 9 10 11 12 13 14	9.0 9.0 11.0 12.0 12.0 13.0 13.0	9.0 9.0 9.0 10.0 12.0 13.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 14.0 13.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0	18.0 18.0 17.0 17.0 19.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0	23.0 22.0 21.0 21.0 21.0 21.0 22.0 21.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0
7 8 9 10 11 12 13	9.0 9.0 11.0 12.0 12.0 13.0	9.0 9.0 9.0 10.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0	13.0 13.0 14.0 14.0 14.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0	14.0 15.0 15.0 15.0 16.0 16.0 14.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0	18.0 18.0 17.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 26.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0
7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 14.0 13.0 13.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0 14.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0	18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0
7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0	9.0 9.0 9.0 10.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 14.0 13.0 13.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0 14.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0	18.0 18.0 17.0 17.0 19.0 17.0 16.0 15.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0
7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 12.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0	13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0	18.0 18.0 17.0 17.0 17.0 19.0 17.0 16.0 15.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0
7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 12.0 13.0 13.0 13.0 13.0	9.0 9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0	13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0 14.0 16.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 20.0	18.0 18.0 17.0 17.0 19.0 17.0 17.0 15.0 15.0 15.0 16.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0
7 8 9 10 11 12 13 14 15 16 17 18	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0 22.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0 14.0 16.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 15.0	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 22.0 22	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0
7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 12.0 13.0 13.0 13.0 13.0 12.0	9.0 9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0	13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0	14.0 15.0 15.0 15.0 16.0 15.0 14.0 14.0 16.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 20.0	18.0 18.0 17.0 17.0 19.0 17.0 17.0 15.0 15.0 15.0 16.0	26.0 26.0 25.0 24.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 10.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 14.0 13.0 13.0 13.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0 22.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 19.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 20.0 21.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 20	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 20.0 22.0 20.0	21.0 20.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0 22.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 19.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0	26.0 25.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 21	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 22.0 22	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 15.0 15.0 14.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 19.0 23.0 21.0 22.0 22.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 17.0 17.0 16.0 17.0	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 19.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 20.0 21.0 20.0 19.0	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 19.0 18.0 18.0 18.0 17.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 22.0 22.0 22.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 21.0 21.0 19.0 21.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 22.0 22	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 15.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 17.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 17.0 17.0 17.0 17.0	26.0 25.0 24.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 22.0 20.0 19.0	21.0 20.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0	13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 16.0 17.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 19.0 18.0 18.0 18.0 17.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 22.0 22.0 22.0 22.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 22.0 21.0 21.0 19.0 21.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 22.0 22	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 15.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	14.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 20.0 22.0 21.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 22.0 20.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 15.0 14.0 13.0 13.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 24.0	15.0 15.0 15.0 15.0 16.0 15.0 14.0 16.0 18.0 18.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 20.0 22.0 22.0 22.0 22.0 22.0 22.0 2	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0 21.0 20.0 20	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 20.0 22.0 20.0 19.0 18.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 20 21 22 23 24 25 26 27	9.0 9.0 9.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	16.0 17.0 17.0 17.0 17.0 17.0 16.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 24.0 23.0 23.0	14.0 15.0 15.0 15.0 16.0 16.0 14.0 16.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 23.0 22.0 22.0 20.0 19.0 19.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 20	23.0 22.0 21.0 21.0 21.0 22.0 21.0 22.0 21.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 11.0 11.0 12.0 21.0 21.0 22.0 22.0 22	14.0 15.0 15.0 16.0 15.0 14.0 14.0 16.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0	24.0 23.0 22.0 22.0 20.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	18.0 18.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0 20.0 21.0 20.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 20.0 22.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	9.0 9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 17.0 16.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 23.0 22.0 22.0 20.0 19.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 21	23.0 22.0 21.0 21.0 21.0 22.0 21.0 21.0 20.0 21.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 11.0 11.0 12.0 21.0 21.0 22.0 22.0 22	14.0 15.0 15.0 16.0 15.0 14.0 14.0 16.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0	24.0 23.0 22.0 22.0 22.0 22.0 29.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 21.0 21.0 22.0 21.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 20.0 21.0 20.0 22.0 22.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
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	9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 14.0 15.0 16.0 17	14.0 14.0 15.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 11.0 21.0 22.0 22.0 22.0 22.0 22.0 22	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 26.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 21	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	9.0 9.0 9.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0 17	14.0 14.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 17.0 16.0 19.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	24.0 23.0 22.0 22.0 22.0 22.0 29.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 25.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 21.0 21.0 22.0 21.0 22.0	21.0 23.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	23.0 22.0 21.0 21.0 21.0 22.0 21.0 21.0 20.0 21.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 26 27 28 29 30 19 19 19 19 19 19 19 19 19 19 19 19 19	9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 13.0 14.0 15.0 17.	9.0 9.0 10.0 12.0 13.0 14.0 15.0 16.0 17.0	14.0 14.0 15.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 11.0 21.0 22.0 22.0 22.0 22.0 22.0 22	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 26.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 21	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0
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	9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	9.0 9.0 10.0 12.0 13.0 14.0 15.0 16.0 17	14.0 14.0 15.0 15.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 19.0 21.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0	14.0 15.0 15.0 15.0 16.0 14.0 14.0 16.0 18.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0	24.0 23.0 22.0 22.0 22.0 20.0 19.0 19.0 19.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22	18.0 18.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	26.0 26.0 25.0 24.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0 22.0 23.0 24.0 24.0 25.0 26.0	21.0 23.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 21	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 20.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0

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11475500 SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	51	OCTOBER	SEDIMENT DISC	,	NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	1.5 28 25 12 21	2 65 18 6 93	.01 8.8 1.2 .19 5.3	B.7 7.7 7.7 7.3 7.7	6 5 4 3	•14 •12 •10 •08 •06	108 180 787 804 857	52 90 259 191 212	15 101 577 695 550
6 7 8 9 10	13 9.6 7.8 6.9 6.6	15 4 3 3 3	•53 •10 •06 •06	7.7 7.0 11 13	2 1 6 7 8	.04 .02 .18 .25	432 708 409 274 198	46 161 32 22 12	57 343 35 16 6.4
11 12 13 14 15	6.6 6.3 5.9 5.5 5.5	3 3 3 3	.05 .05 .05 .04	9.6 8.9 9.2 87 37	10 9 10 224 52	•26 •22 •26 60 5•2	155 122 101 86 77	7 7 6 6 5	2.9 2.3 1.6 1.4 1.0
16 17 18 19 20	5.5 5.2 4.8 4.8	3 3 3 3	.04 .04 .04 .04	24 19 16 14 13	24 13 7 5 6	1.6 .67 .30 .19	68 75 295 200 160	5 19 138 9 8	.92 4.8 120 4.9 3.5
21 22 23 24 25	19 26 16 13	11 5 3 3	.87 .35 .13 .11	12 11 11 10	7 6 6 7 8	.23 .18 .18 .19	134 116 103 95 90	7 6 6 5 5	2.5 1.9 1.7 1.3 1.2
26 27 28 29 30 31	10 9.6 11 11 9.6 9.1	3 5 5 5 5	.08 .08 .15 .15 .13	9.6 10 12 131 158	8 8 6 156 108	•21 •22 •19 80 46	82 75 68 62 58 53	6 5 5 5 5	1.3 1.2 .92 .84 .78
TOTAL	331.6		18.99	701.1		197.76	7032		2553.08
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	JANUARY MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	FEBRUARY MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3	DI SCHARGE (CFS) 50 47 44 41	MEAN CONCEN- TRATION (MG/L) 5 4 3 2	DISCHARGE (TONS/DAY) -68 -51 -36 -22	MEAN DISCHARGE (CFS) 436 875 910 631	MEAN CONCEN- TRATION (MG/L) 25 179 160 50	DISCHARGE (TONS/DAY) 31 460 393 85	DISCHARGE (CFS) 190 166 145 131	MEAN CONCEN- TRATION (MG/L) 6 7 8 9	DI SCHARGE (TONS/DAY) 3-1 3-1 3-1 3-2
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 50 47 44 41 38 37 36 38 265	MEAN CONCEN- TRATION (MG/L) 5 4 3 2 2 2	DISCHARGE (TONS/DAY) .68 .51 .36 .22 .21 .30 .39 .41	MEAN DISCHARGE (CFS) 436 875 910 631 464 359 287 237 202	MEAN CONCEN- TRATION (MG/L) 25 179 160 50 14	DISCHARGE (TONS/DAY) 31 460 393 85 18 9.7 6.2 3.8 2.7	DISCHARGE (CFS) 190 166 145 131 148 123 114 104	MEAN CONCEN- TRATION (MG/L) 6 7 8 9 32	DISCHARGE (TONS/DAY) 3-1 3-1 3-2 13 4-0 2-8 2-0 1-0
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 50 47 44 41 38 37 36 38 265 1150 508 341 320 1100	MEAN CONCENTRATION (MG/L) 5 4 3 2 2 2 2 3 4 4 135 374 120 70 45 586	DISCHARGE (TONS/DAY) .68 .51 .36 .22 .21 .30 .39 .41 361 1350	MEAN DISCHARGE (CFS) 436 875 910 631 464 359 287 202 177 154 136 122	MEAN CONCENTRATION (MG/L) 25 179 160 50 14 10 8 6 5 4 3 3 2 2	DISCHARGE (TONS/DAY) 31 460 393 85 18 9.7 6.2 3.8 2.7 1.9 1.2 1.1 .66	DISCHARGE (CFS) 190 166 145 131 148 123 114 104 95 88 82 283 306 476	MEAN CONCENTRATION (MG/L) 6 7 8 9 32 12 9 7 4 4 2 1 30 21 65	DISCHARGE (TONS/DAY) 3-1 3-1 3-1 3-2 13 4-0 2-8 2-0 -48 -22 34 17 88
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 50 47 44 41 38 37 36 38 205 1150 508 341 320 1160 990 645 469 356	MEAN CONCENTRATION (MG/L) 5 4 3 2 2 2 2 3 4 4 4 4 135 374 120 70 45 586 750	DISCHARGE (TONS/DAY) -64 -51 -36 -22 -21 -30 -39 -31 361 1350 165 64 -39 -2210 3630 454 454 35 155	MEAN DISCHARGE (CFS) 436 875 910 631 464 359 287 237 202 177 154 136 122 111 101 100 102 604	MEAN CONCENTRATION (MG/L) 25 179 160 50 14 10 8 6 5 4 3 3 2 2 2 2 2 2 18	DISCHARGE (TONS/DAY) 31 460 393 85 18 9.7 6.2 3.8 2.7 1.9 1.2 1.1 66 60 55 88	DISCHARGE (CFS) 190 166 145 131 148 123 114 104 95 88 82 283 306 476 440 658 559 457 367	MEAN CONCENTATION (MG/L) 6 7 8 9 9 32 12 9 7 4 2 1 30 20 21 65 20 95 26 14	DISCHARGE (TONS/DAY) 3-1 3-1 3-1 3-2 13 4-0 2-8 2-0 1-0 4-8 2-2 3-4 181 88 2-4
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 324	DISCHARGE (CFS) 50 47 44 41 38 37 36 38 265 1150 508 341 320 11600 665 469 356 277 226 187 159 137	MEAN CONCENTRATION (MG/L) 5 4 3 2 2 2 3 4 4 4 4 4 135 374 120 70 70 70 70 70 70 70 70 70 70 70 70 70	DISCHARGE (TONS/DAY) .69 .51 .30 .39 .31 .41 .350 .66 .49 .22 .210 .30 .39 .31 .51 .55 .66 .64 .39 .210 .3630 .65 .66 .64 .75 .75 .75 .75 .75 .75 .75 .75 .75 .75	MEAN DISCHARGE (CFS) 436 875 910 631 464 359 287 237 202 177 154 136 122 111 101 120 102 604 935 1150 995 920 686	MEAN CONCENTRATION (MG/L) 25 179 160 50 14 10 8 6 5 4 12 2 2 2 2 185 232 185 232 135 118 48	DISCHARGE (TONS/DAY) 31 460 393 85 18 9.7 6.2 3.8 2.7 1.9 1.2 1.1 66 60 55 860 467 752 363 293	DISCHARGE (CFS) 190 166 145 131 148 123 114 104 95 88 82 283 306 476 440 658 658 658 658 658 658 477 367 295	MEAN CONCENTRATION (MG/L) 6 7 8 9 9 32 12 9 7 4 4 2 1 30 20 21 65 7 20 95 26 14 11 9	DISCHARGE (TONS/DAY) 3-1 3-1 3-1 3-2 13 4-0 2-8 2-0 1-0 48 2-2 3-4 17 88 2-4 181 3-9 17 11 7-2 5-3 4-6 3-6 1-7

11475500 SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF .-- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MAY HUNE APRIL MEAN CONCEN-TRATION (MG/L) MEAN MEAN MEAN DISCHARGE (CFS) CONCEN- SEDIMENT TRATION DISCHARGE (MG/L) (TONS/DAY) MEAN DISCHARGE (CFS) CONCEN- SEDIMENT TRATION DISCHARGE (MG/L) (TONS/DAY) MEAN DISCHARGE SEDIMENT DISCHARGE (TONS/DAY) (CFS) DAY 107 98 86 84 79 .87 .79 .70 .68 .15 .07 .07 .07 •05 •05 •05 •14 •14 28 27 25 25 25 2 1 1 1 17 17 18 17 12345 33333 .80 .57 .36 .13 .13 .12 .12 ·14 ·13 74 70 67 62 59 43225 24 24 23 23 23 2 2 2 17 16 15 14 14 3 3 3 2 6 7 8 9 •12 •11 •08 10 .63 .45 .42 .41 .12 .12 .23 .54 .08 .07 .07 .11 58 55 52 50 49 2 2 3 8 6 2 2 3 4 11 12 13 14 15 43333 23 22 28 25 25 14 13 13 13 .37 .36 .23 .22 3 1 1 2 10 .17 .06 .05 .13 12 11 11 9.6 9.7 .16 .15 .18 .16 5 5 6 6 7 16 17 18 19 20 46 44 42 41 40 3 2 2 2 2 21 21 20 24 42 .21 .20 .28 .38 •23 •22 •15 •09 9.5 8.2 9.1 .43 .30 9 10 2 2 3 4 4 5 4 2 1 21 22 23 24 25 38 37 35 35 34 32 28 24 23 34 .06 .30 .06 .06 .05 .10 .06 .06 .04 .04 .26 .26 .26 .25 7.7 7.0 32 32 32 31 30 3 3 3 2 28 24 22 20 19 18 411122 26 27 28 29 30 31 6.6 1599 12.88 TOTAL 767 5.61 357.9 3.20

		JULY			AUGUST		SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.5	2	•04	2.4	6	•04	6.9	2	• 04
2	5.9	2	.03	2.3	8	-05	6.2	2	-03
3	6.4	2	.03	2.2	8	.05	6.0	2	.03
4	6.0	2	.03	2.2	10	•06	5.9	2	•03
5	5.8	2	.03	2.2	8	• 05	5.9	2	.03
6	5.5	2	.03	2.2	8	.05	5.8	2	•03
7	4.8	3	•04	1.9	7	•04	5.8	2	•03
8	4.5	3	.04	1.8	6	•03	5.6	2	.03
9	4.3	4	•05	1.7	6	•03	5.7	3	.05
10	4.3	3	.03	1.7	8	•04	5.5	3	.04
11	4.2	3	.03	1.7	9	.04	5.3	3	•04
12	4.2	2	•02	1.7	8	.04	5.3	3	•04
13	4.2	2	•02	1.7	7	.03	5.4	3	. 04
14	4.3	2	•02	1.6	6	.03	8.2	3	.07
15	4.2	2	.02	1.7	6	.03	6.8	3	.06
16	4.0	2	.02	1.7	5	•02	6.0	3	.05
17	4.0	2	•02	1.7	5	•02	5.5	3	.04
18	3.8	2	.02	1.6	5	•02	5.3	2	.03
19	3.5	2	•02	3.1	5	•04	4.8	2	.03
20	3.4	2	•02	23	29	2.9	4.8	2	.03
21	3.4	2	•02	51	301	46	4.5	1	•01
22	3.3	2	•02	21	48	2.7	4+5	1	•01
23	3.1	2	.02	13	7	. 25	4.7	1	•01
24	2 • 8	2	.02	10	4	-11	4.5	1	•01
25	2.6	3	•02	9.8	2	.05	4.1	1	•01
26	2.7	4	.03	17	8	.37	4.1	2	•D2
27	2.4	6	.04	13	5	-18	3.9	2	•02
28	2.5	6	•04	11	3	.09	3.9	2	• 02
29	2.5	6	.04	9.0	2	•05	3.9	2	•02
30	2.4	6	•04	8.0	2	•04	3.9	2	• 02
31	2.4	6	.04	7.2	2	•04			
TOTAL	123.9		.89	230.1		53.49	158.7		• 92

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

42400.3 16333.74

11475500 SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF .-- Continued

	11475500	SOUTH FORK EEL RIVER	NEAR BRANSCOMB, CALIF COI	CIndea	
PERIODIC DETERMINATIONS	OF SUSPENDED-	SEDIMENT CONCENTRATIO	N AND TURBIDITY, WATER YEAR	OCTOBER 1967 TO	SEPTEMBER 1968
	CONCENTRATION OF SUSPENDED			CONCENTRATION OF SUSPENDED	
	SEDIMENT	YTIGIGAUT		SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
DATE OF COLCECTION	11107 27	(1107 2 3121 0117	2		
OCT. 2, 1967	106	104	MAR. 17	20	27
OCT. 5	59	108	MAR. 18	16	20
OCT. 16	3	1	MAR. 19	10	.9
OCT. 21	26	23	MAR. 20 MAR. 21	8 8	10 6
OCT. 25	3	2	MAR. 21	8	•
OCT. 28	6	4	MAR. 22	10	8
NOV. 2	6	2	MAR. 23	6	11
NOV. 7	1	1	MAR. 25	47	83
NOV. 9	6	2	MAR. 26 MAR. 27	5	10
NOV. 10	9	7	MAR. 27	4	5
NOV 11	10	6	M40 20	5	5
NOV. 11	8	3	MAR. 28 MAR. 29	ś	5
NOV. 14	382	630	MAR. 31	3	ž
NOV. 17	11	4	MAR. 31	3	5
NOV. 18	6	3	APR. 4	3	2
					_
NOV. 19	5	1	APR. 6	4	2 1
NOV. 20	6	2 1	APR. 8	2 5	3
NOV. 22 NOV. 24	7	2	APR. 10	3	2
NOV. 27	ż	4	APR. 16	3	1
	·				
NOV. 30	110	115	APR. 21.,	2	1
DEC. 2	42	44	APR. 24	4	2 1
DEC. 3	317 263	245	APR. 24APR. 26APR. 28	3	2
DEC. 5	263 193	185 135	APR. 30	2	ī
DEC. 3	173	133		_	
DEC. 6	24	20	MAY 3	1	1
DEC. 7	157	149	MAY 6	2	1
DEC. 9	17	17	MAY 8	2 2	1
DEC. 11	7	5	MAY 10	2	ō
DEC. 15	5	3	MAT 12	2	Ü
DEC. 17	6	3	MAY 13	3	1
DEC. 18	173	205	MAY 13	10	13
DEC. 20	8	5	MAY 17	1	1
DEC. 23	5	4	MAY 19	2	1
DEC. 26	6	3	MAY 20	9	В
850 00	5	3	MAY 21	4	2
DEC. 28 DEC. 31	4	3	MAY 24	1	ī
JAN. 4, 1968	2	3	MAY 25	ī	1
JAN. 7	4	4	MAY 25	6	8
JAN. 9	13	20	MAY 27	1	2
			**** ***	3	1
JAN. 10	331	240	MAY 29 MAY 31	2	2
JAN. 14	33 555	47 430	JUNE 3	ī	ō
JAN. 16	100	84	JUNE 4	3	i
JAN. 19	15	10	JUNE 9	3	1
					_
JAN. 22	9	9	JUNE 12	2	1 2
JAN- 25	4	4	JUNE 16	6	3
JAN. 26	8	5 6	JUNE 19	10	3
JAN. 29	324	200	JUNE 25	3	2
					_
FEB: 1	14	12	JUNE 30	2	2
FEB. 2	90	80	JULY 3	2	
FEB. 3	171 29	125 29	JULY 9 JULY 13	2	2 2
FEB. 6	10	11	JULY 16	2	1
	10	••	JULY 21	ž	ž
FEB. 8	6	6			_
FE8. 15	2	6	JULY 27	.6	2 6
FE8. 17	38	80	AUG. 4	10	
FEB. 18 FEB. 19	5 690	5 600	AUG. 9	9	2 2
100 17	690	900	AUG. 16	5	3
FE8. 20	113	100	AUG. 20	14	13
FEB. 21	294	238			
FE8. 22	91	82	AUG. 21	249	320
FEB. 26	18	20	AUG. 22	22	61
FE8. 28	7	7	AUG. 31 SEPT. 15	3	2
MAG 1		-	SEPT. 23	í	ī
MAR. 1	6	7 4	SEPT. 23 SEPT. 27	ž	1
MAR. 5	39	61			
MAR. 6	"	6			
MAR. 7	10	20			
MAR. 10	2	5			
MAR. 12	24	37			
MAR. 13	22 55	30 96			
MAR. 14	91	96 82			
	**				

11475500 SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF, -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(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)

		WATER								PART	ICLE :	SIZE					
		TEM- PERA- TURE			SUSPENDED - SEDIMENT DISCHARGE		NT F	INER	THAN	THE S	IZE (IN MI	LIME	rers)	INDI	CATED	METHOD OF Analy-
DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	•004	.008	.016	.031	.062	.125	.250	•500	1.00	2.00	S1S
NDV 14 1967	0800	11	148	382	153	63	82	93	95	96	99	99	99	100			SBWC
OEC 7	1000	10	735	158	314	42	55	67	77	80	94	97	99	100			SBWC
JAN 10 1968	1105	7	1060	331	947	31	45	56	67	72	86	88	94	99	100		SBMC
JAN 15	1605	7	1440	555	2160	24	35	49	61	67	91	95	98	100			SBWC
FEB 19	1640	9	722	690	1350	38	52	62	82	92	96	99	100				SPWC
MAR 14	1700	9	523	55	78	19	43	60	69	74	90	93	96	100			SBWC

11475560 ELDER CREEK NEAR BRANSCOMB, CALIF. (Hydrologic bench-mark station)

LOCATION, -- Lat 39°43'47", long 123°38'34", in NW NET 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 to September 1968, Water temperatures: October 1967 to September 1968,

EXTREMES. --1967-68: Water temperatures: Maximum, 21.0°C July 6, 7; minimum, 6.0°C on several days during January and February.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	ME AN DIS- CHARGE (CFS)	SILICA (SID2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR~ BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
FEB. 15 JUNE	24	15	.00	9.4	3.0	5.6	.5	49	0	2.0	1.8	.2
14	2.9	14	•00	13	4.2	7.3	.6	70	0	4.0	2.6	.1
JULY 11 AUG.	1.3	14		13	4.4	7.8	.7	75	0	4.0	2.6	•2
28	1.9											
DATE	NITRATE (NO3)	BORON (B)	OIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVEO SOLIOS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	PERCENT SDOIUM	SOCIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACD3	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	РН	DIS- SOLVED OXYGEN
FEB. 15	.4	-00	62	.08	36	0	25	.4	40	92	7.9	
JUNE 14	•0	.00	81	.11	50	0	24	.5	57	122	7.B	9.4
JULY 11 AUG.	.1	.00	B4	-11	50	0	25	.5	62	132	7.3	
28	.1											

DATE	PHOS- PHATE (PO4)	QRTHO PHQS- PHATE (PD4)	AMMONEA (NH4)	ORGANIC NITRO- GEN (NI	TEM- PERA- I TURE (DEG C)
FEB. 15 JUNE	.19				
14	-17	.07	-13	-09	15
11	-21		-12	-12	-
28	.10	.13	-01	1.2	

11475560 ELDER CREEK NEAR BRANSCOMB, CALIF .-- Continued

JANUARY

FEBRUARY

MARCH

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DECEMBER

NOVEMBER

OCTOBER

	UC	LOBEK	NUV	EMBEK	DECI	EMBER	34	TUAKT	rcor	CUART		KCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
UAT	HAA	n in	ne.	714	780	1114	ne.	71.0	neA.	71.14	784	71.19
1	14.0	14.0	11.0	11.0	8.0	8.0	7.0	7.0	6.0	6.0	9-0	9.0
ž	14.0	14.0	11.0	9.0	8.0	8.0	7.0	7-0	7.0	6.0	9.0	9.0
3	14.0	14.0	9.0	9.0	8.0	8.0	7.0	7.0	7.0	7.0	9.0	9.0
4	14.0	13.0	9.0	9.0	8.0	8.0	7.0	7.0	7.0	7.0	9.0	9.0
5	13.0	13.0	9.0	9.0	8.0	8.0	7.0	7.0	8.0	7.0	9.0	9.0
6	13.0	13.0	9.0	9.0	8.0	8.0	7.0	7.0	8.0	8.0	9-0	9.0
7	13.0	13.0	9.0	9.0	8.0	8.0	7.0	7.0	8.0	8.0	9.0	9.0
8	13.0	13.0	11.0	9.0	8.0	8.0	7.0	7.0	8.0	8.0	9-0	9.0
. 9	13.0	13.0	11.0	11.0	8.0	8.0	7-0	7-0	8-0	7.0	9.0 8.0	6.0
10	13.0	13.0	11.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	6.0	8.0
11	13.0	13.0	10.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	8.0	8.0
12	13.0	12.0	10.0	10.0	8.0	8.0	7.0	7.0	7.0	7.0	6.0	8.0
13	12.0	12.0	10.0	10.0	8.0	7.0	7.0	7.0	8.0	7.0	8.0	6.0
14	12.0	12.0	10.0	10.0	7.0	7.0	7.0	7.0	8.0	8.0	8.0	7.0
15	12.0	12.0	10.0	10.0	7.0	7.0	8.0	7.0	8.0	8.0	8.0	8.0
16	12.0	12.0	10.0	10.0	7.0	7.0	8.0	6.0	9.0	6.0	8.0	8.0
17	12.0	12.0	10.0	10.0	7.0	7.0	8.0	8.0	9.0	9.0	8.0	8.0
18	12.0	12.0	10.0	9.0	7.0	7.0	8.0	8.0	9.0	9.0	8.0	8.0
19	12.0	12.0	9.0	9.0	7.0	7.0	8.0	8.0	9.0	9.0	9.0	8.0
20	12.0	12.0	9.0	9.0	7.0	7.0	8.0	8.0	9.0	9.0	9.0	9.0
21	12.0	12.0	9.0	9.0	7.0	7.0	8.0	8.0	9.0	9.0	9.0	8.0
22	12.0	12.0	9.0	9.0	7.0	7.0	8.0	8.0	9.0	9.0	8.0	8.0
23 24	12.0	12.0	9.0	9.0	7.0	7.0 7.0	8.0 8.0	8.0 8.0	9.0 9.0	9.0 9.0	8.0 8.0	8.0 6.0
25	12.0 12.0	12.0 12.0	9.0 9.0	9.0 9.0	7.0 8.0	7.0	8.0	8.0	9.0	9.0	8.0	8.0
25	12.0	12.0	9.0	7.0	0.0	1.0	0.0	8.0	7.0	7.0	0.0	8.0
26	12.0	12.0	9.0	8.0	8.0	8.0	8.0	7.0	9.0	9.0	8.0	8.0
27	12.0	12.0	8.0	8.0	8.0	7.0	7.0	6.0	9.0	9.0	8.0	8.0
28	12.0	12.0	8.0	8.0	7.0	7.0	6.0	6.0	9.0	9.0	8.0	8.0
29	12.0	12.0	8.0	8.0	7.0	7.0	6.0	6.0	9.0	9.0	9.0	8.0
30	12.0	11.0	8.0	8.0	7.0	7.0	6.0	6.0			9.0	8.0
31	11.0	11.0			7.0	7.0	.6.0	6.0			8.0	8.0
HONTH	14.0	11.0	11.0	8.0	8.0	7.0	8.0	6.0	9.0	6.0	9.0	7.0
		PRIL		MAY	JI	UNE	J	JLY	AUC	SUST	SEP	TEMBER
	_											
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	MAX	MIN	MAX		MAX		MAX					
1	MAX B.O	MIN 8.0	MAX 12.0	11.0	MAX 15.0	13.0	MAX 18.0	15.0	19.0	17.0	17-0	16.0
1 2	MAX 8.0 9.0	MIN 8.0 8.0	MAX 12.0 13.0	11.0 11.0	MAX 15.0 14.0	13.0 14.0	MAX 18.0 18.0	15.0 16.0	19.0	17.0 17.0	17.0 17.0	16.0 16.0
1 2 3	MAX 8.0 9.0 10.0	MIN 8.0 8.0 9.0	MAX 12.0 13.0 13.0	11.0 11.0 12.0	MAX 15.0 14.0 16.0	13.0 14.0 14.0	MAX 18.0 18.0 19.0	15.0 16.0 16.0	19.0 19.0 19.0	17.0 17.0 17.0	17.0 17.0 17.0	16.0 16.0 16.0
1 2 3 4	MAX 8.0 9.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0	MAX 12.0 13.0 13.0	11.0 11.0 12.0 12.0	MAX 15.0 14.0 16.0 16.0	13.0 14.0 14.0 13.0	MAX 18.0 18.0 19.0 19.0	15.0 16.0 16.0 16.0	19.0 19.0 19.0	17.0 17.0 17.0 17.0	17.0 17.0 17.0 17.0	16.0 16.0 16.0
1 2 3	MAX 8.0 9.0 10.0	MIN 8.0 8.0 9.0	MAX 12.0 13.0 13.0	11.0 11.0 12.0	MAX 15.0 14.0 16.0	13.0 14.0 14.0	MAX 18.0 18.0 19.0	15.0 16.0 16.0	19.0 19.0 19.0	17.0 17.0 17.0	17.0 17.0 17.0	16.0 16.0 16.0
1 2 3 4	MAX 8.0 9.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0	MAX 12.0 13.0 13.0 13.0	11.0 11.0 12.0 12.0 11.0	MAX 15.0 14.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0	MAX 18.0 18.0 19.0 19.0 20.0	15.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 18.0	17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0	16.0 16.0 16.0 16.0
1 2 3 4 5	MAX 8.0 9.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0	MAX 12.0 13.0 13.0 13.0 12.0	11.0 11.0 12.0 12.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0	13.0 14.0 14.0 13.0 13.0	MAX 18.0 18.0 19.0 19.0 20.0	15.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 18.0	17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0	16.0 16.0 16.0 16.0 16.0
1 2 3 4 5	MAX 8.0 9.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0	MAX 12.0 13.0 13.0 13.0	11.0 11.0 12.0 12.0 11.0	MAX 15.0 14.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0	MAX 18.0 18.0 19.0 20.0 21.0 20.0	15.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 18.0	17.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0	16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8	MAX 8.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0	MIN 8.0 9.0 10.0 10.0 9.0 9.0	MAX 12.0 13.0 13.0 12.0 12.0 12.0	11.0 11.0 12.0 12.0 11.0	MAX 15.0 14.0 16.0 14.0 14.0	13.0 14.0 14.0 13.0 13.0 13.0	MAX 18.0 18.0 19.0 19.0 20.0 21.0 20.0	15.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 16.0	17-0 17-0 17-0 17-0 16-0	16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8	MAX 8.0 9.0 10.0 10.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0	MAX 12.0 13.0 13.0 13.0 12.0 11.0	11.0 11.0 12.0 12.0 11.0	MAX 15.0 14.0 16.0 14.0 14.0 15.0 16.0	13.0 14.0 14.0 13.0 13.0	MAX 18-0 18-0 19-0 20-0 21-0	15.0 16.0 16.0 16.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0	17.0 17.0 17.0 17.0 16.0 16.0	17-0 17-0 17-0 17-0 16-0 16-0	16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9	MAX 8.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0	#IN 8-0 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	18-0 18-0 19-0 19-0 20-0 21-0 21-0 21-0 19-0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	#AX 8.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0	#IN 8-0 8-0 10-0 10-0 9-0 9-0 10-0 11-0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	MAX 8.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0	#IN 8-0 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0	MAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	11.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 16.0 16.0 14.0 14.0 15.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0
1 2 3 4 5 6 7 8 9 10	#AX 5.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0	#IN 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0 11-0 11-0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 8.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0	MIN 8-0 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0 11-0	MAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 17.0 17.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10	#AX 5.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0	#IN 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0 11-0 11-0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 8.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 11.0 11.0 11.0 11.0	#IN 8-0 8-0 9-0 10-0 10-0 9-0 9-0 10-0 11-0 11-0	HAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 11	11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX #.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	#IN 8-0 8-0 10-0 10-0 10-0 9-0 9-0 11-0 11-0 9-0 9-0 9-0	MAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	#AX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 9.0	#IN 8.0 8.0 9.0 10.0 9.0 9.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 10.0	HAX 12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 15.0 16.0	13-0 14-0 14-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 18.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 9.0 10.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 9.0 9.0	8.0 8.0 9.0 10.0 10.0 9.0 9.0 10.0 11.0 11.0	HAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 16.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	#AX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 9.0	8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0 9.0 8.0 8.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 18.0 17.0 17.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MAX 8.0 9.0 10.0 10.0 10.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0	8.0 8.0 9.0 10.0 10.0 9.0 9.0 10.0 11.0 11.0	HAX 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0	NIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 19.0 19.0 20.0 21.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0	19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 16-0 16-0 16-0 16-0 16-0 16-0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 16.0 16.0	19.0 19.0 19.0 18.0 18.0 18.0 19.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0	NIN 8-0 8-0 9-0 10-0 10-0 10-0 11-0 11-0 11-0 9-0 9-0 8-0 8-0 8-0 8-0 8-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9	MAX 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 22 23 24	#AX #.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 11.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	MAX 15.0 14.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0	NIN 8-0 8-0 9-0 10-0 10-0 10-0 11-0 11-0 11-0 9-0 9-0 8-0 8-0 8-0 8-0 8-0 8-0 9-0 9-0 9-0 9-0 9-0 9-0 9-0 9	MAX 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 21.0 21.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 23 24 25	#AX #.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 9.0 9.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 18.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	#AX \$.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0	NIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	HAX 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 7 18 19 20 12 23 24 25 26 26 27	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 10.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 10.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 18.0 19.0 19.0 20.0 21.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	#AX \$.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11	NIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 12 9 2 0	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 10.0 10.0 11.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 17.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	18.0 19.0 19.0 20.0 21.0 21.0 20.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 19.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	#AX \$.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 11	NIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 9.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 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	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 10.0 10.0 11.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 17.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 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	MAX 8.0 9.0 10.0 10.0 10.0 11.0 11.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0 10.0 10.0 10.0 11.0	MIN 8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 11.0 11.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 17.0	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 19.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 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 40NTH	#AX #.0 9.0 10.0 10.0 10.0 11.	8.0 8.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 9.0 9.0 10.0 11.0	12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 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	#AX #.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 11.0 1	8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.0 11.0 11.0 11	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	15.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 18.0 18.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	15.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0

11475800 SOUTH FORK EEL RIVER AT LEGGETT, CALIF.

LOCATION.--Lat 39°52'30", long 123°43'10", in NE{SE} 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 Legget.

DRAINAGE AREA, -- 248 sq mi.

PERIOD OF RECORD .-- Water temperatures: October 1965 to September 1968.

NOVEMBER

MAX MIN

EXTREMES . -- 1967-68:

naco.--1957/-56: ater temperatures: Maximum, 24.0°C on many days during June to September; minimum, 3.0°C on several days during Becember and January.

Period of record:

MAX

DAY

OCTOBER

MIN

water temperatures: Maximum, 25.5°C on several days in 1966 and 1967; minimum, 3.0°C on several days during December and January 1967-68,

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY

MAX MIN

FEBRUARY

MAX MIN

MARCH

MIN

MAX

DECEMBER

MAX MIN

041	THA.	17.14	HAA	71.4	MAX	414	MAA	MIN	HAA	m L M	MAA	
1	21.0	17.0	14.0	12.0	7.0	7.0	4.0	4.0	7.0	7.0	11.0	11.0
2	17.0		14.0									
á	18.0	17.0	14.0	12.0	7.0 8.0	7.0 7.0	4.0	4.0	8.0	7-0	12.0 12.0	11.0
		16.0		11.0			4.0	3.0	9.0	8.0		11.0
•	18.0	16.0	12.0	11.0	8.0	8.0	3.0	3.0	9.0	9.0	12.0	11.0
5	16.0	15.0	14.0	12.0	8.0	8.0	4.0	3.0	9.0	9.0	12.0	11.0
6	18.0	15.0	14.0	12.0	8.0	7.0	4.0	4-0	10.0	9.0	11.0	11.0
7	18.0	15.0	14.0	12.0	8.0	7.0	4.0	4.0	10.0	10.0	11.0	11.0
8	18.0	15.0	14.0	13.0	8.0	7.0	4.0	4.0	10.0	10.0	12.0	9.0
9	18.0	15.0	13.0	12.0	7.0	7.0	6.0	4.0	10.0	10.0	11.0	10.0
10	18.0	16.0	14.0	13.0	7.0	7.0	7.0	6.0	10.0	9.0	11.0	9.0
11	20.0	16.0	13.0	12.0	7.0	7.0	8.0	7.0	10.0	10.0	11.0	10.0
12	19.0	17.0	13.0	12.0	7.0	6.0	7.0	7.0	10.0	9.0	10.0	9.0
13	18.0	15.0	13.0	12.0	6.0	4.0	9.0	7.0	9.0	9.0	9.0	8.0
14	18.0	14.0	13.0	12.0	4.0	3.0	10.0	9.0	9.0	9.0	9-0	8.0
15	18.0	13.0	12.0	12.0	3.0	3.0	10.0	10.0	9.0	9.0	9.0	9.0
16	18.0	13.0	12.0	12.0	3.0	3.0	10.0	9.0	10.0	9.0	9.0	9.0
17	18.0	13.0	12.0	11.0	3.0	3.0	9.0	9.0	11.0	10.0	9.0	9.0
18	18.0	13.0	12.0	11.0	3.0	3.0	9.0	8.0	11.0	11.0	9.0	8.0
19	17.0	14.0	12.0	11.0	4.0	3.0	8.0	8.0	11.0	11.0	9.0	8.0
20	18.0	14.0	12.0	10.0	4.0	4.0	8.0	8.0	11.0	11.0	9.0	9.0
21	15.0	14.0	12.0	9.0	4.0	4.0	9.0	8.0	11.0	11.0	9.0	9.0
22	17.0	15.0	11.0	9.0	6.0	4.0	9.0	9.0	12.0	11.0	9.0	9.0
23	17.0	14.0	11.0	9.0	6.0	6.0	9.0	9.0	12.0	12.0	11.0	9.0
24	18.0	15.0	11.0	9.0	6.0	5.0	9.0	8.0	12.0	12.0	11.0	10.0
25	16.0	14.0	10.0	8.0	6.0	5.0	8.0	8.0	12.0	12.0	11.0	11.0
26	16.0	13.0	9.0	8.0	6.0	6.0	8.0	7.0	12.0	12.0	11.0	10.0
27	16.0	13.0	8.0	7.0	6.0	6.0	7.0	6.0	12.0	12.0	11.0	9.0
28			9.0	8.0		6.0		5.0			12.0	
	16.0	13.0			6.0		6.0		12.0	12.0		11.0
29	15.0	12.0	8.0	7.0	6.0	6.0	6.0	5.0	12.0	11.0	12.0	11.0
30	15.0	12.0	7.0	7.0	6.0	5.0	7.0	6.0			13.0	12.0
31	14.0	11.0			5.0	4.0	7.0	7.0			13.0	11.0
HTMOP	21.0	11.0	14.0	7.0	8.0	3.0	10.0	3.0	12.0	7.0	13.0	8.0
	A	PRIL		MAY	JL.	JNE	JI.	JLY	AUG	SUST	SEP.	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	11.0	18.0	13.0	21.0	16.0	23.0	17.0	24.0	19.0	24.0	19.0
1 2	11.0	11.0 11.0	18.0 18.0	13.0 13.0	21.0 19.0	16.0 17.0	23.0 23.0	17.0 18.0	24.0 24.0	19.0 19.0	24.0 24.0	19.0 18.0
1 2 3	11.0 12.0 12.0	11.0 11.0 10.0	18.0 18.0 18.0	13.0 13.0 14.0	21.0 19.0 20.0	16.0 17.0 17.0	23.0 23.0 23.0	17.0 18.0 18.0	24.0 24.0 24.0	19.0 19.0 19.0	24.0 24.0 24.0	19.0 18.0 19.0
1 2 3	11.0 12.0 12.0 13.0	11.0 11.0 10.0 12.0	18.0 18.0 18.0	13.0 13.0 14.0 14.0	21.0 19.0 20.0 21.0	16.0 17.0 17.0 16.0	23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0	24.0 24.0 24.0 24.0	19.0 19.0 19.0	24.0 24.0 24.0 23.0	19.0 18.0 19.0 19.0
1 2 3	11.0 12.0 12.0	11.0 11.0 10.0	18.0 18.0 18.0	13.0 13.0 14.0	21.0 19.0 20.0	16.0 17.0 17.0	23.0 23.0 23.0	17.0 18.0 18.0	24.0 24.0 24.0	19.0 19.0 19.0	24.0 24.0 24.0	19.0 18.0 19.0
1 2 3 4 5	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0	19.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0	19.0 18.0 19.0 19.0 19.0
1 2 3 4 5	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0	19.0 18.0 19.0 19.0 19.0
1 2 3 4 5	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0	19.0 18.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	11.0 12.0 12.0 13.0 14.0 14.0 14.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0 16.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	11.0 12.0 12.0 13.0 14.0	11.0 11.0 10.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0	21.0 19.0 20.0 21.0 17.0	16.0 17.0 17.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0	19.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 12.0 13.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 15.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 13.0 13.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0	24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0	11.0 10.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 20.0 23.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0	24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 13.0 13.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0	24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0	11.0 10.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 22.0 22	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	11.0 12.0 12.0 13.0 14.0 13.0 14.0 15.0 16.0 16.0 16.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0	11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0	13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 20.0 22.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0 22.0 23.0 23.0 22.0 22.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0	24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0	11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0	13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 20.0 22.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	11.0 12.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 12.0 12.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 24.0 23.0 22.0 23.0 23.0 22.0 22.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0	24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0	11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	16.0 17.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	16.0 17.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 22	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 19 20 20 21	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0
1 2 3 4 4 5 6 7 7 8 8 9 9 10 11 11 12 13 14 15 11 7 18 19 20 21 12 22	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0	23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 22.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 20.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 22.0 23.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0
1 2 2 3 4 4 5 6 7 7 8 9 10 11 12 11 3 11 4 15 5 16 17 18 19 20 21 22 23 24 25	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 10.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	11.0 12.0 13.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 19.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0	24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 24.0 25.0 27.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 19.0 18.0 17.0 18.0 17.0 16.0 14.0 14.0 14.0 16.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 15 15 16 17 18 19 20 21 22 23 24 25 26 27	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 13.0 14.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 22.0 23.0 20.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 27.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0	13.0 14.0 14.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 13.0 14.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 24.0 25.0 26.0 27.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 27.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 24.0 25.0 26.0 27.0	19.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 4 5 6 7 8 9 10 11 12 3 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28 30 31	11.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 26.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 6 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	11.0 12.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	11.0 11.0 12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 11.0 11.0 11.0 11.0 11.0 11	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 19.0 20.0 21.0 17.0 19.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 24.0 24.0 25.0 26.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0	19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 4 5 6 7 8 9 10 11 12 3 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28 30 31	11.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0	19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26 27 8 9 30 31 40NTH	11.0 12.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 10.0 12.0 12.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0	19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 4 5 6 7 8 9 10 11 12 3 14 15 16 17 17 18 19 20 21 22 3 24 25 26 27 28 30 31	11.0 12.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0	11.0 11.0 12.0 12.0 11.0 11.0 11.0 11.0	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	13.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0	21.0 19.0 20.0 21.0 17.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0	16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	23.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0	17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0	19.0 19.0 19.0 19.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0 22.0 21.0	19.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 16.0 16.0 16.0

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CALIF.

LOCATION.--Lat 40°10'55", long 123°46'30", in NW½ 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 1968. Water temperatures: November 1960 to September 1968,

EXTREMES.--1967-68:
Water temperatures: Maximum, 28.0°C June 25; minimum, 3.0°C Dec. 14, 15.

Period of record (1960-64, 1965-68); Water temperatures: Maximum (1960-61, 1963-64, 1965-68), 34.0°C July 25, 1964; minimum, 1.0°C Jan. 20, 21, 1963.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SCDIUM (NA)	SIUM	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)	PHOS-PHATE
CCT. 04	322			11		127	o		7.2	2.4	.13	.08
NGV.							-			2.4		.08
(8 CEC.	81			11		151	1	16	8.9		.11	
Cé JAN.	3950			5.5		60	0		3.9	2.1	.12	.79
10 FEB.	12800			4.5		45	0		4.1	2.6	-24	.83
07 MAR.	3420			4.4		62	0		2.9	1.0	.06	• 40
C6	1490			5.0		73	0		2.2	-1	. 05	.07
C3	1030			5.4		80	0		4.0	.0	.10	.10
C8	278	25	6.2	7.9	1.1	96	3	9.2	4.9	•0	.06	.24
JUNE C5	190			8.0		111	o		4.7	•0	-11	.04
10	64		_	7.5		135	o		5.4	•1	.13	.01
ALG. C7	53			10		126	0		6.6	-1	•13	.00
SEPT. 11	60	18	18	10	1.5	142	0	13	7.4	•0	-16	•02
CATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARO- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOL VED SOL IDS (TONS PER AC-FT)	PERCENT SDDIUM	SODIUM AD- SORP- TION RATIO	M ALKA LINI AS CACO	TY UCTANCE (MICRO-	E	TEM- PERA- TURE (DEG C	DIS- SOLVEI OXYGE	
CCT. 04		111	,		18	.5	10	4 268	8.2	2 16	8.8	9
NCV. (8		130	4		16	.4	12	5 299	8.4	4 16	9.	9
C6		51	2		19	.3	41	9 129	7.1	8 8	1.1	1
JAN. 10		45	8		18	.3	3	7 91	7.0	6 8	11.9	9
FEB. C7		50	0		16	.3	5	1 126	8.0	9	11.	7
MAR. C6		61	1		15	•3	6	0 150	8.	1 11	10.	2
APR. 03		69	3		15	•3	6	6 155	8.0	0 13	10.	9
MAY CB		88	4		16	.4	8	4 202	8.5	5 18	10.	2
JUNE C5		93	2		16	-4	9	1 219	8.	1 19	B.1	8
JULY 10		113	2		13	.3	11	1 259	8.	2 24	9.	5
ALG.		106	3		17	.4	10	3 264	8.	2 22	10.9	5
SEPT.		120	4	.19	15	.4	11		8.		10.	

NOVEMBER

OCTOBER

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 DECEMBER

JANUARY

FEBRUARY

MARCH

DAY MAX MIN M		UL	UBEK	MOAI	EMDEK	DECE	MOEK	JAN	IUANI	FEOR	UART	715	inch.
1			M 7 N	444	M T M	444	MIN	MAY	MIN	MAY	MIN	MAY	MIN
\$ 19.0 16.0 17.0 14.0 9.0 8.0 7.0 8.0 7.0 8.0 7.0 12.0 11.0 13.0	UAY	MAX	m i N	MAA	m t M	MAX	714	MAA	nr.w	750	71.14	na.	14714
\$ 19.0 16.0 17.0 14.0 9.0 8.0 7.0 8.0 7.0 8.0 7.0 12.0 11.0 13.0		20.0	10.0	17.0	14.0	9.0	8.0	7-0	7.0	7-0	7.0	12.0	11.0
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8		19.0			16.0	9.0	9.0	7.0	6.0	10.0	10.0	11.0	10.0
\$ 19.0 15.0 16.0 16.0 16.0 9.0 8.0 9.0 8.0 10.0 9.0 11.0 19.0 110 19.0 17.0 17.0 16.0 16.0 9.0 8.0 8.0 10.0 9.0 11.0 19.0 111 20.0 17.0 17.0 16.0 15.0 8.0 7.0 7.0 6.0 10.0 9.0 11.0 19.0 112 20.0 17.0 17.0 16.0 15.0 8.0 7.0 7.0 6.0 10.0 9.0 11.0 19.0 113 18.0 16.0 16.0 16.0 15.0 8.0 7.0 7.0 5.0 10.0 9.0 11.0 9.0 11.0 19.0 115 17.0 18.0 16.0 16.0 15.0 8.0 8.0 7.0 7.0 6.0 10.0 9.0 11.0 19.0 116 17.0 18.0 16.0 16.0 16.0 15.0 8.0 8.0 8.0 8.0 8.0 8.0 12.0 11.0 11.0 10.0 9.0 11.0 11.0 11.0 11.						9.0	9.0	8.0	7.0		9.0	12.0	10.0
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13							7.0	7.0	6.0	10.0	9.0	11.0	9.0
14 17.0 14.0 16.0 15.0 5.0 3.0 11.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 1	13		16.0	16.0	15.0	7.0	5.0	9.0	7.0	10.0	9.0	9.0	
16 17.0 14.0 15.0 14.0 4.0 3.0 11.0 10.0 10.0 10.0 10.0 11.0 10.0 11.0 10.0 11.0						5.0		11.0	9.0	9.0	9.0	10.0	9.0
14						4.0	3.0	11.0	10.0	10.0	9.0	11.0	10.0
17													
17	16	17.0	13.0	15.0	14.0	5.0	4.0	10.0	9.0	10.0	10.0	11.0	9.0
18	17	17.0	14.0	14.0	14.0	6.0	4.0	9.0	8.0	12.0	10.0	10.0	9.0
19		17.0	14.0	14.0	13.0	6.0	6.0	8.0	B.0	12.0	11.0	11.0	8.0
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22 18.0 17.0 12.0 11.0 7.0 6.0 9.0 9.0 12.0 12.0 12.0 11.0 10.0 24 18.0 16.0 12.0 11.0 7.0 7.0 9.0 8.0 12.0 12.0 12.0 12.0 11.0 25 18.0 16.0 12.0 9.0 8.0 7.0 9.0 8.0 12.0 12.0 13.0 11.0 26 17.0 19.0 10.0 8.0 8.0 7.0 9.0 8.0 13.0 12.0 13.0 11.0 27 17.0 19.0 10.0 8.0 8.0 7.0 8.0 7.0 6.0 13.0 11.0 28 18.0 16.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 11.0 13.0 11.0 29 16.0 13.0 10.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 11.0 13.0 11.0 30 15.0 13.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 12.0 14.0 11.0 31 15.0 13.0 9.0 8.0 8.0 7.0 6.0 5.0 12.0 12.0 14.0 12.0 31 15.0 13.0 9.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 40NTH 20.0 13.0 17.0 8.0 11.0 3.0 11.0 4.0 13.0 7.0 14.0 8.0 ARX MIN				13.0	12.0	6.0	6.0	9.0	8.0	12.0	11.0	11.0	9.0
22 18.0 17.0 12.0 11.0 7.0 6.0 9.0 9.0 12.0 12.0 12.0 11.0 10.0 24 18.0 16.0 12.0 11.0 7.0 7.0 9.0 8.0 12.0 12.0 12.0 12.0 11.0 25 18.0 16.0 12.0 9.0 8.0 7.0 9.0 8.0 12.0 12.0 13.0 11.0 26 17.0 19.0 10.0 8.0 8.0 7.0 9.0 8.0 13.0 12.0 13.0 11.0 27 17.0 19.0 10.0 8.0 8.0 7.0 8.0 7.0 6.0 13.0 11.0 28 18.0 16.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 11.0 13.0 11.0 29 16.0 13.0 10.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 11.0 13.0 11.0 30 15.0 13.0 9.0 8.0 8.0 7.0 6.0 5.0 13.0 12.0 14.0 11.0 31 15.0 13.0 9.0 8.0 8.0 7.0 6.0 5.0 12.0 12.0 14.0 12.0 31 15.0 13.0 9.0 8.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 40NTH 20.0 13.0 17.0 8.0 11.0 3.0 11.0 4.0 13.0 7.0 14.0 8.0 ARX MIN													
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23 19.0 17.0 12.0 11.0 7.0 7.0 7.0 9.0 9.0 12.0 12.0 12.0 11.0 12.0 11.0 25 18.0 16.0 12.0 9.0 8.0 7.0 9.0 8.0 12.0 12.0 13.0 11.0 25 18.0 16.0 11.0 9.0 8.0 7.0 9.0 8.0 13.0 12.0 12.0 13.0 11.0 25 18.0 16.0 11.0 12.0 9.0 8.0 8.0 7.0 9.0 8.0 13.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	22	18.0	17.0	12.0	11.0		6.0		9.0				10.0
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27	25	18.0	16.0	11.0	9.0	8.0	7.0	9.0	8.0	13.0	12.0	13.0	12.0
27													
28	26	17.0			8.0	8.0	7.0					12.0	11.0
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MONTH 20.0 13.0 17.0 8.0 11.0 3.0 11.0 4.0 13.0 7.0 14.0 8.0 APRIL MAY JUNE JULY AUGUST SEPTEMBER OAY MAX HIN MAX HIN NAX HIN HIN HAX HIN HI	30	15.0		9.0	8.0							14.0	12.0
APRIL MAY JUNE JULY AUGUST SEPTEMBER	31	16.0	13.0			7.0	7.0	7.0	7.0			14.0	12.0
APRIL MAY JUNE JULY AUGUST SEPTEMBER													
OAY MAX MIN MIN MAX MI	HONTH	20.0	13.0	17.0	8.0	11.0	3.0	11.0	4.0	13.0	7.0	14.0	8.0
OAY MAX MIN MIN MAX MI													
1 13.0 12.0 18.0 15.0 23.0 18.0 25.0 19.0 27.0 22.0 25.0 17.0 2 13.0 11.0 11.0 14.0 16.0 23.0 19.0 24.0 20.0 24.0 20.0 24.0 21.0 26.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18		A	PRIL		MAY	J	JNE	JI	JL Y	AU	GUST	SEP.	TEMBER
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ERI. RIVER BASTN 301

11477000 EEL RIVER AT SCOTIA, CALIF. (International Hydrological Decade River Station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW\(\frac{1}{2}\) 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 1968. Water temperatures: October 1957 to September 1968. Sediment records: October 1957 to September 1968.

