STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

Bulletin No. 65

QUALITY OF SURFACE WATERS IN CALIFORNIA

1955-1956

GOODWIN J. KNIGHT
Governor

HARVEY O. BANKS
Director of Water Resources

December, 1957

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STATE OF CALIFORNIA

Department of Water Resources

SACRAMENTO

December 18, 1957

Honorable Goodwin J. Knight, Governor, and
Members of The Legislature of The
State of California

State Water Pollution Control Board

Gentlemen:

I have the honor to transmit herewith a report on the quality of surface waters in California. This is the second in a series of reports concerning this important matter.

In April, 1951, this Statewide Stream Sampling Program was initiated at the request of the State Water Pollution Control Board, and since that time has been conducted by the Department of Water Resources, as authorized by Section 229 of the Water Code in cooperation with the State Department of Public Health, Bureau of Sanitary Engineering, the State Department of Fish and Game, and with various other agencies and individuals. Its objective is to secure data on prevailing quality of water in the major streams and lakes of California. These data are utilized by the Department of Water Resources in conducting water resources development studies and implementing The California Water Plan, by the regional water pollution control boards in establishing waste discharge requirements for protection of surface waters in California and by other water service agencies throughout the State.

This report covers the period January, 1955 through December, 1956, and presents monthly analyses of water from 150 sampling points.

Very truly yours,

Harvey O. Banks

HARVEY O. BANKS
Director

ACKNOWLEDGMENT

The extensive coverage of the Statewide Stream Sampling Program is made possible through the cooperation of state, local and federal agencies. Through the coordinated efforts of these agencies, this sampling program encompasses the monthly collection of about 150 water samples throughout the state.

The helpful cooperation of the following agencies is gratfully acknowledged:

United States Corps of Engineers

United States Geological Survey

California Disaster Office, Radiological Services

State Department of Fish and Game

State Department of Public Health, Bureau of Sanitary Engineering

State Department of Public Health, Division of Laboratories

State Water Pollution Control Board

Los Angeles County Flood Control District

Ventura County, Department of Public Works

City of Los Angeles, Health Department

City of Los Angeles, Department of Water and Power

City of San Bernardino

City of San Francisco

City of Long Beach, Department of Public Health

Kern County Canal Company

Kings River Water Association

Metropolitan Water District of Southern California

Office of the Watermaster, Truckee and Carson Rivers

Truckee-Carson Irrigation District

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NOTE: Pursuant to Chapter 52, Statutes of 1956, effective July 5, 1956, the Department of Water Resources succeeded to all of the functions, duties and responsibilities formerly assigned to the Division of Water Resources. The Division of Water Resources was organized as follows:

DIVISION OF WATER RESOURCES

Harvey O. Banks* . . . . . State Engineer

L. C. Jopson . . . . . Assistant State Engineer

Carl B. Meyer . . . . . Principal Hydraulic Engineer
Chief - Water Quality Function

Henry Holsinger . . . . . Principal Attorney

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*A. D. Edmonston was State Engineer until his retirement on November 1, 1955.

CHAPTER I INTRODUCTION

In California, as elsewhere, agricultural, industrial, and urban water uses contribute significant amounts of waste to surface and underground supplies. In some instances these wastes are harmful or potentially so as to the State's water resources. The early detection and control of water quality degradation is imperative if the fullest practicable beneficial uses are to be made of the available supplies.

In order to secure the data necessary to protect and monitor the quality of the State's surface water supplies, a continuing stream sampling program was initiated in April, 1951, at the request of the State Water Pollution Control Board. This program has since that time been conducted by the Department of Water Resources in cooperation with various agencies and individuals. A similar program to monitor the mineral quality of ground water in important basins throughout the State was begun in 1953.

The stream sampling program reported herein comprises the monthly collection of water samples from surface streams throughout the State. Monthly reports of mineral analyses of these samples are published by the Department of Water Resources following receipt of the analyses from the laboratories and distributed to cooperating and interested agencies.

This is the second of a series of reports presenting water quality data collected under this program for major streams and lakes of California and covers the period January, 1955, through December, 1956. These reports summarize the data published in the monthly reports and present a brief evaluation of the mineral characteristics of the sampled waters.

Authorization

The stream sampling program reported herein is authorized by Section 229 of the Water Code. This section, as amended, directs that:

> "The Department of Water Resources shall investigate conditions of the quality of all waters within the State, including saline waters, coastal and inland, as related to all sources of pollution of whatever nature and shall report thereon to the Legislature and to the appropriate regional water pollution control board annually, and may recommend any steps which might be taken to improve or protect the quality of such waters."

Purpose and Scope

The general objectives of the surface water sampling program are: (1) to secure information on present or prevailing quality of water in the major streams and lakes throughout the State of California; (2) to secure data useful for evaluating salt balance conditions; and (3) to provide a continual check on quality of water. These data provide a basis for determination of the water quality aspects of the California Water Plan and other water resources developments.

At present the program entails analyses of water samples collected at monthly intervals from 150 sampling stations located on 90 major California streams and lakes as shown on Plate 1. The ultimate objective of the program is to secure continuous and reliable water quality data at a network of sampling stations located so as to represent practically all of the surface drainage of California, both above and below present or potential sources of pollution or degradation. Water analyses made in connection with this program include mineral, radiological and bacterial tests.

This report presents a brief discussion and generalized appraisal of the mineral characteristics of surface water throughout the State. In the future, it is anticipated that subsequent reports will be greatly expanded to include a detailed appraisal of water quality characteristics for each stream from which water samples are obtained. This detailed appraisal will include: (1) a discussion of the mineral, radiological and bacterial characteristics; (2) enumeration and discussion of major waste discharges on each stream covered in the program; and (3) evaluation of significant changes in quality detected during the reporting period. Additional sampling stations will be added to the program as conditions dictate and time and availability of funds permit.

Field Methods and Procedures

Agencies participating in the field sampling program are listed below together with the number of stations sampled monthly by each agency:

Agency	Number of Stations Sampled
Department of Water Resources	114
Department of Public Health, Bureau of Sanitary Engineering	24
Department of Fish and Game	1
United States Corps of Engineers	4
Metropolitan Water District of Southern California	2
City of San Bernardino	2
City of Los Angeles, Department of Water and Power	1
City of Los Angeles, Health Department	1
City of Long Beach, Department of Public Health	1
TOTAL	150

Water samples are collected each month for mineral analysis and bacterial examination. In addition, samples are collected twice a year for radiological assay. Samples obtained for bacterial examination are kept in the field in portable ice boxes while in transit to the laboratory for examination.

In addition to collecting the above described samples, sampling personnel make field determinations of dissolved oxygen (DO) by use of the Modified Winkler Method. Determination of water temperature and pH is also made at point of collection and physical conditions of the water from visual inspection are noted.

Nearly all of the sampling stations are situated at or near stream gaging stations and gage heights are recorded at the time the water samples are collected. Instantaneous stream discharges at the time of sample collection are subsequently obtained.

Laboratory Methods and Procedures

Complete mineral analyses, including the determination of heavy metals and radiological assays are performed on samples collected usually in May and September, because it is during these spring and fall months that extremes in flow conditions usually occur. Partial mineral analyses of water samples collected in the remaining months are deemed sufficient to permit detection of any significant variation in mineral character of the water. Duplicate bacterial examinations are performed on samples collected monthly throughout the entire year.

Mineral analyses and determination of heavy metals are performed by the Water Quality Branch of the United States Geological Survey, and by

the Department of Water Resources laboratories located in Sacramento, San Bernardino, and Riverside. Radiological assays are performed by the California Disaster Office radiological laboratory in Sacramento, and bacterial examinations are made by the California Department of Public Health, Division of Laboratories, in Berkeley and Los Angeles.

The procedures used in radioassays of stream samples are described in the California Disaster Office communication shown in Appendix B.

Methods of mineral and bacterial analyses in general are those described in the American Public Health Association publication entitled "Standard Methods for the Examination of Water and Sewage" 10th Edition, 1955. In some cases, the methods described in the following publications also have been employed: (1) U. S. Geological Survey, "Methods of Water Analysis", 1950. California Department of Public Works, Division of Water Resources, "Methods of Analysis", October, 1955.

The following tabulation indicates the constituent analyzed for in the various types of analyses performed in connection with this program.

Constituent	Analyses			
	Complete mineral	Partial mineral	Bacterial	Radiological
Specific Conductance	X	X		
pH	X			
Total Dissolved Solids	X			
Per Cent Sodium	X	X		
Hardness	X	X		
Turbidity	X	X		
Coliform			X	
Temperature **	X	X		
Dissolved Oxygen **	X	X		
Calcium	X	X		
Magnesium	X	X		
Sodium	X	X		
Potassium	X	X		
Carbonate	X	X		
Bicarbonate	X	X		
Sulfate	X			
Chloride	X	X		
Nitrate	X			
Fluoride	X			
Boron	X	X		
Silica	X			
Phosphate*	X			
Zinc*	X			
Iron*	X			
Copper*	X			
Aluminum*	X			
Magnesium*	X			
Arsenic*	X			
Hexavalent Chromium*	X			
Lead*	X			
Dissolved Alpha				X
Solid Alpha				X
Dissolved Beta				X
Solid Beta				X

* These constituents are normally designated as heavy metals.

** Field Determinations

Water Quality Criteria

Criteria currently used by the Department of Water Resources to determine acceptability of water for the most common beneficial uses are described hereinafter. In general the values presented herein should be considered only as guides to judgment, and not as absolute limiting standards.

Criteria for Drinking Water

Water that is used for drinking and culinary purposes must be clear, colorless, odorless, pleasant to the taste, and must not endanger the lives or health of human beings. These general requirements pertain to the water as it is finally delivered to the consumer.

Chapter 7 of the California Health and Safety Code contains laws and standards relating to domestic water supply. Section 4010.5 of this code refers to the drinking water standards promulgated by the United States Public Health Service for water used on interstate carriers. These criteria have been adopted by the State of California. They are set forth in detail in United States Public Health Report, Volume 61, No. 11, March 15, 1956.

According to Section 4.2 of the above-named report, chemical substances in drinking water supplies, either natural or treated, should not exceed the concentrations shown in Table I.

TABLE I

LIMITING CONCENTRATIONS OF MINERAL CONSTITUENTS

FOR DRINKING WATER

United States Public Health Service
Drinking Water Standards, 1946

Constituent	Parts per million
Mandatory	
Fluoride (F)	1.5
Lead (Pb)	0.1
Selenium (Se)	0.05
Hexavalent Chromium	0.05
Arsenic (As)	0.05
Non-Mandatory but Recommended Values	
Iron (Fe) and Manganese (Mn) together	0.3
Magnesium (Mg)	125
Chloride (Cl)	250
Sulfate (SO_4)	250
Copper (Cu)	3.0
Zinc (Zn)	15
Phenolic Compounds in terms of Phenol	0.001
Total Solids, desirable	500
permitted	1,000

The suspected relationship of infant methemoglobinemia occurrence to nitrates in the water supply has led to limitation of allowable nitrates in drinking water. The California State Department of Public Health has recommended a tentative limit of 10 ppm nitrate nitrogen (44 ppm nitrates) for domestic waters. Any water containing higher concentrations should be considered of questionable suitability for domestic and municipal use.

Limits may be established for other organic or mineral substances if their presence in water renders it hazardous, in the judgment of State or local health authorities.

An additional factor with which users are concerned is the hardness of the water. Hardness is due principally to carbonates and sulfates of calcium and magnesium, and is generally evidenced by inability to develop suds when using soap. In general domestic use, hardness can result in increased soap consumption, excessive repairs to plumbing, and the necessity or desirability of maintaining individual water softening appliances. The following classification for degree of hardness has been suggested by the United States Geological Survey.

Class	Range of Hardness in ppm	
1	0-55	Soft
2	56-100	Slightly hard
3	101-200	Moderately hard
4	201-500	Very hard

Criteria for Irrigation Water

Because of the diverse climatological conditions, crops, soils, and irrigation practices in California, criteria which may be set up to establish the suitability of water for irrigation use must necessarily be of a general nature, and judgment must be used in their application to individual cases. Dr. L. D. Doneen, Professor of Irrigation at the University of California at Davis, a recognized authority on irrigation water quality, has suggested limiting values for total dissolved solids, chloride concentration, per cent sodium and boron concentration for three general classes of irrigation water as shown in Table 2.

TABLE 2

QUALITATIVE CLASSIFICATION OF IRRIGATION WATERS

Chemical Properties	Class I "Excellent to good Suitable under most conditions"	Class II "Good to injurious Suitability dependent on soil, crops, climate and other factors"	Class III "Injurious to Unsatisfactory Unsuitable under most conditions"
Total dissolved solids			
In ppm	Less than 700	700-2,000	More than 2,000
In conductance EC x 10^6	Less than 1,000	1,000-3,000	More than 3,000
Chloride ion concentration			
In milliequivalents per liter	Less than 5	5-10	More than 10
In ppm	Less than 175	175-350	More than 350
Sodium in per cent of base constituents	Less than 60	60-75	More than 75
Boron in ppm	Less than 0.5	0.5-2.0	More than 2.0

Criteria for Industrial Uses

The water quality criteria for the diversified uses of water in industry range from the exacting requirements for make-up water for high pressure boilers to the minimum requirements for water for washdown and metallurgical processing.

Industrial uses of water also include water utilized for food processing purposes. It may be stated that with the exception of certain canning operations such waters should at least conform to the quality requirements previously cited for drinking water supplies. Some food processing industries are even more exacting in their water quality requirements than those set forth in the United States Public Health Service "Drinking Water Standards".

Because of the large number of industrial uses of water and widely varied quality requirements, it is practicable to establish only very broad criteria of quality. These variable conditions make it desirable to consider water quality requirements in broad and general terms only, and where possible, for groups of related industries rather than individually. The general quality requirements of several individual and major groups of water uses are listed in Table 3. The values shown in this table are those suggested in the Progress Report of the Committee on Quality Tolerance of Water for Industrial Uses in the Journal of the New England Water Works Association, Volume 54, 1940.

TABLE 3

WATER QUALITY TOLERANCE FOR INDUSTRIAL USES[a]

Allowable limits in parts per million

Use	Turbidity	Color	Hardness as $CaCO_3$	Iron as Fe[c]	Manganese as Mn	Total solids	Alkalinity as $CaCO_3$	Odor taste	Hydrogen sulfide	Miscellaneous Requirements	
										Health	Other
Air Conditioning				0.5	0.5			Low	1		No corrosiveness, slime formation.
Baking	10	10		0.2	0.2			Low	0.2	Potable[b]	
Brewing											
Light beer	10			0.1	0.1	500	75	Low	0.2	Potable[b]	NaCl less than 275 ppm (pH 6.5-7.0).
Dark beer	10			0.1	0.1	1,000	150	Low	0.2	Potable[b]	NaCl less than 275 ppm (pH 7.0 or more)
Canning											
Legumes	10		25-72	0.2	0.2			Low	1	Potable[b]	
General	10			0.2	0.2			Low	1	Potable[b]	
Carbonated beverages	2	10	250	0.2	0.2	850	50-100	Low	0.2	Potable[b]	Organic color plus oxygen consumed less than 10 ppm.
Confectionery				0.2	0.2	100		Low	0.2	Potable[b]	pH above 7.0 for hard candy.
Cooling	50		50	0.5	0.5				5		No corrosiveness, slime formation.
Food: General	10			0.2	0.2			Low		Potable[b]	
Ice	5	5	50	0.2	0.2			Low		Potable[b]	
Laundering			50	0.2	0.2						SiO_2 less than 10 ppm.
Plastics, clear,											
Uncolored	2	2		0.2	0.2	200					
Paper and pulp:											
Groundwood	50	20	180	1.0	0.5						No grit, corrosiveness.
Kraft pulp	25	15	100	0.2	0.1	300					
Soda and sulfide	15	10	100	0.1	0.05	200					
High-grade light papers	5	5	50	0.1	0.05	200					
Rayon (viscose):											
Pulp production	5	5	8	0.05	0.03	100	total 50; hydroxide 8				Al_2O_3 less than 8 ppm, SiO_2 less than 25 ppm, Cu less than 5 ppm.
Manufacture	0.3		55	0.0	0.0						pH 7.8 to 8.3
Tanning	20	10-100	50-135	0.2	0.2		total 135; hydroxide 8				
Textiles: General	5	20		0.25	0.25						
Dyeing	5	5-20		0.25	0.25	200					Constant composition. Residual alumina less than 0.5 ppm.
Wool scouring		70		1.0	1.0						
Cotton bandage	5	5		0.2	0.2			Low			

a-Moore, E. W., Progress Report of the Committee on Quality Tolerances of Water for Industrial Uses: Journal New England Water Works Association, Volume 54, Page 271, 1940.

b-Potable water, conforming to U.S.P.H.S. standards, is necessary.

c-Limit given applies to both iron alone and the sum of iron and manganese.

CHAPTER II - SURFACE WATER QUALITY

In 1955 and 1956 the streams emanating from the Coast Ranges north of San Francisco and from the Sierra Nevadas contained waters of excellent quality, with total dissolved solids generally below 150 parts per million (ppm).

Streams draining the coastal areas extending southerly from San Francisco to the Mexican boundary, and those draining into the Colorado and Lahontan basins contained waters varying from good to poor quality with total dissolved solids ranging up to 1,000 ppm.

These streams as they pass from their mountain watersheds through the valley floor or coastal plain, receive irrigation return flow, ground water drainage, and waste water discharges, resulting in progressively greater concentration of salts with increasing distance from the mountains. In fact, during summer and early fall, flow in portions of many streams is comprised almost entirely of water from these sources.

Radiological assays of surface waters conducted as part of this program indicate no significant amounts of radioactivity other than normal background counts during this reporting period.

North Coastal Region (No. 1)

Stream sampling stations in the North Coastal Region are presently located on the following streams: (1) Klamath River, (2) Smith River, (3) Trinity River, (4) Eel River, (5) South Fork Eel River, (6) Russian River, and (7) East Fork Russian River.

Surface waters in this region are generally of bicarbonate type with calcium and magnesium constituting the major cations. Mineral analyses of samples display but comparatively little variation in mineral constituents

with remarkably low concentrations of total dissolved solids, low per cent sodium, and are generally very soft. Under conditions of abundant rainfall, and sustained stream flow throughout the year, there is little opportunity for the wide variation in mineral concentration and composition which characterize the waters of most arid regions.

A study of water analyses reveals that, except for occurrence of relatively high concentrations of boron in the Russian River during summer months, the waters in the streams sampled are of excellent quality and well suited for most beneficial uses except that for domestic and municipal uses, some treatment and purification would be necessary.

The waters of the Eel River, especially samples obtained at the stations near McCann and Scotia during the summer months, show total hardness in the slightly to moderately hard classification.

As reported in Water Quality Investigations Report No. 15, "Quality of Surface Waters in California, 1951-1954", boron was detected in the Russian River at Healdsburg and was found to originate in waste from a dry-ice manufactu ing plant located between Hopland and Healdsburg. Upon further investigation by the North Coastal Regional Water Pollution Control Board and this Department, the source of this pollution was found to be a deep well supplying the dry-ice plant. During the period of investigation, the plant was discharging approxi-mately 500 to 750 gallons per minute of waste water from this carbon dioxide well to the Russian River. Samples of this water contained from 404 to 690 ppm of boron as well as extremely high concentrations of other mineral con-stituents. For the period January, 1955 to January, 1956, boron content of the Russian River at Healdsburg, below the waste discharge, ranged from 0.11 to 4.3 ppm. Operation of the plant was halted in July, 1956. The quality of water in the Russian River at Healdsburg will be observed to determine whether this plant shut-down will alleviate the boron problem.

No other significant trends in mineral composition or concentration of surface waters in the North Coastal Region are evidenced in analyses obtained during the course of this program. Seasonal variations in water quality are shown graphically on Plates 2 through 5 for selected streams within the region. Sampling station data for this region are shown in Table 1 of Appendix A, and analyses in Tables 10 and 19 of this appendix.

San Francisco Bay Region (No. 2)

Surface water samples are presently collected from the following San Francisco Bay Region streams: (1) Napa River, (2) Alameda Creek, (3) Los Gatos Creek, (4) Coyote Creek.

Surface runoff of the San Francisco Bay Region is generally of good to excellent mineral quality and suitable for domestic, agricultural, and industrial uses with exception of the tidewater reaches. The waters of the region are principally of the bicarbonate type, and the dominant base is either calcium, magnesium or sodium, dependent upon mineral composition of the rock formations in the drainage basin.

Analyses of samples show the waters to be slightly to moderately hard. Although waters of the region are suitable for most uses; samples collected from Alameda Creek near Niles contained concentrations of total dissolved solids near the upper limit for Class I irrigation water while boron concentration has been noted as high as 1.8 ppm. A few of the smaller streams including those tributary to Napa River and Coyote Creek, occasionally have boron content near the upper safe limit for boron sensitive plants.

Mineral concentration of waters at Alameda Creek near Niles shows a gradual increase through the summer months of 1955, and a subsequent decrease from that time through the summer of 1956. During December, 1955, and January, 1956, these waters showed a marked decrease in total dissolved solids, chlorides, and total hardness. Insufficient data are available to predict with any degree of certainty whether this is a cyclic phenomenon or whether it is due to the flushing action of flood runoff waters. Seasonal variations in water quality are shown graphically on Plate 6 for Alameda Creek near Niles.

Sampling station and analyses data are presented in Tables 2, 11 and 20 of Appendix A.

Central Coastal Region (No. 3)

Samples are collected from the following Central Coastal Region streams: (1) Salinas River, (2) Santa Ynez River, (3) San Lorenzo River, (4) Soquel Creek, (5) Pajaro River, (6) Carmel River, (7) Uvas Creek.

Surface waters in the coastal drainage from the Santa Lucia and Gabilan Ranges and from Santa Ynez, San Rafael, and Santa Cruz Mountains are generally of good quality, with low total dissolved solids, per cent sodium, and boron. Total hardness of these waters is low and generally suitable for most household uses. The coastal streams are uniformly calcium-magnesium bicarbonate type waters. Many streams draining interior basins are high in sulfate and have relatively high total dissolved solids. They usually contain significant amounts of boron, probably originating from juvenile waters rising along faults.

During periods of flood runoff, the waters in most streams of this region are of good mineral quality and suitable for all but the most exacting uses. However, the periods of low flow water in many of the major streams

consist largely of return irrigation waters and mineralized ground water drainage. During these low flow periods mineral concentrations approach maximum limits of usability.

Surface inflow to the Salinas River Basin from Santa Lucia Range, and from the part of its drainage area above the mouth of Nacimiento River, is generally low in total dissolved solids, boron, and per cent sodium, and is a bicarbonate type water.

Water from the Santa Maria River near Santa Maria shows higher calcium sulfate than inflow from Sisquoc River, and the latter is lower in total dissolved solids than flow of either Cuyama or Santa Maria Rivers. Except during brief periods of flood flow the mineral content of the Cuyama and Santa Maria Rivers approaches the upper limit of Class I irrigation water.

In addition to seasonal fluctuations in mineral concentrations, some general trend toward greater mineral concentration in certain streams of the Central Coastal Region have been evidenced in analyses performed under this program. In contrast to this, samples collected from Pajaro River near Chittenden show a gradual build up of total dissolved solids and increase in chloride concentration through the summer of 1954, a slight decrease in the summer of 1955, and a sharp decline between December, 1955, and January, 1956. Here as elsewhere this latter decline as well as the notably lower mineral concentrations during the subsequent summer may be attributed to the unusually high flood flows during December, 1955, and January, 1956. The aforementioned increase and subsequent decrease in mineral concentration in samples from Pajaro River near Chittenden is illustrated on Plate 7. As may be seen there is a marked decrease in concentration of mineral solubles with increased flow during the winter runoff months.

Sampling station and analyses data are presented in Tables 3, 12 and 21 of Appendix A.

Los Angeles Region (No. 4)

Stream sampling stations in the Los Angeles Region are presently located on the following streams: (1) Matilija Creek, (2) Ventura River, (3) Santa Clara River, (4) Los Angeles River, (5) Rio Hondo, (6) Mission Creek, (7) San Gabriel River, (8) Metropolitan Water District Aqueduct at La Verne, and (9) Mono-Owens Aqueduct at San Fernando Reservoir.

Surface waters in this region vary widely in character according to location. Quality is generally better in most streams during periods of high flow than during periods of low flow. Since annual runoff during the reporting period was considerably less than the long time mean values for most of the natural streams in the Los Angeles Region, the general water quality was below normal.

The Los Angeles River in its lower reaches serves as a drainage channel through the Los Angeles Metropolitan Area. The flows monitored, particularly at Station No. 48, (Los Angeles River at Long Beach) include varying quantities of wastes which have a pronounced effect upon water quality. An illustration of the wide range in mineral concentration of water sampled at this station during the reporting period may be seen in Table 13 were chloride concentration varied between 172 parts per million in February, 1955, and 8275 parts per million in May, 1956.

The San Gabriel River at Azusa contains varying amounts of Colorado River water released from Morris Reservoir. Colorado River water has also periodically been released from Puddingstone Reservoir for spreading in the Los Angeles Forebay and has been sampled at the Whittier Narrows Station on the San Gabriel River. Therefore analyses at this station are not indicative of the native water. It is contemplated that the San Gabriel River station at Azusa will be moved upstream above the reach affected by imported water.

Waters of Matilija Creek show a fluctuation of boron from 0.6 to 4.3 ppm. Additional samples are presently being collected within the Ventura River System in cooperation with Ventura County to determine the magnitude and extent of the boron problem.

Santa Clara River water is poor quality, has a high sulfate content, and is extremely hard. This river system also includes waters containing significant quantities of boron. The water in Santa Clara River at the Santa Paula Station is of better quality than the water at the Los Angeles-Ventura County line station. This improvement in quality is attributed to the effect of better quality tributary inflow from Sespe and Piru Creeks. Inclusion in the monitoring program of sampling stations on these two tributaries is being considered. Seasonal variations in water quality are shown graphically on Plate 8 for the Santa Clara River at Los Angeles-Ventura County Line.

Sampling station data for this region are shown in Table 4, and analyses for these stations in Table 13 and 22 of Appendix A.

The tremendous urban and industrial development taking place within this region and the associated increase in waste disposal problems necessitate the addition of other stations to provide essential data for control of pollution and contamination of the surface and ground waters.

Central Valley Region (No. 5)

Because of the great size of the Central Valley Region and the wide variance in mineral characteristics and concentration of the surface water supplies, more sampling stations are located in this region than in any other. The streams, lakes, and other water supplies sampled under this program in the Central Valley Region are listed hereunder as follows:

Sacramento River
Cottonwood Creek
Stony Creek
Sacramento Slough
Calaveras River
Pit River
Burney Creek
Indian Creek
McCloud River
Feather River
Yuba River
American River
Mokelumme River
San Joaquin River
Stanislaus River
Tuolumne River
Merced River
Kings River
Kaweah River
Kern River
Clear Lake
Cache Creek
Bear River
North Fork Cache Creek
Putah Creek
Butte Creek
Big Chico Creek
Colusa Trough
Mill Creek
South Honcut Creek
Tule River
Delta-Mendota Canal
Consumnes River
Deer Creek
Delta-Cross Channel
Little Potato Slough
Stockton Ship Channel
Old River
Italian Slough
Indian Slough
Rock Slough
Lindsey Slough
Bear Creek

The concentration of mineral solubles in surface streams varies widely with stream regimen. There is a gradual increase in mineral content during the course of flow from the foothills across the valley floor. It may be generalized that concentration of salts is usually lower in the northern and northeastern portions of the Central Valley Region than in the southern and southwestern portion, owing to dilution from more abundant rainfall and run-off, and because soluble salts have been leached from the alluvium in past geological time.

From point of view of mineral characteristics, surface water of the Central Valley Region may be divided geographically into "east side", "west side", and "axial".

Waters in streams that flow from the Sierra Nevada are generally of excellent mineral quality at the eastern edge of the valley floor, and suitable from that standpoint for most purposes without treatment. Water in streams from the Cascade and Klamath Mountains, tributary to the

Sacramento Basin in the north, is of similar high quality. All of the aforementioned waters are in the "east side" quality classification and are uniformly calcium bicarbonate in type. Total mineral solids in these waters is generally less than 100 parts per million.

Included in the "west side" quality classification are those waters of all streams draining the coastal ranges north to Stony Creek, and from the San Emigdio and Tehachapi Mountains at the southern end of San Joaquin Valley. The largest of these streams are Cache and Putah Creeks. Average concentration of salts in these two streams is three to four times that which occurs in the "east side" streams. Much higher concentrations of mineral solubles, ranging from about 250 to 3800 ppm are contained in the water of "west side" streams flowing into San Joaquin River. The most important of these are San Luis, Los Banos, Little Panoche, Cantua, and Los Gatos Creeks. The combined flows of these streams are small, but they contain relatively high amounts of dissolved mineral matter, including up to 17 ppm of boron. These waters are either chloride or sulfate in type, in contrast with the uniformly bicarbonate "east side" waters.

A mixture of "east side" and "west side" waters plus return irrigation and effluent ground water seepage comprise the surface waters of the valley trough. This classification is herein termed "axial" waters. Surface inflow from east side tributaries is generally so large that the effect of the poorer quality "west side" waters is obscured in the mixture. However, the effect of ground water effluent seepage, primarily irrigation return, is noticeable much of the time in San Joaquin River between Mendota Pool and the Sancramento-San Joaquin Delta. During periods of relatively low flow, chloride and sulfate content is generally greater than bicarbonate content in the reach of the San Joaquin River between Mendota Pool and the confluence of Sacramento River.

The Sacramento River, the largest watercourse in the state, falls in the "axial" group. At the Sacramento sampling station, the waters show a remarkably uniform quality pattern from year to year. Total dissolved solids generally range below 175 parts per million in waters sampled at this station and hardness is generally below 90 ppm. Concentration of mineral solubles were greatly reduced during the summer of 1956, perhaps as a result of extremely high flows during December, 1955, and January, 1956.

Streams in areas of the San Joaquin Valley, where water supplies are more fully developed, show a continuing trend toward greater mineralization. Although the increase, in many cases, is slight, the trend is apparent and probably will continue until imported waters are available to provide sufficient dilution to carry off the increasing amounts of return irrigation flows and municipal and industrial wastes or a waste conveyance system is provided.

Sampling station and analyses for this region are listed in Tables 5, 14, and 23 of Appendix A. Fluctuations in quality characteristics for the major streams are shown graphically on Plates 10 through 15.

Lahontan Region (No. 6)

Samples are collected and analyses reported herein for Lake Tahoe and the following streams: (1) Susan River, (2) Truckee River, and (3) Mojave River.

The surface waters draining the eastern slopes of the Warner Range and the Sierra Nevadas are of excellent mineral quality and well suited for general use, as are the waters draining the north slopes of the San Gabriel and San Bernardino Mountains. These mountains, composed largely of granitic materials, contribute only slight quantities of mineral solubles. Surface water from the Owens River watershed are calcium bicarbonate in type as are the waters of the Mojave River. These waters have similar characteristics

except that those of Mohave River have a somewhat greater total hardness and lower boron content. The higher boron content of Owens River is due largely to mineralized hot spring waters flowing in from Hot Creek. These spring waters contain 10 or more parts per million of boron.

The waters of the monitored streams in the Lahontan Region are of excellent mineral quality and from a standpoint of irrigation are all class I waters; although waters sampled from Mojave River near Victorville are slightly hard. No significant trend toward greater mineral concentration is noticeable.

Sampling station and analyses data for this region are presented in Tables 6, 15 and 24 of Appendix A. A graphical representation of water quality characteristics of the Truckee River near Farad is shown on Plate 16.

Colorado River Basin Region (No. 7)

Sampling stations in the Colorado River Basin Region are presently located on the following water courses: (1) Colorado River, (2) All American Canal, (3) New River, (4) Alamo River, and (5) Whitewater River.

Throughout this region, rainfall is sparse, and the occasional heavy rains often result in flash floods. These floods generally have high instantaneous discharges but are of short duration. The runoff is usually of good quality. Except for the Colorado River, natural suface streams in the region are usually dry throughout most of the year.

Water flowing in the All American Canal is diverted from the Colorado River. It is sodium-calcium sulfate in character and is Class II irrigation water. The New and Alamo Rivers, which enter the United States from Mexico, are made up, in large part, of irrigation return flows and

canal spills from the All American Canal and distribution canals of the Imperial Irrigation District. Water in these two rivers is usually sodium chloride in character and Class III irrigation water. At the International Boundary, the New River poses a serious quality problem because of the industrial wastes and raw sewage discharges from the City of Mexicali. At New River near Calexico, (station No. 57), bacterial counts have reached 30 million MPN (most probable number per milliliter).

The Whitewater River is calcium bicarbonate in character and meets the mineral quality criteria for Class I irrigation water. Water is diverted from the Whitewater River one and one-half miles upstream from Whitewater and piped to Palm Springs for non-domestic use.

Because of the stability of the character and mineral content of these waters, consideration is being given to placing these stations on a bi-monthly sampling schedule. Sampling station and analyses data for this region are given in Tables 7, 16 and 25 of Appendix A.

Santa Ana Region (No. 8)

Sampling stations in the Santa Ana Region are presently located at Lake Elsinore and on the following streams: (1) Santa Ana River, (2) Warm Creek, and (3) Chino Creek.

In this region, mineral quality of surface runoff varies with flow, being noticeably better during periods of high flow. Accordingly, it should be observed that runoff during the reporting period was less than 50 per cent of the long time mean runoff.