EXTREMES .-- 1967-68:

. Nakoj. -- 1997-90: Maximum, 24.0°C June 24-26, July 10, Aug. 30; minimum, 4.0°C Dec. 15, 16. Sediment concentrations: Maximum daily, 5650 mg/l Jan. 15; minimum daily, 2 mg/l June 12, 21, July 8, 9. Sediment discharge: Maximum daily, 2,140,000 tons Jan. 15; minimum daily, 1.0 ton on several days during

Period of record:

sriod of record:
Maximum (1960-64, 1965-68), 24.0°C on several days in 1962, 1967-68; minimum, 3.5°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 discharge: Maximum daily, 57,000,000 tons (estimated) Dec. 23, 1964; minimum daily, 0.3 ton on many
days in 1958-63, 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	ME AN DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PO- TAS- S IUM (K)	LITHIUM (LI)	STRON- TIUM (SR)	BICAR- BONATE (HCQ3)	CAR- BONATE (CO3)	SELFATE (SO4)
OC T.												
04 NDV.	716	11	.01	45	12	9.2	1.5	•01	-40	170	0	38
08 DEC.	243	9. 2	.01	4B	14	9.5	1.4	•02	.01	176	0	33
06	17700	8.4	.06	18	4.8	4.5	. 9	.01	. 20	64	0	15
JAN. 10 FEB.	37400	8.7	.10	13	5. 2	2.0	2.7	.00	.20	48	0	8.0
06	20200	11	.19	16	4.9	4.6	1.1	.00	.19	68	0	9.0
MAR. 05 APR.	6560	11	•01	20	6.2	4.8	. 9	.00	.26	87	C	11
03	4720	10	.05	21	6.1	5.1	1.0	.00	.30	87	0	13
MAY 08 JUNE	1210	10	.00	28	8.0	6.4	1.0	•00	.37	120	c	17
04 JULY	752	7.3	.00	31	8.9	7.4	1.2	•00	.42	132	c	18
10	226	7.8	.00	40	11	9.3	1.5	• 00	.23	164	0	21
07	128	7.5	.00	38	12	10	1.6	•00	.45	163	2	22
SEPT. 11	123	8.3	.00	41	13	10	1.6	.01	.48	165	2	26
DATE	CHLO- Ride (CL)	FLUO- R:IDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	BORON (B)	OIS- SOLVEO SOLIDS (SUM OF CONSTI- TUENTS)	HARD— NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PER CENT SODI UM	SDOIUM AC- SORP- TION RATIC	ALKA- EINI TY AS CACO3
OCT.	RIDE (CL)	R-IDE (F)	(EDA)	PHATE (PO4)	(8)	SOLVEO SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SODIUM	AC- SORP- TION RATIC	LÍNI TY AS CACO3
0CF . 04 NOV.	RIDE (CL) 7.6	R-TDE (F)	(NO3)	PHATE (PO4)	.10	SOLVEO SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SODIUM 11	AC- SORP- TION RATIC	LINI TY AS
0CF. 04 NOV. 08 DEC.	7.6 9.1	•1 •1 •2	(NO3)	PHATE (PO4) -18	.10 .10	SOLVEO SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA-MG) 162 178	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT) .28	5 OD 1 UM 11 10	AC- SORP- TION RATIC	LÍNI TY AS CACO3 139
OCT. 04 NOV. 08 DEC. 06 JAN.	7.6 9.1 4.2	•1 •2 •1	.4 .4 .4	•18 •15 •22	.10 .10	SOLVEO SOLIDS (SUM OF CONSTI - TUENTS) 209 212 91	NESS (CA,MG) 162 178 64	CAR- BONATE HARD- NESS 23 34	SOLVEO SOLIDS (TONS PER AC-FT) .28 .29	11 10 13	AE- SORP- TION RATIC .3	LÍNI TY AS CACO3 139 144
OCT. 04 NOV. 08 DEC. 06	7.6 9.1	•1 •1 •2	(NO3)	PHATE (PO4) -18	.10 .10	SOLVEO SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA-MG) 162 178	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT) .28	5 OD 1 UM 11 10	AE- SORP- TION RATIC	139 144 52
OCF. 04 NOV. 08 DEC. 06 JAN. 10 FEB. 06	7.6 9.1 4.2	**************************************	.4 .4 .4	•18 •15 •22	.10 .10	SOLVEO SOLIDS (SUM OF CONSTI - TUENTS) 209 212 91	NESS (CA,MG) 162 178 64	CAR- BONATE HARD- NESS 23 34	SOLVEO SOLIDS (TONS PER AC-FT) .28 .29	11 10 13	AE- SORP- TION RATIC .3	LÍNI TY AS CACO3 139 144
OCT. 04 NOV. 08 DEC. 06 JAN. 10 FEB. 06 MAR.	7.6 9.1 4.2 2.8	.1 .2 .1	.4 .4 2.3	•18 •15 •22	.10 .10 .10	SOLVEO SOLIDS (SUM OF CONSTI- TUENTS) 209 212 91 72	NESS (CA+MG) 162 178 64 54	CAR- BONATE HARD- NESS 23 34 11	SOLVED SOLIDS (TONS PER AC-FT) .28 .29 .12	11 10 13	AE- SORP- TION RATIC	139 144 52
OCT. 04 NOV. 08 DEC. 06 JAN. 10 FEB. 06 MAR. 05	7.6 9.1 4.2 2.8 2.1	**IDE (F) -1 -2 -1 -2 -1	.4 .4 2.3 3.0	PHATE (PO4) -18 -15 -22 -09 -20	.10 .10 .10 .10	SOLVEO SOLIDS (SUM OF CONSTI - TUENTS) 209 212 91 72 83	NESS (CA+MG) 162 178 64 54	CAR- BONATE HARD- NESS 23 34 11	SOLVEO SOLIOS (TONS PER AC-FT) .28 .29 .12 .10	11 10 13 14	AE- SORP- TION RATIC .3 .3 .2	139 144 52 39 56
OCT. D4 NOV. D8 DEC. D6 JAN. 10 FEB. O6 MAR. D5 APR. O3 MAY D8	7.6 9.1 4.2 2.8 2.1	*1	(NO3) .4 .4 2.3 3.0 .6	PHATE (PO4) .18 .15 .22 .09 .20 .15	.10 .10 .10 .10 .10	SOLVEO SOLIDS (SUM OF CONSTI - TUENTS) 209 212 91 72 83	NESS (CA+MG) 162 178 64 54 60 76	CAR- BONATE HARD— NESS 23 34 11 15 4	SOLVEO SOLIOS (TONS PER AC-FT) .28 .29 .12 .10 .11	SODIUM 11 10 13 14 14	.3 .3 .2 .3	139 144 52 39 56
OCT. D4 NOV. OB DEC. D6 JAN. 10 FEB. O6 MAR. O5 APR. O3 MAY OB JUNE	7.6 9.1 4.2 2.8 2.1 2.4	*10E (F) *1 *2 *1 *2 *1 *2 *1 *1 *1	(NO3) .4 .4 2.3 3.0 .6 .5	PHATE (PO4) .18 .15 .22 .09 .20 .15	.10 .10 .10 .10 .10 .00	SOL VEO SOL IDS (SUM OF CONSTI- TUENTS) 209 212 91 72 83 100	NESS (CA+MG) 162 178 64 54 60 76	CAR- BONATE HARD- NESS 23 34 11 15 4	SOLVED SOLIDS (TONS PER AC-FT) -28 -29 -12 -10 -11 -14 -14	SODIUM 11 10 13 14 14 12	AP- SORP- TION RATIC .3 .3 .2 .3	139 144 52 39 56 71
OCF. 04 04 08 08 06 JAN. 10 FEB. 06 MAR. 03 APR. 03 JUNE 04 JULY 10	7.6 9.1 4.2 2.8 2.1 2.4	**TOE (F) -1 -2 -1 -2 -1 -1 -1	(NO3) .4 .4 2.3 3.0 .6 .5 1.4	.18 .15 .22 .09 .20 .15	.10 .10 .10 .10 .00 .04	SOL VEO SOL IDS (SUM OF CONSTITUENTS) 209 212 91 72 83 100 103	NESS (CA-MG) 162 178 64 54 60 76 78	CAR- BONATE HARD- NESS 23 34 11 15 4 5	SOLVED SOLIDS (170NS PER AC-FT) . 28 . 29 . 12 . 10 . 11 . 14 . 18	SODIUM 11 10 13 14 14 12 12	.3 .3 .2 .3 .3 .2 .2 .3	139 144 52 39 56 71 71
OCT. D4 NOV. D8 DEC. JAN. 10 FEB. O6 HAR. O5 APR. O3 HAY OB JUNE O4 JULY	7.6 9.1 4.2 2.8 2.1 2.4 1.6 3.5	**Property of the state of the	.4 .4 2.3 3.0 .6 .5 1.4	.18 .15 .22 .09 .20 .15 .12 .08	.10 .10 .10 .10 .00 .04 .06	SOL VEO SOL IDS (SUM OF CONSTITUENTS) 209 212 91 72 83 100 103 134	NESS (CA,MG) 162 178 64 54 60 76 78 103	CAR- BOMATE HARD- NESS 23 34 11 15 4 5 7	SOLVED SOLIDS (170NS PER AC-FT) . 28 . 29 . 12 . 10 . 11 . 14 . 14 . 18 . 20	SODIUM 11 10 13 14 14 12 12 12	SORP- TION RATIC .3 .3 .2 .3 .3 .2 .2 .3 .3	EÉNIT S CACO3 139 144 52 39 56 71 71 98 108

11477000 EEL RIVER AT SCOTIA, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	SPECI- FIC				
	COND-		TEM-		
	UCTANCE		PERA-	TUR-	DIS-
	(MICRO-	PH	TURE	BIO-	SOLVED
DATE	MHOS 1		(DEG C)	ITY	DXYGEN
OCT.					
04	333	8.2		22	9.3
NOV.					
08	353	8.1		5.0	9.1
DEC.			_		
JAN.	144	7.9	8	2800	11.3
10	107	7.2	8	900	11.4
FEB.		142		700	11.4
06	136	7.7		550	11.6
MAR.					
05	169	7.9		90	10.6
APR.					
03	169	7.9		30	10.7
MAY 08	226	8.1	• •		
JUNE	220	9.1	16	1.0	10.2
04	250	8.1	20	1.0	9.9
JULY	230			1.0	7.7
10	310	8.1	20	1.0	8.7
AUG.					•••
07	316	8.3	21	10	11.5
SEPT.					
11	334	8. 3	19		9 .8

SUSPENDED SRDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

			WATER								PART	ICLE	SIZE					
			TEM- Pera-			SUSPENDED-	PERCI	NT F	INER	THAN	THE S	IZE (IN MI	LIMET	(ERS)	INDI	ATED	METHOD OF ANALY-
c	DATE	TIME	(C)	(CFS)	TRATION (MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	•250	•500	1.00	2.00	SIS
DFC	4 1967	1600	9	19300	2450	128000	24	30	43	54	69	81	93	97	100			VPWC
JAN	10 1968	0900	8	46200	7020	87600D	22	28	33	50	63	72	83	94	100			VPWC
JAN	14	0900	9	47700	4100	528000	19	27	34	49	63	71	92	100				VPWC
JAN	15	0900	9	140000	6970	2630000	20	30	31	48	63	72	92	98	100			VPWC
JAN	30	1600	6	41000	3730	413000	17	24	31	36	38	65	87	99	100			ABMC
FFB	1	1400	7	19000	756	38800	20	29	36	40	42	61	76	100				VBWC
FEB	20	1600	10	82300	4730	1050000	20	28	35	49	65	74	91	98	99	100		VPWC
MAR	1	1330	12	10100	287	7830	30	44	52	56	58	75	82	98	100			VBWC
MAR	13	1700		17200	2440	113000	15	20	27	33	37	51	62	89	100			ABMC

11477000 EEL RIVER AT SCOTIA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		-	areanione.			MA IEAR C			IDMDDA IS			
		TOBER		EMBER		EMBER	JAN	NUARY	FEB	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	21.0 19.0	19.0	16.0	15.0	8.0	8.0	6.0	6-0	7.0	6.0	12.0	12.0
3	17.0	17.0 16.0	16.0 17.0	15.0 16.0	8.0 9.0	8.0 8.0	6.0 6.0	5.0 6.0	7.0 8.0	7.0 7.0	12.0 13.0	12.0 12.0
4	17.0	16.0	17.0	16.0	9.0	8.0	6.0	6.0	8.0	8.0	13.0	12.0
5	17.0	17.0	16.0	16.0	8.0	8.0	7.0	6.0	8.0	8.0	12.0	12.0
6	18.0	17.0	17.0	16.0	9.0	8.0	7.0	6.0	9.0	8.0	12.0	12.0
? 8	18.0 18.0	17.0 17.0	17.0 17.0	17.0 17.0	8.G 9.0	8.0 9.0	7.0 7.0	7.0 7.0	9.0 9.0	9.0 9.0	12.0 12.0	11.0 11.0
ý	19.0	17.0	17.0	16.0	9.0	9.0	8.0	7.0	9.0	9.0	11.0	11.0
10	19.0	18.0	16.0	16.0	9.0	8.0	8.0	8.0	9.0	9.0	11.0	11.0
11	20.0	18.0	17.0	16.0	9.0	B.0	8.0	7.0	9.0	9.0	12.0	11.0
12 13	19.0	18.0 17.0	16.0 17.0	15.0 15.0	8.0 7.0	7.0 6.0	7.0 8.0	7.0 7.0	9.0 9.0	9.0 9.0	11.0 11.0	11.0 9.0
14	17.0	16.0	16.0	15.0	6.0	5.0	9.0	8.0	9.0	9.0	9.0	9.0
15	17.0	14.0	15.0	15.0	5.0	4.0	9.0	9.0	9.0	9.0	10.0	9.0
16	17.0	14.0	15.0	15.0	5.0	4.0	9.0	9.0	9.0	9.0	10.0	10.0
17 18	17.0	15.0	16.0	14.0	5.0	5.0	9.0	8.0	10.0	9.0	10.0	10.0
19	17.0 18.0	16.0 16.0	15.0 14.0	14.0 12.0	6.0 6.0	5.0 6.0	8.0 8.0	8.0 8.0	10.0 10.0	10.0	10.0 11.0	9.0 10.0
20	17-0	16.0	13.0	12.0	6.0	6.0	8.0	8.0	10.0	10.0	11.0	10.0
21	17.0	16.0	13.0	12.0	6.0	6.0	8.0	8.0	10.0	10.0	11.0	10.0
22	17-0	17.0	12.0	12.0	6.0	6.0	8.0	8.0	10.0	10.0	11.0	11.0
23 24	18.0 18.0	17.0 16.0	12.0	12.0	7.0 7.0	6.0 6.0	8.0 8.0	8.0 8.0	10.0 10.0	10.0 10.0	12.0	11.0 11.0
25	17.0	17.0	12.0	11.0	7.0	7.0	8.0	8.0	11.0	10.0	12.0	12.0
26	17.0	16.0	11.0	10.0	7.0	7.0	8.0	8.0	11.0	11.0	12.0	12.0
27	18.0	16.0	11.0	9.0	7.0	6.0	8.0	7.0	11.0	11.0	12.0	11.0
28 29	17•0 16•0	16.0 15.0	9.0 9.0	9.0 9.0	7.0 7.0	7.0 7.0	7.0 6.0	6.0 6.0	12.0 11.0	11.0 11.0	13.0 12.0	12.0 12.0
30	16.0	14.0	9.0	8.0	7.0	6.0	6.0	6.0			14.0	12.0
31	16.0	14.0			6.0	6.0	6.0	6.0			14.0	13.0
HONTH	21.0	14.0	17.0	8.0	9.0	4.0	9.0	5.0	12.0	6.0	14.0	9.0
	AF	PRIL		IAY	JL	INE	JU	ILY	AUG	SUST	SEP.	TEMBER
DAY	AF MAX	PRIL	MAX	MIN	JL XAM	INE MIN	JU Max	NIN	AUA MAX	SUST MIN	SEP.	TEMBER M I N
	MAX	MIN	MÁX		MAX	MIN 17.0	MAX	MIN	MAX 22.0	MIN		
1 2	MAX 14-0 13-0	MIN 13-0 12-0	MAX 17.0 17.0	MIN 16.0 15.0	MAX 21-0 21-0	MIN 17.0 19.0	MAX 23.0 21.0	MIN 18.0 19.0	MAX 22.0 22.0	MIN 20.0 20.0	MAX 22.0 22.0	MIN 21.0 20.0
1 2 3	MAX 14.0 13.0 12.0	MIN 13-0 12-0 12-0	MAX 17.0 17.0 17.0	MIN 16.0 15.0 16.0	MAX 21.0 21.0 21.0	MIN 17.0 19.0 19.0	MAX 23.0 21.0 20.0	MIN 18.0 19.0 19.0	MAX 22.0 22.0 21.0	MIN 20.0 20.0 20.0	MAX 22.0 22.0 23.0	MIN 21.0 20.0 19.0
1 2	MAX 14-0 13-0	MIN 13-0 12-0	MAX 17.0 17.0	MIN 16.0 15.0	MAX 21-0 21-0	MIN 17.0 19.0	MAX 23.0 21.0	MIN 18.0 19.0	MAX 22.0 22.0	MIN 20.0 20.0	MAX 22.0 22.0	MIN 21.0 20.0
1 2 3 4 5	MAX 14.0 13.0 12.0 13.0	MIN 13.0 12.0 12.0 12.0 13.0	MAX 17.0 17.0 17.0 17.0	MIN 16.0 15.0 16.0 16.0	MAX 21.0 21.0 21.0 21.0	MIN 17.0 19.0 19.0 19.0	MAX 23.0 21.0 20.0 21.0 22.0	MIN 18.0 19.0 19.0 20.0	MAX 22.0 22.0 21.0 20.0 20.0	MIN 20.0 20.0 20.0 19.0 19.0	MAX 22.0 22.0 23.0 21.0 21.0	MIN 20.0 19.0 19.0 21.0
1 2 3 4 5	MAX 14.0 13.0 12.0 13.0 13.0	MIN 13-0 12-0 12-0 12-0 13-0	MAX 17.0 17.0 17.0 17.0 16.0	MIN 16.0 15.0 16.0 16.0 14.0	MAX 21-0 21-0 21-0 21-0 19-0	MIN 17.0 19.0 19.0 19.0 17.0	MAX 23.0 21.0 20.0 21.0 22.0 22.0	MIN 18.0 19.0 19.0 20.0 19.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0	MAX 22.0 22.0 23.0 21.0 21.0	MIN 21.0 20.0 19.0 19.0 21.0
1 2 3 4 5 6 7 8	MAX 14.0 13.0 12.0 13.0 13.0 13.0	MIN 13.0 12.0 12.0 12.0 13.0	MAX 17.0 17.0 17.0 16.0 16.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0	MAX 21-0 21-0 21-0 21-0 19-0 19-0	MIN 17.0 19.0 19.0 17.0 16.0 16.0	MAX 23.0 21.0 20.0 21.0 22.0 22.0 23.0 23.0	MIN 18.0 19.0 19.0 20.0 19.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0	MAX 22.0 22.0 23.0 21.0 21.0 20.0	MIN 21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0
1 2 3 4 5	MAX 14.0 13.0 12.0 13.0 13.0	MIN 13-0 12-0 12-0 12-0 13-0	MAX 17.0 17.0 17.0 17.0 16.0	MIN 16.0 15.0 16.0 16.0 14.0	MAX 21-0 21-0 21-0 21-0 19-0	MIN 17.0 19.0 19.0 19.0 17.0	MAX 23.0 21.0 20.0 21.0 22.0 22.0	MIN 18.0 19.0 19.0 20.0 19.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0	MAX 22.0 22.0 23.0 21.0 21.0	MIN 21.0 20.0 19.0 19.0 21.0
1 2 3 4 5 6 7 8 9	14-0 13-0 13-0 13-0 13-0 13-0 14-0 14-0 15-0	MIN 13.0 12.0 12.0 12.0 13.0 12.0 12.0 13.0	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 16.0 15.0	MAX 21-0 21-0 21-0 19-0 19-0 19-0 20-0 21-0	MIN 17.0 19.0 19.0 17.0 16.0 16.0 18.0	MAX 23-0 21-0 20-0 21-0 22-0 23-0 23-0 23-0 24-0	MIN 18.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 21.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0 19.0 20.0	MAX 22.0 22.0 23.0 21.0 21.0 20.0 20.0 20.0 22.0	MIN 21.0 20.0 19.0 21.0 20.0 20.0 20.0 20.0
1 2 3 4 5 6 7 8 9 10	MAX 14-0 13-0 12-0 13-0 13-0 14-0 14-0 15-0	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 13-0 14-0	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 16.0 15.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 21.0	MIN 17.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0	MAX 23.0 21.0 20.0 21.0 22.0 22.0 23.0 23.0 23.0 24.0	MIN 18.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 21.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 19.0 19.0 19.0 19.0 20.0 20.0	MAX 22.0 22.0 23.0 21.0 21.0 21.0 20.0 20.0 22.0 22.0	MIN 21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 14-0 13-0 12-0 13-0 13-0 13-0 14-0 15-0	MIN 13.0 12.0 12.0 12.0 12.0 13.0 12.0 14.0 14.0 14.0 12.0	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 15.0 16.0 15.0 16.0 15.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0	MIN 17.0 19.0 19.0 19.0 17.0 16.0 17.0 18.0 19.0 18.0	MAX 23.0 21.0 20.0 21.0 22.0 23.0 23.0 24.0 21.0 21.0 22.0	MIN 18.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 21.0 21.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 23.0 22.0 22.0 22	MIN 20.0 20.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	MAX 22.0 23.0 21.0 21.0 20.0 20.0 20.0 22.0 22.0 22	MIN 21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 14-0 13-0 12-0 13-0 13-0 14-0 14-0 15-0	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 13-0 14-0	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 16.0 15.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 21.0	MIN 17.0 19.0 19.0 19.0 17.0 16.0 18.0 18.0	MAX 23.0 21.0 20.0 21.0 22.0 22.0 23.0 23.0 23.0 24.0	MIN 18.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 21.0	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 19.0 19.0 19.0 19.0 20.0 20.0	MAX 22.0 22.0 23.0 21.0 21.0 21.0 20.0 20.0 22.0 22.0	MIN 21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0 20.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14-0 13-0 12-0 13-0 13-0 13-0 14-0 14-0 15-0 15-0 13-0 13-0	MIN 13.0 12.0 12.0 12.0 13.0 12.0 13.0 14.0 14.0 13.0 12.0 13.0	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 15.0 15.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 14.0 15.0 15.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	MIN 17.0 19.0 19.0 17.0 16.0 16.0 18.0 18.0 18.0 18.0	MAX 23.0 21.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 21.0 21.0 22.0 22.0	MIN 18.0 19.0 19.0 20.0 19.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0	MAX 22.0 23.0 21.0 21.0 21.0 20.0 20.0 22.0 22.0 22	MIN 21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0 19.0 20.0 19.0 20.0
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 15 16 7 18 19 20 21 22 23 24 25 26 7 28 8 7 9	HAX 14.0 13.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 13-0 14-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 15.0 16.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 17.0 18.0	MIN 16.0 15.0 16.0 16.0 14.0 14.0 15.0 15.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 19.0 19.0 17.0 16.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0	MAX 23.0 21.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 19.0 19.0 20.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 23.0 21.0 21.0 20.0 20.0 22.0 22.0 22.0 22	MIN 21.0 20.0 19.0 19.0 22.0 20.0 20.0 20.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 17.0 16.0 16.0 17.0 18.0
1 2 3 4 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	HAX 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	MAX 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 21.0 21.0 21.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 26.0	MIN 17.0 19.0 19.0 17.0 16.0 17.0 18.0 19.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0	MAX 23.0 21.0 20.0 21.0 22.0 23.0 23.0 23.0 24.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 19.0 19.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 23.0 21.0 21.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 21.0 20.0 19.0 19.0 22.0 20.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 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	HAX 14.0 13.0 12.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	MAX 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	HIN 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 17.0 19.0 19.0 17.0 16.0 17.0 18.0 19.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0	MAX 23.0 21.0 20.0 20.0 21.0 22.0 23.0 23.0 24.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 19.0 19.0 20.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MAX 22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.	MIN 20.0 20.0 20.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 23.0 21.0 21.0 20.0 20.0 22.0 22.0 22.0 21.0 21	MIN 21.0 20.0 19.0 19.0 22.0 20.0 20.0 20.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 3 4 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	HAX 14-0 13-0 12-0 13-0 13-0 13-0 13-0 14-0 14-0 14-0 15-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MIN 13-0 12-0 12-0 12-0 12-0 12-0 12-0 13-0 14-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	17.0 17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 15.0 16.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HIN 16.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 21.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	MIN 17.0 19.0 19.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21	MAX 23.0 21.0 20.0 20.0 21.0 22.0 23.0 23.0 24.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 19.0 19.0 20.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 19.0 21.0 21.0 19.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 21.0 20.0 22.0 22.0 22.0 22.0	MIN 20.0 20.0 20.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	22.0 22.0 23.0 21.0 21.0 20.0 22.0 22.0 22.0 22.0 21.0 21	21.0 20.0 19.0 19.0 21.0 20.0 20.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0

11477000 EEL RIVER AT SCOTIA, CALIF. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	(MG/L)	DISCHARGE (TONS/DAY)
1 2	149 212	4 30	1.6 17	247 246	6	2.7 4.0	3710 3680	1130 780	11300 7750
3	488	34	45	246	9	6.0	12900	1180	42600
4	716	35	68	228	11	6.8	20700	2860	161000
5	882	40	95	233	10	6.3	34200	3860	367000
6	821	48	106	220	8	4.8	17700	1440	75000
7	652	34	60	219	5	3.0	18000	1720	89400
8 9	506 392	14	19 6.4	243 264	4 5	2.6 3.6	17300 9500	1100 520	51400 13300
10	346	4	3.7	261	ģ	6.3	6310	330	5620
				273	17	13	5060	230	3140
11 12	342 285	4	3.7 3.1	261	20	14	4100	160	1770
13	259	4	2.8	320	23	20	3480	100	940
14	244 237	3	2.0	1200 1970	237 252	822 1440	2860 2400	40 45	309 292
15	237	3	1.9	1970	252	1440	2400	40	
16	228	3	1.8	2030	253	1390	2120	40	229
17 18	217 204	4	2.3 2.2	1260 885	105 55	357 131	2040 4120	35 576	193 8130
18	197	4	2.1	692	35	65	7280	903	18100
20	192	4	2.1	573	26	40	5170	290	4050
21	201	3	1.6	502	15	20	3750	125	1270
22	276	3	1.8	438	10	12	3080	45	374
23	265	4	2.9	383	7	7.2	285D	45	346
24	323	5 5	4.4	345 321	6	5.6 5.2	2960 3270	80 100	639 883
25	325	,	4.4	5/1	ь	9.2	3210	100	
26	302	4	3.3	306	5	4.1	3710	95	952
27 28	291 285	3	2.4 2.3	327 340	4 20	3.5 18	3970 4150	85 80	911 896
28	279	3	2.3	731	220	434	3720	60	603
30	275	3	2.2	2610	1330	10500	3140	59	500
31	261	3	2.1				2740	39	289
TOTAL	10602		475.4	18174		15347.7	219970		869186
		JANUARY			FEBRUARY			MARCH	
					FEBRUARY			MARCH	
	MFÅN	MEAN	SEDIMENT	MEAN	MEAN	CENTMENT	MEAN	MEAN	
	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE		SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT
DAY		MEAN CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)		MEAN CONCEN-	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 2380 2170	MEAN CONCEN- TRATION (MG/L) 22 10	DISCHARGE (TONS/DAY) 141 59	DISCHARGE (CFS) 19200 34400	MEAN CONCEN- TRATION (MG/L) 800 1490	DISCHARGE (TONS/DAY) 41500 191000	DISCHARGE (CFS) 10800 8810	MEAN CONCEN- TRATION (MG/L) 280 110	DISCHARGE (TONS/DAY) 8160 2620
1 2 3	DISCHARGE (CFS) 2380 2170 1990	MEAN CONCEN- TRATION (MG/L) 22 10 9	DISCHARGE (TONS/DAY) 141 59 48	DISCHARGE (CFS) 19200 34400 52000	MEAN CONCEN- TRATION (MG/L) 800 1490 2630	DISCHARGE (TONS/DAY) 41500 191000 369000	DISCHARGE (CFS) 10800 8810 7720	MEAN CONCEN- TRATION (MG/L) 280 110 140	DISCHARGE (TONS/DAY) 8160 2620 2920
1 2 3 4	DISCHARGE (CFS) 2380 2170 1990 1850	MEAN CONCEN- TRATION (MG/L) 22 10	DISCHARGE (TONS/DAY) 141 59 48 55	DISCHARGE (CFS) 19200 34400 52000 37500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070	DISCHARGE (TONS/DAY) 41500 191000 369000 108000	DISCHARGE (CFS) 10800 8810 7720 6850	MEAN CONCEN- TRATION (MG/L) 280 110 140 470	DISCHARGE (TONS/DAY) 8160 2620 2920 8690
1 2 3 4	DISCHARGE (CFS) 2380 2170 1990 1850 1710	MEAN CONCEN- TRATION (MG/L) 22 10 9 11	DISCHARGE (TONS/DAY) 141 59 48 55	DISCHARGE (CFS) 19200 34400 52000 37500 24500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900	10800 8810 7720 6850 6560	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620
1 2 3 4 5	DISCHARGE (CFS) 2380 2170 1990 1850 1710	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11	DISCHARGE (TONS/DAY) 141 59 48 55 51	DISCHARGE (CFS) 19200 34400 52000 37500 24500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900	DISCHARGE (CFS) 10800 8810 7720 6850 6560	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170
1 2 3 4	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580	MEAN CONCEN- TRATION (MG/L) 22 10 9 11	DISCHARGE (TONS/DAY) 141 59 48 55	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1540 1550	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17 13 250	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 15500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 550	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900 23000 21900	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260 190 140	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810
1 2 3 4 5	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1540	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 15500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 550	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900 23000	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260 190	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1540 1550 37400	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17 13 250	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 15500	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 550	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900 23000 21900	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260 190	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 37400 28300	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 600 700 770	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 5920 5930 4800 4360 400	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260 190 140 80	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1540 1550 37400 28300 13300 13600	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 870 1260	DISCHARGE (TONS/DAY) L41 59 48 55 51 58 73 54 1050 487000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 15500 12000 10800 9640 8700	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 550 600 700 770 700	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21000 22700 22500 18200 11700	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6590 5920 5330 4800 4360 4030 6070 16400	MEAN CONCENTRATION (MG/L) 280 110 1440 470 2560 190 1440 80 50 110 2340	DISCHARGE (TUNS/DAY) R160 2620 2920 8690 7620 6170 4160 2730 1810 942 544 1800 106000
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 37400 28300	MEAN CONCEN- TRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000	MEAN CONCEN- TRATION (MG/L) 800 1490 2630 1070 830 670 560 600 700 770	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 5920 5930 4800 4360 400	MEAN CONCEN- TRATION (MG/L) 280 110 140 470 430 350 260 190 140 80	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 7380 2170 1990 1850 1710 1650 1580 1540 1550 37400 28300 13300 13400 60500	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 11 13 250 4820 1860 870 1260 6650	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 1150000 2140000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 15500 12000 10800 9640 8700 8700 8000 7430	MEAN CONCENTRATION (MG/L) 800 1490 2630 1070 830 670 550 600 700 500 290 230	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900 23000 21900 22700 22700 22700 11700 6260 4610	DISCHARGE (CFS) 10800 RR10 7720 6850 6560 6530 5920 5330 4360 4030 6070 16400 20700	MEAN CONCENTRATION (MG/L) 280 110 1400 470 4300 1900 1900 100 100 100 100 100 100 100	DISCHARGE (TUNS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1540 1550 37400 28300 13400 13500 60500	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 250 4820 1860 1860 5820 4600	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 31200 49400 1150000 2140000 757000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 17800 15500 12000 10800 9640 8700 8000 7430	MEAN CONCENTRATION (MG/L) ROO 1490 1690 1700 500 770 700 290 230 240	DISCHARGE (TONS/DAY) 415/00 191000 369000 108000 54900 26900 21900 21900 22700 22500 18200 11700 6260 4610	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 6530 5920 5330 4800 4360 4030 6070 16400 20700 20400	MEAN CONCENTRATION (MG/L) 280 110 140 260 190 140 80 50 110 2340 1920 1420 2780	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544 1800 107000 107000 79400
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13300 13300 13300 13300 13000 60500 113000 60200 40000 26800	MEAN CONCENTRATION (MG/L) 22 10 9 11 1 13 17 13 250 4820 1260 5820 6650 4600 2380 1660 1660	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 3120000 757000 257000 120000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100	MEAN CONCENTRATION ROO 1490 1690 1700 1690 1700 1690 1700 1690 1700 1700 1700 1700 1700 1700 1700 17	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 20700 24400 33700 22800	MEAN CONCENTRATION (MG/L) 280 110 120 280 190 140 470 280 190 140 290 280 280 280 280 280 280 280 280 280 28	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400
1 2 3 4 4 5 6 7 8 9 10 11 12 13 11 14 15 16 17 18 19	DISCHARGE (CFS) 7380 7170 1990 1850 1710 1650 1580 1580 1580 13400 28300 13400 60500 113000 60700 40000 26800 18700	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 870 1260 5820 6650 4600 2380 1660 1180	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 73 1054 487000 1158000 31200 49400 1150000 2140000 757000 257000 120000 59600	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8700 8700 8700 6860 13100 15800	MEAN CONCENTRATION (MG/L) ROO 1490 26-30 1070 830 670 550 600 700 7700 720 290 230 240 1080 1180 1180	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 229000 221900 22700 22700 22500 11700 6260 4610 4560 9480 38200 54400	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 6530 5920 5330 4800 4360 4030 6070 16400 20700 22800 16700	MEAN CONCENTRATION (MG/L) 280 1100 1400 4700 430 350 2600 190 1400 4700 2340 1400 2340 1420 2780 8840 840 470	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400 193000 153000 51700 21200
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 7380 7170 1990 1850 1710 1650 1580 1580 1580 13400 28300 13300 13300 13300 13300 13700 60200 60200 60200 60800 18700 18700	MEAN CONCENTRATION (MG/L) 22 10 9 9 11 11 13 17 13 250 4820 1860 870 1260 5820 6650 4660 1660 1180 840	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 1158000 31200 49400 1150000 2140000 757000 227000 120000 59600 31500	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8700 8700 8700 13100 15800 7430 7040 87400 15800 74200	MEAN CONCENTRATION ROO 1490 1690 1700 1690 1700 1690 1700 1690 1700 1700 1700 1700 1700 1700 1700 17	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 20700 24400 33700 22800	MEAN CONCENTRATION (MG/L) 280 110 120 280 190 140 470 280 190 140 290 280 280 280 280 280 280 280 280 280 28	DISCHARGE (TONS/DAY) 8160 2620 2920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400
1 2 3 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	01SCHARGE (CFS) 2380 2170 1970 1850 1710 1650 1580 1580 27400 28300 13300 13600 60500 113000 60200 40000 26800 18700 13900	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 870 1280 6650 4600 2380 1180 8580	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 312000 2140000 757000 120000 59600 31500 17900	DISCHARGE (1700) 34400 52000 37500 24500 20200 17800 13500 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100 15800 15800 65100	MEAN CONCENTRATION (MG/L) R00 1490 2630 10770 830 670 550 600 700 700 290 230 1180 4180 480 3480	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4360 4030 6070 16400 20700 22800 16700 139700 22800 16700 10900	MEAN CONCENTRATION (MG/L) 280 1100 140 470 250 190 110 2300 110 2300 110 2300 1420 1420 1420 1420 1420 360 360 360	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 779400 193000 153000 51700 21200 13300
1 2 3 3 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13800 13800 13800 13800 113000 60200 113000 18700 13900	MEAN CINCENTRATION (MG/L) 22 10 10 9 11 11 11 12 13 17 13 250 4820 1860 870 1260 6650 4600 1860 1860 1840 580 4650	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 1050 487000 158000 2120000 757000 12100000 757000 1290000 159000 1190000 1190000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8000 7430 7040 15100 15800 74200 65100 65100	MEAN CONCENTRATION (MG/L) ROO 1490 2630 1070 830 670 550 600 700 770 720 290 230 240 1180 4980 3480 4210 6210	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 22900 22900 22900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000 387000	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 6530 5920 5330 4800 4360 4030 6070 16400 20700 22800 16700 13000 10900 9430	MEAN CONCENTRATION (MG/L) 280 1100 1400 4700 2600 1900 1400 2340 1400 2340 1420 2780 8840 470 380 360 410	DISCHARGE (TONS/DAY) 8160 2620 27920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 77400 193000 153000 51700 21200 13300 106000
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 74	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13800 13800 13800 13800 113000 60200 113000 11400 9820 8520 8520	MEAN CONCENTRATION (MG/L) 22 10 9 9 11 11 13 17 13 250 4820 1860 870 1260 6650 4600 2380 1660 1180 840 580 450 460 370	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 1050 487000 11580000 21400000 2570000 2570000 2570000 1590000 2570000 1190000 2570000 1190000 2770000 1190000 2770000 1190000 2770000 1190000 2770000 119000 277000	DISCHARGE (1700) 34400 52000 37500 24500 20200 17800 13500 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100 15800 15800 65100	MEAN CONCENTRATION (MG/L) R00 1490 2630 10770 830 670 550 600 700 700 290 230 1180 4180 480 3480	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4360 4030 6070 16400 20700 22800 16700 139700 22800 16700 10900	MEAN CONCENTRATION (MG/L) 280 1100 140 470 250 190 110 2300 110 2300 110 2300 1420 1420 1420 1420 1420 360 360 360	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 779400 193000 153000 51700 21200 13300
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 7380 2170 1990 1850 1710 1650 1580 1580 1580 13300 13300 13300 13300 13400 60500 113000 607200 40000 26800 113700 13990	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 1260 1260 1280 1460 2380 1460 1460 2460 2460 2460 2460 2460 2460 2460 2	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 312000 49400 1150000 2140000 757000 120000 59600 31500 17900	DISCHARGE (SCHARGE) 19200 34400 52000 37500 24500 20200 15500 13500 12000 10800 9640 8760 8560 13100 15800 74200 65100 59500 51400	MEAN CONCENTRATION (MG/L) R00 1490 2630 1070 830 670 550 600 700 770 720 230 240 410 1180 4980 3480 2410 2030	DISCHARGE (TONS/DAY) 4 15/00 19 1000 36 9000 10 8000 5 4900 2 3000 2 1900 2 2700 2 22500 18 200 11700 6 260 4 610 4 560 9 480 3 8 200 5 4 400 10 20000 6 16 000 3 8 7000 2 8 2000	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 22800 16700 13700 22800 16700 13000	MEAN CONCENTRATION (MG/L) 280 1110 240 470 80 120 120 140 470 140 140 140 140 140 140 140 140 140 14	DISCHARGE (TONS/DAY) 8160 2620 27920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 779400 193000 153000 51700 21200 13300 10600 10400 10500
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23 24 25 27 27 27 27 27 27 27 27 27 27 27 27 27	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13300 13300 13300 13300 13300 13300 13300 13300 13300 13400 26800 13700 13900 14700 13900	MEAN CINCENTRATION (MG/L) 22 10 9 9 11 11 11 13 17 13 250 4820 1860 870 1260 5820 6650 4600 1860 1860 1860 1870 1260 5820 6650 4600 370 260	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 1050 487000 158000 31200 49400 2140000 757000 257000 129000 59600 31500 17900 11900 9200 7630 4920	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 13500 12000 10800 9640 8700 8700 8700 13100 15800 7430 70430 7430 7430 7640 65100 59500 51400	MEAN CONCENTRATION (MG/L) ROO 1490 26-30 1070 670 670 670 670 670 670 670 670 670	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 26900 21900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000 387000 282000 215000	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 6530 5920 5330 4800 4360 4030 6070 16400 20700 22800 16700 12800 16700 19900 9430 8650 7960 8200	MEAN CONCENTRATION (MG/L) 280 1100 1240 260 190 1400 2340 1400 2340 1420 2780 840 470 380 360 440 450 480 570	DISCHARGE (TONS/DAY) 8160 2620 27920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 77400 193000 153000 51700 21200 13300 10600 105000 105000 105000 105000 105000 105000 105000 105000 105000 105000 105000 105000 105000 105000
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13300 13300 13300 13300 13300 13300 13300 13300 13300 13900 113000 113000 113000 113000 113000 113000 113000 113000 11400 18700	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 870 1260 6650 4600 2380 1660 1180 450 460 370 260	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 1050 487000 1158000 2140000 22140000 757000 22140000 757000 119000 257000 119000 2980 11900 2980	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8700 7430 7040 8560 13100 15800 74200 65100 51400 44400 31600 23800 19000	MEAN CONCENTRATION (MG/L) ROO 1490 26-30 1070 830 670 5500 600 700 7700 290 230 240 1180 4980 3480 4980 3480 840 840 840 840 840 840 840 840 840	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 29000 21900 22700 22500 18200 11700 62600 45400 387000 284000 282000 215000 616000 387000 282000 612000	DISCHARGE (CFS) 10800 8810 7720 6850 6550 6550 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 22400 33700 22400 13000 13000	MEAN CONCENTRATION (MG/L) 280 110 140 470 430 350 260 190 140 140 140 140 140 140 140 140 140 14	DISCHARGE (TONS/DAY) 8160 2620 27920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 779400 193000 153000 51700 21200 13300 10600 10400 10500 10500 10500 10500
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 7 28	OISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 28300 13300 13300 13600 60500 113000 60200 40000 26800 113700 13900 11400 9820 7640 76560 6140 6560 6140	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 177 13 250 4820 1870 1280 6650 4600 370 2500 370 260 180 180 180 180 180 180 180 180 180 18	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 31200 49400 1150000 2140000 757000 120000 59600 31500 17900 11900 9200 7630 4920 3190 2980 6000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100 15800 74200 65100 59500 51400 44400 31600 23800 19000	MEAN CONCENTRATION (MG/L) R00 1490 2630 1070 830 670 550 600 700 7700 230 240 2410 1080 4980 3480 2410 2030 1790 1310 980 840 840	DISCHARGE (TONS/DAY) 415/00 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000 387000 282000 215000 1120000 63000 43100	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 22800 16700 13700 22800 16700 13900 19430 8650 7960 7960	MEAN CONCENTRATION (MG/L) 280 110 140 470 250 190 1140 270 11	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400 193000 113000 113000 113000 113000 106000 1050000 1050000 1050000 1050000 1050000 1050000 10500000 105000000 10500000000
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 11 14 15 16 7 1 18 11 9 20 21 22 23 24 25 26 27 28 29 29	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13300 13300 13300 13300 13300 13300 13300 13300 13900 113000 18700	MEAN CONCENTRATION (MG/L) 10 0 9 9 11 11 12 13 17 13 250 4820 1860 870 1260 5820 6650 4600 2380 1660 1180 370 260 180 370 260 180 370 370 370 370 380 860 860 860 860 860 860 860 860 860 8	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 1050 487000 1158000 31200 49400 21400000 757000 221400000 757000 119000 257000 119000 11900	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8700 7430 7040 8560 13100 15800 74200 65100 51400 44400 31600 23800 19000	MEAN CONCENTRATION (MG/L) ROO 1490 26-30 1070 6700 7700 7700 700 700 290 230 240 410 1080 4980 3480 4980 1180 4980 840 760 600 600 600 600 600 600 600 600 60	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 36500 29000 21900 22700 22500 18200 11700 62600 45400 387000 284000 282000 215000 616000 387000 282000 612000	DISCHARGE (CFS) 10800 8810 7720 6850 5920 5920 5930 4800 4360 4030 6070 16400 20700 22800 16700 13000 10900 9430 8650 7960 7960 7080 6580	MEAN CONCENTRATION (MG/L) 280 1100 1240 260 260 260 190 1440 270 260 260 260 2780 840 470 380 570 800 570 800 450 450 450 450 450 450 450 450 450 4	DISCHARGE (TONS/DAY) 8160 2620 27920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 77400 193000 153000 51700 21200 13300 10600 10500 10500 10500 20400 12600 20400 16100 8600 3730
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 7 28	OISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 28300 13300 13300 13600 60500 113000 60200 40000 26800 113700 13900 11400 9820 7640 76560 6140 6560 6140	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 177 13 250 4820 1870 1280 6650 4600 370 2500 370 260 180 180 180 180 180 180 180 180 180 18	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 31200 49400 1150000 2140000 757000 120000 59600 31500 17900 11900 9200 7630 4920 3190 2980 6000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100 15800 74200 65100 59500 51400 44400 31600 23800 19000	MEAN CONCENTRATION (MG/L) R00 1490 2630 1070 830 670 550 600 700 7700 230 240 2410 1080 4980 3480 2410 2030 1790 1310 980 840 840	DISCHARGE (TONS/DAY) 415/00 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4610 4560 9480 38200 54400 1020000 616000 387000 282000 215000 1120000 63000 43100	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 22800 16700 13700 22800 16700 13900 19430 8650 7960 7960	MEAN CONCENTRATION (MG/L) 280 110 140 470 250 190 1140 270 11	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 106000 107000 79400 193000 113000 113000 113000 113000 106000 1050000 1050000 1050000 1050000 1050000 1050000 10500000 105000000 10500000000
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 3 24 25 26 27 7 28 29 30	DISCHARGE (CFS) 2380 2170 1990 1850 1710 1650 1580 1580 1580 13800 13800 13800 60500 118000 60200 40000 26800 113700 13900 11400 9820 7640 7010 6560 6140 6170 13000 37000	MEAN CONCENTRATION (MG/L) 22 10 9 11 11 13 17 13 250 4820 1860 870 1280 6650 4600 2380 1180 840 2580 4600 370 260 370 260 380 180 380 380 380 380 380 380 380	DISCHARGE (TONS/DAY) 141 59 48 55 51 58 73 54 1050 487000 158000 312000 49400 1150000 2140000 757000 120000 59400 31500 17900 11900 2200 7630 4920 3190 2980 6000 30200 3045000	DISCHARGE (CFS) 19200 34400 52000 37500 24500 20200 17800 13500 12000 10800 9640 8700 8000 7430 7040 8560 13100 15800 74200 65100 59500 51400 44400 31600 23800 19000 15700	MEAN CONCENTRATION (MG/L) R00 1490 2630 1070 830 670 550 600 700 7700 230 240 2410 1080 4980 3480 2410 2410 2410 2410 2410 2410 2410 241	DISCHARGE (TONS/DAY) 41500 191000 369000 108000 54900 26900 23000 21900 22700 22500 18200 11700 6260 4450 9480 38200 54400 1020000 616000 387000 282000 215000 43100 32200 215000 215000	DISCHARGE (CFS) 10800 8810 7720 6850 6560 6530 5920 5330 4800 4800 4360 4030 6070 16400 20700 22800 16700 13700 22800 16700 13000 10900 9430 8650 7960 8200	MEAN CONCENTRATION (MG/L) 280 110 140 470 260 190 110 2340 80 470 380 470 380 470 380 750 480 750 480 750 480 750 480 750 480 750 480 750 480 750 480 750 480 750 750 750 750 750 750 750 750 750 75	DISCHARGE (TONS/DAY) 8160 2620 7920 8690 7620 6170 4160 2730 1810 942 544 1800 107000 79400 193000 1133000 51700 21200 133000 106000 105000 105000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200 133000 21200

EEL RIVER BASIN 11477000 EEL RIVER AT SCOTIA, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MEAN CONCEN-TRATION MEAN MEAN SEDIMENT Discharge (Tons/Day) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE MFAN SEDIMENT DISCHARGE (TONS/DAY) MEAN CONCEN-TRATION MEAN DISCHARGE (CFS) DISCHARGE DISCHARGE (CFS) (TONS/DAY) DAY (CFS) (MG/L) (MG/L) 1460 1160 922 6.8 6.5 6.2 6.1 46 3 3 3 3 2 3 4 5 4720 4270 91 80 78 1400 1370 768 752 33 29 6.2 88 107 92, 6.0 5.8 7.5 7.4 8.6 21 20 19 15 7 8 9 3210 3070 927 763 1210 1160 690 684 639 5 2840 2740 2560 322 326 304 583 561 543 531 42 3 2 3 3 3 4.9 12 13 14 1130 1210 15 16 3.1 4.5 4.4 4.3 44 41 4.2 4.1 3.9 3.8 17 18 19 20 3 3 3 3 2120 1990 1910 27 26 27 155 140 139 986 982 13 13 14 481 466 443 5 5 5 3.6 1580 1380 1260 19 7 399 370 371 352 2.2 3.2 3.0 3.0 2.9 1800 3 3 3 24 20 18 18 81 26 20 21 23 24 25 93 81 79 21 17 13 12 9.5 1090 1030 946 921 876 327 312 299 298 2.8 2.6 2.5 3.2 3.2 27 28 29 30 31 1510 1510 1480 1430 15 15 14 61 60 54 TOTAL 727.5 136.5

		JULY			AUGUST			SEPTEMBER	l .
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	289	5	3.9	130	3	1.1	270	4	2.9
2	277	5	3.7	129	3	1.0	245	3	2.0
3	276	4	3.0	128	3	1.0	220	4	2.4
4	268	4	2.9	127	3	1.0	208	4	2.2
5	275	4	3.0	126	3	1.D	171	5	2.3
6	266	4	2.9	127	3	1.0	161	5	2.2
7	254	3	2.1	128	3	1.0	154	5	2.1
8	247	2	1.3	129	4	1.4	157	5	2.1
9	235	5	1.3	131	5	1.8	148	5	2.0
10	226	3	1.8	128	4	1.4	130	5	1.8
11	212	4	2.3	130	4	1.4	123	5	1.7
12	203	5	2.7	126	3	1.0	167	5	2 • 3
13	196	4	2.1	125	3	1.0	302	4	3.3
14	191	4	2.1	136	4	1.5	352	3	2.9
15	180	3	1.5	131	5	1.8	259	3	2.1
16	176	3	1.4	131	5	1.8	196	4	2.1
17	170	3	1.4	128	5	1.7	164	5	2.2
18	164	3	1.3	135	5	1.8	146	5	2.0
19	159	3	1.3	140	5	1.9	180	5	2.4
20	156	3	1.3	182	6	2 • 9	167	5	2.3
21	151	3	1.2	243	13	8.5	149	5	2.0
22	152	3	1.2	386	39	41	197	5	2.7
23	141	3	1.1	860	66	153	136	5	1.8
24	143	3	1.2	642	13	23	134	5	1.8
25	140	3	1.1	533	5	7.2	199	•	2.1
26	138	3	1.1	440	5	5.9	298	4	3.2
27	136	3	1.1	404	5	5.5	252	5	3.4
28	134	3	1.1	374	5	5.0	154	5	2.1
29	132	3	1.1	350	4	3.8	137	5	1.8
30	131	3	1.1	315	3	2.6	134	5	1.8
31	130	3	1.1	290	3	2.3			
TOTAL	5948		55.7	7484		286.3	5710		68.0

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

11435189.1

11477000 EEL EIVER AT SCOTIA, CALIF. -- Continued

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY		CONCENTRATION OF SUSPENDED SEDIMENT	TURBIDITY
DATE OF COLLECTION	(MG/L)	(MG/L SILICA)	DATE OF COLLECTION	(MG/L)	(MG/L SILICA)
OCT. 18, 1967	4	2	MAR. 1	287	185
OCT. 21	3	2	MAR. 4	540	105
OCT. 24	5	2	MAR. 6	381	86
DCT. 27	3	2	MAR. B	212	70
OCT. 31	3	2	MAR. 10	90	42
NOV. 4	11	2			
	_	_	MAR. 13	2440	630
NDV. 7	5	1	MAR. 15	1320	410 525
NOV. 9	.5	4 7	MAR. 17	1410	220
NOV. 11	18 306	210	MAR. 19	427 424	120
NOV. 14	293	210	MAR. 22	424	120
MUV. 10	273	210	MAR. 25	581	120
NDV. 18	58	56	MAR. 27	1080	115
NDV. 20	28	22	MAR. 29	200	66
NOV. 22	- 9	7	APR. 2	101	48
NDV. 24	5	2	APR. 5	80	32
NOV. 26	5	2			
			APR. B	108	25
NDV. 29	283	260	APR. 10	44	19
OEC. 2	730	440	APR. 12	41	20
DEC . 4	2450	600	APR. 15	38 33	20 10
DEC. 5	4480 2100	1300 1080	APR. 17	33	10
DEC. 7	2100	1080	APR. 20	27	9
DEC. B	876	800	APR. 23	16	ý
DEC. 9	478	368	MAY 1	14	2
OEC. 13	113	57	MAY 4	9	4
DEC. 15	50	30	MAY 7	7	2
DEC. 17	29	20			
			MAY 11	4	1
DEC. 19	1010	412	MAY 14	5	1
DEC. 21	133	152	MAY 18	. 5	1
DEC - 23	51	30	MAY 22	14	6
DEC. 26	82	37	MAY 25	8	4
DEC. 30	63	54	MAY 29	5	1
JAN. 1. 1968	24	22	JUNE 1	á	â
JAN. 5	10	8	JUNE 4	3	i
JAN. 9	296	135	JUNE 7	3	1
JAN. 10	7020	2450	JUNE 10	4	O
JAN. 12	1130	385			
			JUNE 12	2	1
JAN. 14	4100	1280	JUNE 15	3	1
JAN. 15	6970	1520	JUNE 18	3	0
JAN. 17	2460	850	JUNE 21	1	0 0
JAN. 19	1240 540	430 220	JUNE 24	2 2	ů
JAN. 21	240	220	JUNE 27	2	v
JAN. 23	400	150	JUNE 30	4	2
JAN. 25	246	105	JULY 5	2	2
JAN. 28	390	50	JULY B	2	0
JAN. 30	3730	1100	JULY 9	1	1
FEB. 1	756	335	JULY 12	5	2
		_	JULY 21	2	2
FEB. 7	574	270			2
FE8. 9	564	220	JULY 28	4	2
FEB. 11	777	170	AUG. 4	3	2
FEB. 13	504	120	AUG. 11	3	2
FE8. 15	216	84	AUG. 18	6	1 2
560 17	451	91	AUG. 25 SEPT. 4	4	3
FEB. 17	451 4730	2080	SEP1. 7	₹	-
FE8. 24	1680	2080 585			
FEB. 26	995	420			
FEB. 28	772	255			
	· · · -	== =			

307

11477500 VAN DUZEN RIVER NEAR DINSMORES, CALIF.

LOCATION. -- Lat 40°29'05", long 123°39'25", in NW 3 sec.7, T.1 N., R.5 E., Trinity 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 1968.

EXTREMES, --1967-68:
Water temperatures: Maximum, 24.0°C on several days during July and August; minimum, freezing point Dec. 18, Jan. 13, 28, 29.

Period of record: Water temperatures: Maximum, 24.0°C on several days in 1966-68; minimum, freezing point on several days during winter periods.

REMARKS .-- Recorder malfunction Sept. 1-30.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	or.	TOBER	MOV	EMBER	nec	EMBER		NUARY	5505	RUARY	WA	RCH
									MAX	MIN	MAX	MIN
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	14.0	13.0	11.0	7.0	4.0	5.0	3.0	4.0	3.0	9.0	8.0
2	14.0 15.0	11.0 11.0	13.0 13.0	11.0	6.0 5.0	3.0 3.0	4.0 4.0	2.0 1.0	4.0 6.0	2.0 3.0	12.0 12.0	7.0 7.0
4	15.0	13.0	12.0	12.0	6.0	4.0	4.0	2.0	7.0	3.0	11.0	7.0
5	15.0	13.0	14.0	12.0	6.0	4.0	4.0	2.0	7.0	4.0	9.0	7.0
6	15.0	13.0	14.0	12.0	6.0	3.0	4.0	1.0	7.0	5.0	8.0	6.0
7	16.0	12.0	14.0	12.0	6.0	4.0	4.0	2.0	8.0	4. D	9.0	6.0
8	15.0	13.0 13.0	13.0	13.0	7.0	6.0	5.0	4.0 3.0	8.0	4.0	11.0	6.0
10	16.0 16.0	14.0	13.0 13.0	12.0 12.0	7.0 7.0	5.0 4.0	5.0 4.0	3.0	8.0 8.0	5.0 6.0	10.0	6.0 4.0
11	17.0	15.0	12.0	11.0	7.0	4.0	4.0	2.0	7.0	6.0	11.0	7.0
12	16.0	15.0	13.0	12.0	6.0	3.0	5.0	2.0	8.0	5.0	9.0	5.0
13	15.0	13.0	12.0	12.0	4.0	2.0	6.0	0.0	7.0	5.0	7.0	3.0
14	14.0	12.0	12.0	11.0	5.0	1.0	7.0	7.0	8.0	6.0	7.0	3.0
15	14.0	12.0	12.0	9.0	4.0	2.0	7.0	6.0	8.0	4.0	9.0	6.0
16	14.0	11.0	12.0	11.0	4.0	2.0	6.0	5.0	7.0	6.0	6.0	4.0
17	14.0 14.0	11.0	12.0	10.0	3.0	2.0	6.0	4.0 4.0	9.0 8.0	6.0	B.O 9.0	4.0 4.0
18 19	15.0	11.0 12.0	11.0	9.0 9.0	2.0 3.0	0.0 2.0	6.0 7.0	4.0	8.0	6.0 7.0	10.0	5.0
20	14.0	12.0	10.0	9.0	4.0	3.0	B. 0	4.0	9.0	7.0	10.0	4.0
21	13.0	12.0	10.0	9.0	5.0	3.0	8.0	6.0	9.0	8.0	9.0	6.0
22	15.0	13.0	9.0	8.0	6.0	4.0	B. 0	6.0	9.0	8.0	9.0	6.0
23	15.0	13.0	9.0	7.0	6.0	4.0	B.O	4.0	9.0	8.0	11.0	7.0
24	14.0 15.0	12.0	9.0	7.0	6.0	3.0	7-0	4-0 4-0	9.0 10.0	8.0	12.0 9.0	6.0 6.0
25		13.0	9.0	7.0	6.0	3.0	7.0		•	8.0		
26	14.0	12.0	7.0	6.0	6.0	3.0	4.0	2.0	11.0	7.0	10.0	6.0
27 28	13.0 14.0	12.0 12.0	7.0 8.0	6.0 6.0	6.0 6.0	3.0 3.0	4.0 2.0	2.0 0.0	11.0 11.0	7.0 7.0	11.0 13.0	6.0 7.0
29	12.0	11.0	8.0	4.0	6.0	3.0	1.0	0.0	11.0	6.0	13.0	8.0
30	13.0	11.0	4.0	3.0	5.0	2.0	3.0	1.0			13.0	8.0
31	13.0	11.0			4.0	2.0	4.0	3.0			13.0	7.0
MONTH	19.0	11.0	14.0	3.0	7.0	0.0	8.0	0.0	11.0	2.0	13.0	3.0
		PRIL		MAY		INF		JLY	A116	SUST	SEOT	EMBER
	•	PRIL		787	3,	UNE	34	JL 1	AUL	3U3 I		CHOCK
DAY					•	0.10	-					
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	MAX 10.0	MIN 8.0	MAX 16.0	MIN 11.0	MAX 20.0	MIN 15.0	MAX 21.0	MIN 17.0	MAX 24.0	MIN 21.0	MAX	MIN
	MAX 10.0 11.0	MIN 8.0 7.0	MAX 16.0 18.0	MIN 11.0 11.0	MAX 20.0 20.0	MIN 15.0 16.0	MAX 21.0 21.0	MIN 17.0 18.0	MAX 24.0 24.0	MIN 21.0 20.0	MAX	MIN
1 2 3 4	MAX 10.0 11.0 13.0 11.0	MIN 8.0 7.0 7.0 8.0	MAX 16.0 18.0 18.0 17.0	MIN 11.0 11.0 12.0 13.0	MAX 20.0 20.0 19.0	MIN 15.0	MAX 21.0	MIN 17.0	MAX 24.0	MIN 21.0	MAX	MIN
1 2 3	MAX 10.0 11.0 13.0	MIN 8.0 7.0 7.0	MAX 16.0 18.0 18.0	MIN 11.0 11.0 12.0	MAX 20.0 20.0 19.0	MIN 15.0 16.0 16.0	MAX 21.0 21.0 22.0	MIN 17.0 18.0 18.0	MAX 24.0 24.0 24.0	MIN 21.0 20.0 20.0	MAX	MIN
1 2 3 4 5	MAX 10.0 11.0 13.0 11.0 12.0	MIN 8.0 7.0 7.0 8.0 8.0	MAX 16.0 18.0 18.0 17.0 16.0	MIN 11.0 11.0 12.0 13.0 12.0	MAX 20.0 20.0 19.0 19.0 18.0	MIN 15.0 16.0 16.0 16.0 13.0	MAX 21.0 21.0 22.0 22.0	MIN 17.0 18.0 18.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0	MIN 21.0 20.0 20.0 19.0	MAX	HIN
1 2 3 4 5	MAX 10.0 11.0 13.0 11.0 12.0	MIN 8-0 7-0 7-0 8-0 8-0	MAX 16.0 18.0 17.0 16.0	MIN 11.0 11.0 12.0 13.0 12.0	MAX 20.0 20.0 19.0 19.0 18.0	MIN 15.0 16.0 16.0 13.0	MAX 21-0 21-0 22-0 22-0 23-0 24-0 23-0	MIN 17.0 18.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 24.0	MIN 21-0 20-0 20-0 19-0 18-0 18-0	MAX	HIN
1 2 3 4 5 6 7 8	MAX 10.0 11.0 13.0 11.0 12.0 13.0 13.0	#IN 8.0 7.0 7.0 8.0 8.0 7.0 8.0	MAX 16.0 18.0 18.0 17.0 16.0	MIN 11.0 12.0 13.0 12.0	MAX 20.0 20.0 19.0 19.0 16.0	MIN 15.0 16.0 16.0 13.0 13.0 13.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 24.0	MIN 17.0 18.0 19.0 19.0 19.0 19.0 20.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 24.0 24.0	MIN 21.0 20.0 20.0 19.0 18.0 18.0 19.0 20.0	MAX	#IN
1 2 3 4 5 6 7 8	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0	8.0 7.0 7.0 8.0 8.0 7.0 8.0 8.0	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0	MIN 11.0 12.0 13.0 12.0 12.0 9.0 11.0 13.0	MAX 20.0 20.0 19.0 19.0 16.0 15.0 18.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 20.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 23.0	MIN 21.0 20.0 20.0 19.0 18.0 18.0 19.0 20.0	MAX	#IN
1 2 3 4 5 6 7 8 9	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 16.0	#IN 8.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0	MAX 16.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0	MIN 11.0 12.0 12.0 12.0 12.0 11.0 11.0 13.0 13.0	MAX 20.0 20.0 19.0 19.0 15.0 15.0 19.0 19.0	MIN 15.0 16.0 16.0 13.0 13.0 14.0 14.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 23.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 20.0 19.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 24.0 23.0 23.0 24.0	MIN 21.0 20.0 20.0 19.0 18.0 18.0 19.0 20.0 19.0	MAX	# IN
1 2 3 4 5 6 7 8 9	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0	#IN 8.0 7.0 8.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0	MIN 11.0 11.0 12.0 13.0 12.0 9.0 11.0 11.0 13.0 13.0	MAX 20.0 20.0 19.0 19.0 18.0 15.0 16.0 19.0 19.0 19.0	MIN 15.0 16.0 16.0 13.0 13.0 14.0 15.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 23.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0	MIN 21.0 20.0 20.0 19.0 18.0 19.0 20.0 19.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 15.0 14.0	MIN 8.0 7.0 7.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	MIN 11.0 12.0 13.0 12.0 13.0 11.0 13.0 13.0 13.0	MAX 20.0 20.0 19.0 19.0 18.0 15.0 19.0 19.0 19.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 14.0 14.0 15.0	MAX 21.0 21.0 22.0 22.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0 23.0 23.0 24.0 23.0 23.0 23.0 23.0 23.0	MIN 21.0 20.0 20.0 19.0 18.0 19.0 20.0 19.0 19.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 15.0 14.0 14.0 14.0	MIN 8.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MIN 11.0 11.0 12.0 13.0 12.0 9.0 11.0 11.0 13.0 13.0	MAX 20.0 20.0 19.0 19.0 18.0 15.0 16.0 19.0 19.0 19.0	MIN 15.0 16.0 16.0 13.0 13.0 14.0 15.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 23.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0	MIN 21.0 20.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 16.0 15.0 14.0	#IN 8.0 7.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 14.0	MIN 11.0 12.0 13.0 13.0 11.0 11.0 13.0 13.0 12.0 12.0	MAX 20.0 20.0 19.0 19.0 18.0 15.0 18.0 19.0 19.0 19.0 19.0 19.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 14.0 15.0 16.0 13.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 23.0 22.0 22.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0	MAX 24.0 24.0 24.0 24.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0	MIN 21.0 20.0 20.0 19.0 18.0 19.0 20.0 19.0 19.0	MAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 11.0 13.0 12.0 13.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0	8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 11.0 11.0 12.0 12.0 12.0 11.0 11.0 13.0 13.0 13.0 11.0 11.0 11	MAX 20.0 20.0 19.0 19.0 18.0 15.0 18.0 19.0 19.0 19.0 17.0 19.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0	MAX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 22.0 22.0 22.0 22.0 22.0	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAX 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 21.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 19.0 18.0 19.0 18.0 17.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 16.0 14.0 14.0 12.0	#IN 8.0 7.0 8.0 8.0 8.0 9.0 10.0 10.0 9.0 8.0 9.0	MAX 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 17.0	MIN 11.0 11.0 12.0 12.0 9.0 11.0 13.0 12.0 11.0 13.0 12.0 11.0 12.0 11.0 11.0 11.0 11.0 11	MAX 20.0 20.0 19.0 19.0 18.0 15.0 19.0 19.0 19.0 19.0 19.0 12.0 21.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 13.0 17.0	MAX 21.0 21.0 22.0 23.0 24.0 23.0 24.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX 24.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 21.0 20.0 20.0	MIN 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 145 145 145 145 145 145 145 145 145	10.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 16.0 15.0 14.0 14.0 11.0 11.0 11.0 11.0	8.0 7.0 8.0 8.0 8.0 8.0 9.0 10.0	MAX 16.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0	MIN 11.0 11.0 12.0 13.0 12.0 11.0 11.0 13.0 12.0 12.0 11.0 11.0 11.0 12.0 11.0 11	MAX 20.0 20.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 21.0 21.0 22.0	MIN 15.0 16.0 16.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 17.0 18.0	21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 19.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0	24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 21.0 20.0 21.0	MIN 21.0 20.0 20.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 18.0 19.0 18.0 17.0 17.0 17.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 11.0 13.0 11.0 12.0 13.0 14.0 16.0 16.0 14.0 14.0 12.0	#IN 8.0 7.0 8.0 8.0 8.0 9.0 10.0 10.0 9.0 8.0 9.0	MAX 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 14.0 14.0 14.0 17.0	MIN 11.0 11.0 12.0 12.0 9.0 11.0 13.0 12.0 11.0 13.0 12.0 11.0 12.0 11.0 11.0 11.0 11.0 11	MAX 20.0 20.0 19.0 19.0 18.0 15.0 19.0 19.0 19.0 19.0 19.0 12.0 21.0	MIN 15.0 16.0 16.0 16.0 13.0 13.0 13.0 14.0 14.0 15.0 16.0 13.0 17.0	MAX 21.0 21.0 22.0 23.0 24.0 23.0 24.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX 24.0 24.0 24.0 24.0 23.0 24.0 23.0 23.0 23.0 23.0 21.0 20.0 20.0	MIN 21.0 20.0 20.0 20.0 19.0 18.0 18.0 19.0 19.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	HAX	#IN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	10.0 11.0 13.0 11.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 12.0	#IN 8.0 7.0 8.0 8.0 8.0 9.0 10.0 9.0 8.0 9.0 8.0 9.0 8.0	MAX 16.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	#IN 11.0 12.0 12.0 13.0 12.0 11.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 11	20.0 20.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 21.0 21.0 22.0	HIN 15.0 16.0 16.0 16.0 13.0 13.0 14.0 14.0 14.0 15.0 17.0 16.0 17.0 16.0 17.0 16.0 18.0 18.0	21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 23	MIN 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX 24-0 24-0 24-0 24-0 23-0 23-0 23-0 23-0 23-0 23-0 23-0 23	MIN 21.0 20.0 20.0 20.0 19.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 15.0	HAX	#IN
1 2 3 4 4 5 5 6 7 7 8 9 10 11 11 2 11 3 11 4 15 5 16 17 18 19 20 20 21 12 22	10.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 16.0 16.0 14.0 16.0 14.0 15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	8.0 7.0 8.0 8.0 8.0 8.0 8.0 9.0 10.0 10.0 8.0 9.0 9.0 7.0 8.0 9.0 7.0	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0	#IN 11.0 11.0 12.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11	20.0 20.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 11.0 21.0 21.0 22.0 22.0 22.0 22.0 22	HIN 15.0 16.0 16.0 16.0 13.0 13.0 14.0 14.0 15.0 16.0 13.0 16.0 13.0 16.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0	21.0 21.0 22.0 22.0 23.0 23.0 23.0 23.0 23.0 22.0 22	MIN 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 21.0 20.0 20.0 19.0 18.0 18.0 19.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	HAX	#IN
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 22 23 24	10.0 11.0 11.0 11.0 11.0 12.0 13.0 14.0 16.0 16.0 14.0 12.0 11.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MIN 8.0 7.0 8.0 8.0 8.0 9.0 10.0 10.0 9.0 7.0 8.0 9.0 7.0 8.0 9.0 7.0 8.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 9.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MAX 16.0 18.0 18.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	#IN 11.0 12.0 12.0 13.0 12.0 11.0 11.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11	20.0 20.0 19.0 19.0 19.0 18.0 18.0 19.0 19.0 19.0 17.0 17.0 21.0 21.0 22.0 22.0 22.0 21.0 22.0 22	HIN 15.0 16.0 16.0 16.0 13.0 13.0 14.0 14.0 15.0 16.0 13.0 16.0 17.0 17.0 18.0 18.0 17.0 18.0 18.0 17.0 18.0 18.0	#AX 21.0 21.0 22.0 22.0 23.0 24.0 23.0 24.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	HAX 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 20.0 21.0 20.0 21.0 18.0 18.0 19.0 19.0 20.0	MIN 21.0 20.0 20.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 17.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	NAX	HIN
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11478500 VAN DUZEN RIVER NEAR BRIDGEVILLE, CALIF.

LCCATION. -- Lat 40°28'50", long 123°53'23", in NE₂SE₂ 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 Bridge ville.

DRAINAGE AREA, -- 222 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1958 to September 1968. Water temperatures: December 1960 to September 1968. Sediment records: October 1955 to September 1963.

EXTREMES.--1967-68:
Water temperatures: Maximum, 29.0°C June 24; minimum, 3.0°C on several days during December and January.

Period of record (1960-64, 1965-68):
Water temperatures: Maximum, 29.5°C July 1, 2, 1967; minimum, 0.5°C Dec. 18-20, 23, 1965.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OCT. O2 26 8.1 139	.04 .06 .07 .26 .09 .02
NOV. 06 25 8.7 139 0 6.1 DEC. 06 1500 4.1 67 0 2.8 JAN. 10 6990 2.6 50 0 2.3 FEB. 06 1870 2.6 62 0 1.2 MAR. 05 624 3.2 69 0 APR. 01 666 3.0 69 0 2.0 MAY 08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	.06 .07 .26 .09 .02
DEC. 06 1500 4.1 67 0 2.8 JAN. 10 6990 2.6 50 0 2.3 FEB. 06 1870 2.6 62 0 1.2 MAR. 05 624 3.2 69 0 APR. 01 666 3.0 69 0 2.0 MAY 08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	.07 .26 .09 .02
Ob 1500 4.1 67 0 2.8 JAN. 10 6990 2.6 50 0 2.3 FEB. Ob 1870 2.6 62 0 1.2 MAR. O5 624 3.2 69 0 APR. O1 666 3.0 69 0 2.0 MAY O8 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE O5 71 5.2 111 1 2.4	.26 .09 .02
10 6990 2.6 50 0 2.3 FER. 06 1870 2.6 62 0 1.2 MAR. 05 624 3.2 69 0 APR. 01 666 3.0 69 0 2.0 MAY 08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	.09 .02
O6 1870 2.6 62 0 1.2 MAR. O5 624 3.2 69 0 APR. O1 666 3.0 69 0 2.0 MAY O8 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE O5 71 5.2 111 1 2.4	.02 .13
05 624 3.2 69 0 APR. 01 666 3.0 69 0 2.0 MAY. 08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	.13
01 666 3.0 69 0 2.0 MAY 08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	
08 120 28 5.6 5.1 1.0 95 3 13 3.0 .1 JUNE 05 71 5.2 111 1 2.4	.02
05 71 5.2 111 1 2.4	
	•D6
JULY 10 16 5.6 143 0 3.3	.05
AUG. 07 13 9.0 152 0 4.0	.04
SEPT.	
11 17 40 9.7 8.8 1.6 135 5 4.8 .0	-04
DIS-	DIS- SOLVED OXYGEN
OCT. OZ 137 23 11 .3 114 306 8.1 16	
NOV.	9.5
DEC 64 9 12 8-2 18	10.2
JAN 45 4	12.4
FEB. 12 41 91 8.0 5	13.2
MAR. 10 •2 51 115 8•1 8	12.2
05 65 8 10 .2 57 141 8.1 11	11.1
01 68 11 9 .2 57 137 8.1 12	10.6
08 186 93 10 .25 11 .2 83 202 8.5 14	10.2
05 102 9 10 -2 93 226 8.4 16	9.7
10 131 14 9 .2 117 288 8.2 18	8.2
07 147 22 12 .3 125 308 8.2 18	8.2
11 140 21 12 .3 119 315 8.4 18	8.6

NOVEMBER

OCTOB ER

EEL RIVER BASIN 309

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 DECEMBER

JANUARY

FEBRUARY

MARCH

					000	CHECH	•					
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	17.0	17.0	12.0	7.0	5.0	5.0	4.0	6.0	4.0	11.0	11.0
2	17.0	14.0	17.0	12.0	8.0	7.0	5.0	4.0	6.0	5.0	12.0	10.0
3	18.0	14.0	18.0	12.0	8.0	7.0	4.0	4.0	7.0	5.0	13.0	11.0
4	19.0	13.0	16.0	13.0	9.0	7.0	4.0	3.0	7.0	6.0	12.0	11.0
5	19.0	14.0	18.0	14.0	7.0	6.0	4.0	4.0	8.0	6.0	12.0	9.0
6	21.0	14.0	18.0	12.0	7.0	6.0	4.0	4.0	9.0	8.0	10.0	8.0
7	20.0	13.0	18.0	13.0	7.0	6.0	5.0	4.0	8.0	7.0	11.0	9.0
Ŕ	19.0	14.0	17.0	15.0	7.0	6.0	6.0	6.0	8.0	7.0	12.0	9.0
ă	21.0	14.0	16.0	13.0	7.0	6.0	7.0	6.0	8.0	7.0	12.0	8.0
10	21.0							5.0		7.0		2.0
10	21.0	16.0	17.0	14.0	7.0	6.0	6.0	5.0	8.0	8.0	12.0	7.0
11	22.0	15.0	16.0	13.0	7.0	6.0	5.0	4.0	9.0	7.0	13.0	9.0
12	21.0	16.0	17.0	14.0	6.0	6.0	6.0	4.0	9.0	7.0	9.0	7.0
13	20.0	15.0	16.0	13.0	6.0	4.0	8.0	6.0	8.0	8.0	8.0	7.0
14	19.0	13.0	14.0	13.0	4.0	4.0	9.0	8.0	9.0	7.0	8.0	7.0
15	19.0	12.0	14.0	12.0	4.0	3.0	9.0	8.0	9.0	7.0	9.0	7.0
16	19.0	11.0	14.0	11.0	4.0	4.0	8.0	7.0	9.0	B. 0	9.0	7.0
17	20.0	12.0	14.0	10.0	4.0	4.0	7.0	6.0	10.0	9.0	8.0	7.0
18	18.0	12.0	12.0	11.0	4.0	4-0	7.0	6.0	10.0	8.0	9.0	6.0
19	19.0	14.0	13.0	10.0	4.0	4.0	7.0	6.0	10.0	9.0	10.0	7.0
20	18.0	14.0	14.0	9.0	4.0	4.0	8.0	6.0	10.0	9.0	11.0	7.0
21	17.0	14.0	13.0	9.0	5.0	4.0	8.0	8.0	10.0	10.0	11 0	
22	18.0	16.0	12.0	8.0	6.0	5.0	9.0	7.0	11.0	10.0	11.0 10.0	8.0 8.0
23	19.0	16.0	12.0	9.0			8.0	7.0				
			12.0		6.0	6.0			11.0	11.0	12.0	9.0
24	19.0	14.0	13.0	11.0	6.0	5.0	8.0	7.0	11.0	11.0	12.0	9.0
25	19.0	15.0	12.0	8.0	6.0	5.0	8.0	6.0	11.0	9.0	11.0	9.0
26	18.0	13.0	10.0	7.0	6.0	5.0	6.0	4.0	11.0	9.0	10.0	7.0
27	18.0	13.0	8.0	7.0	6.0	5.0	5.0	3.0	11.0	9.0	11.0	8.0
28	18.0	15.0	10.0	7.0	6.0	6.0	3.0	3.0	12.0	10.0	13.0	10.0
29	16.0	12.0	9.0	7.0	6.0	5.0	4.0	3.0	12.0	9.0	12.0	11.0
30	17.0	11.0	7.0	6.0	5.0	5.0	5.0	3.0	12.0	7.0	14.0	11.0
31	18.0	12-0	7.0		5.0	5.0	6.0	4.0			14.0	10.0
		-210										
MONTH	22.0	11.0	18.0	6.0	9.0	3.0	9.0	3.0	12.0	4.0	14.0	6.0
		PRIL		TAY		UNE		JLY	411	GUST		TEMBER
	A	PRIL		TAT	31	UNE	30	JL 1	AUG	5051	367	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	19.0	13.0	26.0	16.0	27.0	17.0	26.0	18.0	23.0	19-0
1 2	12.0 11.0	11.0 9.0	19.0 21.0	13.0 13.0	26.0 22.0	16.0 18.0	27.0 23.0	17.0 18.0	26.0 24.0	18.0 19.0	23.0 22.0	19.0 19.0
1 2 3	12.0 11.0 13.0	11.0 9.0 9.0	19.0 21.0 21.0	13.0 13.0 14.0	26.0 22.0 18.0	16.0 18.0 17.0	27.0 23.0 24.0	17.0 18.0 18.0	26.0 24.0 20.0	18.0 19.0 18.0	23.0 22.0 26.0	19.0 19.0 18.0
1 2 3 4	12.0 11.0	11.0 9.0	19.0 21.0	13.0 13.0	26.0 22.0	16.0 18.0	27.0 23.0	17.0 18.0	26.0 24.0	18.0 19.0	23.0 22.0	19.0 19.0
1 2 3	12.0 11.0 13.0	11.0 9.0 9.0	19.0 21.0 21.0	13.0 13.0 14.0	26.0 22.0 18.0	16.0 18.0 17.0	27.0 23.0 24.0	17.0 18.0 18.0	26.0 24.0 20.0	18.0 19.0 18.0	23.0 22.0 26.0	19.0 19.0 18.0
1 2 3 4 5	12.0 11.0 13.0 13.0 14.0	11.0 9.0 9.0 11.0 10.0	19.0 21.0 21.0 19.0 18.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0	16.0 18.0 17.0 17.0 16.0	27.0 23.0 24.0 23.0 27.0	17.0 18.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 23.0	18.0 19.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0	19.0 19.0 18.0 18.0 19.0
1 2 3 4 5	12.0 11.0 13.0 13.0 14.0	11.0 9.0 9.0 11.0 10.0	19.0 21.0 21.0 19.0 18.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0	16.0 18.0 17.0 17.0 16.0	27.0 23.0 24.0 23.0 27.0	17.0 18.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 23.0	18.0 19.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0	19.0 19.0 18.0 18.0 19.0
1 2 3 4 5	12.0 11.0 13.0 13.0 14.0	11.0 9.0 9.0 11.0 10.0	19.0 21.0 21.0 19.0 18.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0	16.0 18.0 17.0 17.0 16.0	27.0 23.0 24.0 23.0 27.0 27.0	17.0 18.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 26.0	18.0 19.0 18.0 18.0 18.0	23-0 22-0 26-0 24-0 24-0 24-0	19-0 19-0 18-0 18-0 19-0
1 2 3 4 5 6 7 8	12.0 11.0 13.0 13.0 14.0	11.0 9.0 9.0 11.0 10.0	19.0 21.0 21.0 19.0 18.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0	16.0 18.0 17.0 17.0 16.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0	17.0 18.0 18.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 26.0	18.0 19.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0	19-0 19-0 18-0 18-0 19-0
1 2 3 4 5 6 7 8	12.0 11.0 13.0 13.0 14.0 14.0	11.0 9.0 9.0 11.0 10.0 9.0 9.0 11.0	19.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0	16.0 18.0 17.0 17.0 16.0 15.0 14.0 16.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 26.0 25.0	18.0 19.0 18.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0	19-0 19-0 18-0 18-0 19-0 19-0
1 2 3 4 5 6 7 8	12.0 11.0 13.0 13.0 14.0	11.0 9.0 9.0 11.0 10.0	19.0 21.0 21.0 19.0 18.0	13.0 13.0 14.0 14.0 13.0	26.0 22.0 18.0 20.0 18.0	16.0 18.0 17.0 17.0 16.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0	17.0 18.0 18.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 26.0	18.0 19.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0	19-0 19-0 18-0 18-0 19-0
1 2 3 4 5 6 7 8 9	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0	9.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0	19.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0 20.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0 25.0	16.0 18.0 17.0 17.0 16.0 15.0 14.0 16.0 17.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0	18.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0	19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	12.0 11.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 18.0	11.0 9.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0	19.0 21.0 21.0 19.0 19.0 19.0 20.0 21.0 20.0 18.0	13.0 13.0 14.0 14.0 13.0 12.0 12.0 14.0 14.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0	16.0 18.0 17.0 17.0 16.0 15.0 14.0 16.0 17.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0	18.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0	19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0	9.0 9.0 9.0 11.0 10.0 9.0 11.0 12.0 13.0	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 14.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0 25.0	16.0 18.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 16.0 16.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0 27.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0	18.0 19.0 18.0 18.0 18.0 18.0 18.0 19.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0 21.0	19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0	9.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 23.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 14.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0 27.0 24.0 21.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0 21.0 19.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	12.0 11.0 13.0 13.0 14.0 14.0 15.0 16.0 17.0 18.0	11.0 9.0 9.0 11.0 10.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0 15.0 17.0 16.0 18.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 13.0 12.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0 25.0 23.0 23.0 23.0 23.0	16.0 18.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 14.0 14.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 27.0 21.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 21.0 19.0 23.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0 22.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0	9.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 13.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 23.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 14.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 28.0 27.0 27.0 24.0 21.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0 21.0 19.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 11.0 13.0 14.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0	11.0 9.0 9.0 11.0 10.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0	19.0 21.0 21.0 21.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 16.0 18.0 21.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 14.0 14.0 13.0 12.0 12.0 12.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 24.0 24.0 24.0 24.0 27.0	16.0 18.0 17.0 16.0 15.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0	27.0 23.0 24.0 27.0 27.0 28.0 27.0 27.0 24.0 21.0 26.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0 21.0 19.0 23.0 24.0 23.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 25.0 25.0 24.0 25.0 24.0 21.0 22.0 24.0 23.0	19-0 19-0 18-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 11.0 13.0 14.0 14.0 15.0 16.0 17.0 16.0 16.0 16.0 16.0	11.0 9.0 9.0 11.0 10.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0	19.0 21.0 21.0 21.0 19.0 19.0 20.0 20.0 20.0 18.0 17.0 16.0 18.0 21.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 14.0 14.0 13.0 12.0 12.0 12.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 24.0 24.0 24.0 24.0 27.0	16.0 18.0 17.0 17.0 16.0 14.0 16.0 17.0 16.0 14.0 14.0 14.0	27.0 23.0 24.0 27.0 27.0 28.0 27.0 27.0 27.0 21.0 26.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0 25.0 24.0 21.0 22.0 24.0 23.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 11.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0	11.0 9.0 9.0 11.0 10.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0 11.0	19.0 21.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0 20.0 15.0 17.0 16.0 18.0 21.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0 25.0 22.0 23.0 24.0 26.0 27.0	16.0 18.0 17.0 16.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 17.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 24.0 21.0 26.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 17.0	23.0 22.0 24.0 24.0 24.0 24.0 25.0 25.0 24.0 21.0 22.0 24.0 23.0 23.0	19-0 19-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 17-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 15.0 16.0 16.0 14.0 14.0	9.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0 9.0 9.0	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0 17.0 16.0 21.0 21.0 22.0 21.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 23.0 24.0 24.0 26.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	27.0 23.0 24.0 27.0 27.0 28.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 17.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 21.0 19.0 24.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0 23.0 23.0 23.0 21.0	19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12.0 11.0 13.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 14.0	9.0 9.0 11.0 10.0 9.0 11.0 12.0 12.0 13.0 12.0 13.0 12.0 9.0 11.0	19.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0 20.0 18.0 15.0 16.0 18.0 21.0 21.0 22.0 21.0	13.0 13.0 14.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 23.0 24.0 25.0 22.0 23.0 24.0 26.0 27.0	16.0 18.0 17.0 16.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 17.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 24.0 21.0 26.0 26.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 17.0	23.0 22.0 24.0 24.0 24.0 24.0 25.0 25.0 24.0 21.0 22.0 24.0 23.0 23.0	19-0 19-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 17-0 17-0
1 2 3 4 4 5 6 7 7 8 9 10 0 11 12 13 14 15 16 17 18 19 20	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	9.0 9.0 11.0 10.0 10.0 11.0 12.0 12.0 12.0 12	19.0 21.0 21.0 19.0 19.0 20.0 21.0 20.0 18.0 17.0 16.0 21.0 21.0 21.0 21.0 21.0	13.0 14.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0	26.0 22.0 18.0 20.0 18.0 23.0 23.0 24.0 25.0 22.0 23.0 23.0 23.0 23.0 23.0 27.0 26.0 27.0 27.0 27.0	16.0 18.0 17.0 17.0 16.0 14.0 16.0 16.0 17.0 14.0 14.0 14.0 17.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 28.0 27.0 27.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 17.0 18.0 19.0 17.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 23.0 24.0 22.0 24.0 29.0 20.0 20.0 20.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0	23.0 22.0 26.0 24.0 24.0 24.0 24.0 25.0 21.0 21.0 22.0 23.0 23.0 24.0 24.0 20.0	19-0 18-0 18-0 18-0 19-0 19-0 19-0 18-0 19-0 18-0 17-0 17-0 17-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0	11.0 9.0 11.0 10.0 9.0 11.0 12.0 12.0 12.0 12.0 12.0 10.0 9.0 11.0 9.0 8.0 9.0	19.0 21.0 19.0 19.0 18.0 20.0 20.0 20.0 18.0 15.0 16.0 21.0 21.0 22.0 18.0 19.0	13.0 14.0 14.0 14.0 13.0 12.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	26.0 22.0 18.0 20.0 18.0 23.0 23.0 24.0 25.0 22.0 23.0 23.0 24.0 27.0 27.0 27.0 27.0	16.0 18.0 17.0 17.0 16.0 14.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 26.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 23.0 25.0 25.0 25.0 25.0 24.0 21.0 21.0 23.0 24.0 22.0 24.0 22.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	23.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 21.0 21.0 22.0 23.0 23.0 23.0 21.0 20.0	19-0 18-0 18-0 18-0 19-0 19-0 19-0 18-0 18-0 17-0 17-0 17-0 15-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 11 15 15 16 17 18 19 20 21 22	12.0 11.0 13.0 13.0 14.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	9.0 9.0 11.0 10.0 11.0 9.0 9.0 12.0 12.0 12.0 10.0 9.0 11.0 9.0 11.0	19.0 21.0 21.0 19.0 19.0 20.0 20.0 18.0 17.0 16.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	13.0 14.0 14.0 14.0 12.0 12.0 13.0 14.0 14.0 12.0 13.0 13.0 13.0 12.0 13.0 15.0 15.0 15.0 16.0	26.0 22.0 18.0 20.0 17.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0	16.0 18.0 17.0 17.0 16.0 14.0 16.0 16.0 17.0 14.0 14.0 14.0 14.0 17.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 28.0 27.0 27.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 17.0 18.0 19.0	26.0 24.0 20.0 23.0 23.0 25.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 22.0 22.0 22.0 22.0 22.0 22.0 22	18.0 19.0 18.0 18.0 18.0 18.0 19.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0	23.0 22.0 24.0 24.0 24.0 24.0 24.0 25.0 21.0 21.0 22.0 23.0 24.0 21.0 20.0 20.0 20.0	19-0 18-0 18-0 18-0 19-0 19-0 19-0 18-0 19-0 18-0 17-0 17-0 17-0 14-0 14-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	12.0 11.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 9.0 11.0 10.0 10.0 9.0 9.0 11.0 12.0 12.0 12.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	19.0 21.0 21.0 19.0 18.0 20.0 21.0 20.0 18.0 17.0 16.0 16.0 12.0 22.0 21.0 22.0 18.0 21.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 15.0 17.0 16.0 17.0 17.0 18.0 19.0	26.0 22.0 18.0 20.0 18.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 28.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 25.0 26.0 26.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 18.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 23.0 24.0 22.0 24.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	23.0 22.0 26.0 24.0 24.0 24.0 25.0 22.0 22.0 23.0 23.0 23.0 20.0	19-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 22 23 24	12.0 11.0 13.0 13.0 14.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 9.0 11.0 10.0 11.0 11.0 12.0 13.0 12.0 9.0 11.0 9.0 11.0 9.0 10.0 9.0 10.0 9.0 11.0	19.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0 20.0 18.0 17.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	13.0 14.0 14.0 14.0 13.0 11.0 13.0 14.0 13.0 14.0 13.0 12.0 12.0 13.0 15.0 15.0 16.0 17.0 16.0 17.0	26.0 22.0 18.0 20.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 24.0 27.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 14.0 14.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 24.0 21.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 17.0 18.0 19.0 17.0 18.0 19.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 21.0 24.0 24.0 22.0 24.0 22.0 24.0 23.0 24.0 24.0 24.0 23.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 17.0 17.0 17.0 16.0 17.0	23.0 22.0 24.0 24.0 24.0 24.0 25.0 21.0 21.0 22.0 23.0 24.0 23.0 20.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0 14.0 14.0 13.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	12.0 11.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 9.0 11.0 10.0 10.0 9.0 9.0 11.0 12.0 12.0 12.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	19.0 21.0 21.0 19.0 18.0 20.0 21.0 20.0 18.0 17.0 16.0 16.0 12.0 21.0 22.0 21.0 22.0 18.0 21.0	13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 15.0 17.0 16.0 17.0 17.0 18.0 19.0	26.0 22.0 18.0 20.0 18.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 28.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0 25.0 26.0 26.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 18.0 19.0 19.0 18.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 23.0 24.0 22.0 24.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	23.0 22.0 26.0 24.0 24.0 24.0 25.0 22.0 22.0 23.0 23.0 23.0 20.0	19-0 18-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 22 23 24 25	12.0 11.0 13.0 13.0 14.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 9.0 11.0 10.0 10.0 11.0 11.0 12.0 13.0 10.0 9.0 9.0 11.0 9.0 8.0 9.0 8.0 9.0 11.0	19.0 21.0 21.0 19.0 18.0 19.0 20.0 21.0 20.0 18.0 17.0 21.0 21.0 22.0 18.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	13.0 14.0 14.0 14.0 13.0 11.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 16.0 17.0 16.0 17.0 18.0 19.0	26.0 22.0 18.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 24.0 27.0	16.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 14.0 14.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	27.0 23.0 24.0 23.0 27.0 27.0 28.0 27.0 24.0 21.0 26.0 26.0 26.0 26.0 27.0 26.0 26.0 27.0 26.0 27.0	17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 17.0 18.0 19.0 18.0 19.0 17.0 18.0 17.0 18.0 17.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 21.0 23.0 24.0 22.0 24.0 22.0 24.0 22.0 24.0 22.0 24.0 22.0 24.0 22.0 24.0 21.0	18.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0 17.0 16.0 17.0 16.0 17.0	23.0 22.0 24.0 24.0 24.0 24.0 25.0 21.0 22.0 23.0 20.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 17.0 16.0 17.0 16.0 17.0 14.0 13.0 14.0 13.0 14.0 14.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 45 22 5 26	12.0 11.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 14.0 14.0 15.0 16.0 17.0 17.0	11.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0 12.0 13.0 14.0 9.0 8.0 8.0 8.0 8.0 8.0 11.	19.0 21.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0 22.0 18.0 22.0 21.0 22.0 18.0 21.0 22.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	13.0 13.0 14.0 14.0 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 15.0 17.0 16.0 15.0 17.0 18.0 19.0	26.0 22.0 18.0 20.0 18.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 18.0	27.0 23.0 24.0 27.0 27.0 28.0 27.0 27.0 21.0 26.0 26.0 26.0 26.0 26.0 27.0 25.0 26.0 27.0 26.0 27.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 23.0 24.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	23.0 22.0 26.0 24.0 24.0 24.0 25.0 22.0 22.0 23.0 23.0 23.0 20.0 20.0 21.0 20.0 21.0 22.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0 24.0 25.0 26.0 27.0	19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 16.0
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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 0	12.0 11.0 13.0 13.0 14.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0	11.0 9.0 11.0 10.0 10.0 9.0 11.0 12.0 13.0 12.0 13.0 10.0 9.0 8.0 8.0 8.0 8.0 11.0 11.0 12.0 13.0 13.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 19.0 1	19.0 21.0 21.0 19.0 18.0 20.0 18.0 21.0 21.0 21.0 22.0 18.0 22.0 21.0 22.0 18.0 21.0 22.0 21.0 22.0	13.0 13.0 14.0 14.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 15.0 17.0 16.0 15.0 17.0 16.0 17.0 17.0 18.0 19.0	26.0 22.0 18.0 18.0 17.0 23.0 24.0 25.0 22.0 23.0 24.0 27.0 28.0	16.0 18.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	27.0 23.0 24.0 23.0 27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 26.0 27.0 26.0 26.0 26.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 17.0 18.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 22.0 24.0 25.0 26.0 27.0 28.0 29.0 20.0 20.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	23.0 22.0 24.0 24.0 24.0 25.0 22.0 22.0 22.0 23.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0	19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 MONTH	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0 17.0 19.0 20.0 21.0 23.0 20.0	11.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0 8.0 8.0 11.0 11.0 11.0 12.0 13.0 13.0 10.0	19.0 21.0 21.0 19.0 18.0 20.0 21.0 20.0 18.0 17.0 18.0 22.0 21.0 22.0 18.0 17.0 18.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0 23.0 24.0 25.0 26.0 27.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 15.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0	26.0 22.0 18.0 20.0 18.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	27.0 23.0 24.0 27.0 28.0 27.0 28.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 19.0 26.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0 23.0 23.0 20.0 21.0 20.0 21.0 22.0 23.0 21.0 22.0 23.0 21.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0	19-0 19-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 16-0
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 25 26 27 8 29 30 31	12.0 11.0 13.0 13.0 14.0 15.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	11.0 9.0 11.0 10.0 9.0 9.0 11.0 12.0 13.0 12.0 10.0 9.0 8.0 10.0 8.0 11.0 11.0 11.0 12.0 13.0 13.0 13.0 10.0	19.0 21.0 21.0 19.0 18.0 20.0 21.0 20.0 18.0 17.0 18.0 22.0 21.0 22.0 18.0 17.0 18.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 22.0 23.0 24.0 25.0 26.0 27.0	13.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 13.0 13.0 15.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0	26.0 22.0 18.0 20.0 18.0 23.0 24.0 25.0 23.0 24.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0	16.0 18.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0	27.0 23.0 24.0 27.0 28.0 27.0 28.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0 19.0 26.0 25.0 26.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	17.0 18.0 18.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 18.0 19.0 18.0 19.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0	26.0 24.0 20.0 23.0 25.0 25.0 25.0 25.0 21.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 27.0 28.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0	18.0 19.0 18.0 18.0 18.0 18.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	23.0 22.0 26.0 24.0 24.0 24.0 25.0 24.0 21.0 22.0 23.0 23.0 20.0 21.0 20.0 21.0 22.0 23.0 21.0 22.0 23.0 21.0 20.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 23.0 21.0	19-0 19-0 18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 16-0

11480500 MAD RIVER NEAR FOREST GLEN, CALIF.

LOCATION. -- Lat 40°27'30", long 123°30'35", in SW2 sec.16, T.1 N., R.6 E., Trinity County, temperature recorder at gaging station on right bank, 0.7 mile downstream from Lamb Creek, and 11.1 miles (revised) northwest of Forest Glen.

DRAINAGE AREA, -- 143 sq mi.

OCTOBER

MIN

MAX

PERIOD OF RECORD, -- Water temperatures: November 1960 to September 1968. Sediment records: January 1957 to September 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 22.0°C on several days during June; minimum, freezing point Jan. 5, 6.

DAY

Period of record:
Water temperatures: Maximum (1960-66, 1967-68), 26.0°C June 25, 1961; minimum, freezing point Jan. 5, 6, 1968.

REMARKS, -- Recorder stopped Oct. 20 to Nov. 6, Nov. 22 to Dec. 6, Dec. 19-30, Jan. 8, 9, Jan. 23 to Feb. 6, Feb. 29, Mar. 1-12, 20-23.

MAX

TEM	PERATURE	(°C) OF W	ATER, WAT	ER YEAR O	CTOBER 1967	TO SEP	TEMBER 1968
	NOVE	MBER	DECE	MBER	JANU	ARY	FEBRUAR
IN	MAX	MIN	MAX	MIN	MAX	MIN	MAX

FEBRUARY

MIN

MARCH

MIN

MAX

_												
1	16.0	13.0					3.0	1.0				
2	13.0	12.0					3.0	1.0				
3	16.0	12.0			~~~		3.0	1.0				
4	15.0	13.0					2.0	1.0				
5	15.0	13.0					2.0	0.0				
,	15.0	13.0					2.0	0.0				
6	16.0	13.0					2.0	0.0				
7	17.0	13.0	14.0	13.0	4.0	2.0			6.0	4.0		
Ř	17.0	13.0	13.0	12.0	5.0	4.0			6.0	4.0		
	17.0											
9	17.0	13.0	13.0	12.0	5.0	4.0	3.0	1.0	6.0	5.0		
10	18.0	14.0	14.0	12.0	5.0	4.0	3.0	1.0	6.0	5.0		
11	18.0	15.0	13.0	12.0	5.0	4.0	2.0	1.0	6.0	5.0		
									7.0	5.0		
12	17.0	14.0	13.0	12.0	4.0	3.0	2.0	1.0				
13	17.0	14.0	13.0	12.0	3.0	1.0	4.0	2.0	6.0	5.0	8.0	6.0
14	16.0	13.0	13.0	12.0	3.0	1.0	6.0	4.0	7.0	5.0	8.0	6.0
15	17.0	13.0	13.0	11.0	3.0	2.0	6.0	3.0	7.0	5.0	8.0	7.0
					,,,,			,,,,				
16	17.0	13.0	13.0	11.0	3.0	2.0	3.0	2.0	6.0	5.0	8.0	7.0
17	17.0	13.0	12.0	11.0	3.0	1.0	3.0	2.0	8.0	6.0	8.0	8.0
18	17.0	14.0	12.0	11.0	2.0	1.0	3.0	3.0	7.0	6.0	8.0	7.0
19			11.0	9.0			3.0	3.0	7.0	6.0	9.0	7.0
	17.0	14.0									760	
20			12.0	9.0			4.0	3.0	7.0	7.0		
21			11.0	9.0			4.0	3.0	7.0	7.0		
22							4.0	3.0	7.0	7.0		
								3.0				
23									8.0	7.0		
24									8.0	8.0	10.0	8.0
25									8.0	7.0	9.0	8.0
2,												
26									8.0	7.0	9.0	7.0
27									8.0	8.0	10.0	8.0
28									8.0	7.0	11.0	8.0
29											11.0	8.0
30											11.0	8.0
31					3.0	2.0					11.0	7.0
HONTH												
1014111												
	A.	PRIL		YAM	J(JNE	Jl	JLY	AUG	GUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAY	MIN	MAY	MIN
DAY	MAX	MIN	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	8.0	15.0	11.0	18-0	14.0	21.0	16.0	19.0	15.0	19.0	16.0
									19.0	15.0		16.0
1 2	9.0 9.0	8.0 7.0	15.0 16.0	11.0 11.0	18-0 16-0	14.0 14.0	21.0 21.0	16.0 17.0	19.0 20.0	15.0 15.0	19.0 19.0	16.0 16.0
1 2 3	9.0 9.0 11.0	8.0 7.0 7.0	15.0 16.0 17.0	11.0 11.0 12.0	18-0 16-0 18-0	14.0 14.0 14.0	21.0 21.0 19.0	16.0 17.0 15.0	19.0 20.0 19.0	15.0 15.0 15.0	19.0 19.0 19.0	16.0 16.0 16.0
1 2 3	9.0 9.0 11.0	8.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0	11.0 11.0 12.0 13.0	18-0 16-0 18-0 19-0	14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0	16.0 17.0 15.0 16.0	19.0 20.0 19.0 19.0	15.0 15.0 15.0	19.0 19.0 19.0	16.0 16.0 16.0 15.0
1 2 3	9.0 9.0 11.0	8.0 7.0 7.0	15.0 16.0 17.0	11.0 11.0 12.0	18-0 16-0 18-0	14.0 14.0 14.0	21.0 21.0 19.0	16.0 17.0 15.0	19.0 20.0 19.0	15.0 15.0 15.0	19.0 19.0 19.0	16.0 16.0 16.0
1 2 3	9.0 9.0 11.0	8.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0	11.0 11.0 12.0 13.0	18-0 16-0 18-0 19-0	14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0	16.0 17.0 15.0 16.0	19.0 20.0 19.0 19.0	15.0 15.0 15.0	19.0 19.0 19.0	16.0 16.0 16.0 15.0
1 2 3 · 4 5	9.0 9.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0 15.0	11.0 11.0 12.0 13.0 12.0	18.0 16.0 18.0 19.0 17.0	14.0 14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0
1 2 3 · 4 5	9.0 9.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0 15.0	11.0 11.0 12.0 13.0 12.0	18.0 16.0 18.0 19.0 17.0	14.0 14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0
1 2 3 4 5	9.0 9.0 11.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0 15.0	11.0 11.0 12.0 13.0 12.0	18-0 16-0 18-0 19-0 17-0	14.0 14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0
1 2 3 · 4 5 6 7 8	9.0 9.0 11.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0	18-0 16-0 18-0 19-0 17-0	14.0 14.0 14.0 14.0 14.0 10.0 14.0	21.0 21.0 19.0 20.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0
1 2 3 4 5	9.0 9.0 11.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0 7.0	15.0 16.0 17.0 17.0 15.0	11.0 11.0 12.0 13.0 12.0	18-0 16-0 18-0 19-0 17-0	14.0 14.0 14.0 14.0 14.0 10.0 14.0	21.0 21.0 19.0 20.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0
1 2 3 · 4 5 6 7 8	9.0 9.0 11.0 11.0 11.0 12.0 12.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0	18-0 16-0 18-0 19-0 17-0 17-0 20-0	14.0 14.0 14.0 14.0 14.0 14.0 14.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0	19.0 20.0 19.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 16.0 15.0
1 2 3 4 5 6 7 8	9.0 9.0 11.0 11.0 11.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0	18-0 16-0 18-0 19-0 17-0	14.0 14.0 14.0 14.0 14.0 10.0 14.0	21.0 21.0 19.0 20.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0
1 2 3 4 5 6 7 8 9	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0	21.0 21.0 19.0 20.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9	9.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 13.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 18.0 20.0 20.0 20.0 20.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 14.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9	9.0 9.0 11.0 11.0 11.0 12.0 12.0 13.0	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 13.0	18.0 16.0 18.0 19.0 17.0 17.0 18.0 20.0 20.0 20.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 16.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 14.0 13.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 21.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 15.0	21.0 21.0 19.0 20.0 21.0 21.0 20.0 20.0 19.0 20.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 20.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 15.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 11.0 12.0 12.0 13.0 12.0 13.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 20.0 21.0 22.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 15.0 16.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 15.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 14.0 16.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 11.0 11	18.0 16.0 18.0 19.0 17.0 17.0 18.0 20.0 20.0 20.0 21.0 21.0 22.0	14.0 14.0 14.0 14.0 10.0 14.0 16.0 16.0 15.0 15.0 16.0 17.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 16.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 16.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 11.0 11	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 22.0 22.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 15.0 16.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 15.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 14.0 16.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 16.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 11.0 11	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 22.0 22.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 16.0 17.0 16.0 17.0	21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0 14.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0	19-0 19-0 19-0 19-0 19-0 19-0 19-0 19-0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9.0 9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 11.0 11	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 20.0 19.0 22.0 22.0	14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0	21.0 21.0 20.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 3 4 4 5 5 6 6 7 8 9 9 10 11 12 12 13 14 15 16 17 18 19 19	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 16.0 16.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 21.0 22.0 22.0 22	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 16.0 17.0 15.0 16.0 17.0 16.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 21.0 16.0 15.0 16.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9.0 9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0	11.0 11.0 12.0 13.0 12.0 10.0 11.0 12.0 12.0 12.0 11.0 11	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 20.0 19.0 22.0 22.0	14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 15.0 15.0 16.0 17.0 17.0 17.0	21.0 21.0 20.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 14.0 14.0 16.0 17.0 16.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11	18.0 16.0 18.0 19.0 17.0 18.0 20.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	14.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 15.0 16.0 17.0 15.0 16.0 17.0 16.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0 14.0 14.0
1 2 3 3 4 4 5 5 6 6 7 8 9 9 10 11 12 12 13 14 15 16 17 18 19 19	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 14.0 14.0 16.0 17.0 16.0	11.0 12.0 12.0 13.0 12.0 10.0 11.0 12.0 13.0 12.0 11.0 11.0 11.0 11.0 11.0 11.0 11	18.0 16.0 18.0 19.0 17.0 18.0 20.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	14.0 14.0 14.0 14.0 10.0 14.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 15.0 16.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 16.0 16.0 14.0
1 2 2 3 4 4 5 5 6 7 8 9 9 10 11 12 13 14 15 5 16 6 17 18 19 20 21	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 6.0 7.0 6.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	11.0 11.0 12.0 13.0 12.0 11.0 12.0 13.0 12.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 11.0 12.0 12	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 20.0 21.0 22.0 22.0 22	14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 15.0 16.0 17.0 17.0 17.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 16.0 21.0 21.0 16.0 15.0 16.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0 13.0 14.0 13.0 13.0 13.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 14.0 15.0 14.0 15.0 14.0
1 2 3 4 4 5 6 7 8 9 9 10 11 12 13 13 4 15 5 16 17 18 9 20 22	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 14.0 14.0 16.0 17.0	11.0 11.0 12.0 12.0 12.0 10.0 11.0 12.0 12	18.0 16.0 18.0 19.0 17.0 18.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	14.0 14.0 14.0 14.0 10.0 14.0 16.0 16.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 21.0 16.0 15.0 16.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0 13.0 13.0 13.0 13.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 14.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 16.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 14.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 4 5 5 6 7 8 9 10 11 12 3 13 4 15 5 16 17 18 19 20 21 22 23 24	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 7.0 8.0 8.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 7.0 8.0 8.0 7.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18
1 2 3 4 4 5 5 6 7 8 9 10 11 12 3 13 4 15 5 16 17 18 19 20 21 22 23 24	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 16.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 13.0 13.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 16.0 14.0 15.0 16.0 15.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 6.0 7.0 8.0 8.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 14.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 18.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	16.0 17.0 15.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0 14.0 15.0 12.0 14.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 24 25 26	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 21.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 9 10 11 11 12 13 3 11 4 15 5 16 17 18 19 20 21 22 23 24 25 26 27	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 6.0 7.0 8.0 8.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 14.0 17.0 16.0 17.0 16.0 14.0 16.0 16.0 16.0 16.0 16.0	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 18.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 22 24 25 26	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 7.0 6.0 7.0 8.0 8.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 18.0 18.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	16.0 17.0 15.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0
1 2 2 3 4 4 5 6 7 8 9 10 11 12 13 14 4 15 16 17 18 19 20 21 22 23 24 25 26 27 28	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 14.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25 26 26 27 28 29	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 11.0 11.0 11.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 2 3 4 4 5 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	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 14.0 13.0 14.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 14.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 14.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 21.0 16.0 21.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25 26 26 27 28 29	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 12.0 11.0 11.0 11.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	21.0 21.0 21.0 20.0 21.0 21.0 21.0 21.0	16.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 15.0	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	9.0 9.0 11.0 11.0 11.0 12.0 14.0	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 16.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 2 3 4 4 5 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	9.0 9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 16.0 17.0 16.0 14.0 13.0 14.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	18.0 16.0 18.0 19.0 17.0 17.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0	14.0 14.0 14.0 14.0 14.0 16.0 17.0 15.0 16.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 21.0 16.0 21.0 16.0 15.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	9.0 9.0 11.0 11.0 11.0 12.0 14.0	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 16.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 3 4 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 40NTH	9.0 9.0 11.0 11.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 16.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14
1 2 2 3 4 4 5 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	9.0 9.0 11.0 11.0 11.0 12.0 14.0	8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 7.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	15.0 16.0 17.0 17.0 15.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 13.0	18.0 16.0 19.0 17.0 18.0 20.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	14.0 14.0 14.0 14.0 14.0 10.0 16.0 16.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 14.0 14.0 14.0 14.0	21.0 21.0 21.0 20.0 21.0 21.0 21.0 20.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 17.0 15.0 16.0 16.0 21.0 16.0 16.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	15.0 15.0 15.0 15.0 14.0 14.0 16.0 15.0 14.0 14.0 15.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	16.0 16.0 16.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 14.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14

11480500 MAD RIVER NEAR FOREST GLEN, CALIF .-- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: R. BOTTOM MITHORAMAL TUBE: C. CHEMICALLY DISPERSED; N. IN NATIVE WATER: P. PIPET; S. SIEVE; V. VISUAL ACCUMULATION TUBE: M. IN DISTILLED MATER)

		WATER TEM- PERA-				PERC	ENT F	INER 1	THAN 1		ICLE (LL IME	TERS)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	TURE (C)	(CFS)	TRATION (MG/L)	DISCHARGE (TDNS/DAY)	•005	.OD4	•008	.016	.031	•062	.125	.250	•500	1.00	2.00	SIS
OCT 12 1967	0800	14	140	11	4.2												
NOV 7		14	146	13	5.1												
DEC 7		- i	178	42	20	77	90	91	94	96	100						SBWC
FEB 7 1968		4	1240	42	141	30	58	63	70	76	87	91	93	96	100		SBWC
MAR 13		7	424	26	30												
APR 2	0850	8	321	18	16												
MAY 1	0950	11	56	.9	1.4												
JUN 6		15	11	3	• 09												
AUG 27			87	4	.94												

11480750 MAD RIVER NEAR KNEELAND, CALIF.

LOCATION. -- Lat 40°45'50", long 123°53'20", in NW/NW/2 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 28.0°C July 19-22; minimum, 3.0°C Dec. 29, 31, Jan. 1-3.

Period of record: Water temperatures: Maximum, 28.0°C July 19-22, 1968; minimum, 2.0°C Mar. 2, 1966.

REMARKS. -- Recorder stopped Jan. 4-11, May 3 to June 6.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	nc	CTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	
1	18.0	18.0	14.0	14.0	8.0	7.0	3.0	3.0	6.0	5.0	9.0	9.0	
2	18.0	17.0	14.0	14.0	7.0	7.0	4.0	3.0	6.0	6.0	9.0	8.0	
3	17.0	17.0	14.0	13.0	7.0	7.0	4.0	3.0	6.0	6.0	9.0	8.0	
4	17.0	16.0	14.0	14.0	8.0	7.0			6.0	6.0	9.0	8.0	
5	16.0	16.0	14.0	14.0	8.0	7.0			6.0	6.0	9.0	8.0	
6	16.0	16.0	14.0	14.0	7.0	6.0			6.0	6.0	8.0	8.0	
7	16.0	16.0	14.0	14.0	7.0	6.0			6.0	6.0	8.0	7.0	
8	16.0	15.0	14.0	14.0	7.0	7.0			6.0	6.0	8.0	7.0	
9	16.0	15.0	14.0	14.0	7.0	6.0			6.0	6.0	8.0	7.0	
10	16.0	15.0	14.0	14.0	7.0	6.0			6.0	6.0	8.0	7.0	
11	16.0	15.0	14.0	14.0	7.0	7.0			7.0	6.0	8.0	7.0	
12	16.0	15.0	14.0	14.0	7.0	6.0	7.0	7.0	7.0	6.0	8.0	7.0	
13	16.0	15.0	14.0	14.0	6.0	6.0	8.0	7.0	7.0	7.0	7.0	7.0	
14	16.0	15.0	14.0	14.0	6.0	4.0	11.0	8.0	7.0	6.0	7.0	6.0	
15	16.0	15.0	14.0	14.0	4.0	4.0	10.0	9.0	7.0	6.0	7.0	6.0	
16	16.D	15.0	14.0	13.0	4.0	4.0	9.0	7.0	7.0	6.0	7.0	7.0	
17	16.0	14.0	13.0	13.0	5.0	4.0	8.0	7.0	7.0	6.0	7.0	7.0	
18	15.0	14.0	13.0	13.0	6.0	5.0	8.0	7.0	7.0	7.0	7.0	7.0	
19	15.0	14.0	13.0	13.0	6.0	5.0	8.0	7.0	7.0	7.0	7.0	7.0	
20	15.D	14.0	13.0	13.0	5.0	5.0	8.0	8.0	8.0	7.0	7.0	7.0	
21	15.0	14.0	13.0	13.0	5.0	5.0	8.0	7.0	8.0	8.0	7.0	7.0	
22	15.0	14.0	13.0	12.0	6.0	5.0	8.0	8.0	9.0	8.0	7.0	7.0	
23	16.0	15.0	12.0	12.0	6.0	5.0	8.0	8.0	9.0	9.0	8.0	7.0	
24	16.0	15.0	12.0	12.0	6.0	5.0	8.0	8.0	9.0	8.0	8.0	7.0	
25	16.0	15.0	12.0	11.0	6.0	5.0	8.0	8.0	9.0	8.0	8.0	8.0	
26	16.0	15.0	11.0	11.0	5.0	4.0	8.0	6.0	9.0	8.0	8.0	8.0	
27	15.0	14.0	11.0	10.0	4.0	4.0	6.0	5.0	9.0	8.0	8.0	8.0	
28	15.0	15.0	10.0	9.0	4.0	4.0	7.0	4.0	9.0	8.0	8.0	7.0	
29	15.0	14.0	9.0	9.0	4.0	3.0	7.0	7.0	9.0	8.0	8.0	8.0	
30	15.0	14.0	9.0	8.0	4.0	4.0	7.0	6.0			8.0	7.0	
31	14.0	14.0			4.0	3.0	6.0	5.0			8.0	8.0	
HDNTH	18.0	14.0	14.0	8.0	8.0	3.0			9.0	5.0	9.0	6.0	

11480750 MAD RIVER NEAR KNEELAND, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 -- Continued

	APRIL		APRIL MAY		J	JUNE		ILY	AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	8.0	16.0	13.0			21.0	19.0	26.0	24.0	24.0	22.0
2	8.0	8.0	16.0	12.0			21.0	20.0	26.0	24.0	23.0	22.0
3	9.0	8.0					20+0	19.0	25.0	24.0	23.0	22.0
4	9.0	9.0					21.0	19.0	24.0	24.0	23.0	22.0
5	9.0	9.0					21.0	19.0	25.0	23.0	24.0	22.0
6	10.0	9.0					21.0	20.0	24.0	22.0	24.0	22.0
7	10.0	9.0			17.0	16.0	22.0	21.0	24.0	22.0	24.D	22.0
8	10.0	9.0			17.0	16.0	22.0	21.0	24.0	23.0	23.0	22.0
9	10.0	9.0			16.0	16.0	22.0	21.0	24.0	23.0	23.0	22.0
10	10.0	9.0			17.0	16.0	22.0	21.0	25.0	23.0	23.0	21.0
11	10.0	10.0			16.0	16.0	22.0	21.0	25.0	23.0	23.0	21.0
12	10.0	9.0			16.0	16.0	22.0	21.0	26.0	22.0	23.0	22.0
13	10.0	9.0			16.0	15.0	24.0	21.0	23.0	22.0	23.0	21.0
14	10.0	9.0			16.0	15.0	23.0	21.0	23.0	22.0	23.0	22.0
15	11.0	10.0			16.0	16.0	23.0	20.0	24.0	21.0	23.0	21.0
16	11.0	10.0			17.0	16.0			23.0	22.0	23.0	21.0
17	11.0	10.0			19.0	16.0			23.0	21.0	23.0	21.0
18	12.0	10.0			20.0	17.0			23.0	21.0	23.0	22.0
19	12.0	11.0			21.0	17.0	28.0	24.0	22.0	21.0	22.0	21.0
20	12.0	10.0			22.0	18.0	28.0	24.0	22.0	21.0	21.0	21.0
21	13.0	10.0			21.0	17.0	28.0	24.0	23.0	20.0	22.0	21.0
22	13.0	10.0			22.0	17-0	28.0	24.0	23.0	19.0	22.0	19.0
23	12.0	11.0			23.0	19.0	27.0	24.0	23.0	19.0	22.0	18.0
24	14.0	11.0			24.0	19.0	26.0	24.0	23.0	21.0	22.0	18.0
25	14.0	11.0			24.0	19.0	26.0	24.0	22.0	21.0	21.0	19.0
26	15.0	11.0			24.0	20.0	27.0	24.0	23.0	21.0	22.0	19.0
27	14.0	11.0			24.0	20.0	27.0	23.0	23.0	21.0	23.0	19.0
28	14.0	12.0			24.0	18.0	26.0	23.0	24.0	21.0	22.0	19.0
29	15.0	12.0			24.0	18.0	26.0	24.0	23.0	21.0	21.0	19.0
30	14.0	12.0			22.0	19.0	26.0	23.0	23.0	21.0	21.0	20.0
31							26.0	23.0	24.0	21.0		
HONTH	15.0	8.0			24.0	15.0	28.0	19.0	26.0	19.0	24.0	18.0
YEAR	28.0	3.0										

11481000 MAD RIVER NEAR ARCATA, CALIF.

LOCATION.--Lat 40°54'35", long 124°03'35", in NW1 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 1958. Water temperatures: December 1957 to September 1958. Sediment records: December 1957 to September 1968.

KEMES, --1967-68:
Water temperatures: Maximum, 27.0°C on several days in July; minimum, 4.0°C on several days in January.
Sediment concentrations: Maximum daily, 7,100 mg/l Jan. 14; minimum daily, 1 mg/l Nov. 20, 21, June 10,
Aug. 8, 9.
Sediment discharge: Maximum daily, 187,000 tons Jan. 14; minimum daily, 0.02 ton June 13, Aug. 8, 9.

Period of record:

Water temperatures: Dec. 17-20, 1965. eratures: Maximum (1963-64, 1955-68), 27.0°C on several days in July 1958; minimum, 0.5°C

Dec. 17-20, 1965. Sediment concentrations: Maximum daily, 21,900 mg/l Dec. 23, 1954; minimum daily, 1 mg/l on many days in 1958-60, 1962, 1965, 1967-68.

Sediment discharge: Maximum daily, 3,140,000 tons Dec. 22, 1964; minimum daily, 0.02 ton June 13, Aug. 8,

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

11481000 MAD RIVER NEAR ARCATA, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

3TAC	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SOD IUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
OCT.											
02 NOV.	92			4.8		101	0		2.8		.03
06 DEC.	101			5.6		97	0		3.3		.07
04 JAN.	2570			4.2		50	0		4.0		.10
08 FEB.	304			4.3		76	0		3.7		.OR
05	3560			2.6		50	0		2.2		•02
04 APR.	1360			2.8		60	0				.07
01 MAY	981			3.0		59	e		3.0		•07
JUNE	125	30	3.6	4.9	.8	93	3	9.5	3.5	• 2	•00
O3 JULY	68			5.0		104	0		3.1		• 06
OR	23			3.9		120	0		2.9		.06
05 SEPT.	24			5.4		117	0		2.7		•02
10	23	33	3.5	5.4	1.3	119	0	13	3.0	.1	•00
	D1 S-			DIS-							
DATE	SOLVED SOLIDS (RESI- DUE AT 190 C)	HARO- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TIDN PATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
OCT.	SOLVED SOLIDS (RESI- DUE AT	NESS (CA,MG)	CAR- BONATE HARD-	SOL VED SOLIDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН	PERA- TURE	SOLVED
	SOLVED SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOL VED SOLIDS (TONS PER		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН 8•О	PERA- TURE	SOLVED
02 02 NUV. 06	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	SODIUM	AD- SORP- TIDN PATIO	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED DXYGEN
OCT. 02 NUV. 06 DEC.	SOLVED SOLIDS (RESI- OUE AT 190 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOL VED SOLIDS (TONS PER AC-FT)	\$001UM	AD- SORP- TIDN PATIO	LINITY AS CACU3	FIC COND- UCTANCE (MICRO- MHOS)	8.0	PERA- TURE (DEG C)	SOLVED DXYGEN 9.4
OCT. 02 NOV. 06 DEC. 04 JAN. 08	SOLVED SOLIDS (RESI- OUE AT 190 C)	NESS (CA,MG) 89	CAR- BONATE HARD- NESS 6	SOL VED SOL IDS (TONS PER AC-FT)	\$001UM 11 12	AD- SORP- TION PATIO	LINITY AS CACU3 83	FIC COND- UCTANCE (MICRO- MHOS) 198	8.0 B.1	PERATURE (DEG C)	SOLVED OXYGEN 9.4 10.4
OCT. O2 NUV. O6 DEC. O4 JAN. O8 FEB. O5	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG) 89 86 55	CAR- BONATE HARD- NESS 6 6	SOL VED SOLIDS (TONS PER AC-FT)	11 12 14	AD- SORP- TIDN PATIO	CACU3 R3 R0 41	FIC COND- UCTANCE (MICRO- MHOS) 198 190	8.0 8.1 7.7	PERATURE (DEG C) 16 16	9.4 10.4 11.1
OCT. O2 NUV. O6 DEC. O4 JAN. OR FER. O5 MAR.	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG) 89 86 55	CAR- BONATE HARO- NESS 6 6 14	SOL VED SOLIDS (TONS PER AC-FT)	11 12 14 12	AD- SORP- TION PATIO	R3 80 41	FIC COND- UCTANCE (MICRO- MHOS) 198 190 121 162	8.0 8.1 7.7 7.8	PERATURE (DEG C) 16 16 9	9.4 10.4 11.1 12.2
OCT. 02 NUV. 06 DEC. 04 JAN. 0A FEB. 05 MAR. 04 0P	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG) 89 86 55 72 46	CAR- BONATE HARD- NESS 6 6 6 14	SOLVED SOLIDS (TONS PER AC-FT)	11 12 14 12	AD- SORP- TION PATIO	R3 80 41 62 41	COND- UCTANCE (MICRO- MHOS) 198 190 121 162	8.0 B.1 7.7 7.8 8.0	PERATURE (DEG C) 16 16 9 7	9.4 10.4 11.1 12.2 12.5
OCT. O2 NUV. O6 DEC. O4 JAN. O8 FEB. O5 MAR. O4	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA,MG) 89 86 55 72 46	CAR- BONATE HARD- NESS 6 6 14 10 5	SOL VED SOLIDS (TDNS PER AC-FT)	11 12 14 12 11	AD- SORP- TION PATIO .? .3 .2 .2 .2 .2	R3 R0 41 62 41	EIC COND- UCTANCE (MICRO- MHOS) 198 190 121 162 105	8.0 8.1 7.7 7.8 8.0	PERATURE (DEG C) 16 16 9 7 7 12	9.4 10.4 11.1 12.2 12.5
OCT. O2 NUV. O6 DEC. O4 JAN. O8 FEB. O5 MAR. O1 APR.	SOLVED SOLIDS (RESI- DUE AT 190 C)	NESS (CA-MG) 89 86 55 72 46 55	CAR- BONATE HARD- NESS 6 6 14 10 5 6	SOL VED SOL IDS (TONS PER AC-FT)	11 12 14 12 11 10	AD- SORP- TION PATIO .? .3 .2 .2 .2 .2 .2	R3 R0 41 62 41 49 48	FIC COND- UCTANCE (MICRO- MHOS) 198 190 121 162 105 123 124	8.0 8.1 7.7 7.8 8.0 8.0	PERATURE (OEG C) 16 16 9 7 7 12	9.4 10.4 11.1 12.2 12.5 10.9
OCT. O2 NUV. O6 DEC. O4 JAN. O8 FEB. O5 MAR. O1 APR. O1 MAY O6 JUNE O3	SOL VED SOL IDS (RESI – DUE AT 190 C)	NESS (CA-MG) 89 86 55 72 46 55 54	CAR- BONATE HARO- NESS 6 6 6 14 10 5 6 6	SDL VEO SOL IDS (TONS PER AC-FT)	\$001UM 11 12 14 12 11 10 11	AD- SORP- TIDN PATIO .? .3 .2 .2 .2 .2 .2	CACO3 83 80 41 62 41 49 48 81	FIC COND- COND- UCTANCE (MICRO- MHOS) 198 190 121 162 105 123 124	8.0 8.1 7.7 7.8 8.0 8.0 7.8	PERATURE (OEG C) 16 16 9 7 7 12	9-4 10-4 11-1 12-2 12-5 10-9 10-6
OCT. O2 NUV. O6 DEC. O4 JAN. O5 FER. O1 APR. O1 MAY O6 JUNE O3 JUNE O3 JUNE O3	SOL VED SOL IDS (RESI – DUE AT 190 C)	NESS (CA, MG) 89 86 55 72 46 55 54 90 94	CAR- BONATE HARO- NESS 6 6 6 6 14 10 5 6 6 9	SOL VEO SOL IDS (TONS PER AC-FT)	11 12 14 12 11 10 11	AO- SORP- TION PATIO .? .3 .2 .2 .2 .2 .2 .2	AS CACO3 R3 R0 41 62 41 49 48 81	FIC COND- COND- UCTANCE (MICRO- MHOS) 198 190 121 162 105 123 124 200 210	8.0 B.1 7.7 7.8 8.0 8.0 7.8 8.5	PERATTURE (OEG C) 16 16 9 7 7 12 17	9.4 10.4 11.1 12.2 12.5 10.9 10.6

11481000 MAD RIVER NEAR ARCATA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY 1 2 3 4 5 6 7 8 9 15 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 MONTH OCTORER.. -- 14 16 18 -- 16 ---- -- -- -- -- --16 14 13 13 16 16 16 16 17 17 18 18 17 18 19 17 18 19 19 19 19 13 14 14 14 14 14 14 14 14 14 16 16 16 15 14 -- 13 -- 14 -- 14 -- 15 17 17 17 17 13 12 :2 12 14 -- -- ---- 15 14 14 -- 12 12 12 MUNIXAM 17 18 14 14 MINIMUM --NOVE 4BER. MAXIMUM MINIMUM DECE 46ER. 13 13 13 ٠. 8 --7 ---7 MUMIXAM R 9 9 10 11 11 10 9, Q Ģ 9 9 9 8 9 ..YAAUNAL MUMIXAM 7 5 6 , 5 5 8 -- 9 5 5 --4 ---- --6 7 5 8 MINIMUM FERRJARY. MUMINAM MUMINIM ------à ç 10 10 10 Ģ c 9 9 MUMIXAM MUNIVAM 9 7 9 7 8 9 8 8 12 12 13 13 9 9 16 9 8 7 9 9 13 13 13 --9 10 10 11 10 10 ċ а APRIL.... MAXIMUM MINIMUM 11 12 11 11 11 11 11 11 11 11 - 1: - 9 11 11 12 12 4 21 18 13 14 .1 " !1 MUMIXAN 13 13 13 13 13 12 17 17 18 18 13 13 12 12 17 14 21 19 1 19 18 18 19 19 1 12 12 13 13 14 1 24 24 24 21 23 1 16 17 17 12 16 MINIMUM 12 12 MUMIXAM MUMINIE 21 19 19 18 15 11) 7 17 13 23 23 16 16 17 18 17 22 24 17 18 16 14 JULY.... MUMIXAM MUMINIM 19 15 27 25 26 19 18 27 27 18 1° 19 22 22 19 16 20 20 19 19 21 د2 AUGUST... MUMIKIE SEPTEMBER MUMIXAP 16

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:

				٧,	VISUAL A	CCUMULATION	1000	, ",	IN OT	3116	CU #4	ILK/						
			WATER								PART	ICLE S	SIZE					
			TEM-			SUSPENDED - SEDIMENT	PERC	ENT F	INER '	THAN '	THE S	IZE ()	IN MI	LIME	TERS)	INDIC	CATED	METHOD OF ANALY-
ı	DATE	TIME	TURE (C)	(CFS)	(MG/L)	DISCHARGE (TONS/DAY)	.002	-004	.008	.016	.031	•062	•125	.250	•500	1.00	2.00	SIS
NOV	14 1967	1715	14	1410	842	3210	44	59	67	84	91	96	98	99	100			VPWC
DEC	3	1000	9	1750	691	3260	34	44	55	64	68	85	89	94	99	100		VBWC
DEC	4	1400	ý	1640	618	2740	30	39	51	61	65	82	84	90	96	100		SBWC
			10	4830	1830	23900		25		43		67	80	93	98	100		VPWC
JAN.	5 10 1968	1100 1100	6	5700	3030	4660D	21	24	35		57	67	86	98	99	100		VPWC
JAN	14	0830	6	/040	6880	131000	14	18	28	37		60	86	95	98	100		VPWC
	14	1500	6	11500	9580	297000	16	19	22	34	43	50	75	91	98	100		VPWC
	15	0830	6	14000	4850	183000	15	20	26	36	47	56	77	95	100			VPWC
FF8	3	1030	8	5150	2560	35600		19		33		51	66	82	97	100		VPWC
FF8	7	1205	7	3210	552	4780	30		53		76	86	92	99	100			VPWC
MAR	8	1145	9	953	92	237	16	31	46	56	61	81	86	95	100			SBWC

11481000 MAD RIVER NEAR ARCATA, CALIF, -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

11481000 MAD RIVER NEAR ARCATA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL MAY JUNE MFAN MEAN
CONCENTRATION
TRATION
(MG/L)
(TONS/DAY) MEAN MFAN MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE MEAN DISCHARGE MEAN DISCHARGE CONCEN-TRATION SEDIMENT DISCHARGE (TONS/DAY) DAY (CES) (MG/L) (TONS/DAY) (CFS) (CFS) (MG/L) 9.0 9.0 7.1 4.2 1.1 981 73 193 208 16 .78 953 866 770 732 160 143 127 144 167 155 157 135 .71 .73 .71 62 20 17 66 61 73 10 66 61 1.4 2.1 .92 .61 125 128 113 113 605 556 493 454 109 36 29 56 40 56 53 44 40 67 4 3 2 1 .60 .57 .36 67 24 22 46 35 10 422 105 34 .09 3.6 2.1 6.8 6.8 394 373 356 342 329 8.1 9.6 9.7 8.9 11 .85 1.2 2.7 6.3 3.5 ? .06 11 105 3 4 7 17 13 14 112 145 145 118 8 .02 .09 4 5 5 10 16 11 .06 .05 .63 1.3 95 93 83 84 135 1.8 1.3 1.1 1.4 6.9 6.8 6.6 47 60 8.5 8.9 7.6 7.2 4.8 16 17 18 19 316 301 283 265 254 10 7 5 6 19 3 5 8 8 11 10 10 20 54 7 44 43 48 58 54 1.9 142 12 .83 22 23 24 25 15 9 6 5 6.4 3.5 1.7 1.3 226 210 196 1.8 5.1 1.6 1.9 159 145 107 .58 .52 .63 3 9 3 4 179 2.2 3.7 4.9 5.7 7.3 1.2 1.4 1.2 1.1 . 56 26 27 165 194 112 .81 1.2 1.4 201 197 208 112 99 84 75 10 28 29 45 47 11 30 48 1.0 31 TOTAL 94.57 1253.7 12055 1157.9 3774 17.07

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MFAN 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	4	• 38	22	5	• 30	31	4	.33
2	18	3	-15	19	4	•21	43	4	•46
3	34	5	.46	71	4	.23	49	4	• 53
4	44	7	.83	24	4	.26	48	4	•52
5	54	6	.87	24	4	•26	46	4	• 50
6	51	5	.69	18	3	.15	35	7	.66
7	37	11	1.1	25	5	-14	30	9	.73
8	23	9	•56	8.5	1	•02	27	11	.80
9	14	6	.23	8.9	1	.02	26	11	•77
10	13	4	-14	15	7	• 0 B	23	11	.68
11	13	4	.14	20	2	-11	21	11	- 62
12	13	4	.14	21	3	.17	19	10	.51
13	23	4	.25	25	4	. 27	27	10	. 73
14	31	5	.47	27	4	.29	41	10	1.1
15	30	6	.49	29	4	.31	41	9	1.0
16	29	3	.23	18	4	.19	32	7	.60
17	28	4	.30	12	4	•13	38	5	.51
18	30	6	.49	16	4	•17	29	5	.39
19	30	7	.57	31	5	.42	17	5	.23
Su	31	6	•50	37	11	1.1	14	5	• 19
21	32	5	.43	65	28	4.9	14	5	.19
22	29	4	.31	47	17	7.2	16	5	•22
23	38	5	.51	36	11	1.1	20	5	•27
74	40	9	.97	29	10	.78	18	5	•24
25	40	13	1.4	42	19	2.2	18	5	.24
26	40	11	1.2	161	146	63	20	5	.27
27	40	10	1.1	115	50	16	33	5	.45
28	33	9	.80	70	17	3.2	39	6	.63
29	24	7	.45	45	9	1.1	29	7	•55
30	28	4	• 30	34	6	.55	23	6	.37
31	29	6	.47	31	5	.42			
TOTAL	954		16.88	1096.4		100.28	867		15.29

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

TUTAL LUAD FOR TEAR (10NS

312571.1

11482500 REDWOOD CREEK AT ORICK, CALIF.

LOCATION. --Lat 41°17'20", long 124°03'30", in NE4 sec.4, T.10 N., R.1 E., Humboldt County, temperature recorder at gaging station on left bank at upstream side 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 1968.