At several of the stream sampling stations within this region, analyses showed great variation in characteristics. This variation particularly notable in analyses from the Prado and Arlington stations on

the Santa Ana River, is due to the mixing of imported Colorado River water with the natural flow of the Santa Ana River. In the natural waters, bicarbonate is the predominant anion, but in the mixed waters sulfate is the predominant anion. Both the natural and mixed waters are of good quality for irrigation use and fall within the standards for Class I or Class II. Despite the hardness of these waters, they are suitable for domestic use. Water in the Santa Ana River near Mentone is soft and of excellent mineral quality. It is calcium bicarbonate in character and has its origin in precipitation on the San Bernardino Mountain areas, where man's activity has not as yet resulted in noticeable impairment of water quality.

Warm Creek channel carries natural surface runoff, rising ground water, and treated effluent from the San Bernardino sewage treatment plant. The creek is tributary to Santa Ana River but virtually all of the low flows are diverted into the Riverside Canal for irrigation use. The Warm Creek station at Colton, No. 50b, serves to monitor the effect of sewage discharge into Warm Creek. The second Warm Creek station, No. 50c, at San Bernardino monitors the natural flow of the creek. During periods of low flow, most of the flow at this station is diverted for irrigation purposes into the Meeks and Daley Canal. Natural Warm Creek water is calcium bicarbonate in character, hard, and Class I for irrigation. The San Bernardino sewage effluent is sodium bicarbonate in character, hard, and Class I for irrigation.

Chino Creek is tributary to the Santa Ana River just above Prado Dam. The flow in this creek consists mainly of Chino sewage plant effluent, except when there is sufficient rain to cause runoff. This effluent is normally calcium bicarbonate in character, hard, and of good mineral quality.

Lake Elsinore has been dry most of the time since 1952. There was sufficient water to sample at only one time during the period of this report. This was in February, 1956, when the total dissolved solids content was 10,500 ppm. The lake water, when it can be sampled, is usually sodium chloride in character and moderately hard.

Continued urban and industrial growth in this region requires full development, conservation, and protection of local water supplies. Therefore, continued monitoring of these surface waters at existing stations is important, and consideration is being given to the establishment of additional stations on the San Jacinto River.

Sampling station data and analyses for this region are shown in Tables 8, 17 and 26, of the Appendix A. A quality characteristics graph for the Santa Ana River near Mentone is presented on Plate 17.

San Diego Region (No. 9)

Sampling stations in the San Diego Region are presently located on the following streams: (1) Santa Margarita River, (2) San Luis Rey River, (3) Escondido Creek, (4) San Dieguito River, (5) San Diego River, and (6) Tia Juana River.

Drought conditions which have prevailed throughout southern California for the past decade have been severe in the San Diego area. The effect of sub-normal precipitation and runoff in San Diego County is manifest in the surface water storage which averaged approximately 15 per cent of the total reservoir capacity during 1955 and 1956, in spite of the importation of 269,648 acre-feet of Colorado River water during the period. These severe drought conditions are reflected in the monitoring program by lack of sufficient flow to sample and by high mineral concentration in low flows sampled.

Throughout most of this region, the surface waters are sodium chloride in character; however, the waters of San Luis Rey River near Pala and San Dieguito River near San Pasqual Valley are calcium to sodium bicarbonate in character.

The Santa Margarita River near Fallbrook displays relatively little variation in mineral quality and is normally Class II irrigation water, occasionally becoming Class I during high flows. This water is sodium bicarbonate-chloride in character and is very hard. Santa Margarita River flows the entire year at this station, but the discharge is very small during the summer months.

The Pala Station on San Luis Rey River is located about 25 miles inland from the coast. Water in the river at this station is of good quality but hard.

The dry weather flow of Escondido Creek consists mainly of effluent from the Escondido sewage plant. The Creek at the sampling point is normally dry during the summer months, since the sewage effluent is used to irrigate permanent pasture upstream. This water is variable in quality, reflecting the effect of both sewage treatment plant effluent and waste discharges from a stone quarry. Quarry cooling water with cutting waste enters Escondido Creek just above the station during periods when the quarry is in operation. At a point 200 yards downstream from the station a small earth dam is usually built after spring rains. This dam backs up water beyond the station and influences the water quality. The water sampled from Escondido Creek near Harmony Grove (Station No. 63) is hard and is generally class III irrigation water.

The sampling station on the San Dieguito River is located below San Pasqual Valley and just upstream from the San Diego Aqueduct crossing.

Because of its location and the drought conditions extant during the reporting period, there has been no flow at this station most of the time. Past analyses show this water to be Class I for irrigation and hard.

The San Diego River, sampled just below Old Mission Dam, normally flows after a heavy rain. The remainder of the time, water is ponded above and below the dam, and samples are taken from the downstream pond. Analyses show this water to be sodium chloride in character, very hard and Class I to Class III irrigation water, depending on flow.

Runoff in the Tia Juana River is controlled in Rodriguez Reservoir in Mexico. During the reporting period, the only surface flow at the station near the international boundary was tributary runoff from the area below Rodriguez Dam. Development of ground water from the upper Tia Juana Valley in Mexico by the City of Tia Juana has caused further depletion of the surface flow in the river. Runoff at Station No. 66 (Tia Juana River at International Boundary) is sodium chloride in character, very hard and ranges from Class I to Class III for irrigation depending upon flow. Flows often contain trash and domestic wastes from sections of the City of Tia Juana constructed along and in the river channel.

Rapid urban and industrial development of San Diego County has taxed the available water supply to the limit and plans are under preparation to provide for importation of additional water. Protection of the quality of local water supplies is therefore important, and emphasizes the need for continuation of the monitoring program in this region. However, since mineral quality has been consistent and flows generally small, consideration is being given to placing the program on a bi-montly basis in this region.

Sampling station data and analyses for this region are shown in Tables 9, 18 and 27, Appendix A. The mineral characteristics of Santa Margarita River near Fallbrook are presented on Plate 18.

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING
WATER QUALITY INVESTIGATIONS

PERIODIC STREAM SAMPLING STATIONS
1955-1956

SCALE OF MILES
10 0 10 20 30 40

SUR

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umber

NORTH COA
1 Klamath Riv
2 Klamath Ri
3 Klamath Ri
3a Smith River
4 Trinity Riv
4a Trinity Riv
5 Eel River n
6 Eel River at
7 Eel River, S
8 Russian Riv
Calpella
8a Russian Riv
9 Russian Riv
0 Russian Riv
0a Russian Riv
Valley Po
0b Russian Riv

SAN FRANCISC
2 Napa River
3 Alameda Cr
4 Los Gatos C
2 Coyote Creek

CENTRAL COA
3 Salinas Rive
3a Salinas Rive
4 Santa Ynez
5 Santa Ynez
Canyon
5a Santa Ynez
5 San Lorenzo
Fenton)
3 Soquel Creek
7 Pajaro Rive
3 Carmel Rive
3 Uvas Creek

LOS ANGE
5b Matilija Cre
3 Santa Clara
Ventura C
3a Santa Clara
3b Santa Clara
Los Angeles
3 Los Angeles
) Rio Hondo
)a Mission Cre
) San Gabriel
)a San Gabriel
Ventura Riv
Metropolita
at La Ver
Mono-Owen
Fernando

CENTRAL VA
Sacramento
Sacramento
a Sacramento
b Cottonwood
Sacramento

Because of its location and the drought conditions extant during the reporting period, there has been no flow at this station most of the time. Past analyses show this water to be Class I for irrigation and hard.

The San Diego River, sampled just below Old Mission Dam, normally flows after a heavy rain. The remainder of the time, water is ponded above and below the dam, and samples are taken from the downstream pond. Analyses show this water to be sodium chloride in character, very hard and Class I to Class III irrigation water, depending on flow.

Runoff in the Tia Juana River is controlled in Rodriguez Reservoir in Mexico. During the reporting period, the only surface flow at the station near the international boundary was tributary runoff from the area below Rodriguez Dam. Development of ground water from the upper Tia Juana Valley in Mexico by the City of Tia Juana has caused further depletion of the surface flow in the river. Runoff at Station No. 66 (Tia Juana River at International Boundary) is sodium chloride in character, very hard and ranges from Class I to Class III for irrigation depending upon flow. Flows often contain trash and domestic wastes from sections of the City of Tia Juana constructed along and in the river channel.

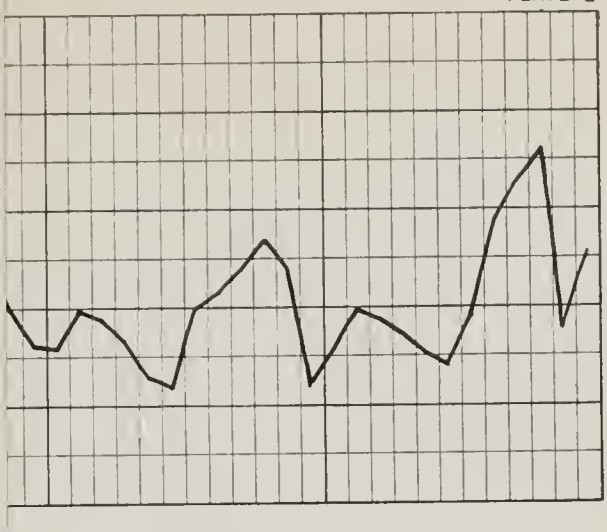
Rapid urban and industrial development of San Diego County has taxed the available water supply to the limit and plans are under preparation to provide for importation of additional water. Protection of the quality of local water supplies is therefore important, and emphasizes the need for continuation of the monitoring program in this region. However, since mineral quality has been consistent and flows generally small, consideration is being given to placing the program on a bi-montly basis in this region.

Sampling station data and analyses for this region are shown in Tables 9, 18 and 27, Appendix A. The mineral characteristics of Santa Margarita River near Fallbrook are presented on Plate 18.

STREAM SAMPLING STATIONS
SURFACE WATER QUALITY MONITORING PROGRAM

Station Number	Stream
	NORTH COASTAL REGION (No. 1)
1	Klamath River near Copco
2	Klamath River at Somesbar
3	Klamath River near Klamath
3a	Smith River near Crescent City
4	Trinity River near Hoopa
4a	Trinity River at Lewiston
5	Eel River near McCann
6	Eel River at Scotia
7	Eel River, South Fork near Miranda
8	Russian River, East Fork near Calpella
8a	Russian River near Hopland
9	Russian River near Healdsburg
10	Russian River at Guerneville
10a	Russian River, East Fork at Potter Valley Power House
10b	Russian River near Ukiah
	SAN FRANCISCO BAY REGION (No. 2)
72	Napa River near St. Helena
73	Alameda Creek near Niles
74	Los Gatos Creek at Los Gatos
82	Coyote Creek near Madrone
	CENTRAL COASTAL REGION (No. 3)
43	Salinas River near Spreckels
43a	Salinas River at Paso Robles
44	Santa Ynez River below Gibraltar Dam
45	Santa Ynez River below Los Laureles Canyon
45a	Santa Ynez River at Solvang
75	San Lorenzo River at Big Trees (near Felton)
76	Soquel Creek at Soquel
77	Pajaro River near Chittenden
81	Carmel River near Carmel
90	Las Cruces Creek near Morgan Hill
	LOS ANGELES REGION (No. 4)
42b	Matilija Creek above Matilija Dam
46	Santa Clara River at Los Angeles-Ventura County Line
46a	Santa Clara River near Santa Paula
46b	Santa Clara River at Bire Cut
47	Los Angeles River at Los Angeles
48	Los Angeles River at Long Beach
49	Rio Hondo at Whittier Narrows
49a	Mission Creek at Whittier Narrows
50	San Gabriel at Whittier Narrows
50a	San Gabriel River near Azusa
51	Ventura River near Ventura
69	Metropolitan Water District Aqueduct at La Verne
70	Monrovia Aqueduct near San Fernando
	CENTRAL VALLEY REGION (No. 5)
11	Sacramento River at Delta
12	Sacramento River at Keswick
12a	Sacramento River near Redding
12b	Cottonwood Creek near Cottonwood
13	Sacramento River near Hamilton City
13a	Stony Creek near Hamilton City
14	Sacramento River at Knights Landing
14a	Sacramento Slough near Knights Landing
15	Sacramento River at Sacramento
16	Sacramento River at Rio Vista
16a	Calaveras River near Jenny Lind
17	Pit River near Montgomery Creek
17a	Pit River near Canby
17c	Burney Creek near Burney
17d	Indian Creek near Crescent Mills
18	McCloud River above Shasta Lake
19	Feather River near Oroville
20	Feather River at Nicolaus
21	Yuba River at Marysville
21a	Yuba River near Smartville
22	American River at Sacramento
23	Mokelumne River at Woodbridge
23a	Mokelumne River near Lasche Plaza
24	San Joaquin River at Frant
25	San Joaquin River near Mendota
25a	San Joaquin River near Don Pedro
26	San Joaquin River near Grayson
26a	San Joaquin River at Maze Road Bridge
27	San Joaquin River near Vernalis
28	San Joaquin River at Antioch
29	Stanislaus River near Mouth
29a	Stanislaus River near Knights Ferry
30	Tuolumne River at Hickman Waterford Bridge
31	Tuolumne River at Tuolumne City
31a	Tuolumne River below Don Pedro Dam
31b	Tuolumne River at La Grange
32	Merced River near Stevinson
32a	Merced River below Exchequer Dam
33	Kings River above North Fork
33a	Kings River at Piedra
33b	Kings River below Pine Flat Dam
33c	Kings River below North Fork
34	Kings River below Peoples Weir (near Kingsburg)
35	Kaweah River near Three Rivers
36	Kern River near Bakersfield
36a	Kern River below Isabella Dam
36b	Kern River near Kernville
40	Clear Lake near Clearlake Highlands
41	Clear Lake at Lakeport
42	Cache Creek near Lower Lake
78	Bear River near Wheatland
78	Cache Creek, North Fork near Lower Lake
80	Cache Creek near Lopes
81	Putah Creek near Winters
84	Butte Creek near Chico
85	Big Chico Creek near Chico
87	Colusa Trough near Colusa
88	Mill Creek near Los Molinos
89	Hospital Creek, South, near Bonsor
91	Tule River near Porterville
92	Delta-Mendota Canal near Mendota
93	Delta Mendota Canal near Tracy
94	Cosumnes River near Michigan Bar
95	Deer Creek near Vina
97	Sacramento River at Steamboat Slough
98	Delta Cross Channel near Walnut Grove
99	Little Potato Slough at Terminous
100	Stockton Ship Channel on Rindge Island
101	San Joaquin River at Garwood Bridge
102	San Joaquin River at Mossdale Bridge
103	Old River near Tracy
104	Old River at Clifton Court Ferry
106	Italian Slough near Mouth
107	Italian Slough near Brentwood
108	Old River at Orwood Bridge
109	Rock Slough near Knightsen
110	Lindsey Slough near Rio Vista
111	Bear Creek near Stevinson
112	Old River at Mandeville Island
	LAHONTAN REGION (No. 6)
17b	Susan River at Susanville
37	Lake Tahoe at Tahoe Vista
38	Lake Tahoe at Tahoe City
39	Lake Tahoe at Bijou
72	Truckee River near Truckee
73	Truckee River near Farad
67	Mojave River near Victorville
	COLORADO RIVER BASIN REGION (No. 7)
74	Colorado River at Topock, Arizona
53	Colorado River at Parker Dam
56	Colorado River at Yuma, Arizona
56a	All American Canal near Pilot Knob
56b	Colorado River below Morelos Dam
56c	Colorado River near Blythe
56d	Lake Havasu at Metropolitan Water District Intake
57	New River at International Boundary
58	New River near Westmorland
59	Alamo River at International Boundary
60	Alamo River near Calipatria
68	Whitewater River at Whitewater
	SANTA ANA REGION (No. 8)
50b	Warm Creek at Colton
50c	Warm Creek at San Bernardino
51	Santa Ana River near Arlington
51a	Santa Ana River near Prado Dam
51b	Santa Ana River near Mentone
51d	Santa Ana River at Riverside (MWD Blowoff)
51e	Santa Ana River at Norco
86	Chino Creek near Chino
96	Lake Elsinore at North Shore
	SAN DIEGO REGION (No. 9)
51c	Santa Margarita River near Fallbrook
82	San Luis Rey River near Pala
83	Escondido Creek near Harmony Grove
84	San Dieguito River below San Pasqual Valley
85	San Diego River at Old Mission Dam
66	Tia Juana River at International Boundary

PLATE 2



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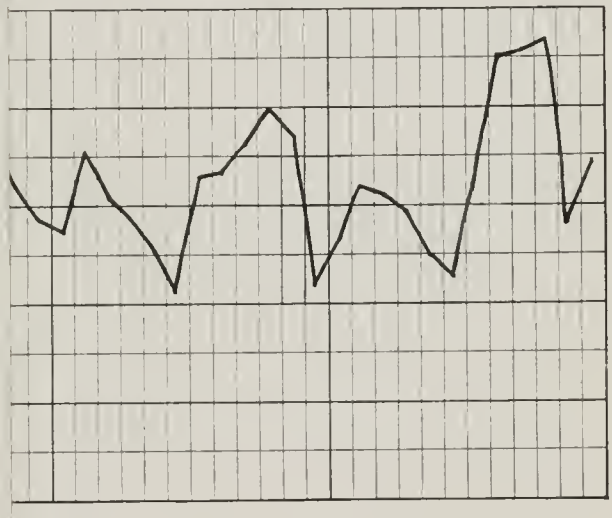

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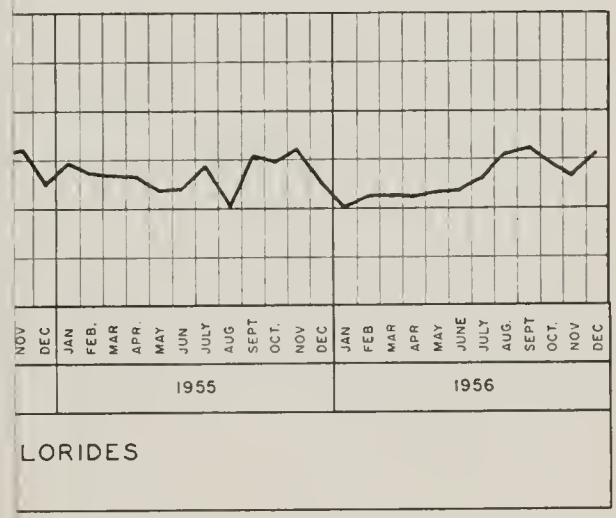

LORIDES

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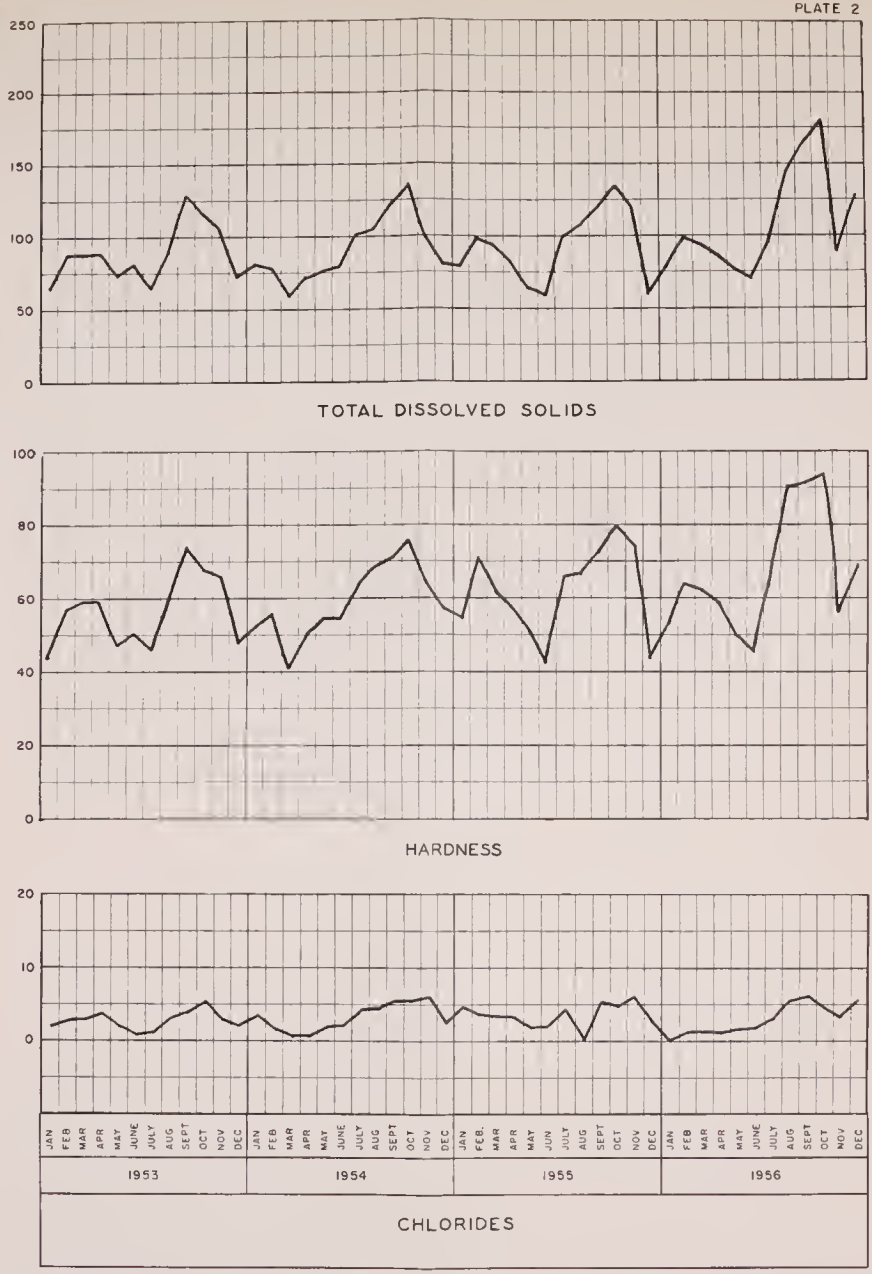
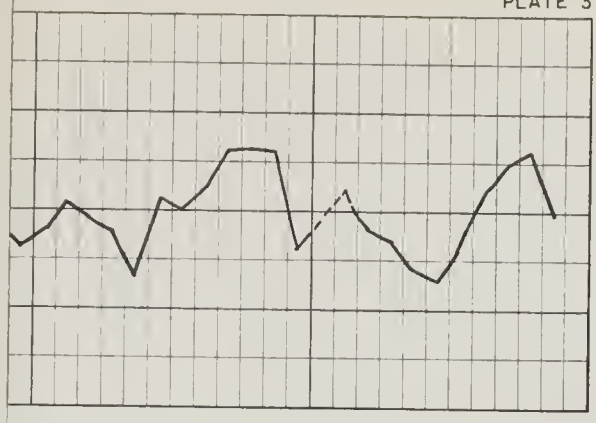
PLATE 2



QUALITY CHARACTERISTICS
OF
KLAMATH RIVER NEAR KLAMATH
STATION NO. 3

DEPARTMENT OF WATER RESOURCES 1957

PLATE 3



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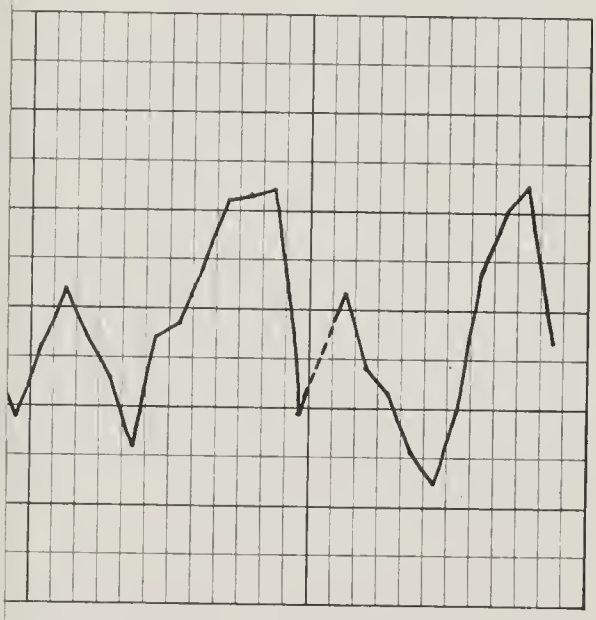

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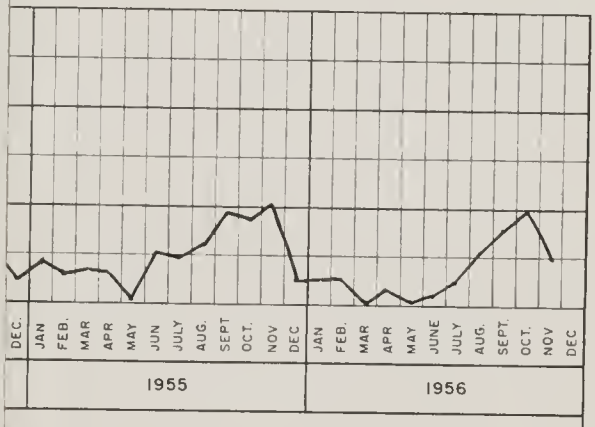

ORIDES

ARACTERISTICS
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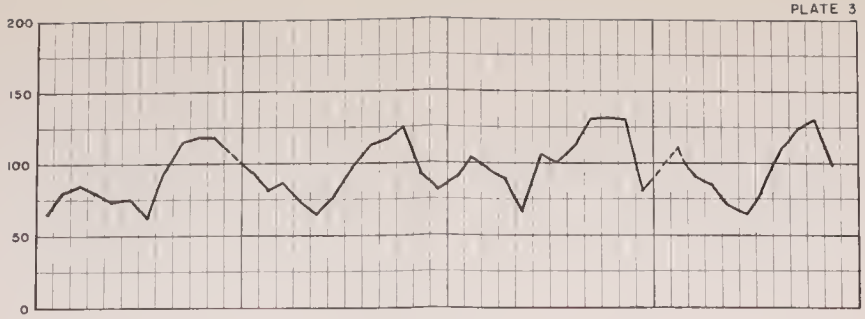
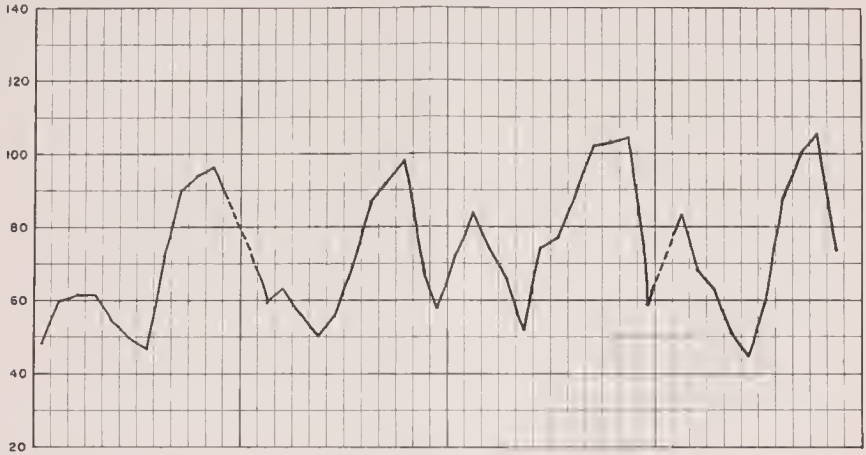
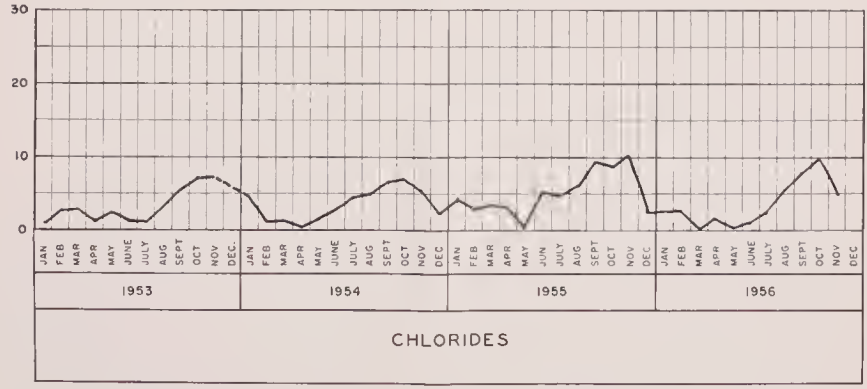


TOTAL DISSOLVED SOLIDS



HARDNESS

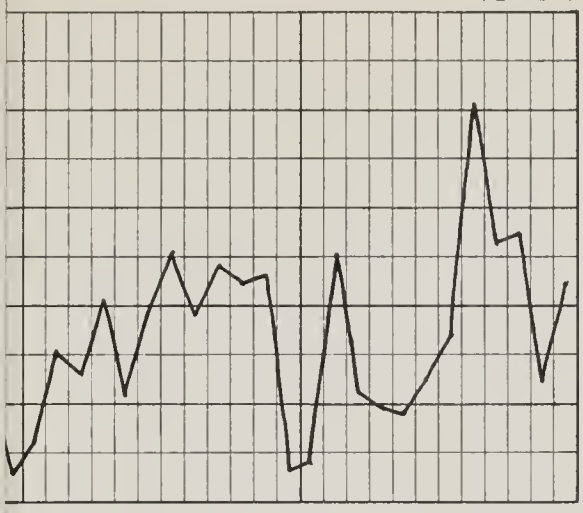


CHLORIDES

QUALITY CHARACTERISTICS
OF
TRINITY RIVER NEAR HOOPA
STATION NO. 4

DEPARTMENT OF WATER RESOURCES 1957

PLATE 4



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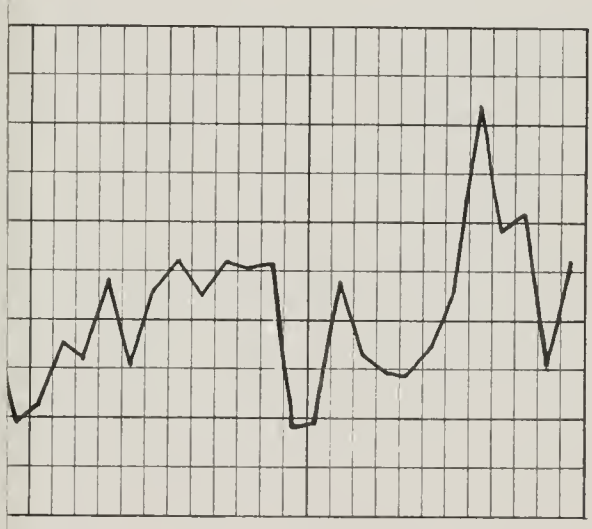
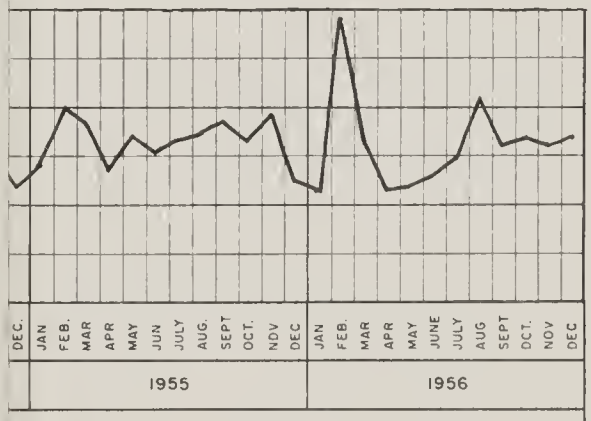


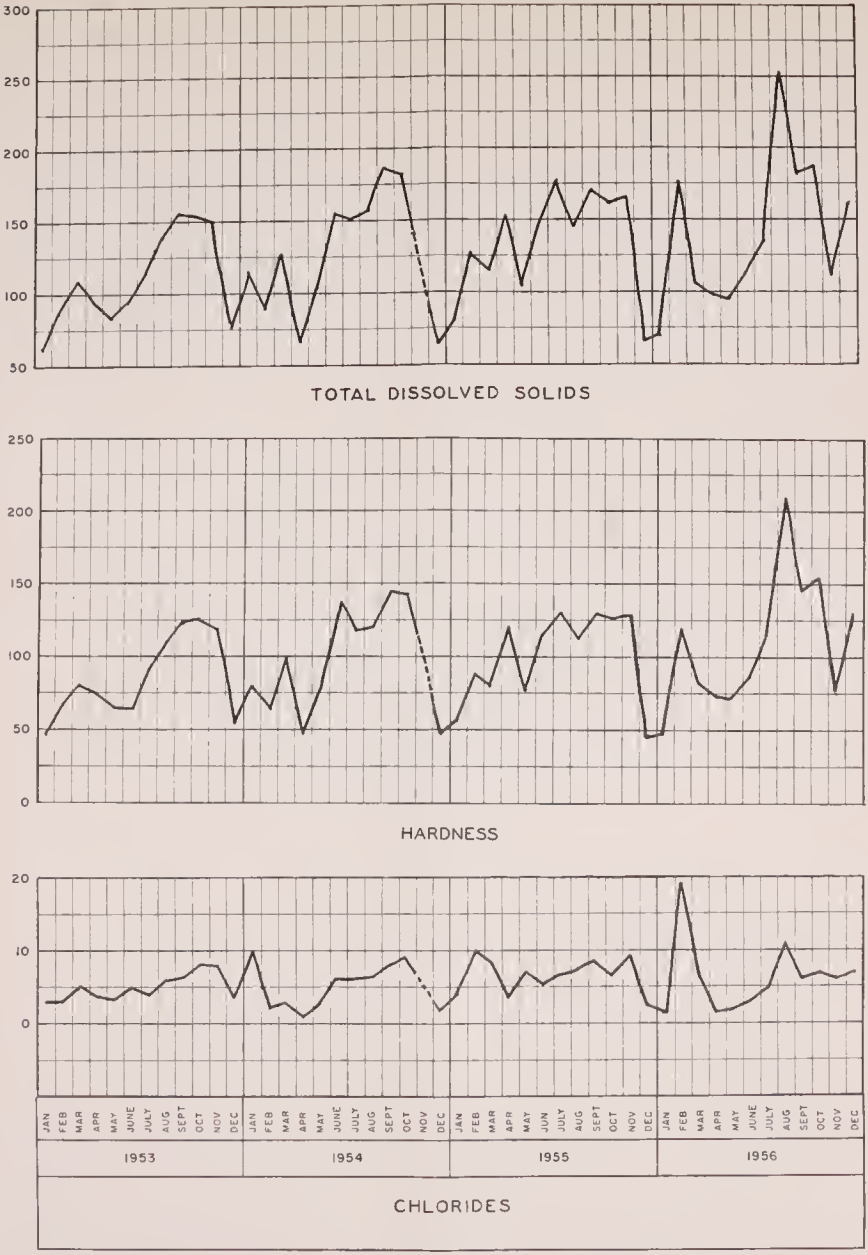
RDNESS



ORIDES

ARACTERISTICS
OF
R AT SCOTIA
ION NO. 6

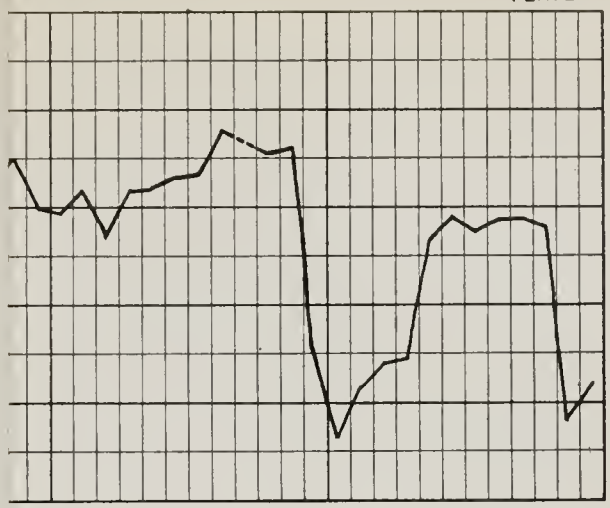
PLATE 4



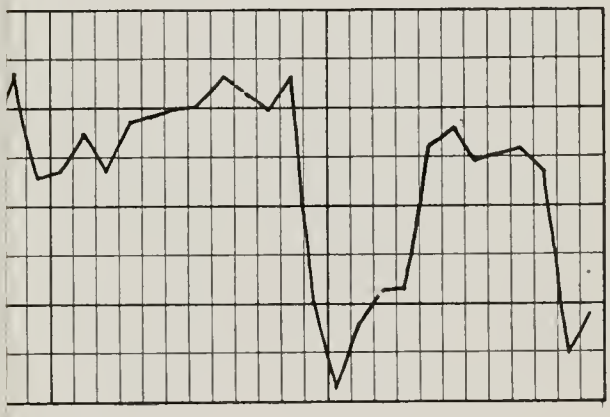
QUALITY CHARACTERISTICS
OF
EEL RIVER AT SCOTIA
STATION NO. 6

DEPARTMENT OF WATER RESOURCES 1957

PLATE 6



SOLVED SOLIDS



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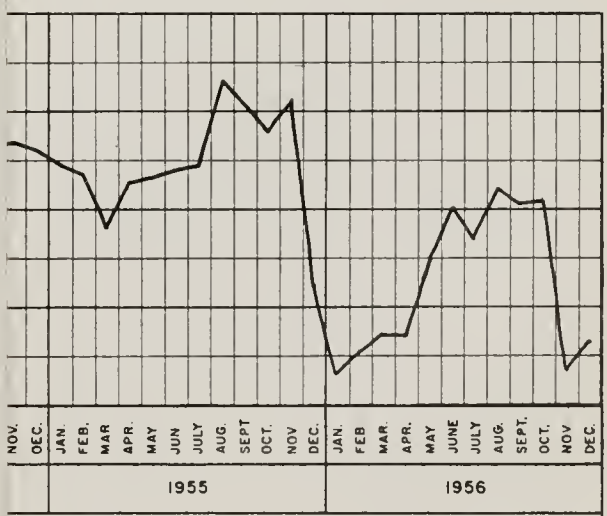
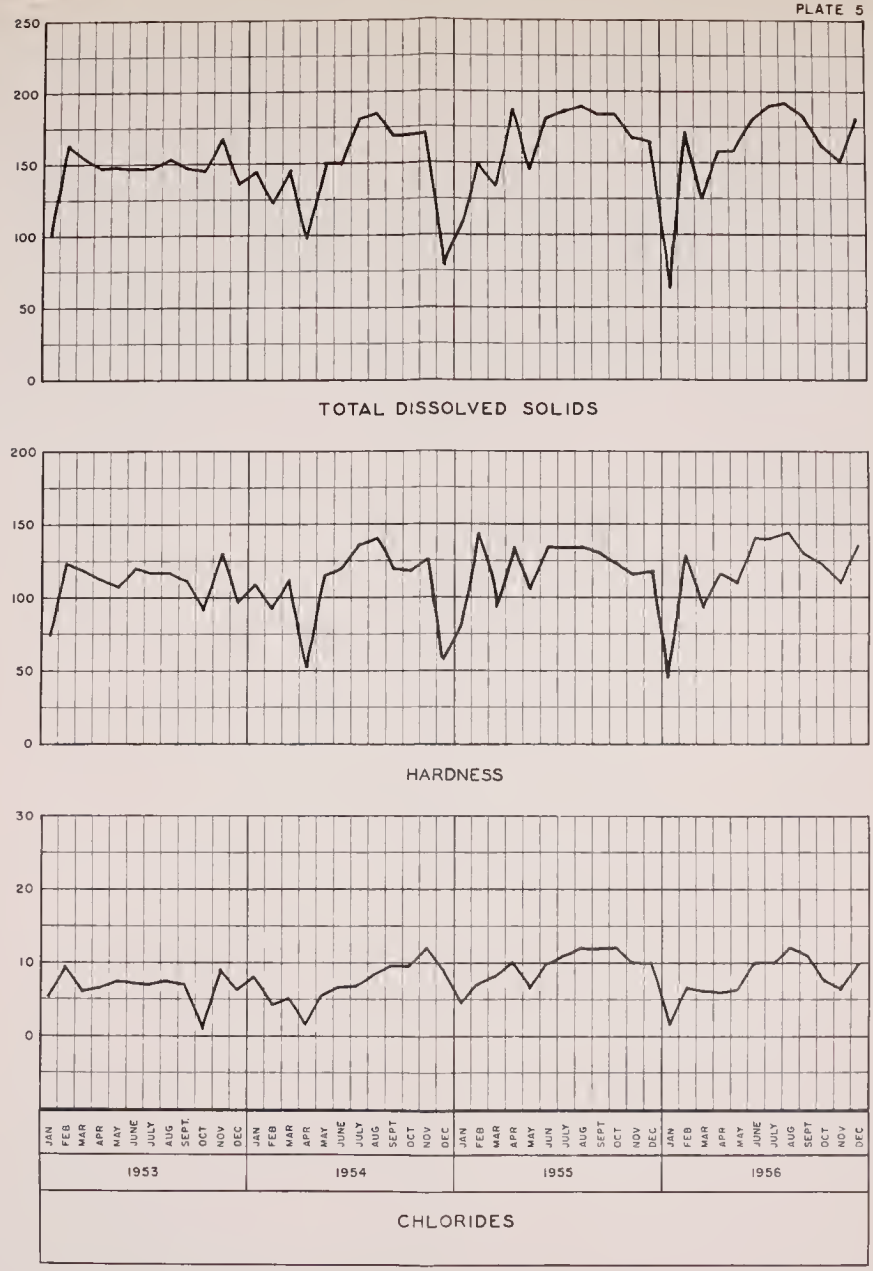


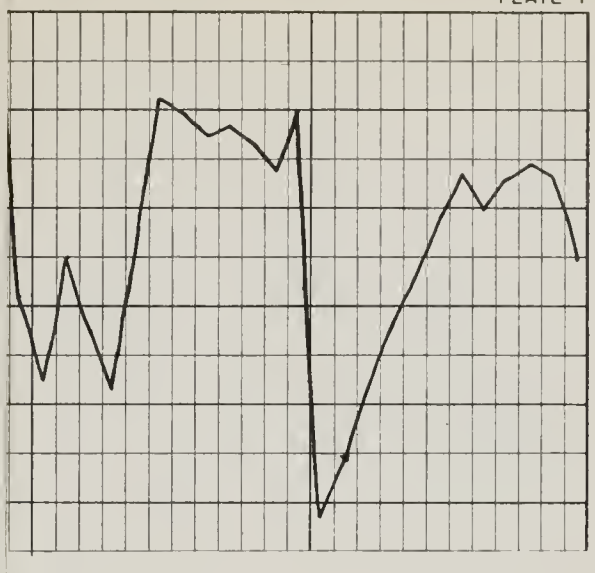
LORIDES

HARACTERISTICS
OF
EEK NEAR NILES
TION NO. 73



QUALITY CHARACTERISTICS
OF
RUSSIAN RIVER AT GUERNEVILLE
STATION NO. 10

DEPARTMENT OF WATER RESOURCES 1957



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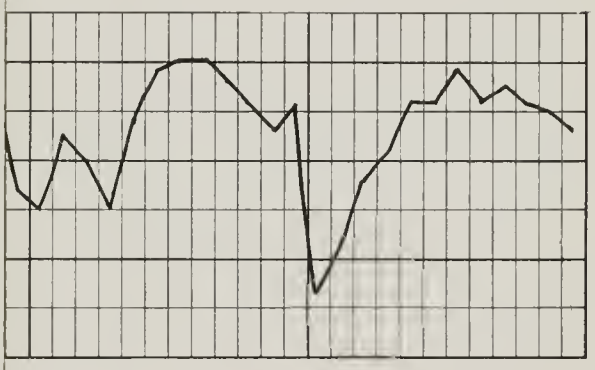

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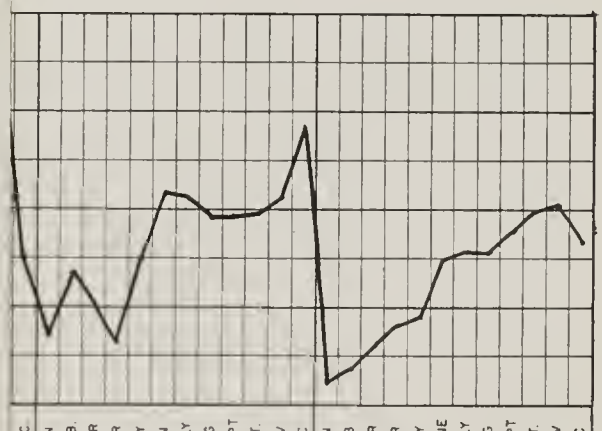
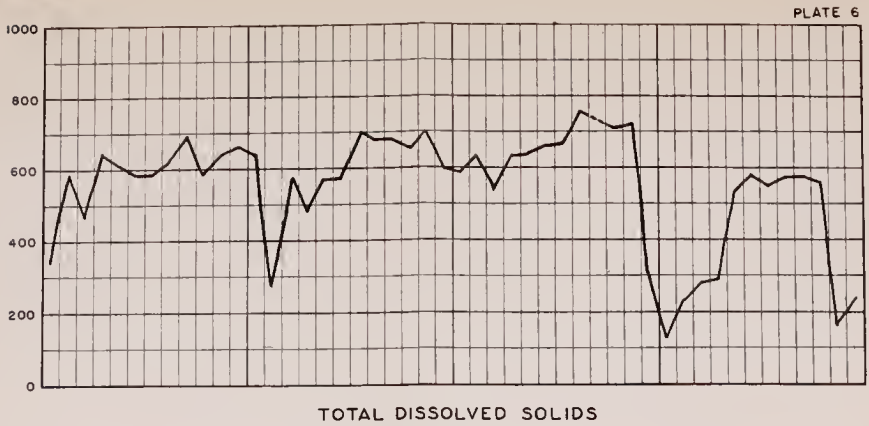


ORIDES

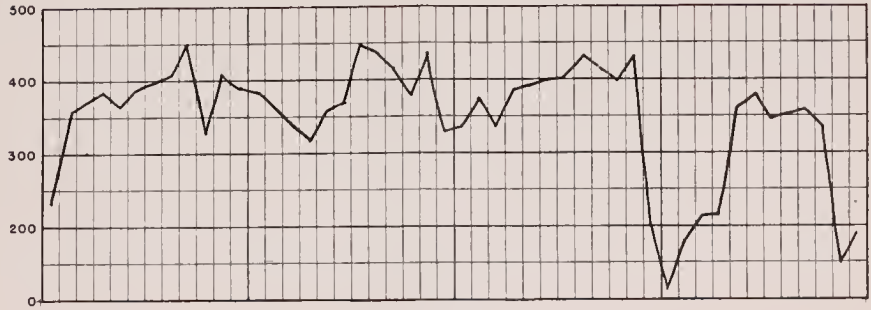
ARACTERISTICS
OF
NEAR CHITTENDEN
ON NO. 77

PLATE 6



TOTAL DISSOLVED SOLIDS

CONCENTRATION IN PARTS PER MILLION



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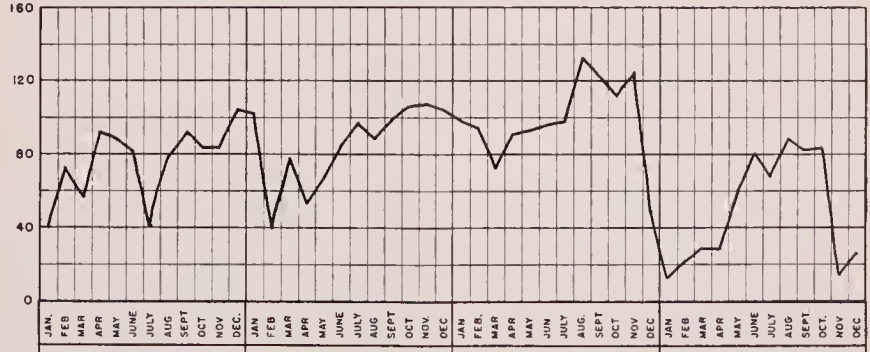
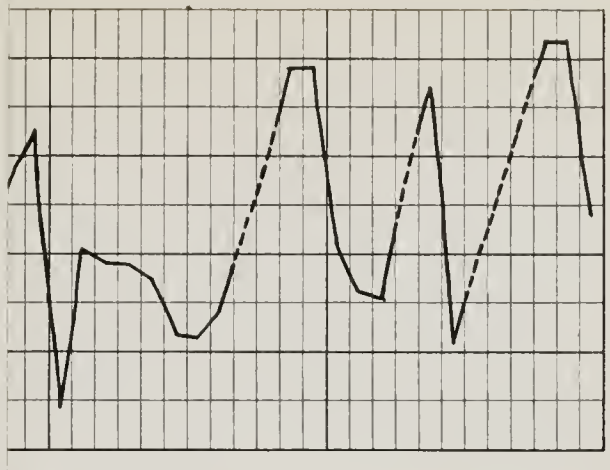


CHLORIDES

QUALITY CHARACTERISTICS
OF
ALAMEDA CREEK NEAR NILES
STATION NO. 73

DEPARTMENT OF WATER RESOURCES 1957

PLATE 9



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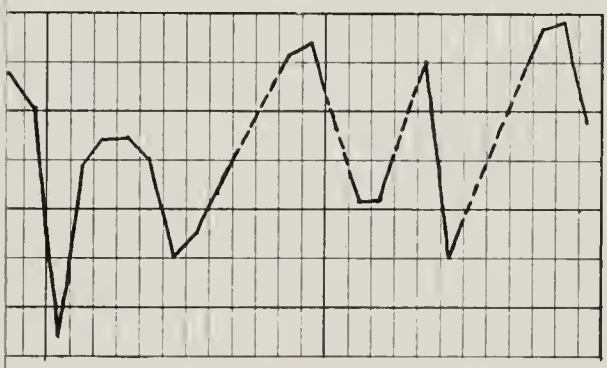

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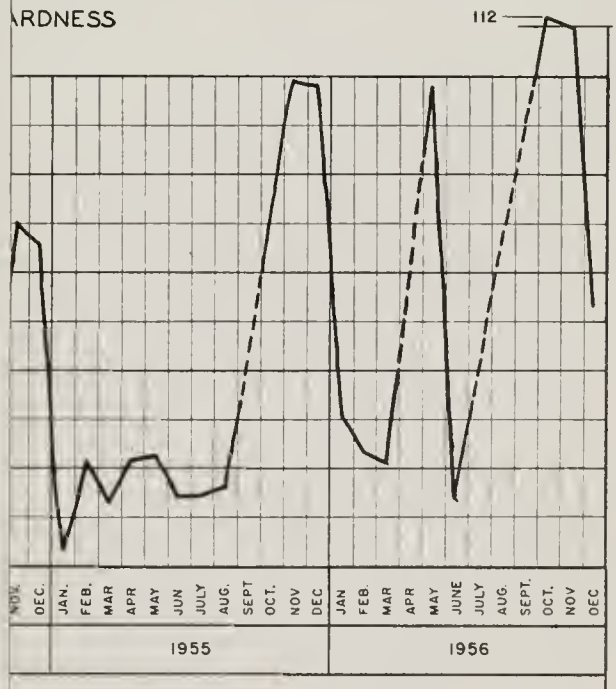
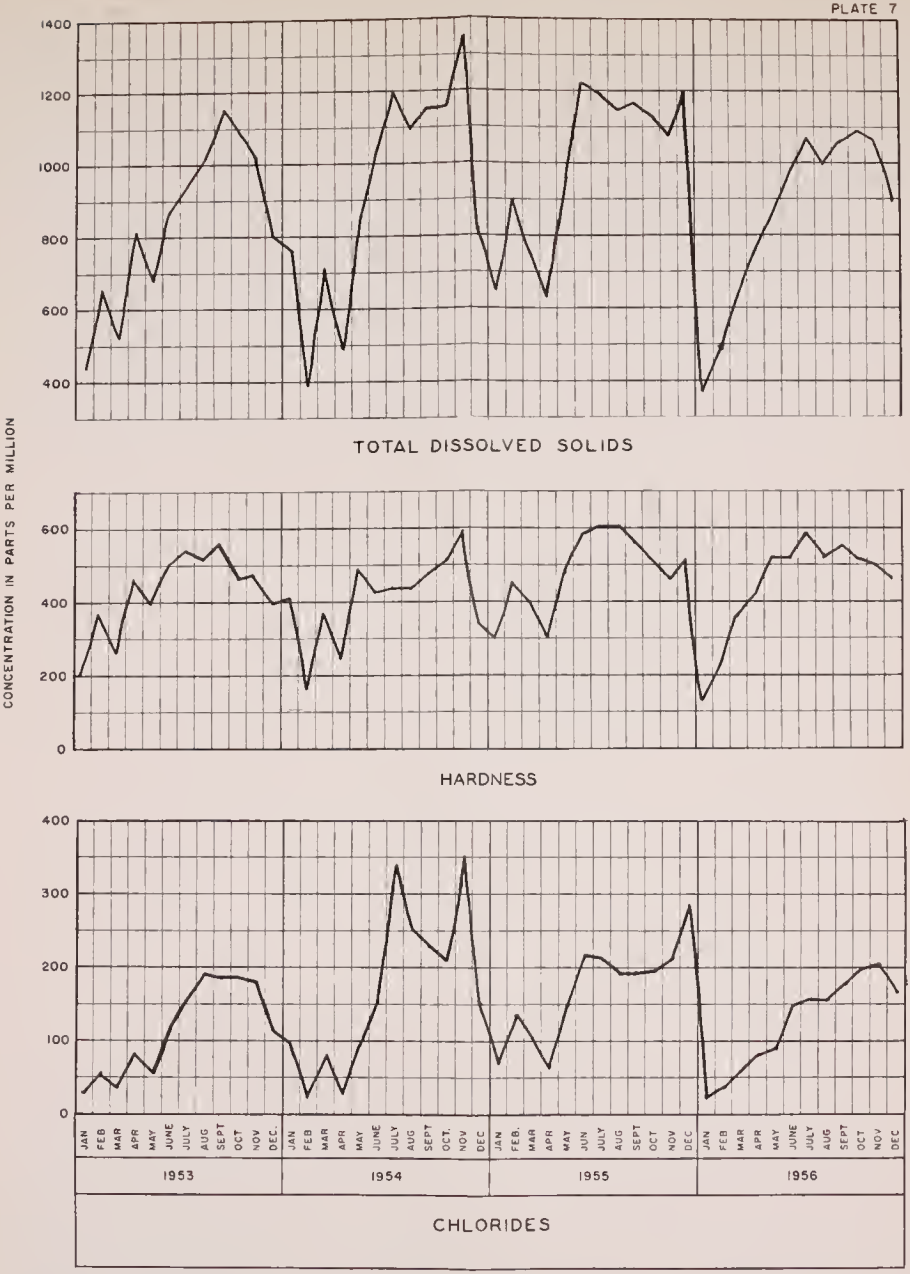


LORIDES

HARACTERISTICS
OF
AT WHITTIER NARROWS
TION NO. 50

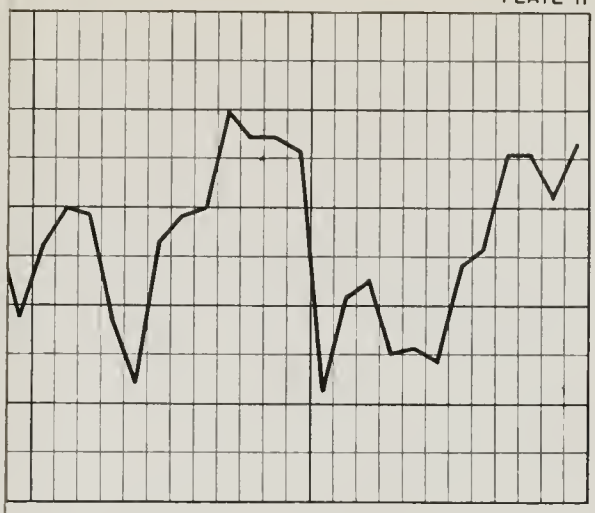
PLATE 7



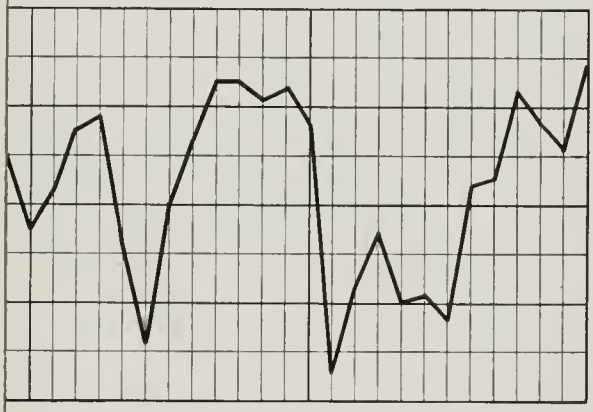
QUALITY CHARACTERISTICS
OF
PAJARO RIVER NEAR CHITTENDEN
STATION NO. 77

DEPARTMENT OF WATER RESOURCES 1957

PLATE II



OLVED SOLIDS



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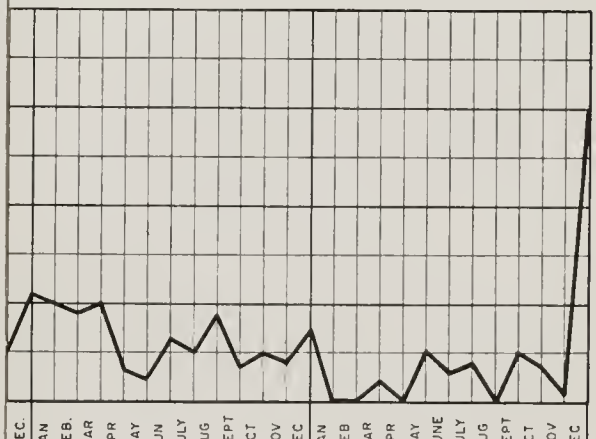
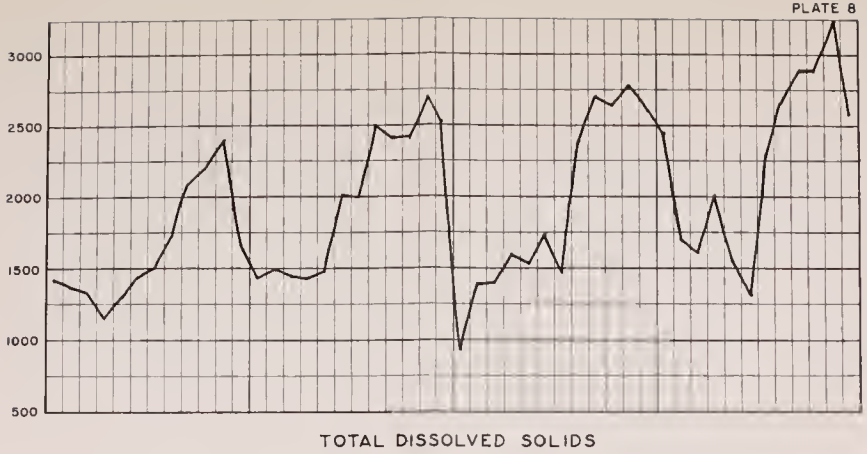


ORIDES

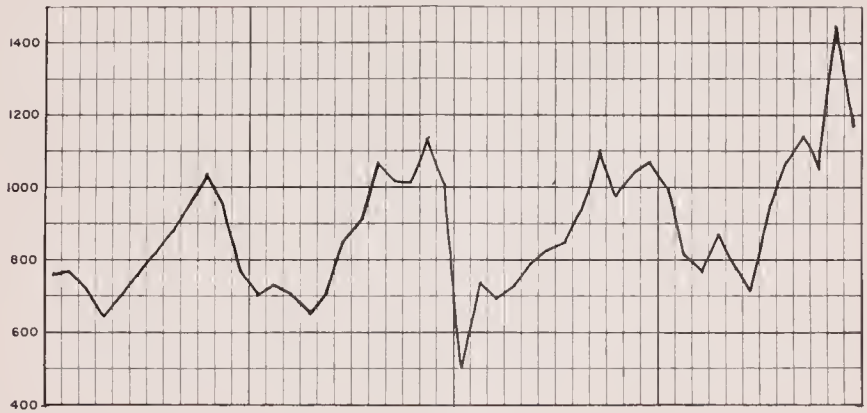
ARACTERISTICS
OF
R NEAR OROVILLE
ION NO. 19

PLATE 8

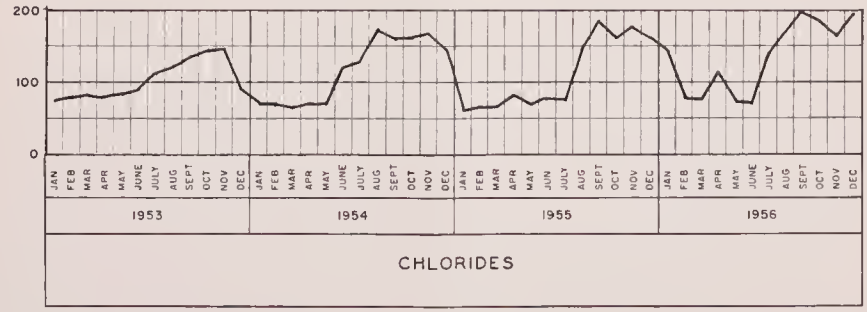


TOTAL DISSOLVED SOLIDS

CONCENTRATION IN PARTS PER MILLION



HARDNESS

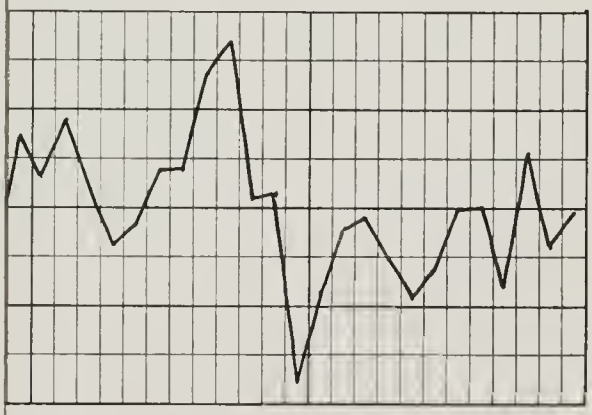


CHLORIDES

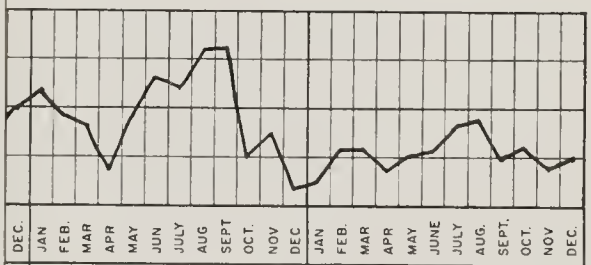
QUALITY CHARACTERISTICS
OF
SANTA CLARA RIVER AT L. A.-VENTURA CO. LINE
STATION NO. 46

DEPARTMENT OF WATER RESOURCES 1957

SOLVED SOLIDS



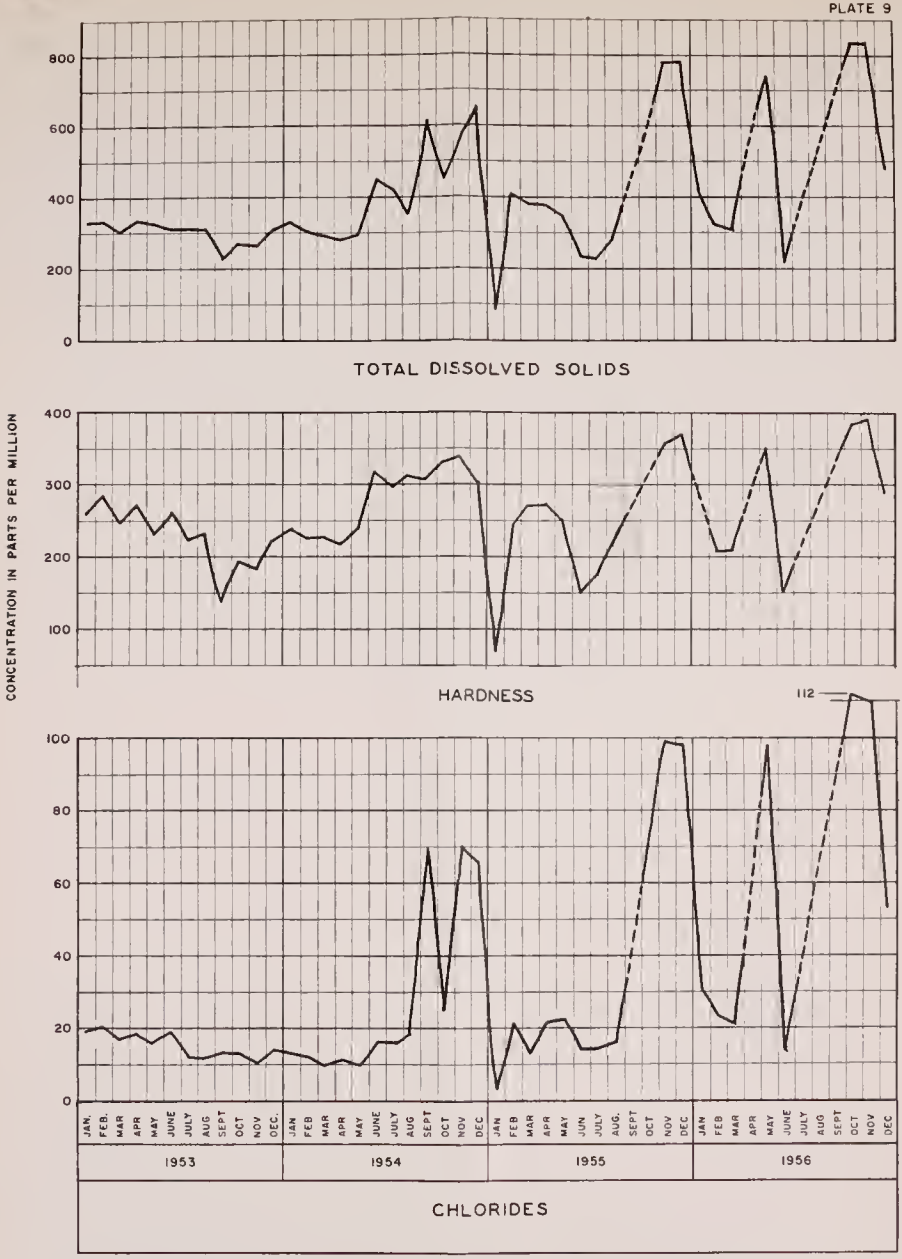
RDNESS



ORIDES

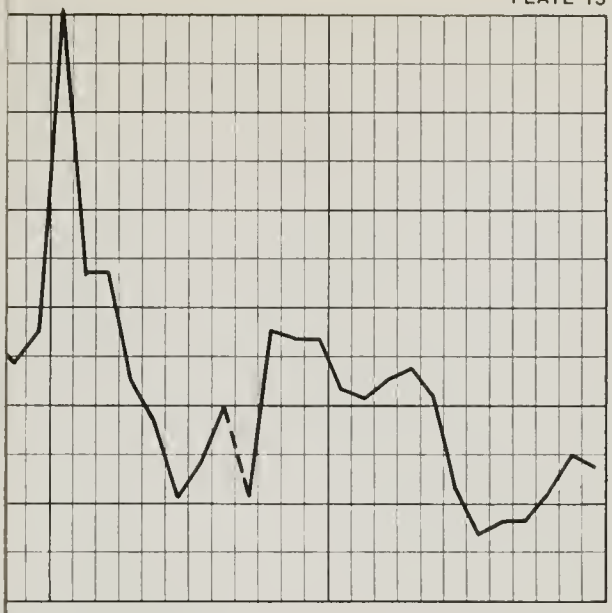
ARACTERISTICS
OF
ER AT SACRAMENTO
ION NO. 15