EXTREMES. -- 1967-68:
Water temperatures: Minimum, 1.0°C Dec. 14.

Period of record: Water temperatures: Minimum, 1.0°C Dec. 14, 1967.

REMARKS.--Recorder stopped Oct. 31 to Nov. 6, Dec. 30 to Jan. 9, Feb. 24 to Mar. 12, Aug. 15 to Sept. 20; recorder malfunction Jan. 14, 15.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	oc	TOBER	NOV	E4BÈR	DEC	EMBER	JA	NUARY	FEB	RUARY	M.	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.0	13.0			8.0	6.0			7.0	6.0		
2	16.0	12.0			9.0	7.0			B • 0	7.0		
3	18.0	12.0			9.0	8.0			9.0	7.0		
5	16.0 18.0	12.0 12.0			9.0 9.0	9.0 7.0			8.0 B.0	7.0 7.0		
6 7	18.0 18.0	11.0	15.0	14.0	7.0 7.0	6.0 7.0			9•0 9•0	8.0 7.0		
8	17.0	12.0	15.0	13.0	8.0	7.0			8.0	8.0		
9	19.0	12.0	14.0	12.0	9.0	6.0			8.0	9.0		
10	19.0	14.0	13.0	12.0	8.0	6.0	7.0	4.0	9.0	B.0		
11	19.0	13.0	15.0	12.0	B.0	4.0	6.0	4.0	10.0	7.0		
12	18.0	13.0	15.0	12.0	7.0	3.0	8.0	6.0	9.0	8.0		
13 14	16.0	12.0 10.0	15.0 14.0	13.0 13.0	6.0 4.0	2.0 1.0	9.0	8.0	9.0 9.0	8.0 8.0	9.0 10.0	8.0 8.0
15	18.0	11.0	14.0	12.0	6.0	2.0			10.0	7.0	11.0	9.0
16	18.0	11.0	14.0	10.0	6.0	2.0	8.0	6.0	11.0	8.0	9.0	8.0
17	19.0	11.0	14.0	10.0	5.0	2.0	7.0	6.0	12.0	9.0	9.0	7.0
18	16.0	12.0	13.0	10.0	4.0	3.0	8.0	6.0	11.0	9.0	10.0	6.0
19	18.0	11.0	13.0	9.0	5.0	3.0	8-0	6.0	11.0	10.0	11.0	7.0
20	13.0	11.0	14.0	9.0	6.0	3.0	8.0	7.0	11.0	10.0	11.0	8.0
. 21	16.0	12.0	12.0	8.0	7.0	4.0	10.0	8.0	11.0	11.0	10.0	8.0
22	17.0	14.0	13.0	8.0	8.0	6.0	11.0	8.0	12.0	11.0	11.0	9.0
23 24	18.0 17.0	14.0 13.0	12.0 12.0	8.0 7.0	7.0 7.0	5.0 5.0	10.0 9.0	7.0 7.0	11.0	11.0	12.0 13.0	9.0 10.0
25	17.0	14.0	11.0	7.0	7.0	5.0	9.0	6.0			11.0	9.0
26 27	14.0 14.0	12.0 12.0	12.0 11.0	6.0 6.0	7.0 7.0	5.0 5.0	6.0 6.0	4.0 3.0			12.0 12.0	7.0 8.0
28	16.0	13.0	8.0	6.0	6.0	4.0	4.0	4.0			13.0	9.0
29	16.0	10.0	10.0	8.0	7.0	4.0	5.0	4.0			12.0	11.0
30 31	16.0	10.0	9.0	6.0			6.0	4.0			14.0	10.0
31							6.0	5.0			12.0	9.0
MONTH	20.0	10.0	15.0	6.0	9.0	1.0			12.0	6.0		
	20.0	10.0										
		PRIL		MAY	J	JNE	J	ILY	AUG	GUST	SEPT	TEMBER
DAY				MAY	IL XAM		JI. Max	ILY Min	AUC		SEP1	FEMBER MIN
DAY	A	PRIL	MAX		MAX	INE	MAX		MAX	GUST MIN		
DAY 1 2	MAX 12.0 12.0	PRIL MIN 9.0 9.0	MAX 17-0 17-0	MIN 11.0 12.0	MAX 20.0 17.0	JNE MIN 13.0 14.0	MAX 22.0 18.0	MIN 16.0 17.0	MAX 19.0 17.0	MIN 16.0 16.0	MAX	MIN
DAY 1 2 3	MAX 12.0 12.0 13.0	PRIL MIN 9.0 9.0 9.0	MAX 17-0 17-0 14-0	MIN 11.0 12.0 11.0	MAX 20.0 17.0 17.0	MIN 13.0 14.0 14.0	MAX 22.0 18.0 19.0	MIN 16.0 17.0 17.0	MAX 19.0 17.0 17.0	MIN 16.0 16.0 16.0	MAX	MIN
DAY 1 2	MAX 12.0 12.0	PRIL MIN 9.0 9.0	MAX 17-0 17-0	MIN 11.0 12.0	MAX 20.0 17.0	JNE MIN 13.0 14.0	MAX 22.0 18.0	MIN 16.0 17.0	MAX 19.0 17.0	MIN 16.0 16.0	MAX	MIN
DAY 1 2 3 4 5	12.0 12.0 13.0 13.0 13.0	PRIL MIN 9.0 9.0 9.0 9.0	MAX 17-0 17-0 14-0 16-0	MIN 11.0 12.0 11.0 12.0	MAX 20.0 17.0 17.0 17.0	MIN 13.0 14.0 14.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0	MIN 16.0 17.0 17.0 17.0	19.0 17.0 17.0 19.0 20.0	MIN 16.0 16.0 16.0 15.0	MAX	MIN
DAY 1 2 3 4 5	12.0 12.0 13.0 13.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0	MAX 17.0 17.0 14.0 16.0 '6.0	MIN 11.0 12.0 11.0 12.0 10.0	MAX 20.0 17.0 17.0 17.0 14.0	MIN 13.0 14.0 14.0 13.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0	MIN 16.0 17.0 17.0 17.0 17.0	MAX 19.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0	MAX	MIN
DAY 1 2 3 4 5	MAX 12.0 12.0 13.0 13.0 13.0	PRIL MIN 9.0 9.0 9.0 9.0 9.0 9.0	MAX 17.0 17.0 14.0 16.0 16.0	MIN 11.0 12.0 11.0 12.0 10.0	MAX 20.0 17.0 17.0 17.0 14.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0	MIN 16.0 17.0 17.0 17.0 17.0	MAX 19.0 17.0 17.0 19.0 20.0	MIN 16.0 16.0 15.0 15.0	MAX	MIN
DAY 1 2 3 4 5 6 7 8 9 9	MAX 12-0 12-0 13-0 13-0 13-0 14-0 15-0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 17.0 17.0 14.0 16.0 '6.0	MIN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0	MAX 20.0 17.0 17.0 17.0 14.0 17.0 19.0 20.0 20.0	MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0 19.0 21.0 21.0 22.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 17.0 17.0 20.0 20.0 20.0 19.0 17.0	MIN 16.0 16.0 15.0 15.0 16.0 15.0 16.0	MAX	MIN
DAY 1 2 3 4 5 6 6 7 8	MAX 12-0 12-0 13-0 13-0 13-0 14-0	9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 17.0 17.0 14.0 16.0 16.0 17.0	MIN 11.0 12.0 11.0 12.0 10.0	MAX 20.0 17.0 17.0 14.0 14.0	MIN 13.0 14.0 14.0 13.0 13.0 13.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 17.0 17.0 20.0 20.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 16.0 15.0	MAX	MIN
DAY 1 2 3 4 5 6 7 8 9 10 11	MAX 12-0 13-0 13-0 13-0 13-0 13-0 14-0 14-0 15-0 15-0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 17.0 14.0 16.0 16.0 17.0 17.0 17.0 13.0	MIN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 12.0 11.0	MAX 20.0 17.0 17.0 17.0 14.0 17.0 19.0 20.0 20.0 20.0	MIN 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0 19.0 21.0 22.0 22.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0	MIN 16.0 16.0 15.0 15.0 15.0 15.0 15.0	MAX	HIN
DAY 1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 13-0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 16.0 16.0 17.0 17.0 16.0 13.0	#IN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 9.0 12.0 11.0	MAX 20.0 17.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 22.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 19.0 20.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0	MIN 16.0 16.0 15.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0	MAX	HIN
DAY 1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 12.0 13.0 13.0 13.0 14.0 14.0 15.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 17.0 14.0 14.0 16.0 17.0 17.0 13.0 13.0	HIN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 12.0 11.0	MAX 20.0 17.0 17.0 17.0 17.0 19.0 20.0 20.0 20.0 219.0 19.0	MIN 13.0 14.0 14.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 12.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0	MAX 19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0	MIN 16.0 16.0 16.0 15.0 15.0 16.0 15.0 15.0 15.0 15.0	MAX	MIN
DAY 1 2 3 4 5 6 7 8 9 10	MAX 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 13-0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 17.0 17.0 16.0 16.0 17.0 17.0 16.0 13.0	#IN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 9.0 12.0 11.0	MAX 20.0 17.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0	MIN 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 22.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 19.0 20.0	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0	MIN 16.0 16.0 15.0 15.0 16.0 15.0 16.0 15.0 16.0 15.0	MAX	HIN
DAY 1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15	12.0 12.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 14.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 8.0 9.0	MAX 17.0 14.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 13.0 13.0 13.0 15.0 18.0	MIN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0	MAX 20.0 17.0 17.0 17.0 14.0 17.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN 13.0 14.0 14.0 13.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 22.0 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 16.0 15.0 15.0 16.0 15.0	MAX	MIN
0AY 1 2 3 4 4 5 6 6 7 7 8 9 9 10 11 12 13 14 15 16 17	MAX 12.0 12.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 15.0 14.0 14.0 14.0 14.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	HAX 17.0 17.0 14.0 16.0 16.0 17.0 17.0 13.0 13.0 13.0 15.0 18.0	MIN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 12.0 11.0 11.0 11.0 9.0 9.0 9.0	20.0 17.0 17.0 17.0 14.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 22.0	HIN 13.0 14.0 13.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 13.0 14.0 14.0 14.0 14.0	MAX 22.0 18.0 19.0 20.0 21.0 19.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 16-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17	19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 16.0 17.0	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	MAX	HIN
DAY 1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Aid MAX 12-0 12-0 13-0 13-0 13-0 13-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	MAX 17-0 17-0 16-0 16-0 17-0 17-0 13-0 13-0 13-0 13-0 15-0 18-0 18-0 18-0	#IN 11.0 12.0 11.0 12.0 10.0 8.0 9.0 9.0 12.0 11.0 11.0 10.0 9.0 10.0 12.0	20.0 17.0 17.0 17.0 14.0 19.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0	HIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 12.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	HIN 16-0 17-0 17-0 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 17-0 18-0 17-0 17-0 17-0	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 14.0 15.0 15.0 15.0 16.0 15.0	MAX	HIN
0AY 1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 19	MAX 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	HAX 17.0 17.0 16.0 16.0 17.0 17.0 13.0 13.0 13.0 15.0 18.0 18.0	#IN 11.0 12.0 11.0 12.0 10.0 9.0 9.0 12.0 11.0 11.0 10.0 9.0 9.0	20.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 20.0 22.0 22.0 2	HIN 13.0 14.0 13.0 13.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	HIN 16.0 17-0 17-0 17-0 17-0 17-0 17-0 18-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 1	19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 16.0 17.0	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 16.0	MAX	HIN
0AY 1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20	12-0 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0	PRIL MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 9.0 8.0 8.0 7.0 9.0 7.0 7.0	MAX 17.0 17.0 14.0 16.0 16.0 17.0 17.0 13.0 13.0 13.0 15.0 18.0 18.0 17.0 17.0	#IN 11.0 12.0 11.0 12.0 10.0 10.0 9.0 9.0 11.0 11.0 10.0 9.0 12.0 11.0 11.0	20.0 17.0 17.0 17.0 14.0 19.0 20.0 20.0 20.0 20.0 20.0 22.0 21.0 22.0 22	MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	HIN 16.0 17-0 17-0 17-0 17-0 17-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0 16.0 16.0 15.0	HAX	HEN
DAY 1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Ail MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 9.0 8.0 9.0 9.0 9.0 7.0 7.0	MAX 17.0 14.0 14.0 16.0 '6.0 17.0 17.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 15.0 16.0 17.0 18.0 1	#IN 11.0 12.0 12.0 10.0 12.0 11.0 12.0 11.0 11	20.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 22.0 21.0 22.0 21.0 22.0 22	HIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 16.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0	MAX	HIN
0AY 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 15 16 16 17 18 9 20 21 22	12-0 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 14-0 14-0 14-0 14-0 14-0 14-0 14-0 14	PRIL MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 9.0 8.0 8.0 7.0 7.0 7.0 7.0	MAX 17.0 14.0 14.0 16.0 16.0 17.0 17.0 13.0 13.0 13.0 15.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0	#IN 11.0 12.0 12.0 10.0 10.0 9.0 11.0 11.0 11.0 11.0 9.0 9.0 12.0 12.0 12.0 13.0	20.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0	JNE MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0	MAX 22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 1	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 14.0 15.0 16.0 16.0 15.0	MAX	MIN
0AY 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 21 2 2 2 3 7 4	Ail MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 9.0 8.0 9.0 9.0 9.0 7.0 7.0	MAX 17.0 14.0 14.0 16.0 '6.0 17.0 17.0 13.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 15.0 16.0 17.0 18.0 1	#IN 11.0 12.0 12.0 10.0 12.0 11.0 12.0 11.0 11	20.0 17.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 22.0 21.0 22.0 21.0 22.0 22	HIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0	MAX	HIN
DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Ail MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 8.0 8.0 9.0 7.0 7.0 7.0 7.0 7.0 7.0 9.0	MAX 17.0 14.0 16.0 16.0 17.0 17.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 15.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 19.0 1	#IN 11.0 12.0 12.0 10.0 12.0 11.0 12.0 11.0 11	20.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 21.0 22.0 21.0 22.0 22	HIN 13.0 14.0 13.0 14.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 15.0 15.0 17.0 16.0	22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 1	MAX 19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 17.0 17.0 16.0 20.0	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0	MAX	MIN
DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	Ail MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 9.0 8.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 10.0 10.0 10.0 10.0 10.0 10.0	17.0 14.0 14.0 16.0 16.0 17.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	#IN 11.0 12.0 12.0 10.0 10.0 9.0 11.0 11.0 11.0 11.0 9.0 9.0 12.0 12.0 13.0 13.0 13.0 17.0 17.0 17.0	20.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 22.0 21.0 22.0 22	MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 12.0 13.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 17.0	22.0 18.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 18.0 19.0 1	MAX 19.0 17.0 17.0 19.0 20.0 20.0 20.0 17.0 17.0 17.0 17.0 16.0 20.0	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 16.0 15.0 16.0 15.0	MAX	MIN
0AY 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 16 17 18 19 19 20 21 22 23 24 25 26 27	MAX 12-0 12-0 13-0 13-0 13-0 13-0 15-0 15-0 15-0 15-0 15-0 15-0 15-0 15	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 8.0 8.0 7.0 7.0 7.0 9.0 8.0 8.0	MAX 17.0 14.0 14.0 16.0 16.0 17.0 17.0 17.0 13.0 13.0 13.0 15.0 18.0 18.0 17.0 18.0 17.0 18.0 18.0 17.0 18.0 1	#IN 11.0 12.0 12.0 12.0 10.0 11.0 11.0 11.0	20.0 17.0 17.0 14.0 14.0 20.0 20.0 20.0 21.0 21.0 21.0 22.0 22	INE MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 14.0 15.0 17.0 16.0 17.0 18.0	MAX 22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0 18.0 18.0 19.0 1	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX	HIN
DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Aid MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0	17.0 14.0 16.0 16.0 17.0 17.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	#IN 11.0 12.0 10.0 12.0 10.0 9.0 9.0 12.0 11.0 11.0 10.0 9.0 9.0 9.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0	20.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 22.0 21.0 22.0 22	HIN 13.0 14.0 13.0 14.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 14.0 17.0 16.0 17.0 18.0 17.0 18.0 19.0	22.0 18.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MAX 19.0 17.0 17.0 19.0 20.0 20.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 20.0	HIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	MAX	NIN
0AY 1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 16 17 18 19 19 20 21 22 23 24 25 26 27	12-0 12-0 12-0 13-0 13-0 13-0 13-0 14-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 8.0 8.0 8.0 7.0 7.0 9.0 8.0 10.0 11.0 11.0	17.0 14.0 14.0 16.0 16.0 17.0 16.0 17.0 13.0 13.0 13.0 13.0 13.0 15.0 15.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	#IN 11.0 12.0 12.0 12.0 10.0 11.0 11.0 11.0	20.0 17.0 17.0 14.0 14.0 20.0 20.0 20.0 21.0 21.0 22.0 22.0 22	INE MIN 13.0 14.0 14.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 13.0 13.0 14.0 15.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0	MAX 22.0 18.0 19.0 20.0 21.0 21.0 22.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 1	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX	HIN
DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29	Aid MAX 12.0 12.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0	17.0 14.0 16.0 16.0 17.0 17.0 17.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	#IN 11.0 12.0 10.0 12.0 10.0 9.0 9.0 12.0 11.0 11.0 10.0 9.0 9.0 9.0 12.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0	20.0 17.0 17.0 14.0 20.0 20.0 20.0 20.0 21.0 22.0 21.0 22.0 22	HIN 13.0 14.0 13.0 14.0 13.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 15.0 14.0 17.0 16.0 17.0 18.0 17.0 18.0 19.0	22.0 18.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22	MIN 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 17.0 17.0 19.0 20.0 20.0 19.0 17.0 17.0 17.0 20.0	MIN 16.0 16.0 16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX	NIN

11492200 CRATER LAKE NEAR CRATER LAKE, OREG. (Bydrologic bench-mark station)

LOCATION (revised), --Lat 42°58'45", long 122°04'45" (unsurveyed) Crater Lake National Park and Vicinity Quadrangle, Klamath County, temperature recorder at gaging station at boat harbor at end of trail in Cleatwood Cove, and 6 miles northeast of Crater Lake post office.

DRAINAGE AREA. -- 26.2 sq mi, of which 20.5 sq mi is lake area at elevation 6,176 ft.

PERIOD OF RECORD, -- Chemical analyses: October 1963 to September 1965, October 1966 to September 1966 (miscellaneous). Water temperatures: October 1963 to September 1968.

EXTREMES, -1967-68:
Water temperatures: Maximum, 15.0°C on several days in August; minimum, 3.0° C on many days during December to May.

Period of record:

riog of record: Water temperatures: Maximum, 18.0°C on several days during August and September 1967; minimum (1963-64, 1965-68), 1.5°C on several days during March 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LIVER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SILICA (SIO2)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)
OCT.											
05	18	7.0	2.9	11	2.0	36	0	9.6	10	-1	•0
24	18	6.8	2.9	11	2.2	38	O	10	10	-1	•1
NOV.						_					
24		6.8	2.8	11		40	O		11		
MAY											
14	16	7.0	2.8	11	1.8	36	0	10	11	.1	•0
JULY											
01	18	6.5	2.7	11	1.8	38	0	10	10	•1	•1
AUG.											
09	18	6.6	2.8	12	1.7	37	0	10	12	.1	. 1
SEPT.											
14	19	6.7	2.7	11	1.7	36	0	10	10	•2	.1

DATE	PHOS-PHATE	DIS- SQL VED SQL IDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD— NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	SODIUM AD- SORP- Tion Ratio	PERCEN' SODIUM	COLOR	РН
OCT.										
05	. 96	78	.11	30	o	117	.9	43	5	7.7
24	.07	78	.11	29	o	115	.9	43	0	7.6
NOV.										
24				28	O	121	.9	46		7.5
MAY										
14	.23	84	.11	29	o	116	• 9	43	a	7.5
JULY										
01	• 05	8.5	.12	27	0	119	.9	45	O	7.5
AUG.										
09	.07	79	.11	28	0	117	1.0	46	0	7.4
SEPT.										
14	. 06	77	.10	28	0	117	.9	44	0	7.4

11492200 CRATER LAKE NEAR CRATER LAKE, OREG. -- Continued

			PERATURE		ATER, WATE							
	001	TOBER	NOVE	MBER	DECE	MBER	JAN	UARY	FEBR	UARY	MA	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	12.0	7.0	7.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0
2	12.0 12.0	12.0 11.0	7.0 7.0	7.0 7.0	6.0 5.0	5.0 5.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0
4	11.0	10.0	7.0	7.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
5	10.0	10.0	7.0	7.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
6	10.0	9.0	7.0	7.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
7	9.0	9.0	7.0	7.0	5.0	4.0	3.0	3.0	3.0	3.0	3.0 3.0	3.0 3.0
8	9.0 9.0	9.0 9.0	7•0 7•0	7.0 7.0	4.0 4.0	4.0 4.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0	3.0
10	9.0	9.0	7.0	7.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
11	9.0	9.0	7.0	7.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
12	9.0	9.0	7.0	7.0 7.0	4.0	4.0 4.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0
13 14	9.0 9.0	9.0 9.0	7.0 7.0	7.0	4.0 4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
15	9.0	8.0	7.0	6.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
16	8.0	8.0	6.0	6.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
17	8.0	B.0	6.0 6.0	6.0	4.0	4.0 4.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0
18 19	8.0 8.0	8.0 8.0	6.0	6.0 6.0	4.0 4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
20	8.0	8.0	6.0	6.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
21	8.0	8.0	6.0	6.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
22	8.0	8.0	6.0	6.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
23 24	8.0 8.0	8.0 8.0	6.0 6.0	6.0 6.0	4.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0
25	8.0	8.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
26	8.0	8.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
27	8.0	8.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
28 29	8.0 7.0	7.0 7.0	6.0 6.0	6.0 6.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0	3.0 3.0
30	7.0	7.0	6.0	6.0	3.0	3.0	3.0	3.0			3.0	3.0
31	7.0	7.0			3.0	3.0	3.0	3.0			3.0	3.0
MONTH	13.0	7.0	7.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	A	PRIL		IAY	JU	NE	J	JL Y	AUG	SUST	SEP	rember
DAY	A XAM	PRIL MIN	MAX	MIN	UU XAM	MIN)L XAM	ALY Min	AUC Max	SUST MIN	SEP1	TEMBER Min
1	MAX 3.0	MIN 3.0	MAX 3.0		MAX 4.0	MIN 4.0	MAX 9+0		MAX	MIN	MAX	MIN
1 2	MAX 3.0 3.0	MIN 3.0 3.0	MAX 3.0 3.0	MIN 3.0 3.0	MAX 4.0 4.0	MIN 4.0 4.0	MAX 9.0 9.0	MIN 9.0 9.0	MAX 15.0 15.0	MIN 14.0 14.0	MAX 12.0 12.0	MIN 12.0 12.0
1	MAX 3.0 3.0 3.0	MIN 3.0 3.0 3.0	MAX 3.0 3.0 3.0	MIN 3.0 3.0 3.0	MAX 4.0 4.0 4.0	MIN 4.0 4.0 4.0	MAX 9+0 9+0 9+0	MIN 9.0 9.0 9.0	MAX 15.0 15.0 15.0	MIN 14.0 14.0 14.0	MAX 12.0 12.0 12.0	MIN 12.0 12.0 12.0
1 2 3	MAX 3.0 3.0	MIN 3.0 3.0	MAX 3.0 3.0	MIN 3.0 3.0	MAX 4.0 4.0	MIN 4.0 4.0	MAX 9.0 9.0	MIN 9.0 9.0	MAX 15.0 15.0	MIN 14.0 14.0	MAX 12.0 12.0	MIN 12.0 12.0
1 2 3 4	3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 15.0 15.0	MIN 14.0 14.0 14.0 15.0	MAX 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5	MAX 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5	MAX 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0	HAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 5.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.
1 2 3 4 5 6 7 8 9 10	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 5.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 1	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0	9.0 9.0 9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 13.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	#AX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	MAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	+.0 +.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	#AX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0	#10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0	HAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0	MAX 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0	#10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	HAX 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 8 9 10 11 11 12 3 14 4 15 5 16 17 18 18 12 20 21 22	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0	#10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 20 21 22 22 23	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0	MAX 9.0 9.0 9.0 9.0 9.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 8 9 10 11 11 12 3 14 4 15 5 16 17 18 18 12 20 21 22	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0	#10 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 8.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	HIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 8 9 10 11 12 3 11 4 4 15 15 16 17 18 19 20 21 22 23 24 25	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0	#10 #4.0 #4.0 #4.0 #4.0 #4.0 #4.0 #4.0 #4.	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 11 14 15 16 17 18 19 20 21 22 23 24	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0	MAX 9.0 9.0 9.0 9.0 9.0 11.0 12.0 13.0 13.0 13.0 12.0 13.0	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
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 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 11 14 15 5 16 17 18 19 20 21 22 23 24 25 26 27 28 29	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
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 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0
1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	MIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.
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 29 20 20 20 20 20 20 20 20 20 20 20 20 20	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	MIN 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 12.0 12.0 12.0 12.0 12	15.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	HIN 14.0 14.0 14.0 15.0 15.0 15.0 15.0 15.0 16.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0	12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CALIF.

LOCATION. --Lat 41°55'40", long 122°26'35", in Einel 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.

DRAINAGE AREA, -- 4.630 sq mi, approximately.

PERIOD OF RECORD, -- Chemical analyses: October 1961 to September 1968, Water temperatures: October 1962 to September 1968,

EXTREMES, -- 1967-68:

Water temperatures: Maximum, 22.0°C on several days during June to August; minimum, 2.0°C on many days during December and January.

Period of record:

Water temperatures: Maximum, 23.0°C Aug. 6, 1967; minimum, 1.0°C on several days during January 1965.

EMARKS. -- Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Dec. 16 to Jan. 1; temperature range, 2.0°C to 6.0°C.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- S LUM (MG)	SODIUM (NA)	PO TAS S IUM (K)	BICAP- BONATE (HCO3)	CAR- BONATE (CO3)	SUL FATE	CHLO- R IDE (CL)	NI TRATE (NO3)	PHOS- PHATE (PO4)
OCT. C9	1710			16		88	0		4.0	4.5	.63
NOV.	1110			10		00	U		4.0	4.9	•03
C 8	1760			21		96	0		5.5	5.5	-60
CEC.	1,00			••		,,	U		,,,	,,,	•00
12	2840			20		88	0		5.6	6.1	.26
JAN.							=				
C3	1860			15		8.2	0		2.8	7.6	.39
FEB.											
13	1830			19		93	0		3.9	6.7	. 36
MAR.											
06	2900			17		88	0		3.8	5.7	.42
APR.							_				
Cl PAY	1320			17		88	0			2.6	.22
06	1020	14	7.5	17	2.5	86	Q	21	5.0	1.0	.34
JUNE	1020			.,	247	80	ď	~ 1	3.0	1.0	• > 7
11	715		_	14		83	0		3.8	.9	- 28
JULY							-			-	
03	708			17		69	13		4.4	2.3	.44
AUG.											
06	729			17		93	0		4.4	2.0	.58
SEPT.											
04	1040	13	6.2	15	2.7	89	0	14	4.8	3.0	-66

DATE	BORON (B)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	PERCENT S CDIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCT ANCE (MI CRO- MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN	
OCT.											
09 NOV.	• 09	62	C	36	.9	72	197	8.0	17	6.0	
C8	.08	69	0	40	1. 1	79	231	7.9	11	5.8	
12 JAN.	. 13	59	c	42	1.1	72	217	7.8	6	10.3	
03 FE8.	.06	52	C	39	.9	67	181	7.5	2	11.5	
13 MAR.	.08	66	0	39	1.0	76	230	7.6	4	12.6	
06 APR.	-11	65	0	36	. 9	72	211	7.9	8	12.8	
01 MAY	.10	71	0	34	.9	72	225	7.7	9	9.7	
06 JUNE	.15	66	0	35	•9	71	207	8.0	14	11.2	
11	.08	55	0	36	• B	68	177	8.1	18	9.4	
0 3 AUG.	- 07	65	0	36	•9	78	212	9.2	21	10.9	
06	.10	62	0	37	.9	76	229	8.0	22	8.9	
SEPT.	.04	58	0	35	.9	73	194	7.5	20	9.6	

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CALIF .-- Continued

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		TEN	(PERATURE	(°C) OF 1	VATER, WAT	ER YEAR C	CTOBER 19	67 10 561	TEMBER 19	00		
	oc	TOBER	NOV	EMBER	DEC	EMBER	JAN	IUARY	FEBR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	17.0	12.0	12.0	8.0	8.0			3.0	3.0	7.0	7.0
2	17.0	16.0	12.0	12.0	8.0	7.0	2.0	2.0	3.0	3.0	7.0	7.0
3	16.0	16.0	12.0	12.0	7.0	7.0	2.0	2.0	3.0	3.0	7.0	7.0
4 5	16.0	15.0	12.0	12.0	7.0 7.0	7.0 7.0	2.0 2.0	2.0	3.0	3.0 3.0	7.0 7.0	6.0 6.0
,	16.0	15.0	12.0	12.0	7.0	7.0	2.0	2.0	3.0	3.0	1.0	0.0
6	15.0	15.0	12.0	12.0	7.0	7.0	2.0	2.0	3.0	3.0	7.0	7.0
7	15.0	15.0	12.0	12.0	7.0	7.0	2.0	2.0	3.0	3.0	7.0	7.0
8	15.0	15.0	12.0	12.0	7.0	7.0	2.0	2.0	3.0	3.0	7-0	7.0
10	15.0 15.0	15.0 15.0	12.0 12.0	12.0 12.0	7.0 7.0	7.0 6.0	2.0	2.0	3.0	3.0 3.0	8.0 8.0	7.0 8.0
10	1340	13.0	12.0		,	•••	240		,,,,			
11	15.0	14.0	12.0	11.0	6.0	6.0	2.0	2.0	3.0	3.0	8.0	6.0
12	14.0	14.0	11.0	11.0	6.0	6.0	2.0	2.0	4.0	3.0	7.0 7.0	6.0 7.0
13 14	14.0 14.0	14.0	11.0	11.0 11.0	6.0 6.0	6.0 6.0	2•0 2•0	2.0 2.0	4.0 4.0	4.0 4.0	7.0	7.0
îš	14.0	14.0	11.0	11.0	6.0	6.0	2.0	2.0	4.0	4.0	7.0	7.0
16 17	14.0	14.0	11.0	11.0			2.0	2.0	4.0	4.0 4.0	7.0 B.0	7.0 7.0
18	14.0 14.0	14.0	11.0	11.0 11.0			2.0	2.0	4.0	4.0	8.0	8.0
19	14.0	14.0	11.0	11.0			2.0	2.0	4.0	4.0	8.0	8.0
20	14.0	14.0	11.0	10.0			2.0	2.0	4.0	4.0	8.0	8.0
21	14.0	14.0	10.0	10.0			2.0	2.0	4.0	4.0	8.0	8.0
21	14.0	13.0	10.0	10.0			2.0	2.0	6.0	4.0	8.0	8.0
23	13.0	13.0	10.0	9.0			2.0	2.0	6.0	6.0	8.0	8.0
24	13.0	13.0	9.0	9.0			2.0	2-0	6.0	6.0	8.0	8.0
25	13.0	13.0	9.0	9.0			3.0	2.0	6.0	6.0	8.0	8.0
26	13.0	13.0	9.0	9.0			3.0	3.0	6.0	6.0	8.0	8.0
27	13.0	13.0	9.0	9.0			3.0	3.0	6.0	6.0	9.0	8.0
28	13.0	13.0	9.0	8.0			3.0	3.0	7.0	6.0	9.0	8.0
29	13.0	13.0	8.0	8.0			3-0	3.0	7.0	7.0	10.0	9.0 9.0
30 31	13.0 12.0	12.0 12.0	8.0	8.0			3.0 3.0	3.0 3.0			9.0	8.0
31	12.0	12.0					,,,,	,				
MUNTH	17.0	17.0	12.0	8.0			3.0	2.0	7.0	3.0	10.0	6.0
		0011		MAU		INE			***			
		PRIL		MAY	J	UNE	Ji	JLY	AU	GUS T	SEP	TEMBER
DAY	MA X	PRIL Min	MAX	MAY	J. XAM	UNE MIN	JL Max	JLY Min	AUI MAX	GUST Min	SEP [.]	TEMBER Min
DAY 1	MAX	MIN		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	MAX 9.0 9.0	MIN 8.0 9.0	MAX 13-0 13-0	MIN 12.0 13.0	MAX 17.0 16.0	MIN 16.0 16.0	MAX 18.0 19.0	MIN 18.0 18.0				
1 2 3	MAX 9.0 9.0 9.0	MIN 8.0 9.0 9.0	MAX 13.0 13.0 13.0	MIN 12.0 13.0 13.0	MAX 17.0 16.0 18.0	MIN 16.0 16.0 16.0	MAX 18.0 19.0 19.0	MIN 18.0 18.0 19.0	MAX 20.0 21.0 21.0	MIN 20.0 20.0 21.0	MAX 19.0 19.0 18.0	MIN 18.0 18.0 18.0
1 2 3 4	9.0 9.0 9.0 9.0	MIN 8.0 9.0 9.0 9.0	MAX 13.0 13.0 13.0 15.0	MIN 12.0 13.0 13.0	MAX 17.0 16.0 18.0	MIN 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 21.0	MIN 18.0 18.0 19.0 19.0	MAX 20.0 21.0 21.0 22.0	MIN 20.0 20.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0	MIN 18.0 18.0 18.0
1 2 3	MAX 9.0 9.0 9.0	MIN 8.0 9.0 9.0	MAX 13.0 13.0 13.0	MIN 12.0 13.0 13.0	MAX 17.0 16.0 18.0	MIN 16.0 16.0 16.0	MAX 18.0 19.0 19.0	MIN 18.0 18.0 19.0	MAX 20.0 21.0 21.0	MIN 20.0 20.0 21.0	MAX 19.0 19.0 18.0	MIN 18.0 18.0 18.0
1 2 3 4 5	9.0 9.0 9.0 9.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 13.0 15.0 14.0	MIN 12.0 13.0 13.0 13.0 14.0	MAX 17.0 16.0 18.0 18.0 17.0	MIN 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0	MIN 18.0 18.0 19.0 19.0	MAX 20.0 21.0 21.0 22.0 22.0	MIN 20.0 20.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 18.0	MIN 18.0 18.0 18.0
1 2 3 4 5	9.0 9.0 9.0 10.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 13-0 13-0 13-0 15-0 14-0	MIN 12.0 13.0 13.0 14.0 13.0 14.0	MAX 17.0 16.0 18.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0	MIN 18.0 18.0 19.0 19.0 19.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0	MIN 20-0 20-0 21-0 21-0 21-0 21-0	MAX 19.0 19.0 18.0 19.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8	MAX 9.0 9.0 9.0 10.0 10.0 10.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0	MIN 12.0 13.0 13.0 14.0 13.0 13.0	MAX 17.0 16.0 18.0 18.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0	MAX 18.0 19.0 19.0 21.0 20.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8	9.0 9.0 9.0 10.0 10.0 10.0 10.0	8.0 9.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 14.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0	MAX 17.0 16.0 18.0 17.0 16.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0	MAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 22.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9	MAX 9.0 9.0 9.0 10.0 10.0 10.0 10.0	MIN 8.0 9.0 9.0 9.0 9.0	MAX 13.0 13.0 15.0 14.0 14.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 14.0 13.0 13.0	MAX 17.0 16.0 18.0 18.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0	MAX 18.0 19.0 19.0 21.0 20.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0	MAX 13.0 13.0 15.0 14.0 14.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 22.0 21.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0	MAX 13.0 13.0 15.0 15.0 14.0 14.0 15.0 15.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 17.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 22.0 21.0 22.0 21.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.	MAX 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	MAX 17-0 16-0 18-0 18-0 17-0 17-0 17-0 17-0 17-0 17-0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.	MAX 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 12.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0	MAX 13.0 13.0 15.0 15.0 14.0 14.0 15.0 15.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 15.0 16.0 17.0 16.0	MAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 22.0 21.0 22.0 21.0	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9-0 9-0 9-0 10-0 10-0 10-0 10-0 11-0 11-	MIN 8.0 9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 14.0 15.0 14.0 15.0 16.0	MIN 12.0 13.0 13.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0	MAX 17.0 16.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0	MAX 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0 11.0 11	#IN 8.0 9.2 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 14.0 15.0 16.0 16.0 14.0 14.0 14.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0	HAX 20.0 21.0 21.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 18.0	M1N 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 9.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0	8.0 9.7 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11	HAX 13.0 13.0 13.0 15.0 14.0 14.0 14.0 15.0 16.0 15.0 14.0 14.0 15.0 15.0 16.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 18.0	HAX 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	HAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	M1N 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	9.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.	#IN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 13.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0	HIN 16.0 16.0 16.0 16.0 16.0 15.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 19.0 20.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 18.0 18.0 18.0 18.0	M1N 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0	MAX 13.0 13.0 13.0 15.0 15.0 16.0 16.0 15.0 16.0 15.0 16.0 16.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 19.0	HAX 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	HAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	M1N 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 6 7 8 8 9 9 10 0 11 12 13 14 15 16 17 18 19 20	9.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.	#IN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 13.0 15.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MIN 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 12.0 19.0	HIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 19.0 20.0	HAX 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HIN 18.0 18.0 19.0 19.0 19.0 20.0 2	20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 8 19 20 21	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 12.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 22.0 22.0 21.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 16.0 16.0 17.0 18.0 18.0 19.0 20.0 19.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 22.0 21.0 20.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	20.0 21.0 21.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 8 19 20 21 22 23 23	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 22.0 21.0 18.0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 13 11 15 15 16 17 18 19 20 21 22 23 24	9.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0 11.	#IN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 14.0 15.0 14.0 14.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 21.0 18.0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 17.0 18.0 19.0 20.0 17.0 17.0 17.0 17.0 17.0	MAX 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 8 19 20 21 22 23 23	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 22.0 21.0 18.0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 17.0 17.0 17.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 23 23 24 25 26	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 16.0 17.0 18.0 18.0 19.0 20.0 17.0 17.0 17.0 17.0 18.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 13 11 15 11 15 11 17 18 19 20 21 22 23 24 25 26 27	MAX 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11	MIN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 21.0 21.0 18.0 19.0 19.0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	MAX 18.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0
1 2 3 4 4 5 6 7 8 9 10 11 12 12 13 14 14 15 16 17 8 19 20 21 22 23 23 24 25 26 27 28	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 16.0 17.0 16.0 16.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 7 8 9 10 11 11 12 13 14 15 15 16 17 18 19 19 20 21 22 23 24 25 26 27 28 8 29	MAX 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11	MIN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 13.0	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 16.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0	MAX 18.0 19.0 19.0 21.0 21.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 21.0 21	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 12 13 14 14 15 16 17 8 19 20 21 22 23 23 24 25 26 27 28	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 21.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 16.0 17.0 16.0 16.0 17.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 17.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 8 19 20 21 22 23 24 25 26 27 28 29 30 31	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 15.0 16.0 14.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 17.0	MIN 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0	17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 19.0 19.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 16.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 8 19 20 21 22 23 24 25 26 27 28 29 30 30	9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.	MIN 8.0 9.0 9.0 9.0 9.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MAX 13.0 13.0 13.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MIN 12.0 13.0 13.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAX 17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 16.0 17.0 18.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 21.0 22.0 22.0 22.0 22.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 8 19 20 21 22 23 24 25 26 27 28 29 30 31	9.0 9.0 9.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 13.0 13.0 13.0 15.0 14.0 14.0 15.0 16.0 14.0 15.0 14.0 14.0 15.0 14.0 14.0 14.0 14.0 15.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 16.0 17.0	MIN 12.0 13.0 13.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0	17.0 16.0 18.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 22.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 16.0 16.0 16.0 16.0 16.0 15.0 16.0 15.0 16.0 17.0 16.0 17.0 18.0 18.0 17.0 17.0 17.0 18.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	HAX 18.0 19.0 19.0 21.0 20.0 21.0 22.0 21.0 21.0 21.0 21	MIN 18.0 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0	MIN 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 19.0 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0

11516600 COTTONWOOD CREEK AT RORNBROOK, CALIF.

LOCATION.--Lat 41°55'00" long 122°33'45", in SW\set 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.

OCTOBER

PERIOD OF RECORD, -- Water temperatures: October 1964 to September 1968.

EXTREMES . -- 1967-68:

Water temperatures: Maximum, 30.0°C July 7, 8; minimum, 1.0°C on many days during December to February.

Period of record:

Water temperatures: Maximum (1964-65, 1966-68), 30.0°C July 7, 8, 1968; minimum, freezing point on several days in December 1965, December 1966, and January 1967.

REMARKS. -- Clock stopped Dec. 20 to Jan. 2; temperature range, 1.0°C to 2.0°C.

NOVEMBER

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY

FEBRUARY

MARCH

DECEMBER

	UC	LUBEK	NOV	EMBEK	DEC	EMBEK	JA	NUAKT	FEB	KUAR Y	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
941	784	71.7	744	74.14	HAA		747	ata	744	414	ma A	717
1	18.0	16.0	12.0	7.0	4.0	2.0			4.0	1.0	8.0	6.0
ž	17.0	11.0	12.0	8.0	4.0	2.0			4.0	2.0	10.0	5.0
3	16.0	11.0	11.0	7.0	6.0	3.0	1.0	1.0	6.0	2.0	9.0	5.0
4	17.0	10.0	10.0	7.0	5.0	3.0	1.0	1.0	6.0	2.0	9.0	6.0
5	17.0	12.0	12.0	8.0	4.0	2.0	1.0	1.0	6.0	3.0	9.0	7.0
6	17.0	11.0	11.0	7.0	3.0	1.0	1.0	1.0	6.0	3.0	B. O	4.0
7	18.0	11.0	12.0	B.0	3.0	1.0	1.0	1.0	6.0	2.0	B.O	4.0
В	17.0	11.0	13.0	9.0	3.0	2.0	1.0	1.0	6.0	2.0	B.O	4.0
9	17.0	11.0	11.0	9.0	5.0	2.0	1.0	1.0	7.0	3.0	7.0	4.0
10	18.0	11.0	12.0	9.0	5.0	3.0	2.0	1.0	7.0	4.0	7.0	3.0
11	1 B. C	13.0	12.0	8.0	5.0	3.0	1.0	1.0	7.0	4.0	B.O	6.0
12	17.0	11.0	12.0	9.0	3.0	1.0	1.0	1.0	6.0	2.0	B.O	6.0
13	16.0	10.0	12.0	9.0	2.0	1.0	2.0	1.0	5.0	1.0	6.0	3.0
14	16.0	9.0	13.0	9.0	1.0	1.0	2.0	1.0	5.0	1.0	B.O	5.0
15	16.0	9.0	11.0	7.0	1.0	1.0	3.0	2.0	6.0	2.0	8.0	6.0
16	16.0	8.0	10.0	7.0	1.0	1.0	5.0	2.0	6.0	3.0	B.0	6.0
17	16.0	9.0	9.0	6.0	1.0	1.0	3.0	1.0	B.0	4-0	8.0	6.0
18 19	16.0	9.0	10.0	7.0	1.0	1.0	3.0	1.0	B.0	4.0	8.0	6.0
	16.0	10.0	9.0	7.0	1.0	1.0	4.0	2.0	B.0	6.0	8.0	5.0
20	16.0	9.0	8.0	6.0			4.0	2.0	7.0	6.0	9.0	5.0
21	14.0	11.0	8.0	4.0			6.0	3.0	9.0	6.0	9.0	6.0
22	17.0	11.0	7.0	3.0			5.0	2.0	8.0	6.0	9.0	7.0
23	14.0	11.0	7.0	3.0			4.0	2.0	9.0	7.0	9.0	7.0
24	14.0	9.0	7.0	4.0			4.0	1.0	9.0	6.0	11.0	7.0
25	16.0	12.0	7.0	3.0			4.0	2.0	9.0	5.0	12.0	B.0
		12.00		2.0			****	2.0	,.0	2.0	1200	
26	13.0	8.0	6.0	2.0			3.0	1.0	10.0	5.0	11.0	4.0
27	12.0	10.0	4.0	2.0			3.0	1.0	10.0	5.0	11.0	6.0
28	14.0	11.0	6.0	3.0			2.0	1.0	9.0	4.0	12.0	7.0
29	12.0	8.0	5.0	2.0			2.0	1.0	9.0	4.0	13.0	B.0
30	12.0	7.0	4.0	2.0			2.0	1.0			13.0	8.0
31	12.0	7.0					4.0	1.0			12.0	7.0
4CNTH	18.0	7.0	13.0	2.0			6.0	1.0	10.0	1.0	13.0	3.0
	A!	PRIL	1	YAY	31	JNE	31	JLY	AUG	SUST	SEP1	FEMBER
DAY	MAX	MIN	MAX	MIN	M AX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	MAX	MIN										
1	MAX 12.0	MIN 9.0	17.0	12.0	22.0	17.0	25.0	18.0	27.0	24.0	24.0	21.0
1 2	MAX 12.0 12.0	MIN 9.0 8.0	17.0 18.0	12.0 11.0	22.0 19.0	17.0 17.0	25.0 26.0	18.0 19.0	27.0 28.0	24.0 23.0	24.0 23.0	21.0 20.0
1 2 3	MAX 12.0 12.0 11.0	MIN 9.0 8.0 7.0	17.0 18.0 18.0	12.0 11.0 12.0	22.0 19.0 22.0	17.0 17.0 16.0	25.0 26.0 28.0	18.0 19.0 20.0	27.0 28.0 28.0	24.0 23.0 23.0	24.0 23.0 23.0	21.0 20.0 19.0
1 2 3 4	MAX 12.0 12.0 11.0 11.0	MIN 9.0 8.0 7.0 8.0	17.0 18.0 18.0 18.0	12.0 11.0 12.0 13.0	22.0 19.0 22.0 22.0	17.0 17.0 16.0 17.0	25.0 26.0 28.0 29.0	18.0 19.0 20.0 22.0	27.0 28.0 28.0 27.0	24.0 23.0 23.0 23.0	24.0 23.0 23.0 23.0	21.0 20.0 19.0 19.0
1 2 3	MAX 12.0 12.0 11.0	MIN 9.0 8.0 7.0	17.0 18.0 18.0	12.0 11.0 12.0	22.0 19.0 22.0	17.0 17.0 16.0	25.0 26.0 28.0	18.0 19.0 20.0	27.0 28.0 28.0	24.0 23.0 23.0	24.0 23.0 23.0	21.0 20.0 19.0
1 2 3 4 5	MAX 12.0 12.0 11.0 11.0	9.0 8.0 7.0 8.0	17.0 18.0 18.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0	17.0 17.0 16.0 17.0	25.0 26.0 28.0 29.0 29.0	18.0 19.0 20.0 22.0 22.0	27.0 28.0 28.0 27.0 27.0	24.0 23.0 23.0 23.0 23.0	24.0 23.0 23.0 23.0 24.0	21.0 20.0 19.0 19.0 20.0
1 2 3 4 5	MAX 12.0 12.0 11.0 11.0 12.0	9.0 8.0 7.0 8.0 8.0	17.0 18.0 18.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0	17.0 17.0 16.0 17.0 17.0	25.0 26.0 28.0 29.0 29.0	18.0 19.0 20.0 22.0 22.0	27.0 28.0 28.0 27.0 27.0	24.0 23.0 23.0 23.0 23.0 22.0	24.0 23.0 23.0 23.0 24.0	21.0 20.0 19.0 19.0 20.0
1 2 3 4 5	MAX 12.0 12.0 11.0 11.0 12.0	MIN 9.0 8.0 7.0 8.0 7.0	17.0 18.0 18.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0	17.0 17.0 16.0 17.0 17.0	25.0 26.0 28.0 29.0 29.0 29.0	18.0 19.0 20.0 22.0 22.0 22.0	27.0 28.0 28.0 27.0 27.0 27.0	24.0 23.0 23.0 23.0 22.0	24.0 23.0 23.0 23.0 24.0 24.0	21.0 20.0 19.0 19.0 20.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 11.0 11.0 12.0 11.0	MIN 9.0 8.0 7.0 8.0 8.0 7.0 7.0	17.0 18.0 18.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0	17.0 17.0 16.0 17.0 17.0	25.0 26.0 28.0 29.0 29.0 29.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 23.0	27.0 28.0 28.0 27.0 27.0 27.0 26.0 24.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0	17.0 17.0 16.0 17.0 17.0 16.0 15.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 30.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 23.0 23.0	27.0 28.0 28.0 27.0 27.0 27.0 26.0 24.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8	MAX 12.0 12.0 11.0 11.0 12.0 11.0	MIN 9.0 8.0 7.0 8.0 8.0 7.0 7.0	17.0 18.0 18.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0	17.0 17.0 16.0 17.0 17.0	25.0 26.0 28.0 29.0 29.0 29.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 23.0	27.0 28.0 28.0 27.0 27.0 27.0 26.0 24.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0
1 2 3 4 5 6 7 8 9	MAX 12.0 11.0 11.0 11.0 12.0 11.0 12.0 13.0 15.0	9.0 8.0 7.0 8.0 8.0 7.0 7.0 7.0 9.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0	25.0 26.0 28.0 29.0 29.0 30.0 30.0 30.0 29.0 28.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0	27.0 28.0 28.0 27.0 27.0 26.0 24.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 23.0 21.0 22.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9	MAX 12-0 12-0 11-0 11-0 12-0 11-0 12-0 13-0 16-0	9.0 8.0 7.0 8.0 8.0 7.0 7.0 7.0 9.0 11.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0	17.0 17.0 16.0 17.0 17.0 16.0 15.0 15.0 17.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 30.0 29.0 28.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 22.0 22.0 22	27.0 28.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0 22.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 11.0 12.0 11.0 12.0 11.0 12.0 16.0 16.0 13.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 9.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 19.0 20.0 21.0	12.0 11.0 12.0 13.0 11.0 9.0 11.0 12.0 13.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 14.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 30.0 29.0 28.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 22	27.0 28.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0 22.0	24.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10	12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0 15.0 16.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 9.0 11.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0	22.0 19.0 22.0 22.0 21.0 22.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 16.0 15.0 14.0 15.0 17.0	25.0 26.0 28.0 29.0 29.0 30.0 30.0 29.0 29.0 27.0 27.0 27.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 23.0 22.0 22	27.0 28.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 12.0 11.0 11.0 12.0 11.0 12.0 11.0 12.0 16.0 16.0 13.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 9.0	17.0 18.0 18.0 18.0 17.0 17.0 17.0 19.0 20.0 21.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 13.0 13.0 13.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 14.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 30.0 29.0 28.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 22	27.0 28.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0 22.0	24.0 23.0 23.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 12.0 11.0 11.0 12.0 11.0 12.0 13.0 15.0 16.0 13.0 13.0	MIN 9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 9.0 7.0 9.0 11.0	17.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 19.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0 12.0 12.0 12.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0	25.0 26.0 28.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 27.0 27.0 26.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 22	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	24.0 23.0 23.0 23.0 22.0 22.0 21.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 21.0 20.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12-0 12-0 11-0 12-0 11-0 12-0 13-0 13-0 13-0 13-0 13-0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 9.0 11.0	17.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 19.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0 12.0 12.0 12.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 15.0 15.0	25.0 26.0 28.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 27.0 27.0 26.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 23.0 22.0 22	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	24.0 23.0 23.0 23.0 22.0 22.0 23.0 23.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 21.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13	12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 15.0 16.0 13.0 13.0 13.0 13.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 9.0 11.0 9.0 7.0	17-0 18-0 18-0 18-0 17-0 17-0 19-0 20-0 21-0 19-0 18-0 19-0 18-0 19-0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0 12.0 12.0 11.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 21.0 22.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 15.0 15.0 17.0	25.0 26.0 29.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0	18.0 19.0 20.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 19.0	27.0 28.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 22.0 22.0 22	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 20.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12-0 12-0 11-0 11-0 12-0 11-0 12-0 13-0 16-0 13-0 13-0 13-0	9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 10.0	17.0 18.0 18.0 17.0 17.0 17.0 20.0 21.0 19.0 21.0 19.0 17.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 12.0 13.0 12.0 11.0	22.0 19.0 22.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	17.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 14.0 15.0 17.0 18.0 15.0 15.0 17.0 17.0	25.0 26.0 29.0 29.0 29.0 30.0 29.0 27.0 27.0 27.0 27.0 26.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 22	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0 22.0 22.0 22.0 21.0 18.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 20.0 21.0 21.0 21.0 21.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 17.0
1 2 3 4 5 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19	MAX 12.0 12.0 11.0 11.0 12.0 13.0 13.0 15.0 16.0 13.0 13.0 13.0 13.0 14.0 13.0	9.0 8.0 7.0 8.0 7.0 7.0 7.0 9.0 11.0 11.0 9.0 7.0 8.0 10.0	17.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 19.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	12.0 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0 12.0 14.0 14.0 14.0 16.0	22.0 19.0 22.0 22.0 18.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	25.0 26.0 28.0 29.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 27.0 26.0 25.0 25.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 19.0 19.0 20.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 21.0 20.0 21.0 21.0 21.0 21.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18	12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0	9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 10.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 18.0 17.0 18.0 17.0 18.0 19.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 12.0 13.0 12.0 11.0	22.0 19.0 22.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	17.0 17.0 17.0 17.0 17.0 17.0 16.0 15.0 14.0 15.0 17.0 18.0 15.0 15.0 17.0 17.0	25.0 26.0 29.0 29.0 29.0 30.0 29.0 27.0 27.0 27.0 27.0 26.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 22	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 23.0 21.0 22.0 22.0 22.0 21.0 18.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 17.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 14.0 14.0	MIN 9.0 8.0 7.0 8.0 7.0 7.0 7.0 9.0 11.0 11.0 10.0 8.0 8.0 10.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	17.0 18.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 20.0 21.0 19.0 18.0 19.0 18.0 19.0 19.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0 12.0 12.0 11.0 12.0 14.0 14.0 14.0	22.0 19.0 22.0 22.0 21.0 22.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 15.0 15.0 15.0 17.0 15.0 17.0 15.0 15.0 17.0	25.0 26.0 28.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 19.0 19.0 20.0 19.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0 19.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 17.0 18.0 18.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 114 15 16 117 18 19 20 21	12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0	MIN 9.0 8.0 7.0 8.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 10.0 8.0 7.0 8.0 8.0 8.0 8.0 9.0 9.0 11.0 9.0 11.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	17.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 19.0 18.0 10.0 20.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	12.0 11.0 12.0 13.0 11.0 9.0 10.0 12.0 13.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0	22.0 19.0 22.0 22.0 22.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 17.0 18.0 15.0 15.0 15.0 19.0 19.0 19.0	25.0 26.0 29.0 29.0 29.0 30.0 30.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 27.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 20.0 19.0 19.0 19.0 19.0 20.0 21.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 22.0 21.0 21.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 19.0 17.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0	MIN 9.0 8.0 8.0 8.0 7.0 7.0 9.0 11.0 11.0 9.0 8.0 8.0 7.0 9.0 9.0 9.0 8.0	17.0 18.0 18.0 18.0 17.0 18.0 19.0 20.0 21.0 19.0 19.0 19.0 20.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	12.0 11.0 12.0 13.0 11.0 9.0 10.0 11.0 12.0 13.0 12.0 12.0 11.0 14.0 14.0 14.0 14.0 14.0	22.0 19.0 22.0 22.0 21.0 22.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 15.0 15.0 17.0 15.0 17.0 15.0 17.0 19.0 19.0 19.0 19.0	25.0 26.0 29.0 29.0 29.0 30.0 30.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 22.0 21.0 21.0 21.0 19.0 19.0 19.0 20.0 19.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 18.0 17.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 7.0 8.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 7.0 7.0 8.0 7.0 9.0 8.0 10.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 18.0 17.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	12.0 11.0 12.0 13.0 11.0 10.0 10.0 12.0 13.0 12.0 12.0 14.0 14.0 14.0 14.0 13.0 13.0	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 16.0 17.0 19.0 19.0 19.0 19.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 20.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 17.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 13.0 13.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 11 4 15 5 16 17 18 19 20 21 22 23 24	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 15.0 16.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 8.0 7.0 7.0 7.0 9.0 11.0 11.0 8.0 7.0 7.0 9.0 7.0 8.0 8.0 8.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 18.0 17.0 19.0 20.0 18.0 19.0 19.0 18.0 19.0	12.0 11.0 12.0 13.0 11.0 10.0 11.0 11.0 12.0 13.0 12.0 12.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0	22.0 19.0 22.0 22.0 22.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 16.0 17.0 14.0 15.0 17.0 18.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0	25.0 26.0 29.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 22	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 19.0 17.0 18.0 19.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0 17.0 18.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	12.0 12.0 11.0 11.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 7.0 8.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 7.0 7.0 8.0 7.0 9.0 8.0 10.0	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 18.0 17.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	12.0 11.0 12.0 13.0 11.0 10.0 10.0 12.0 13.0 12.0 12.0 14.0 14.0 14.0 14.0 13.0 13.0	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 17.0 15.0 15.0 15.0 15.0 16.0 17.0 19.0 19.0 19.0 19.0	25.0 26.0 28.0 29.0 29.0 29.0 30.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 20.0 19.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 22.0 21.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 21.0 22.0 22.0 21.0 19.0 19.0 19.0 19.0 17.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 13.0 13.0
1 2 3 4 5 6 7 7 8 9 10 11 11 2 11 3 11 4 11 5 11 6 11 7 11 8 11 9 20 21 22 23 24 25	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 8.0 7.0 7.0 9.0 11.0 11.0 9.0 8.0 7.0 7.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 9.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 18.0 17.0 19.0 20.0 18.0 19.0 18.0 17.0 18.0 17.0 18.0 17.0	12.0 11.0 12.0 13.0 11.0 10.0 11.0 12.0 13.0 12.0 12.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 16.0 15.0 15.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	25.0 26.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 21.0 20.0 21.0 21	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 19.0 19.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0 17.0 18.0 18.0 17.0 15.0
1 2 2 3 4 5 6 7 7 8 9 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN 9.0 8.0 7.0 7.0 7.0 7.0 9.0 11.0 11.0 7.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 10.0 8.0 10.0 8.0 10.0 10.0	17.0 18.0 18.0 17.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	12.0 11.0 12.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 16.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 29.0 29.0 29.0 29.0 29.0 20.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 23.0 22.0 21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0	24.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 22.0 21.0 22.0 21.0 19.0 19.0 19.0 17.0 17.0 17.0 18.0 17.0 19.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 19.0 17.0 18.0 19.0 19.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 13.0 14.0 14.0
1 2 3 4 5 6 7 7 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 15.0	MIN 9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 11.0 8.0 7.0 7.0 8.0 8.0 8.0 8.0 10.	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 19.0 19.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	12.0 11.0 12.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 16.0 15.0 16.0 17.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	25.0 26.0 28.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0 27.0 28.0 27.0 27.0 28.0 27.0 27.0 27.0 27.0 27.0 28.0 27.0	18.0 19.0 20.0 22.0 22.0 23.0 22.0 21.0 22.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 22.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 23.0 21.0 21.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 20.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1
1 2 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0	MIN 9.0 8.0 7.0 7.0 9.0 11.0 11.0 7.0 7.0 7.0 7.0 7.0 7.0 11.0 11	17.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 19.0 20.0 18.0 17.0 18.0 17.0 18.0 19.0 20.0 18.0 19.0 20.0 19.0 20.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	12.0 11.0 12.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 15.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0	18.0 19.0 20.0 22.0 23.0 23.0 22.0 21.0 21.0 20.0 19.0 19.0 19.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0	27.0 28.0 27.0 27.0 27.0 26.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0	24.0 23.0 23.0 22.0 22.0 22.0 21.0 22.0 22.0 21.0 21.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 18.0 17.0 19.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 17.0 18.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 13.0 14.0 17.0 14.0
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1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 0	12.0 12.0 11.0 11.0 12.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 17.0	MIN 9.0 8.0 7.0 7.0 9.0 11.0 11.0 7.0 7.0 7.0 7.0 7.0 7.0 11.0 11	17.0 18.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	12.0 11.0 12.0 13.0 11.0 11.0 12.0 13.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 15.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 28.0 28.0 27.0 28.0	18.0 19.0 20.0 22.0 23.0 23.0 22.0 21.0 20.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0 17.0 17.0 17.0 18.0 17.0 18.0 19.0 10.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 17.0 18.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 13.0 14.0 17.0 14.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 3 14 5 15 16 17 18 19 20 21 22 23 24 25 26 27 28 8 29	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 17.0 18.0 19.0 19.0 19.0	MIN 9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 11.0 11.0 8.0 7.0 9.0 9.0 9.0 10.0 8.0 8.0 10.	17.0 18.0 18.0 18.0 17.0 17.0 19.0 20.0 18.0 17.0 19.0 21.0 21.0 20.0 19.0 19.0 19.0 17.0 18.0 19.0 19.0	12.0 11.0 12.0 13.0 11.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 27.0 28.0 28.0 28.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 29.0 28.0	18.0 19.0 20.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 22.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 21.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 18.0 19.0 19.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0
1 2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 7.0 7.0 7.0 8.0 10.0 10.0 10.0 11.0 11.0 11.0 11.	17.0 18.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	12.0 11.0 12.0 13.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 14.0	22.0 19.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 28.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0	18.0 19.0 20.0 22.0 23.0 23.0 22.0 21.0 20.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 18.0 19.0 19.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 10.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 17.0 19.0 19.0 19.0 21.0 20.0 21.0 20.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 0	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 17.0 18.0 19.0 19.0 19.0	MIN 9.0 8.0 7.0 8.0 7.0 7.0 9.0 11.0 11.0 11.0 8.0 7.0 9.0 9.0 9.0 10.0 8.0 8.0 10.	17.0 18.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	12.0 11.0 12.0 13.0 11.0 11.0 12.0 13.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	22.0 19.0 22.0 22.0 21.0 21.0 21.0 22.0 22.0 22	17.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 29.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 28.0 28.0 27.0 28.0	18.0 19.0 20.0 22.0 23.0 23.0 22.0 21.0 20.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 26.0	24.0 23.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 18.0 19.0 19.0 17.0 17.0 17.0 18.0 17.0 18.0 19.0 10.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0	21.0 20.0 19.0 19.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 18.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0
1 2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	12.0 12.0 11.0 11.0 11.0 12.0 13.0 15.0 16.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0	MIN 9.0 8.0 7.0 7.0 9.0 11.0 9.0 11.0 9.0 7.0 7.0 7.0 8.0 10.0 10.0 10.0 11.0 11.0 11.0 11.	17.0 18.0 18.0 18.0 17.0 19.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	12.0 11.0 12.0 13.0 11.0 11.0 12.0 13.0 12.0 13.0 12.0 14.0	22.0 19.0 22.0 22.0 21.0 21.0 22.0 22.0 22.0 22	17.0 17.0 16.0 17.0 17.0 15.0 14.0 15.0 15.0 16.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	25.0 26.0 28.0 29.0 29.0 29.0 29.0 27.0 27.0 27.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.0	18.0 19.0 20.0 22.0 23.0 23.0 22.0 21.0 20.0 21.0 20.0 19.0 19.0 21.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 22.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	27.0 28.0 27.0 27.0 26.0 24.0 26.0 26.0 26.0 22.0 22.0 22.0 21.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 27.0	24.0 23.0 23.0 22.0 22.0 22.0 22.0 22.0 22.0 22.0 21.0 22.0 21.0 18.0 19.0 19.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 10.0	24.0 23.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 17.0 19.0 19.0 19.0 21.0 20.0 21.0 20.0	21.0 20.0 19.0 20.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0

11517500 SHASTA RIVER NEAR YREKA, CALIF.

LOCATION.--Lat 41°49'30", long 122°35'40", in E3 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 mt.