PLATE 9



QUALITY CHARACTERISTICS
OF
SAN GABRIEL RIVER AT WHITTIER NARROWS
STATION NO 50

DEPARTMENT OF WATER RESOURCES 1957



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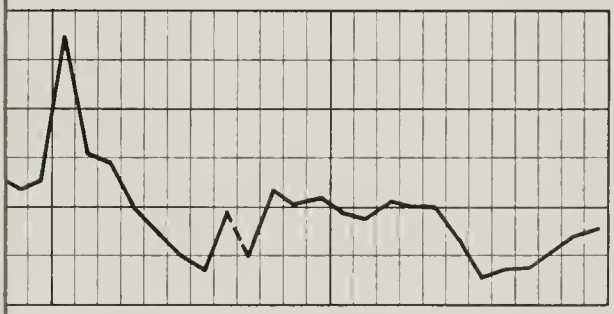

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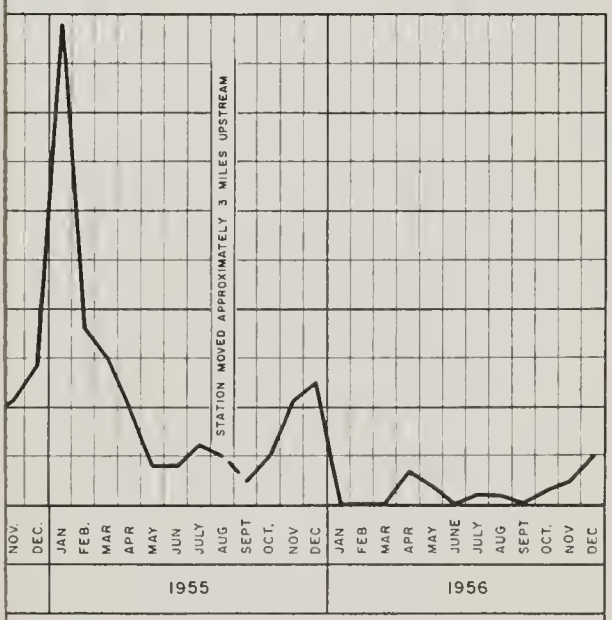
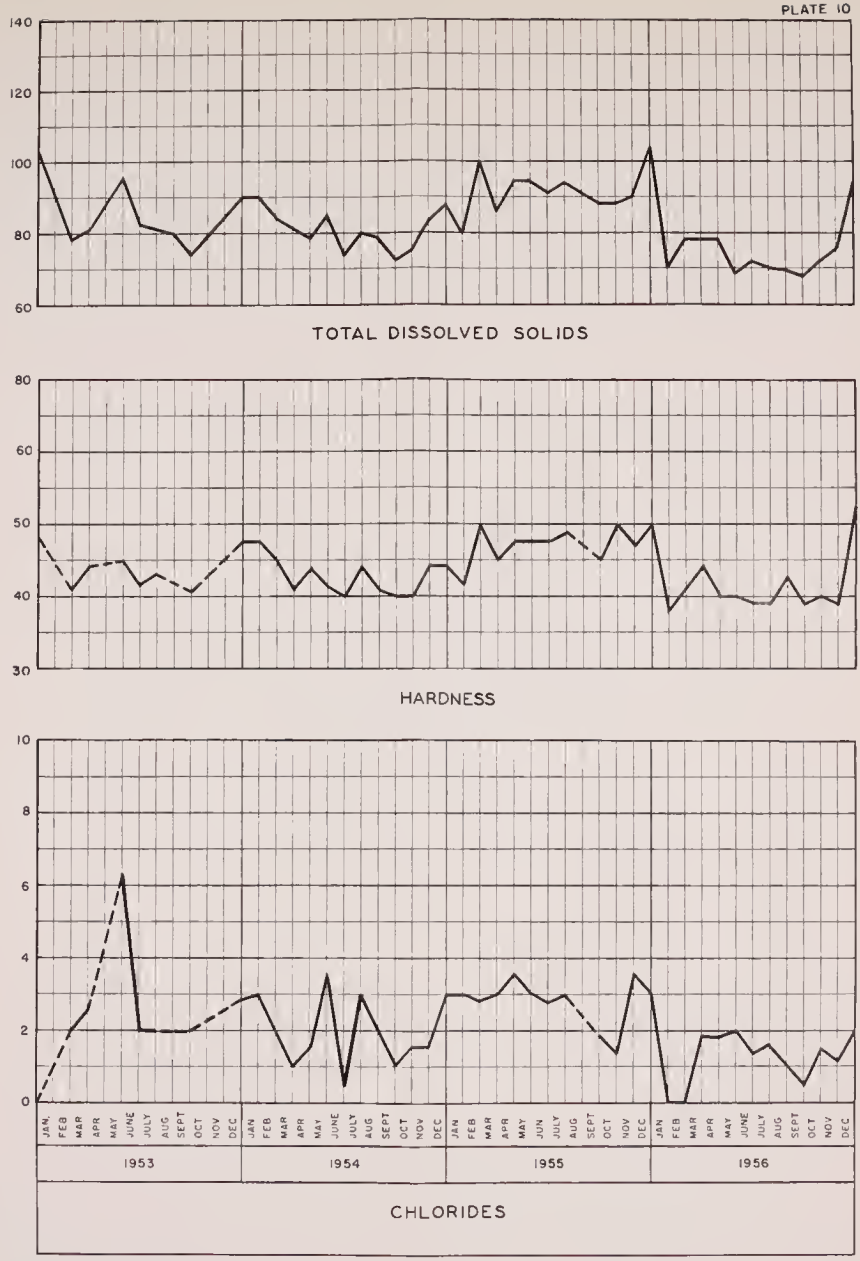


LORIDES

HARACTERISTICS
OF
AND BELOW PINE FLAT DAM
N NO. 33a & 33b

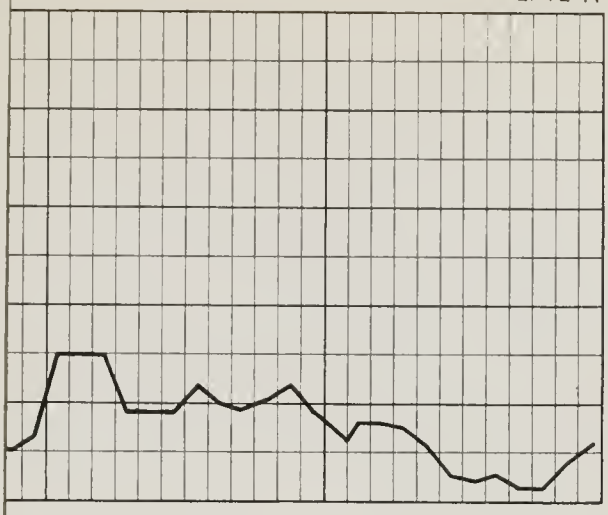
PLATE 10



QUALITY CHARACTERISTICS
OF
SACRAMENTO RIVER AT KESWICK
STATION NO 12

DEPARTMENT OF WATER RESOURCES 1957

PLATE 14



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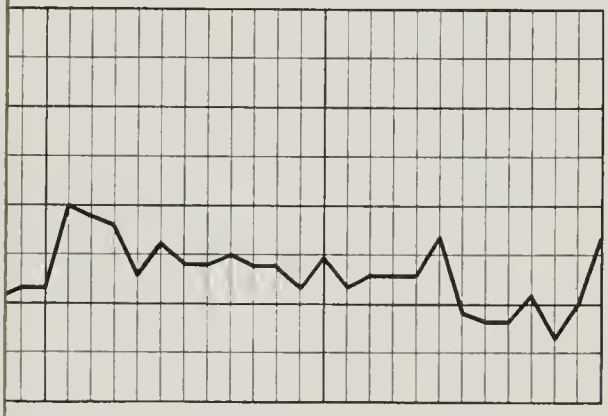

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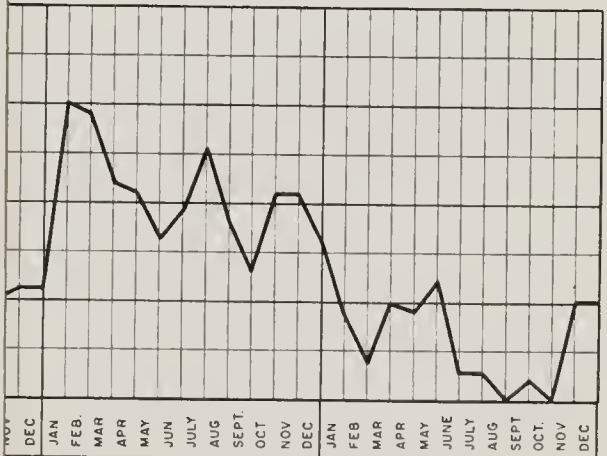
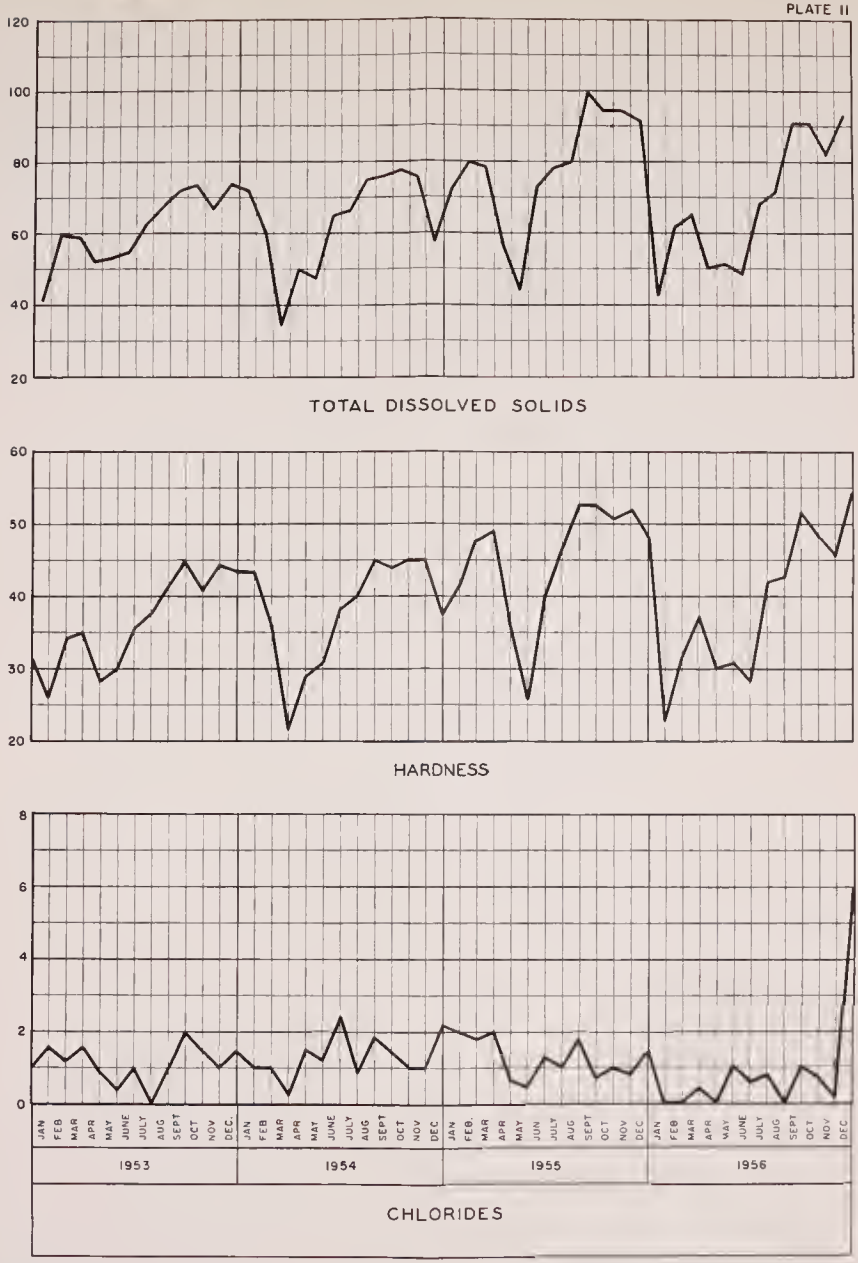


LORIDES

ARACTERISTICS
OF
RIVER AT FRIANT
TION NO. 24

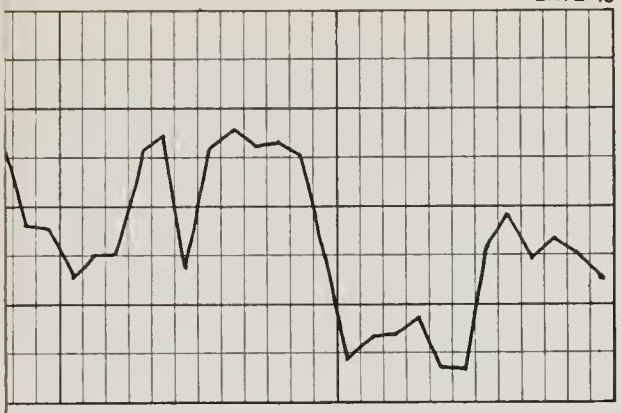
PLATE II



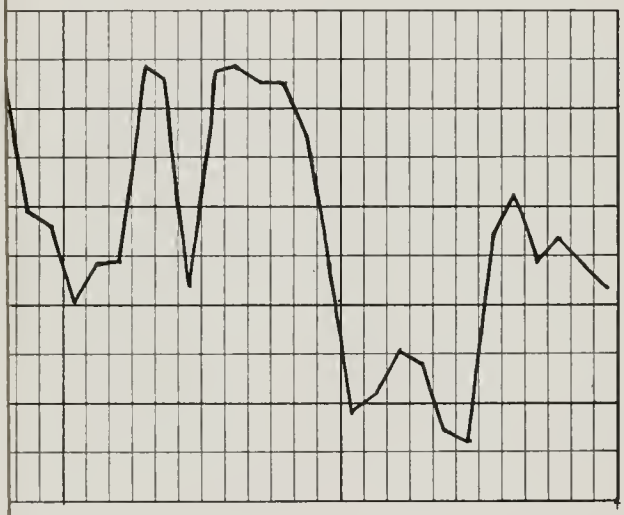
QUALITY CHARACTERISTICS
OF
FEATHER RIVER NEAR OROVILLE
STATION NO. 19

DEPARTMENT OF WATER RESOURCES 1957

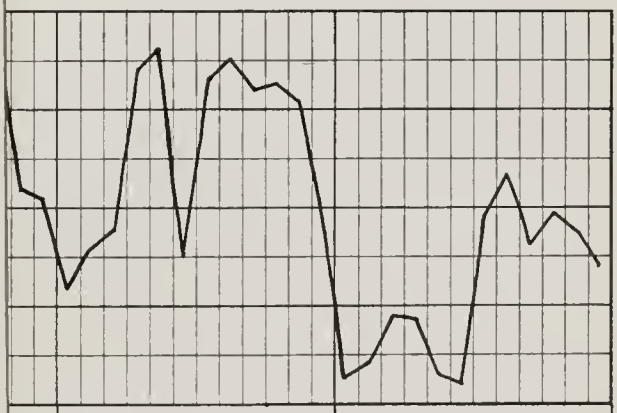
PLATE 15



SSOLVED SOLIDS



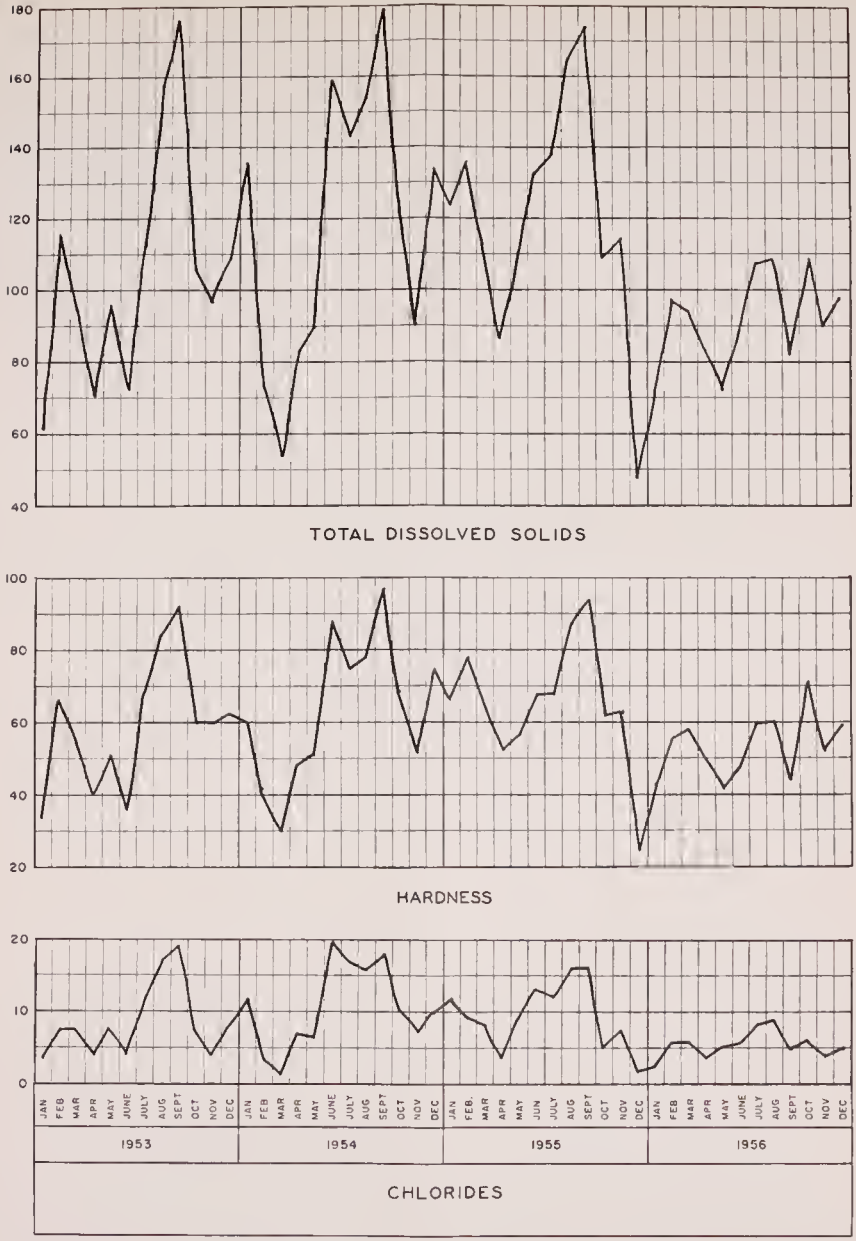
ARDNESS



HLORIDES

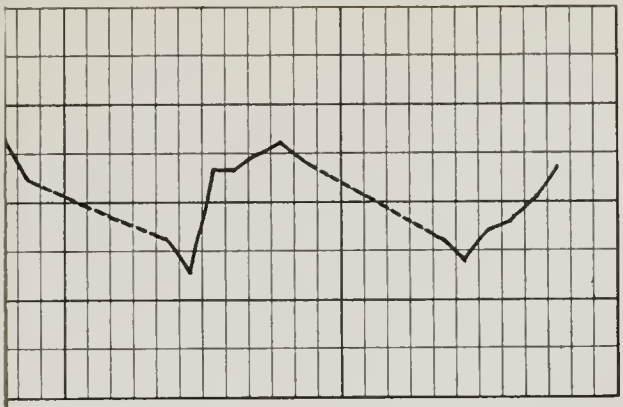
HARACTERISTICS
OF
IVER NEAR VERNALIS
TION NO. 27

PLATE 12



QUALITY CHARACTERISTICS
OF
SACRAMENTO RIVER AT SACRAMENTO
STATION NO 15

DEPARTMENT OF WATER RESOURCES 1957



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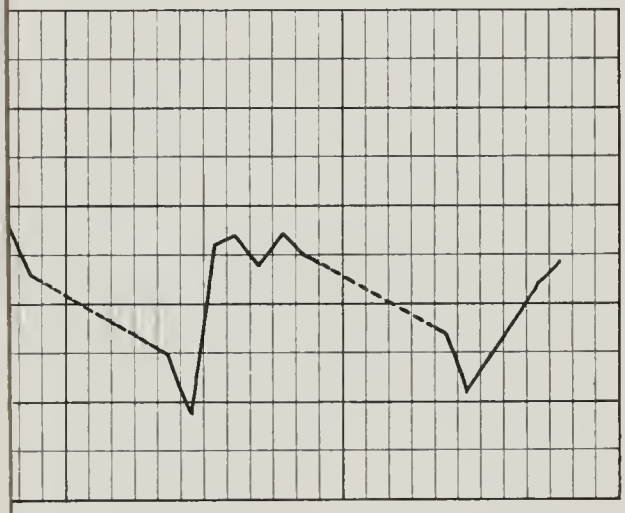

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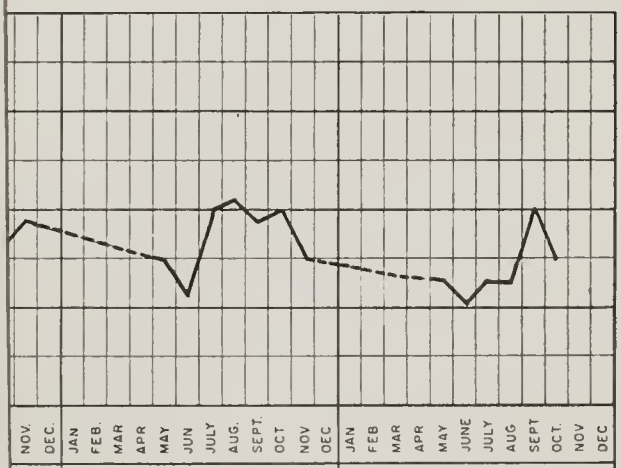
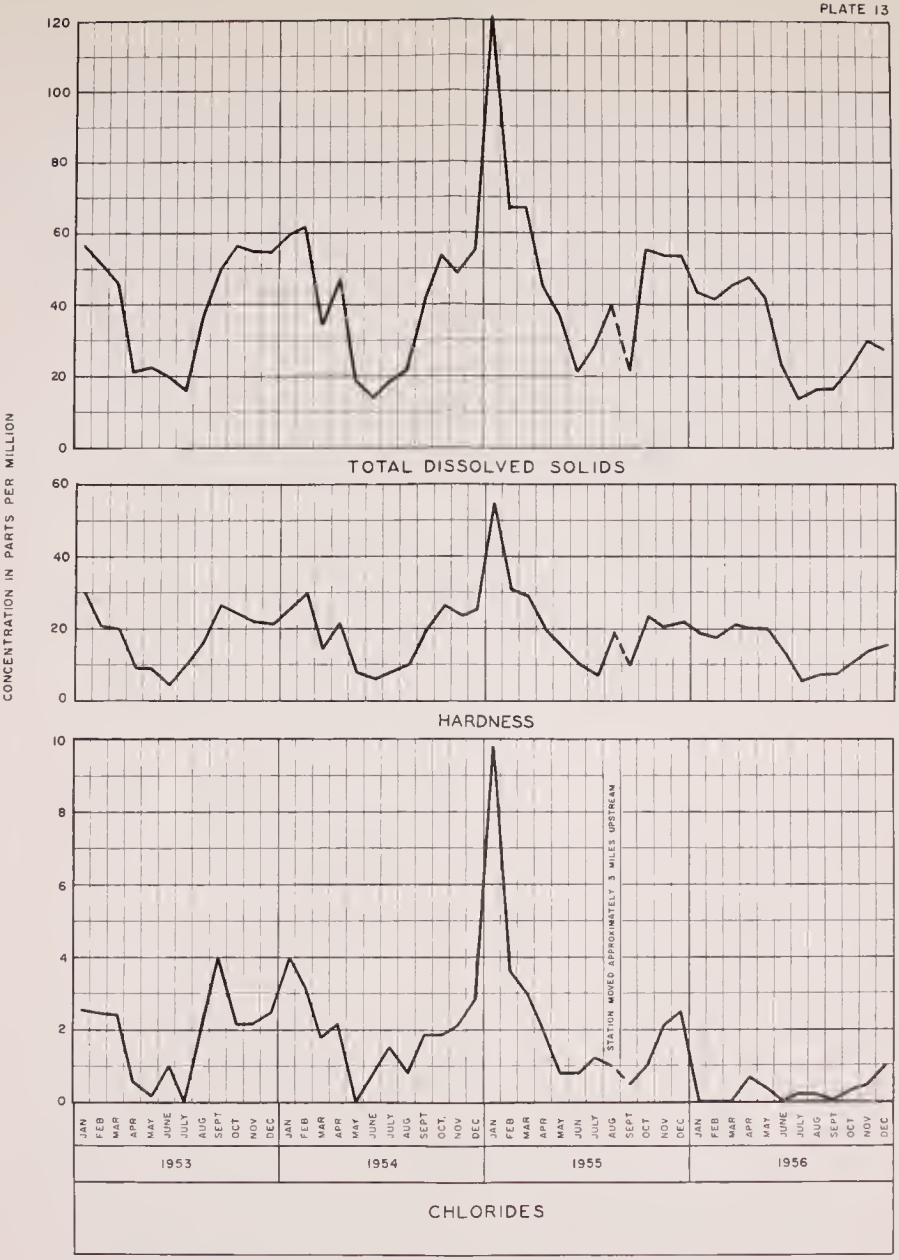


HLORIDES

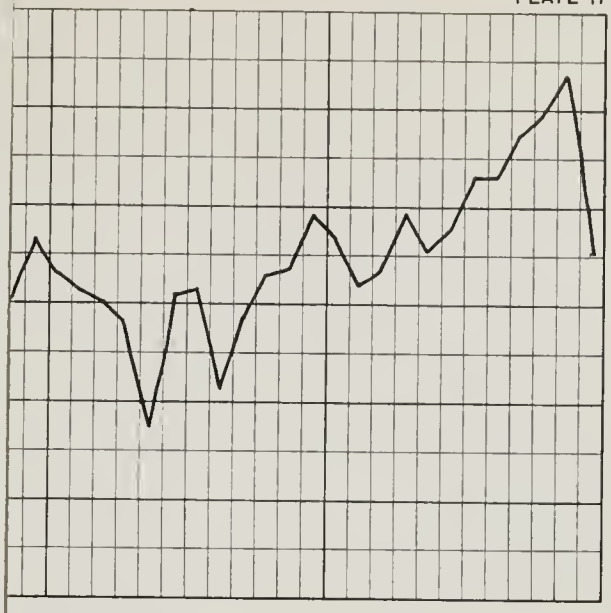
HARACTERISTICS
OF
VER NEAR FARAD
ATION NO. 53

PLATE 13

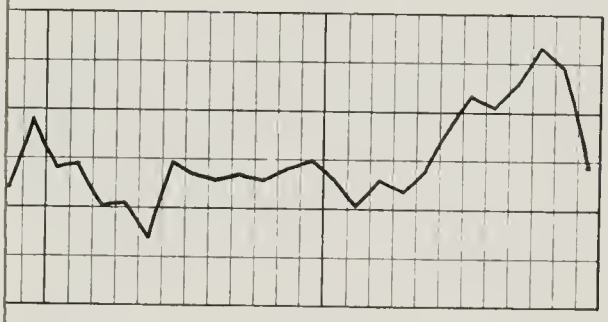


QUALITY CHARACTERISTICS
OF
KINGS RIVER AT PIEDRA AND BELOW PINE FLAT DAM
STATION NO 33a & 33b

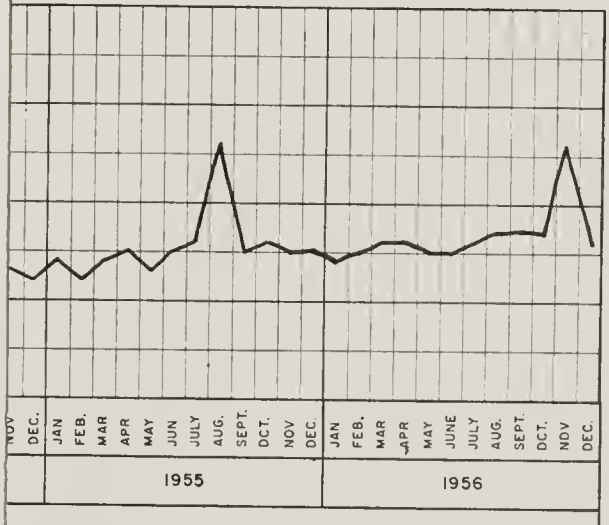
DEPARTMENT OF WATER RESOURCES 1957



SOLVED SOLIDS



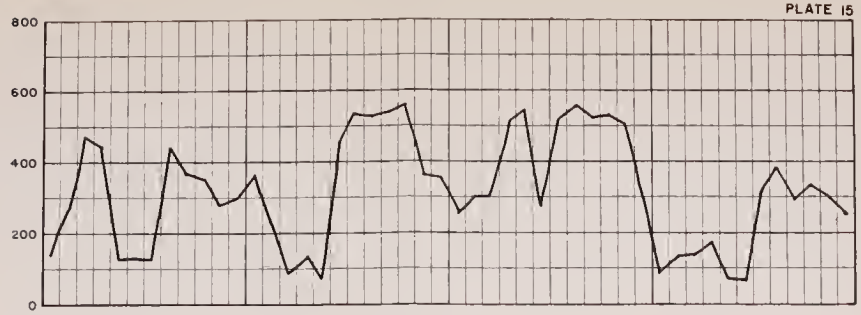
RDNESS



LORIDES

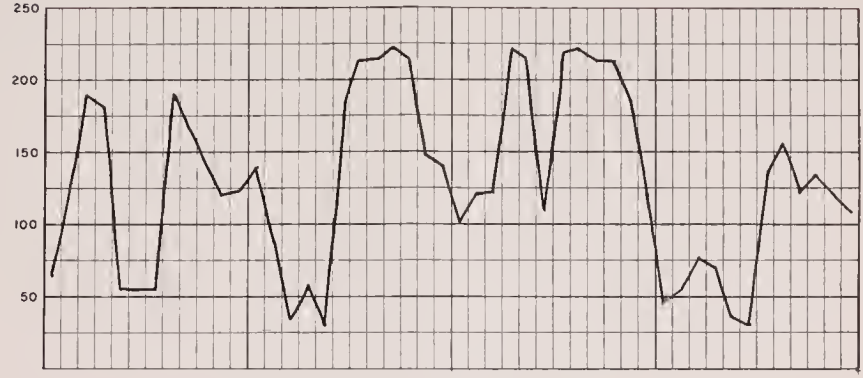
HARACTERISTICS
OF
ER NEAR MENTONE
TION NO. 51b

PLATE 15

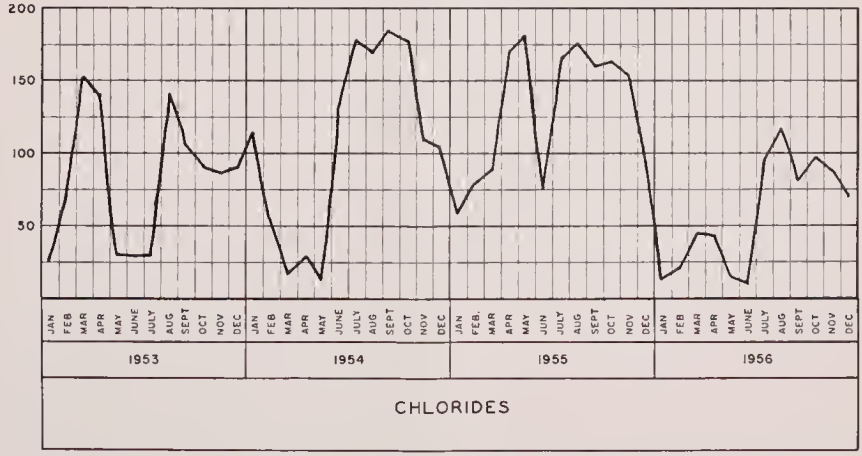


TOTAL DISSOLVED SOLIDS

CONCENTRATION IN PARTS PER MILLION



HARDNESS

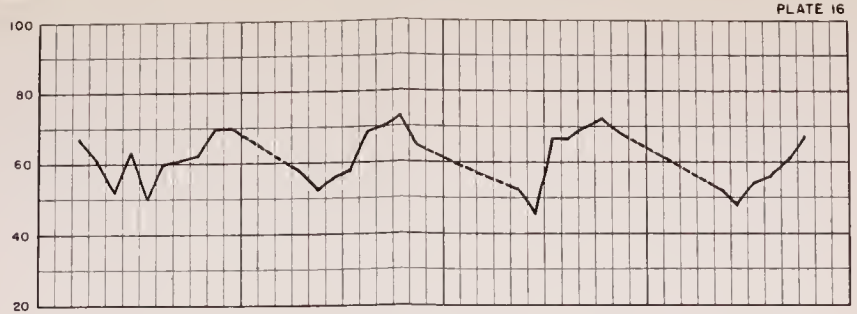


CHLORIDES

QUALITY CHARACTERISTICS
OF
SAN JOAQUIN RIVER NEAR VERNALIS
STATION NO. 27

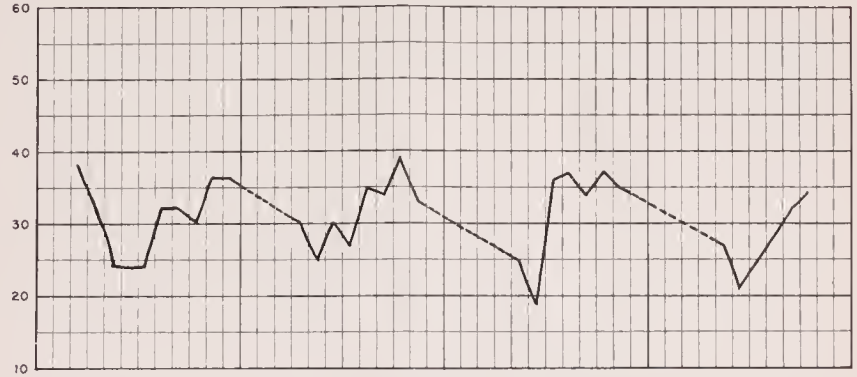
DEPARTMENT OF WATER RESOURCES 1957

PLATE 16



TOTAL DISSOLVED SOLIDS

CONCENTRATION IN PARTS PER MILLION



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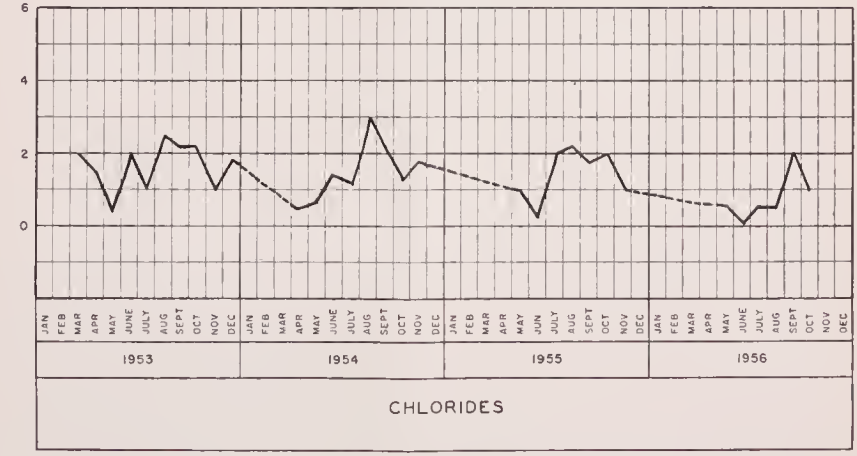
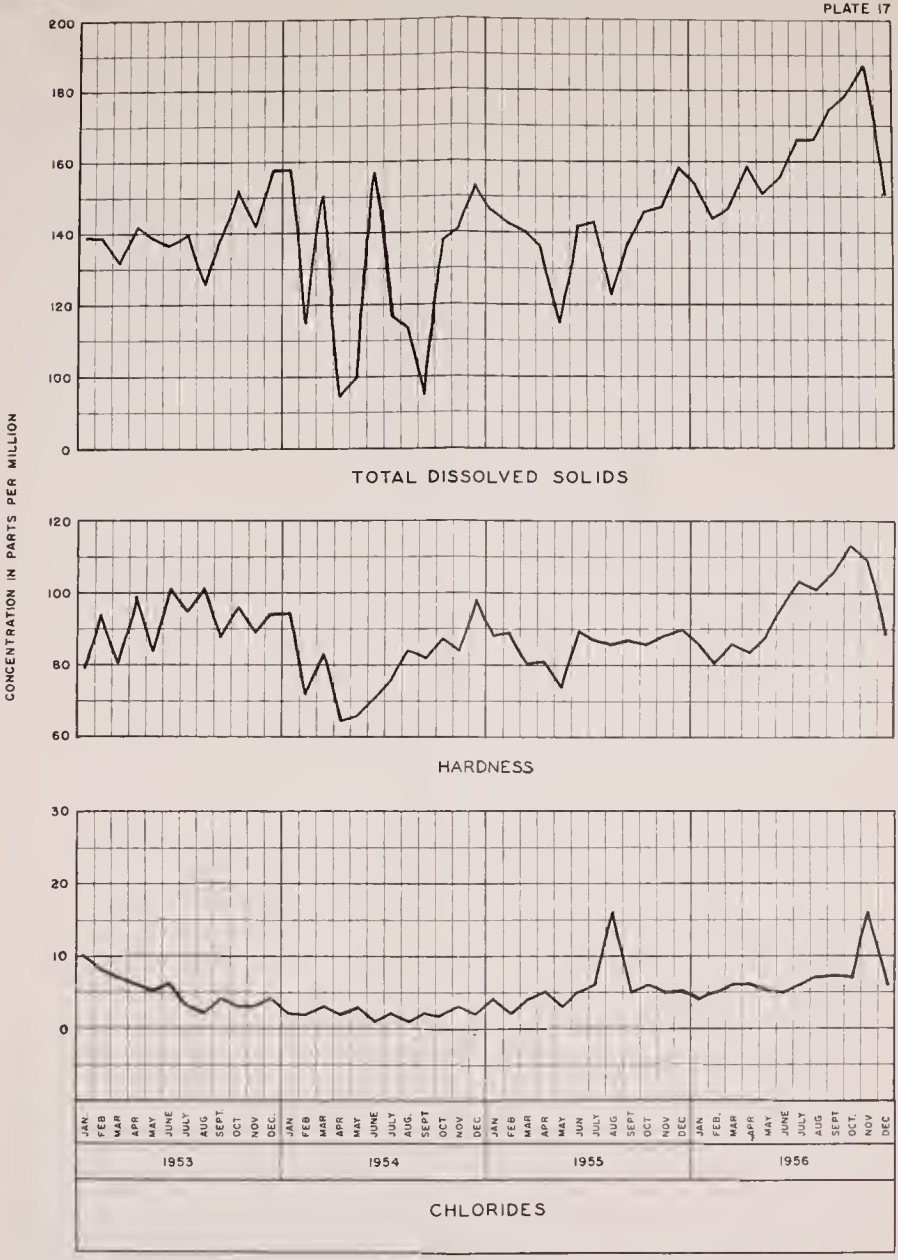


CHLORIDES

QUALITY CHARACTERISTICS
OF
TRUCKEE RIVER NEAR FARAD
STATION NO. 53

DEPARTMENT OF WATER RESOURCES 1957



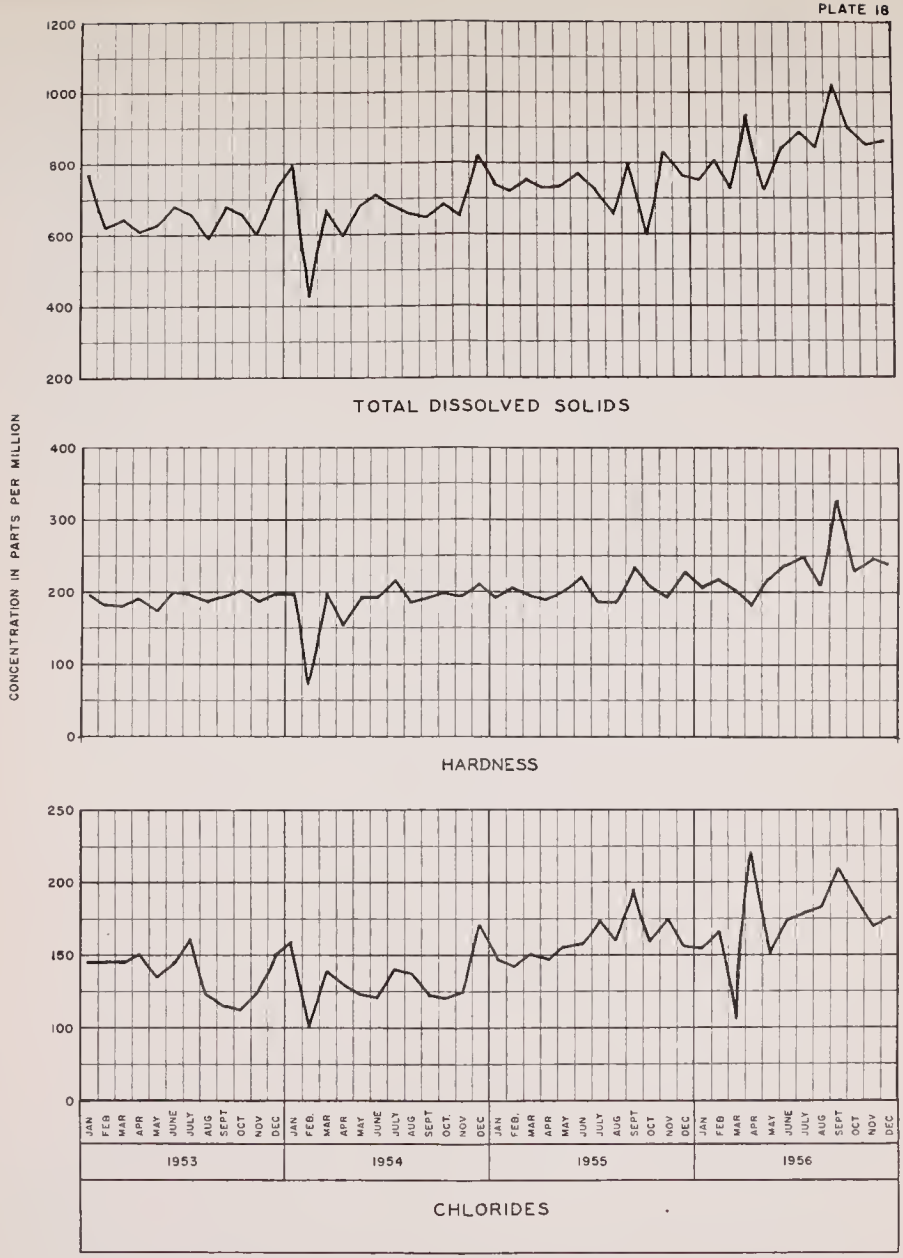
QUALITY CHARACTERISTICS
OF
SANTA ANA RIVER NEAR MENTONE
STATION NO. 51b

DEPARTMENT OF WATER RESOURCES 1957

APPENDIX A

Sampling Station, Mineral Analyses, and Radioassay Data

PLATE 18



QUALITY CHARACTERISTICS
OF
SANTA MARGARITA RIVER NEAR FALLBROOK
STATION NO. 51c

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Sampling Station Data

Mineral Analyses

Radioassays

Table No.

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Eel River near McCann

SAMPLING POINT Summer bridge near left bank.

STATION NO. 5 REGION NO. 1 COUNTY Humboldt

AT RIVER MILE 46.5 SEC. 3, T 2 S, R 3 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-89 TABLE 1

STATION Eel River at Scotia

SAMPLING POINT Left bank below U. S. Highway 101 bridge between Scotia and Rio Dell.

STATION NO. 6 REGION NO. 1 COUNTY Humboldt

AT RIVER MILE 21.8 SEC. 7, T 1 N, R 1 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-91 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Eel River, South Fork, near Miranda

SAMPLING POINT Right bank below gage six miles south of Miranda at Sylvandale camp grounds on U. S. Highway 101 and 0.9 mile south of Rocky Glen Creek.

STATION NO. 7 REGION NO. 1 COUNTY Humboldt

AT RIVER MILE 20 SEC. 30, T 3 S, R 4 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-93 TABLE 1

STATION Klamath River near Copco

SAMPLING POINT Right bank at USGS gaging station one mile south of Copco post office, one-half mile downstream from Copco No. 2 plant of the California-Oregon Power Company and 500 feet downstream from Fall Creek.

STATION NO. 1 REGION NO. 1 COUNTY Siskiyou

AT RIVER MILE 190 SEC. 36, T 48 N, R 5 W, MDB&M

SAMPLED BY Department of Fish and Game

ANALYSIS ON PAGE A-95 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Klamath River near Klamath

SAMPLING POINT Right bank at USGS gage located 5.7 miles upstream from town of Klamath.

STATION NO. 3 REGION NO. 1 COUNTY Del Norte

AT RIVER MILE _____ SEC. 17, T 13 N, R 2 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-97 TABLE 1

STATION Klamath River at Somesbar

SAMPLING POINT Left bank 100 feet downstream from gage, 1 mile west of Somesbar post office and 300 feet downstream from Salmon River.

STATION NO. 2 REGION NO. 1 COUNTY Siskiyou

AT RIVER MILE 64 SEC. 4, T 11 N, R 6 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-99 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Russian River, East Fork, near Calpella

SAMPLING POINT Left bank about 0.2 mile downstream from gage. Gage located on right bank, 5.1 miles east of U. S. Highway 101 on State Route No. 20.

STATION NO. 8 REGION NO. 1 COUNTY Mendocino

AT RIVER MILE 6.0 SEC. 13, T 16 N, R 12 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-101 TABLE 1

STATION Russian River, East Fork, at Potter Valley Power House

SAMPLING POINT Tailrace of PG&E powerhouse, 3 miles northeast of town of Potter Valley.

STATION NO. 10a REGION NO. 1 COUNTY Mendocino

AT RIVER MILE _____ SEC. 6, T 17 N, R 11 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-103 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Russian River at Guerneville

SAMPLING POINT Right bank below highway bridge in Guerneville, 6.5 miles upstream from Austin Creek.

STATION NO. 10 REGION NO. 1 COUNTY Sonoma

AT RIVER MILE 15 SEC. 32, T 8 N, R 10 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-105 TABLE 1

STATION Russian River near Healdsburg

SAMPLING POINT Left bank below gage, 2 miles east of Healdsburg and 3.5 miles upstream from Dry Creek.

STATION NO. 9 REGION NO. 1 COUNTY Sonoma

AT RIVER MILE 35.6 SEC. 22, T 9 N, R 9 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-107 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Russian River near Hopland

SAMPLING POINT Right bank below gage of abandoned bridge 0.6 mile off U. S. Highway 101 on Largo Road and 3.8 miles north of Hopland.

STATION NO. 8a REGION NO. 1 COUNTY Mendocino

AT RIVER MILE 85.7 SEC. 36, T 14 N, R 12 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-109 TABLE 1

STATION Russian River near Ukiah

SAMPLING POINT Left bank upstream from Talmadge Road Bridge about 1 mile southeast of Ukiah.

STATION NO. 10b REGION NO. 1 COUNTY Mendocino

AT RIVER MILE _____ SEC. 28, T 15 N, R 12 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-111 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Smith River near Crescent City

SAMPLING POINT From left bank below gage, 8 miles east of Crescent City and 0.5 mile downstream from South Fork.

STATION NO. 3a REGION NO. 1 COUNTY Del Norte

AT RIVER MILE 17 SEC. 10, T 16 N, R 1 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-113 TABLE 1

STATION Trinity River near Hoopa

SAMPLING POINT From left bank near gage located 2 miles southeast of Hoopa and 0.5 mile downstream from Campbell Creek on Hoopa Indian Reservation and on property of Sugar Pine Lumber Company.

STATION NO. 4 REGION NO. 1 COUNTY Humboldt

AT RIVER MILE 15.3 SEC. 31, T 8 N, R 5 E, HB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-115 TABLE 1

TABLE I

SAMPLING STATION DATA
NORTH COASTAL REGION

STATION Trinity River at Lewiston

SAMPLING POINT From left bank below gage at highway bridge at Lewiston, 0.8 mile downstream from Deadwood Creek.

STATION NO. 4a REGION NO. 1 COUNTY Trinity

AT RIVER MILE 102 SEC. 19, T 33 N, R 8 W, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-117 TABLE 1

TABLE 2

SAMPLING STATION DATA
SAN FRANCISCO BAY REGION

STATION Alameda Creek near Niles

SAMPLING POINT Right bank at concrete control near gage located 0.2 mile downstream from railroad bridge and 1.2 miles northeast of Niles.

STATION NO. 73 REGION NO. 2 COUNTY Alameda

AT RIVER MILE 1 SEC. 15, T 4 S, R 1 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-119 TABLE 2

STATION Coyote Creek near Madrone

SAMPLING POINT Right bank at gage 0.2 mile downstream from county road bridge and 2.8 miles northeast of Madrone.

STATION NO. 82 REGION NO. 2 COUNTY Santa Clara

AT RIVER MILE _____ SEC. 9, T 9 S, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-121 TABLE 2

TABLE 2

SAMPLING STATION DATA
SAN FRANCISCO BAY REGION

STATION Los Gatos Creek at Los Gatos

SAMPLING POINT Sampled from left bank at foot of gage about 0.75 mile upstream from Los Gatos and 0.25 mile downstream from Lexington Dam.

STATION NO. 74 REGION NO. 2 COUNTY Santa Clara

AT RIVER MILE 10.5 SEC. 29, T 8 S, R 1 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-123 TABLE 2

STATION Napa River near St. Helena

SAMPLING POINT At bridge which is located 1.3 miles northeast of Highway 128 on Zinfandel Lane and 2.5 miles east of St. Helena. Gage located 0.2 mile upstream from bridge.

STATION NO. 72 REGION NO. 2 COUNTY Napa

AT RIVER MILE _____ SEC. 33, T 8 N, R 5 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-125 TABLE 2

TABLE 3

SAMPLING STATION DATA
CENTRAL COASTAL REGION

STATION Carmel River near Carmel

SAMPLING POINT right bank about 30 feet below Rancho San Carlos bridge about 3 miles east of Carmel.

STATION NO. 83 REGION NO. 3 COUNTY Monterey

AT RIVER MILE _____ SEC. 17, T 16 S, R 1 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-127 TABLE 3

STATION Pajaro River near Chittenden

SAMPLING POINT right bank at Highway bridge on Chittenden Road at Santa Cruz-San Benito County line, 1 mile southeast of Chittenden and 2.5 miles downstream from San Benito River.

STATION NO. 77 REGION NO. 3 COUNTY Santa Cruz

AT RIVER MILE _____ SEC. 12, T 12 S, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-129 TABLE 3

TABLE 3

SAMPLING STATION DATA
CENTRAL COASTAL REGION

STATION San Lorenzo River at Big Trees (near Felton)

SAMPLING POINT at Sequoia Gardens Resort on right bank 1.7 miles south of Felton West of State Highway 9.

STATION NO. 75 REGION NO. 3 COUNTY Santa Cruz

AT RIVER MILE 6.5 SEC. 26, T 10 S, R 2 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-131 TABLE 3

STATION Salinas River near Spreckles

SAMPLING POINT from right bank at USGS gaging station located four miles south of Salinas, two miles west of Spreckles and 80' upstream from South Salinas-Monterey Highway bridge.

STATION NO. 43* REGION NO. 3 COUNTY Monterey

AT RIVER MILE 12.5 SEC. 8, T 15 S, R 3 E, MDB&M

SAMPLED BY BSE-Berkeley

ANALYSIS ON PAGE A-133 TABLE 3

* No report since December, 1955.

TABLE 3

SAMPLING STATION DATA
CENTRAL COASTAL REGION

STATION Salinas River at Paso Robles

SAMPLING POINT from left bank just upstream from USGS gage on State Highway 41 bridge at Paso Robles, 3.5 mile upstream from Huerhuero Creek.

STATION NO. 43a REGION NO. 3 COUNTY San Luis Obispo

AT RIVER MILE 121.7 SEC. 33, T 26 S, R 12 E, MDB&M

SAMPLED BY BSE-Santa Barbara

ANALYSIS ON PAGE A-134 TABLE 3

STATION Santa Ynez River below Gibraltar Dam

SAMPLING POINT from left bank at USGS gage 700 feet downstream from Gibraltar Dam and 7 miles north of Santa Barbara.

STATION NO. 44* REGION NO. 3 COUNTY Santa Barbara

AT RIVER MILE 70.5 SEC. 10, T 5 N, R 27 W, SBB&M

SAMPLED BY BSE-Santa Barbara

ANALYSIS ON PAGE A-136 TABLE 3

* Discontinued in March, 1956.

TABLE 3

SAMPLING STATION DATA
CENTRAL COASTAL REGION

STATION Santa Ynez River below Los Laureles Canyon

SAMPLING POINT from left bank at USGS gage located 0.1 mile downstream from Los Laureles Canyon and 13 miles east of Santa Ynez.

STATION NO. 45 REGION NO. 3 COUNTY Santa Barbara

AT RIVER MILE 51 SEC. 6, T 5 N, R 28 W, SBB&M

SAMPLED BY BSE-Santa Barbara

ANALYSIS ON PAGE A-138 TABLE 3

STATION Santa Ynez River at Solvang

SAMPLING POINT from right bank near USGS gage at Mission Bridge 25 feet downstream from Alisal Creek and 0.9 mile south of Solvang.

STATION NO. 45a REGION NO. 3 COUNTY Santa Barbara

AT RIVER MILE 35 SEC. 22, T 6 N, R 31 W, SBB&M

SAMPLED BY BSE-Santa Barbara

ANALYSIS ON PAGE A-140 TABLE 3

TABLE 3

SAMPLING STATION DATA
CENTRAL COASTAL REGION

STATION Soquel Creek at Soquel

SAMPLING POINT from left bank at foot of gage, 0.25 mile upstream from bridge on Old Santa Cruz Highway.

STATION NO. 76 REGION NO. 3 COUNTY Santa Cruz

AT RIVER MILE 1.4 SEC. 10, T 11 S, R 1 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-142 TABLE 3

STATION Uvas Creek near Morgan Hill

SAMPLING POINT from right bank at foot of gage, 500 feet upstream from Uvas Dam, 0.6 mile downstream from Eastman Canyon and 4.8 miles southwest of Morgan Hill.

STATION NO. 96 REGION NO. 3 COUNTY Santa Clara

AT RIVER MILE _____ SEC. 18, T 10 S, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-144 TABLE 3

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Los Angeles River at Los Angeles

SAMPLING POINT USGS and LACFCD gaging station at Figueroa Street bridge, 0.1 mile upstream from Arroyo Seco confluence.

STATION NO. 47 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 26 SEC. 15, T 1 S, R 13 W, SBB&M

SAMPLED BY LAPH and DWR, Los Angeles (May and September)

ANALYSIS ON PAGE A-147 TABLE 4

STATION Los Angeles River at Long Beach

SAMPLING POINT Highway 101 (State Street) Bridge, sampled from left bank just downstream from bridge. LACFCD gage at Wardlow Ave. 2 mile upstream.

STATION NO. 48 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 1.8 SEC. 26, T 4 S, R 13 W, SBB&M

SAMPLED BY LBPH and DWR, Los Angeles (May and September)

ANALYSIS ON PAGE A-149 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Matilija Creek above Matilija Dam

SAMPLING POINT left bank at USGS Gaging Station 1.7 miles northwest of Matilija and 2 miles upstream from Matilija Dam.

STATION NO. 45b REGION NO. 4 COUNTY Ventura

AT RIVER MILE 2.5 SEC. 19 T 5 N, R 23 W, SBB&M

SAMPLED BY BSE-Santa Barbara

ANALYSIS ON PAGE A-151 TABLE 4

STATION Metropolitan Water District Aqueduct at La Verne

SAMPLING POINT Raw water inflow to Metropolitan Water District Treatment Plant (monthly composite sample)

STATION NO. 69 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE _____ SEC. 6, T 1 S, R 9 W, SBB&M

SAMPLED BY MWD

ANALYSIS ON PAGE A-153 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Mission Creek at Whittier Narrows

SAMPLING POINT 2 miles northeast of Montebello at LACFCD gaging station 200 yards upstream from San Gabriel Boulevard bridge. Sampled from right bank at gage.

STATION NO. 49a REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 1.7 SEC. 6, T 2 S, R 11 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-155 TABLE 4

STATION Mono-Owens Aqueduct near San Fernando

SAMPLING POINT at inlet to Upper San Fernando Reservoir

STATION NO. 70 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE Aqueduct SEC. 30, T 3 N, R 15 W, SBB&M

SAMPLED BY LADWP

ANALYSIS ON PAGE A-157 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Rio Hondo at Whittier Narrows

SAMPLING POINT right bank, 125 yards upstream from San Gabriel Boulevard bridge. Sampled at LACFCD gaging station.

STATION NO. 49 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 9.5 SEC. 6, T 2 S, R 11 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-159 TABLE 4

STATION San Gabriel River at Whittier Narrows

SAMPLING POINT from right bank 200 feet beyond end of San Gabriel Boulevard extended (Syphon Road) upstream from Whittier Narrows Dam.

STATION NO. 50 REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 19.7 SEC. 5, T 2 S, R 11 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-161 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION San Gabriel River near Azusa

SAMPLING POINT at USGS gaging station 3 miles northeast of Azusa, 1 mile below Morris Dam. Sampled from right bank at gage.

STATION NO. 50a REGION NO. 4 COUNTY Los Angeles

AT RIVER MILE 38 SEC. 13, T 1 N, R 10 W SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-163 TABLE 4

STATION Santa Clara River at Los Angeles-Ventura County line

SAMPLING POINT 1/2 mile west of Los Angeles-Ventura County line and 1/2 mile upstream from Ventura County gage. Sampled from left bank at Newhall Ranch road crossing.

STATION NO. 46 REGION NO. 4 COUNTY Ventura

AT RIVER MILE 40 SEC. 19, T 4 N, R 17 W SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-165 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Santa Clara River near Santa Paula

SAMPLING POINT station located 1.5 miles upstream from Santa Paula bridge (Willard Bridge) and 100 feet north of South Mountain Road. Sampled from left bank.

STATION NO. 46a REGION NO. 4 COUNTY Ventura

AT RIVER MILE 17 SEC. 12, T 3 N, R 21 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-167 TABLE 4

STATION Santa Clara River at Blue Cut

SAMPLING POINT 1 mile downstream from station 46 at Tapo Canyon pipe and road crossing and 1/2 mile downstream from Ventura County gaging station. Sampled downstream from road culvert.

STATION NO. 46b REGION NO. 4 COUNTY Ventura

AT RIVER MILE 39 SEC. 25, T 4 N, R 18 W, SBB&M

SAMPLED BY DWR-Los Angeles; Sampled May and September

ANALYSIS ON PAGE A-169 TABLE 4

TABLE 4

SAMPLING STATION DATA
LOS ANGELES REGION

STATION Ventura River near Ventura

SAMPLING POINT Station located at USGS gage in Foster Memorial Park on right bank, 5 miles north of Ventura, 300 feet downstream from highway 150 bridge.

STATION NO. 61 REGION NO. 4 COUNTY Ventura

AT RIVER MILE 6.0 SEC. 8, T 3 N, R 23 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-171 TABLE 4

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION American River at Sacramento

SAMPLING POINT at "H" Street bridge, water stage recorder located on left bank on upstream side of bridge.

STATION NO. 22 REGION NO. 5 COUNTY Sacramento

AT RIVER MILE 6.5 SEC. 3, T 8 N, R 5 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-173 TABLE 5

STATION Bear Creek near Stevinson

SAMPLING POINT Right bank 4.5 miles southeast of Stevinson at washed out wooden bridge.

STATION NO. 111 REGION NO. 5 COUNTY Merced

AT RIVER MILE 0.15 SEC. 36, T 7 S, R 10 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-175 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Bear River near Wheatland

SAMPLING POINT left bank, 30 feet downstream from gage located on downstream side of bridge on U. S. Highway 99E 1 mile southeast of Wheatland.

STATION NO. 78 REGION NO. 5 COUNTY Placer

AT RIVER MILE 10 SEC. 3, T 13 N, R 5 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-177 TABLE 5

STATION Big Chico Creek near Chico

SAMPLING POINT right bank at staff gage located one mile upstream from golf course clubhouse in Bidwell Park and 6 miles northeast of Chico.

STATION NO. 85 REGION NO. 5 COUNTY Butte

AT RIVER MILE 12.9 SEC. 9, T 22 N, R 2 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-179 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Burney Creek near Burney

SAMPLING POINT Timber bridge on Jack Rabbit Flat Road, 1.5 miles west of Burney on Highway 299.

STATION NO. 17c REGION NO. 5 COUNTY Shasta

AT RIVER MILE 13 SEC. 18, T 33 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-181 TABLE 5

STATION Butte Creek near Chico

SAMPLING POINT Right bank at foot of gage 0.8 mile downstream from Little Butte Creek and 7.5 miles east of Chico.

STATION NO. 84 REGION NO. 5 COUNTY Butte

AT RIVER MILE _____ SEC. 36 T 22 N, R 2 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-183 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Cache Creek near Capay

SAMPLING POINT Right bank at gage located 3 miles northwest of Capay and 2 miles upstream from Clear Lake Water Company's diversion dam.

STATION NO. 80 REGION NO. 5 COUNTY Yolo

AT RIVER MILE _____ SEC. 8, T 10 N, R 2 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-185 TABLE 5

STATION Cache Creek near Lower Lake

SAMPLING POINT Left bank at foot of gage about 500 feet downstream from dam and about 3.5 miles southeast of State Highway 53.

STATION NO. 42 REGION NO. 5 COUNTY Lake

AT RIVER MILE _____ SEC. 6, T 12 N, R 6 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-187 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Cache Creek, North Fork, near Lower Lake

SAMPLING POINT bridge on State Highway 20 between Williams and Clear Lake. Gage located on right bank 2.7 miles northwest of bridge.

STATION NO. 79 REGION NO. 5 COUNTY Lake

AT RIVER MILE 3.0 SEC. 31, T 14 N, R 6 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-189 TABLE 5

STATION Calaveras River near Jenny Lind

SAMPLING POINT from right bank about 150 feet downstream from USGS gage. Gage located 70 feet below bridge on Milton Road, 0.2 mile south of Jenny Lind.

STATION NO. 16a REGION NO. 5 COUNTY Calaveras

AT RIVER MILE 36.7 SEC. 27, T 3 N, R 10 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-191 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Clear Lake near Clearlake Oaks

SAMPLING POINT at Gordy's Fish Harbor Motel at Glen Haven, 3.6 miles northwest of Clearlake Oaks.

STATION NO. 40 REGION NO. 5 COUNTY Lake

AT RIVER MILE _____ SEC. 27, T 14 N, R 8 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-193 TABLE 5

STATION Clear Lake at Lakeport

SAMPLING POINT end of pier at foot of 3rd Street at North end of park. Staff gage located on piling at end of pier.

STATION NO. 41 REGION NO. 5 COUNTY Lake

AT RIVER MILE _____ SEC. 24, T 14 N, R 10 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-195 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Colusa Trough near Colusa

SAMPLING POINT Colusa-Williams highway bridge, 3 miles west of Colusa. Water stage recorder on upstream side of bridge.

STATION NO. 87 REGION NO. 5 COUNTY Colusa

AT RIVER MILE _____ SEC. 34, T 16 N, R 2 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-197 TABLE 5

STATION Cosumnes River near Michigan Bar

SAMPLING POINT Michigan Bar road bridge about 1 mile north of Michigan Bar.

STATION NO. 94 REGION NO. 5 COUNTY Sacramento

AT RIVER MILE _____ SEC. 36 T 8 N, R 8 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-199 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Cottonwood Creek near Cottonwood

SAMPLING POINT Right bank at gage house located 2 miles east of Cottonwood.

STATION NO. 12b REGION NO. 5 COUNTY Shasta

AT RIVER MILE 2.5 SEC. 7, T 29 N, R 3 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-201 TABLE 5

STATION Deer Creek near Vina

SAMPLING POINT Left bank under U. S. Highway 99E bridge 1 mile north of Vina. DWR gage located approximately 400' downstream from 99E bridge on left bank.

STATION NO. 95 REGION NO. 5 COUNTY Tehama

AT RIVER MILE _____ SEC. 14, T 24 N, R 2 W MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-203 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Delta-Cross Channel near Walnut Grove

SAMPLING POINT left bank 0.2 mile downstream from gates when gates are open and from highway bridge when gates are closed.

STATION NO. 98 REGION NO. 5 COUNTY Sacramento

AT RIVER MILE _____ SEC. 35, T 5 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-205 TABLE 5

STATION Delta-Mendota Canal near Mendota

SAMPLING POINT right bank one mile upstream from canal gates and 2 miles north of Mendota on Bass Road.

STATION NO. 92 REGION NO. 5 COUNTY Fresno

AT RIVER MILE _____ SEC. 19, T 13 S, R 15 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-207 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Delta-Mendota Canal near Tracy

SAMPLING POINT Left bank downstream from Byron-Bethany road cross-over, about 1 mile from Tracy Pumping Plant, about 10 miles northwest of Tracy.

STATION NO. 93 REGION NO. 5 COUNTY Contra Costa

AT RIVER MILE _____ SEC. 30, T 1 S, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-209 TABLE 5

STATION Feather River at Nicolaus

SAMPLING POINT Left bank at gage located 0.5 miles downstream from highway bridge at Nicolaus.

STATION NO. 20 REGION NO. 5 COUNTY Sutter

AT RIVER MILE 9.3 SEC. 12, T 12 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-211 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Feather River near Oroville

SAMPLING POINT left bank at gage located 75 feet upstream from bridge on Feather River Highway (State Highway 24), two miles downstream from confluence of North and Middle Forks and 4 miles northeast of Oroville.

STATION NO. 19 REGION NO. 5 COUNTY Butte

AT RIVER MILE 71.0 SEC. 2, T 19 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-213 TABLE 5

STATION Honcut Creek, South, near Bangor

SAMPLING POINT Right bank at foot of gage located 100 feet upstream from Brown's Valley-Bangor road bridge and 2.5 miles southeast of Bangor.

STATION NO. 90 REGION NO. 5 COUNTY Butte

AT RIVER MILE _____ SEC. 35, T 18 N, R 5 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-215 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Indian Creek near Crescent Mills

SAMPLING POINT at bridge about 1 mile above gage which is located 0.8 mile upstream from Dixie Creek and 1.5 miles south of town of Crescent Mills.

STATION NO. 17d REGION NO. 5 COUNTY Plumas

AT RIVER MILE _____ SEC. 25, T 26 N, R 9 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-217 TABLE 5

STATION Indian Slough near Brentwood

SAMPLING POINT East Contra Costa Irrigation District canal at the District's Pump No. 1 on Bixler Road at the head of Indian Slough, 3 miles north of Byron.

STATION NO. 107 REGION NO. 5 COUNTY Contra Costa

AT RIVER MILE _____ SEC. 22, T 1 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-219 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Italian Slough near Mouth

SAMPLING POINT Boat landing on right bank at confluence of slough and Old River about 3 miles southeast of Byron.