PERIOD OF RECORD, -- Chemical analyses: December 1958 to September 1968, Water temperatures: June 1965 to September 1968.

EXTREMES. --1967-68:
Water temperatures: Dec. 14-18.
Maximum, 30.0°C sometime during period July 2-17, and July 27, 28; minimum, 1.0°C

Period of record: rico of record: Water tempsratures: Maximum, 30.0°C Aug. 2, 3, 1966, July 1, 2, 12, 1967, sometime during period July 2-17, and July 27, 28, 1968; minimum, 1.0°C Dec. 14-18, 1967.

REMARKS.--Chemical-quality records furnished by California Department of Water Resources and reviewed by Geological Survey. Thermograph clock stopped Nov. 8 to Dec. 1, Dec. 29 to Jan. 4, June 28 to July 2, July 3-16, Aug. 29 to Sept. 3; temperature ranges, 4.0°C to 12.0°C, 2.0°C to 4.0°C, 15.0°C to 27.0°C, 18.0°C to 30.0°C, and 17.0°C to 24.0°C, respectively. Recorder malfunction Jan. 5 to Feb. 1.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR DCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	M4G- NE- Sium (MG)	SUDIUM (NA)	PD- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
OCT.											
09 NOV.	191			41		309	0		24		.43
08	195			38		287	17		21		.45
DEC.	221										
12 JAN.	224			43		275	10		26		.46
03	211			36		269	0		15		.46
FEB. 13	249			37		259	11		19		.41
MAR.	242										
O6 APR.	243			30		197	8		19		.39
01 MAY	103			43		288	16		23		.47
06 JUNE	43	4 3	46	52	3.6	378	22	8.7	30	.7	.69
11 JULY	80			46		331	15		26		.78
03 AUG.	16			49		346	39		33		.68
06 SEPT.	11			55		380	21		39		.76
04	39	34	37	50	4.0	324	19	7.9	31	.4	.72
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BUNATE HARD- NESS	DIS- SOL VED SOL IDS (TONS PEP AC-FT)	PERCENT SOOIUM	SODIUM AD- SORP- TION PATIC	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED DXYGEN
	SOLVED SOLTOS (RESI- DUE AT	NESS	CAR- BUNATE HARD-	SOL VED SOL IDS (TONS PEP		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН	PERA Ture	SOLVED
OCT. 09	SOLVED SOLTOS (RESI- DUE AT	NESS	CAR- BUNATE HARD-	SOL VED SOL IDS (TONS PEP		AD- SORP- TION	LINITY AS	FIC COND- UCTANCE (MICRO-	РН 8•2	PERA Ture	SOLVED
00T. 09 NDV. 08	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG)	CAR- BUNATE HARD- NESS	SOL VED SOL IDS (TONS PEP AC-FT)	\$001UM	AD- SORP- TION PATIC	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHDS)		PERA- TURE (DEG C)	SOLVED DXYGEN
OCT. 09 NDV. 08 OEC. 12	SOLVED SOLTOS (RESI- DUE AT 180 C)	NESS (CA.MG) 206	CAR- BUNATE HARD- NESS	SOL VED SOL IDS (TONS PEP AC-FT)	30 30	AD- SORP- TION PATIC	LINITY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)	8.2	PERATURE (DEG C)	SOLVED DXYGEN 10.6
DCT. 09 NOV. 08 DEC. 12 JAN.	SOLVED SOLTDS (RESI- DUE AT 180 C)	NESS (CA.MG) 206 193	CAR- BUNATE HARD- NESS	SOL VED SOL IDS (TONS PEP AC-FT)	30 30	AD- SORP- TION PATIC 1.2	LINITY AS CACO3 253 263	FIC COND- UCTANCE (MICRO- MHOS) 571	8.2	PERA- TURE (DEG C)	SOLVED DXYGEN 10.6 11.5
OCT. 09 NOV. 08 DEC. 12 JAN. 03 FEB. 13	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 206 193 195	CAR- BUNATE HARD- NESS C O	SOL VED SOL IDS (TONS PEP AC-FT)	30 30 30 32	AD- SORP- TION PATIC 1.2 1.2	LINITY AS CACO3 253 263 242	FIC COND- UCTANCE (MICRO- MHOS) 571 513	8.2 8.7 8.5	PERA- TURE (DEG C)	10.6 11.5 12.3
DCT. 09 NDV. 08 DEC. 12 JAN. 03	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 206 193 195	CAR- BUNATE HARD- NESS	SOL VED SOL IDS (TONS PEP AC-FT)	30 30 30 32 30	AD- SORP- TION PATIO 1.2 1.2 1.3	253 263 242 221	FIC COND- UCTANCE (MICRO- MHOS) 571 513 556	8.2 8.7 8.5 8.2	PERATURE (DEG C) 13 11 4	10.6 11.5 12.3
OCT. 09 NOV. 08 OEC. 12 JAN. 03 FEB. 13 MAR. 06 APP. 01	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 206 193 195 184	CAR- BUNATE HARD- NESS 0 0 0	SOLVED SOLIDS (TONS PEP AC-FT)	30 30 32 30 29	AD- SORP- TION PATIC 1.2 1.3 1.2	253 263 242 221	FIC COND- UCTANCE (MICRO- MHOS) 571 513 556 507	8.2 8.7 8.5 8.2	PERATURE (DEG C)	10.6 11.5 12.3 13.4
OCT. 09 NOV. 08 UEC. 12 JAN. 03 FER. 13 MAR. 06 APR. 01 MAY. 06	SOLVED SOLIDS (RESI- DUE AT 180 C)	NESS (CA-MG) 206 193 195 184 196 189	CAR- BUNATE HARD- NESS C O O O O 14	SOLVED SOLIDS (TONS PEP AC-FT)	30 30 32 30 29 26	AD- SORP- TION PATIC 1.2 1.3 1.2 1.2	253 263 242 221 230	FIC COND- UCTANCE (MICRO- MHOS) 571 513 556 507 513	8.2 8.7 8.5 8.2 8.5	PERATURE (DEG C) 13 11 4 3 6	10.6 11.5 12.3 13.4 12.2
OCT. 09 NOV. 08 08 12 JAN. 03 FER. 13 MAR. 06 APR. 01 MAY. 06 JUNE 11	SOLVED SOLTOS (REST)- DUE AT 180 C)	NESS (CA.MG) 206 193 195 184 196 189 223	CAR-BUNATE HARD-NESS	SOL VED SOL IDS (TONS PEP AC-FT)	30 30 32 30 29 26 30	AD- SORP- TION PATIC 1.2 1.2 1.3 1.2 1.2 .9	253 263 242 221 230 175 262	FIC COND- UCTANCE (MICRO- MHOS) 571 513 556 507 513 506	8.2 8.7 8.5 8.2 8.5 6.6	PERA- TURE (DEG C) 13 11 4 3 6 8	10.6 11.5 12.3 13.4 12.2 11.1
OCT. 09 NDV. 08 OEC. 12 JAN. 03 FER. 13 MAR. 06 APR. 01 MAY	SOLVED SOLVED SOLVEDS (RESIDUE AT 180 C)	NESS (CA.MG) 206 193 195 184 196 189 223 297	CAR-BUNATE HARD-NESS C O O O O O O O O O O O O O O O O O	SOL VED SOL IDS (I TONS PEP AC-FT)	30 30 32 30 29 26 30 27	AD- SORP- TION PATIC 1.2 1.3 1.2 1.2 .9 1.3	CACO3 253 263 242 221 230 175 262 346	COND- COND- UCTANCE (MICRO- MHOS) 571 513 556 507 513 506 574	8.2 8.7 8.5 8.2 8.5 6.6 9.7	PERA- TURE (DEG C) 13 11 4 3 6 8	SOLVED DXYGEN 10.6 11.5 12.3 13.4 12.2 11.1 10.2 10.2
OCT. 09 NOV. 08 08 08 12 JAN. 03 FER. 13 MAR. 06 APP. 01 JUNE 11 JULY	SOLVED SOLVED SOLVEDS (RESIDUE AT 180 C)	NESS (CA.MG) 206 193 195 184 196 199 223 297 249	CAR-BUNATE HARD-NESS C 0 0 0 0 14 0 0	SOL VED SOL IDS (TONS PEP AC-FT)	30 30 32 30 29 26 30 27	AD- SORP- TION PATIC 1.2 1.2 1.3 1.2 1.2 .9 1.3 1.3	CACCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	FIL COND- COND- UCTANCE (MICRO- MHOS) 571 513 556 507 513 506 574 724 636	8.2 8.7 8.5 8.2 8.5 8.6 9.7 8.7	PERA- TURE (DEG C) 13 11 4 3 6 8 14 14	SOLVED DXYGEN 10.6 11.5 12.3 13.4 12.2 11.1 10.2 10.2 8.8

11517500 SHASTA RIVER NEAR YREKA, CALIF .-- Continued

		TE	IPERATURE		•		Clober 186					
	001	OBER	NOVE	MBER	DECE	MBER	JAN	UARY	FEBR			RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	15.0	12.0	10.0							11.0	11.0 9.0
2	15.0 14.0	12.0 12.0	12.0 12.0	11.0	5.0 6.0	5.0 5.0			6.0 7.0	6.0 6.0	12.0 12.0	9.0
4	14.0	12.0	11.0	10.0	6.0	5.0			8.0	6.0	12.0	10.0
5	16.0	13.0	12.0	11.0	7.0	6.0			7.0	6.0	12.0	10-0
6	16.0	13.0	12.0	10.0	6.0	4.0			8.0	7.0	11.0	9.0
ž	16.0	13.0	12.0	11.0	5.0	3.0			8.0	7.0	12-0	8.0
8	16.0	13.0			5.0	4.0			9.0 9.0	7.0 7.0	12-0 12-0	8.0 8.0
9 10	17.0 17.0	14.0 14.0			6.0 6.0	5.0 6.0			9.0	7.0	12.0	8.0
									9.0	8.0	12.0	9-0
11 12	16.0 16.0	14.0			6.0 5.0	5.0 4.0			9.0	7.0	9.0	7.0
13	16.0	12.0			4.0	2.0			8.0	6.0	8.0	7.0
14	15.0	12.0			2.0	1.0			8.0	6.0	11.0 11.0	7.0 8.0
15	14.0	11.0			2.0	1.0			8.0	7.0	11.0	
16	14.0	11.0			3.0	1.0			9.0	7.0	10-0	9.0
17	14.0 14.0	11.0			4.0 4.0	1.0 1.0			10.0 10.0	8.0 8.0	11.0 12.0	7.0 8.0
18 19	15.0	12.0 12.0			3.0	2.0			11.0	9.0	12.0	7.0
20	15.0	12.0			3.0	2.0			10.0	9.0	13.0	8.0
21	14.0	13.0			4.0	3.0			11.0	9.0	12.0	9.0
22	15.0	13.0			6.0	4.0			11.0	10.0	11.0	9.0
23	14.0 14.0	12.0 12.0			6.0 6.0	4.0 4.0			11.0 11.0	10.0	12.0 14.0	9.0 9.0
24 25	14.0	12.0			5.0	4.0			12.0	9.0	13.0	11-0
26	13.0	11-0			5.0	4.0			12.0	9.0	14.0	9.0
26 27	13.0	12.0			5.0	4.0			12.0	9.0	14.0	9.0
28	13.0	11.0			6.0	4.0			12.0	9.0	16.0	11.0
29	12.0	11.0							12.0	9.0	17.0 17.0	12.0 12.0
30 31	12.0 12.0	9.0 9.0									17.0	12.0
									12.0	6.0	17.0	7.0
HONTH	18.0	9.0			7.0	1.0			12.0	0.0		
	A	PRIL		MAY	J	UNE	J	JLY	AU	GUST	SEP	TEMBER
DAY	A Max	PRIL `- _, min	MAX	MAY Min	JI XAM	MIN	JL XAM	JLY MIN	AU: MAX	GUST MEN	SEP Max	TEMBER Min
1	MAX 14.0	_MIN 12.0	MAX 21.0	MIN 13.0	MAX 24.0	MIN 18.0			MAX 26-0		MAX	
1 2	MAX 14.0 14.0	MIN 12.0 11.0	MAX 21.0 21.0	MIN 13.0 12.0	MAX 24.0 21.0	MIN 18.0 18.0	MAX	HIN	MAX 26.0 29.0	MIN 22.0 22.0		MIN
1 2 3	MAX 14.0 14.0 14.0	MIN 12.0 11.0 9.0	MAX 21.0 21.0 21.0	MIN 13.0 12.0 14.0	MAX 24.0 21.0 23.0	MIN 18.0 18.0 16.0	MAX	HIN	MAX 26.0 29.0 29.0	MIN 22.0 22.0 22.0	HAX	MIN
1 2	MAX 14.0 14.0	MIN 12.0 11.0	MAX 21.0 21.0	MIN 13.0 12.0	MAX 24.0 21.0	MIN 18.0 18.0	MAX	HIN	MAX 26.0 29.0	MIN 22.0 22.0	MAX	MIN
1 2 3 4 5	MAX 14.0 14.0 14.0 13.0 15.0	MIN 12.0 11.0 9.0 10.0	MAX 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0	MAX 24.0 21.0 23.0 24.0 18.0	MIN 18.0 18.0 16.0 17.0	MAX	HIN	MAX 26.0 29.0 29.0 26.0 27.0	MIN 22.0 22.0 22.0 21.0 19.0	MAX 25.0 25.0	MIN 18-0 18-0
1 2 3 4	MAX 14.0 14.0 14.0 13.0 15.0	MIN 12.0 11.0 9.0 10.0	MAX 21.0 21.0 21.0 21.0 19.0	MIN 13.0 12.0 14.0 15.0 13.0	MAX 24.0 21.0 23.0 24.0	MIN 18.0 18.0 16.0 17.0	MAX	HIN	MAX 26.0 29.0 29.0 26.0 27.0	MIN 22.0 22.0 22.0 21.0 19.0	#AX 	MIN 18.0 18.0
1 2 3 4 5 6 7 8	MAX 14.0 14.0 14.0 13.0 15.0 15.0	MIN 12.0 11.0 9.0 10.0 10.0 9.0 11.0 9.0	MAX 21.0 21.0 21.0 21.0 19.0 20.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0	MIN 18.0 16.0 16.0 16.0 14.0 14.0	MAX	HIN	MAX 26-0 29-0 29-0 26-0 27-0 27-0 27-0	MIN 22.0 22.0 22.0 21.0 19.0 20.0 21.0 21.0	#AX 	MIN 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8	MAX 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0	#IN 12.0 11.0 9.0 10.0 10.0 9.0 11.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 20.0 21.0 22.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 13.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 21.0 22.0	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0	MAX	HIN	MAX 26.0 29.0 29.0 26.0 27.0 27.0 27.0 24.0 27.0	MIN 22-0 22-0 21-0 21-0 20-0 21-0 21-0	#AX 	HIN 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9	MAX 14.0 14.0 13.0 15.0 15.0 15.0 16.0 17.0 18.0	9.0 11.0 9.0 10.0 10.0 10.0 9.0 11.0 9.0 11.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 20.0 21.0 22.0 22.0	MIN 13.0 12.0 14.0 15.0 13.0 13.0 14.0 14.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0	MIN 18.0 15.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0	MAX	HIN	MAX 26-0 29-0 29-0 26-0 27-0 27-0 24-0 27-0 27-0	MIN 22.0 22.0 22.0 21.0 19.0 20.0 21.0 21.0	25-0 25-0 25-0 25-0 26-0 24-0 24-0	MIN 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9	MAX 14.0 14.0 13.0 13.0 15.0 16.0 17.0 18.0	9.0 11.0 9.0 10.0 10.0 9.0 11.0 9.0 11.0 12.0	MAX 21.0 21.0 21.0 21.0 19.0 20.0 20.0 21.0 22.0 22.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0	MIN 18.0 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0	MAX	HIN	MAX 26-0 29-0 29-0 26-0 27-0 27-0 27-0 27-0 27-0 27-0 27-0	MIN 22-0 22-0 21-0 19-0 20-0 21-0 21-0 21-0	#AX	18-0 18-0 19-0 19-0 19-0 19-0 18-0
1 2 3 4 5 6 7 8 9 10	MAX 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 19.0	9.0 10.0 10.0 10.0 10.0 11.0 9.0 11.0 9.0 12.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0	MIN 18.0 16.0 17.0 16.0 14.0 14.0 14.0 14.0 14.0	MAX	HIN	MAX 26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 22-0 22-0 21-0 21-0 21-0 21-0 21-0 21-	MAX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 14-0 14-0 13-0 15-0 15-0 16-0 18-0 18-0 16-0 16-0 16-0	9.0 11.0 9.0 10.0 10.0 9.0 11.0 9.0 11.0 12.0 12.0 9.0	MAX 21.0 21.0 21.0 21.0 19.0 20.0 20.0 21.0 22.0 22.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 13.0 14.0 14.0 13.0 13.0 13.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0	MIN 18.0 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0	MAX	HIN	MAX 26-0 29-0 29-0 26-0 27-0 27-0 27-0 27-0 27-0 27-0 27-0	MIN 22-0 22-0 21-0 19-0 20-0 21-0 21-0 21-0	MAX 25.0 25.0 25.0 26.0 24.0 24.0 23.0 23.0 21.0	MIN 18-0 18-0 19-0 19-0 19-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 19.0	#IN 12.0 11.0 9.0 10.0 10.0 11.0 9.0 11.0 12.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 13.0	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0	MIN 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0	MAX	HIN	MAX 26-0 29-0 29-0 29-0 27-0 27-0 27-0 27-0 27-0 27-0 27-0 27	MIN 22-0 22-0 21-0 19-0 21-0 21-0 21-0 21-0 21-0 21-0 21-0	MAX	MIN
1 2 3 4 5 6 7 8 9 10	14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 16-0 17-0	#IN 12.0 11.0 9.0 10.0 9.0 11.0 12.0 12.0 12.0 8.0 9.0 9.0	MAX 21.0 21.0 21.0 21.0 19.0 19.0 20.0 21.0 22.0 19.0 19.0 18.0 18.0 21.0 23.0	MIN 13.0 12.0 14.0 15.0 13.0 12.0 13.0 14.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0	HAX	MIN	MAX 26.0 29.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX	18-0 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 14.0 14.0 14.0 13.0 15.0 16.0 17.0 18.0 19.0 16.0 16.0 17.0 16.0	#IN 12.0 11.0 9.0 10.0 10.0 11.0 9.0 11.0 12.0 9.0 11.0 12.0 9.0 8.0 8.0 8.0	HAX 21.0 21.0 21.0 21.0 21.0 19.0 19.0 20.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 13.0 12.0 15.0 15.0 13.0 11.0 12.0 14.0 14.0 13.0 12.0 12.0	MAX 24.0 21.0 21.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 24.0 25.0 27.0	MIN 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	MAX	MIN	MAX 26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 23.0 23.0 22.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 22.0 21.0 21	#AX	MIN
1 2 3 4 5 6 7 8 9 10	MAX 14.0 14.0 14.0 15.0 15.0 15.0 16.0 17.0 18.0 16.0 17.0 18.0 16.0 17.0	MIN 12.0 11.0 9.0 10.0 11.0 9.0 11.0 12.0 12.0 9.0 11.0 9.0 11.0 9.0 12.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 20.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 22.0 22.0	HIN 13.0 12.0 15.0 15.0 13.0 12.0 14.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 18.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 18.0 19.0 20.0	HAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	HAX	MIN 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 17-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 14.0 14.0 14.0 13.0 15.0 16.0 17.0 18.0 19.0 16.0 16.0 17.0 16.0	#IN 12.0 11.0 9.0 10.0 10.0 11.0 9.0 11.0 12.0 9.0 11.0 12.0 9.0 8.0 8.0 8.0	HAX 21.0 21.0 21.0 21.0 21.0 19.0 19.0 20.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	HIN 13.0 12.0 15.0 15.0 13.0 11.0 12.0 14.0 14.0 13.0 12.0 12.0	MAX 24.0 21.0 21.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 24.0 25.0 27.0	MIN 18.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	MAX	MIN	MAX 26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 23.0 23.0 22.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 22.0 21.0 21	#AX	MIN
1 2 3 4 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21	HAX 14.0 14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 19.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 14.0 15.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 26.0 27.0 28.0 28.0	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 18.0 19.0 20.0 20.0	HAX	HIN	26.0 29.0 29.0 22.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	25.0 25.0 25.0 26.0 26.0 26.0 27.0 27.0 21.0 21.0 21.0 21.0 21.0 21.0	16.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 17.0 16.0 17.0 16.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 12 0 21 12 2	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 11.0 9.0 8.0 9.0 11.0	19.0 21.0 21.0 21.0 21.0 21.0 22.0 19.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 13.0 14.0 14.0 13.0 14.0 15.0 17.0 16.0 17.0 17.0 17.0 17.0	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 19.0 20.0 20.0 20.0	#AX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 27.0 24.0 23.0 24.0 23.0 22.0 19.0 21.0	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 17.0 16.0 17.0 16.0	25.0 25.0 25.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 17-0 16-0 17-0 14-0
1 2 3 4 5 6 7 7 8 9 10 11 12 12 12 14 15 16 17 18 19 20 21 22 23	HAX 14.0 14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 19.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	12.0 11.0 9.0 10.0 10.0 11.0 9.0 11.0 12.0 9.0 8.0 8.0 8.0 8.0 8.0 9.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 15.0 13.0 12.0 12.0 12.0 13.0 15.0 15.0 15.0 15.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 20.0 20.0 20.0	HAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 23.0 23.0 23.0 22.0 19.0 19.0 11.0 22.0	MIN 22-0 22-0 22-0 21-0 19-0 20-0 21-0 21-0 21-0 21-0 21-0 21-0 21	HAX 25.0 25.0 25.0 26.0 26.0 27.0 21.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 18.0	MIN 18-0 18-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 12 0 21 12 2	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 11.0 9.0 8.0 9.0 11.0	19.0 21.0 21.0 21.0 21.0 21.0 22.0 19.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 13.0 14.0 14.0 13.0 14.0 15.0 17.0 16.0 17.0 17.0 17.0 17.0	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 19.0 20.0 20.0 20.0	#AX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 27.0 24.0 23.0 24.0 23.0 22.0 19.0 21.0	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 19.0 17.0 16.0 17.0 16.0	25.0 25.0 25.0 25.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	18-0 18-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 17-0 16-0 17-0 14-0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 9 12 2 2 2 3 2 2 4 2 5	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 18-0 17-0 18-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 9.0 11.0 10.0 10.0 10.0 10.0	19.0 21.0 21.0 21.0 21.0 21.0 22.0 19.0 22.0 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 13.0 14.0 15.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 20.0 20.0 20.0 20.0 21.0	27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	18.0 19.0 19.0 19.0 19.0 19.0 19.0	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 27.0 24.0 23.0 22.0 19.0 21.0 22.0 19.0 21.0 22.0	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	25.0 25.0 25.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	19-0 19-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 12 20 21 22 23 24 25 26 27	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 19-0 19-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 9.0 11.0 10.0 10.0 10.0 10.0 10.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 22.0 19.0 22.0 19.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 13.0 14.0 15.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 21.0 23.0 24.0 18.0 21.0 21.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 16.0 16.0 16.0 20.0 20.0 20.0 20.0 20.0 20.0	27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 24.0 27.0 24.0 23.0 22.0 22.0 19.0 21.0 22.0 21.0	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	25.0 25.0 25.0 26.0 26.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HIN 18-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	HAX 14.0 14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	12.0 11.0 11.0 10.0 10.0 10.0 11.0 12.0 9.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 10.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 15.0 13.0 12.0 12.0 12.0 13.0 16.0 17.0 15.0 16.0 17.0 16.0 17.0	24.0 21.0 23.0 24.0 18.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 16.0 20.0 20.0 20.0 20.0 20.0 20.0 22.0	MAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 23.0 23.0 23.0 22.0 19.0 19.0 11.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 22-0 22-0 21-0 21-0 21-0 21-0 21-0 21-	HAX 25.0 25.0 25.0 25.0 26.0 26.0 27.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 19.0 20.0 19.0 20.0	MIN 18-0 18-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 19-0 19-0 21-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 22.0 19.0 22.0 19.0 22.0 19.0 19.0 19.0 19.0 21.0 22.0 19.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 13.0 12.0 14.0 15.0 11.0 12.0 11.0 12.0 14.0 13.0 14.0 15.0 17.0 15.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	24.0 21.0 23.0 24.0 18.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 22.0	MAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 22.0 22	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	25.0 25.0 25.0 26.0 26.0 27.0 27.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 18-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	HAX 14.0 14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 18.0 17.0 18.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	12.0 11.0 11.0 10.0 10.0 10.0 11.0 12.0 9.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 10.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 15.0 13.0 12.0 12.0 12.0 13.0 16.0 17.0 15.0 16.0 17.0 16.0 17.0	24.0 21.0 23.0 24.0 18.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 16.0 20.0 20.0 20.0 20.0 20.0 20.0 22.0	MAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 23.0 23.0 23.0 22.0 19.0 19.0 11.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HAX 25.0 25.0 25.0 25.0 26.0 26.0 27.0 21.0 21.0 21.0 21.0 17.0 17.0 17.0 19.0 20.0 19.0 20.0	MIN 18-0 18-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 4 5 6 7 7 8 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	HAX 14.0 14.0 14.0 14.0 13.0 15.0 15.0 16.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 19.0 17.0 19.0 19.0 19.0 17.0 19.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	12.0 11.0 11.0 10.0 10.0 10.0 11.0 12.0 9.0 8.0 8.0 8.0 8.0 9.0 10.0 9.0 9.0 9.0 10.0	MAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20	MIN 13.0 12.0 14.0 15.0 11.0 12.0 14.0 14.0 14.0 14.0 12.0 13.0 12.0 13.0 12.0 13.0 12.0 15.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	24.0 21.0 21.0 21.0 21.0 21.0 22.0 22.0 22	MIN 18.0 18.0 16.0 16.0 17.0 16.0 14.0 14.0 16.0 16.0 16.0 16.0 20.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 20.0	MAX	HIN	26.0 29.0 29.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 22-0 22-0 21-0 21-0 21-0 21-0 21-0 21-	#AX	HIN 18-0 19-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	HAX 14-0 14-0 14-0 13-0 15-0 15-0 16-0 17-0 18-0 16-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 17-0 18-0 19-0 19-0 21-0	12.0 11.0 10.0 10.0 10.0 11.0 11.0 12.0 9.0 11.0 12.0 9.0 9.0 10.0 10.0 10.0 10.0 10.0	#AX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 13.0 12.0 14.0 15.0 13.0 11.0 12.0 14.0 14.0 14.0 15.0 13.0 12.0 12.0 12.0 12.0 13.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	24.0 21.0 23.0 24.0 18.0 21.0 22.0 22.0 22.0 22.0 22.0 22.0 22	MIN 18.0 18.0 16.0 16.0 17.0 16.0 14.0 14.0 14.0 15.0 16.0 12.0 20.0 20.0 20.0 20.0 20.0 21.0 22.0 22	MAX	HIN	26.0 29.0 29.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 23.0 23.0 22.0 19.0 19.0 19.0 19.0 19.0 19.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 22.0 22.0 22.0 21.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	HAX	MIN 18-0 19-0 19-0 19-0 19-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18

11519500 SCOTT RIVER NEAR FORT JONES, CALIF.

LOCATION.--Lat 41°38'28", long 123°00'54", in NE NE 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 m1.

PERIOD OF RECORD. -- Chemical analyses: November 1958 to September 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCD3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
OCT. 09	106			5.3		175	D		5.0		.03
NOV.							4		4.4		•00
09 DEC.	89			5.1		160					
12 JAN.	153			5.3		143	0		6.0		• 05
04 FEB.	138			3.2		142	0		3.2		.02
13 MAR.	675			2.4		116	0,		1.4		.00
06 APR.	1350			2.2		86	0		1.1		.01
02 MAY	868			2.0		86	0		.5		•00
06 JUNE	608	15	11	2.7	•9	95	0	•8	2.6	1.2	.04
11 JULY	335			3.5		119	2		2.2		.06
03 AUG.	103			3.4		145	6		5.2		.00
06	45			5.7		165	0		4.9		.00
SEPT. 05	41	30	15	4.4	.7	163	0	7.4	6.0	2.7	.00
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIC	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	РН	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
OCT.			_								
09 NDV.		145	1		7	•2	144	297	8.2	16	11.4
09 DEC.		1 43	5		7	•2	138	283	8.4	11	11.6
12 JAN.		120	3		9	• 2	117	253	8.2	4	12.4
04 FEB.		122	6		5	•1	116	241	B.0	0	12.9
13 Mar.		97	2		5	-1	95	202	7.9	7	11.5
O6 APR.		74	3		6	•1	71	152	8.2	7	10.8
02 May		70	0		6	•1	71	149	7.8	A	10.6
O6 JUNE	94	82	4	-13	7	.1	78	171	7.9	20	10.0
ll JULY		108	7		7	•1	101	212	8.5	16	9.8
03 AUG.		137	8		5	-1	129	288	8.7	24	11.3
06 SEPT.		151	16		8	-2	135	285	8.0	24	11.3
05	155	137	3	•21	7	•2	134	285	7.8	15	7.4

11520500 KLAMATH RIVER NEAR SEIAD VALLEY, CALIF.

LOCATION. -- Lat 41°51'20", long 123°13'50", in SW4SW4 sec.3, T.46 N., R.12 W., Siskiyou County, 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 1968.

EXTREMES.--1967-68:
Water temperatures: Maximum, 27.0°C July 28-30; minimum, 1.0°C on several days during December and January.

Period of record: Water temperatures: Maximum, 27.0°C July 28-30, 1968; minimum (1963-64, 1966-68), 1.0°C on several days during December 1967 and January 1968.

TEMPERATURE ("C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1	TEMPER ATURE	EAR OCTOBER 1967 TO	O SEPTEMBER 1968
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		TE	MPERATURE	(C) OF	WATER, WAT	ER YEAR (CTOBER 19	67 TO SEE	ALEMBEK 18	70 6		
	oc	TOBER	NOV	EMBER	DEC	EMBER	JAN	IUARY	FEB	RUARY	H	ARCH
DAY	MAX	MEN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	16.0	13.0	11.0	7.0	6.0	1.0	1.0	4.0	4.0	8.0	8.0
2	16.0	13.0	12.0	11.0	6.0	6.0	1.0	1.0	4.0	4.0	8.0	8.0
3	14.0	12.0	12.0	11.0	6.0	6.0	1.0	1.0	4.0	4.0	9.0	8.0
4 5	15.0 16.0	13.0 13.0	11.0	11.0	6.0	5.0	3.0	1.0	5.0	4-0	9.0	9.0
,	16.0	13.0	12.0	11-0	5.0	4.0	3.0	2.0	5.0	4.0	9.0	8.0
6	16.0	13.0	12.0	11.0	5.0	4.0	3.0	2.0	5.0	5.0	8.0	8.0
7	16.0	14.0	12.0	11.0	4.0	4.0	3.0	2.0	6.0	5.0	8.0	8.0
8	17.0 17.0	14.0 15.0	12.0 12.0	11.0 11.0	5.0 6.0	4.0 5.0	4.0 4.0	3.0 4.0	6.0 6.0	5.0 6.0	8.0 8.0	8.0 8.0
10	17.0	15.0	12.0	11.0	5.0	5.0	4.0	4.0	6.0	6.0	8-0	8.0
11 12	17.0 16.0	16.0 15.0	12.0 11.0	11.0 11.0	5.0	4.0 3.0	4.0 3.0	3.0 3.0	6.0	6.0	9.0	8.0
13	16.0	14.0	11.0	11.0	4.0 3.0	2.0	5.0	3.0	6.0 6.0	6.0 6.0	9.0 7.0	7.0 6.0
14	14.0	13.0	12.0	11.0	2.0	2.0	6.0	5.0	6.0	5.0	8.0	7.0
15	14.0	12.0	11.0	9.0	2.0	1.0	5.0	5.0	6.0	6.0	8.0	8.0
16	14.0	12.0	10.0	9.0	2.0	1.0	5.0	5.0	6.0	6.0	8.0	8.0
17	14.0	12.0	10.0	9.0	2.0	2.0	4.0	4.0	7.0	6.0	8.0	8.0
18	14.0	13.0	10.0	9.0	2.0	1.0	4.0	4.0	7.0	7.0	8.0	8.0
19	15.0	13.0	9.0	9.0	2.0	2.0	5.0	4.0	7.0	7.0	8.0	8.0
20	15.0	13.0	9.0	8.0	2.0	2.0	6.0	5.0	7.0	7.0	9.0	8.0
21	15.0	13.0	8.0	8.0	2.0	2.0	6.0	5.0	8.0	7.0	9.0	9.0
22	15.0	13.0	8.0	7.0	2.0	2.0	6.0	5.0	8.0	8.0	9.0	9.0
23 24	15.0	13.0	8.0	7.0 7.0	2.0	2.0	6.0 6.0	5.0 5.0	8.0 8.0	8.0	10.0	9.0
25	15.0	13.0	8.0	7.0	2.0 2.0	2.0 2.0	6.0	5.0	8.0	8.0 8.0	11.0 11.0	9.0 10.0
26 27	14.0 13.0	13.0	7.0 6.0	6.0	2.0	2.0	4.0	4.0 4.0	8.0 9.0	8.0 8.0	10.0 10.0	9.0
28	14.0	12.0	7.0	6.0	2.0 3.0	2.0	4.0	3.0	8.0	8.0	12.0	9.0 9.0
29	12.0	11.0	7.0	5.0	2.0	1.0	3.0	3.0	8.0	8.0	13.0	11.0
30	12.0	11.0	6.0	6.0	1.0	1.0	3.0	3.0			12-0	11.0
31	12.0	11.0			1.0	1.0	4.0	3.0			12.0	11.0
ACATH	17.0	11.0	13.0	5.0	7.0	1.0	6.0	1.0	9.0	4.0	13.0	6.0
	A	PRIL	•	AAY	J (INE	Ju	LY	AUC	TZUS	SEP	FEMBER
DAY	AI MAX	PRIL Min	MAX	4AY Min	J L XAM	INE MIN	JU MAX	MIN	MAX	TZUS MIN	SEP MAX	TEMBER M I N
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	HAX	MIN
1	MAX 12.0	MIN 11.0	MAX 16.0	MIN 12.0	MAX 19.0	MIN 16.0	HAX 23.0	MIN 18.0	MAX 24.0	MIN 22.0	MAX 22.0	MIN 19.0
1 2	MAX 12.0 11.0	MIN 11.0 10.0	MAX 16.0 16.0	MIN 12.0 12.0	MAX 19.0 18.0 18.0	MIN 16.0 17.0	MAX 23.0 23.0	MIN 18.0 20.0	MAX 24.0 25.0	MIN 22.0 21.0	MAX 22.0 21.0	MIN 19.0 18.0
1 2 3 4	MAX 12.0	MIN 11.0 10.0 9.0 10.0	MAX 16.0 16.0 17.0 17.0	MIN 12.0 12.0 13.0 14.0	MAX 19.0 18.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0	MAX 23.0 23.0 24.0 26.0	MIN 18.0	MAX 24.0 25.0 24.0 23.0	MIN 22.0 21.0 21.0 20.0	MAX 22.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0
1 2 3	MAX 12.0 11.0 11.0	MIN 11.0 10.0 9.0	MAX 16.0 16.0 17.0	MIN 12.0 12.0 13.0	MAX 19.0 18.0 18.0	MIN 16.0 17.0 17.0	MAX 23.0 23.0 24.0	MIN 18.0 20.0 20.0	MAX 24.0 25.0 24.0	MIN 22.0 21.0 21.0	MAX 22.0 21.0 21.0	MIN 19.0 18.0 18.0
1 2 3 4 5	MAX 12.0 11.0 11.0 11.0	MIN 11.0 10.0 9.0 10.0 11.0	MAX 16.0 16.0 17.0 17.0	MIN 12.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0	MIN 18.0 20.0 20.0 21.0 22.0	MAX 24.0 25.0 24.0 23.0 23.0	MIN 22.0 21.0 21.0 20.0 18.0	MAX 22.0 21.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0 19.0
1 2 3 4	MAX 12.0 11.0 11.0	MIN 11.0 10.0 9.0 10.0	MAX 16.0 16.0 17.0 17.0	MIN 12.0 12.0 13.0 14.0	MAX 19.0 18.0 18.0 19.0 18.0	MIN 16.0 17.0 17.0 16.0	MAX 23.0 23.0 24.0 26.0	MIN 18.0 20.0 20.0 21.0	MAX 24.0 25.0 24.0 23.0	MIN 22.0 21.0 21.0 20.0	MAX 22.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0 19.0
1 2 3 4 5 6 7 8	12.0 11.0 11.0 11.0 11.0 11.0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 9.0	MAX 16.0 16.0 17.0 17.0 14.0 14.0	MIN 12.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 19.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 23.0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0	MAX 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 19.0 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 9.0 10.0	MAX 16.0 16.0 17.0 17.0 14.0 14.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 11.0 13.0	MAX 19.0 18.0 19.0 19.0 17.0 17.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0 14.0 14.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0 25.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0	MIN 22.0 21.0 20.0 18.0 19.0 19.0 21.0	MAX 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	HIN 19.0 18.0 18.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8	12.0 11.0 11.0 11.0 11.0 11.0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 9.0	MAX 16.0 16.0 17.0 17.0 14.0 14.0	MIN 12.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 19.0 18.0	MIN 16.0 17.0 17.0 16.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 22.0	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 23.0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0	MAX 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 19.0 18.0 18.0 19.0 19.0
1 2 3 4 5 6 7 8 9	12-0 11-0 11-0 11-0 11-0 12-0 12-0 14-0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 9.0 10.0 11.0	MAX 16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0	MAX 19.0 18.0 19.0 19.0 17.0 17.0 18.0 19.0	MIN 16.0 17.0 16.0 16.0 14.0 14.0 14.0 15.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0 26.0 25.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0 24.0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 19.0 21.0 20.0	MAX 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0
1 2 3 4 5 6 7 8 9 10	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	#IN 11.0 10.0 9.0 10.0 11.0 9.0 11.0 12.0	MAX 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0	MIN 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0	MAX 19.0 18.0 19.0 19.0 17.0 18.0 18.0 19.0	MIN 16.0 17.0 16.0 16.0 14.0 14.0 15.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0	MIN 22.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0	MAX 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 10.0 11.0 12.0	MAX 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0	HIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 13.0	MAX 19.0 18.0 18.0 19.0 19.0 17.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 16.0	MAX 23.0 24.0 24.0 26.0 26.0 26.0 25.0 24.0 24.0 23.0 23.0	MIN 18.0 20.0 21.0 22.0 22.0 22.0 21.0 21.0 21.0 21.0	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0	MIN 22.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0 20.0	MAX 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	#IN 11.0 10.0 9.0 10.0 11.0 9.0 11.0 12.0	MAX 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0	MIN 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0	MAX 19.0 18.0 19.0 19.0 17.0 18.0 18.0 19.0	MIN 16.0 17.0 16.0 16.0 14.0 14.0 15.0 16.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0 25.0 25.0 24.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 21.0 21.0 21.0 21.0	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0	MIN 22.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0	MAX 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 14.0 13.0 12.0 12.0	MIN 11.0 10.0 9.0 10.0 11.0 9.0 10.0 11.0 12.0 12.0 11.0 9.0 11.0	MAX 16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 13.0 12.0 12.0	MAX 19.0 18.0 18.0 19.0 19.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0 21.0	MIN 16.0 17.0 17.0 16.0 16.0 14.0 15.0 15.0 17.0 15.0 17.0	MAX 23.0 24.0 26.0 26.0 26.0 26.0 25.0 25.0 24.0 23.0 23.0 23.0 22.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 21	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 23.0 24.0 21.0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0 20.0 20.0 20.0	MAX 22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 17.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 12-0 11-0 11-0 11-0 11-0 12-0 12-0 12-0	MIN 11.0 10.0 9.0 11.0 9.0 11.0 12.0 12.0 12.0 11.0 11.0	MAX 16.0 16.0 17.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0	HIN 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0	MAX 19.0 18.0 18.0 19.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0	MIN 16.0 17.0 17.0 16.0 14.0 14.0 15.0 16.0 17.0 15.0 17.0 15.0 17.0	MAX 23.0 23.0 26.0 26.0 26.0 26.0 25.0 24.0 23.0 23.0 23.0 23.0 23.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 21	MAX 24-0 25-0 24-0 23-0 23-0 24-0 24-0 24-0 24-0 24-0 21-0 21-0	MIN 22.0 21.0 21.0 21.0 20.0 18.0 19.0 21.0 20.0 20.0 20.0 20.0 17.0 18.0	MAX 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 9.0 11.0 9.0 11.0 12.0 12.0 12.0 11.0 9.0 11.0 9.0 11.0	16.0 16.0 17.0 17.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 14.0	19.0 18.0 19.0 19.0 19.0 17.0 17.0 18.0 19.0 18.0 19.0 21.0 21.0 24.0	MIN 16.0 17.0 16.0 16.0 16.0 14.0 14.0 15.0 17.0 15.0 17.0 18.0 19.0 20.0	23-0 23-0 24-0 26-0 26-0 26-0 26-0 26-0 25-0 24-0 23-0 23-0 23-0 23-0 23-0 23-0 24-0	MIN 18.0 20.0 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21	24-0 25-0 24-0 23-0 23-0 24-0 24-0 24-0 24-0 21-0 21-0 21-0 21-0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0 20.0 20.0 18.0 17.0	MAX 22-0 21-0 21-0 21-0 21-0 22-0 22-0 22-0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12-0 11-0 11-0 11-0 11-0 11-0 12-0 12-0	HIN 11.0 10.0 9.0 10.0 11.0 9.0 11.0 12.0 12.0 11.0 9.0 11.0 9.0 11.0 9.0 11.0	16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 14.0 14.0 15.0	19.0 18.0 18.0 19.0 19.0 17.0 18.0 17.0 18.0 19.0 19.0 21.0 21.0 21.0 24.0 24.0	HIN 16.0 17.0 17.0 16.0 16.0 14.0 14.0 15.0 15.0 17.0 17.0 19.0 20.0 21.0	23.0 23.0 24.0 26.0 26.0 26.0 26.0 26.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0	24-0 25-0 24-0 23-0 23-0 23-0 24-0 24-0 24-0 24-0 21-0 21-0 21-0 21-0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 20.0 20.0 20.0 20.0 18.0 17.0 17.0 17.0 16.0	MAX 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0 22	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 9.0 11.0 9.0 11.0 12.0 12.0 12.0 11.0 9.0 11.0 9.0 11.0	16.0 16.0 17.0 17.0 14.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 14.0	19.0 18.0 19.0 19.0 19.0 17.0 17.0 18.0 19.0 18.0 19.0 21.0 21.0 24.0	MIN 16.0 17.0 16.0 16.0 16.0 14.0 14.0 15.0 17.0 15.0 17.0 18.0 19.0 20.0	23-0 23-0 24-0 26-0 26-0 26-0 26-0 26-0 25-0 24-0 23-0 23-0 23-0 23-0 23-0 23-0 24-0	MIN 18.0 20.0 20.0 21.0 21.0 22.0 22.0 22.0 21.0 21	24-0 25-0 24-0 23-0 23-0 24-0 24-0 24-0 24-0 21-0 21-0 21-0 21-0	MIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0 21.0 20.0 20.0 20.0 18.0 17.0	MAX 22-0 21-0 21-0 21-0 21-0 22-0 22-0 22-0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 16.0 15.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MAX 12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 10.0 10.0 11.0 9.0 9.0 9.0 11.0 12.0 11.0 12.0 11.0 10.0 10.0 10	16.0 16.0 17.0 17.0 17.0 14.0 14.0 16.0 16.0 15.0 14.0 14.0 14.0 16.0 17.0 16.0 17.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 11.0 13.0 13.0 12.0 12.0 12.0 12.0 14.0 15.0 13.0	19.0 18.0 19.0 18.0 19.0 17.0 17.0 18.0 19.0 19.0 21.0 23.0 24.0 24.0 24.0 24.0	MIN 16.0 17.0 16.0 16.0 16.0 14.0 15.0 17.0 15.0 17.0 15.0 17.0 18.0 19.0 20.0 21.0 21.0 20.0	MAX 23.0 23.0 24.0 24.0 26.0 26.0 26.0 26.0 25.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 20.0	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 18.0	MIN 22.0 21.0 21.0 21.0 20.0 19.0 21.0 21.0 21.0 20.0 18.0 17.0 20.0 17.0 17.0 16.0 17.0 16.0 16.0	22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	MIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 17.0 18.0
1 2 3 4 5 5 6 7 8 9 10 0 11 12 12 13 14 15 16 17 18 19 20 21 22	12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 10.0 11.0 9.0 9.0 11.0 12.0 12.0 12.0 11.0 10.0 10.0 10	16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0 15.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	HIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 14.0 14.0 15.0 15.0 15.0 15.0	19.0 18.0 18.0 19.0 11.0 17.0 18.0 18.0 19.0 19.0 19.0 21.0 21.0 24.0 24.0 24.0 24.0 23.0	MIN 16.0 17.0 17.0 16.0 14.0 14.0 15.0 16.0 17.0 15.0 17.0 15.0 17.0 19.0 20.0 21.0 20.0 20.0	23.0 23.0 24.0 26.0 26.0 26.0 26.0 26.0 25.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0	MIN 18-0 20-0 20-0 21-0 22-0 22-0 22-0 21-0 21	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 19.0 17.0	HIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0 20.0 20.0 20.0 17.0 17.0 17.0 16.0	22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	HIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 16.0 17.0 16.0 17.0 16.0 17.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 22 1 22 23	MAX 12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 10.0 10.0 11.0 12.0 11.0 12.0 11.0 10.0 10	16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 14.0 15.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 19.0 19.0 19.0 17.0 17.0 19.0 19.0 21.0 23.0 24.0 24.0 24.0 24.0 23.0	MIN 16.0 17.0 16.0 16.0 16.0 14.0 15.0 17.0 15.0 17.0 15.0 17.0 18.0 19.0 20.0 21.0 21.0 20.0 20.0 20.0	MAX 23.0 23.0 24.0 26.0 26.0 26.0 26.0 25.0 24.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 21	MAX 24.0 25.0 24.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 22.0 21.0 21.0 20.0 19.0 19.0 21.0 21.0 20.0 20.0 18.0 17.0 17.0 16.0 16.0 16.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	HIN 19.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 18.0 17.0 16.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
1 2 3 4 5 5 6 7 8 9 10 0 11 12 12 13 14 15 16 17 18 19 20 21 22	12.0 11.0 11.0 11.0 11.0 12.0 12.0 14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN 11.0 10.0 10.0 11.0 11.0 11.0 11.0 12.0 12	16.0 16.0 17.0 17.0 14.0 14.0 16.0 16.0 16.0 15.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	MIN 12.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 13.0 12.0 12.0 12.0 14.0 15.0 15.0 15.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 18.0 19.0 18.0 19.0 18.0 17.0 18.0 18.0 19.0 19.0 21.0 21.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 16.0 17.0 17.0 16.0 14.0 14.0 15.0 17.0 16.0 17.0 18.0 17.0 19.0 20.0 21.0 20.0 21.0	HAX 23.0 23.0 24.0 26.0 26.0 26.0 26.0 25.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0	MIN 18.0 20.0 20.0 21.0 22.0 22.0 22.0 21.0 21	MAX 24.0 25.0 24.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 21.0 21.0 21.0 21.0 19.0 17.0	HIN 22.0 21.0 21.0 20.0 18.0 19.0 21.0 20.0 20.0 20.0 17.0 17.0 17.0 16.0	22.0 21.0 21.0 21.0 21.0 22.0 22.0 22.0	HIN 19.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 16.0 17.0 16.0 17.0 14.0 13.0 13.0 13.0 13.0 14.0
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11522500 SALMON RIVER AT SOMESBAR, CALIF.

LOCATION.--Lat 41°22'40", long 123°28'35", in NE4 sec.3, T.11 N., R.6 E., Siskiyou County, temperature recorder at gaging station on left bank at Somesbar, 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 1968.

EXTREMES. --1967-68:
Water temperatures: Maximum, 29.0°C July 30; minimum, freezing point Dec. 14, 15.

Period of record: Water temperatures: Maximum (1965-66, 1967-68), 32.0°C Sept. 4, 5, 1966; minimum, freezing point Dec. 14, 15, 1967.

REMARKS .-- Probe out of water Oct. 1-19; recorder stopped Apr. 6 to May 26.

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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	AVFP- AGF
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DECEMBER																																
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MINIMUM	6	6	7	7	6	5	4	6	6	6	4	3	1	c	r	1	1	2	2	2	3	3	4	4	3	3	3	3	3	2	2	3
JANUARY																													-		_	
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MINIMUM	3	4	4	5		6	6	6	6	6	6		6	6	6	6	7	7	7	7	R		Ŕ	á	P	Ř	7	7	7			6
MARCH	-		-	-	-		-		-					•	-	-					.,	.,			•			•	•			
MAXIMUM	8	q	q	9	q	В	8	8	я	7	8	8	7	7	ρ	я	a	R	R	R	8	•	10	11	10	q	۰	11		11	11	R
MINIMUM	Ř		ź		Ŕ					6				ż	7	7	7	Ä			7		Î,	Ťâ.		7					Å	7
APRIL			•				•											•	.,		•					,	•	,	,	٠	.,	,
MAXIMUM	10	11	10	q	11																											
MINIMUM	- 9		Ã		Ř																											
MAY																																
MAXIMUM																											16	22	16	16	16	
MINIMUM																															14	
JUNE																											• •		• -	• -		
MAXIMUM	18	17	17	17	10	17	17	17	17	18	18	17	16	18	19	20	21	21	22	25	21	21	22	23	23	23	23	22	21	21		19
MINIMUM															16																	16
JULY	-				•						•		•		•						• •	• • • •	• '	•	• ′			•		•		•
MAX1 MUM	22	21	22	23	24	24	26	24	24	24	22	22	23	23	22	22	23	23	23	24	24	24	24	25	25	26	27	28	28	20	27	24
MINIMUM															18																	20
AUGUST	•	•		• /							2		.,	.,		• •	• .,	.,	.,	• ′	• /	•	.,	٠,	.,		′ •		, 0		~ ~	2.
MAXIMUM	25	25	24	22	22	22	22	22	22	22	22	22	21	22	21	21	20	20	10	10	10	10	20	21	10	17	10	10	20	٠.	22	21
MINIMUM															18																	18
SEPTEMBER	23		r. L	.,	.,	17	47	. 7	.,	20	. 7	. 9	.,	.,	20	. 0	• 0	.,	.,	.0	• 10	.,	.,		• •	10	. /	1,	٠,	1 /	10	10
MAXIMUM	21	21	21	21	21	21	22	22	1	21	21	- 1	10	10	19	10	20	10	17					٠.			٠.	٠.				• •
MINIMUM																																19
MINIMUM	18	18	1.7	17	18	18	18	18	18	1/	18	17	17	1 /	17	16	16	19	15	14	13	13	13	14	14	16	16	14	14	14		16

11523000 KLAMATH RIVER AT ORLEANS, CALIF.

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 1968. Water temperatures: October 1955 to September 1968. Sediment records: January 1967 to September 1968.

Names, --1907-08: Maximum, 28.0°C July 7, 8, 30, 31; minimum, 1.0°C Dec. 15-17. Sediment concentrations: Maximum daily, 3,220 mg/l Feb. 23; minimum daily, 2 mg/l Sept. 28-30. Sediment discharge: Maximum daily, 82,000 tons Feb. 23; minimum daily, 8.2 tons Sept. 28-30.

eriod of record:
Water temperatures: Maximum, 28.0°C on several days in 1967-68; minimum (1965-86, 1967-88), 1.0°C on several
days in 1965 and 1967.
Sediment concentrations: Maximum daily, 3,220 mg/l Feb. 23, 1968; minimum daily, 2 mg/l Sept. 28-30, 1968.
Sediment discharge: Maximum daily, 825,000 tons Feb. 23, 1968; minimum daily, 8.2 tons Sept. 28-30, 1968.