STATION NO. 106 REGION NO. 5 COUNTY Contra Costa

AT RIVER MILE 1.5 SEC. 7, T 1 S, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-221 TABLE 5

STATION Kaweah River near Three Rivers

SAMPLING POINT Left bank at gage located 2.5 miles downstream from South Fork and 3 miles southwest of Three Rivers on Highway 198 approximately 0.5 mile past Cobbles Lodge..

STATION NO. 35 REGION NO. 5 COUNTY Tulare

AT RIVER MILE _____ SEC. 33, T 17 S, R 28 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-223 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Kern River near Bakersfield

SAMPLING POINT Diversion weir located at mouth of lower canyon five miles northeast of Bakersfield.

STATION NO. 36 REGION NO. 5 COUNTY Kern

AT RIVER MILE _____ SEC. 2, T 29 S, R 28 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-225 TABLE 5

STATION Kern River below Isabella Dam

SAMPLING POINT Right bank, 500 feet downstream from outfall tunnel.

STATION NO. 36a REGION NO. 5 COUNTY Kern

AT RIVER MILE _____ SEC. 19, T 26 S, R 33 E, MDB&M

SAMPLED BY Corp of Engineers

ANALYSIS ON PAGE A-227 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Kern River near Kernville

SAMPLING POINT At gage 3 miles upstream from Salmon Creek and 15 miles north of Kernville.

STATION NO. 36b REGION NO. 5 COUNTY Kern

AT RIVER MILE _____ SEC. 14, T 23 S, R 23 E, MDB&M

SAMPLED BY Corps of Engineers

ANALYSIS ON PAGE A-229 TABLE 5

STATION Kings River below North Fork

SAMPLING POINT from bridge at midstream 0.8 mile downstream from North Fork.

STATION NO. 33c REGION NO. 5 COUNTY Fresno

AT RIVER MILE _____ SEC. 21, T 12 S, R 26 E, MDB&M

SAMPLED BY Corp of Engineers

ANALYSIS ON PAGE A-231 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Kings River below Peoples Weir (near Kingsburg)

SAMPLING POINT at gage on left bank about 1/4 mile downstream from diversion weir, 2 miles south of Kingsburg and 12 miles northeast of Hanford.

STATION NO. 34 REGION NO. 5 COUNTY Kings

AT RIVER MILE 71 SEC. 1, T 17 S, R 22 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-233 TABLE 5

STATION Kings River below Pine Flat Dam

SAMPLING POINT Left bank, 3000 feet downstream from the dam.

STATION NO. 33b REGION NO. 5 COUNTY Fresno

AT RIVER MILE _____ SEC. 2, T 13 S, R 24 E, MDB&M

SAMPLED BY Corps of Engineers

ANALYSIS ON PAGE A-235 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Kings River above North Fork

SAMPLING POINT at bridge about 3/4 mile downstream from gage located on left bank one mile upstream from North Fork and 10 miles southeast of Trimmer. Discontinued in September 1955.

STATION NO. 33 REGION NO. 5 COUNTY Fresno

AT RIVER MILE 130 SEC. 27, T 12 S, R 26 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-237 TABLE 5

STATION Kings River at Piedra

SAMPLING POINT at damaged highway bridge about 1/2 mile upstream from gage located on left bank two miles downstream from Mill Creek and 12 miles northeast of Sanger. Discontinued in September 1955.

STATION NO. 33a REGION NO. 5 COUNTY Fresno

AT RIVER MILE 100 SEC. 8, T 13 S, R 24 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-238 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Lindsey Slough near Rio Vista

SAMPLING POINT from boat landing near gage located at Montezuma Ranch, headquarters of California Packing Corporation, six miles north of Rio Vista.

STATION NO. 110 REGION NO. 5 COUNTY Solano

AT RIVER MILE 1.1 SEC. 25, T 5 N, R 2 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-239 TABLE 5

STATION Little Potato Slough at Terminous

SAMPLING POINT from boat dock on east bank approximately 250' feet north of State Highway 12 Bridge.

STATION NO. 99 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE _____ SEC. 13, T 3 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-241 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION McCloud River above Shasta Lake

SAMPLING POINT Left bank below gage located just upstream from Shasta Lake, 0.3 mile downstream from Bollibokka Creek and 11 miles east of Delta. Stream confined in a steep rocky canyon. Station inaccessible by road. One and one-half hour walk to station.

STATION NO. 18 REGION NO. 5 COUNTY Shasta

AT RIVER MILE _____ SEC. 28, T 36 N, R 3 W, MDB&M

SAMPLED BY BSE-Redding

ANALYSIS ON PAGE A-243 TABLE 5

STATION Merced River below Exchequer Dam

SAMPLING POINT Right bank at foot of gage located at Exchequer, 0.5 miles downstream from Lake McClure and 5 miles northeast of Merced Falls.

STATION NO. 32a REGION NO. 5 COUNTY Mariposa

AT RIVER MILE 59 SEC. 14-23 T 4 S, R 15 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-245 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Merced River near Stevinson

SAMPLING POINT from right bank approximately 100 feet upstream from gage. Gage located 6 miles northwest of Stevinson.

STATION NO. 32 REGION NO. 5 COUNTY Merced

AT RIVER MILE 4.6 SEC. 36, T 6 S, R 9 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-247 TABLE 5

STATION Mill Creek near Los Molinos

SAMPLING POINT right bank below highway 99E bridge, 1.5 mile north of Los Milinos. Gage located downstream from bridge.

STATION NO. 88 REGION NO. 5 COUNTY Tehama

AT RIVER MILE _____ SEC. 9, T 25 N, R 2 W MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-249 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Mokelumne River near Lancha Plana

SAMPLING POINT Left bank near gage, located 1 mile east of Lancha Plana, 3 miles downstream from Pardee Dam and 5 miles upstream from Camanche Creek.

STATION NO. 23a REGION NO. 5 COUNTY Amador

AT RIVER MILE 52 SEC. 4, T 4 N, R 10 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-251 TABLE 5

STATION Mokelumne River at Woodbridge

SAMPLING POINT Left bank at foot of gage house located 0.4 mile downstream from dam and canal intake of woodbridge Irrigation District.

STATION NO. 23 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 19.2 SEC. 34, T 4 N, R 6 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-253 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Old River at Clifton Court Ferry

SAMPLING POINT from ferry at left bank about 10 miles northwest of Tracy and 6 miles southeast of Byron. Gage located on left bank 0.3 mile upstream from Ferry.

STATION NO. 104 REGION NO. 5 COUNTY San Joaquin - Contra Costa Co. line

AT RIVER MILE 20.5 SEC. 20, T 1 S, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-255 TABLE 5

STATION Old River at Mandeville Island

SAMPLING POINT at right bank at northwest side of Mandeville Island.

STATION NO. 112 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 0.5 SEC. 6, T 2 N, R 4 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-257 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Old River at Orwood Bridge

SAMPLING POINT Boat dock on right bank at Atchison Topeka & Santa Fe Rialroad bridge about 6 miles northeast of Byron.

STATION NO. 108 REGION NO. 5 COUNTY San Joaquin-Contra Costa Co. line

AT RIVER MILE 10.5 SEC. 17, T 1 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-259 TABLE 5

STATION Old River near Tracy

SAMPLING POINT Left bank at trash rack of pump intake at end of Lammers Road and about 5 miles northwest of Tracy.

STATION NO. 103 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 26 SEC. 6, T 2 S, R 5 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-261 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Pit River near Canby

SAMPLING POINT about 500 feet downstream from bridge on U. S. Highway 299 located about 4.5 miles southwest of Canby. Water stage recorder located on right bank 0.5 mile upstream from bridge.

STATION NO. 17a REGION NO. 5 COUNTY Modoc

AT RIVER MILE 141 SEC. 10, T 41 N, R 9 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-263 TABLE 5

STATION Pit River near Montgomery Creek

SAMPLING POINT right bank about 125 feet upstream from gage, located one mile upstream from Cow Canyon Creek and 3.5 miles west of town of Montgomery Creek.

STATION NO. 17 REGION NO. 5 COUNTY Shasta

AT RIVER MILE 29 SEC. 32, T 35 N, R 1 W, MDB&M

SAMPLED BY BSE-Redding

ANALYSIS ON PAGE A-265 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Putah Creek near Winters

SAMPLING POINT Left bank 50 feet below gage located 8.2 miles west of Winters on State Highway 128.

STATION NO. 81 REGION NO. 5 COUNTY Yolo

AT RIVER MILE _____ SEC. 28, T 8 N, R 2 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-267 TABLE 5

STATION Rock Slough near Knightsen

SAMPLING POINT Tule Lane bridge at head of slough 300 feet south of gates of Contra Costa Canal intake and two miles northeast of Knightsen.

STATION NO. 109 REGION NO. 5 COUNTY Contra Costa

AT RIVER MILE _____ SEC. 34, T 2 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-269 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Sacramento River at Delta

SAMPLING POINT right bank 50 feet upstream from gage, located 0.2 mile downstream from Dog Creek and 0.6 mile southeast of Delta.

STATION NO. 11 REGION NO. 5 COUNTY Shasta

AT RIVER MILE 349 SEC. 35, T 36 N, R 5 W, MDB&M

SAMPLED BY BSE-Redding

ANALYSIS ON PAGE A-271 TABLE 5

STATION Sacramento River near Hamilton City

SAMPLING POINT at Gianella Bridge on State Highway 32 between Hamilton City and Chico. Sampled from each channel from bridge (composite of two samples). Gage on left bank on downstream side of bridge.

STATION NO. 13 REGION NO. 5 COUNTY Glenn

AT RIVER MILE 201 SEC. 20, T 22 N, R 1 W, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-273 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Sacramento River at Keswick

SAMPLING POINT From left bank about 100 feet upstream from gage located 0.6 mile downstream from Keswick Dam. 0.6 mile upstream from Middle Creek. 1.5 mile downstream from Keswick and 10 miles downstream from Shasta Dam.

STATION NO. 12 REGION NO. 5 COUNTY Shasta

AT RIVER MILE 309 SEC. 28 T 32 N R 5 W MDB&M

SAMPLED BY BSE-Redding

ANALYSIS ON PAGE A-275 TABLE 5

STATION Sacramento River at Knights Landing

SAMPLING POINT From highway bridge. Water stage recorder 0.3 mile downstream from bridge. Composite of two samples.

STATION NO. 14 REGION NO. 5 COUNTY Yolo

AT RIVER MILE 98.9 SEC. 14 T 11 N R 2 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-277 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Sacramento River near Redding

SAMPLING POINT From right bank 500 feet downstream from gage located below Anderson-Cottonwood diversion dam.

STATION NO. 12a REGION NO. 5 COUNTY Shasta

AT RIVER MILE 306 SEC. 18, T 31 N, R 4 W, MDB&M

SAMPLED BY BSE-Redding

ANALYSIS ON PAGE A-279 TABLE 5

STATION Sacramento River at Rio Vista

SAMPLING POINT From right bank at pier at upstream side of U. S. Department of Army installation located about 1 mile downstream from Rio Vista. Tidal gage located near administration building about 1,500 feet downstream from sampling point.

STATION NO. 16 REGION NO. 5 COUNTY Solano

AT RIVER MILE 14.3 SEC. 31, T 4 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-281 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Sacramento River at Sacramento

SAMPLING POINT from U. S. Highway 40 at Tower Bridge. Water stage recorder located on left bank 0.3 mile upstream from bridge. Composite of three samples.

STATION NO. 15 REGION NO. 5 COUNTY Sacramento

AT RIVER MILE 62.5 SEC. 35, T 9 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-283 TABLE 5

STATION Sacramento River at Snodgrass Slough

SAMPLING POINT at gage on left bank, 2 miles north of Courtland.

STATION NO. 97 REGION NO. 5 COUNTY Sacramento

AT RIVER MILE _____ SEC. 27, T 6 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-285 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Sacramento Slough near Knights Landing

SAMPLING POINT From pond near discharge pipes from pumps below gage located on levee near Reclamation District 1500 pumping plant.

STATION NO. 14a REGION NO. 5 COUNTY Sutter

AT RIVER MILE 1.0 SEC. 20 T 11 N, R 3 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-287 TABLE 5

STATION San Joaquin River at Antioch

SAMPLING POINT From pier at old Antioch Water Works on Fulton Shipyard Road. Tidal gage located in house at end of pier.

STATION NO. 28 REGION NO. 5 COUNTY Contra Costa

AT RIVER MILE 4.5 SEC. 13 T 2 N, R 2 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-289 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION San Joaquin River near Dos Palos

SAMPLING POINT from bridge at head of Temple Slough, 6.3 miles east of Dos Palos. Gage located 0.7 mile downstream.

STATION NO. 25a REGION NO. 5 COUNTY Fresno

AT RIVER MILE 186.0 SEC. 12 T 11 S, R 13 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-291 TABLE 5

STATION San Joaquin River at Friant

SAMPLING POINT from left bank 100 feet downstream from gage house located 0.5 mile west of Friant and 2 miles downstream from Friant Dam.

STATION NO. 24 REGION NO. 5 COUNTY Fresno

AT RIVER MILE 268.13 SEC. 7, T 11 S, R 21 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-293 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION San Joaquin River at Garwood Bridge

SAMPLING POINT From boat landing on left bank near upstream side of bridge on Stockton-Byron Road. Gage located at right bank on Brandts Bridge 5 miles upstream from Garwood bridge.

STATION NO. 101 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 42.1 SEC. 16 T 1 N, R 6 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-295 TABLE 5

STATION San Joaquin River near Grayson

SAMPLING POINT from Laird Slough bridge. Water stage recorder located on bridge near left bank.

STATION NO. 26 REGION NO. 5 COUNTY Stanislaus

AT RIVER MILE 93.6 SEC. 24, T 4 S, R 7 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-297 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION San Joaquin River at Maze Road bridge

SAMPLING POINT from boat dock on left bank, 300 feet upstream from Maze Road bridge (State Highway 132), at El Solyo Ranch pump intake. Gage on left bank approximately 0.5 mile upstream from bridge.

STATION NO. 26a REGION NO. 5 COUNTY Stanislaus

AT RIVER MILE 82.65 SEC. 29, T 3 S, R 7 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-299 TABLE 5

STATION San Joaquin River near Mendota

SAMPLING POINT from left bank at foot of gage house, 2.5 miles upstream from Mendota Dam and 4 miles north of Mendota on Base Road.

STATION NO. 25 REGION NO. 5 COUNTY Fresno

AT RIVER MILE 206.2 SEC. 7, T 13 S, R 15 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-301 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION San Joaquin River at Mossdale Bridge

SAMPLING POINT From boat landing on left bank just downstream from Mossdale Bridge on U. S. Highway 50 located about 12 miles south of Stockton and 7 miles northeast of Tracy. Gage located on right bank just downstream from bridge.

STATION NO. 102 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 56 SEC. 4, T 2 S, R 6 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-303 TABLE 5

STATION San Joaquin River near Vernalis

SAMPLING POINT from Durham Ferry Highway bridge located 3.4 miles northeast of Vernalis. Water stage recorder located on left bank on upstream side bridge.

STATION NO. 27 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 76.7 SEC. 13 T 3 S, R 6 E MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-305 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Stanislaus River near Knights Ferry

SAMPLING POINT left bank, tunnel intake, above construction of Tulloch Dam.

STATION NO. 29a REGION NO. 5 COUNTY Tuolumne

AT RIVER MILE _____ SEC. 1, T 1 S, R 12 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-307 TABLE 5

STATION Stanislaus River near Mouth

SAMPLING POINT from right bank at foot of gage house. 2.9 miles above the mouth.

STATION NO. 29 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 3.5 SEC. 17, T 3 S, R 7 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-308 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Stockton Ship Channel on Rindge Island

SAMPLING POINT From boat landing on right bank of ship channel at south-east corner of Rindge Tract near junction of Fourteen Mile Slough.

STATION NO. 100 REGION NO. 5 COUNTY San Joaquin

AT RIVER MILE 34 SEC. 27 T 2 N, R 5 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-310 TABLE 5

STATION Stony Creek near Hamilton City

SAMPLING POINT From right bank at gage located 2.5 miles southwest of Hamilton City and 8 miles of Orland.

STATION NO. 13a REGION NO. 5 COUNTY Glenn

AT RIVER MILE 6.0 SEC. 36 T 22 N, R 2 W MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-312 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Tule River near Porterville

SAMPLING POINT from County road bridge, 0.1 mile upstream from South Fork and 6 miles east of Porterville. Water stage recorder on downstream side of bridge across from Bartlett Park.

STATION NO. 91 REGION NO. 5 COUNTY Tulare

AT RIVER MILE _____ SEC. 25, T 21 S, R 28 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-314 TABLE 5

STATION Tuolumne River below Don Pedro Dam

SAMPLING POINT left bank, 1/4 mile downstream from dam.

STATION NO. 31a REGION NO. 5 COUNTY Tuolumne

AT RIVER MILE 50 SEC. 3, T 3 S, R 14 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-316 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Tuolumne River at Hickman-Waterford Bridge

SAMPLING POINT From Hickman-Waterford Bridge, about 1 mile north of Hickman. Water stage recorder is located on the downstream side of bridge.

STATION NO. 30 REGION NO. 5 COUNTY Stanislaus

AT RIVER MILE 31.7 SEC. 34, T 3 S, R 11 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-318 TABLE 5

STATION Tuolumne River at La Grange

SAMPLING POINT Sampled from highway bridge at La Grange. Discontinued July, 1956.

STATION NO. 31b REGION NO. 5 COUNTY Stanislaus

AT RIVER MILE _____ SEC. 20, T 3 S, R 14 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-320 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Tuolumne River at Tuolumne City

SAMPLING POINT From highway bridge on Shiloh Road. Water stage recorder located on right bank beneath bridge.

STATION NO. 31 REGION NO. 5 COUNTY Stanislaus

AT RIVER MILE 3.35 SEC. 7, T 4 S, R 8 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-322 TABLE 5

STATION Yuba River at Marysville

SAMPLING POINT From center of Simpson Lane Bridge at Marysville. From November 1956 sampled just below USGS gage on left bank 1/4 mile downstream from Simpson Lane Bridge.

STATION NO. 21 REGION NO. 5 COUNTY Yuba

AT RIVER MILE 2 SEC. 18, T 15 N, R 4 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-324 TABLE 5

TABLE 5

SAMPLING STATION DATA
CENTRAL VALLEY REGION

STATION Yuba River near Smartville

SAMPLING POINT From right bank, one-half mile downstream from Highway 20 bridge about 5 miles below Narrows Dam and about 4 miles below confluence of Deer Creek.

STATION NO. 21a REGION NO. 5 COUNTY Yuba

AT RIVER MILE 25 SEC. 14, T 16 N, R 6 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-326 TABLE 5

TABLE 6

SAMPLING STATION DATA
LAHONTAN REGION

STATION Lake Tahoe at Tahoe Vista

SAMPLING POINT from pier, 0.1 mile west of Tahoe Vista and eight miles northeast of Tahoe City.

STATION NO. 37 REGION NO. 6 COUNTY Placer

AT RIVER MILE _____ SEC. 14, T 16 N, R 17 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-327 TABLE 6

STATION Lake Tahoe at Tahoe City

SAMPLING POINT upstream from control gates of Truckee River upstream from State Highway 89.

STATION NO. 38 REGION NO. 6 COUNTY Placer

AT RIVER MILE _____ SEC. 7, T 15 N, R 17 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-329 TABLE 6

TABLE 6

SAMPLING STATION DATA
LAHONTAN REGION

STATION Lake Tahoe at Bijou

SAMPLING POINT from Connolly's Resort pier at Bijou

STATION NO. 39 REGION NO. 6 COUNTY El Dorado

AT RIVER MILE _____ SEC. 35, T 13 N, R 18 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-331 TABLE 6

STATION Mojave River near Victorville

SAMPLING POINT left bank at USGS gage, 3 miles northwest of Victorville and 500 feet upstream from U. S. Highway 66 bridge across Lower Narrows.

STATION NO. 67 REGION NO. 6 COUNTY San Bernardino

AT RIVER MILE 95 from Soda Lake SEC. 29, T 6 N, R 4 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-333 TABLE 6

TABLE 6

SAMPLING STATION DATA
LAHONTAN REGION

STATION Susan River at Susanville

SAMPLING POINT Sampled from left bank at foot of USGS gage, 0.5 mile west of Susanville and 1.1 mile upstream from Piute Creek.

STATION NO. 17b REGION NO. 6 COUNTY Lassen

AT RIVER MILE 24 SEC. 31, T 30 N, R 12 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-335 TABLE 6

STATION Truckee River near Truckee

SAMPLING POINT from left bank at gage, 1.4 mile upstream from Donner Creek and 2.5 miles southwest of Truckee.

STATION NO. 52 REGION NO. 6 COUNTY Placer

AT RIVER MILE _____ SEC. 28, T 17 N, R 16 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-337 TABLE 6

TABLE 6

SAMPLING STATION DATA
LAHONTAN REGION

STATION Truckee River near Farad

SAMPLING POINT from left bank at foot of gage, two miles from California-Nevada state line on U. S. Highway 40.

STATION NO. 53 REGION NO. 6 COUNTY Nevada

AT RIVER MILE _____ SEC. 29, T 18 N, R 18 E, MDB&M

SAMPLED BY DWR-Sacramento

ANALYSIS ON PAGE A-339 TABLE 6

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION Alamo River at International Boundary

SAMPLING POINT between All American Canal and International Boundary, upstream from canal seepage pipes. Imperial Irrigation District Station AR-1

STATION NO. 59 REGION NO. 7 COUNTY Imperial

AT RIVER MILE 51 SEC. 18, T 17 S, R 16 E, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-341 TABLE 7

STATION Alamo River near Calipatria

SAMPLING POINT left bank 6.2 miles north of Westmorland--Calipatria Highway, 0.4 mile downstream from lateral 3-road bridge at Imperial Irrigation District Station AR-17.

STATION NO. 60 REGION NO. 7 COUNTY Imperial

AT RIVER MILE 2.5 SEC. 15, T 11 S, R 13 E, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-343 TABLE 7

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION All American Canal near Pilot Knob

SAMPLING POINT left bank just upstream from Highway 80 bridge, over canal, 5 miles west of Yuma Bridge. Imperial Irrigation District Station 1035 (lower slope).

STATION NO. 56a REGION NO. 7 COUNTY Imperial

AT RIVER MILE 20 SEC. 24, T 16 S, R 21 E, SBB&M

SAMPLED BY DWR-Los Angeles; Sampled May and September.

ANALYSIS ON PAGE A-345 TABLE 7

STATION Colorado River near Topock, Arizona

SAMPLING POINT USGS auxiliary gage on furthest downstream high pressure gas line bridge from Highway 66 bridge. Right bank, California side.

STATION NO. 54 REGION NO. 7 COUNTY San Bernardino

AT RIVER MILE 196* SEC. 8, T 7 N, R 24 E, SBB&M

SAMPLED BY DWR-Los Angeles; Sampled May and September

ANALYSIS ON PAGE A-346 TABLE 7

* From California-Arizona-Mexico Boundary junction.

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION Colorado River below Morelos Dam

SAMPLING POINT from left bank 1/4 mile downstream from Morelos Dam, Arizona side. The dam is approximately one mile downstream from California-Arizona-Mexico boundary junction.

STATION NO. 56b REGION NO. 7 COUNTY Yuma

AT RIVER MILE -1* SEC. 28, T 8 S, R 24 W, G&SRM

SAMPLED BY DWR-Los Angeles; Sampled May and September

ANALYSIS ON PAGE A-347 TABLE 7

* From California-Arizona-Mexico Boundary junction.

STATION Colorado River near Blythe

SAMPLING POINT at boat dock approximately one-half mile downstream from US 60-70 Highway bridge. Sampled from California side.

STATION NO. 56c REGION NO. 7 COUNTY Imperial

AT RIVER MILE 98* SEC. 2, T 7 S, R 23 E, SBB&M

SAMPLED BY DWR-Los Angeles; Sampled May and September

ANALYSIS ON PAGE A-348 TABLE 7

* From California-Arizona-Mexico Boundary junction.

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION Colorado River at Parker Dam

SAMPLING POINT shore at right bank on California side 1 mile upstream from USGS gage. 3 miles downstream from Parker Dam; 11 miles northeast of Parker, Arizona. Sampled from River Lodge boat dock.

STATION NO. 55 REGION NO. 7 COUNTY San Bernardino

AT RIVER MILE 149.7* SEC. 16, T 2 N, R 27 E, SBB&M

SAMPLED BY DWR-Los Angeles; Sampled May and September

ANALYSIS ON PAGE A-349 TABLE 7

* From California-Arizona-Mexico Boundary junction.

STATION Colorado River at Yuma, Arizona

SAMPLING POINT left bank at old Highway 80 bridge. USGS gage is 0.4 mile downstream from sample point.

STATION NO. 56 REGION NO. 7 COUNTY Yuma

AT RIVER MILE 7.5* SEC. 36, T 16 S, R 22 E, G&SRM

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-350 TABLE 7

* From California-Arizona-Mexico Boundary junction.

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION Lake Havasu at Metropolitan Water District intake

SAMPLING POINT right bank at the MWD Intake, 1½ mile upstream from Parker Dam.

STATION NO. 56d REGION NO. 7 COUNTY San Bernardino

AT RIVER MILE 156* SEC. 28, T 3 N, R 27 E, SBB&M

SAMPLED BY MWD

ANALYSIS ON PAGE A-351 TABLE 7

* From California-Arizona-Mexico Boundary junction.

STATION New River International Boundary

SAMPLING POINT right bank at road bridge, 150 yards north of International boundary. Imperial Irrigation District Station NR-1.

STATION NO. 57 REGION NO. 7 COUNTY Imperial

AT RIVER MILE 56 SEC. 14, T 17 S, R 14 E, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-353 TABLE 7

TABLE 7

SAMPLING STATION DATA
COLORADO RIVER BASIN REGION

STATION New River near Westmorland

SAMPLING POINT right bank 50 feet north of Vail Canal, 3 miles west of Calipatria-Westmorland Highway, 0.6 mile downstream from Trifolium #10 Road bridge. Imperial Irrigation District Station NR-17.

STATION NO. 58 REGION NO. 7 COUNTY Imperial

AT RIVER MILE 5 SEC. 30 T 12 S, R 13 E, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-355 TABLE 7

STATION Whitewater River at Whitewater

SAMPLING POINT 8 feet Cipoletti weir 1.6 mile upstream from Whitewater. 2 USGS gages, one on river and one on weir.

STATION NO. 68 REGION NO. 7 COUNTY Riverside

AT RIVER MILE 54 SEC. 2, T 3 S, R 3 E, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-357 TABLE 7

TABLE 8

SAMPLING STATION DATA
SANTA ANA REGION

STATION Chino Creek near Chino

SAMPLING POINT right bank 20 feet upstream from Pine Avenue Bridge approximately 5 miles southeast of Chino.

STATION NO. 86 REGION NO. 8 COUNTY San Bernardino

AT RIVER MILE 5 SEC. 36, T 2 S, R 8 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-359 TABLE 8

STATION Lake Elsinore north shore

SAMPLING POINT north shore of lake at USGS staff gage, approximately 0.5 mile south of junction of Riverside Drive and State Highway 71.

STATION NO. 89 REGION NO. 8 COUNTY Riverside

AT RIVER MILE _____ SEC. 1, T 6 S, R 5 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-361 TABLE 8

TABLE 8

SAMPLING STATION DATA
SANTA ANA REGION

STATION Santa Ana River near Arlington

SAMPLING POINT from right bank at Pedley Road bridge 75 feet upstream from USGS gage. 3.3 miles northeast of Arlington and 1/2 mile downstream from Riverside Sewage Treatment Plant.

STATION NO. 51* REGION NO. 8 COUNTY Riverside

AT RIVER MILE 44 SEC. 25, T 2 S, R 6 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-363 TABLE 8

* Discontinued September, 1955.

STATION Santa Ana River near Prado Dam

SAMPLING POINT from left bank, at USGS gage; 2500 feet downstream from Prado Dam; 4 mile west of Corona.

STATION NO. 51a REGION NO. 8 COUNTY Riverside

AT RIVER MILE 31.6 SEC. 29, T 3 S, R 7 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-364 TABLE 8

TABLE 8

SAMPLING STATION DATA
SANTA ANA REGION

STATION Santa Ana River near Mentone

SAMPLING POINT southern California Edison Company's Santa Ana River No. 3 Power Plant tailrace. 3.5 miles northeast of Mentone near mouth of Canyon.

STATION NO. 51b REGION NO. 8 COUNTY San Bernardino

AT RIVER MILE 72.7 SEC. 4, T 1 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-366 TABLE 8

STATION Santa Ana River at Riverside (MWD Blowoff)

SAMPLING POINT from left bank, 200 yeards upstream from Metropolitan Water District Aqueduct Crossing, and 0.5 miles upstream from Riverside Sewage Treatment Plant.

STATION NO. 51d REGION NO. 8 COUNTY Riverside

AT RIVER MILE 45.5 SEC. 30, T 2 S, R 5 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-368 TABLE 8

TABLE 8

SAMPLING STATION DATA
SANTA ANA REGION

STATION Santa Ana River at Norco

SAMPLING POINT at USGS summer gage just downstream from Hammer Ave. bridge on left bank.

STATION NO. 51e REGION NO. 8 COUNTY Riverside

AT RIVER MILE 38 SEC. 36, T 2 S, R 7 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-370 TABLE 8

STATION Warm Creek at Colton

SAMPLING POINT from right bank near USGS gage at "F" Street bridge, 1/4 mile north of U. S. Highway 99 and 0.4 mile east of Mt. Vernon Avenue, 1.2 mile east of Colton, 0.3 mile below San Bernardino Sewage Disposal Plant.

STATION NO. 50b REGION NO. 8 COUNTY San Bernardino

AT RIVER MILE 0.4 SEC. 21, T 1 S, R 4 W, SBB&M

SAMPLED BY DWR-Los Angeles to 7-11-55; 8-55 to date by City of San Bernardino

ANALYSIS ON PAGE A-372 TABLE 8

TABLE 8

SAMPLING STATION DATA
SANTA ANA REGION

STATION Warm Creek at San Bernardino

SAMPLING POINT from right bank beneath "E" Street bridge, 0.5 mile upstream from San Bernardino Sewage Disposal Plant.

STATION NO. 50c REGION NO. 8 COUNTY San Bernardino

AT RIVER MILE 1.4 SEC. 15, T 1 S, R 4 W, SBB&M

SAMPLED BY DWR-Los Angeles to 7-11-55; 8-55 to date by City of San Bernardino

ANALYSIS ON PAGE A-374 TABLE 8

TABLE 9

SAMPLING STATION DATA
SAN DIEGO REGION

STATION Escondido Creek near Harmony Grove

SAMPLING POINT Harmony Grove road culvert, 4 miles south of Escondido.

STATION NO. 63 REGION NO. 9 COUNTY San Diego

AT RIVER MILE 11.5 SEC. 30, T 12 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-377 TABLE 9

STATION San Diego River at Old Mission Dam

SAMPLING POINT from left bank just below Old Mission Dam, three miles west of Santee.

STATION NO. 65 REGION NO. 9 COUNTY San Diego

AT RIVER MILE 15.2 SEC. 25, T 15 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-379 TABLE 9

TABLE 9

SAMPLING STATION DATA
SAN DIEGO REGION

STATION San Dieguito River below San Pasqual Valley

SAMPLING POINT from right bank, 75 yards upstream from USGS gage, 2½ mile upstream from Highway 395 Bridge, 4.5 miles southeast of Escondido and 5 miles west of San Pasqual.

STATION NO. 64 REGION NO. 9 COUNTY San Diego

AT RIVER MILE 21.8 SEC. 1, T 13 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-381 TABLE 9

STATION San Luis Rey River near Pala

SAMPLING POINT from right bank at Pala Diversion Dam and USGS summer gage, 1.8 miles east of Pala.

STATION NO. 62 REGION NO. 9 COUNTY San Diego

AT RIVER MILE 24.8 SEC. 36, T 9 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-383 TABLE 9

TABLE 9

SAMPLING STATION DATA
SAN DIEGO REGION

STATION Santa Margarita River near Fallbrook

SAMPLING POINT left bank 2 miles north of Fallbrook and 1/2 mile downstream from Fallbrook Public Utility District gage.

STATION NO. 51c REGION NO. 9 COUNTY San Diego

AT RIVER MILE 20 SEC. 12, T 9 S, R 4 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-385 TABLE 9

STATION Tia Juana River at International Boundary

SAMPLING POINT from right bank at California Water & Telephone Company gage 2.5 miles upstream from Nestor bridge.

STATION NO. 66 REGION NO. 9 COUNTY San Diego

AT RIVER MILE 6.0 SEC. 1, T 19 S, R 2 W, SBB&M

SAMPLED BY DWR-Los Angeles

ANALYSIS ON PAGE A-387 TABLE 9

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Eel River near McCann																			
1955																										
Jan 4 1230	Not rated	42	12.6	100	132	7.7	17 / 0.848	4.4 / 0.362	3.6 / 0.157	0.9 / 0.023	0 / 0.000	70 / 1.147		1.8 / 0.051			0.19				11	60	3	35		USGS
Feb 8 1040		53	12.2	112	164	7.8	21 / 1.048	5.7 / 0.472	4.9 / 0.213	0.7 / 0.018	0 / 0.000	88 / 1.442		3.0 / 0.085			0.06				12	76	4	7		USGS
Mar 6 1735		48	12.2	105	153	7.8	17 / 0.848	7.4 / 0.612	5.0 / 0.217	1.0 / 0.026	0 / 0.000	84 / 1.377		3.2 / 0.090			0.07				13	73	4	10		USGS
Apr 5 0900		50	10.2	95	157	7.6	20 / 0.998	5.1 / 0.422	4.6 / 0.200	0.8 / 0.020	0 / 0.000	83 / 1.360		2.5 / 0.071			0.12				12	71	3	2		USGS
May 4 1350		58	10.6	103	148	6.8	19 / 0.948	4.8 / 0.392	4.5 / 0.196	0.8 / 0.020	0 / 0.000	80 / 1.311	9.7 / 0.202	2.2 / 0.062	0.1 / 0.002	0.0 / 0.000	0.02	10	Pb 0.005; (a) PO_4 0.05	90[b]	13	67	1	20		USGS
Jun 6 1345		80	9.0	110	187	8.3	28 / 1.397	4.4 / 0.363	5.2 / 0.226	0.9 / 0.023	0 / 0.000	99 / 1.622		3.4 / 0.096			0.07		Al 0.04; Zn 0.01 (a)		11	88	7	0.4		USGS
Jul 12 1015		68	8.2	90	249	7.6	31 / 1.547	8.9 / 0.733	6.6 / 0.287	1.1 / 0.028	0 / 0.000	135 / 2.212		5.0 / 0.141			0.21				11	114	3	0.9		USGS
Aug 1 1700		76	10.0	118	247	8.4	35 / 1.747	6.7 / 0.553	7.1 / 0.309	1.1 / 0.028	0 / 0.000	131 / 2.147		5.5 / 0.155			0.21				12	115	8	0.8		USGS
Sep 13 0945		64	8.8	92	283	8.3	37 / 1.846	8.6 / 0.710	7.8 / 0.339	1.3 / 0.033	0 / 0.000	150 / 2.458	19 / 0.396	5.6 / 0.158	0.1 / 0.002	0.1 / 0.005	0.13	12	Fe 0.02; Al 0.04; Cu 0.01; (a)	166[b]	12	128	0	1.0		USGS
Oct 4 1300		65	9.9	103	277	7.2	36 / 1.796	9.3 / 0.764	7.6 / 0.331	1.3 / 0.033	0 / 0.000	142 / 2.327		4.8 / 0.135			0.17				11	128	12	3		USGS
Nov 15 1030		48	10.8	93	288	7.0	37 / 1.846	9.7 / 0.794	9.5 / 0.413	1.2 / 0.031	0 / 0.000	136 / 2.229		9.8 / 0.276			0.26				13	132	20	3		USGS
Dec 6 1120		51	9.5	85	112	7.1	13 / 0.649	2.9 / 0.239	5.6 / 0.244	2.7 / 0.069	0 / 0.000	49 / 0.803		3.3 / 0.093			0.22				20	44	4	1100	median 0.62 minimum .045 maximum 62	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by e
							Eel River near McCann																			
1956																										
Jan 17 1040	Not rated	50	11.0	97	101	6.9	9.8 / 0.489	4.0 / 0.331	4.2 / 0.183	1.3 / 0.033	0 / 0.000	53 / 0.869		0.0 / 0.000			0.01				18	41	0	600		USGS
Feb 16 1135		45	11.5	95	148	6.9	16 / 0.798	5.4 / 0.442	6.2 / 0.270	0.8 / 0.020	0 / 0.000	81 / 1.328		3.0 / 0.085			0.10				18	62	0	15		USGS
Mar 6 1030		47	11.0	93	218	6.9	27 / 1.347	7.5 / 0.613	5.9 / 0.257	1.1 / 0.028	0 / 0.000	112 / 1.836		6.8 / 0.192			0.04				11	98	6	140		USGS
Apr 2 1515		52	11.2	101	144	7.2	16 / 0.798	6.3 / 0.522	3.9 / 0.170	0.9 / 0.023	0 / 0.000	83 / 1.360		1.0 / 0.028			0.09				11	66	0	50		USGS
May 8 1215		60	10.5	105	128	7.5*	18 / 0.898	3.7 / 0.302	3.4 / 0.148	0.8 / 0.020	0 / 0.000	71 / 1.164	8.2 / 0.171	0.5 / 0.014	0.3 / 0.005	0.3 / 0.016	0.00	9.0	Fe 0.04; Al 0.03; Cu 0.02; Zn 0.01; PO_4 0.05 (a)	79[b]	11	60	2	300		USGS
June 12 1450		70	8.6	96	162	7.1	22 / 1.098	4.9 / 0.406	3.8 / 0.165	0.9 / 0.023	0 / 0.000	88 / 1.442		1.5 / 0.042			0.11				10	75	3	3		USGS
July 3 1120		67	8.9	96	201	8.3	27 / 1.347	7.2 / 0.593	4.7 / 0.204	1.2 / 0.031	0 / 0.000	111 / 1.819		3.0 / 0.080			0.14				9	97	6	1		USGS
Aug 7 1500		74	9.8	113	273	7.2	38 / 1.896	9.3 / 0.764	7.0 / 0.304	1.3 / 0.033	0 / 0.000	156 / 2.557		4.5 / 0.127			0.09				10	133	5	1		USGS
Sept 14 1200		74	10.6	122	286	7.2	38 / 1.896	9.7 / 0.796	7.5 / 0.326	1.6 / 0.041	0 / 0.000	155 / 2.540	18 / 0.375	5.3 / 0.149	0.3 / 0.005	0.0 / 0.000	0.16	12	Al 0.04; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	169[b]	11	135	8	0.4		USGS
Oct 5 1030		75	8.0	94	289	8.0	40 / 1.996	9.2 / 0.760	7.5 / 0.326	1.4 / 0.036	0 / 0.000	154 / 2.524		5.8 / 0.164			0.11				10	138	12	0.6		USGS
Nov 3 1425		49	10.8	94	212	7.4	27 / 1.347	5.9 / 0.489	6.6 / 0.287	1.2 / 0.031	0 / 0.000	98 / 1.606		6.5 / 0.183			0.19				13	92	12	45		USGS
Dec 4 1325		48	11.8	102	267	7.9	36 / 1.80	8.8 / 0.72	6.5 / 0.28	1.0 / 0.03	0 / 0.000	137 / 2.25		6.4 / 0.18			0.12				10	126	14	0.2		USGS
																									median 6.2 minimum .23 maximum 500	

*lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

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												Eel River at Scotia														
1955																										
Jan 4 1200	12,400	45	12.3	102	135	7.8	16 / 0.798	4.3 / 0.352	4.8 / 0.209	1.0 / 0.026	0 / 0.000	68 / 1.114		4.0 / 0.113			0.15				15	58	2	45		USGS
Feb 8 1215	4,680	56	15.6	148	213	8.0	24 / 1.198	7.1 / 0.582	9.9 / 0.430	0.7 / 0.018	0 / 0.000	101 / 1.655		10 / 0.282			0.05				19	89	6	5		USGS
Mar 6 1840	4,600	54	13.2	122	196	8.2	19 / 0.948	7.9 / 0.652	8.1 / 0.352	1.1 / 0.023	0 / 0.000	92 / 1.508		8.3 / 0.234			0.01				18	80	5	10		USGS
Apr 5 1000	3,300	54	13.6	126	265	7.4	26 / 1.297	14 / 1.127	8.4 / 0.365	1.3 / 0.033	0 / 0.000	143 / 2.344		3.3 / 0.093			0.10				13	121	4	4		USGS
May 13 1120	4,850	60	10.4	104	177	6.9	24 / 1.198	4.2 / 0.342	6.8 / 0.296	0.8 / 0.020	0 / 0.000	90 / 1.475	9.6 / 0.200	7.0 / 0.197	0.1 / 0.002	0.0 / 0.000	0.09	10	Fe 0.1; Al 0.03; Pb 0.005; (a) FO_4 0.05	107[b]	16	77	3	8		USGS
Jun 6 1500	1,240	83	13.4	170	262	8.5	28 / 1.397	11 / 0.943	8.4 / 0.365	2.7 / 0.069	0 / 0.000	149 / 2.442		5.2 / 0.147			0.16				13	117	0	1		USGS
Jul 12 1120	380	67	15.6	168	310	8.1	37 / 1.846	9.4 / 0.774	8.9 / 0.387	3.2 / 0.082	0 / 0.000	173 / 2.835		6.5 / 0.183			0.17				13	131	0	15		USGS
Aug 1 1820	190	77	18.2	217	249	9.0	28 / 1.397	10 / 0.863	8.6 / 0.374	1.3 / 0.033	6 / 0.200	128 / 2.098		7.2 / 0.203			0.15				14	113	0	2		USGS
Sep 13 1130	104	58	11.6	104	293	8.4	33 / 1.647	11 / 0.917	10 / 0.435	1.5 / 0.038	0 / 0.000	159 / 2.606	13 / 0.271	8.5 / 0.240	0.9 / 0.015	0.1 / 0.005	0.10	9.3	Fe 0.92; Al 0.09; (a)	165[b]	14	128	0	7.0		USGS
Oct 4 1430	154	69	16.8	185	277	8.1	33 / 1.647	11 / 0.873	9.5 / 0.413	1.2 / 0.031	5 / 0.167	142 / 2.327		6.8 / 0.192			0.18				14	126	1	4		USGS
Nov 15 1145	340	48	11.4	98	286	7.1	36 / 1.796	9.2 / 0.756	10 / 0.435	1.3 / 0.033	0 / 0.000	146 / 2.393		9.1 / 0.257			0.10				14	128	8	4		USGS
Dec 6 1235	56,300	50	10.0	88	108	7.1	12 / 0.599	3.9 / 0.321	4.6 / 0.200	1.9 / 0.049	0 / 0.000	49 / 0.803		2.4 / 0.068			0.26				17	46	6	800	median 42 minimum .06 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituants

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
													Eel River at Scotia													
1956																										
Jan 17 1245	65,400	49	11.5	100	112	6.9	14 / 0.699	3.2 / 0.261	3.0 / 0.130	1.8 / 0.046	0 / 0.000	61 / 1.000		1.5 / 0.042			0.11				11	48	0	1100		USGS
Feb 16 1010	5,200	47	11.0	93	304	6.8	34 / 1.697	8.8 / 0.723	15 / 0.652	1.5 / 0.038	0 / 0.000	140 / 2.295		19 / 0.536			0.11				21	121	6	40		USGS
Mar 6 1145	23,500	52	10.4	94	183	6.9	21 / 1.048	7.4 / 0.612	5.7 / 0.248	1.3 / 0.033	0 / 0.000	100 / 1.639		6.5 / 0.183			0.27				13	83	1	150		USGS
Apr 2 1800	5,050	54	11.0	102	163	7.4	26 / 1.297	2.2 / 0.183	5.2 / 0.226	1.0 / 0.026	0 / 0.000	97 / 1.590		1.5 / 0.042			0.05				13	74	0	35		USGS
May 8 1330	6,130	60	10.8	108	159	7.9*	22 / 1.098	4.5 / 0.374	4.7 / 0.204	0.9 / 0.023	0 / 0.000	89 / 1.459	9.8 / 0.204	1.7 / 0.048	0.7 / 0.011	0.3 / 0.016	0.06	10	Fe 0.02; Cu 0.01; As 0.02; (a) PO_4 0.10	99[b]	12	74	1	150		USGS
June 12 1630	1,500	70	10.2	114	190	7.3	25 / 1.248	6.1 / 0.504	5.3 / 0.231	1.2 / 0.031	0 / 0.000	105 / 1.721		3.0 / 0.085			0.00				11	88	2	1		USGS
July 3 1310	550	66	9.8	104	234	8.0	31 / 1.547	9.2 / 0.753	6.3 / 0.274	1.2 / 0.031	0 / 0.000	134 / 2.196		4.5 / 0.127			0.17				11	115	5	1		USGS
Aug 7 1630	167	75	13.6	159	441	6.7	43 / 2.146	25 / 2.094	14 / 0.609	2.1 / 0.054	0 / 0.000	239 / 3.917		11 / 0.310			0.15				12	212	16	3		USGS
Sept 14 1030	86	65	9.4	99	316	7.2	40 / 1.996	12 / 0.952	9.9 / 0.431	1.7 / 0.043	0 / 0.000	182 / 2.983	11 / 0.229	6.3 / 0.178	0.7 / 0.011	0.0 / 0.000	0.14	8.4	Al 1.10; Zn 0.03; PO_4 0.15; (a)	180[b]	13	147	0	0.4		USGS
Oct 5 0900	82	68	8.6	94	322	8.0	42 / 2.096	12 / 0.988	9.8 / 0.426	1.4 / 0.036	0 / 0.000	190 / 3.114		6.8 / 0.192			0.10				12	154	0	0.5		USGS
Nov 3 1240	3,130	48	11.0	95	191	7.5	22 / 1.098	6.2 / 0.510	7.0 / 0.304	1.3 / 0.033	0 / 0.000	85 / 1.393		6.3 / 0.178			0.04				16	80	10	30		USGS
Dec 4 1430	380	48	13.4	115	277	8.2	36 / 1.80	9.1 / 0.75	8.6 / 0.37	1.2 / 0.03	0 / 0.000	146 / 2.39		7.0 / 0.20			0.06				13	128	8	0.6	median 62; minimum 6.2; maximum 2400	USGS

* Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Eel River, South Fork near Miranda																										
1955																										
Jan 4 0900	3,100	44	12.3	100	107	7.5	12 / 0.599	3.2 / 0.261	5.5 / 0.239	0.8 / 0.020	0 / 0.000	58 / 0.951		2.0 / 0.056			0.00				21	43	0			USGS
Feb 8 0930	1,710	48	12.5	107	137	7.4	15 / 0.749	4.6 / 0.381	6.2 / 0.270	0.7 / 0.018	0 / 0.000	72 / 1.180		4.0 / 0.113			0.03				19	56	0	5		USGS
Mar 6 1630	922	49	12.0	104	131	7.7	12 / 0.599	6.1 / 0.505	6.1 / 0.265	0.8 / 0.020	0 / 0.000	70 / 1.147		4.4 / 0.124			0.0				19	55	0	2		USGS
Apr 5 0730	578	48	10.4	90	146	7.8	16 / 0.798	4.9 / 0.402	6.6 / 0.287	0.8 / 0.020	0 / 0.000	78 / 1.278		4.5 / 0.127			0.09				19	60	0	4		USGS
May 3 1500	1,770	56	10.5	100	125	6.8	11 / 0.549	6.0 / 0.495	6.1 / 0.265	1.0 / 0.026	0 / 0.000	70 / 1.147	6.3 / 0.131	3.1 / 0.087	0.3 / 0.005	0.3 / 0.016	0.06	38	(a) PO_4 0.10	106[b]	20	52	0	5		USGS
Jun 6 1300	300	76	10.0	118	103	8.2	11 / 0.549	4.2 / 0.343	2.6 / 0.113	0.6 / 0.015	0 / 0.000	51 / 0.836		2.8 / 0.079			0.00		Al 0.03; (a)		11	45	3	1		USGS
Jul 12 0900	112	68	8.0	87	204	7.5	21 / 1.048	8.4 / 0.692	8.9 / 0.387	1.2 / 0.031	0 / 0.000	113 / 1.852		5.5 / 0.155			0.09				18	87	0	0.6		USGS
Aug 1 1700	75	79	10.4	127	220	7.3	22 / 1.098	9.3 / 0.762	9.0 / 0.391	1.3 / 0.033	0 / 0.000	126 / 2.065		5.5 / 0.155			0.12				17	93	0	0.0		USGS
Sep 13 0830	42	64	8.1	84	240	7.9	25 / 1.248	10 / 0.824	9.3 / 0.404	1.1 / 0.028	0 / 0.000	135 / 2.212	4.0 / 0.083	7.0 / 0.197	0.2 / 0.003	0.2 / 0.011	0.11	9.4	Fe 0.02; Al 0.05; Cu 0.01; (a)	133[b]	16	104	0	1.0		USGS
Oct 4 1100	72	61	9.4	95	251	7.1	26 / 1.297	11 / 0.871	9.2 / 0.400	1.3 / 0.033	0 / 0.000	138 / 2.262		6.5 / 0.183			0.17				15	108	0	2		USGS
Nov 15 0930	153	47	11.2	95	228	6.9	24 / 1.198	9.5 / 0.782	9.2 / 0.400	0.9 / 0.023	0 / 0.000	119 / 1.950		7.6 / 0.214			0.13				17	99	1	10		USGS
Dec 6 1000	24,500	52	9.5	86	75.9	7.1	7.2 / 0.359	3.1 / 0.253	3.9 / 0.170	2.2 / 0.056	0 / 0.000	35 / 0.574		2.2 / 0.062			0.20				20	31	2	1300	median 2.3 minimum .23 maximum 230	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl) equivalents per million	Nitrate (NO_3) equivalents per million	Fluoride (F) equivalents per million	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Eel River, South Fork near Miranda																			
1956																										
Jan 17 0910	12,600	49	11.0	96	105	7.0	11 / 0.549	4.0 / 0.331	3.5 / 0.152	1.6 / 0.041	0 / 0.000	56 / 0.918		2.5 / 0.070			0.08				14	44	0	550		USGS
Feb 16 1300	2,450	45	12.2	100	148	7.0	16 / 0.798	5.0 / 0.414	6.5 / 0.283	0.8 / 0.020	0 / 0.000	80 / 1.311		2.6 / 0.073			0.05				19	61	0	25		USGS
Mar 6 0905	5,450	44	12.0	98	102	6.9	12 / 0.599	2.8 / 0.233	4.8 / 0.209	1.1 / 0.028	0 / 0.000	59 / 0.967		1.5 / 0.042			0.03				20	42	0	450		USGS
Apr 2 1630	664	54	11.2	104	149	7.8	5.6 / 0.279	12 / 0.981	6.4 / 0.278	0.9 / 0.023	0 / 0.000	86 / 1.410		2.5 / 0.070			0.04				18	63	0	15		USGS
May 8 1100	479	61	9.4	94	159	7.9	19 / 0.948	5.0 / 0.412	6.9 / 0.300	1.0 / 0.026	0 / 0.000	90 / 1.475	6.4 / 0.133	2.8 / 0.079	0.2 / 0.003	0.3 / 0.016	0.05	13	Fe 0.02; Cu 0.01; As 0.01; (a) PO_4 0.10	99[b]	18	68	0	4		USGS
June 12 1340	177	70	9.4	104	204	7.2	23 / 1.148	8.0 / 0.660	7.7 / 0.335	1.1 / 0.028	0 / 0.000	116 / 1.901		5.1 / 0.144			0.11				15	90	0	1		USGS
July 3 1015	117	66	8.0	85	229	8.1	27 / 1.347	9.4 / 0.773	8.8 / 0.383	1.3 / 0.033	0 / 0.000	134 / 2.196		5.5 / 0.155			0.18				15	106	0	2		USGS
Aug 7 1150	60	72	9.2	105	243	7.1	26 / 1.297	10 / 0.863	10 / 0.435	1.5 / 0.038	0 / 0.000	141 / 2.311		7.0 / 0.197			0.10				17	108	0	1		USGS
Sept 14 1400	44	70	10.4	116	258	7.4	28 / 1.397	11 / 0.883	10 / 0.435	1.5 / 0.038	0 / 0.000	148 / 2.426	6.0 / 0.125	7.2 / 0.203	0.5 / 0.008	0.0 / 0.000	0.16	7.0	Al 0.08; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	144[b]	16	114	0	0.4		USGS
Oct 5 1100	39	71	9.6	108	270	7.8	32 / 1.597	11 / 0.871	10 / 0.435	1.3 / 0.033	0 / 0.000	157 / 2.573		7.4 / 0.209			0.17				15	123	0	0.3		USGS
Nov 3 1540	648	47	11.0	93	159	7.3	16 / 0.798	6.2 / 0.506	6.9 / 0.300	1.0 / 0.026	0 / 0.000	79 / 1.295		4.7 / 0.133			0.10				18	65	0	9		USGS
Dec 4 1140	110	49	11.8	103	218	7.5	25 / 1.25	7.9 / 0.65	8.4 / 0.37	0.9 / 0.02	0 / 0.000	118 / 1.93		6.9 / 0.19			0.12				16	95	0	9		USGS
																									median 13 minimum .23 maximum 2400	

*Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million							equivalents per million						Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N C ppm			
												Klamath River near Copco														
1955																										
Jan 4 1300	2,010	38	8.0	60	132		9.7 / 0.484	4.3 / 0.356	12 / 0.522	1.7 / 0.043	0 / 0.000	64 / 1.049		2.5 / 0.071			0.02				37	42	0	7		USGS
Feb 11 1100	2,000	38			148		11 / 0.549	5.2 / 0.431	12 / 0.522	2.2 / 0.056	0 / 0.000	70 / 1.147		2.0 / 0.056			0.02				34	49	0	3		USGS
Mar 16 1200	2,360	45	7.9	66	289		19 / 0.948	10 / 0.852	21 / 0.913	3.6 / 0.092	0 / 0.000	95 / 1.557		4.0 / 0.113			0.03				33	90	12	4		USGS
Apr 12 1000	2,040	50	7.5	66	353		25 / 1.248	13 / 1.052	26 / 1.131	4.0 / 0.102	0 / 0.000	106 / 1.737		5.5 / 0.155			0.13				32	115	28	1		USGS
May 12 1500	2,950	50	7.9	70	179		5.1 / 0.254	10 / 0.846	14 / 0.609	2.5 / 0.064	0 / 0.000	73 / 1.196	18 / 0.375	4.0 / 0.113	2.9 / 0.047	0.1 / 0.005	0.14	19	Fe 0.01; Al 0.005; (a) PO_4 0.10	112[b]	34	55	0	0.6		USGS
Jun	Not sampled																									
Jul 12 1100	1,840	70	9.6	106	176		13 / 0.649	6.9 / 0.571	14 / 0.609	2.3 / 0.059	0 / 0.000	94 / 1.541		4.8 / 0.135			0.16				32	61	0	2		USGS
Aug 7 1000	284	70			149		11 / 0.549	5.0 / 0.411	11 / 0.478	2.3 / 0.059	0 / 0.000	76 / 1.246		1.5 / 0.042			0.04				32	48	0	1		USGS
Sep 13 1300	1,520	62	7.9	80	191		13 / 0.649	7.2 / 0.591	15 / 0.652	2.5 / 0.064	0 / 0.000	92 / 1.508	13 / 0.271	3.2 / 0.090	2.6 / 0.042	0.3 / 0.016	0.06	35	Fe 0.02; Al 0.03; (a)	137[b]	33	62	0	1		USGS
Oct 10 1000	1,560	57					13 / 0.649	8.2 / 0.675	22 / 0.957	3.4 / 0.087	0 / 0.000	100 / 1.639		4.2 / 0.118			0.12				40	66	0	3		USGS
Nov 7 1100	2,610	50					11 / 0.549	5.5 / 0.451	14 / 0.609	2.7 / 0.069	0 / 0.000	78 / 1.278		3.0 / 0.085			0.06				36	50	0	2		USGS
Dec 2 1000	3,060	40					12 / 0.599	5.7 / 0.465	15 / 0.652	2.7 / 0.069	0 / 0.000	78 / 1.278		3.2 / 0.090			0.08				37	53	0	8		USGS
																									median 620 minimum 23 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Klamath River near Copco																										
1956																										
Jan 11 1000	6,270	35			166		9.6 / 0.479	5.6 / 0.461	13 / 0.566	2.2 / 0.056	0 / 0.000	66 / 1.082		3.5 / 0.099			0.11				36	47	0	25		USGS
Feb 6 1430	6,380	38			170		12 / 0.599	4.9 / 0.401	15 / 0.652	2.2 / 0.056	0 / 0.000	70 / 1.147		0.0 / 0.000			0.11				38	50	0	30		USGS
Mar 13 0900	6,450	38	8.8	86	175		15 / 0.748	4.0 / 0.328	16 / 0.696	2.5 / 0.064	0 / 0.000	78 / 1.278		0.3 / 0.008			0.07				38	54	0	10		USGS
Apr 9 1600	7,430	53	8.9	82	154		11 / 0.549	5.5 / 0.455	13 / 0.566	2.2 / 0.056	0 / 0.000	73 / 1.196		2.6 / 0.073			0.08				35	50	0	15		USGS
May 14 1100	6,960	55	7.9	74	161	7.8*	14 / 0.699	3.7 / 0.301	15 / 0.652	2.6 / 0.067	0 / 0.000	77 / 1.262	16 / 0.333	2.1 / 0.059	2.0 / 0.032	0.5 / 0.026	0.02	22	Fe 0.11; Al 0.14; Cu 0.02; Zn 0.01; PO_4 0.30 (a)	116[b]	38	50	0	10		USGS
June 6 1300	3,670	59			202		12 / 0.599	7.6 / 0.629	19 / 0.826	3.4 / 0.087	0 / 0.000	89 / 1.459		3.5 / 0.099			0.07				39	61	0	3		USGS
July 10 0600	2,420	68			291	7.1*	17 / 0.848	12 / 0.952	25 / 1.088	4.0 / 0.102	0 / 0.000	112 / 1.836		4.9 / 0.138			0.12				36	90	0	1		USGS
Aug 25	1,330	66			309	7.3*	19 / 0.948	10 / 0.852	29 / 1.262	4.6 / 0.118	0 / 0.000	110 / 1.803		5.7 / 0.161			0.11				40	90	0	1		USGS
Sept 23 1000	930	63	10.4	107	286	7.6*	19 / 0.948	9.6 / 0.792	26 / 1.131	4.0 / 0.102	0 / 0.000	106 / 1.737	50 / 1.041	4.2 / 0.118	3.6 / 0.058	0.3 / 0.016	0.14	36	Fe 0.05; Al 0.16; Cu 0.01; Pb 0.02; Zn 0.02 (a)	205[b]	38	87	0	3		USGS
Oct 10 1100	3,470	60	11.4	113	205	7.6*	13 / 0.649	7.6 / 0.627	17 / 0.740	3.1 / 0.079	0 / 0.000	84 / 1.377		3.4 / 0.096			0.09				35	64	0	3		USGS
Nov 5 1300	3,690	50	8.9	79	152	7.6*	14 / 0.699	7.2 / 0.589	6.9 / 0.300	1.3 / 0.033	0 / 0.000	95 / 1.557		1.4 / 0.039			0.00				19	64	0	0.8		USGS
Dec 12 1000	3,850	37	8.9	66	190	7.5*	12 / 0.59	68 / 0.52	18 / 0.78	3.4 / 0.09	0 / 0.00	86 / 1.41		3.0 / 0.08			0.09				39	56	0	10		USGS
																									median 2400	
																									minimum 62	
																									maximum 7000+	

*Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS - Quality of Water Branch (USGS), Reardon Chemical Consultant (RCC), Metropolitan Water Dist of (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH)

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Klamath River near Klamath																										
1955																										
Jan 5 1510	17,600	45	13.0	107	123	7.1	13 / 0.649	5.5 / 0.451	3.4 / 0.148	0.5 / 0.013	0 / 0.000	67 / 1.098		4.2 / 0.118			0.15				12	55	0	7		USGS
Feb 9 1625	13,100	46	12.4	104	153	7.6	16 / 0.798	7.6 / 0.622	5.4 / 0.235	0.8 / 0.020	0 / 0.000	82 / 1.344		3.5 / 0.099			0.02				14	71	4	5		USGS
Mar 13 1000	13,200	48	11.0	94	147	7.3	12 / 0.599	7.9 / 0.649	5.2 / 0.226	0.3 / 0.020	0 / 0.000	78 / 1.278		3.4 / 0.096			0.04				15	62	0	5		USGS
Apr 6 1300	12,400	53	11.0	100	129	7.7	13 / 0.649	6.2 / 0.511	3.9 / 0.170	0.8 / 0.020	0 / 0.000	70 / 1.147		3.0 / 0.085			0.05				13	58	1	3		USGS
May 11 1640	25,200	58	10.4	101	105	6.8	12 / 0.599	5.1 / 0.421	3.2 / 0.139	0.7 / 0.018	0 / 0.000	59 / 0.967	4.8 / 0.100	1.8 / 0.051	0.2 / 0.003	0.1 / 0.005	0.54	5.7	Fe 0.2; Al 0.1; (a) Pb 0.005; PO_4 0.05	63[b]	12	51	3	3		USGS
Jun 7 1100	13,400	66	9.6	101	93.4	7.7	13 / 0.649	2.5 / 0.207	2.9 / 0.126	0.6 / 0.015	0 / 0.000	51 / 0.836		1.8 / 0.051			0.00		Al 0.04 (a)		13	43	1	2		USGS
Jul 13 1230	5,360	68	9.4	102	154	7.4	16 / 0.798	6.3 / 0.522	5.6 / 0.244	0.9 / 0.023	0 / 0.000	83 / 1.360		4.0 / 0.113			0.06				15	66	0	2		USGS
Aug 2 1030	3,070	71	8.3	93	166	7.2	15 / 0.749	7.2 / 0.591	6.9 / 0.300	1.2 / 0.031	0 / 0.000	91 / 1.491		0.0 / 0.000			0.06				18	67	0	0.6		USGS
Sep 15 1500	3,280	61	8.5	86	185		17 / 0.848	7.4 / 0.612	8.8 / 0.383	1.5 / 0.038	0 / 0.000	94 / 1.541	11 / 0.229	5.0 / 0.141	0.7 / 0.011	0.3 / 0.016	0.09	21	Al 0.10; (a)	119[b]	20	73	0	0.5		USGS
Oct 6 1700	3,030	59	10.9	107	206	7.2	18 / 0.898	8.4 / 0.694	11 / 0.478	1.8 / 0.046	0 / 0.000	104 / 1.705		4.8 / 0.135			0.19				23	80	0	2		USGS
Nov 16 1430	4,900	44	12.0	98	183	6.9	17 / 0.848	7.9 / 0.652	9.0 / 0.392	1.4 / 0.036	0 / 0.000	93 / 1.524		5.9 / 0.166			0.14				20	75	0	4		USGS
Dec 7 1730	33,300	47	11.0	93	94.6	7.0	10 / 0.499	4.6 / 0.381	3.7 / 0.161	0.8 / 0.020	0 / 0.000	49 / 0.803		2.3 / 0.065			0.05				15	44	4	45		USGS
																									median 2.3 minimum .06 maximum 24	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Klamath River near Klamath																										
1956																										
Jan 18 1315	107,000	52	12.0	108	122	6.6	12 / 0.599	5.6 / 0.461	4.3 / 0.187	1.1 / 0.028	0 / 0.000	65 / 1.065		0.0 / 0.000			0.02				15	53	0	300		USGS
Feb 9 1015	27,000	43	12.6	101	150	6.9	15 / 0.748	6.5 / 0.532	6.1 / 0.265	1.1 / 0.028	0 / 0.000	81 / 1.328		1.2 / 0.034			0.07				17	64	0	50		USGS
Mar 7 1500	34,900	46	12.6	105	145	6.9	18 / 0.898	4.4 / 0.362	5.3 / 0.231	0.9 / 0.023	0 / 0.000	84 / 1.377		1.1 / 0.031			0.07				15	63	0	60		USGS
Apr 3 1015	31,400	50	11.4	100	134	7.2	13 / 0.649	6.6 / 0.539	5.0 / 0.218	1.0 / 0.026	0 / 0.000	81 / 1.328		1.0 / 0.028			0.05				15	59	0	40		USGS
May 10 1200	30,100	56	10.8	103	116	7.8*	13 / 0.649	4.3 / 0.351	5.0 / 0.218	0.9 / 0.023	0 / 0.000	68 / 1.115	4.8 / 0.100	1.1 / 0.031	0.5 / 0.008	0.3 / 0.016	0.04	15	Fe 0.05; Al 0.05; Cu 0.01; As 0.03; PO_4 0.10	78[b]	18	50	0	30		USGS
June 14 1300	16,900	60	9.4	94	110	6.8	10 / 0.499	5.2 / 0.429	4.9 / 0.213	1.1 / 0.028	0 / 0.000	63 / 1.033		1.5 / 0.042			0.00				18	46	0	15		USGS
July 4 0930	No record	68	8.8	96	147	7.9	14 / 0.699	6.8 / 0.561	6.2 / 0.270	1.3 / 0.033	0 / 0.000	81 / 1.328		3.0 / 0.085			0.01				17	63	0	5		USGS
Aug 9 1020	4,260	70	9.0	100	224	6.9	20 / 0.998	10 / 0.822	13 / 0.566	1.8 / 0.046	0 / 0.000	112 / 1.836		5.5 / 0.155			0.10				23	91	0	20		USGS
Sept 13 1000	3,380	63	10.8	110	258	7.1	21 / 1.048	9.6 / 0.792	17 / 0.740	3.0 / 0.077	0 / 0.000	114 / 1.868	29 / 0.604	5.9 / 0.166	1.5 / 0.024	0.0 / 0.000	0.14	24	Al 0.04; PO_4 35; (a)	167[b]	28	92	0	1.0		USGS
Oct 2 1600	2,530	68	10.2	111	280	7.6	21 / 1.048	10 / 0.836	21 / 0.914	2.6 / 0.067	0 / 0.000	114 / 1.868		16 / 0.451			0.08				32	94	1	3		USGS
Nov 2 1020	15,100	48	12.8	110	139	7.6	13 / 0.649	6.0 / 0.495	5.9 / 0.257	1.3 / 0.033	0 / 0.000	70 / 1.147		3.6 / 0.102			0.05				18	57	0	60		USGS
Dec 6 1110	5,900	41	12.2	96	198	7.4	16 / 0.80	7.1 / 0.58	12 / 0.52	1.6 / 0.04	0 / 0.00	93 / 1.52		5.5 / 0.16			0.04				27	69	0	15	median 2.3 minimum .23 maximum 230	USGS