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

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	CAL- GIUM (CA)	MAG- NE- Sium (MG)	SODIUM (NA)	PO- TAS- Sium (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SUL FATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
OCT.											
02 NOV .	2380			14		109	0		6.2		•06
06 DEC.	2300			16		110	0		6.5		•14
04 JAN.	6200			12		91	0		4.4		.06
08 FEB.	3510			12		93	0		4.5		-14
05 MAR.	12300			5.0		73	c		2.2		.03
04 APR.	13700			4.8		74	C				.05
01 MAY	9340			4.4		72	0		2.0		.11
06 JUNE	5240	14	6.1	5.1	1.1	73	0	3.1	2.6	-1	.05
03 JULY	4210			5.3		73	0		2.4		.03
08	1880			7.5		100	0		3.6		.09
05 SEPT.	1290			13		107	0		5.0		.OR
09	1350	17	9.1	14	2.4	100	0	10	5.3	.1	.08
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS [CA, MG]	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
OCT.											
02 · · ·		80	0		28	•7	89	227	8.0	16	9.2
06 DEC.		81	0		30	.8	90	228	8.1	13	11.5
04 JAN.		68	0		28	.6	75	193	8.2	6	12.2
08 FEB.		65	0		29	.6	76	186	7.8	3	14.0
05 MAR.		66	6		14	.3	60	147	8.1	6	13.4
04 APR.		64	3		14	.3	61	147	8.1		12.2
01 MAY		62	3		13	•2	59	142	B. D	11	11.9
06 JUNE	90	60	0	-12	15	.3	60	148	8.2		10.5
03 JULY		59	o		16	•3	60	142	7.9		9.7
08 AUG.		79	0		17	-4	82	195	8.1	24	8.8
O5 SEPT.		79	0		26	.6	88	212	8.2	22	9.7
09	136	80	0	.18	27	.7	89	216	7.7	21	9.9

11523000 KLAMATH RIVER AT ORLEANS, CALIF. -- Continued

	00	TOBER	PERMIURE NOW	EMBER	•	EMBER		UARY		RUARY		ARCH
DAY	MAX	MIN	MAX	MIN								
			•		MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	18.0 17.0	17.0 13.0	12.0 12.0	11.0 12.0	6.0 7.0	5.0 6.0	4.0 4.0	3.0 4.0	7.0 7.0	6.0 7.0	12.0 12.0	11.0 12.0
3	14.0	13.0	12.0	11.0	7.0	6.0	4.0	3.0	8.0	7.0	12.0	12.0
4 5	15.0 16.0	13.0 14.0	12.0 12.0	11.0 11.0	7.0 6.0	6.0 5.0	3.0 4.0	3.0 3.0	9.0	B.O 8.0	12.0 12.0	12.0 12.0
•		1440	12.0	11.0		3.0	7.0	3.0	7.0	0.0	12.0	12.0
6	16.0	14.0	12.0	12.0	5.0	5.0	3.0	3.0	9.0	8.0	12.0	12.0
7 8	16.0 17.0	14.0	12.0 12.0	12.0	5.0 6.0	4.0	4.0 6.0	3.0 4.0	9.0 9.0	8.0 8.0	12.0 11.0	11.0 11.0
9	17.0	15.0	12.0	11.0	6.0	6.0	7.0	6.0	9.0	8.0	11.0	11.0
10	17.0	16.0	12.0	11.0	6.0	6.0	7.0	7.0	9.0	8.0	11.0	11.0
11	17.0	16.0	12.0	11.0	6.0	6.0	7.0	6.0	9.0	9.0	11.0	11.0
12 13	16.0 16.0	15.0 14.0	12.0 12.0	12.0 11.0	6.0 4.0	4.0	6.0	4.0	9.0	9.0	11.0	11.0
14	16.0	13.0	12.0	11.0	3.0	2.0 2.0	7.0 8.0	5.0 7.0	9.0 9.0	8.0 8.0	11.0 11.0	10.0 10.0
15	14.0	12.0	11.0	10.0	5.0	1.0	8.0	8.0	9.0	8.0	11.0	11.0
16	14.0	12.0	10.0	9.0	2.0	1.0	8.0	8.0	9.0	8.0	11.0	11.0
17	14.0	12.0	10.0	9.0	2.0	1.0	8.0	8.0	11.0	9.0	11.0	11.0
18 19	14.0	13.0 13.0	10.0 10.0	9.0 9.0	3.0 3.0	2.0	8.0 8.0	8.0 8.0	11.0	10.0 10.0	11.0 11.0	11.0 11.0
20	14.0	13.0	9.0	8.0	3.0	3.0	8.0	8.0	11.0	10.0	12.0	11.0
21	14.0	13.0	8.0	8.0	4.0	3.0	9.0	8.0	11.0	11.0	12.0	11.0
22	14.0	14.0	8.0	7.0	4.0	3.0	9.0	9.0	11.0	11.0	12.0	12.0
23 24	14.0 [4.0	14.0	7.0	6.0	5.0	4.0	9.0	8.0	11.0	11.0	12.0	12.0
25	14.0	13.0	7.0 7.0	6.0 6.0	6.0 5.0	5.0 4.0	8.0	8.0 8.0	11.0	11.0	13.0 13.0	12.0 12.0
26 2 7	13.0 13.0	12.0 12.0	6.0 6.0	4.0	4.0 5.0	4.0	8.0 7.0	7.0 6.0	11.0 11.0	11.0 11.0	12.0 12.0	12.0 12.0
28	13.0	12.0	5.0	4.0	5.0	5.0	6.0	4.0	11.0	11.0	13.0	12.0
29 30	12.0 11.0	11.0 10.0	6.0 6.0	5.0 4.0	5.0 5.0	4.0 4.0	4.0 4.0	4.0	11.0	11.0	13.0	13.0
31	12.0	10.0			4.0	3.0	6.0	4.0			14.0 14.0	13.0 13.0
HONTH	18.0	10.0	12.0	4.0	7.0	1.0	9.0	3.0	11.0	6.0	14-0	10.0
		PRIL		IAY		JNE		ILY		aus T		TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14-0	13.0	17.0	16.0	21.0	20.0	24.0	23.0	26.0	23.0	22.0	20.0 19.0
?	13.0	13.0 12.0	17.0 18.0	17.0 17.0	21.0 22.0	21.0 20.0	24.0 25.0	23.0 23.0	26.0 25.0	23.0 23.0	22.0 22.0	19.0
4	13.0	13.0	18.0	17.0	22.0	20.0	26.0	24.0	24.0	22.0	22.0	19.0
5	13.0	13.0	18.0	17.0	21.0	20.0	27.0	26.0	23.0	21.0	22.0	19.0
6	13.0	13.0	17.0	16.0	21.0	19.0	27.0	26.0	23.0	21.0	22.0	20.0
7	13.0	13.0	17-0	16.0	21.0	20.0	28.0	26.0	24.0	21.0	23.0	20.0
8	14.0	13.0	18.0 18.0	16.0 17.0	22.0 22.0	20.0	28.0 27.0	26.0 26.0	23.0 24.0	22.0	22.0 22.0	20.0 19.0
10	16.0	14.0	18.0	17.0	22.0	21.0	27.0	25.0	24.0	22.0	21.0	18.0
11	16.0	15.0	18.0	17.0	22.0	21.0	27.0	25.0	24.0	22.0	21.0	19.0
12	15.0	13.0	18.0	17.0	21.0	20.0	25.0	24.0	23.0	21.0	21.0	18.0
13 14	14.0 14.0	13.0	17.0 17.0	16.0 16.0	21.0 22.0	19.0 20.0	25.0 25.0	23.0 23.0	23.0 22.0	20.0 19.0	21.0 19.0	18.0 18.0
15	14.0	13.0	17.0	16.0	23.0	21.0	24.0	23.0	21.0	19.0	19.0	17.0
16	13.0	12.0	18.0	17-0	24.0	22.0	24.0	22.0	21.0	19.0	19.0	17.0
17	13.0	12.0	18.0	18.0	25.0	23.0	24.0	21.0	21.0	19.0	20.0	17.0
18	13.0	12.0	19.0	18.0	26.0	24.0	24.0	22.0	21.0	18.0	20.0 18.0	18.0 17.0
19 20	14.0	13.0	19.0 18.0	18.0 17.0	26.0 26.0	24.0 24.0	24.0 26.0	22.0 23.0	19.0 18.0	17.0	18.0	16.0
21	14.0	12.0	17.0	17.0	26.0	24.0	26.0	23.0	19.0	16.0	16.0	14.0
22	14.0	13.0	17.0	16.0	26.0	24.0	26.0	23.0	19.0	17.0	16.0	13.0
23	14.0	13.0	17-0	17.0	26.0	25.0	26.0	23.0	20.0	17.0	18.0	14.0
24 25	14.0 15.0	13.0	17.0 18.0	17.0 17.0	26.0 27.0	25.0 26.0	26.0 26.0	22.0 23.0	21 • 0 21 • 0	18.0 18.0	18.0 19.0	16.0 16.0
•			10.0		27.0	24.0	22.0	22.0		17.0	19.0	17.0
26 27	16.0 17.0	15.0 16.0	18.0 19.0	18.0 18.0	27.0 27.0	26.0 26.0	27.0 27.0	23.0 24.0	18.0 19.0	17.0 17.0	19.0	17.0
28	17.0	16.0	20.0	19.0	26.0	24.0	27.0	24.0	20.0	17.0	19.0	16.0
29 30	17.0 17.0	16.0 17.0	21.0 21.0	20.0 19.0	24.0 24.0	23.0 22.0	27.0 28.0	25.0 25.0	21.0 21.0	17.0 18.0	18.0 18.0	16.0 16.0
31			21.0	19.0			28.0	24.0	55.0	19.0		
YONTH	17.0	12.0	21.0	16.0	27.0	19.0	28.0	21.0	26.0	16.0	23.0	13.0
YEAR	28.0	1.0										

11523000 KLAMATH RIVER AT ORLEANS, CALIF.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
	MFAN	MEAN CONCEN-	SEDIMENT	MFAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	
DAY	DISCHARGE (CFS)	TRATION	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	SEDIMENT DISCHARGE
									(TONS/DAY)
1 2	2190 2380	12 82	71 527	2560 2500	4 6	28 41	3580 4000	22 111	213 1280
3	2980	177	1420	2420	6	39	5130	184	2580
4	2710 2700	53	388	2350 2320	7 7	44 44	6200 9050	219 244	3830 6230
5	2100	16	117	2320	,	44	9050	244	6230
6	2600	14	98	2300	5 4	31 25	6140	79 68	1310
7 8	2820 2790	17 16	129 121	2320 2430	4	26	6030 5440	35	1110 514
9	2760	15	112	2680	6	43	5150	23	320
10	2750	12	89	2820	8	61	5110	18	248
11	2740	10	74	2650	10	72	4980	21	282
12	2720	8 8	59 59	2550 5500	12 15	83	4810	23 23	299 289
13 14	2720 2700	9	66	11400	114	223 3510	4660 4480	21	254
15	2680	10	72	5400	46	671	4250	20	230
16	2670	10	72	4200	19	215	4210	21	239
17	2670	10	72	3750	14	142	3920	17	180
18	2660	9	65	3500	10	95	4530	27	330
19 20	2660 2650	9 10	65 72	3200 3050	8 7	69 58	4550 4360	27 19	332 224
• •		-	,,		•				
21	2840	11	84	2900	6	47	4260	18	207
22 23	3130 2930	11 9	93 71	2780 2760	6	45 45	4210 4350	20 22	227 258
24	2820	10	76	2760	6	45	4930	19	232
25	2810	13	99	2770	6	45	4710	20	254
26	2810	15	114	2710	6	44	5170	27	377
27 28	2780 3220	18 27	135 235	2700 2740	6	44 44	6850 6260	80 37	1510 625
29	3160	22	188	3310	58	544	5900	20	319
30	2910	10	79	3400	29	266	5200	16	225
31	2740	5	37				4520	14	171
TOTAL	85700		4959	98730		6689	156540		24699
		JANUARY			FFRRUARY			MARCH	
		MFAN			MEAN			MARCH MEAN	
	MEAN	MFAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
OAY	MEAN DISCHARGE (CFS)	MFAN	SEDIMENT DISCHARGE		MEAN	DISCHARGE	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE
	DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
l 2	DI SCHARGE (CFS) 4160 4000	MFAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 168 151	MEAN DISCHARGE (CFS) 5090 5260	MEAN CONCEN- TRATION (MG/L) 27 47	DISCHARGE (TONS/DAY) 371 667	DISCHARGE (CFS) 16100 14600	MEAN CONCEN- TRATION (MG/L)	DISCHARGE
l 2 3	DISCHARGE (CFS) 4160 4000 3910	MFAN CONCEN- TRATION (MG/L) 15 14 13	DISCHARGE (TONS/DAY) 168 151 137	MEAN OISCHARGE (CFS) 5090 5260 15600	MEAN CONCEN- TRATION (MG/L) 27 47 495	DISCHARGE (TONS/DAY) 371 667 21200	DISCHARGE (CFS) 16100 14600 13700	MEAN CONCEN- TRATION (MG/L) 245 210 185	DISCHARGE (TONS/DAY) 10700 8280 6840
1 2 3	DISCHARGE (CFS) 4160 4000 3910 3730	MFAN CONCEN- TRATION (MG/L) 15 14 13	DISCHARGE (TONS/DAY) 168 151 137 131	MEAN DISCHARGE (CF5) 5090 5260 15600 14600	MEAN CONCEN- TRATION (MG/L) 27 47 495 165	DISCHARGE (TONS/DAY) 371 667 21200 6500	DISCHARGE (CFS) 16100 14600 13700 13700	MEAN CONCEN- TRATION (MG/L) 245 210 185 215	DISCHARGE (TONS/DAY) 10700 8280 6840 7950
1 2 3 4 5	DI SCHARGE (CFS) 4160 4000 3910 3730 3570	MFAN CONCEN- TRATION (MG/L) 15 14 13 13	DISCHARGE (TONS/DAY) 168 151 137 131 106	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480	DISCHARGE (CFS) 16100 14600 13700 13700 14200	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900
1 2 3 4 5	DISCHARGE (CFS) 4160 4000 3910 3730 3570	MFAN CONCEN- TRATION (MG/L) 15 14 13 13 11	DISCHARGE (TONS/DAY) 168 151 137 131 106	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480	01SCHARGE (CFS) 16100 14600 13700 13700 14200	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180	DISCHARGE (TONS/DAY) 10700 6280 6840 7950 6900
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510	MFAN CONCEN- TRATION (MG/L) 15 14 13 13 11 11	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208	MEAN DISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11100 11300	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050	01SCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 117 81	DISCHARGE (TONS/DAY) 10,700 8280 6840 7950 6900 4960 3750 2520
1 2 3 4 5 6 7 8	D1SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510	MFAN CONCEN- TRATION (MG/L) 15 14 13 11 11 11 22 36	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730	01SCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10900	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 112 81 70	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060
1 2 3 4 5 6 7 8	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920	MFAN CONCEN- TRATION (MG/L) 15 14 13 13 11 11	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208	MEAN DISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11100 11300	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050	01SCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 117 81	DISCHARGE (TONS/DAY) 10,700 8280 6840 7950 6900 4960 3750 2520
1 2 3 4 5 6 7 8 9	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920	MFAN CONCEN- TRATION (MG/L) 15 14 13 13 11 11 11 22 36 157	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 11700 10700 10700	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 195 175 100 60 54	DISCHARGE (TDNS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 12400 11500 10900 10400	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 112 81 70 78	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 2750 2520 2060 2190
1 2 3 4 5 6 7 8 9 10	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 4510 4510 7920 5920	MFAN CONCEN- TRATION (MG/L) 15 14 13 13 11 11 22 36 157	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450	MEAN OISCHARGE (CFS) 5090 5760 15600 14600 12300 11100 11000 11000 10700 10700	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60 54	DI SCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10900 10400	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 117 81 70 78	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190
1 2 3 4 5 6 7 8 9 10	D1 SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 4510 4510 7920 5920 5000 9360 34900	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 11 22 36 157 36 22 150 948	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 9650 9230 8930 8930	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 2850 1730 1490 1350 1300 1210 974	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10900 10400 10100 10600 11000 11200	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 117 70 78 101 107 87 83	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 2570 2560 2190 2560 2580 2510
1 2 3 4 5 6 7 8 9 10	D1 SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5920 5000 9360	MFAN CONCENTRATION (MG/L) 15 14 13 11 11 11 22 36 157 36 22	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11000 110700 10700 9650 9230 8930	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 95 175 100 60 54	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210	DISCHARGE (CFS) 16100 14600 13700 13700 14200 14200 13300 12400 11500 10900 10400	MEAN CONCEN- TRATION (MG/L) 245 210 185 215 180 138 112 81 70 78	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2580
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5000 9360 34900 55200 25600	MFAN CONCENTRATION (MG/L) 15 14 13 11 11 22 36 157 36 157 36 26 150 968 1810	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11000 11000 10700 10700 9650 9230 8390 7930 7570	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43 34	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210 974 728	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10400 10100 10100 11200 11200 11900	MEAN CONCEN- TRATION (MG/L) 245 215 180 138 112 81 70 78 101 107 83 81 81	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2510 2380 2760
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 4160 4000 3910 3730 35770 3460 3390 3510 45110 7920 5900 9360 34900 55200 25600 15100	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 11 22 36 157 36 12 157 36 11 11 22 36 157 36 11 31 31 31 31 31 31 31 31 31 31 31 31	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000 45600 13500	MEAN DISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 11000 10700 10700 9650 9230 8930 8930 7930 7570 8440	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43 34 29 46	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2450 5200 3050 1730 1490 1350 1210 974 728 593	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 13300 12400 11500 10400 10100 10600 11000 11500 11500 11500 11500 11500 11500 11500	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 112 81 107 83 81 89 79	DISCHARGE (TONS/DAY) 10.700 8.280 6.840 7950 6.900 4.960 2.520 2.060 2.190 2.580 2.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 4510 7920 5920 5920 25600 15100 10600 8480	MFAN CONCENTRATION (MG/L) 15 14 13 11 11 22 36 157 36 157 36 26 150 968 1810	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11000 11000 10700 10700 9650 9230 8390 7930 7570	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43 34	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210 974 728	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10400 10100 10100 11200 11200 11900	MEAN CONCEN- TRATION (MG/L) 245 215 180 138 112 81 70 78 101 107 83 81 81	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2510 2380 2760
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 4510 7920 5000 9360 34900 55200 25600 15100	MFAN CONCENTRATION (MG/L) 15 14 13 11 11 11 11 12 36 157 36 22 150 968 1810	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000 45600 13500 6350	MEAN 01SCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11000 11000 10700 10700 9650 9230 8390 7930 7570 8440 9950	MEAN CONCEN- TRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43 34 29 46 68	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210 974 728 593 1050 1830	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 11500 10900 10100 10100 11200 11200 11900 11900 11900	MEAN CONCEN- TRATION (MG/L) 245 215 180 138 112 81 70 78 101 107 83 81 89 79 79	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2510 2380 2760 2540 2120
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5000 9360 34900 55200 25600 15100 10600 8480 6480 6600	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 22 36 157 36 62 27 150 631 332 27 158 158	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 797 3790 105000 242000 45600 13500 6350 3620 2240 2030	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 10700 17200 9650 9230 8930 7930 7570 8440 9450 13700 33100	MEAN CONCENTRATION (MG/L) 747 495 165 135 95 175 100 54 52 2 50 33 34 29 46 68 233 701 903	JISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210 974 778 593 1050 1830 11700 64000	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 12400 12400 11500 10900 10100 11600 11100 11200 11900 11900 11900 10900 11900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900 10900	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 132 81 170 78 101 107 83 81 89 97 97 72 65 57	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2510 2580 2510 2380 2760 2540 2120 1810 1330
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 4510 7920 5920 5900 25600 15100 10600 8480 6920 6600 6880	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 11 12 26 157 7 36 22 150 968 1810 631 332 272 150 114 117 117 117 117 117 117 117 117 117	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 100 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2740 2030 2270	MEAN DISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 11000 10700 10700 9650 9230 8930 8930 7930 7570 8440 9950 13700 33100 44400 60300	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 100 54 52 52 50 43 34 29 46 68 233 701 903 1470	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2450 5200 3050 1730 1490 1350 1370 1210 974 728 593 1050 1830 11700 64000 116000 262000	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10900 10400 10100 11500 11500 11500 11900 11900 11900 19400 9810 9460 9190	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 112 78 101 107 78 101 107 75 87 88 1 89 79 72 65 57 52 49	DISCHARGE (TONS/DAY) 10.700 8.280 6.840 7950 6.900 4.960 2.520 2.060 2.190 2.580 2.5
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5000 9360 34900 55200 25600 15100 8480 6800 6880 6880	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 12 26 157 29 150 968 1810 631 332 272 158 120 114 122 82 82 82 82 82 82 82 82 82 82 82 82 8	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000 45600 13500 3620 2240 2030 2270 15500	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 10700 17500 8930 8930 8930 7930 7570 8440 9450 13700 33100 44400 60300 92800	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 95 175 100 54 52 52 50 43 34 99 46 68 233 701 1470 3220	JISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 5200 3050 1730 1490 1350 1300 1210 974 778 593 1050 1830 11700 64000 116000 262000	DISCHARGE (CFS) 16100 14600 13700 13700 13700 13700 11500 10900 10100 10100 10100 11200 11900 11900 11900 11900 11900 11900 11900 10900	MEAN CONCENTRATION (MG/L) 245 215 180 132 81 170 78 101 107 83 81 107 65 57 75 22 49 45	DISCHARGE (TONS/DAY) 10700 8280 6840 7950 6900 4960 3750 2520 2060 2190 2750 3060 2510 2580 2510 2380 2760 2540 2120 1810 1330 1220 1070
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 4510 7920 5920 5900 25600 15100 10600 8480 6920 6600 6880	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 11 12 26 157 7 36 22 150 968 1810 631 332 272 150 114 117 117 117 117 117 117 117 117 117	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 100 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2740 2030 2270	MEAN DISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 11000 10700 10700 9650 9230 8930 8930 7930 7570 8440 9950 13700 33100 44400 60300	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 100 54 52 52 50 43 34 29 46 68 233 701 903 1470	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2450 5200 3050 1730 1490 1350 1370 1210 974 728 593 1050 1830 11700 64000 116000 262000	DISCHARGE (CFS) 16100 14600 13700 13700 14200 13300 12400 11500 10900 10400 10100 11500 11500 11500 11900 11900 11900 19400 9810 9460 9190	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 112 78 101 107 78 101 107 75 87 88 1 89 79 72 65 57 52 49	DISCHARGE (TONS/DAY) 10.700 8.280 6.840 7950 6.900 4.960 2.520 2.060 2.190 2.580 2.5
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5920 5930 34900 35700 25600 15100 16000 8480 6920 6600 6680 6680 6540	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 11 12 26 26 157 36 27 158 120 114 122 158 120 114 122 158 120 114 122 158 120 114 122 158 120 114 122 158 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 120 114 122 128 128 120 114 122 128 128 120 114 122 128 128 120 114 122 128 128 120 114 122 128 128 120 114 122 128 128 120 114 128 128 128 120 114 128 128 128 128 128 128 128 128 128 128	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 100 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2740 2030 2740 2030 2270 1540 1190 883	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 9650 9230 8930 7930 7570 8440 9950 13700 33100 44400 60300 92800 55200 34300	MEAN CONCENTRATION (MG/L) 27 47 495 165 135 95 175 100 60 54 52 52 50 43 34 29 46 68 233 701 903 1470 3220 2020 1530	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2450 5200 3050 1730 1350 1370 1370 1370 1370 1370 1370 1370 137	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 13300 11500 10900 10100 10100 11500 11900 11900 11900 11900 19900	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 117 78 101 107 87 88 1 89 79 72 65 57 57 52 49 45 40 226	DISCHARGE (TONS/DAY) 10.700 8.780 6.840 7.950 6.900 4.960 3.750 2.060 2.190 2.750 2.
1 2 3 3 4 4 5 6 7 7 8 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	DI SCHARGE (CFS) 4160 4000 3910 3730 3460 3390 3570 3460 3390 3510 4510 7920 5920 59300 34900 55200 55200 55200 6600 6680 6690 6600 6680 6640 6540 6300	MFAN CONCENTRATION (MG/L) 15 144 13 11 11 11 12 22 36 157 36 22 150 968 1810 631 332 272 150 114 122 66 50 42 27	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 103 101 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2240 2030 2270 1540 1190 883 714 595	MEAN OISCHARGE (CFS) 5090 15600 15600 12300 11100 11300 10700 10700 10700 9650 9230 8930 8930 7930 7570 8440 9950 13700 33100 44400 60300 92800 55200 34300 24100	MEAN CONCENTRATION (MG/L) 27 475 165 135 135 100 54 135 100 54 125 100 100 100 100 100 100 100 100 100 10	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 2850 1730 1490 1350 1370 1370 1370 1370 1370 1370 1370 137	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 13300 12400 11500 10900 10100 10600 11200 11900 11900 10900 10900 11900 10900 10900 11900 10900 11900 10900 11900 10900 11900	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 117 70 78 101 107 87 83 81 89 97 72 65 57 52 49 45 40 226	DISCHARGE (TONS/DAY) 10.700 8.280 6.840 7.950 6.900 4.940 3.750 2.520 2.040 2.190 2.750 2.
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21 22 22 22 22 22 22 22 22 22 22 22 22	DI SCHARGE (CFS) 4160 4000 3730 3770 3460 3390 3510 4510 7920 5000 9360 34900 55200 25600 15100 10600 8480 6920 6600 6880 6940 6660 6880 6540	MFAN CONCENTRATION (MG/L) 15 14 14 13 13 11 11 11 22 36 157 36 27 159 48 1810 631 332 2727 158 120 114 122 86 60 0 42 37	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 101 208 438 3450 575 297 3790 105000 282000 45600 11500 2270 1240 2270 1540 1190 883 714 595 538	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 10700 7570 8930 7930 8930 7930 7570 8440 60300 92800 55200 34300 24100 21700	MEAN CONCENTRATION (MG/L) 27 475 165 135 95 175 100 60 54 52 52 50 33 34 66 68 233 701 903 1470 2020 2020 1530 800 500 500	DISCHARGE (TONS/DAY) 371 667 21200 6500 6500 2850 1730 1490 1350 1210 974 778 593 1050 11700 64000 116000 262000 825000 301000 142000 29300 19500	DISCHARGE (CFS) 16100 14600 13700 13700 13700 13700 12400 12400 12400 11500 10900 10100 10100 11200 11900 11900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900	MEAN CONCENTRATION (MG/L) 245 215 215 215 216 216 216 216 217 81 117 70 78 101 107 87 87 88 1 89 79 72 265 57 52 49 45 266 118 65 3	DISCHARGE (TONS/DAY) 10 700 8280 8280 8280 8280 8280 8280 8280
1 2 3 3 4 4 5 6 7 7 8 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11	DI SCHARGE (CFS) 4160 4000 3910 3730 3460 3390 3570 3460 3390 3510 4510 7920 5920 59300 34900 55200 55200 55200 6600 6680 6690 6600 6680 6640 6540 6300	MFAN CONCENTRATION (MG/L) 15 144 13 11 11 11 12 22 36 157 36 22 150 968 1810 631 332 272 150 114 122 66 50 42 27	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 103 101 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2240 2030 2270 1540 1190 883 714 595	MEAN OISCHARGE (CFS) 5090 15600 15600 12300 11100 11300 10700 10700 10700 9650 9230 8930 8930 7930 7570 8440 9950 13700 33100 44400 60300 92800 55200 34300 24100	MEAN CONCENTRATION (MG/L) 27 475 165 135 135 100 54 135 100 54 125 100 100 100 100 100 100 100 100 100 10	DISCHARGE (TONS/DAY) 371 667 21200 6500 4480 2850 2850 1730 1490 1350 1370 1370 1370 1370 1370 1370 1370 137	DISCHARGE (CFS) 16100 14600 13700 13700 13700 14200 11500 10900 10100 10100 11500 11900 17900 17900 17900 17900	MEAN CONCENTRATION (MG/L) 245 210 185 215 180 138 117 70 78 101 107 87 83 81 89 79 72 65 57 52 49 45 40 226 118 69 53 49	DISCHARGE (TONS/DAY) 10.700 8.780 6.840 6.840 7.950 6.900 4.946 3.750 2.060 2.190 2.750 2.060 2.580 2.580 2.760 2.580 2.120 1810 1.510 1.330 1.220 1.070 8.53 7.970 3.790 1.970 1.280
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 29	DI SCHARGE (CFS) 4160 4000 3910 3730 3460 3390 3570 3460 3390 3510 4510 7920 5920 5930 34900 55200 55200 6600 6600 6680 66940 6640 6540 6550 5530	MFAN CONCENTRATION (MG/L) 15 14 13 13 11 11 12 22 36 157 36 22 150 968 1810 631 332 272 158 120 114 112 12 82 65 650 42 37 36 35	DISCHARGE (TONS/DAY) 168 151 137 106 103 100 100 208 438 3450 575 297 3790 105000 282000 45600 13500 6350 3620 2740 2030 2270 1540 1190 883 714 595 538 521	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 9650 9230 8930 8930 7930 7570 8440 9950 13700 33100 44400 60300 92800 55200 34300 26100 21700 19000 17100	MEAN CONCENTRATION (MG/L) 27 475 165 135 95 175 100 60 54 52 52 50 33 34 66 68 233 701 903 1470 2020 2020 1530 800 500 500	DISCHARGE (TONS/DAY) 371 667 21200 6500 6500 2850 1730 1490 1350 1210 974 778 593 1050 11700 64000 116000 262000 825000 301000 142000 29300 19500	DISCHARGE (CFS) 16100 14600 13700 13700 13700 13700 12400 12400 12400 11500 10900 10100 10100 11200 11900 11900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900	MEAN CONCENTRATION (MG/L) 245 215 215 215 216 216 216 216 217 81 117 70 78 101 107 87 87 88 1 89 79 72 265 57 52 49 45 266 118 65 3	DISCHARGE (TONS/DAY) 10 700 8280 8280 8280 8280 8280 8280 8280
1 2 3 4 4 5 6 6 7 8 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 30 30	DI SCHARGE (CFS) 4160 4000 3910 3730 3570 3460 3390 3510 4510 7920 5000 9360 34900 55200 25600 15100 10600 8480 6920 6600 6880 6940 6660 6880 65530 5510 5510	MFAN CONCENTRATION (MG/L) 15 14 14 13 13 11 11 11 22 36 157 36 27 158 120 114 122 82 158 120 114 122 82 65 50 42 37 36 35	DISCHARGE (TONS/DAY) 168 151 137 131 106 103 1001 208 438 3450 575 297 3790 105000 282000 45600 113500 5350 2240 2240 2270 11540 1190 883 714 595 538 521 445	MEAN OISCHARGE (CFS) 5090 5260 15600 14600 12300 11100 11300 10700 10700 10700 10700 17700 8940 9230 8940 8940 8940 8940 8940 8940 8940 894	MEAN CONCENTRATION (MG/L) 27 475 165 135 95 175 100 60 54 52 52 50 33 34 66 68 233 701 903 1470 2020 2020 1530 800 500 500	DISCHARGE (TONS/DAY) 371 667 371 667 21200 6500 6500 6500 1730 1490 1350 1300 1210 974 778 593 1050 11700 64000 116000 825000 825000 825000 825000 825000 13200 13200	DISCHARGE (CFS) 16100 14600 13700 13700 13700 13700 12400 12400 12400 12400 10900 10900 10100 10900 11900 11900 11900 10900 13900 19900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900 11900 10900	MEAN CONCENTRATION (MG/L) 245 215 215 215 180 138 117 70 78 101 107 87 87 87 87 97 97 72 65 57 52 49 45 226 118 65 3 49 38 89 39 38	DISCHARGE (TONS/DAY) 10.700 8280 8280 8280 8280 6900 4960 3750 2520 2060 2190 2750 3060 2510 2380 2760 2510 2380 1310 1310 1310 1320 1070 853 7970 1400 1280 995

11523000 KLAMATH RIVER AT ORLEANS, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TOTAL OISCHARGE FOR YEAR (CES-DAYS) TOTAL LOAD FOR YEAR (TONS)

2538186.6

11523000 KLAMATH RIVER AT ORLEANS, CALIF, -- Continued

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHOOS OF ANALYSIS: B. ROTTOM WITHORAWAL TUBE; C. CHEMICALLY DISPERSED; N. IN NATIVE WATER; P. PIPET; S. SIEVE;
V. VISUAL ACCUMULATION TUBE; M., IN DISTILLED WATER)

	WATER								PART	ICFE 3	1126					
	TEM-			SUSPENDED-												METHOD
	PERA-			SEDIMENT	PERCE	NI F	INER	THAN	THE S	12E (N MI	FIME	(FK2)	INDIC	ATED	DF
	TURE			DISCHARGE												ANALY-
DATE	TIME (C)	(CFS)	(MG/L)	(TONS/DAY)	.D02	•004	•D08	.016	.031	• 062	.125	-250	•500	1.00	2.00	S1S
	1200 0															
JAN 15 1968	1300 8	54800	1760	260000	13	14	30	41	. 53	64	76	91	99	100		V P W C
FEB 23	1400 11	93600	2720	687000	12	19	29	41	54	67	80	94	99	100		VPWC
FEB 28	1400 11	18400	353	17500	8	19	29	36	40	67	77	94	100			VB₩C
"AR 27	1330 12	10600	70	2000	19	40	52	60	66	85	89	94	98	100		SBWC

11525500 TRINITY RIVER AT LEWISTON, CALIF.

LOCATION.--Lat 40°43'10", long 122°48'09", in SW1NW1 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 1968. Water temperatures: September 1951 to September 1955, October 1957 to September 1958, July 1959 to September 1968.

EXTREMES . -- 1967-68:

water temperatures: Maximum, 11.0°C on many days during April, and June to September; minimum, 4.0°C on several days during January and February.

Mater temperatures: Maximum (1951-55, 1957-58, 1959-63, 1964-68), 26.0°C July 20, 21, 28, 29, 1960; minimum, 0.5°C on several days in January 1952.

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

11525500 TRINITY RIVER AT LEWISTON, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	SIUM	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PO4)
001.				2.5		52	0		1.8	•2	•02	.13
02 NOV.	166											
D6 DEC.	259			2.5		53	0	.3	2.2	• D	.00	
04 JAN.	212			2.8		53	0		2.0	•5	.06	.04
D8	159			2.9		54	0		2.2	. 5	.05	.09
FEB. C5	161			2.0		51	0		1.5	•2	.06	.06
MAR. 04	153			2.6		53	0			-1	.02	.01
APR. Cl	164			2.2		53	0		1.3	•0	.07	.02
PAY			4 7			50	0					.19
JUNE C6	155	5.5	6.7	2.6	.4			•5	1.9	. 1	•00	
03 July	155			2.3		50	0		1.4	-1	.03	•01
08 AUG.	150			1.7		50	0		1.1	.1	.00	•00
05 SEPT.	158			2.5		52	0		1.5	•0	.00	.08
09	203	5.2	6.6	2.5	.5	51	0	•0	1.5	•0	.04	.02
	DIS- SOLVED SOLIDS (RESI-	HARD-	NON- CAR- BONATE		.	SODIU	ALKA- Lini	TY UCTANCE	ŀ	TEM- PERA-		
DATE	SOLVED SOLIDS (RESI- DUE AT	HARD- NESS	CAR-	SOLVED	PERCENT SODIUM	AD- SORP- TION	ALKA-	FIC - CONO- TY UCTANCE {MICRO-	ŀ	PERA-	SOLVE	
ОСТ.	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS [CA, MG]	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	5 0D I UM	AD- SORP- TION RATIO	ALKA- LINI AS CACO	FIC - CONO- TY UCTANCE (MICRO- 3 MHOS)	- рн	PERA- TURE (OEG C	SOLVEI OXYGEN	•
0CT . 02 NOV.	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	CAR-BONATE BONATE HARD- NESS	SOLVED SOLIDS (TONS PER	50DIUM 13	AD— SORP— TION RATIO	ALKA- LINI AS CACO	FIC - CONO- TY UCTANCE {MICRO-	ŀ	PERA- TURE (OEG C	SOLVEI OXYGEN	.
0CT. 02 Nov. 06	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS [CA, MG]	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	5 0D I UM	AD- SORP- TION RATIO	ALKA- LINI AS CACO	FIC - CONO- TY UCTANCE (MICRO- 3 MHOS)	- рн	PERA- TURE (OEG C	SOLVEI OXYGEN	.
0CT. 02 Nov. 06 DEC. C4	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	CAR-BONATE BONATE HARD- NESS	SOLVED SOLIDS (TONS PER AC-FT)	50DIUM 13	AD— SORP— TION RATIO	ALKA- LINI AS CACO	FIC COND- TY UCTANCE (MICRO- 3 MHOS)	РН 7•	PERA- TURE (DEG C	SOLVEI OXYGEN	1 1
OCT. O2 NOV. O6 DEC. C4 JAN. O8	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG) 38	CAR-BONATE BONATE HARD- NESS O	SOLVED SOLIDS (TONS PER AC-FT)	500 LUM 13 11	AD- SORP- TION RATIO .2	ALKA- LINI AS CACO 43	FIC - CONO- TY UCTANCE (MICRO- 3 MHOS) 96	РН 7.	PERA- TURE (OEG C	SOLVEI OXYGEN 10.1	1 7 3
OCT. 02 NOV. 06 DEC. C4 JAN. 08 FE8.	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS (CA, MG) 38 42 43	CAR- BONATE HARD- NESS 0 0	SOL VED SOLIDS (TONS PER AC-FT)	13 11 12	AD— SORP— TION RATIO	ALKA- LINI: AS CACO 43 43	FIC COND— TY UCTANCE (MICRO- 3 MHOS) 96 97	7. 7.	PERA- TURE (OEG C 7 8 4 8 7 6	SOLVEI OXYGEN 10.1 10.7	i. 7 3 .
OCT. 02 NOV. 06 DEC. C4 JAN. 08 FEB. 05 MAR.	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG) 38 42 43	CAR- BONATE HARD- NESS 0 0	SOLVED SOLIDS (TONS PER AC-FT)	50D1UM 13 11 12 13	AD— SORP— TION RATIO	ALKA- LINI AS CACO 43 43 43	FIC COND- TY UCTANCE (MICRO- 3 MHOS) 96 97 95	7. 7. 7.	PERA- TURE (OEG C 7 8 4 8 7 6 6 6	SOLVEI OXYGEN 10.1 10.7 10.8	4 7 3 .
OCT. 02 NOV. 06 DEC. JAN. 08 FEB. 05 MAR. 04	SOL VED SOLIOS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG) 38 42 43 43 43 49	CAR- BONATE MARD- NESS 0 0 0 0	SOLVED SOLIDS (TONS PER AC-FT)	13 11 12 13 10	AD— SORP— TION RATIO .2 .2 .2 .2 .2 .2 .2	ALKA- LINI AS CACO 43 43 43 44 42	FIC CONO- CONO- LOCTANCE (MICRO- MHOS) 96 97 95 98 92	7. 7. 7. 7. 7.	PERATURE (OEG C 7 8 4 8 7 6 6 6 8 6 7 8	SOLVEI OXYGEN 10.1 10.8 11.8 11.6	1 7 3
OCT O2 NOV O6 DEC C4 JAN O8 FEB O5 MAR O4 APR O1 MAY	SOL VED SOLLOS (REST) DUE AT 180 C)	HARD- NESS (CA, MG) 38 42 43 43 43 49 46	CAR-BONATE HARD-NESS O O O O 3	SOLVED SOLIDS (TONS PER AC-FT)	13 11 12 13 10 11	AD— SORP— TION RATIO	ALKA- LINI ASS CACO 43 43 43 44 42 43	FIC COND— COND— COND— UCTANCE (MICRO- MHOS) 96 97 95 98 92 97	7. 7. 7. 7. 7.	PERA-TURE 10EG C 7 8 4 8 7 6 6 6 8 6 7 8	SOLVEI OXYGEN 10.1 10.7 10.8 11.6 11.3	1 7 3
OCT O2 NOY O6 DEC C4 JAN O8 FEB O5 MAR O1 APR O1 MAY O6 JUNE	SOL WED SOLL TO SOLL T	HARD— NESS (CA.MG) 38 42 43 43 49 46 44	CAR-BONATE HARD-NESS 0 0 0 0 0 1 0 0 0	SOL VED SOL IOS (TONS PER AC-FT)	13 11 12 13 10 11	AD- SORP- TION RATIO .2 .2 .2 .2 .1 .2	ALKA- LINI' AS CACO 43 43 43 44 42 43 43	FIC COND— TY UCTANCE (MICRO- 3 MHOS) 96 97 95 98 92 97 97	7. 7. 7. 7. 7.	PERATURE 10EG C 7 8 4 8 7 6 6 6 8 6 7 8 6 9	SOLVEI OXYGEN 10-1 10-2 11-8 11-6 11-3 9-8	1
OCT. 02 NOV. 06 DEC. C4 JAN. 08 FEB. 05 MAR. 04 APR. 01 MAY	SOL WED SOLL TO SOLL T	HARD- NESS (CA, MG) 38 42 43 43 43 49 46	CAR-BONATE HARD-NESS O O O O 3	SOLVED SOLIDS (TONS PER AC-FT)	13 11 12 13 10 11	AD— SORP— TION RATIO	ALKA- LINI ASS CACO 43 43 43 44 42 43	FIC COND— COND— COND— UCTANCE (MICRO- MHOS) 96 97 95 98 92 97	7. 7. 7. 7. 7.	PERATURE 10EG C 7 8 4 8 7 6 6 6 8 6 7 8 6 9	SOLVEI OXYGEN 10.1 10.7 10.8 11.6 11.3	1
OCT. O2 NOV. O6 DEC. C4 JAN. O8 FE8. O5 MAR. O4 APR. O1 JUNE O3 JULY O8	SOL VED SOL IND SOL IN	HARD— NESS (CA.MG) 38 42 43 43 49 46 44	CAR-BONATE HARD-NESS 0 0 0 0 0 1 0 0 0	SOL VED SOL IOS (TONS PER AC-FT)	13 11 12 13 10 11	AD- SORP- TION RATIO .2 .2 .2 .2 .1 .2	ALKA- LINI' AS CACO 43 43 43 44 42 43 43	FIC COND— TY UCTANCE (MICRO- 3 MHOS) 96 97 95 98 92 97 97	7. 7. 7. 7. 7.	PERA-TURE (OEG C C C C C C C C C C C C C C C C C C C	SOLVEI OXYGEN 10-1 10-2 11-8 11-6 11-3 9-8	3
OCT. O2 NOY. O6 DEC. C4 JAN. O8 FE8. O5 MAR. O1 MAY O6 JUNE O3 ULLY	SOLVED SOLICE SO	HARD-NESS (CA.MG) 38 42 43 43 43 49 46 44 41	CAR-BONAT-BONAT-NESS O O O O O O O O O O O O O O O O O O	SOL VED SOL VED SOL TONS (TONS PER AC-FT)	13 11 12 13 10 11 10	AD- SORP- TION RATIO -2 -2 -2 -1 -2 -1 -2	ALKA- LINIT AS CACO 43 43 43 44 42 43 43 41	FIC COND— TY UCTANCE (MICRO— 3 MHOS) 96 97 98 92 97 97 90	7. 7. 7. 7. 7. 7.	PERA-TURE TORE TORE TORE TORE TORE TORE TORE TO	SOLVEI OXYGEN 10-1 10-2 10-8 11-3 9-8 11-7	1

11525500 TRINITY RIVER AT LEWISTON, CALIF. -- Continued

								67 TO SEE				
	oct	OBER	NOVE	MBER	DECE	MBER		UARY	FEBR			RCH
DAY	MAX	MIN	XAP	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	B.0	8.0	8.0	6.0	6.0	6.0	6.0	5.0	4.0	7.0	7.0
2	8.0 8.0	8.0 P.0	8.0 8.0	8.0 8.0	6.0 6.0	6.0 6.0	6.0 6.0	6.0 6.0	4.0 4.0	4.0 4.0	8.0 8.0	7.0 7.0
3	8.0	8.0	8.0	8.0	6.0	6.0	6.0	6.0	4.0	4.0	8.0	7.0
5	8.0	8.0	8.0	8.0	6.0	6.0	6.0	6.0	5.0	4.0	8.0	7.0
6	8.0	8.0	8.0	8.0	6.0	6.0	6.0	6.0	5.0	5.0	7.0	7.0
7	9.0	8.0	8.0	8.0	6.0	5.0	6.0	6.0	5.0	5.0	7.0	7.0
8	8.0 8.0	8.0 8.0	8.0 8.0	8.0 8.0	5.0 5.0	5.0 5.0	6.0 6.0	6.0 4.0	5.0 5.0	5.0 5.0	8.0 8.0	7.0 7.0
10	8.0	8.0	B. 0	8.0	5.0	5.0	5.0	4.0	6.0	5.0	8.0	7.0
11	8.0	8.0	8.0	8.0	5.0	5.0	5.0	5.0	6.0	6.0	8.0	7.0
12	8.0	8.0	8.0	8.0	5.0	5.0	5.0	5.0	6.0	6.0	7.0	7.0
13 14	8.0 8.0	8.0 8.0	8.0 8.0	8.0 8.0	5.0 5.0	5.0 5.0	5+0 5+0	5.0	6.0 6.0	6.0 6.0	7.0 7.0	7.0 7.0
15	8.0	8.0	8.0	7.0	5.0	5.0	5.0	5.0	6.0	6.0	7.0	7.0
16	8.0	8.0	7.0	7.0	5.0	5.0	5.0	5.0	6.0	6.0	7.0	7.0
17	8.0	8.0	7.0	7.0	5.0	5.0	5.0	5.0	7.0	6.0	7.0	7.0
18 19	8.0 A.0	8.0 8.0	7.0 7.0	7.0 7.0	5.0 5.0	5.0 5.0	5.0 5.0	5.0 5.0	6.0 6.0	6.0 6.0	8.0 8.0	7.0 7.0
20	8.0	8.0	7.0	7.0	5.0	5.0	5.0	5.0	6.0	6.0	8.0	7.0
21	8.0	8.0	7.0	7.0	5.0	5.0	5.0	5.0	7.0	6.0	8.0	7.0
22	8.0	8.0	7.0	7.0	5.0	5.0	5.0	5.0	7.0	7.0	8.0	7.0
23	8.0	8.0	7.0	7.0	5.0	5.0	6.0	5.0	7.0	7.0 7.0	8.0 8.0	7.0 7.0
24 25	8.0 8.0	8.0 8.0	7.0 7.0	7.0 7.0	5.0 6.0	5.0 5.0	6.0 6.0	5.0 6.0	7.0 7.0	7.0	8.0	7.0
26	8.0	8.0	7.0	7.0	6.0	6.0	6.0	6.0	7.0	7.0	8.0	8.0
27	8.0	9.0	7.0	7.0	6.0	6.0	6.0	6.0	7.0	7.0	9.0	8.0
28	8.0	8.0	7.0	7.0	6.0	6.0	6.0	5.0 5.0	7.0 7.0	7.0 7.0	9.0 9.0	8.0 8.0
29 30	8.0 8.0	8.0 8.0	7.0 6.0	6.0	6.0 6.0	6.0 6.0	5.0 5.0	5.0			9.0	8.0
31	8.0	9.0			6.0	6.0	5.0	5.0			9.0	8.0
HTVOF	9.0	8.0	8.0	6.0	6.0	5.0	6.0	4.0	7.0	4.0	9.0	7.0
	ΔC	RIL		AY	JU	NE	JU	ILY	AUG	SUST	SEP	TEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	8.0	9.0	8.0	10.0	8.0	11.0	8.0	10.0	8.0	11.0	10.0
2	9.0	8.0	10.0	8.0	9.0	8.0	10.0	8.0	11.0	8.0	11.0	10.0
3 4	9.0 9.0	8.0	10.0	8.0	9.0	8.0	11.0	8.0	11.0	8.0	11.0	10.0 10.0
5		8.0	10.0			R . O	11.0					
	9.0	8.0 8.0	9.0	8.0 8.0	9.0	8.0 8.0	11.0	8.0 8.0	11.0 11.0	8.0 8.0	11.0 11.0	10.0
6	9.0	8.0	9.0	8.0	9.0	8.0	11.0	8.0	11.0	8.0	11.0	10.0
6 7	9.0 9.0 9.0	8.0 9.0 9.0	9.0 9.0 9.0	8.0 8.0	9.0 10.0 10.0				11.0 11.0 11.0		11.0	
7 8	9.0 9.0 9.0	9.0 9.0 9.0	9.0 9.0 9.0	8.0 8.0 8.0	9.0 10.0 10.0 10.0	8.0 8.0 8.0	11.0 11.0 11.0	8.0 8.0 8.0	11.0 11.0 11.0	9.0 9.0 9.0	11.0 11.0 11.0	10.0 10.0 10.0
7	9.0 9.0 9.0	8.0 9.0 9.0	9.0 9.0 9.0	8.0 8.0	9.0 10.0 10.0	8.0 8.0	11.0 11.0	8.0 8.0	11.0 11.0	9.0 9.0	11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0
7 8 9 10	9.0 9.0 9.0 9.0 10.0	8.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 10.0	8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 10.0 11.0	8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0
7 8 9 10	9.0 9.0 9.0 9.0 10.0 11.0	8.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 10.0	8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0	11.0 11.0 10.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0
7 8 9 10 11 12 13	9.0 9.0 9.0 9.0 10.0 11.0	8.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 10.0 11.0 10.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0
7 8 9 10 11 12 13 14	9.0 9.0 9.0 10.0 11.0 11.0 11.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0	11.0 11.0 10.0 11.0 10.0 11.0 11.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0
7 8 9 10 11 12 13 14 15	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 9.0	11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 11-0 10-0
7 8 9 10 11 12 13 14 15	9.0 9.0 9.0 10.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0	11.0 11.0 10.0 11.0 10.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0
7 8 9 10 11 12 13 14 15 16 17	9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	11.0 11.0 11.0 10.0 11.0 10.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0
7 8 9 10 11 12 13 14 15 16 17 18 19	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 10.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 11-0 11-0 11-0 11-0 11-0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 10.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 10.0 11.0 11.0 11.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 11.0 10.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 10.0 11.0 11.0 11.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0	9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 11.0 10.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 9.0 9.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 11-0 11-0 11-0 11-0 11-0 11-0 11-0 10-0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	9.0 9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 3.0 3.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 10.0 11.0 11.0 11.0 11.0 11.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 9.0 9.0 10.0 10.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 11-0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	9.0 9.0 9.0 10.0 11.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 11-0 11-0 11-0 11-0 11-0 11-0 11-0 11-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 9.0 11.0 11	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 10.0 11.0 11.0 11.0 10.0
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	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0
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 MONTH	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0
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	9.0 9.0 9.0 10.0 11.0 11.0 11.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 9.0 9.0 9.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10	8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 10.0 10.0	8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	11.0 11.0 10.0 10.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	11.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 10.0 10.0 10.0 10.0 10.0 10.0

11528500 HAYFORK CREEK NEAR HYAMPON, CALIF.

LOCATION.--Lat 40°37'35", long 123°26'00", in NW\$\frac{1}{4}\text{ sec.19, T.3 N., R.7 E,, Trinity County, temperature recorder at gaging station on right bank, 1.2 miles upstream from mouth, and 1.3 miles northeast of Hyampom.

DRAINAGE AREA. -- 378 sq mi.

PERIOD OF RECORD, -- Water temperatures: December 1960 to September 1968.

YEAP

26.0

0.0

EXTREMES. --1967-68:
Water temperatures: Maximum, 26.0°C Aug. 1; minimum, freezing point Jan. 6, 14-17.

Period of record (1960-66, 1967-68):
Water temperatures: Maximum (1960-61, 1962-66, 1967-68), 28.5°C July 13, 1961; minimum, freezing point on several days in January 1962 and 1968.

		TE	IPERATURE	(°C) OF 1	VATER, WAT	TER YEAR O	CTOBER 19	67 TO SEE	PTEMBER 19	68		
	oc.	TOBER	NOV	EMBER	DEC	EMBER	JAI	NUARY	FEB	RUAR Y	н	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	14.0	10.0	8.0	6.0	5.0	2.0	1.0	4.0	3.0	8.0	8.0
2	14.0	13.0	10.0	8.0	5-0	4.0	2.0	1.0	4.0	3.0	8.0	8.0
3	13.0	12.0	10.0 9.0	9.0 9.0	5.0	4.0	2.0	1.0	4.0	3.0	9.0	8.0
5	13.0	11.0	11.0	9.0	5.0 5.0	4.0 4.0	1.0 1.0	1.0	4.0 4.0	4.0 4.0	9.0 9.0	8.0 8.0
6	13.0	12.0	11.0	11.0	4.0	4.0	1.0	0.0	5.0	4.0	8.0	8.0
7 8	13.0	12.0	11.0	11.0	4.0	3.0	1.0	1.0	6.0	4.0	8.0	8.0
å	13.0	11.0 12.0	11.0 11.0	11.0	4.0 4.0	3.0 4.0	2.0 2.0	1.0 2.0	6.0 6.0	4.0 5.0	8.0 8.0	8.0 7.0
10	13.0	12.0	11.0	11.0	4.0	4.0	2.0	1.0	6.0	6.0	7.0	7.0
11	14.0	12.0	11-0	11.0	4.0	4.0	2.0	1.0	6.0	6.0	8.0	7.0
12	13.0	12.0 11.0	11.0 11.0	11.0	4.0	3.0	2.0	1.0	6.0	6.0	7.0	6.0
14	12.0	11.0	11.0	11.0 11.0	3.0 4.0	2.0 2.0	2.0 1.0	1.0 0.0	6.0 6.0	6.0 6.0	7.0 7.0	6.0
15	11.0	8.0	11.0	10.0	6.0	4.0	1.0	0.0	6.0	6.0	8.0	7.0
16	11.0	9.0	11.0	10.0	6.0	5.0	1.0	0.0	6.0	6.0	8.0	7.0
17	11.0	9.0	10.0	10.0	5.0	4.0	1.0	0.0	7.0	6.0	7.0	7.0
18 19	12.0	10.0	11.0 10.0	9.0 9.0	5.0 4.0	4.0 4.0	1.0 2.0	1.0 1.0	7.0 7.0	6.0 7.0	8.0 8.0	7.0
20	12.0	11.0	9.0	9.0	5.0	4.0	2.0	1.0	8.0	7.0	8.0	7.0 7.0
21	12.0	11.0	9.0	9.0	5.0							
22	13.0	12.0	8.0	7.0	5.0	4.0 4.0	2.0 3.0	2.0 2.0	8.0 8.0	7.0 8.0	8.0 8.0	7.0 8.0
23	13.0	12.0	7.0	6.0	5.0	4.0	3.0	3.0	B.0	8.0	9.0	8.0
24	13.0	12.0	7.0	6.0	4.0	4.0	3.0	3.0	8.0	8.0	9.0	8.0
25	13.0	11.0	7.0	6.0	4.0	4.0	3.0	2.0	9.0	8.0	9.0	9.0
26	12.0	11.0	6.0	4.0	4.0	4.0	3.0	2.0	9.0	8.0	9.0	8.0
27	11.0	10.0	5.0	4.0	4.0	3.0	3.0	2.0	9.0	8.0	9.0	8.0
78 29	12.0	11.0 9.0	6.0 6.0	5.0 6.0	3.0 2.0	1.0	3.0 2.0	2.0 2.0	9.0 8.0	8.0 7.0	10.0	8.0 10.0
30	10.0	9.0	6.0	5.0	2.0	1.0	3.0	1.0		7.0	11.0	10.0
31	10.0	9.0			2.0	1.0	3.0	2.0			10.0	9.0
MONTH	17.0	8.0	11.0	4.0	6.0	1.0	3.0	0.0	9.0	3.0	11.0	6.0
	AF	PRIL		MAY	JU	JNE	JU	JLY	AUG	GUST	SEP	TEMBER
DAY	AS MAX	PRIL MIN	MAX	MAY Min	JL XAM	JNE MIN	JU Max	JLY MIN	AUA XAM	GUST MIN	SEP Max	TEMBER MIN
1	MAX 10.0	MIN 9.0	MAX 15.0	M1N 13.0	MAX 19.0	MIN 16.0	MAX 22.0	MIN 18.0	MAX 26.0	MIN 22.0	MAX 22.0	MIN 20.0
1 2	MAX 10.0 10.0	MIN 9.0 9.0	MAX 15.0 15.0	MIN 13.0 12.0	MAX 19.0 18.0	MIN 16.0 17.0	MAX 22.0 21.0	MIN 18.0 19.0	MAX 26.0 25.0	MIN 22.0 22.0	MAX 22.0 22.0	MIN 20.0 19.0
1 2 3	MAX 10.0 10.0 11.0	9.0 9.0 9.0	MAX 15.0 15.0 17.0	MIN 13.0 12.0 13.0	MAX 19.0 18.0 18.0	MIN 16.0 17.0 17.0	MAX 22.0 21.0 22.0	MIN 18.0 19.0 18.0	MAX 26.0 25.0 24.0	MIN 22.0 22.0 22.0	MAX 22.0 22.0 22.0	MIN 20.0 19.0 19.0
1 2	MAX 10.0 10.0	MIN 9.0 9.0	MAX 15.0 15.0	MIN 13.0 12.0	MAX 19.0 18.0	MIN 16.0 17.0	MAX 22.0 21.0	MIN 18.0 19.0	MAX 26.0 25.0	MIN 22.0 22.0	MAX 22.0 22.0	MIN 20.0 19.0
1 2 3 4	MAX 10.0 10.0 11.0 10.0	9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 17.0 17.0	MIN 13.0 12.0 13.0 14.0	MAX 19.0 18.0 18.0 18.0	MIN 16.0 17.0 17.0 16.0 15.0	MAX 22.0 21.0 22.0 23.0 23.0	MIN 18.0 19.0 18.0 19.0 20.0	MAX 26.0 25.0 24.0 23.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0	MIN 20.0 19.0 19.0 19.0 20.0
1 2 3 4 5	MAX 10.0 10.0 11.0 10.0 11.0	MIN 9-0 9-0 9-0 9-0 9-0	MAX 15-0 15-0 17-0 17-0 15-0	MIN 13.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 17.0	MIN 16.0 17.0 17.0 16.0 15.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0	MIN 18.0 19.0 18.0 19.0 20.0	MAX 26.0 25.0 24.0 23.0 24.0 24.0	MIN 22-0 22-0 22-0 21-0 21-0 21-0	MAX 22.0 22.0 22.0 22.0 22.0 23.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0
1 2 3 4 5 6 7 8	MAX 10.0 10.0 11.0 10.0 11.0	MIN 9.0 9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 17.0 17.0 15.0	MIN 13.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 17.0 17.0 18.0	MIN 16.0 17.0 17.0 16.0 15.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0	MIN 18.0 19.0 18.0 19.0 20.0	MAX 26.0 25.0 24.0 24.0 24.0 24.0 24.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	MIN 20.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0
1 2 3 4 5	MAX 10.0 10.0 11.0 10.0 11.0	MIN 9-0 9-0 9-0 9-0 9-0	MAX 15-0 15-0 17-0 17-0 15-0	MIN 13.0 12.0 13.0 14.0 13.0	MAX 19.0 18.0 18.0 17.0	MIN 16.0 17.0 17.0 16.0 15.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0	MIN 18.0 19.0 18.0 19.0 20.0	MAX 26.0 25.0 24.0 23.0 24.0 24.0	MIN 22-0 22-0 22-0 21-0 21-0 21-0	MAX 22.0 22.0 22.0 22.0 22.0 23.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0
1 2 3 4 5 6 7 8	MAX 10.0 10.0 11.0 10.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 15.0 15.0 17.0 17.0 15.0 14.0 16.0 16.0	MIN 13.0 12.0 13.0 14.0 13.0 11.0 12.0 13.0	MAX 19.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 14.0 16.0	MAX 22.0 21.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MIN 18.0 19.0 18.0 19.0 20.0 19.0 20.0 21.0 21.0	MAX 26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0	MIN 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 23.0 23.0 23.0 22.0 21.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 10.0 11.0 10.0 11.0 11.0 11.0 12.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0	MIN 13.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 14.0	MAX 19.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0	MAX 26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0	MIN 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 10.0 11.0 10.0 11.0 11.0 11.0 12.0 13.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0	MIN 13.0 12.0 13.0 14.0 13.0 11.0 13.0 14.0	MAX 19.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 20.0	MAX 26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 23.0 22.0	MIN 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10	MAX 10.0 10.0 11.0 10.0 11.0 11.0 11.0 12.0 13.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0	MAX 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0	MIN 13.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 14.0	MAX 19.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0	MAX 26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0	MIN 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 11.0 11.0 11.0 11.0 11.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	15.0 15.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 16.0 15.0 14.0	HIN 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	MAX 19.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 16.0 17.0 15.0 15.0 15.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MAX 26.0 25.0 24.0 23.0 24.0 24.0 23.0 23.0 22.0 22.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 19.0 20.0	MIN 20.0 19.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 12.0 11.0 10.0 9.0	MAX 15.0 15.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 15.0 14.0 15.0 15.0 15.0	HIN 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 12.0 12.0 12.0	19.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 20.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 15.0 16.0	MAX 22-0 21-0 22-0 23-0 23-0 23-0 23-0 23-0 23-0 23	HIN 18.0 19.0 18.0 19.0 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20	26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 22.0 23.0 22.0 21.0 21.0	MIN 22-0 22-0 22-0 21-0 21-0 21-0 21-0 21-0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 19.0 19.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18	10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 11	15.0 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 15.0 15.0 15.0	13.0 12.0 13.0 14.0 13.0 12.0 13.0 13.0 14.0 13.0 12.0 11.0 12.0 11.0 12.0 11.0	19.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 20.0	MIN 16.0 17.0 17.0 16.0 16.0 14.0 16.0 16.0 16.0 17.0 15.0 15.0 15.0 15.0	22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 12.0 11.0 10.0 9.0	MAX 15.0 15.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 15.0 14.0 15.0 15.0 15.0	HIN 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 12.0 12.0 12.0	19.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 20.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 15.0 16.0	MAX 22-0 21-0 22-0 23-0 23-0 23-0 23-0 23-0 23-0 23	HIN 18.0 19.0 18.0 19.0 20.0 20.0 21.0 21.0 21.0 20.0 20.0 20	26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 22.0 23.0 22.0 21.0 21.0	MIN 22-0 22-0 22-0 21-0 21-0 21-0 21-0 21-0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 19.0 19.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 19.0 18.0 18.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 2 13 14 15 16 17 18 19 20	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 10.0 9.0 9.0 11.0 10.0 9.0	15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 15.0 11.0 15.0 11.0 15.0 11.0 15.0	MIN 13.0 12.0 13.0 14.0 13.0 11.0 12.0 13.0 14.0 13.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0	19.0 18.0 18.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0	MIN 16.0 17.0 16.0 15.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 19.0 19.0 19.0 20.0	MAX 22-0 21-0 23-0 2	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 20.0 21.0 19.0 19.0 19.0	26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 22.0 21.0 21.0 20.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 18.0 18.0 17.0 17.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 10	MAX 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 13.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0 22.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0	22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 19.0 21.0 21.0 21.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	26.0 25.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 20.0 19.0 19.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 16.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 14.0 14.0
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 12 13 14 15 16 17 18 19 20 20 21 22 23	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAX 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 17.0 16.0 17.0	HIN 13.0 12.0 14.0 13.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 21.0 22.0 23.0 23.0 23.0 22.0 22.0 23.0	MIN 16.0 17.0 16.0 17.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 19.0 19.0 19.0 19.0 20.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 21.0 21.0 21.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	26.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 16.0 16.0	MIN 20-0 19-0 19-0 20-0 20-0 21-0 20-0 19-0 19-0 18-0 17-0 18-0 17-0 14-0 13-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 10	MAX 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MIN 13.0 12.0 13.0 14.0 13.0 11.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 21.0 22.0 23.0 23.0 23.0 23.0 22.0	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0	22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 19.0 21.0 21.0 21.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0	26.0 25.0 24.0 23.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0 21.0 21.0 21.0 20.0 19.0 19.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.0	MAX 22.0 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 16.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 14.0 14.0
1 2 2 3 4 4 5 5 6 6 7 7 8 9 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 22 24 25 26	10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 10	15.0 15.0 17.0 17.0 17.0 15.0 14.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0	HIN 13.0 12.0 14.0 13.0 14.0 13.0 13.0 13.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 16.0 14.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	#AX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 21.0 21.0 21.0 21.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 21.0 21.0 19.0 17.0 20.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 22.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 16.0 16.0 16.0 17.0 17.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 16.0 14.0 13.0 14.0 14.0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 3 14 4 15 15 16 17 18 19 20 22 23 24 24 25 26 27 7	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 10	15.0 15.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0	MIN 13.0 12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 14.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 17.0 17.0 18.0 18.0 19.0 1	19.0 18.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 20.0 22.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0	MAX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 18.0 19.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	26.0 25.0 24.0 24.0 24.0 24.0 24.0 22.0 22.0 22	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 16.0 16.0 17.0 17.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 19.0 17.0 16.0 17.0 14.0 13.0 14.0
1 2 3 4 4 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 7 28	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	15.0 15.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 17.0 18.0 18.0	HIN 13.0 12.0 12.0 14.0 13.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0	19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0 21.0 21.0	#AX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 21.0 21.0 21.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 21.0 21.0 19.0 17.0 20.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 16.0 14.0 13.0 14.0 15.0 15.0
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1 2 3 4 4 5 6 7 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 7 28	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	MIN 9.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 12.0 11.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	15.0 15.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 17.0 18.0 18.0	HIN 13.0 12.0 12.0 14.0 13.0 11.0 12.0 13.0 13.0 14.0 13.0 14.0 13.0 14.0 14.0 14.0 14.0 14.0 13.0 14.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0	19.0 18.0 18.0 17.0 18.0 17.0 18.0 19.0 19.0 19.0 20.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 16.0 17.0 16.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 19.0 19.0 19.0 20.0 20.0 21.0 20.0 21.0 21.0	#AX 22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 21.0 21.0 21.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	26.0 25.0 24.0 24.0 24.0 24.0 24.0 23.0 22.0 22.0 22.0 21.0 21.0 19.0 17.0 20.0 21.0	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 22.0 22.0	MIN 20.0 19.0 19.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 17.0 16.0 14.0 13.0 14.0 15.0 15.0
1 2 2 3 4 4 5 5 6 6 7 7 8 9 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 22 23 24 25 26 27 28 29 30	10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0	9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 10.0 10	15.0 15.0 17.0 17.0 17.0 15.0 16.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 18.0 17.0 17.0 18.0 19.0 19.0 19.0 20.0 22.0 23.0 23.0 23.0 23.0 23.0 23	MIN 16.0 17.0 17.0 16.0 15.0 14.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	22.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 19.0 20.0 21.0 21.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	26.0 25.0 24.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 22.0 21.0 21.0 20.0 19.0 17.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	MIN 22.0 22.0 22.0 21.0 21.0 21.0 21.0 21.	MAX 22.0 22.0 22.0 22.0 23.0 23.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 17.0 17.0 17.0	MIN 20.0 19.0 19.0 20.0 20.0 21.0 20.0 19.0 19.0 19.0 17.0 18.0 17.0 14.0 14.0 15.0 14.0

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPON, CALIF.

LOCATION. -- Lat 40°39'00", long 123°29'35", in NW 18 sec. 10, T.3 N., R.6 E., Trinity County, 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 1968.
Sediment records: October 1966 to September 1968.

EXTREMES . -

Water temperatures: Maximum, 29.0°C Aug. 1, 2; minimum, freezing point on several days during December and January, January, Sediment concentrations: Maximum daily, 3,630 mg/l Jan. 16; minimum daily, 1 mg/l Oct. 5, Nov. 10, 11, July 29. Sediment discharge: Maximum daily, 193,000 tons Jan. 14; minimum daily, 0.28 ton July 29.

Period of record:

or record:
Maximum, 29.0°C June 30, July 1, 3, 1967, Aug. 1, 2, 1968; minimum, freezing point on several days in 1965, 1967-68.
Sediment concentrations: Maximum daily, 3,890 mg/l Jan. 29, 1967; minimum daily, 1 mg/l Aug. 1, Oct. 5, Sediment concentrations: Maximum daily, 3,890 mg/l Jan. 29, 1967; minimum daily, 1 mg/l Aug. 1, Oct. 5, Nov. 10, 11, 1967, July 29, 1968.

REMARKS..-Low flow samples during July to September are erratic because of work in basin above gage. Where no maximum or minimum is shown, temperature is once-daily reading.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

															D	¥Υ																
HTMOM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OC TOBER																																
MUM1 XAP							18																									16
MINIMUM	13	11	11	12	12	12	11	11	11	12	13	12	11	13	9	9	9	10	12	11	12	13	12	12	12	11	10	10	9	8	9	11
NOVEMBER.																																
MAXIMUM							14																							5		12
MINIMUM	9	9	9	10	12	11	12	12	12	11	10	11	11	11	10	10	9	9	9	8	7	6	6	6	7	4	4	6	5	3		В
DECEMBER.																																
MUMIXAM	6	5	4	5	4	6	5	6																	6	4	4		4	3	3	4
MUMINIP	4	4	3	3	3	3	3	4	5	5	5	3	1	e	Ĉ	0	1	2												1	1	2
JANUARY																								7								
MAXIMUM	4						3																			5					4	4
MUMINIP	1	1	1	r	Ú	0	0	2	3	2	2	1	3	4	6	5	4	4							4	3	3	1	1	2	3	ž
FEBRUARY.																																
MUM I X AM							7														9			0								7
MINIMUM	3	4	4	4	4	4	4	4	5	6	5	5	5	5	5	6	6	6	7	7	8	8	9	ė	9	8						6
MARCH																																
MA X I MUM							9																									5
MINIMUM	8	8	7	8	7	7	7	7	ŧ	5	7	7	5	7	7	6	6	6	6	5	6	7	В	7	8	7	7	8	9	8	8	7
APRIL																																
MA XI MUM							13																									13
MINIMUM	s	8	8	9	8	7	8	8	9	10	10	9	8	8	8	7	6	6	8	7	- 6	7	8	8	В	9	10	10	10	11		8
MAY																																
MAKIMUM							17																									18
MINIMUM	10	10					9																						13	13	13	12
JUNE																																
MUMIXAM							21																									23
MININIM	15	! 6	16	14	14	14	14																									16
JULY																																
MAXIMUM							27																									2 €
MINIMUM	17	18	21	18	18	18	18	21	20	18	15	19	18	19	17	17	17													41	14	18
AUGUST																																
MUMIXAP							28																									24
MINIMUM	21	21	20	16	19	19	19	19	18	19	19	19	19	19	18	18	17	18	18	1.7	37	17	16	17	18	17	17	18	17	17	18	18
SEPTEMBER																																
MUMIXAM							26																									23
MINIMUM	18	17	17	18	18	18	18	18	18	17	1.7	18	17	18	16	16	16	16	14	14	13	13	13	14	14	12	15	14	13	14		16

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY OISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;

			WATER	t							PART	ICLE S	SIZE					
			TEM-			SUSPENDED-												METHOD
			PERA-		CONCEN-	SEDIMENT	PERCE	NT F	INER 1	HAN :	THE S!	[ZE (]	IN MI	LIMET	ERS)	INDIC	CATED	OF.
			TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
ε	DATE	TIME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	•062	.125	•250	.500	1.00	2.00	SIS
NOV	14 1967	1100	11	446	204	246	4	30	46	57	64	90	99	100				SBWC
DEC	3	1000	4	992	575	1540	17	25	35	42	45	74	85	97	100			VPWC
JAN	14 1968	0900	4	24000	3850	249000	9	18	26	35	44	54	76	90	94	99	100	VPWC
JAN	14	1200	4	29200	3540	279000	11	19	29	38	48	57	79	93	97	100		VPWC
JAN	14	1400	4	31600	3350	286000	12	19	27	38	47	56	78	92	95	99	100	VPWC
JAN	15	1045	6	21000	2910	165000	7	13	19	25	31	38	54	86	99	100		VPWC
JAN	15	1635	6	16800	3700	168000	6	9	11	18	22	27	40	81	99	100		VPWC
JAN	16	1000	6	9120	3970	97800	3	4	6	8	8	14	17	27	60	91	100	VBWC
JAN	16	1500	6	T840	3660	77500	3	5	6	8	9	14	18	31	69	97	100	VBWC
	17	0945	5	4680	1170	14800	2	5	10	13	14	24	30	50	95	100		VBWC
FER	6	1130	6	3160	309	2630	9	13	21	25	27	39	53	100				VBWC
	19	1800	8	13500	1720	62700	7	11	16	21	23	37	48	69	93	100		VBWC
FEB	24	0900	9	12000	700	22700	21	33	47	60	65	91	97	100				SBWC
MAR	14	1330	7	2790	181	1120	12	20	30	39	44	60	69	87	99	100		VBWC
	4	1030	9	1320	22	78	7	13	24	32	36	47	52	64	96	100		VBWC
VAM	3	1100	14	690	26	48	13	26	40	51	54	86	95	98	100			SBWC

337

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF .-- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

OCTOBER NOVEMBER DECEMBER MEAN CONCEN-MEAN CONCEN-MEAN SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) CONCEN-TRATION (MG/L) SEDIMENT DISCHARGE (TDNS/DAY) MEAN SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) TRATION (MG/L) TRATION (MG/L) DISCHARGE (CFS) DAY 63 120 293 214 166 .34 1.9 17 2.9 277 297 1020 1400 1380 542 480 750 1060 520 405 385 2070 4010 104 104 126 155 135 .56 .56 .68 .84 2 3 4 5 2 6 2 2 2 21 5 1 .45 194D .80 .72 .67 .96 .65 .62 .59 .86 1140 1250 992 735 648 148 134 124 2 6 7 2 2 3 7 120 85 262 115 12 29 18 11 41 72 36 19 2 3 1 8 9 10 119 106 .29 .57 .90 141 44 3.4 4.0 3.4 1.7 25 25 18 11 7.5 106 106 105 104 102 106 106 111 446 403 585 549 482 386 397 11 12 13 14 12 14 12 6 2 16 17 14 11 2 3 112 40 8.5 9.6 17 14 9.7 .55 .54 .80 .51 235 181 161 152 146 9.5 4.9 2.2 3.7 5.1 394 394 517 470 399 102 100 99 95 93 15 10 5 9 8 16 17 18 19 20 2 3 2 2 12 .58 1.3 1.3 .92 370 358 358 7.0 4.8 2.9 4.D 5.1 4.8 4.6 4.8 4.8 107 120 117 144 138 132 126 123 24433 13 13 13 14 14 7 5 3 21 22 23 24 25 373 17 111 405 1.2 .84 .83 .84 .56 532 771 920 888 796 709 121 30 44 47 36 108 20 6.5 21 26 27 28 29 30 31 104 103 104 104 104 119 126 188 302 300 390 96 133 142 151 21 19 15 14 20

280 185

770.94

20192

53.62

4747

TOTAL

3699

30 38

9648.0

		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	653	8	14	1380	129	481	3330	550	4950
2	610	9	15	2350	215	1360	3060	400	3300
3	548	13	19	5220	960	13500	2770	290	2170
4	495	12	16	3900	492	5180	2470	160	1070
5	467	8	10	3330	348	3130	2430	170	1120
6	432	3	3.5	3160	294	2510	2230	270	1630
7	407	4	4.4	3390	254	2320	2060	160	890
8	447	20	24	3490	255	2400	1920	170	881
9	657	812	2180	3510	350	3320	1820	170	835
10	1160	2040	6270	3550	302	2890	1730	160	747
11	1160	370	1160	3420	247	2280	1650	140	624
12	1030	230	640	3240	246	2150	1930	537	3040
13	1820	1040	5670	3090	280	2340	2180	600	3530
14	23000	2980	193000	2870	301	2330	2260	230	1400
15	19800	3160	161000	2630	314	2230	2240	260	1570
16	8670	3630	87000	2850	366	2820	3190	636	5620
17	4730	1270	17200	4920	500	6730	3650	220	2170
18	3160	462	3940	5070	443	6060	2950	109	868
19	2370	429	2750	9900	1680	63400	2530	108	738
20	2070	429	2400	18200	2280	122000	2230	82	494
21	2020	284	1550	15000	1950	79300	2110	94	536
22	2190	164	970	13400	1790	64800	2030	78	428
23	2290	220	1360	15100	1890	77300	2000	74	400
24	2240	182	1100	11400	1010	30400	1940	72	377
25	2150	148	859	7740	1320	27600	2430	208	1360
26	2040	219	1210	5760	620	9640	2410	82	534
27	1900	218	1120	4800	370	4800	2130	70	403
28	1770	111	530	4050	360	3940	1950	56	295
29	1910	62	320	3600	360	3500	1870	49	247
30	1880	75	381				1810	60	293
31	1630	104	458				1690	38	173
TOTAL	95706		493173.9	170320		550711	71000		42693

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF .-- Continued SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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

73.94

76.06

TOTAL

35.77 1101668.23

11530000 TRINITY RIVER AT HOOPA, CALIF.

LOCATION.--Lat 41°03'00" (revised), long 123°40'15", in SEINW1 sec.25, T.8 N., R.4 E., Humboldt County, at gaging station in Hoopa Valley Indian Reservation at Hoopa, and 0.4 mile upstream from Supply Creek.

DRAINAGE AREA .-- 2,865 sq m1.

PERIOD OF RECORD, --Chemical analyses: October 1953 to September 1968, Water temperatures: November 1956 to September 1968, Sediment records: November 1956 to September 1968,

Water temperatures: Minimum, 2.0°C Dec. 17.
Sediment concentrations: Maximum daily, 3,720 mg/l Feb. 23; minimum daily, 1 mg/l on several days during Sep-Sediment discharge: Maximum daily, 456,000 tons Feb. 23; minimum daily, 1.2 tons Sept. 30.

Period of record:

Nater temperatures (1963-68): Maximum (1963-66), 26.5°C July 16, 1965; minimum (1964-68), 2.0°C Dec. 17, 1967.

Sediment concentrations: Maximum daily, 20,400 mg/l Dec. 23, 1964; minimum daily, 1 mg/l on many days during

1957-64, 1968.

Sediment discharge: 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 suspend 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 IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	ME AN DIS- Charge (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- R IDF (CL)	NITRATE (NO3)	BORON (B)	PHOS- PHATE (PO4)
cct.												
02 NEV.	570			4.8		110	0		5.3	1.0	.05	.14
Cé	731			5.8		109	0	12	6.7	•6	.02	
C4	4290			3.9		80	0		4.1	.4	.07	.95
JAN.							0		4.0	.6	.02	.03
C8 FEB.	1610			4.1		99	u		4.0	••	•02	.03
C5	8700			2.5		88	0		2.4	•5	.01	.53
MAR. 04	5200			2.2		84	a	_		.2	.00	.35
APR. 01	3200			2.2		86	o		3.0	.1	.05	.09
PAY C6	2210	21	5.5	3.3	.5	86	0	6.2	2.7	.1	.00	
JLNE	1450					88	o		2.8	•0	.00	•05
C3 JLLY	1450			3.5		88	u		2.8	•0	.00	•05
C 8	640			3-1		107	1		3.9	-4	•00	.00
C5 SEPT.	344			5.4		115	0		5.2	•0	•01	.08
(9	482	16	16	5.6	1.0	113	a	12	5.7	•0	•02	.04

CATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD— NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	DIS- SOLVED SOLIDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AO- SORP- Tion Ratio	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	Рн	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
cc.											
02		99	9		10	•2	90	224	7.9	16	8.6
66 C6 CEC.		101	12		11	•3	89	220	8.0	14	10.1
C4 JAN.		82	16		9	•2	66	179	7.1	7	11.4
C8		94	13		9	•2	81	198	8.0	4	13.2
05 PAR.		78	6		7	•1	72	164	8.2	6	12.2
04 APR.		79	10		6	-1	69	157	8.1	9	11.3
01		78	7		6	-1	71	158	8.1	11	10.7
C6	100	75	4	-14	9	•2	71	164	8.2	12	10.9
03 JLLY		79	7		9	•2	72	172	7.8	18	9.4
C8		100	11		6	-1	89	214	8.4	24	8.5
C5 SEPT.		113	19		9	•2	94	231	8.2	21	9.1
09	121	105	12	-16	10	•2	93	228	8.2	21	9.2

11530000 TRINITY RIVER AT HOOPA, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 37 31 MONTH 19 --16 -- 16 -- 17 ---- 16 -- --17 ---- 14 -- 13 OCTOBER. 17 ---18 MAXIMUM MINIMUM 16 14 12 15 15 14 14 14 13 13 13 -- 9 -- 7 14 12 7 14 15 14 15 15 13 13 13 14 14 13 13 11 12 ------NOVEMBER. 14 13 14 14 13 14 13 12 12 9 6 13 13 13 12 13 14 12 12 12 12 12 12 12 7 7 8 7 6 6 MINIMUM DECEMBER. MAXIMUM 6 6 7 7 6 6 4 3 3 3 2 3 4 4 _4 __ 6 6 6 --MINIMUM --JANUARY.. 5 5 4 3 3 3 3 4 5 4 4 4 4 6 7 7 7 _7 7 7 7 7 5 5 3 3 8 9 9 --₇ --9 MINIMUM FEBRUARY. 9 8 8 9 8 9 11 11 11 11 11 11 -- --9 8 9 9 9 ... MINIMUM ----9 8 9 9 9 9 9 MARCH.... MAXIMUM 11 11 11 11 11 9 10 10 10 10 11 В 8 11 11 10 9 11 9 10 --MINI MUM ----PRIL.... 12 12 9 13 13 14 16 15 14 14 13 11 14 16 13 13 13 13 14 14 15 18 18 18 13 11 --MINIMUM == MAY.... MUMIXAM MUMINIM 18 18 19 18 17 18 21 21 21 21 19 18 21 -- 21 --21 --== -- -------==== ------JUNE..... PAXI MUM -- --23 ------ 26 26 -- 25 -- -- 24 -- 24 -- 24 -- 24 -- 25 ---- -- 25 -- 26 -- --MINIMUM --JULY.... MAXIMUM -- 26 --------MINIMUM ----21 20 AUGUST... 19 20 24 24 23 22 22 22 23 22 23 23 22 22 19 21 20 19 19 19 18 17 18 18 19 19 19 17 21 21 22 20 MINIMUM SEPTEMBER 20 20 20 19 18 18 18 19 19 19 19 19 18 18 17 17 17 17 17 15 17 15 16 17 16 15 17 17 21 21 21 21 21 21 21 21 21 20 20 19 20 19 18 18 19 19 18 17 16 15 16 16 17 17 18 18 17 17 19 18 18 18 18 18 18 19 18 18 18 17 17 17 17 17 16 16 17 16 15 14 13 13 14 15 15 15 15 15 MAX IMUM MINIMUM

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)

		WATER TEM- PERA-		CONCEN-	SUSPENDED -		ENT F	INER	THAN		ICLE :		LIME1	rers)	INDIC	ATED	METHDD DF ANALY~
DATE	TIME	TURE (C)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	.002	.004	•00B	.016	.031	.062	.125	•250	.500	1.00	2.00	SIS
JAN 10 1968	1625	4	8280	2090	46700	13	20	29	39	51	59	67	76	86	99	100	VPWC
	1105		24800	5100	341000	14	20	30	43	52	59	82	95	100			VPWC
JAN 14			30900	5030	420000	14	22	31	44	54	62	83	96	100			VPWC
JAN 15			45000	2440	296000	13	20	32	42	54	62	81	94	99	100		VPWC
FEB 21			36500	2460	242000	11	16	23	32	40	47	59	81	96	100		VPWC
FFB 22	1665	q	36700	2640	262000	14	20	30	41	49	57	68	87	98	100		VPWC
FEB 23			45300	2960	362000	13	20	29	39	51	60	73	92	99	100		VPWC
FEB 25			20700	1860	104000						41	51	74	93	100		v
FEB 26			15000	1300	52700	11	16	22	28	30	44	53	72	92	100		VBWC
FEB 27			11000	1190	35300	10		21	24	25	40	46	66	96	100		VBWC
WAR 16	1535	8	4030	558	6070	3	12	22	28	31	51	56	66	93	100		VBWC

11530000 TRINITY RIVER AT HOOPA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	328	6	5.3	651	5	8.8	1210	B1	265
2	570 1410	24 111	37 450	642 688	8 11	14 20	1260 2440	10B 243	406 1660
4	1270	70	240	69B	19	17	4290	B63	10400
5	1010	39	106	712	7	13	7170	1920	37600
6	934	26	66	731	11	22	4090	549	6380
7	840	13	29	707	12	23	3850	263	2730
8 9	775 732	6 5	13 9.9	730 794	16 22	32 47	3100 2220	150 120	1260 719
1ó	709	10	19	826	17	3B	1900	120	616
11	686	8	15	826	12	27	1800	118	573
12	671	5	9.1	794	10	21	1740	72	338
13	66D	7	12	794	14	30	1650	45	200
14 15	64B 643	6 3	10 5.2	2530 2770	454 343	3500 2710	1330 1380	43 45	154 16B
16	640	2	3.5	1440	69	26B	1370	48	178
17	602	3	4.9	1070	23	66	1370	34	128
18	611	17	2B	898	13	32	1960	128	701
19	608	16	26	810	11	24	1790	181	875
20	605	10	16	762	17	35	1530	109	450
21 22	742 881	34 25	68 59	722 690	23 27	45	1400	70 42	265 153
23	881 850	13	30	666	34	50 61	1350 1420	38	146
24	766	8	17	642	37	64	1570	46	195
25	732	7	14	626	24	41	1830	41	203
26 27	700	6	11	610	13	21	2450	186 392	1230
28	673 731	6 23	11 45	626 690	16 19	27 35	3400 3950	272	3600 2900
29	726	21	41	1070	191	629	3800	172	1760
30	692	10	19	1390	242	917	3190	126	1090
31	669	5	9.D				2760	95	708
TOTAL	23111		1428.9	27605		8837.8	74590		78051
		JANUARY			FERRUARY			MARCH	
		MEAN			MEAN			MARCH Mean	
	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT
DAY	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)		MEAN	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)
	DISCHARGE (CFS) 2490	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 5090	01SCHARGE (CFS) 6430	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 17700
1 2	DISCHARGE (CFS) 2490 2260	MEAN CONCEN- TRATION (MG/L) 85 101	DISCHARGE (TONS/DAY) 571 616	MEAN DISCHARGE (CFS) 3930 5220	MEAN CDNCEN- TRATION (MG/L) 480 704	DISCHARGE (TONS/DAY) 5090 10400	01SCHARGE (CFS) 6430 6030	MEAN CONCEN- TRATION (MG/L) 1020 861	DISCHARGE (TONS/DAY) 17700 14000
1 2 3	DISCHARGE (CFS) 2490 2260 2030	MEAN CONCEN- TRATION (MG/L) 85 101 82	DISCHARGE (TONS/DAY) 571 616 449	MEAN DISCHARGE (CFS) 3930 5220 10800	MEAN CONCEN- TRATION (MG/L) 480 704 1660	DISCHARGE (TONS/DAY) 5090 10400 48500	01SCHARGE (CFS) 6430 6030 5600	MEAN CONCEN- TRATION (MG/L) 1020 861 712	DISCHARGE (TONS/DAY) 17700 14000 10800
1 2	DISCHARGE (CFS) 2490 2260	MEAN CONCEN- TRATION (MG/L) 85 101	DISCHARGE (TONS/DAY) 571 616	MEAN DISCHARGE (CFS) 3930 5220	MEAN CDNCEN- TRATION (MG/L) 480 704	DISCHARGE (TONS/DAY) 5090 10400	01SCHARGE (CFS) 6430 6030	MEAN CONCEN- TRATION (MG/L) 1020 861	DISCHARGE (TONS/DAY) 17700 14000
1 2 3 4 5	DISCHARGE (CFS) 2490 2260 2030 1880 1780	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37	DISCHARGE (TONS/DAY) 571 616 449 233 178	MEAN DI SCHARGE (CFS) 3930 5220 10800 9800 8700	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820	DISCHARGE (TONS/DAY) 5090 10400 485D0 21700 14800	01SCHARGE (CFS) 6430 6030 5600 5200 4900	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751	DISCHARGE (TONS/DAY) 17700 14000 108D0 9530 9940
1 2 3 4 5	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37 35 28	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116	MEAN D1 SCHARGE (CFS) 3930 5220 10800 9800 8700 8340 8840	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700	01SCHARGE (CFS) 6430 6030 5600 5200 4900 4600 4300	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37 35 28 37	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 8840 9200	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700 600	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900	01SCHARGE (CFS) 6430 6030 5600 5200 4900 4600 4300 3900	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530 444	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680
1 2 3 4 5	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37 35 28	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116	MEAN D1 SCHARGE (CFS) 3930 5220 10800 9800 8700 8340 8840	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700	01SCHARGE (CFS) 6430 6030 5600 5200 4900 4600 4300	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 66640	MEAN CONCENTRATION (MG/L) 85 101 82 46 37 35 28 37 193 1410	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400	MEAN DI SCHARGE (CFS) 3930 5220 10800 9800 8700 8340 8840 9200 9010 8890 8400	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16700 16700 14900 14600 13000	01 SCHARGE (CFS) 6430 5600 5200 4900 4600 4300 3900 3700 3500	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392	DISCHARGE (TONS/DAY) 17700 14000 16000 9530 9940 8460 6150 4680 4320 3700
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6640 5080 3620	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37 35 28 37 193 1410 700 320	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130	MEAN 01 SCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7800	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 510 480	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14600 13000	01 SCHARGE (CFS) 6430 6030 5600 5200 4900 4600 4300 3700 3700 3500	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680 4320 3700
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6640 5080 3620 5040	MEAN CONCENTRATION (MG/L) 85 101 82 46 37 35 28 37 193 1410 700 320 675	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7800 7500	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700 600 600 600 540 510 480 580	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14600 13000	01 SCHARGE (CFS) 6430 6030 5600 5200 4900 4500 4300 3700 3500 3200 2900 3530	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392 358 452 550	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680 4320 3700 3090 3540 5540
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6640 5080 3620	MEAN CONCEN- TRATION (MG/L) 85 101 82 46 37 35 28 37 193 1410 700 320	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130	MEAN 01 SCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7800	MEAN CONCEN- TRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 510 480	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14600 13000	01 SCHARGE (CFS) 6430 6030 5600 5200 4900 4600 4300 3700 3700 3500	MEAN CONCEN- TRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680 4320 3700
1 2 3 4 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6660 5080 3620 5060 25800 45100	MEAN CONCENTRATION (MG/L) 85 101 82 466 37 35 8 37 193 1410 700 320 675 3680 7690 1780	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7800 7160 6590	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 540 540 580 520 495 495 400	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14900 14000 11100 11100 11700 10100 8810	01 SCHARGE (CFS) 6430 6630 5600 5200 4900 4900 4300 3900 3700 3500 2900 3530 3350 3350	MEAN CONCEN- TRATTON (MG/L) 1020 861 712 679 751 681 530 444 444 432 392 358 452 459 468	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6660 5080 3620 5060 45100 30300 18800	MEAN CONCENTRATION (MG/L) 85 101 82 46 37 193 1410 700 320 675 3680 2690 1360 1360	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 1161 1430 26400 9600 3130 10700 328000 146000 69000	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7500 7160 6590	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 540 540 580 580 580 695	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 14800 14000 14000 11000 11700 11700 11700 10100 8810 6940 16700	015CHARGE (CFS) 6430 6430 5500 4500 4500 4300 3700 3500 3200 2900 3530 3350 3350 3910 5090	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392 358 452 550 468 548 728	DISCHARGE (TONS/DAY) 17700 14000 14000 19500 9530 9940 8460 6150 4680 4320 3700 3090 3090 3540 5240 4150 4230 5790 10000
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6660 5080 3620 5040 25800 45100	MEAN CONCENTRATION (MG/L) 85 101 82 46 37 35 28 37 193 1410 700 320 675 3680 2690 1780 1380	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 8840 9200 88400 7800 7800 7160 6430 8890 11500	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 540 540 520 495 400 695 1480	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14900 14000 11100 11100 11700 10100 8810 6940 16700 46000	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3200 2900 3530 3350 3350 3910 5090 4170	MEAN CONCEN- TRATTON (MG/L) 1020 861 712 679 751 681 530 444 444 432 550 459 468 548 728	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6660 5080 3620 5060 45100 30300 18800	MEAN CONCENTRATION (MG/L) 85 101 82 46 37 193 1410 700 320 675 3680 2690 1360 1360	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 1161 1430 26400 9600 3130 10700 328000 146000 69000	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7500 7160 6590	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 540 540 580 580 580 695	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 14800 14000 14000 11000 11700 11700 11700 10100 8810 6940 16700	015CHARGE (CFS) 6430 6430 5500 4500 4500 4300 3700 3500 3200 2900 3530 3350 3350 3910 5090	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392 358 452 550 468 548 728	DISCHARGE (TONS/DAY) 17700 14000 14000 19500 9530 9940 8460 6150 4680 4320 3700 3090 3090 3540 5240 4150 4230 5790 10000
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1610 2200 6660 5080 3620 5040 25800 45100 30300 18800 12200 8700 7100	MEAN CONCENTRATION (MG/L) 85 101 46 46 37 35 28 37 193 1410 700 320 675 3680 2690 1780 1360 1300 1000 760	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800 24000 14600	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7160 6590 6430 8890 11500 13700 36700	MEAN CDNCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 510 480 520 495 405 695 1480 1470 3150	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16700 14900 13000 11100 11700 10100 18810 6940 16700 46000 46000 42000 316000	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3500 3200 2900 3510 3350 3350 3310 3910 5090 4170 3580 3240	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392 358 452 550 468 548 728	DISCHARGE (TONS/DAY) 17700 14000 14000 19500 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 5440 3740
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 5080 3080 25800 45100 30300 18800 12200 87100 6460	MEAN CONCENTRATION (MG/L) 85 101 85 101 86 24 46 37 37 35 28 37 193 1410 700 320 675 3680 2690 1780 1350 1020 760 660 820	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 378000 146000 146000 146000 146000 11500 11500	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7160 6590 6430 8890 11500 13700 33800 337000	MEAN CDNCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16700 114900 114900 114900 111700 10100 11700 10100 4810 6940 16700 48000 48000 48000 42000 316000	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3500 3200 2900 3530 3350 3310 5090 4170 3580 3240 3010 2800	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 432 392 358 452 550 468 548 728 533 563 363 563 365 563 365 564 564 565 565 565 565 565 565 565 5	DISCHARGE (TONS/DAY) 17700 14000 14000 19500 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 3740 2890 2300
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 22 3	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6640 5080 3620 5040 25800 45100 30300 18800 12200 8700 7100	MEAN CONCENTRATION (MG/L) 85 101 182 46 37 35 28 37 1410 700 675 3680 2690 1300 760 660 820 750	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800 24000 14600 11500 14300 13000	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8840 9200 9010 88890 8400 7500 7160 6590 6430 8890 11500 13700 33800 37000 44900	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 580 580 580 1470 3150 1470 3150 2240 33720 2340 33720	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14900 11000 11700 10100 8810 6940 16700 46000 42000 316000 112000 241000 241000	01 SCHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3700 3550 3510 3550 3910 5090 4170 3580 3350 3010 2800 2890	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 2392 358 452 550 468 530 633 428 530 434 335 304 345 355 304 344	DISCHARGE (TONS/DAY) 1700 14000 14000 14000 9530 9540 8460 6150 4680 4320 3700 3056 5240 4150 4230 5790 10000 55440 3740 2890 2300 2500
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 2490 2260 2260 2230 1880 1780 1670 1540 1610 2260 6660 5080 3620 5080 3620 5080 3620 5080 37100 6800 6800 6800 6800 6800 6800	MEAN CONCENTRATION (MG/L) 85 101 46 24 46 37 35 28 37 193 1410 700 320 675 3680 2690 1780 1300 1000 760 660 820 750 780	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 378000 14600 11500 14600 11500 14300 13000 12700	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7160 6590 6430 8890 11500 13700 33800 37000 44900	MEAN CDNCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 600 540 510 480 520 495 400 695 1480 1470 3150 2100 2340 3720 2280	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16700 114900 114900 114900 11100 11700 10100 11700 4000 4000 400	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3500 3510 3510 3510 3510 3150 3110 2900 4170 3580 3240 3010 2800 2800 2800 2800 2800 2800 2800	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 434 392 358 452 550 458 548 728 530 563 428 355 304 344 344 344	DISCHARGE (TONS/DAY) 17700 14000 14000 19500 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 2410
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	DISCHARGE (CFS) 2490 2260 2230 1880 1780 1670 1540 1610 2260 5080 3620 5080 3620 5080 31220 30300 18800 112200 8700 7100 6460 6460 6460 6460 6450 5620	MEAN CONCENTRATION (MG/L) 85 101 46 24 46 37 35 28 37 193 1410 700 320 675 3680 2690 1780 1300 1000 760 660 820 750 780 700	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 110700 277000 328000 14600 14600 11500 14600 11500 14900 12700 13000 12700	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8340 9200 9010 8890 8400 7500 7160 6590 6430 8890 11500 13700 34700 33800 31700 21700	MEAN CDNCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 114900 114900 11500 11700 11700 10100 11700 45000 45000 42000 316000 112000 221000 221000 187000	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3500 3500 3500 3500 3	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 434 392 358 452 550 468 548 728 530 563 428 355 304 344 349 451	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9940 8460 6150 6150 6480 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 2410 2890 2300 2500 2410
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 3 24 5 26	DISCHARGE (CFS) 2490 2260 2030 1880 1780 1670 1540 1610 2260 6640 5080 3620 5040 25800 45100 30300 18800 12200 8700 7100 6460 66410 6050 6640	MEAN CONCENTRATION (MG/L) 85 101 182 46 37 35 28 37 193 1410 700 2690 1360 2690 1760 660 820 760 700 560	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800 24000 11500 14300 12700 13000 12700 13000 17700 77510	MEAN DISCHARGE (CFS) 3930 5220 10800 8700 8840 9200 9010 88890 87500 7500 7160 6590 6430 8870 37000 37000 37000 37000 30300 21700 15900	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 580 580 580 1470 3150 2340 3720 2280 1820 1410	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14900 11000 11700 10100 8810 6940 16700 46000 421000 316000 127000 127000 60500	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3550 3550 3550 3910 5090 4170 3580 3240 3010 2890 2890 2890 2890	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 2392 398 452 550 468 530 643 428 530 643 428 530 643 428 345 545 545 545 545 545 545 545 545 545	DISCHARGE (TONS/DAY) 1700 14000 14000 14000 19530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 2410 2410 3210
1 2 3 4 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	DISCHARGE (CFS) 2490 2260 2230 1880 1780 1670 1540 1610 2260 6640 5080 3620 5040 25800 45100 30300 18800 12200 8700 7100 6460 66410 6050 65620 4970 4650	MEAN CONCENTRATION (MG/L) 85 101 182 46 37 35 28 37 193 1410 700 320 675 3680 2690 1780 2690 750 660 660 820 750 750 750 780 700 780 780 780	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800 24000 11500 14300 12700	MEAN OI SCHARGE (CFS) 3930 5220 10800 8700 8840 9200 9010 88890 8400 7500 7160 6590 6430 8690 13700 36700 33800 37000 30300 21700 12100 9320	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 580 740 740 750 750 750 750 750 750 750 750 750 75	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 14800 14700 14900 14900 11700 11700 10100 8810 6940 16700 46000 62000 316000 187000 187000 38900 29900	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3500 3510 3510 3510 3580 3350 3010 2800 2800 2800 2800 2800 2800 2800 2	MEAN CONCENTRATION (MG/L) 1020 861 712 6751 681 530 444 432 3392 358 458 550 468 548 349 451 346 3350	DISCHARGE (TONS/DAY) 1/700 14/000 14/000 1000 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 5444 37740 2890 2800 2410 4150 2910 2980
1 2 3 4 5 6 7 8 9 9 10 11 1 1 1 3 1 1 4 1 5 1 6 7 1 1 8 1 9 2 0 2 1 2 2 3 4 2 5 2 6 2 7 2 8 8 2 9	DI SCHARGE (CFS) 2490 2260 2260 2280 1880 1780 1670 1540 1610 2260 6660 5080 3620 5090 25800 45100 30300 18800 12200 8700 7100 6460 6460 6460 6460 6460 6460 6460 6	MEAN CONCENTRATION (MG/L) 85 101 182 46 63 77 35 28 37 193 1410 700 320 675 3680 2690 1780 1300 1020 760 660 820 750 780 820 780 820 780 820	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 42800 146000 146000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 15900	MEAN DISCHARGE (CFS) 3930 5220 10800 9800 8700 8840 9210 8890 8400 7500 7160 6590 11500 36700 33800 37000 44900 30300 21700 12100 9320 7580	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 114900 114900 111700 10100 10100 4810 6940 116700 42000 316000 112000 241000 45000 45000 45000 187000 107000 60500 38900 29900 23100	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3500 3510 3510 3510 3010 2000 4170 3150 3240 3010 2000 3740 3150 3150 3240 3010 3240 3010 3250 3310	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 434 392 358 452 550 468 548 728 355 303 428 355 303 5350 350 350 350 350 350 350 35	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9990 8460 6150 6150 4320 33700 3090 3540 5240 4150 4230 5790 10000 5940 3740 2890 2300 2510 2910 2980 3020
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 30	DISCHARGE (CFS) 2490 2260 2230 1880 1780 1670 1540 1610 2260 6660 5080 3620 5080 3620 5080 3620 5080 3620 5080 45100 30300 18800 12200 8700 7100 6460 66410 6050 5520	MEAN CONCENTRATION (MG/L) 85 101 120 46 37 193 1410 700 6780 1360 11020 760 630 780 780 780 780 1080 820 820 820 820 820 820 820 820 820	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 69000 42800 24000 11500 14300 12700 13000 12700 13000 17701 8950 9900 14200	MEAN OI SCHARGE (CFS) 3930 5220 10800 8700 8840 9200 9010 88890 8400 7500 7160 6590 6430 8690 13700 36700 33800 37000 30300 21700 12100 9320	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 580 740 740 750 750 750 750 750 750 750 750 750 75	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 14800 14700 14900 14900 11700 11700 10100 8810 6940 16700 46000 62000 316000 187000 187000 38900 29900	015CHARGE (CFS) 6430 6030 55600 5200 4900 4600 4300 3700 3700 3700 3530 3500 3510 3510 3580 3350 3110 2800 2690 2560 3410 3440 3250 3150 3200	MEAN CONCENTRATION (MG/L) 1020 861 712 6751 681 751 751 681 751 751 751 751 751 751 751 751 751 75	DISCHARGE (TONS/DAY) 1700 14000 14000 10500 9530 9940 8460 6150 4680 4320 3700 3090 3540 5240 4150 4230 5790 10000 5970 2410 4150 4210 2910 2980 3020 2960
1 2 3 4 5 6 7 8 9 9 10 11 1 1 1 3 1 1 4 1 5 1 6 7 1 1 8 1 9 2 0 2 1 2 2 3 4 2 5 2 6 2 7 2 8 8 2 9	DI SCHARGE (CFS) 2490 2260 2260 2280 1880 1780 1670 1540 1610 2260 6660 5080 3620 5090 25800 45100 30300 18800 12200 8700 7100 6460 6460 6460 6460 6460 6460 6460 6	MEAN CONCENTRATION (MG/L) 85 101 182 46 63 77 35 28 37 193 1410 700 320 675 3680 2690 1780 1300 1020 760 660 820 750 780 820 780 820 780 820	DISCHARGE (TONS/DAY) 571 616 449 233 178 158 116 161 1430 26400 9600 3130 10700 277000 328000 146000 42800 146000 146000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 149000 15900	MEAN 01 SCHARGE (CFS) 3930 5220 10800 8700 8840 9200 9010 88890 8400 7500 7500 7500 7500 7500 37000 30300 21700 15900 12100 9320 7580 7580	MEAN CONCENTRATION (MG/L) 480 704 1660 820 630 710 700 600 600 540 580 740 740 750 750 750 750 750 750 750 750 750 75	DISCHARGE (TONS/DAY) 5090 10400 48500 21700 14800 16000 16700 14900 14900 14000 11700 10100 11700 10100 8810 6940 16700 46000 62000 316000 192000 241000 456000 187000 187000 107000	015CHARGE (CFS) 6430 6030 5500 4900 4600 4300 3700 3700 3700 3500 3510 3510 3510 3010 2000 4170 3150 3240 3010 2000 3740 3150 3150 3240 3010 3240 3010 3250 3310	MEAN CONCENTRATION (MG/L) 1020 861 712 679 751 681 530 444 434 392 358 452 550 468 548 728 355 303 428 355 303 5350 350 350 350 350 350 350 35	DISCHARGE (TONS/DAY) 17700 14000 10800 9530 9990 8460 6150 6150 4320 33700 3090 3540 5240 4150 4230 5790 10000 5940 3740 2890 2300 2510 2910 2980 3020

11530000 TRINITY RIVER AT HOOPA, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		JULT			A00031			SEFTEMBER	
DAY	MEAN OISCHARGE (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	680	5	9.2	347	4	3.7	518	4	5.6
2	630	6	10	350	3	2.8	481	3	3.9
3	630	6	10	360	3	2.9	502	3	4.1
4	620	7	12	357	4	3.9	513	4	5.5
5	630	7	12	344	4	3.7	512	3	4.1
6	650	7	12	331	3	2.7	498	2	2.7
7	670	8	14	333	3	2.7	490	2	2.6
8	640	8	14	332	3	2.7	485	2	2.6
9	600	6	9.7	354	4	3.8	482	1	1.3
10	570	4	6.2	353	4	3.8	473	1	1.3
11	560	3	4.5	341	4	3.7	475	1	1.3
12	540	2	2.9	332	4	3.6	472	2	2.5
13	530	2	2.9	319	4	3.4	483	3	3.9
14	520	2	2.8	334	4	3.6	561	2	3.0
15	510	2	2.8	332	4	3.6	581	1	1.6
16	495	3	4.0	340	4	3.7	540	1	1.5
17	480	4	5.2	348	4	3.8	538	1	1.5
18	470	5	6.3	372	5	5.0	515	2	2.8
19	465	7	8.8	461	10	12	488	2	2.6
20	455	6	7.4	612	25	41	494	2	2.7
21	445	4	4.8	772	16	33	501	2	2.7
22	435	3	3.5	730	10	20	506	1	1.4
23	430	5	5.8	638	8	14	503	1	1.4
24	410	9	10	584	10	16	504	1	1.4
25	390	7	7.4	630	25	43	503	2	2.7
26	365	4	3.9	1020	47	129	492	2	2.7
27	360	4	3.9	953	29	75	487	1	1.3
28	420	4	4.5	802	11	24	479	1	1.3
29	420	4	4.5	698	4	7.5	465	1	1.3
30	370	4	4.0	612	5	8.3	457	1	1.2
31	360	5	4.9	553	5	7.5			
TOTAL	15750		213.9	15244		493.4	14998		74.5

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

3386181.4

11530300 BLUE CREEK NEAR KLAMATH, CALIF.

DRAINAGE AREA. -- 120 sq mi.

PERIOD OF RECORD, -- Water temperatures: October 1965 to September 1968.

NOVEMBER

EXTREMES.--1967-68:
Water temperatures: Maximum, 21.0°C on many days during June to September; minimum, 4.0°C Jan. 27-29.

DECEMBER

Period of record:
Water temperatures: Maximum, 21.0°C on many days in 1967 and 1968; minimum, 4.0°C Feb. 15, Mar. 3, 1967,
Jan. 27-29, 1968.

REMARKS .-- Recorder stopped Jan. 9-14.

OCTOBER

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

JANUARY

FEBRUARY

MARCH

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.0	13.0	12.0	9.0	8.0	7.0	6.0	7.0	6.0	9.0	9.0
ž	14.0	12.0	14.0	13.0	9.0	8.0	6.0	6.0	7.0	6.0	10.0	8.0
3	14.0	13.0	14.0	13.0	9.0	8.0	6.0	5.0	7.0	6.0	10.0	9.0
4	14.0	13.0	14.0	13.0	9.0	8.0	6.0	6.0	8.0	7.0	10.0	9.0
5	15.0	13.0	15.0	13.0	8.0	9.0	6.0	6.0	8.0	7.0	9.0	8.0
6	16.0	13.0	15.0	13.0	8.0	8.0	6.0	5.0	8.0	7.0	9.0	8.0
7	16.0	13.0	15.0	13.0	8.0	8-0	7.0	6.0	8.0	7-0	9.0	8.0
8	16.0	13.0	14.0	14.0	9.0	8.0	7.0	7.0	8.0	7.0	9.0	8.0
9	16.0	13.0	14.0	12.0	9.0	8.0			8.0	7.0	9.0	7.0 7.0
10	16.0	14.0	13.0	12.0	8.0	8.0			8.0	7.0		
11 12	17.0 17.0	14.0	13.0 13.0	12.0 12.0	8.0 8.0	8.0 7.0			8.0 8.0	7•0 7•0	9.0 8.0	8.0 8.0
13	16.0	14.0 14.0	13.0	12.0	7.0	6.0			8.0	7.0	8.0	7.0
14	16.0	13.0	12.0	12.0	6.0	5.0			8.0	7.0	8.0	7.0
15	16.0	13.0	12.0	10.0	6.0	5.0	8.0	8.0	8.0	7.0	9.0	8.0
16	16.0	13.0	11.0	10.0	6.0	6.0	8.0	7.0	8.0	7.0	8.0	7.0
17	16.0	13.0	12.0	10.0	7.0	6.0	7.0	6.0	9.0	8.0	8.0	7.0
18	15.0	13.0	12.0	11.0	7.0	6.0	8.0	7.0	8.0	8.0	9.0	7.0
19	16.0	13.0	11.0	10.0	7.0	6.0	8.0	7.0	9.0	8.0	9.0	7.0
20	15.0	13.0	11.0	10.0	7.0	6.0	8.0	8.0	9.0	8.0	9.0	7.0
21	14.0	13.0	11.0	10.0	7.0	7.0	9.0	8.0	9.0	9.0	9.0	8.0
22	14.0	13.0	11.0	9.0	8.0	7.0	9.0	8.0	9.0	9.0	10.0	9.0
23	14-0	13.0	11.0	10.0	8.0	7-0	9.0	8.0	9.0	9.0	10.0	9.0
24	15.0	13.0	11.0	9.0	7-0	7-0	8.0	8.0	10.0	9-0	10.0	9.0
25	15.0	13.0	11.0	9.0	7.0	7.0	8.0	7.0	10.0	9.0	9.0	8.0
26	14.0	13.0	9.0	8.0	8.0	7.0	7.0	6.0	10.0	9.0	9.0	7.0
27	14.0	13.0	9.0	9.0	7.0	7.0	6.0	4.0	10.0	9.0	9.0	7.0
28	13.0	12.0	9.0	9.0	7.0	7.0	6.0	4.0	10.0	9.0	11.0	8.0
29	13.0	12.0	9.0	8.0	7.0	6.0	6.0	4.0	10.0	8.0	11.0	8.0
30	13.0	12.0	9.0	8.0	7.0	6.0	6.0	5.0			10.0	8.0
31	14.0	12.0			7.0	6.0	6.0	6.0			10.0	8.0
HONTH	17.0	12.0	15.0	8.0	9.0	5.0	9.0	4.0	10.0	6.0	11.0	7.0
	A	PRIL		MAY	ال	INE	JI	JLY	AUG	SUST	SEP	TEMBER
244			M4.0									
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	8.0	14.0	11.0	16.0	12.0	19.0	14.0	21.0	17.0	21.0	17.0
1 2	9.0 11.0	8.0	14.0 14.0	11.0	16.0 14.0	12.0	19.0 18.0	14.0 15.0	21.0 21.0	17.0 17.0	21.0	17.0 17.0
1 2 3	9.0 11.0 11.0	8.0 9.0 9.0	14.0 14.0 15.0	11.0 10.0 11.0	16.0 14.0 16.0	12.0 13.0 13.0	19.0 18.0 20.0	14.0 15.0 16.0	21.0 21.0 21.0	17.0 17.0 17.0	21.0 21.0 20.0	17.0 17.0 16.0
1 2 3 4	9.0 11.0 11.0 11.0	8.0 9.0 9.0	14.0 14.0 15.0 13.0	11.0 10.0 11.0	16.0 14.0 16.0 17.0	12.0 13.0 13.0	19.0 18.0 20.0 20.0	14.0 15.0 16.0 16.0	21.0 21.0 21.0 18.0	17.0 17.0 17.0	21.0 21.0 20.0 19.0	17.0 17.0 16.0 17.0
1 2 3	9.0 11.0 11.0	8.0 9.0 9.0	14.0 14.0 15.0	11.0 10.0 11.0	16.0 14.0 16.0	12.0 13.0 13.0	19.0 18.0 20.0	14.0 15.0 16.0	21.0 21.0 21.0	17.0 17.0 17.0	21.0 21.0 20.0	17.0 17.0 16.0
1 2 3 4 5	9.0 11.0 11.0 11.0 11.0	8.0 9.0 9.0	14.0 14.0 15.0 13.0	11.0 10.0 11.0	16.0 14.0 16.0 17.0 14.0	12.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0	21.0 21.0 21.0 18.0	17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0	17.0 17.0 16.0 17.0
1 2 3 4 5	9.0 11.0 11.0 11.0 11.0	8.0 9.0 9.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0	11.0 10.0 11.0 11.0	16.0 14.0 16.0 17.0 14.0	12.0 13.0 13.0 14.0 13.0	19.0 18.0 20.0 20.0	14.0 15.0 16.0 16.0	21.0 21.0 21.0 18.0 21.0	17.0 17.0 17.0 17.0 16.0	21.0 21.0 20.0 19.0	17.0 17.0 16.0 17.0 17.0
1 2 3 4 5 6 7 8	9.0 11.0 11.0 11.0 11.0	8.0 9.0 9.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0	11.0 10.0 11.0 11.0 10.0	16.0 14.0 16.0 17.0 14.0	12.0 13.0 13.0 14.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0	14.0 15.0 16.0 16.0 16.0	21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0	17.0 17.0 16.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0 14.0	11.0 10.0 11.0 11.0 10.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0	12.0 13.0 13.0 14.0 13.0 13.0	19-0 18-0 20-0 20-0 21-0 21-0 21-0 21-0	14-0 15-0 16-0 16-0 16-0 16-0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0	17.0 17.0 16.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8	9.0 11.0 11.0 11.0 11.0	8.0 9.0 9.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0	11.0 10.0 11.0 11.0 10.0	16.0 14.0 16.0 17.0 14.0	12.0 13.0 13.0 14.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0	14.0 15.0 16.0 16.0 16.0	21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0	17.0 17.0 16.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 14.0 12.0	11.0 10.0 11.0 11.0 10.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0	12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0	17.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0
1 2 3 4 5 6 7 8 9 10	9.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0	12.0 13.0 13.0 14.0 13.0 13.0	19-0 18-0 20-0 20-0 21-0 21-0 21-0 21-0	14-0 15-0 16-0 16-0 16-0 16-0	21.0 21.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0 19.0 19.0	17.0 17.0 16.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0	11.0 10.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0 17.0	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0	17-0 17-0 16-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0	11.0 10.0 11.0 11.0 10.0 9.0 10.0 10.0 1	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 18.0	17.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0	11.0 10.0 11.0 11.0 11.0 10.0 10.0 11.0 11.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0 17.0	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0	17-0 17-0 16-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 12.0 14.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 10.0 11.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	12.0 13.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 18.0 19.0	17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 12.0 12.0 14.0 12.0 14.0 14.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 10.0 10.0	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0	19.0 18.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 18.0 19.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0	17.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 16 7 18 16 7 18	9.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 9.0 9.0 9.0	14.0 14.0 15.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 16.0 16.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 10.0 11.0	16.0 14.0 16.0 17.0 14.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 21.0 20.0 21.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 17.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0
1 2 3 4 4 5 6 7 8 9 10 11 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 14.0 15.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 14.0 16.0 16.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 14.0 14.0 13.0 12.0 13.0 13.0 13.0 12.0 13.0 13.0 14.0 14.0 14.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 6 7 8 8 9 10 11 11 12 13 14 15 16 17 18 19 20	9.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0	12.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 18.0 19.0 19.0 19.0 20.0 20.0 21.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 20 21	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0	14.0 14.0 13.0 13.0 14.0 14.0 14.0 12.0 14.0 12.0 14.0 12.0 14.0 12.0 14.0 13.0 14.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	12.0 13.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 13.0 14.0 14.0 14.0	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 5 16 16 17 18 19 20 21 22	9.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 11.0 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 14.0 15.0 16.0 16.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0	12.0 13.0 14.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 20.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 18.0 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 19.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0	17-0 17-0 16-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 16.0 16.0 16.0 16.0 13.0 13.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	12.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 19.0 21.0 21.0 19.0 20.0 21.0 19.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
1 2 3 4 5 6 7 8 9 10 11 12 13 11 15 15 16 17 18 19 20 21 22 23 24	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 12.0 13.0 13.0 13.0 13.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 14.0 17.0 17.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0	12.0 13.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 10.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 16.0 16.0 16.0 16.0 13.0 13.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0	12.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 20.0 19.0 21.0 21.0 19.0 20.0 21.0 19.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
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	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 16.0 16.0 16.0 16.0 13.0 13.0 13.0 13.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 10.0	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0	12.0 13.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 4 15 7 18 19 20 21 22 23 24 25 26 27	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0 13.0 12.0 11.0 11.0 11.0 11.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 20.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17-0 17-0 16-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
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	9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0	14.0 15.0 15.0 13.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 11.0 14.0 11.0 11.0 11.0 11.0 11	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	19.0 18.0 20.0 21.0	14.0 15.0 16.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 20.0 21.0 19.0 20.0 18.0 19.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 11 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	9.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 20.0 19.0 21.0 19.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17-0 17-0 16-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
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 0	9.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 10.0 11.0 11.0 10.0 10.0 10.0 10.0	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 20.0 21.0 19.0 20.0 18.0 19.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	9.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 10.0 11.0 11.0 10.0 10.0 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 12.0 12	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 20.0 19.0 21.0 19.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17-0 17-0 16-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
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 0	9.0 11.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 10.0 11.0 11.0 10.0 10.0 10.0 10.0	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0	19.0 18.0 20.0 20.0 21.0	14.0 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	21.0 21.0 20.0 19.0 21.0 19.0 21.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	17-0 17-0 16-0 17-0 17-0 17-0 17-0 17-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30 31	9.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	8.0 9.0 9.0 9.0 9.0 9.0 9.0 11.0 9.0 9.0 9.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0	14.0 15.0 13.0 14.0 14.0 14.0 14.0 12.0 12.0 12.0 14.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	11.0 10.0 11.0 11.0 10.0 10.0 10.0 10.0	16.0 14.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 20.0 20.0 20.0 21.0	12.0 13.0 14.0 13.0 12.0 13.0 12.0 13.0 12.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 16.0	19.0 18.0 20.0 21.0	14.0 15.0 16.0 17.0	21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	17.0 17.0 17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	21.0 21.0 21.0 20.0 21.0 21.0 21.0 19.0 20.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	17.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16

11530500 KLAMATH RIVER NEAR KLAMATH, CALIF. (International Hydrological Decade River Station)

LOCATION.--Lat 41°30'45", long 123°58'30", in SW4 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 1968. Water temperatures: November 1965 to September 1968.

EXTREMES, -1967-68:
Water temperatures: Maximum, 26.0° C on several days during July and August; minimum, 4.0° C on several days in December.

Period of record (1965-68):
Water temperatures: Maximum (1966-68), 26.0°C on several days during July and August 1968; minimum, 4.0°C on several days during January and December 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOL VED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SOD I UM (AN)	PO- TAS- SIUM (K)	LITHIUM (LI)	STRON- TIUM (SR)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
OCT.												
03 NDV.	4540	17	• 02	22	8.8	12	1.7	•01	.10	105	C	18
07 DEC.	3680	19	.03	21	10	11	1.7	.02	.01	120	0	13
05	26700	13	.00	14	5.9	5.6	1.0	.01	•10	63	0	11
JAN. 09	8700	16	- 04	16	7.3	7.3	1.2	.00	.10	84	c	9.0
FEB. 05	28600	14	•05	14	6.4	4.2	.9	•00	. 10 -	64	0	17
MAR. 04	27600	15	.01	15	6. 5	3.8	. 8	.00	.09	76	0	7.0
APR. 02	18900	14	.05	15	6.5	3.9	.9	•00	.10	74	с	9.0
MAY 07	9080	12	.01	15	6.6	4.3	.9	.00	.09	77	0	9.0
JUNF 04	6600	12	•00	16	6. 7	4.5	.9	.00	.10	81	o	9.0
JUL Y	3160	13	.01	20	8.4	7.0	1.4	.00	.14	100	c	12
AUG. 06	2270	13	.00	22	9.3	8.6	1.7	.00	.14	114	С	9.0
SEPT. 10	2530	15	.00	21	9.2	10	1.7	- 01	-14	111	0	14
DATE	CHLC- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	BORON (B)	DIS- SOLVED SOLIDS (SUM DF CONSTI- TUENTS)	HARO- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	DIS- SOL VED SOL IDS (TONS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORF- TICN RATIO	ALKA- LINITY AS CACD 3
DATE 00.T.	RIDE	RIDE (F)	(NO3)	PHATE (PO4)	(8)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA, MG)	CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	SODIUM	AD- SCRF- TICN PATIO	LINITY AS CACO3
OCT.	(CL) 6.1	RIDE		PHATE		SOLVED SOLIDS (SUM OF CONSTI-	NESS	CAR- BONATE HARD-	SOL VED SOL IDS (TONS PER AC-FT)	S 00 IUM 22	AD- SORF- TICH RATIO	AS CACO 3
0C T. 03	RIDE (CL)	RIDE (F)	(NO3)	PHATE (PO4)	.10	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	SODIUM	AD- SCRF- TICN PATIO	LINITY AS CACO3
0C T. 03 NOV. 07	6.1 6.0	**************************************	(NO3) 1.2 1.4	PHATE (PO4) •50 •39	.10	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA, MG) 91 94	CAR- BONATE HARD- NESS	SOL VED SOL IDS (TONS PER AC-FT)	22 20	AD- SORF- TICN PATIO .5 .5	LINITY AS CACD 3 86 98
OCT. 03 NOV. 07 DEC. 05 JAN. 09 FEB.	6.1 6.0 4.5	**************************************	1.2 1.4 1.4	.50 .39	.10 .10	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) 139 142 88	NESS (CA, MG) 91 94 60	CAR- BONATE HARD- NESS 5 0	SOL VED SOL IDS (TONS PER AC-FT) .19 .19	22 20 16	AD- SORF- TICN RATIO	LINITY AS CACD 3 86 98 52
OCT. 03 NOV. 07 DEC. 05 JAN. 09 FEB. 05 MAR. 04	6.1 6.0 4.5	**************************************	1.2 1.4 1.4 3.5	.50 .39 .23	.10 .10 .00	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) 139 142 88	NESS (CA, MG) 91 94 60 70	CAR- BONATE HAR D- NESS 5 0 8	SOL VED SOL IDS (TONS PER AC-FT) .19 .19 .12	22 20 16 18	AD- SORF- TICN RATIO .5 .5 .5	LINITY AS CACO3 86 98 52 69
OCT. 03 NOV. 07 DEC. 05 JAN. 09 FEB. 05 MAR. 04 APR. 02	6.1 6.0 4.5 1.6	**************************************	1.2 1.4 1.4 3.5	.50 .39 .23 .03	.10 .10 .00 .10	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) 139 142 88 103 91	91 94 60 70 62	CAR- BONATE HARD- NESS 5 0 8	SOL VED SOL IDS (TONS PER AC-FT) -19 -12 -16 -12	22 20 16 18	AD- SORF- TICN RATIO .5 .5 .3	LINITY AS CACO3 86 98 52 69
OCT. 03 NOV. 07 DEC. 05 JAN. 09 FEB. 05 MAR. 04 APR. 02 MAY 07	6.1 6.0 4.5 1.6	**************************************	1.2 1.4 1.4 3.5 .6	.50 .39 .23 .03 .18	.10 .10 .00 .10	SOLVED SOLIDS (SUM DF CONSTI- TUENTS) 139 142 88 103 91	91 94 60 70 62	CAR- BONATE HARD- NESS 5 0 8 1	SOL VED SOL IDS (TDNS PER AC-FT) -19 -12 -16 -12	22 20 16 18 13	AD- SORF- TICN RATIO .5 .5 .3 .4 .2	LINITY AS CACO3 86 98 52 69 52
OCT. 03 NOV. DEC. 05 JAN. 09 FEB. 05 MAR. 04 APR. 02 MAY 07 JUNE 04	6.1 6.0 4.5 1.6 1.9	**************************************	1.2 1.4 1.4 3.5 .6	.50 .39 .23 .03 .18 .20	.10 .10 .00 .10 .00	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) 139 142 88 103 91 87	NESS (CA, MG) 91 94 60 70 62 64	CAR- BONATE HARD- NESS 5 0 8 1	SOL VED SDL IDS (170NS PER AC-FT) .19 .19 .12 .16 .12 .12	22 20 16 18 13 12	AD- SORF- TICN RATIO .5 .5 .3 .4 .2 .2	LINITY AS CACD3 86 98 52 69 52 62 61
OCT. 73 NOV. 07 DEC. 05 JAN. 09 FEB. 05 MAR. 04 APR. 02 MAY. 07 JUNE 04 JULY	6.1 6.0 4.5 1.6 1.9 1.4	**************************************	1.2 1.4 1.4 3.5 .6 .5	.50 .39 .23 .03 .18 .20 .07	.10 .10 .00 .10 .00 .00	SOLVED SOLIDS (SUM OF CONSTITUENTS) 139 142 88 103 91 87 88 89	NESS (CA, MG) 91 94 60 70 62 64 64	CAR- BONATE HARD- NESS 5 0 8 1 10 2 3	SOL VED SOL JOS (TONS PER AC-FT) .19 .19 .12 .16 .12 .12 .12	22 20 16 18 13 12 12	AD- SORF- TICN RATIO .5 .5 .3 .4 .2 .2	LINITY CACD3 86 98 52 69 52 62 61 63
OCT. 03 NOV. 07 DEC. 05 JAN. 09 FEB. 05 MAR. 04 APR. 02 MAY 07 JUNE 04 JULY	6.1 6.0 4.5 1.6 1.9 1.4 2.4	.1 .1 .0 .1 .0 .1 .0 .1 .0 .1 .0 .1 .0 .1 .0 .1 .0 .1	(NO3) 1.2 1.4 1.4 3.5 .6 .5 1.3 .8 1.3	.50 .39 .23 .03 .18 .20 .07	.10 .10 .00 .10 .00 .00 .01 .28	SOLVED SOLIDS (SUM OF CONSTIL TUENTS) 139 142 88 103 91 87 88 89 93	NESS (CA, MG) 91 94 60 70 62 64 64 68	CAR- BONATE HARD- NESS 5 0 8 1 10 2 3 1	SOL VED SOL IDS (TONS PER AC-FT) .19 .19 .12 .16 .12 .12 .12 .13	22 20 16 18 13 12 12 13	AD- SORF- TICN RATIO .5 .5 .3 .4 .2 .2 .2	LINITY AS CACD3 86 98 52 69 52 62 61 63 66

11530500 KLAMATH RIVER NEAR KLAMATH, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

SPECI-FIC COND-UCTANCE (MICRO-MHOS) TEM-PERA-TURE (DEG C) TUR-BID-ITY DIS-SOLVED OXYGEN PH DATE OCT.
03...
NDV.
07...
05...
JAN.
09...
FEB.
05...
04...
APR.
02...
HAY
07...
JULY
09...
AUG.
09...
AUG. 216 7.8 41 9.1 --221 8.0 12 5.0 10.2 1650 140 7.8 7 11.6 167 7.4 5.0 12.6 7 7.5 110 12.6 133 11 105 11.3 141 7.9 140 7.8 13 10.8 145 7.7 13 5.0 10.4 148 7.7 18 3.0 9.1 195 8.0 22 1.0 8.4 15 8.5 216 7.9 --20 10.0 10... 215 8.1

	oc	TOBER	NOV	EMBER	DECE	MB ER	JAN	IUARY	FEBR	UARY	н	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	20.0	13.0	13.0	7.0	6.0	6.0	6.0	6.0	6.0	9.0	9.0
2	20.0	20.0	13.0	13.0	6.0	6.0	6.0	6.0	7.0	6.0	9.0	9.0
3	20.0	19.0	14.0	13.0	6.0	6.0	6.0	6.0	7.0	7.0	10.0	9.0
4	19.0	17.0	14.0	14.0	6.0	6.0	6.0	6.0	7.0	7.0	10.0	10.0
5	17.0	17.0	14.0	14.0	6.0	6.0	6.0	6.0	7.0	7.0	10.0	10.0
6	17.0	17.0	14.0	14.0	6.0	6.0	5.0	5.0	8.0	7.0	10.0	10.0
7	17.0	17.0	14-0	14.0	6.0	6.0	7.0	7.0	8.0	7.0	10.0	9.0
8	17.0	17.0	14.0	14.0	6.0	6.0	7.0	7.0	8.0	7.0	9.0	9.0
9	17.0	17.0	14.0	14.0	6.0	5.0	7.0	7.0	8.0	8.0	9.0	9.0
10	17.0	17.0	14.0	14.0	5.0	5.0	7.0	7.0	8.0	8.0	9.0	8.0
11	17.0	17.0	13.0	13.0	5.0	5.0	7.0	7.0	8.0	8.0	10.0	9.0
12	17.0	17.0	13.0	13.0	5.0	4.0	7.0	7.0	8.0	8.0	10.0	10.0
13	17.0	17.0	13.0	13.0	4.0	4.0	7.0	7.0	8.0	8.0	10.0	10.0
14	18.0	16.0	13.0	13.0	4.0	4.0	7.0	7.0	8.0	8.0	10.0	9.0
15	17.0	15.0	12.0	12.0	4.0	4.0	7.0	7.0	8.0	7.0	9.0	9.0
16	16.0	14.0	12.0	12.0	4.0	4.0	7.0	7.0	8.0	8.0	10.0	9.0
17	16.0	14.0	12.0	11.0	4.0	4.0	7.0	7.0	8.0	8.0	10.0	10.0
18	15.0	15.0	12.0	11.0	4.0	4.0	7.0	6.0	8.0	8.0	10.0	9.0
19	16.0	15.0	11.0	11.0	5.0	4.0	7.0	7.0	8.0	8.0	10.0	9.0
20	16.0	16.0	11.0	11.0	4.0	4.0	7.0	7.0	9.0	8.0	10.0	9.0
21	16.0	16.0	11.0	10.0	4.0	4+0	7.0	6.0	9.0	9.0	11.0	10.0
22	16.0	16.0	11.0	11.0	4.0	4.0	8.0	7.0	9.0	9.0	11.0	10.0
23	16.0	15.0	10.0	9.0	5.0	4.0	8.0	7.0	9.0	9.0	11.0	10.0
24	16.0	16.0	9.0	8.0	5.0	4.0	7.0	7.0	9.0	9.0	11.0	11.0
25	16.0	16.0	9.0	8.0	4.0	4.0	7.0	7.0	9.0	9.0	12.0	11.0
26	16.0	16.0	8.0	8.0	4.0	4.0	7.0	7.0	9.0	8.0	12.0	11.0
27	16.0	16.0	B.O	7.0	5.0	4.0	7.0	7.0	9.0	9.0	11.0	11.0
28	16.0	14.0	7.0	7-0	5.0	5.0	7.0	7-0	9.0	9.0	11.0	11.0
29	15.0	14.0	7.0	7.0	6.0	5.0	7.0	6.0	9.0	9-0	11.0	11.0
30	14-0	13.0	7.0	7.0	6.0	5-0	6.0	6-0			12.0	11.0
31	14.0	13.0			6.0	6.0	6.0	6.0			12.0	12.0
MONTH	21.0	13.0	14.0	7.0	7.0	4.0	8.0	5.0	9.0	6.0	12.0	8.0

11530500 KLAMATH RIVER NEAR KLAMATH, CALIF .-- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 -- Continued

	A	PRIL	,	YAY	J	UNE	JI	JLY	AU	GUST	SEP	TEMBER
DAY	MAX	MIN										
1	12.0	12.0	16.0	14.0	17.0	17.0	23.0	22.0	26.0	26.0	22.0	22-0
2	12.0	12.0	16.0	15.0	17.0	17.0	22.0	22.0	26.0	26.0	23.0	22.0
3	12.0	12.0	16.0	16.0	17.0	17.0	22.0	22.0	26.0	26.0	23.0	23.0
4	12.0	12.0	16.0	16.0	17.0	17.0	23.0	22.0	26.0	25.0	23.0	23.0
5	12.0	12.0	16.0	16.0	17.0	17.0	23.0	23.0	26.0	24.0	23.0	23.0
6	12.0	12.0	16.0	16.0	18.0	17.0	23.0	23.0	24.0	24.0	23.0	23.0
7	12.0	12.0	16.0	15.0	18.0	17-0	23.0	23.0	24.0	24.0	23.0	23.0
8	12.0	12.0	16.0	15.0	17.0	17.0	24.0	23.0	25.0	24.0	23.0	23.0
9	12.0	12.0	16.0	16.0	18.0	17.0	24.0	23.0	25.0	25.0	23.0	23.0
10	13.0	12.0	16.0	16.0	18.0	18.0	24.0	24.0	25.0	25.0	23.0	22.0
11	13.0	13.0	16.0	15.0	18.0	18.0	24.0	24.0	25.0	25.0	22.0	22.0
12	13.0	13.0	16.0	16.0	18.0	18.0	25.0	24.0	25.0	24.0	22.0	22.0
13	13.0	13.0	16.0	16.0	18.0	18.0	25.0	24.0	24.0	23.0	22.0	22.0
14	13.0	13.0	16.0	15.0	18.0	18.0	24.0	24.0	23.0	23.0	22.0	21.0
15	13.0	13.0	15.0	14.0	18.0	17.0	24.0	24.0	24.0	23.0	22.0	21.0
16	13.0	13.0	15.0	14.0	18.0	18.0	24.0	24.0	24.0	24.0	22.0	21.0
17	13.0	12.0	16.0	15.0	19.0	18.0	24.0	24.0	24.0	23.0	22.0	21.0
18	12.0	12.0	16.0	16.0	19.0	19.0	24.0	24.0	23.0	23.0	22.0	22.0
19	12.0	12.0	16.0	16.0	20.0	19.0	24.0	24.0	23.0	23.0	22.0	21.0
20	12.0	12.0	17.0	16.0	21.0	20.0	24.0	24.0	23.0	22.0	21.0	20.0
21	12.0	12.0	17.0	17.0	21.0	21.0	24.0	24.0	23.0	20.0	21.0	19.0
22	12.0	12.0	17.0	16.0	21.0	21.0	24.0	24.0	22.0	21.0	20.0	19.0
23	12.0	12.0	16.0	16.0	21.0	21.0	24.0	24.0	22.0	21.0	19.0	18.0
24	12.0	12.0	16.0	16.0	21.0	21.0	25.0	24.0	22.0	21.0	20.0	19.0
25	12.0	12.0	16.0	16.0	22.0	21.0	25.0	24.0	22.0	22.0	21.0	19.0
26	13.0	12.0	16.0	16.0	22.0	22.0	24.0	24.0	22.0	21.0	21.0	20-0
27	13.0	12.0	16.0	15.0	23.0	22.0	24.0	24.0	21.0	20.0	21.0	20.0
28	14.0	13.0	16.0	15.0	23.0	23.0	25.0	24.0	21.0	20.0	21.0	20.0
29	14.0	14.0	16.0	16.0	23.0	23.0	25.0	25.0	21.0	21.0	21.0	21.0
30	14.0	14.0	17.0	16.0	23.0	22.0	26.0	25.0	22.0	21.0	21.0	20.0
31			17.0	17.0			26.0	26.0	22.0	22.0		
MONTH	14.0	12-0	17.0	14.0	23.0	17.0	26.0	22.0	26.0	20.0	23.0	18.0
YEAR	26.0	4.0										

SMITH RIVER BASIN

11532500 SMITH RIVER NEAR CRESCENT CITY, CALIF.

LOCATION. -- Let 41°47'20", long 124°03'20", in SW; sec.10, T.18 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 1968. Water temperatures: October 1965 to September 1968.

EXTREMES .-- 1967-68:
Water temperatures: Maximum, 23.0°C July 28,30; minimum, 4.0°C on several days during December and January.

Period of record (1968-68): Water temperatures: Maximum, 23.0°C July 28, 30, 1968; minimum, 4.0°C on several days during 1967-68.

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

SMITH RIVER BASIN

11532500 SMITH RIVER NEAR CRESCENT CITY, CALIF .-- Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	MEAN DIS- CHARGE (CFS)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- S I UM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	NITRATE (NO3)	BORON (B)
CCT. 03	1170			2.8		70	0		3.9		•00
NOV.											
07 DEC.	373			2.7		83	0		3.3	77	.00
C5	16300			2.4		51	0		4.7		•00
09	7460			1.6		53	0		2.5		.16
FEB. 05	11100			1.5		48	0		3.i		.05
MAR. 05	3260			1.6		52	0		1.6		.00
APR. 02	3050			1.6		52	0		2.0		.03
MAY C7	886	9.4	7.9	2.2	.4	65	0	3.4	2.2	.0	•00
JUNE											-
JULY	1230			1.9		66	0		2.0		•00
C9	418			1.8		80	0		2.4		•00
06 SEPT.	319			2.7		90	0		2.7		•00
10	300	9.5	13	2.8	•9	96	0	5.9	2.7	•0	.00
	DIS-			DIS-				SPECI-			
DATE	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SOLVED SOLIDS ITUNS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SDRP- TION RATIC	ALKA- LINITY AS CACO3	FIC COND- UCTANCE (MICRD- MHOS)	PH	TEM- PERA- TURE (DEG C)	DIS- SOLVED OXYGEN
DATE GCT.	SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLVED SOLIDS (TUNS PER		AD- SDRP- TION	LINTTY AS	FIC COND- UCTANCE IMICRD-	PH	PERA- Ture	SOLVED
GC T.	SOLIDS (RESI- DUE AT	NESS	CAR- BONATE HARD-	SOLVED SOLIDS (TUNS PER		AD- SDRP- TION	LINTTY AS	FIC COND- UCTANCE IMICRD-	PH 7.8	PERA- Ture	SOLVED
GC T. 03 NUV. C7	SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TUNS PER AC-FT)	SODIUM	AD- SDRP- TION PATIC	LINTTY AS CACO3	FIC COND- UCTANCE (MICRO- MHOS)		PERA- TURE (DEG C)	SOLVED OXYGEN
03 NUV. C7 CEC.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG)	CAR- BONATE HARD- NESS	SOLVED SOLIDS (TUNS PER AC-FT)	SODIUM	AD- SDRP- TION RATIC	LINTTY AS CACO3	FIC COND- UCTANCE (MICRD- MHOS)	7.8	PERATURE (DEG C)	SOLVED OXYGEN
03 NUV. C7	SOLIDS (RESI- DUE AT 180 C)	NESS (CA,MG) 67 75	CAR- BONATE HARD- NESS 10	SOLVED SOLIDS (TUNS PER AC-FT)	SODIUM 8 7	AD- SDRP- TION RATIC	LINITY AS CACO3 57 68	FIC COND- UCTANCE (MICRO- MHOS)	7.8 8.0	PERA- TURE (DEG C)	OXYGEN 10.5
GCT. 03 NUV. C7 DEC. 05 JAN. 09	SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 67 75 53 48	CAR-BONATE HARD-NESS	SOLVED SOLIDS (TUNS PER AC-FT)	8 7 9 7	AD- SDRP- TION PATIC	LINITY AS CACO3 57 68 42 43	FIC COND- UCTANCE (MICRO- MHOS) 150 160 99	7.8 8.0 8.1 8.0	PERATURE (DEG C) 13 12 8 7	10.5 10.8 12.2 12.6
GCT. 03 NUV. CT DEC. 05 JAN. 09, FEB. C5 PAR.	SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 67 75 53 48 42	CAR-BONATE HARD-NESS 10 7 11 5	SOLVED SOLIOS (TUNS PER AC-FT)	8 7 9 7 7	AD- SDRP- TION PATIC	57 68 42 43	FIC COND- UCTANCE (MICRO- MHOS) 150 160 99 100	7.8 8.0 8.1 8.0	PERATURE (DEG C) 13 12 8 7	10.5 10.8 12.2 12.6
GCT 03 NUV C7 EEC 05 JAN 09 FEB C5 PAR	SOLIDS (RESI- DUE AT 180 C)	NESS (CA-MG) 67 75 53 48 42 47	CAR-BONATE HARD-NESS 10 7 11 5	SOLVED SOLIOS (TUNS PER AC-FT)	8 7 9 7 7 7	AD- SDRP- TION PATIC	57 68 42 43 39	FIC COND- UCTANCE (MTCRD- MHOS) 150 160 99 100 90	7.8 8.0 8.1 8.0 8.0	PERATURE (DEG C) 13 12 8 7 8	10.5 10.8 12.2 12.6 12.6
GCT. 03 NUV. C7 EEC. 05 JAN. 09, FEB. C5	SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 67 75 53 48 42	CAR-BONATE HARD-NESS 10 7 11 5	SOLVED SOLIOS (TUNS PER AC-FT)	8 7 9 7 7	AD- SDRP- TION PATIC	57 68 42 43	FIC COND- UCTANCE (MICRO- MHOS) 150 160 99 100	7.8 8.0 8.1 8.0	PERATURE (DEG C) 13 12 8 7	10.5 10.8 12.2 12.6
GCT. 03 NUV. C7 DEC. 05 JAN. 09 FEB. C5 PAR. 05 APR. 02	SOLIDS (RESI- DUE AT 180 C)	NESS (CA-MG) 67 75 53 48 42 47	CAR-BONATE HARD-NESS 10 7 11 5	SOLVED SOLIOS (TUNS PER AC-FT)	8 7 9 7 7 7	AD- SDRP- TION PATIC	57 68 42 43 39	FIC COND- UCTANCE (MTCRD- MHOS) 150 160 99 100 90	7.8 8.0 8.1 8.0 8.0	PERATURE (DEG C) 13 12 8 7 8	10.5 10.8 12.2 12.6 12.6
GCT. 03 NUV. CT CFC. 05 JAN. 09, FEB. C5 PAR. 05 APR. 07 JUNE 03	SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 67 75 53 48 42 47 45	CAR- BONATE HARD- NESS 10 7 11 5 3	SOL VED SOL IOS CITUNS PER AC-FT	8 7 9 7 7 7 7	AD- SORP- TION PATIC	57 68 42 43 39 43	FIC COMP- UCTANCE (MICRO- MHOS) 150 160 99 100 90	7.8 8.0 8.1 8.0 8.0 8.0	PERA- TURE (DEG C) 13 12 8 7 9	10.5 10.8 12.2 12.6 12.6 12.0
GCT. 03 NUV. C7 EEC. 05 JAN. 09., FEB. C5 APR. 02 MAY 07 JUNE 03 JULY	SOLIDS (RESI- DUE AT 180 C)	NESS (CA.MG) 67 75 53 48 42 47 45 56	CAR- BONATE HARD- NESS 10 7 11 5 3 4 2	SOLVED SOLVED SOLIDS (TONS PER AC-FT)	SODIUM 8 7 9 7 7 7 8	AO- SDRP- TION PATIC 1 1 1 1 1 1 1 1 1	EINITY AS CACO3 57 68 42 43 39 43 43 53	FIT COMPONENTS OF THE PROPERTY	7.8 8.0 8.1 8.0 8.0 8.0	PERA- TURE (DEG C) 13 12 8 7 5 9	SOLVED OXYGEN 10.5 10.8 12.2 12.6 12.6 12.0 12.2 11.4
GCT 03 NUV C7 EEC JAN 09 FEB PAR 05 APR UNE JUNE 03 JUNE 03 JULY	SOLIDS (RESIDUE AT 180 C)	NESS (CA.MG) 67 75 53 48 42 47 45 56	CAR-BONATE HARD-NESS	SOLVED SOLVED SOLIOS (TONS PER AC-FT)	SODIUM 8 7 9 7 7 7 8 7	A0- SORP- TIGN PATIC -1 -1 -1 -1 -1 -1 -1	EINITY AS CACO3 57 68 42 43 39 43 53 54	FIC COMP- COMD- UCTANGE (MICRO- MHOS) 150 160 99 100 90 96 94 118	7.8 8.0 8.1 8.0 8.0 8.0 8.0	PERA- TURE (DEG C) 13 12 8 7 8 9 9	SOLVED OXYGEN 10.5 10.8 12.2 12.6 12.6 12.0 12.2 11.4 10.3

SMITH RIVER BASIN

11532500 SMITH RIVER NEAR CRESCENT CITY, CALIF. -- Continued

	oc	TOBER	NOV	EMBER	DECE	MBER	JAN	UARY	FEBR	UARY	ma	RCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	16.0	13.0	12.0	8.0	7.0	6.0	6.0	7.0	6.0	10.0	9.0
2	16.0	14.0	13.0	12.0	8.0	8.0	6.0	5.0	8.0	7.0	10.0	9.0
3 4	15.0	13.0	13.0	12.0	9.0	8.0	5.0	4.0	8.0	7.0	10.0	9.0
4	14.0	13.0	13.0	12.0	9.0	8.0	4.0	4.0	8.0	7.0	10.0	9.0
5	15.0	14.0	13.0	12.0	8.0	8.0	5.0	4.0	8.0	7.0	10.0	8.0
6	15.0	14.0	13.0	13.0	8.0	7.0	4.0	4.0	8.0	7.0	9.0	8.0
7	15.0	14.0	13.0	13.0	8.0	8.0	6.0	4.0	8.0	7.0	9.0	8.0
8	15.0	14.0	13.0	12.0	8.0	8.0	7.0	6.0	8.0	7.0	9-0	7.0
9	15.0	14.0	12.0	12.0	8.0	8.0	8.0	7.0	8.0	7.0	9.0	7.0
10	16.0	14.0	12.0	12.0	8.0	7.0	7.0	6.0	8.0	8.0	8.0	7.0
11	16.0	16.0	12.0	12.0	7.0	7.0	6.0	6.0	8.0	7.0	9.0	8.0
12	16.0	14.0	12.0	12.0	7.0	6.0	7.0	6.0	8.0	7.0	9.0	8.0
13	14.0	14.0	12.0	12.0	6.0	4.0	9.0	8.0	8.0	7.0	8.0	8.0
14	14.0	13.0	12.0	11.0	4.0	4.0	9.0	9.0	8.0	7.0	9.0	8.0
15	13.0	13.0	11.0	10.0	4.0	4.0	9.0	8.0	8.0	7.0	9.0	8.0
16	14.0	12.0	11.0	9.0	5.0	4.0	8.0	7.0	8.0	8.0	9.0	8.0
17	14.0	13.0	10.0	10.0	5.0	4.0	7.0	7.0	9.0	8.0	8.0	8.0
18	13.0	13.0	11.0	10.0	6.0	5.0	7.0	7.0	9.0	8.0	9.0	7.0
19	14.0	13.0	10.0	9.0	6.0	6.0	8.0	7.0	9.0	8.0	9.0	7.0
20	13.0	13.0	9.0	9.0	6.0	6.0	8.0	8.0	9.0	8.0	9.0	7.0
21	14.0	13.0	9.0	8.0	6.0	6.0	9.0	8.0	9.0	9.0	9.0	8.0
22	14.0	13.0	9.0	8.0	7.0	6.0	8.0	8.0	10.0	9.0	10.0	8.0
23	14.0	14.0	8.0	8.0	7.0	7.0	8.0	8.0	10.0	9.0	11.0	9.0
24	14.0	13.0	9.0	8.0	7.0	7.0	8.0	7.0	10.0	9.0	11.0	9.0
25	14.0	13.0	9.0	8.0	7.0	7.0	8.0	6.0	10.0	9.0	10.0	8.0
26	13.0	12.0	8.0	7.0	7.0	7.0	6.0	5.0	10.0	9.0	9.0	7.0
27	13.0	13.0	7.0	7.0	7.0	7.0	5.0	4.0	10.0	9.0	10.0	8.0
28	13.0	12.0	8.0	7.0	7.0	7.0	4.0	4.0	10.0	9.0	11.0	8.0
29	12.0	11.0	8.0	8.0	7.0	6.0	5.0	4.0	10.0	9.0	11.0	9.0
30	12.0	11.0	8.0	7.0	6.0	6.0	6.0	5.0			11.0	8.0
31	13.0	12.0			6.0	6.0	7.0	6.0			10.0	8.0
нтип	18.0	11.0	13.0	7.0	9.0	4.0	9.0	4.0	10.0	6.0	11.0	7.0

11532500 SMITH RIVER HEAR CRESCENT CITY, CALIF. -- Continued

	A	PRIL		1AY	J	UNE	J	JLY	AUG	GUS T	SEPI	FEMBER
DAY	MAX	MIN	MAX	MIN	MAX	MIN	XAM	MIN	MAX	MEN	MAX	MIM
1	10.0	9.0	16.0	13.0	17.0	16.0	21.0	18.0	21 -0	19.0	21.0	19.0
2	10.0	9.0	17.0	13.0	17.0	17.0	19.0	18.0	20.0	19.0	20.0	18.0
3	11.0	8.0	17.0	14.0	18.0	16.0	20.0	18.0	20.0	19.0	19.0	18.0
4	10.0	9.0	17.0	14.0	19.0	17.0	21.0	18.0	20.0	18.0	19.0	18.0
5	11.0	9.0	17.0	14.0	17.0	15.0	21.0	19.0	21.0	18.0	19.0	18.0
6	11.0	8.0	16.0	13.0	17.0	14-0	22.0	19.0	21.0	18.0	19.0	18.0
7	12.0	9.0	16.0	13.0	17.0	14.0	22.0	19.0	21.0	19.0	19.0	18.0
8	12.0	9.0	17.0	13.0	18.0	14.0	22.0	19.0	20.0	19.0	19.0	18.0
9	13.0	9.0	17.0	14.0	18.0	15.0	22.0	19.0	21.0	19.0	19.0	18.0
10	13.0	11.0	17.0	14.0	17.0	15.0	22.0	19.0	21.0	19.0	18.0	17.0
11	13.0	11.0	16.0	14.0	17.0	15.0	21.0	19.0	20.0	19.0	18.0	18.0
12	12.0	9.0	16.0	14.0	17.0	14.0	19.0	18.0	19.0	18.0	19.0	18.0
13	12.0	9.0	14.0	13.0	17.0	14.0	21.0	17.0	19.0	18.0	19.0	17.0
14	12.0	9.0	16.0	13.0	18.0	14.0	21 -0	19.0	20.0	18.0	18.0	17.0
15	12.0	11.0	16.0	13.0	19.0	16.0	20.0	18.0	19.0	18.0	18.0	16.0
16	12.0	9.0	17.0	14.0	20.0	17.0	20.0	18.0	20.0	18.0	18.0	16.0
17	12.0	8.0	17.0	16.0	20.0	17.0	21.0	18.0	19.0	19.0	18.0	17.0
18	12.0	9.0	18.0	15.0	20.0	17.0	21.0	18.0	19.0	18.0	18.0	17.0
19	12.0	9.0	17.0	16.0	20.0	17.0	21-0	19.0	18.0	18.0	17.0	16.0
20	12.0	9.0	16.0	14.0	21.0	18.0	22.0	19.0	18.0	17.0	16.0	14.0
21	13.0	9.0	16.0	13.0	21.0	18.0	22.0	19.0	19.0	17.0	16.0	14.0
22	13.0	10.0	14.0	13.0	19.0	17.0	21.0	19.0	19.0	17.0	16.0	14.0
23	12.0	11.0	14.0	13.0	21.0	18.0	21.0	19.0	20.0	18.0	17.0	14.0
24	14.0	11.0	14.0	13.0	22.0	18.0	20-0	18.0	19.0	18.0	17.0	16.0
25	14.0	11.0	14.0	13.0	22.0	19.0	21.0	19.0	19.0	17.0	18.0	16.0
26	15.0	12.0	16.0	13.0	22.0	19.0	22.0	19.0	18.0	17.0	17.0	17.0
27	16.0	13.0	17.0	14.0	21.0	19.0	22.0	19.0	18.0	16.0	17.0	16.0
28	17.0	13.0	17.0	14.0	20.0	18.0	23.0	20.0	19.0	16.0	17.0	16.0
29	17.0	14-0	18.0	14.0	19.0	17.0	22.0	21.0	19.0	17.0	17.0	16.0
30	17.0	14.0	18.0	14.0	20.0	17.0	23.0	21.0	21.0	18.0	16.0	16.0
31			17.0	15.0			22.0	20.0	21.0	19.0		
MONTH	17.0	8.0	18.0	13.0	22.0	14.0	23.0	17.0	21 • 0	16-0	21.0	14-0
YEAR	23.0	4.0										

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG) SANTA A	SODIUM (NA) ANA RIVER	PO- TAS- SIUM (K) BASIN	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- Ride (CL)	FLUO- RIDE (F)
		11072200	TEMESO	AL CREEK A	T CORONA	CALTE	(I.AT 33°)	53:46" T	ONG 117°3	4 : 50")		
		11071100	LLMDDO			-, on.	(2012 00 1	JO 10 , 1	O.N.G 117 0			
JULY,1968 18	3.0	31	.03	99	29	226	16	374	0	222	255	2.6
			• • •			ISTA LAKE			_			
		11186000	KERN R	IVER NEAR	KERNVI LI	E, CALIF.	(LAT 35	°56'43",	LONG 118°	28'36")		
JAN.,1968												
12 May	A47			11	2.8	10	1.4	59	0	5.9	4.8	.1
24	A566			5.0	1.1	5.2	.6	27	0	1.8	1.5	.1
JULY												
08	A118					7.0		44	0		2.1	
SEPT. 03	A70			14	3.2	14	2.4	70	0	8.9	7.6	.0
03	A10					UIN RIVER			-	•••		•
					SAN JUAN	SOLM KIAPP	DAGIN					
1129	9500 ST	ANISLAUS R	IVER BELO	W MELONES	POWERHO	DUSE, NEAR	SONORA,	CALIF. (L	AT 37°56'	50", LONG	120°31'45	"}
FEB1968												
19		11		9.1	2.6	3.0	.9	40	0	6.0	1.2	
MAR.				7.3	2.1	2.8	.9	32	0	4.0	.8	
20 JUNE				1.3	2.1	2.0	.,	32	U	4.0	••	
25	550	12	.03	5.0	1.3	2.4	.8	24	0	3.0	1.3	•0
					SACRAME	ENTO RIVER	BASIN					
	11448	OOO NICHT	NU CORE	r ppiow ur	CUT AND	MEDE DAN	CATIF	/ TAT 20° 5	51.460 T.O	NG 122°55'	100)	
		900 nigni	IND CREEK	. D&LOW III	GHLAND C	MAGA DAM,	CALIF.	(LAI 36 5	5 · 45 ·· , LU	MG 122 33	10)	
FEB.,1968	179			13	9.5	3.9	.9	87	0	7.0	1.4	
20	121			13	8.7	4.3	.9	83	0	5.0	2.0	
		11449100	SCOTTS 1	CREEK NEAR	LAKEDOR	T CALIF	(IAT 39	0314511	LONG 122°	56:50")		
JAN.,1968		111100		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2011121	., CALIT.	(2011 03	00 40 , .	DOMO XUD	00 00 ,		
30	671	11	.00	11	4.1	4.0	.7	54	0	3.0	2.2	.1
FEB.							•••			2		
28	89	14	•00	20	7.4	6.3	.7	98	0	8.0	2.6	•1
MAR. 08,	77	12	•00	20	7.5	6.2	.7	98	0	8.0	2.8	.2
15	252	14	.00	16	6.1	5.4		80	ŏ	6.0	2.2	.1
APR.												
04	34 10	13	•00	23	8.4	7.1	•7	114	0	9.0	2.8	•1 •2
29 May	10	13	•00	24	9.1	7.6	. 8	120	U	11	3.4	• • •
15	6.0	13	.00	24	9.0	7.4	. 8	117	0	11	3.6	.2

A DAILY MEAN DISCHARGE.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	BORON :	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)		HARD- NESS (CA,MG) NA RIVER:	NON- CAR- BONATE HARD- NESS BASIN	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	ALKA- LINITY AS CACO3	SPE- CIFIC CONDUCT- ANCE (MICRO- MHOS)	РН
		11072200	TEMES	CAL CREEK	AT CORONA	, CALIF.	(LAT 33°	53'46", 1	LONG 117°34	1'50")		
JULY,1968	1											
18	.8	1.4	1130	1070	1.54	366	59	56	5.1	307	1780	7.5
					BUENA V	ISTA LAKE	BASIN					
		11186000	KERN	RIVER NEAR	KERNVILL	E. CALIF.	(LAT 35	°56'43".	LONG 118°2	28 ' 36")		
JAN.,1968	ı					,	,	,				
12	.1	.11	84		.11	35	ρ	35	.7	48	128	8.1
MAY 24	.1	.03	40		-05	17	0	39	.5	22	61	7.5
JULY	••		40		•••		-		• • • • • • • • • • • • • • • • • • • •			
OB SEPT.		•02				27	0	36	.6	36	98	7.6
03	•0	.16	88		.12	48	0	37	.9	57	171	7.8
					SAN JOAQ	UIN RIVER	BASIN					
1120	9500 STA	MTGTATE D		TOW MIDTOMP		TIEF MEAD	SUMUBA	CALLE	(TAT 97°56)	50" ION	G 120°31'4	En \
		MIDLENOD II	VIII DE	DOW ABLOWE	D TOWNS	ODD, NEAR	Donoiui,	Char.	(2 0. 00	50 , 2 010	0 120 01 4	, ,
FEB.,1968	1.2	•00	62	55		33	0	16	•2	33	82	7.8
MAR.												
20 B. June		.01	24			26	0	18	.2	26	68	7.5
25 C.	.1	•00	39	38		18	0	21	.2	20	52	6.9
					SACRAME	NTO RIVER	BASIN					
	114489	OO HIGH	AND CRE	EK BELOW H	IGHLAND C	REEK DAM	CALIF.	(LAT 38°	55'45" LO	G 122°55	10")	
FEB1968				DD 1		,			,	00	,	
19 D.	•		90		.12	72	1	10	.2	71	160	7.7
20 D.			90		.12	68	0	12	•2	68	147	7.6
		11449100	SCOTTS	CREEK NEA	R LAKEPOR	T, CALIF.	(LAT 39	°03'45",	LONG 122°	56'50")		
JAN.,1968		00			00			.,		44	100	7.2
30 B. FEB.	1.6	.00		65	.09	45	1	16	.3	44	100	1.2
28 E.	1.0	.00		108	•15	81	1	14	. 3	80	177	7.8
MAR. OS F.	1.0	•00		106	.14	81	1	14	.3	80	180	7.6
15 E.	.8	.00		90	.12	65	ō	15	.3	66	146	7.4
APR. 04 G.	1.7	•00		122	.17	92	0	14	.3	94	204	8,2
29 H.	2.9	.02		131	.18	98	ŏ	14	.3	98	217	8.0
MAY							_					
15 I.	1.8	•00		129	.18	97	1	14	.3	96	215	7.7
	TEMPERATUR TEMPERATUR			TER TEMPER				MPERATURI MPERATURI			TEMPERATURI TEMPERATURI	

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N., IN NATIVE WATER; P, PIPET; S, SIEVE; Y, VISUAL-ACCUMULATION TUBE; W, IN DISTILLED WATER?

				.,													
		WATER TEM-			SUSPENDED-				,	PARTIC	LE SI	ZE					METHOD
		PERA-		CONCEN-	SEDIMENT I	PERCE	NT FIN	ER TH	AN TH	IE S12	ZE (IN	MILI	INET	ERS)	INDIC		DF
		TURE :	DISCHARGE	TRATION :	DISCHARGE								25.0				ANALY-
DATE T	IME	(C)	(CFS)	(MG/L)	(TONS/DAY)				016 .	031	.062 .	125	.250	.500	1.00	2.00	SIS
					SANTA Y	NEZ R	IVER E	BASIN									
		111305	OO SANTA	YNEZ RIVE	R NEAR BUEL	ron, (CALIF.	. (LAT	34°3	36 · 50	, LON	G 12	0°14'	30")			
NOV 22 1967 13		17	7.1	82	1.6												
NDV 30 13	325	15	8.3	36	.81												
DEC 13 10 JAN 9 1968 13	000	10 12	8.0 11	3 21	.06 .62												
JAN 31		13	D19	35	1.8												
MAR 1 13 APR 1 13	300	16 13	18	35 105	1.7 13												
APR 29 09	940	18	45 7.1	105	.17												
		111325		PURDES CRE	EK NEAR LOM	POC (CALIF	(LAT	34°3	35' 20'	· 1.08	IG 12	0° 24 '	27")			
NOV 20 1017 01		10		84				. (,			,			
NDV 28 1967 09 JAN 2 1968 13	320	8	1.2 1.5	160	•27 •65												
JAN 29 09	930	2	2.0	73	• 39												
FEB 28 09	940	14	1.7 53	86	.39 894		76										
MAR 13 11	125	13	53	6250	894	64	16	B6	90	92	100						SPWC
MAR 28 10	000	12	1.6	76	.33												
APR 26 09	950	14	1.1	98	.29												
MAY 28 09	940	18	.34	98	•09												
					SACRAME	NTO R	IVER I	BASIN									
113'	7582	o sou	TH FORK C	OTTONWOOD	CREEK NEAR	COTTO	NW OOD	. CALI	F. (LAT 4	0°18'5	9".	LONG	122°2	6'52")	
NOV 16 1967 14		16	25	2	.14												
DEC 4			176	130	62												
DEC 4 11	100	8	143	114	44												
JAN 14 1968 10 JAN 14 15	030 535		2450 2950	7730 6230	51100 49600	17 15	24 22	31 29	42 41	54 51	64 60	79 78	91 92	97 98	100	100	VPCW VPCW
JWI4 14 17	,,,		2930	0230	49000	15	22	29	41	21	80	10	72	70	77	100	VFCH
JAN 14 22	215		4410	7890	93900	15	22	28	37	48	59	80	94	98	100		VPCW
JAN 15 04 JAN 15 10	450	7	4170 3510	6520 3990	73400 37800												
JAN 15 12	205		3450	4000	37300	18	26	34	46	58	68	84	95	99	100		VPCW
JAN 15 16	650		2940	3380	26800												
JAN 16 1	315		1200	1200	3890												
JAN 30 09		4	476	254	326	27	32	40	46	48	57	75	96	100			VCBW
JAN 30 09	940		469	254	322												
FEB 1 14	415	5	225	16	9.7 23												
FEB 15 09	930		305	28	23												
FEB 15 09	945		305	32	26												
FEB 18 17	750	10	595	320	514												
FEB 19 09	930		546 610	260 348	383 573	13	23	34	40	43	63	65	77	97	100		SCRW
FEB 19 15	510		782	818	1730												JUDA
				3790	21900												
FEB 19 20 FEB 20 0	940		2140 3110	3790 4500	21900 37800												
FEB 20 15	525		2770	2750	20600	19	28	36	48	60	67	80	95	99	100		VPCW
FEB 21 09	915		2570	3410	23700												
FEB 21 15	520		2650	2770	19800												
FEB 22 08	835		2050	1510	8360	18	26	36	42	44	69	78	93	99	100		VCBW
FEB 22 1	355		1950	1490	7840	16	25	33	38	40	64	73	90	99	100		VCBW
FEB 22 19 FEB 23 13	920 315		1960 2130	1460 1960	7730 11300												
FEB 23 1			2160	2000	11700												
			1610	1140	4960												
FEB 24 10 FEB 25 10	010	11 11	1160	782	2450												
MAY 3 1	240	20	117	4	1.3												
JUN 11 1	300	25	36	4	. 39												
1137886	0 1	RED BAN	K CREEK A	T RAWSON B	ROAD BRIDGE,	NEAR	RED	BLUFF	, CAL	IF. (LAT 4	0°08'	20",	LONG	122°	14 ' 20'')
JAN 15 1968 0	850		589	551	876	41	57	69	78	86	91	96	100				VPWC
JAN 15 0	905	9	578	850 495	1330	18			40		 57	62	68	74	80		SCBW
JAN 15 16 JAN 30 08	63U 820	6	329 490	713	440 943	18 28	28 38	36 47	50	43 51	5 r 78	86	94	99	100	100	ACBM
JAN 30 0	825	6	490	745	986												102
			400														
FEB 19 15	300	12 12	188 228	114 370	58 228	44	58	70	83	86	93	96	99	100			VPWC
FEB 2011111 1	300				VEAR PASKENT				40°01		LONG		30 35				*****
		1137	SOUG ELL	MAGAIN AMA	an ragani	, CA	·	/ **** .		J. ,	LONG		JU J.	. ,			
JAN 16 1968 16	600	8	251	90	61												
JAN 30 1	140	4	212	41	23												
JAN 30 13	145	4	212	52	30								89				CODI
FEB 17 16	700	11 10	502 740	133 359	180 717	32 27	48 39	59 51	66 65	69 76	85 82	87 85	89 90	95 98	100 100		S C B W V P W C
							٠,	-1	-		02	-	,,,	,,,	-50		
MAR 12 1	550	10	106	10	2.9												
MAR 29 09	910 015	11 13	78 34	3	.63 .28												
JUN 25 10	030	21	6.4	1	• 02												
AUG 7 0	910	19	1.3	2	.01											<u></u> .	
SEP 6 1	030	24	1.9	3	.02												

D DAILY MEAN DISCHARGE.

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B, BOTTOM MITHORAMAL TUBE; C, CHENICALLY DISPERSED; N,IN NATIVE WATER; P, PIPET; S, SIEYE; V, VISUAL-ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE TIME	(C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED- SEDIMENT DISCHARGE (TONS/DAY) ACRAMENTO R	IVER B	004 .	.008 . Cont	O16	HE SI .031 d	.062	N MIL .125	. 250	•500	1.00	TED	METHOD OF ANALY- SIS
SEP 27 1967 1210	27	7.0	4	.08							LONG	122	JI JI	, 		
NOV 1 1340	22	1.5	10	.04												
DEC 4 1310	8	61	55	9.1	30	45	67	77	83	95	95	97	99	100		SCBW
JAN 3 1968 1400 JAN 31 1300	7	28 120	8 42	.60 14												
JAN 31 1315	7	120 610	33	11 11100	23	38	55	64	69	85	89	93	96	100		SCBW
FEB 19 1055 FEB 19 1120	9	680	6760 6640	12200	13	17	25	34	47	55	69	85	95	99	100	SCPW
FEB 19 1315		1760	12200	58000												
FEB 19 1330		1860	11700	58800	13	21	30	40	52	58	70	82	94	100		SCPW
FEB 19 1620	9	3130	15500	131000												
FEB 19 1640		3440	14600	136000	17	18	30	40	52	57	69	83	98	100		SCPW
FEB 20 0855 FEB 20 0915		2240 2240	10000 9400	60500 56900	20	26	37	49	61	66	79	91	98	99	100	SCPW
APR 1 1450	10	210	172	98												
APR 1 1455	10	210	166	94	3	25	28	34	20	52	57	62	68	100		VCBW
MAY 1 1335	21	72	15	2.9				34	38							V C.DM
JUN 3 1600	27	24	1	• 06												
JUL 1 1320 JUL 31 1350	26 26	14 1.0	11 13	.42												
002 32 1330				REEK NEAR S	TTPE	CALL	. (L	m 20°	71711	Dr: 1/	ONG 1	22°18	00")			
FEB 1 1968 1610				.81	1160,	CHLII	. (14	11 39	17.10	э", ы	JAG I.	. 18	(ייטט			
FEB 1 1625	7	4.7 4.7	64 55	.70	84	87	90	91	91	93	95	98	99	100		SCBW
FEB 21 1325	10	50	55 75	10	63	71	80	85	87	91	92	94	99	100		SCBW
APR 1 1020 MAY 1 0925	15 17	.80 1.7	30 14	.06												
	11	1.1	14													
JUN 3 0805	23	. 30	10	.01												
				BOLINA	S LAGO	ON BA	SIN									
	114	60160 MOR	SES CREEK	AT BOLINAS	CALI	F. (1	AT 37	°55' 0	9" 1	LONG	22°46	ייפחיי				
				ur Dollinin	, 0	\.		00 0	, ,			, 05 ,				
JAN 15 1968 1200	9	1.6	2	.01		- -										
JAN 16 1200 JAN 29 1215	11 9	1.3 1.2	1 13	.04												
JAN 30 1100	9	2.5	14	.09												
JAN 30 1340	7	2.5	15	•10												
JAN 31 1215	9	1.9	10	.05												
FEB 1 1045	8	1.5	41	.17												
FEB 2 0515 FEB 3 1300	10 11	1.4	7	.03												
FEB 4 1300	11	1.7	5	.02												
FEB 5 1445	10	1.4	3	.01												
FEB 17 1230	12	2.6	24	.17												
FEB 18 1215	11	2.6	11	.08												
FEB 19 1135 FEB 20 1645	12 12	2.1 3.1	6 35	.03 .29												
FEB 21 1430 FEB 22 1515	12 12	4.1 3.1	56 17	.62 .14												
FEB 23 1230	12	1.7	8	.04												
FEB 24 1000	12	1.4	5	.02												
FEB 25 1500	14	1.0	5	.01												
FEB 26 1500	15	.78	3	.01												
FEB 27 1345 FEB 28 1145	7	.65 .53	10 3	.02												
MAR 5 1510	13	.15	í	ő												
MAR 12 1730	12	1.1	30	.09												
MAR 13 1515	12	1.2	14	.05												
APR 8 1210 MAY 7 1150	16	.02	2	0												
MAY 7 1150	15	•02	1	0												
	11460			NEAR BOLINA	AS, CAL	IF. (LAT 3	7°55′	47",	LONG	122°4	0'51")			
NOV 6 1967 1330	17	.07	1	0												
NDV 14 0930 NDV 18 0945	13 13	.25 .09	2	0												
NOV 29 1500	12	.09	6	Ō												
DEC 3 1500	14	.09	1	0												
DEC 5 1230	12	.35	2	0												
DEC 7 1115	12	.17	1	0												
DEC 13 1230 DEC 18 0930	3 8	.06 .18	2 12	0												
JAN 10 1968 1100	9	.75	19	.04												
JAN 12 1230	9	.09	3	0												
JAN 15 1215	10	1.4	15	•06												
JAN 16 1200	11	.05	5	0												
JAN 17 1230 JAN 29 1230	11 9	.21 2.4	3 226	0 1.5	46	60	77	87	91	98	99	100				SBWC

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS; B, BOTTOM WITHDRAWAL TUBE, C, CHENICALLY DISPERSED; N, IN ANATYE WATER; P, PIPET; S, SIEVE; V, VISUAL-ACCUMULATION TUBE; N; IN DISTILLED WATER)

			`	, VISUAL	-ACCOMPLATIC	ופנטו אונ	c; w,	IN D	131111	ED WA	1EK)						
		WATER							P	ARTIC	LE SI	ZΕ					
		TEM- PERA-		CONCEN-	SUSPENDED- SEDIMENT	PERCE	NT ETA	JED TI	JAN TU	E C17	E / TN	MTIA	THET	EDCI	TNDIC	ATED	METHOD OF
		TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	T1 ME	(C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016 .	031 .	062 .	125 .	250	.500	1.00	2.00	SIS
					BOLINAS LAG	OON B	asin	-Cont	inued								
	11-	460165	AUDUBON O	REEK NEAL	BOLINAS, C	ALTP.	(LAT	37°5	5' 47"	LONG	122°	40151	···>	Conti	haun		
1411 30 1040		9	2.4				(1211	J. J.	J 1. ,	LONG	122	10 3	. ,	conti	nueu		
JAN 30 1968 JAN 30	1440	9	1.8	11 15	.07 .07												
JAN 31	1230	9	1.2	4	.01												
FEB 2	1100	8 10	.65 .55	2 6	0 •01												
FEB 2	0550	10	• 22		•01									-			
FEB 3	1315	11	1.4	3	.01												
FEB 4	1315	11 10	.95 .55	2 2	0.01												
FEB 20	0500	12	6.6	14	.25												
FEB 21	1445	12	11	33	.98												
FEB 22	1530	12	5.7	7	.11												
FEB 23	1245	12	4.5	6	.07												
FEB 24	1015	12	3.6	3	-03												
FEB 25 FEB 26	1515	14 15	2.2 1.6	5 2	.03												
MAR 5	1430	14	.18	7 59	0 . 48												
MAR 12	0530	12 12	3.0 2.7	4	.03												
APR 8	1120	11	.13	1	0												
MAY 7	1105	14	.08	2	0												
JUN 18	1130	11	.01	6	D												
JUL 25	1045	15	.01	18	ŏ												
SEP 3	1255	19	.01	4	0												
					EEL	RIVE	R BASI	N									
		114	73100 WILI	IAMS CREI	K NEAR COVE	LO, C	ALIF.	(LAT	39°49	30".	LONG	123°	08 ' 2	5")			
OCT 13 1967	0830	13	1.2	1	0												
NOV 16	1025	11	4.2	3	.03												
DEC 14	1530	3 8	23 710	573	.25 1100	19	26	33	38	41	58	65	79	95	100		VBWC
JAN 16 1968 JAN 16	1240	8	610	486	800	18	25	32	37	40	57	65	76	89	98	100	VBWC
JAN 16	1420	8	570	437	673												
JAN 16 JAN 17	0950	4	510 273	431 148	593 109												
JAN 18	1120	6	180	77	37												
JAN 23	1440	8	62	5	.84												
FEB 21	1315	10	D580	795	1240	13	18	25	29	30	48	65	67	82	98	100	VBWC
FEB 27	1030	12	162	26	11												
MAR 29	1045	9	98 14	4	1.1												
MAY 7 JUN 11	1715	20 24	6.2	8	.04												
JUL 17		27 27	1.4 3.5	6	•02 •06												
AUG 2711111	1442				NEAR COVELO	CAL	IF. (I	AT 30	°44'4	511 T.	ONG 1:	93°10	1150				
250 10 10/7		2		6	.26	, O.L.				υ, Δ							
DEC 12 1967 JAN 17 1968	0905	4	16 353	111	106												
JAN 18	0930	4	231	101	63	24	32	35	39	41	48	56	69	96	100		SBWC
JAN 24	1010	4	75 382	12 97	12.4 100	27	33	40	 45	47	60	70	86	100			VBWC
JAN 31	1000	3	302	71	100	21	33	40	45	41	80	10	80	100			ATMC
FEB 21	1100	11	1360	433	1590	25	34	40	45	47	64	69	78	89	100		VBWC
FEB 26 MAR 28	1800	13 17	279 105	29 4	22 1.1												
JUN 13	0950	17	2.0	4	.02												
					KLAMA	TH RIV	ER BA	SIN									
											', LO	NG 12	2 56	31")			
		11525	BOO WEAVER														
DEC 4 1967		4	43	66	7.7	CITY,	CALLE	'. (La									
DEC 4	1605	115258 4 4 2	43 46 1080	66 64 1630	7.7 7.9 4750						 54	 73	 87	 97	100		VPWC
DEC 4 JAN 14 1968 FEB 19	1605 1700 1755	4 4 2 6	43 46 1080 1540	66 64 1630 2390	7.7 7.9 4750 9940					 42	54	73			100		VPWC
DEC 4 JAN 14 1968	1605 1700 1755	4 4 2	43 46 1080	66 64 1630	7.7 7.9 4750		16	 25				73 		97	100		VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19	1605 1700 1755 1820	4 4 2 6 6	43 46 1080 1540 1540	66 64 1630 2390 2380 2150	7.7 7.9 4750 9940 9900		16	 25	34 36			73 72		 96	100 99		VPWC VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21	1605 1700 1755 1820 1825 1310	4 4 2 6 6 6	43 46 1080 1540 1540 1540 715	66 64 1630 2390 2380 2150 1260	7.7 7.9 4750 9940 9900 8940 2430	14	16	25 	36	42 		72	86 	96			••••
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21	1605 1700 1755 1820 1825 1310	4 4 2 6 6 6 8	43 46 1080 1540 1540 1540 715 715	66 64 1630 2390 2380 2150 1260 1520	7.7 7.9 4750 9940 9900 8940 2430 2930	16	16	25	36	47 	57	72	87 	 96			••••
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21	1605 1700 1755 1820 1825 1310 1400	4 4 2 6 6 6	43 46 1080 1540 1540 1540 715	66 64 1630 2390 2380 2150 1260	7.7 7.9 4750 9940 9900 8940 2430	14	16	25 	36	42 		72	86 	96	99 	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 FEB 21	1605 1700 1755 1820 1825 1310 1400 1405 0940	4 4 2 6 6 6 8 8 8	43 46 1080 1540 1540 1540 715 715 715 715 96	66 64 1630 2390 2380 2150 1260 1520 1380	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3	16	16	25	36 44	47 	57	72	86 	96	99 	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 MAR 18	1605 1700 1755 1820 1825 1310 1400 1405 0940	4 4 2 6 6 6 8 8	43 46 1080 1540 1540 1540 715 715 715	66 64 1630 2390 2380 2150 1260 1520 1380	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3	16	16	27	36	42 47 52	57 61 	72	86 	96	99 	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 FEB 21 JUL 2	1605 1700 1755 1820 1825 1310 1400 1405 0940 1350 1225	4 4 2 6 6 6 8 8 8 3 17 18 18	43 46 1080 1540 1540 1540 715 715 715 96 34	66 64 1630 2390 2380 2150 1260 1520 1380 9	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04	16	16 19 26	25 27 35 	36 44	47 	57 61	72	86 84	96 98 	99 100	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 FEB 21 JEB 21 FEB 31 FEB 3	1605 1700 1755 1820 1825 1310 1400 1405 0940 1350 1225 0930	4 4 2 6 6 6 8 8 8 8 1 1 1 8 1 8 2 2	43 46 1080 1540 1540 1540 715 715 715 96 34 15	66 64 1630 2390 2380 2150 1260 1520 1380 9	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04 .05	16	16 19 26 	27	36	47 52 	57 61 	72 70	86 	96	99	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 FEB 21 JUN 3 JUN 3 JUN 2 AUG 12	1605 1700 1755 1820 1825 1310 1400 1405 0940 1225 0930 1200	4 4 2 6 6 6 8 8 8 3 17 18 18	43 46 1080 1540 1540 1540 715 715 715 96 34 15	66 64 1630 2390 2380 2150 1260 1520 1380 9	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04	16	16	27	36	42 47 52	57 61 	72 70	86 84	96	99 100	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 JUN 3 JUN 3 JUN 3 JUN 2 NOV 14 1967	1605 1700 1755 1820 1825 1310 1400 1405 0940 1225 0930 1200 1152	4 4 2 6 6 6 8 8 8 3 17 18 22 26 26 20 12	43 46 1080 1540 1540 1540 715 715 96 34 15 4.4 .40 NORTH FORK	66 64 1630 2390 2380 2150 1260 1520 1380 9 3 1 4 3 TRINITY	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04 .05 .01	14 	16 	25 	36 44 	47 52 46:55'	57 61 	72 70 NG 12	86 84 	96 98 (40")	99 100	100	VPWC
DEC 4 JAN 14 1968 FEB 19 FEB 19 FEB 21 FEB 21 FEB 21 MAR 18 MAY 1 JUN 3 JUL 2 AUG 12 NOV 14 1967 NOV 15	1605 1700 1755 1820 1825 1310 1405 0940 1225 0930 1200 1152 1720	4 4 2 6 6 6 8 8 8 3 17 18 12 22 26 500 12 9	43 46 1080 1540 1540 1550 715 715 715 715 715 74.4 34 15 4.4 .40 NORTH FORK	66 64 1630 2390 2380 2150 1260 1520 1380 9	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04 .05 .01 RIVER AT HE	14 16 22 	16 	25 	36 44 	47 52 46 * 55*	57 61 ', LOI	72 70 9G 12	86 	96 98 40")	99 100	100	VPWC
DEC 4	1605 1700 1755 1825 1310 1400 1405 0940 1225 0930 1200 1152 1720 1740	4 4 2 6 6 6 8 8 8 3 17 18 22 26 26 20 12	43 46 1080 1540 1540 1540 715 715 96 34 15 4.4 .40 NORTH FORK	66 64 1630 2390 2380 2150 1260 1520 1380 9 3 1 4 3 TRINITY	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04 .05 .01	14 	16 	25 	36 44 	47 52 46:55'	57 61 	72 70 NG 12	86 84 	96 98 (40")	99 100	100	VPWC
DEC 4- JAN 14 1968 FEB 19. FEB 19. FEB 19. FEB 21. FEB 21. FEB 21. JUN 3. JUN 3. JUL 2. AUG 12. NOV 14 1967 NOV 15. NOV 15.	1605 1700 1755 1825 1825 1310 1400 1405 1225 0930 1225 1720 1152 1720 1740 1740	4 4 2 6 6 6 8 8 8 3 17 18 18 22 26500	43 46 1080 1540 1540 1557 715 715 715 96 34 15 4.4 .40 NORTH FORK 408 197 169	66 64 1630 2390 2380 2150 1260 1520 1380 9 9 3 1 4 3 TRINITY	7.7 7.9 4750 9940 9900 8940 2430 2930 2660 2.3 .28 .04 .05 .01 RIVER AT HE	14 16 22 ELENA,	16	25 27 35 35	36 44 AT 40°	47 52 46 * 55*	57 61 ', LO	72 70 RG 12	86 84 	96 98	99 100	100	VPWC

D DAILY MEAN DISCHARGE.

SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE V, VISUAL-ACCUMULATION TUBE; N, IN DISTILLED WATER)

		WATER	ı						Р	ARTIC	LE S	ΙZΕ					
		TEM- PERA-		CONCEN-	SUSPENDED- SEDIMENT	PERCE	NT FIN	ER TH	AN TH	E SIZ	E (I)	N MIL	LIMETE	RS)	INDI	CATED	METHOI OF
DATE	TIME	TURE (C)	DISCHARGE (CFS)	(MG/L)	DISCHARGE (TONS/DAY)	.002	.004 .	. 800	016 .	031 .	062	.125	.250	500	1.00	2.00	ANALY- SIS
					KLAMATH R												
	11526	500	NORTH FORK	TRINITY	RIVER AT HE	LENA,	CALIF.	(LAT	40°4	6' 55"	, LO	NG 12	3°07'4	10")-	-Con	tinue	1
JAN 4 1968		1	177	1	.48												
JAN 13		3	560	10	15												
JAN 13 JAN 13		3 4	682 860	24 19	44 44												
JAN 14		6	3610	622	6060	1	9	21	28	33	72	80	94	100			SCBW
JAN 14	1200	6	3230	594	5180	2	9	20	27	31	68	75	90	100			SCBW
JAN 14		6	3100	666	5570												
JAN 14		4	3940	962	10200								==				
JAN 14 JAN 15	1130	7	3940 3730	1240 713	13200 7180	5	12	17	26	34	45	60	77	94	99	100	VPWC
FEB 19 MAR 18		7	2380 466	1020 5	6550 6.3												
MAY 1	1500	12	287	2	1.5												
JUN 3	1330	14	224	ī	.60												
JUL 2	1110	17	72	1	.19												
AUG 12	1420	21	28	1	.08												
		1152	7000 TRIN	TY RIVER	NEAR BURNT	RANCH	, CALI	F. (L	AT 40	°47'2	o",	LONG :	123°26	3 ' 20')		
OCT 17 1967	1630	14	369	2	2.0												
NOV 20		10	474	43	55												
DEC 5		5	1500	58	235												
JAN 8 1968 FEB 7		4	574 2290	13 38	20 235												
MAR 12		8	1650	12	53												
JUN 22		26	522	2	2.8												
AUG 21	1400	20	346	2	1.9												
		Р	ARTICLE SI	ZE OF BEI	MATERIAL, I	WATER					SEPTI	EMBER					
		DS OF	ARTICLE SIZ	ZE OF BED O, OPTI		WATER		s, s	IEVE;	v. v	SEPTI I SUAI	EMBER		TION	TUBE:		
		DS OF	ARTICLE SIZ	ZE OF BED O, OPTI	MATERIAL, I	WATER		s, s		v. v	SEPTI I SUAI	EMBER		TION	TUBE:	 ,	METHOD
		DS OF	ARTICLE SI: ANALYSIS: ITER NUMBER M- OF RA- SAM-	ZE OF BED O, OPTI	MATERIAL, I Cal analyzei Peri	WATER	PIPET	S, S	IEVE; PARTI	V, V	SEPTI I SUAI	EMBER L-ACCI	UMULA1				OF
		DS OF WA TE PE TU	ARTICLE SIZ ANALYSIS: TER NUMBER M- OF	ZE OF BED O, OPTI R DISCHA	MATERIAL, I CAL ANALYZEI PERI RGE	WATER R;,P,	PIPET;	HAN T	IEVE; PARTI HE S1	V, V CLE S ZE (I	SEPTI ISUAI IZE N MI	EMBER L-ACCI	UMULA1	IND	CATE	D	
	(METHO	DS OF WA TE PE TU	ARTICLE SI; ANALYSIS: TER NUMBER M- DF RA- SAM- RE PLING	ZE OF BED O, OPTI R DISCHA	PERIOR PERIOR PAGE	WATER R;,P,	PIPET;	S, S	IEVE; PARTI HE S1 0 2.	V, V CLE S ZE (I	SEPTI ISUAI IZE N MI	EMBER L-ACCI	UMULA1	IND	CATE	D	OF ANALY-
	(METHO	DS OF WA TE PE TU	ARTICLE SI; ANALYSIS: THE NUMBER THE OF RA- SAM- RE PLING C) POINT!	ZE OF BED O, OPTI R DISCHA	PERIOR OF SACRAI	WATER R;,P,	INER T	HAN TO 1.0 BASIN	IEVE; PARTI HE S1 O 2.	V, V CLE S ZE (1	SEPTI ISUAI IZE N MII	EMBER L-ACCI LLIME 8.00	TERS)	INDI 00 3	CATE:	D	OF ANALY-
DATE	(METHO	DS OF WA TE PE TU IE (ARTICLE SI; ANALYSIS: THE NUMBER THE OF RA- SAM- RE PLING C) POINT!	DISCHAS (CFS	PERIAL, I CAL ANALYZEI PERI RGE .) .062 . SACRAI	WATER R;,P, CENT F 125 .2 MENTO	PIPET; INER T 50 .50 RIVER , CALI	HAN TO 1.0 BASIN	IEVE; PARTI HE S1 0 2.	V, V CLE S ZE (1 00 4 °40'4	SEPTI ISUAI IZE N MII	EMBER L-ACCI LLIME 8.00	16.0 122°31	IND1 00 :	CATE: 32.0 6	D	OF ANALY- SIS
DATE FEB 19, 196	(METHO	PE TU	ARTICLE SI: ANALYSIS: TER NUMBER M- OF RA- SAM- RE PLING C) POINT: 500 GRIND: 9 1	ZE OF BED O, OPTI R DISCHA	MATERIAL, I CAL ANALYZEI PERI IRGE) .062 .: SACRAI	WATER R;,P, CENT F 125 .2 MENTO	PIPET; INER T 50 .50 RIVER , CALI	HAN TO 1.0 BASIN	IEVE; PARTI HE S1 0 2.	V, V CLE S ZE (1	SEPTI ISUAL IZE N MI	EMBER L-ACCI LLIME 8.00	16.0 122°31	INDI 00 3	CATE:	D	OF ANALY- SIS S
DATE FEB 19, 196 FEB 19	(METHO TIM 8 114 . 114	PEDS OF TU	ARTICLE SIZ ANALYSIS: Analysis: Anal	DISCHAS OF BEE OF DET OF OF TONE CRE 760 800 825	PERIOR SACRAI	WATER R;,P, CENT F 125 .2 MENTO CREEK 2	PIPET: INER T 50 .50 RIVER , CALL 12 3 3 2 1	HAN TO 1.00 BASING F. (L. 17 4 8 1 1 0 3	PARTI HE S1 0 2. AT 39 0 0 2	V, V CLE S ZE (I 00 4 °40'4 44 15 74	SEPT! ISUAL IZE N MI .00	EMBER L-ACCI LLIME 8.00 LONG 64 40 96	16.0 122°31	IND1 00 3 1'43'	CATE:	0 54.0	OF ANALY- SIS S S S
DATE FEB 19, 196 FEB 19 FEB 19	(METHO TIM 8 114 • 114 • 114	PDS OF WAR	ARTICLE SIZ ANALYSIS: ITER NUMBER MA- DF RA- SAM- GRE PLING C) POINT: 500 GRIND: 9 1 9 1 9 1	ZE OF BEI O, OPTI DISCHA S (CFS STONE CRE 760 800 825 850	PERIAL, ICAL ANALYZEI RGE) .062 .: SACRAI EK NEAR ELK	WATER R;,P, CENT F 125 .2 MENTO CREEK 2	INER TO .50 .50 RIVER , CALL 12 3 2 1	HAN TO 1.00 BASING F. (L. 7 4 8 1 1 0 3 3 3	IEVE; PARTI HE S1 0 2. AT 39 0 0 2	V, V CLE S ZE (I 00 4 °40'4 44 15 74 17	SEPTI TSUAL IZE N MI .00	EMBER L-ACCI LLIME 8.00 LONG 64 40 96 38	16.0 122°31	IND:	CATE:	0 54.0 100 100	OF ANALY- SIS S
DATE FEB 19, 196 FEB 19 FEB 19 FEB 19	(METHO TIM 8 114 . 114 . 114	PDS OF TE PE TU IE (11386	ARTICLE SIZ ANALYSIS: ITER NUMBER MF DF RA- SAM- RE PLING C) POINT: 500 GRIND: 9 1 9 1 9 1 9 1	DISCHAS DISCHAS CFS TONE CRE 760 822 850 880	PERIAL, I CAL ANALYZEI RGE SACRAI EK NEAR ELK	WATER R:,P, CENT F 125 .2 MENTO CREEK 2	INER TO .50 RIVER , CALI	HAN TO 1.0 BASIN	PARTI HE S1 0 2. AT 39 0 0 2 9 7	V, V CLE S ZE (I 00 4 °40'4 44 15 74 17	SEPTI ISUAL IZE N MI .00 6", : 52 25 92 27 20	EMBER L-ACCI LLIME 8.00 LONG 64 40 96 38 34	TERS) 16.0 122°31	IND:	CATE: 32.0 6 7) 100 85 57 91	100 100 100	OF ANALY- SIS S S S S
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46 60 51 65

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