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Klamath River at Somesbar																			
1955																										
Jan 5 0850	5,640	39	14.0	106	138	7.2	13 / 0.649	6.3 / 0.521	5.3 / 0.230	0.9 / 0.023	0 / 0.000	75 / 1.229		3.8 / 0.107			0.08				16	58	0	2		USGS
Feb 9 0900	5,980	44	13.0	106	176	7.7	16 / 0.798	8.3 / 0.682	9.0 / 0.391	1.2 / 0.031	0 / 0.000	95 / 1.557		4.8 / 0.135			0.06				21	74	0	3		USGS
Mar 12 1045	4,370	45	12.2	100	181	7.4	16 / 0.798	8.5 / 0.702	9.4 / 0.409	1.6 / 0.041	0 / 0.000	91 / 1.491		4.2 / 0.118			0.07				21	75	0	2		USGS
Apr 6 0800	4,680	47	12.0	101	162	8.1	11 / 0.549	9.9 / 0.811	7.2 / 0.313	1.1 / 0.028	0 / 0.000	82 / 1.344		3.3 / 0.093			0.04				18	68	1	4		USGS
May 9 2000	9,860	62	10.4	106	94.7	6.8	11 / 0.549	3.1 / 0.251	3.6 / 0.157	0.9 / 0.023	0 / 0.000	52 / 0.852	5.5 / 0.115	1.5 / 0.042	0.5 / 0.008	0.0 / 0.000	0.09	5.3	Fe 0.01; Al 0.04; Pb 0.005; (a) PO_4 0.00	57[b]	16	40	0	2		USGS
Jun 8 0830	7,050	65	9.4	99	93.3	7.5	11 / 0.549	2.6 / 0.215	4.1 / 0.178	0.8 / 0.020	0 / 0.000	50 / 0.819		2.0 / 0.056			0.04		Al 0.04 (a)		19	38	0	0.8		USGS
Jul 12 1945	2,960	74	9.2	107	149	7.3	14 / 0.699	6.6 / 0.541	6.6 / 0.287	1.2 / 0.031	0 / 0.000	82 / 1.344		4.0 / 0.113			0.15				18	62	0	0.8		USGS
Aug 2 1315	1,280	76	9.2	108	162	8.4	14 / 0.699	6.3 / 0.521	8.4 / 0.365	1.8 / 0.046	0 / 0.000	86 / 1.409		3.0 / 0.085			0.07				22	61	0	0.9		USGS
Sep 14 0905	1,670	62	9.4	96	193		15 / 0.749	7.9 / 0.651	12 / 0.522	2.1 / 0.054	0 / 0.000	99 / 1.622	11 / 0.229	5.7 / 0.161	0.9 / 0.015	0.4 / 0.021	0.09	26	Fe 0.04; Al 0.02; (a)	130[b]	26	70	0	2.0		USGS
Oct 5 0800	2,010	58	9.7	95	216	7.2	15 / 0.748	9.7 / 0.800	15 / 0.652	2.2 / 0.056	0 / 0.000	106 / 1.737		5.5 / 0.155			0.12				29	77	0	4		USGS
Nov 16 0850	2,430	40	12.4	96	199	6.9	16 / 0.798	8.0 / 0.662	13 / 0.566	2.0 / 0.051	0 / 0.000	101 / 1.655		6.2 / 0.175			0.15				27	73	0	3		USGS
Dec 7 0810	13,700	48	11.0	95	127	7.0	12 / 0.599	5.2 / 0.429	6.1 / 0.265	1.1 / 0.028	0 / 0.000	65 / 1.065		2.0 / 0.056			0.00				20	51	0	17	median 6.2 minimum .06 maximum 230	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million — equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Klamath River at Somesbar																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr 3 1230	19,100	51	12.0	107	148	8.0	13 / 0.649	6.9 / 0.571	7.2 / 0.313	1.4 / 0.036	0 / 0.000	87 / 1.426		1.0 / 0.028			0.06				20	61	0	30		USGS
May 9 1300	19.800	56	10.6	101	128	7.1*	13 / 0.649	5.2 / 0.431	6.5 / 0.283	1.2 / 0.031	0 / 0.000	75 / 1.229	8.0 / 0.167	0.6 / 0.017	0.5 / 0.008	0.3 / 0.016	0.00	18	Fe 0.03; Al 0.03; Cu 0.01; Zn 0.03; As 0.01; PO_4 0.15 (a)	90[b]	20	54	0	9		USGS
June 13 1100	13,300	55	10.2	108	121	6.8	11 / 0.549	5.0 / 0.415	6.3 / 0.274	1.4 / 0.036	0 / 0.000	67 / 1 098		1.5 / 0.042			0.00				22	48	0	5		USGS
July 5 1500	**8,600	72	9.0	102	192	8.2	16 / 0.798	7.8 / 0.682	12 / 0.522	2.1 / 0.054	0 / 0.000	89 / 1.459		3.5 / 0.099			0.08				25	72	0	2		USGS
Aug 8 1530	4,250	73	8.6	99	222	7.1	20 / 0.998	9.8 / 0.802	13 / 0.566	1.9 / 0.049	0 / 0.000	114 / 1.868		5.0 / 0.141			0.03				23	90	0	20		USGS
Sept 12 1630	2,530	69	10.4	114	289	7.1	21 / 1.048	11 / 0.912	22 / 0.957	3.4 / 0.087	0 / 0.00	124 / 2.032	35 / 0.729	7.0 / 0.197	2.1 / 0.034	0.0 / 0.000	0.14	29	Al 0.08; Cu 0.01; Zn 0.02; PO_4 0.50; (a)	192[b]	32	98	0	0.8		USGS
Oct 1 1720	1,870	69	10.3	113	255	7.5	19 / 0.948	10 / 0.840	18 / 0.783	2.8 / 0.072	0 / 0.000	113 / 1.852		5.7 / 0.161			0.06				30	89	0	3		USGS
Nov 1 1240	9,410	49	12.8	111	166	7.2	14 / 0.699	7.5 / 0.613	8.6 / 0.374	1.4 / 0.036	0 / 0.000	82 / 1.344		3.5 / 0.099			0.05				22	66	0	35		USGS
Dec	Not Sampled																								median 3.5 minimum .62 maximum 230	

** Not revised
*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{0.0}{0.00}$ except as shown.

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REGION 1

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														equivalents per million												
											Russian River, East Fork near Calpella															
1955																										
Jan 3 1820	394	42	12.4	98	141	7.2	17 / 0.848	4.5 / 0.372	4.9 / 0.213	0.8 / 0.020	0 / 0.000	76 / 1.246		3.0 / 0.085			0.40				15	61	0	10		USGS
Feb 7 1500	358	50	11.7	103	169	7.7	20 / 0.998	6.3 / 0.522	6.3 / 0.274	0.7 / 0.018	0 / 0.000	90 / 1.475		3.5 / 0.099			0.27				15	76	2	6		USGS
Mar 1 1440	394	48	12.0	103	183	8.2	17 / 0.848	9.1 / 0.752	6.6 / 0.287	0.8 / 0.020	0 / 0.000	96 / 1.573		3.0 / 0.085			0.27				15	80	1	2		USGS
Apr 4 1500	103	54	10.6	99	206	8.2	22 / 1.098	8.5 / 0.702	8.0 / 0.348	1.0 / 0.026	0 / 0.000	113 / 1.952		4.5 / 0.127			0.46				16	90	0	6		USGS
May 2 1500	361	60	10.1	101	171	7.1	21 / 1.048	6.2 / 0.512	6.2 / 0.270	0.7 / 0.018	0 / 0.000	93 / 1.524	10 / 0.208	4.0 / 0.113	0.1 / 0.002	0.1 / 0.005	0.26	11	Fe 0.07; Al 0.07; Pb 0.005 (a) PO_4 0.00	105[b]	15	78	2	4		USGS
Jun 23 1400	173	69	9.6	106	173	7.3	20 / 0.998	6.0 / 0.492	6.2 / 0.270	1.0 / 0.026	0 / 0.000	94 / 1.541		3.2 / 0.090			0.20		Al 0.04 (a)		15	74	0	1		USGS
Jul 11 1600	177	74	8.9	103	174	7.3	19 / 0.948	7.0 / 0.572	6.6 / 0.287	1.2 / 0.031	0 / 0.000	94 / 1.541		3.8 / 0.107			0.23				16	76	0	10		USGS
Aug 1 1240	193	74	9.0	104	168	8.2	20 / 0.998	6.3 / 0.522	5.9 / 0.257	0.8 / 0.020	0 / 0.000	97 / 1.590		3.2 / 0.090			0.38				14	76	0	3		USGS
Sep 12 1730	193	76	8.3	98	185	7.1	20 / 0.998	7.0 / 0.574	6.3 / 0.274	0.9 / 0.023	0 / 0.000	99 / 1.622	8.4 / 0.175	3.5 / 0.099	0.3 / 0.005	0.2 / 0.011	0.41	8.5	Fe 0.04; Al 0.08; (a)	105[b]	14	79	0	2.0		USGS
Oct 3 1715	206	62	9.0	92	185	7.1	21 / 1.048	6.8 / 0.556	6.5 / 0.283	0.8 / 0.020	0 / 0.000	101 / 1.655		2.5 / 0.070			0.42				15	80	0	3		USGS
Nov 14 1630	280	50	11.2	99	196	6.9	22 / 1.098	7.0 / 0.578	6.8 / 0.296	1.0 / 0.026	0 / 0.000	102 / 1.672		3.8 / 0.107			0.46				15	84	0	4		USGS
Dec 5 1630	715	48	9.0	77	187	6.9	20 / 0.998	7.3 / 0.602	7.6 / 0.331	1.8 / 0.046	0 / 0.000	90 / 1.475		5.6 / 0.158			0.68				17	80	6	340	median 62 minimum 1.3 maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Russian River, East Fork near Calpella																			
1956																										
Jan 16 1520	1,450	54	10.8	100	135	7.6	13 / 0.649	6.2 / 0.511	4.0 / 0.174	1.3 / 0.033	0 / 0.000	72 / 1.180		2.0 / 0.056			0.05				13	58	0	270		USGS
Feb 16 1820	379	45	12.0	99	153	6.9	17 / 0.848	6.1 / 0.500	5.3 / 0.231	0.8 / 0.020	0 / 0.000	84 / 1.377		1.1 / 0.031			0.18				14	67	0	60		USGS
Mar 5 1610	751	47	11.5	98	157	7.1	16 / 0.798	7.6 / 0.622	5.7 / 0.248	1.1 / 0.028	0 / 0.000	85 / 1.393		4.0 / 0.113			0.28				15	71	1	60		USGS
Apr 2 1300	347	53	10.8	99	149	7.3	16 / 0.798	6.6 / 0.542	4.9 / 0.213	0.8 / 0.020	0 / 0.000	88 / 1.442		0.0 / 0.000			0.12				14	67	0	35		USGS
May 7 1630	331	60	9.8	98	152	7.8*	18 / 0.898	5.6 / 0.462	5.0 / 0.218	0.9 / 0.023	0 / 0.000	86 / 1.410	8.0 / 0.167	0.2 / 0.006	0.4 / 0.006	0.3 / 0.016	0.22	12	Fe 0.04; Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.10 (a)	93[b]	14	68	0	30		USGS
June 11 1730	127	69	8.4	92	162	7.1	18 / 0.898	6.5 / 0.534	5.4 / 0.235	1.1 / 0.028	0 / 0.000	91 / 1.491		1.9 / 0.054			0.24				14	72	0	2		USGS
July 2 1530	184	72	8.8	100	149	7.7	18 / 0.898	7.8 / 0.642	4.6 / 0.200	0.9 / 0.023	0 / 0.000	86 / 1.410		2.0 / 0.056			0.17				11	77	6	0.6		USGS
Aug 6 1650	209	74	9.2	107	152	7.6	18 / 0.898	5.9 / 0.482	5.2 / 0.226	0.9 / 0.023	0 / 0.000	90 / 1.475		1.5 / 0.042			0.21				14	69	0	3		USGS
Sept 11 1410	239	70	10.2	114	166	6.8	20 / 0.998	6.1 / 0.502	5.4 / 0.235	1.0 / 0.026	0 / 0.000	98 / 1.606	5.6 / 0.117	2.3 / 0.065	0.4 / 0.006	0.0 / 0.000	0.35	8.8	Al 0.01; Cu 0.01; Zn 0.03; PO_4 0.10; (a)	98[b]	13	75	0	0.8		USGS
Oct 5 1540	216	70	9.4	104	174	7.8	21 / 1.048	6.6 / 0.540	5.6 / 0.244	0.8 / 0.020	0 / 0.000	104 / 1.705		2.9 / 0.082			0.32				13	79	0	1		USGS
Nov.4 1040	247	52	12.0	108	204	7.6	22 / 1.098	8.0 / 0.658	7.7 / 0.335	0.8 / 0.020	0 / 0.000	110 / 1.803		5.0 / 0.141			0.48				16	88	0	9		USGS
Dec 3 1600	25	47	11.8	100	222	8.0	26 / 1.30	8.0 / 0.66	7.4 / 0.32	0.8 / 0.02	0 / 0.00	124 / 2.03		5.0 / 0.14			0.29				14	98	0	0.8	median 23; minimum .23; maximum 2400	USGS

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River, East Fork at Potter Valley Power House																										
1955																										
Jan 3 1900	310	41	13.0	102	141	7.1	17 / 0.948	4.6 / 0.382	4.7 / 0.204	0.9 / 0.023	0 / 0.000	75 / 1.229		3.2 / 0.090			0.32				14	62	0	8		USGS
Feb 7 1430	308	46			147	7.5	18 / 0.898	4.8 / 0.392	5.5 / 0.239	0.6 / 0.015	0 / 0.000	78 / 1.278		3.5 / 0.099			0.24				15	64	0	9		USGS
Mar 1 1500	322	43	12.4	100	155	7.9	15 / 0.749	7.5 / 0.619	5.6 / 0.244	0.8 / 0.020	0 / 0.000	84 / 1.377		3.8 / 0.107			0.28				15	68	0	2		USGS
Apr 4 1415	85	54	10.2	95	176	7.8	21 / 1.048	5.5 / 0.452	6.8 / 0.296	1.0 / 0.026	0 / 0.000	94 / 1.541		4.0 / 0.113			0.49				16	75	0	6		USGS
May 2 1530	324	58	10.5	102	148	6.9	18 / 0.898	4.9 / 0.402	5.3 / 0.230	0.8 / 0.020	0 / 0.000	79 / 1.295	8.4 / 0.175	4.2 / 0.118	0.2 / 0.003	0.1 / 0.005	0.23	9.3	Fe 0.1; Al 0.02; (a) PO_4 0.00	90[b]	15	65	0	2		USGS
Jun 23 1500	226	65	9.8	103	156	7.4	21 / 1.048	4.0 / 0.332	5.4 / 0.235	0.5 / 0.013	0 / 0.000	86 / 1.409		3.2 / 0.090			0.26		Al 0.03; (a)		14	69	0	0.8		USGS
Jul 11 1515	212	70	8.6	95	158	7.1	19 / 0.948	5.3 / 0.432	5.4 / 0.235	0.6 / 0.015	0 / 0.000	86 / 1.409		2.2 / 0.090			0.33				14	69	0	2		USGS
Aug 1 1300	Not Sampled																									
Sep 12 1700	231	74	7.8	90	175	7.1	21 / 1.048	5.4 / 0.448	5.7 / 0.248	0.7 / 0.018	0 / 0.000	96 / 1.573	7.0 / 0.146	3.4 / 0.096	0.3 / 0.005	0.1 / 0.005	0.35	7.7	Fe 0.02; Al 0.03; Cu 0.01; (a)	99[b]	14	75	0	2.0		USGS
Oct 3 1800	231	61	9.0	90	177	7.0	21 / 1.048	6.7 / 0.552	6.3 / 0.274	0.6 / 0.015	0 / 0.000	97 / 1.590		2.7 / 0.075			0.37				15	80	0	5		USGS
Nov 14 1550	231	50	7.8	86	190	6.9	23 / 1.148	6.5 / 0.532	6.9 / 0.300	1.0 / 0.026	0 / 0.000	102 / 1.672		5.0 / 0.141			0.59				15	84	0	6		USGS
Dec 5 1730	240	47	10.0	85	207	6.8	26 / 1.297	5.6 / 0.463	8.7 / 0.378	0.9 / 0.023	0 / 0.000	106 / 1.737		6.8 / 0.192			0.75				17	88	1	44		USGS
																									median 2.3 minimum .045 - maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	equivalents per million: Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River, East Fork at Potter Valley Power House																										
1956																										
Jan	Not sampled																									
Feb 16 1745	318	44	11.5	94	123	6.9	14 / 0.699	4.5 / 0.373	4.2 / 0.183	0.8 / 0.020	0 / 0.000	67 / 1.098		0.0 / 0.000			0.11				14	54	0	45		USGS
Mar 5 1525	317	46	11.6	97	96.8	7.1	12 / 0.599	3.2 / 0.261	3.3 / 0.144	1.0 / 0.026	0 / 0.000	54 / 0.885		2.0 / 0.056			0.31				14	43	0	95		USGS
Apr 2 1220	320	52	10.4	94	122	8.8	12 / 0.599	5.8 / 0.481	4.0 / 0.174	0.9 / 0.023	0 / 0.000	75 / 1.229		0.0 / 0.000			1.5				14	54	0	40		USGS
May 7 1600	320	58	10.0	97	139	7.8*	17 / 0.848	4.9 / 0.400	4.4 / 0.191	0.8 / 0.020	0 / 0.000	80 / 1.311	6.4 / 0.133	2.1 / 0.059	0.4 / 0.006	0.1 / 0.005	0.15	12	Fe 0.01; Al 0.07; Cu 0.01; Zn 0.02; PO_4 0.09 (a)	87[b]	13	62	0	15		USGS
June 11 1700	150	67	8.7	94		6.9																				
July 2 1610	225	64	8.8	92	133	7.7	17 / 0.848	4.3 / 0.352	3.9 / 0.170	0.7 / 0.018	0 / 0.000	78 / 1.278		1.5 / 0.042			0.19				12	60	0	2		USGS
Aug 6 1600	252	68	9.4	103	142	6.8	17 / 0.848	5.7 / 0.472	5.0 / 0.218	0.8 / 0.020	0 / 0.000	85 / 1.393		1.5 / 0.042			0.19				14	66	0	2		USGS
Sept 11 1505	259	69	8.6	95	160	6.8	20 / 0.998	5.5 / 0.450	5.0 / 0.218	0.9 / 0.023	0 / 0.000	94 / 1.541	3.8 / 0.079	2.2 / 0.062	0.4 / 0.006	0.0 / 0.000	0.32	10	Cu 0.01; Zn 0.01; PO_4 0.05; (a)	94[b]	13	72	0	0.4		USGS
Oct 5 1500	230**	69	9.8	108	168	8.0	21 / 1.048	5.7 / 0.472	5.0 / 0.218	0.6 / 0.015	0 / 0.000	100 / 1.639		3.0 / 0.085			0.27				12	76	0	0.9		USGS
Nov 4 1000	302**	54	10.0	93	198	7.4	23 / 1.148	6.8 / 0.560	7.7 / 0.335	0.8 / 0.020	0 / 0.000	109 / 1.787		5.3 / 0.149			0.64				16	85	0	30		USGS
Dec 3 1515	No Record	49	11.2	98	205	7.9	26 / 1.30	6.9 / 0.57	7.0 / 0.30	0.8 / 0.02	0 / 0.000	118 / 1.93		5.0 / 0.14			0.55				14	93	0	0.9	median 1.8 minimum .06 maximum 2400	USGS

** Not Reviseed

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River at Guerneville																										
1955																										
Jan 3 1320	2,050	50	10.3	91	185	7.1	18 / 0.898	9.0 / 0.742	6.7 / 0.291	1.4 / 0.036	0 / 0.000	95 / 1.557		4.8 / 0.135			0.24				15	82	4	55		USGS
Feb 7 0930	1,320	44	11.1	90	251	7.4	24 / 1.198	13 / 1.082	10 / 0.435	1.1 / 0.028	0 / 0.000	132 / 2.163		7.0 / 0.197			0.32				16	114	6	10		USGS
Mar 1 1200	1,680	48	15.4	132	225	8.4	17 / 0.848	13 / 1.032	10 / 0.435	1.5 / 0.038	0 / 0.000	112 / 1.836		8.0 / 0.226			0.57				18	94	2	30		USGS
Apr 4 1000	421	56	10.2	97	312	7.9	29 / 1.447	15 / 1.233	15 / 0.652	1.3 / 0.033	0 / 0.000	170 / 2.786		10 / 0.282			1.4				19	134	0	6		USGS
May 2 0900	2,060	60	9.0	90	237	6.9	23 / 1.148	12 / 0.992	9.0 / 0.391	1.2 / 0.031	0 / 0.000	126 / 2.065	14 / 0.291	6.5 / 0.183	0.9 / 0.015	0.1 / 0.005	0.28	16	Mn 0.01; (a) PO_4 0.25	145[b]	15	107	4	20		USGS
Jun 24 0950	212	74	8.0	93	305	7.6	30 / 1.497	15 / 1.207	13 / 0.565	1.3 / 0.033	0 / 0.000	170 / 2.786		9.9 / 0.279			1.8		Al 0.05 (a)		17	135	0	0.8		USGS
Jul 11 0900	186	76	8.2	97	313	7.3	28 / 1.398	16 / 1.302	15 / 0.652	1.3 / 0.033	0 / 0.000	174 / 2.852		11 / 0.310			2.4				19	135	0	2		USGS
Aug 1 0950	148	74	8.2	95	318	8.1	27 / 1.347	16 / 1.353	15 / 0.652	1.4 / 0.036	0 / 0.000	181 / 2.966		12 / 0.336			2.6				19	135	0	7		USGS
Sep 12 1215	148	76	8.2	97	312	8.2	23 / 1.148	18 / 1.472	15 / 0.652	1.4 / 0.036	0 / 0.000	169 / 2.770	11 / 0.229	12 / 0.338	1.2 / 0.019	0.0 / 0.000	2.6	15	Al 0.07; Cu 0.02; (a)	182[b]	20	131	0	5		USGS
Oct 3 1300	181	70	9.0	100	308	7.2	26 / 1.297	14 / 1.167	16 / 0.696	1.4 / 0.036	0 / 0.000	163 / 2.672		12 / 0.338			3.0				22	123	0	4		USGS
Nov 14 1200	257	50	8.2	72	280	6.9	26 / 1.297	12 / 1.027	15 / 0.652	1.3 / 0.033	0 / 0.000	152 / 2.491		10 / 0.282			1.5				22	116	0	1		USGS
Dec 5 0940	363	50	7.5	66	276	6.8	27 / 1.347	12 / 0.993	14 / 0.609	2.5 / 0.064	0 / 0.000	136 / 2.229		10 / 0.282			1.1				20	117	5	30	median 17; minimum .23; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River at Guerneville																										
1956																										
Jan 16 0930	52,700	53	10.1	93	107	6.6	10 / 0.499	4.9 / 0.401	3.7 / 0.161	1.2 / 0.031	0 / 0.000	59 / 0.967		1.8 / 0.051			0.05				15	45	0	1000		USGS
Feb 17 1430	1,610	47	10.5	89	291	6.6	28 / 1.397	14 / 1.171	12 / 0.522	1.3 / 0.033	0 / 0.000	158 / 2.590		6.3 / 0.178			0.77				17	128	0	25		USGS
Mar 5 0950	4,610	52	10.2	93	211	6.9	20 / 0.998	11 / 0.882	7.9 / 0.344	1.5 / 0.038	0 / 0.000	115 / 1.885		6.2 / 0.175			0.50				15	94	0	80		USGS
Apr 2 0950	1,180	57	9.9	95	267	8.6	22 / 1.098	15 / 1.222	13 / 0.566	1.3 / 0.033	0 / 0.000	154 / 2.524		6.0 / 0.169			1.2				19	116	0	10		USGS
May 7 0940	1,200	63	8.6	89	231	7.8*	27 / 1.347	10 / 0.849	12 / 0.522	1.5 / 0.038	0 / 0.000	138 / 2.262	12 / 0.250	6.2 / 0.175	1.5 / 0.024	0.3 / 0.016	0.87	19	Fe 0.06; Al 0.06; Cu 0.01; As 0.01; PO_4 0.30; (a)	158	19	110	0	15		USGS
June 11 1230	327	76	8.8	104	305	7.4	27 / 1.347	18 / 1.485	15 / 0.652	1.6 / 0.041	0 / 0.000	165 / 2.704		10 / 0.282			1.7				18	142	7	5		USGS
July 2 0820	183	74	7.8	90	318	8.0	30 / 1.497	16 / 1.343	15 / 0.652	1.5 / 0.038	0 / 0.000	181 / 2.967		10 / 0.282			2.1				18	142	0	3		USGS
Aug 6 1030	158	78	8.2	99	322	7.3	29 / 1.447	17 / 1.413	16 / 0.696	1.5 / 0.038	0 / 0.000	184 / 3.016		12 / 0.338			2.9				19	143	0	3		USGS
Sept 11 0820	163	72	9.6	109	304	6.9	27 / 1.347	15 / 1.225	15 / 0.652	1.4 / 0.036	0 / 0.000	171 / 2.803	9.0 / 0.187	11 / 0.310	0.4 / 0.006	0.0 / 0.000	2.7	17	Al 0.05; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	182[b]	20	129	0	1.0		USGS
Oct 18 1000	214	64	9.0	94	274	8.0	27 / 1.347	13 / 1.093	12 / 0.522	1.1 / 0.028	0 / 0.000	162 / 2.655		7.4 / 0.209			1.2				17	122	0	1		USGS
Nov 4 1620	422	59	10.6	104	256	7.6	24 / 1.198	12 / 1.010	11 / 0.478	1.8 / 0.046	0 / 0.000	135 / 2.213		6.3 / 0.178			0.70				17	110	0	30		USGS
Dec 3 0920	205	51	10.4	93	307	7.9	30 / 1.50	15 / 1.20	13 / 0.57	1.5 / 0.04	0 / 0.000	172 / 2.82		9.8 / 0.28			0.63				17	135	0	0.7		USGS
																									median 18 minimum .23 maximum 620	

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e USGS - Geological Survey Water Data Network (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH).

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River near Healdsburg																										
1955																										
Jan 3 1430	1,520	48	11.7	101	192	7.1	19 / 0.948	9.6 / 0.792	7.7 / 0.335	1.3 / 0.033	0 / 0.000	102 / 1.672		4.5 / 0.127			0.39				16	87	3	45		USGS
Feb 7 1100	926	52	11.4	103	257	7.4	25 / 1.248	12 / 0.992	12 / 0.522	0.9 / 0.023	0 / 0.000	136 / 2.229		7.8 / 0.220			1.2				19	112	0	7		USGS
Mar 6 1230	908	52	11.6	105	242	7.6	21 / 1.048	14 / 1.124	8.4 / 0.365	1.1 / 0.028	0 / 0.000	132 / 2.163		5.3 / 0.149			0.34				14	109	1	2		USGS
Apr 4 1045	324	58	11.0	107	293	8.2	27 / 1.347	16 / 1.325	11 / 0.478	1.0 / 0.026	0 / 0.000	168 / 2.753		7.1 / 0.200			0.84				15	134	0	2		USGS
May 2 1030	1,390	60	9.5	95	234	6.9	25 / 1.248	11 / 0.872	8.7 / 0.378	0.9 / 0.023	0 / 0.000	129 / 2.114	13 / 0.271	7.5 / 0.212	0.6 / 0.010	0.1 / 0.005	0.16	5.6	Mn 0.01; Pb 0.005; (a) PO_4 0.10	137[b]	15	106	0	10		USGS
Jun 23 1110	196	70	7.8	87	306	7.2	31 / 1.547	12 / 1.025	16 / 0.696	1.5 / 0.038	0 / 0.000	164 / 2.688		11 / 0.310			2.5		Al 0.08; Zn 0.01; (a)		21	129	0	1		USGS
Jul 11 1100	180	74	8.	89	309	7.3	27 / 1.347	15 / 1.193	17 / 0.739	1.2 / 0.031	0 / 0.000	171 / 2.802		12 / 0.338			3.1				22	127	0	1		USGS
Aug 1 1100	141	72	8.0	91	314	7.3	27 / 1.347	15 / 1.213	16 / 0.696	1.2 / 0.031	0 / 0.000	173 / 2.835		12 / 0.338			3.3				21	128	0	1		USGS
Sep 12 1330	170	74	8.6	100	305	7.3	28 / 1.397	12 / 0.971	18 / 0.783	1.2 / 0.031	0 / 0.000	164 / 2.688	7.8 / 0.162	12 / 0.338	0.1 / 0.002	0.1 / 0.005	3.5	12	Fe 0.02; Al 0.07; Cu 0.01; (a)	176[b]	25	118	0	2.0		USGS
Oct 3 1400	192	69	9.6	106	303	7.7	27 / 1.347	14 / 1.161	19 / 0.826	1.2 / 0.031	0 / 0.000	163 / 2.672		11 / 0.310			4.3				25	125	0	2		USGS
Nov 14 1245	279	50	11.0	97	245	6.9	26 / 1.297	11 / 0.875	11 / 0.478	1.1 / 0.028	0 / 0.000	137 / 2.245		6.7 / 0.189			1.4				18	109	0	0.6		USGS
Dec 5 1125	328	50	8.0	70	257	7.0	28 / 1.397	10 / 0.823	11 / 0.478	1.1 / 0.028	0 / 0.000	133 / 2.180		7.8 / 0.220			1.4				18	111	2	13	median 13 minimum .13 maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Russian River near Healdsburg																			
1956																										
Jan 16 1130	31,900	53	10.0	92	108	6.8	10 / 0.499	5.1 / 0.421	3.2 / 0.139	2.3 / 0.059	0 / 0.000	58 / 0.951		2.0 / 0.056			0.11				12	46	0	950		USGS
Feb 17 1345	1,080	46	10.0	84	256	6.8	24 / 1.198	12 / 1.026	10 / 0.435	1.2 / 0.031	0 / 0.000	139 / 2.278		4.2 / 0.118			1.1				16	111	0	30		USGS
Mar 5 1115	3,210	51	11.0	98	215	7.1	20 / 0.998	11 / 0.902	8.6 / 0.374	1.0 / 0.026	0 / 0.000	117 / 1.918		6.5 / 0.183			0.66				16	95	0	60		USGS
Apr 2 1000	852	56	10.4	99	261	8.4	22 / 1.098	14 / 1.142	12 / 0.522	1.3 / 0.033	0 / 0.000	150 / 2.458		2.5 / 0.070			1.5				19	112	0	15		USGS
May 7 1110	857	64	10.4	108	252	7.9*	28 / 1.397	9.8 / 0.803	11 / 0.478	1.2 / 0.031	0 / 0.000	140 / 2.295	12 / 0.250	4.6 / 0.130	1.3 / 0.021	0.3 / 0.016	1.2	16	Fe 0.02; Al 0.05; Cu 0.01; PO_4 0.10 (a)	154[b]	18	110	0	20		USGS
June 11 1400	226	76	9.0	106	298	7.7	27 / 1.347	15 / 1.201	15 / 0.652	1.4 / 0.036	0 / 0.000	166 / 2.721		8.5 / 0.240			2.4				20	127	0	2		USGS
July 2 1000	160	75	8.0	94	313	8.2	29 / 1.447	16 / 1.333	16 / 0.696	1.4 / 0.036	0 / 0.000	177 / 2.901		10 / 0.282			2.8				20	139	0	1		USGS
Aug 6 1130	140	78	8.3	100	307	7.2	27 / 1.347	15 / 1.253	18 / 0.783	1.3 / 0.033	0 / 0.000	174 / 2.852		12 / 0.338			3.4				23	130	0	2		USGS
Sept 0945	145	71	9.0	101	287	6.9	27 / 1.347	14 / 1.125	14 / 0.609	1.4 / 0.036	0 / 0.000	165 / 2.704	8.1 / 0.169	9.1 / 0.257	0.6 / 0.010	0.0 / 0.000	2.1	17	Cu 0.01; PO_4 0.05; (a)	174[b]	36	124	0	0.4		USGS
Oct 18 1300	210	55	10.2	108		7.8	Sample missing																			
Nov 4 1330	369	58	10.8	105	262	7.6	26 / 1.297	12 / 1.015	10 / 0.435	1.6 / 0.041	0 / 0.000	144 / 2.360		6.0 / 0.169			0.83				16	116	0	20		USGS
Dec 3 1100	210	49	10.8	94	277	7.8	29 / 1.45	13 / 1.07	10 / 0.44	1.1 / 0.03	0 / 0.000	161 / 2.64		6.5 / 0.18			0.55				15	126	0	0.8	median 23 minimum .06 maximum 620	USGS

*Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH), or State Division of Water Resources (DWR), as indicated.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							(equivalents per million)																			
							Russian River near Hopland																			
1955																										
Jan 3 1620	870	46	11.2	94	169	7.2	18 / 0.898	7.6 / 0.622	6.4 / 0.278	1.0 / 0.026	0 / 0.000	88 / 1.442		4.5 / 0.127			0.34				15	76	4	20		USGS
Feb 7 1300	580	50	11.7	103	191	7.3	20 / 0.998	8.3 / 0.682	7.8 / 0.339	0.7 / 0.018	0 / 0.000	100 / 1.639		5.2 / 0.147			0.25				17	84	2	3		USGS
Mar 1 1415	712	46	13.4	112	179	7.0	16 / 0.798	10 / 0.826	7.6 / 0.330	1.1 / 0.028	0 / 0.000	98 / 1.606		4.8 / 0.135			0.23				17	81	1	4		USGS
Apr 4 1245	171	56	11.0	102	226	7.9	23 / 1.148	9.9 / 0.812	9.6 / 0.417	1.3 / 0.033	0 / 0.000	125 / 2.049		6.0 / 0.169			0.39				17	98	0	10		USGS
May 2 1200	652	60	9.8	98	191	6.8	22 / 1.098	7.3 / 0.602	7.7 / 0.335	0.8 / 0.020	0 / 0.000	103 / 1.688	10 / 0.208	5.5 / 0.155	0.9 / 0.015	0.0 / 0.000	0.28	13	Fe 0.06; Al 0.01; (a) PO_4 0.05	118[b]	16	85	1	4		USGS
Jun 23 1230	224	70	7.8	87	189	7.2	19 / 0.948	7.0 / 0.572	7.3 / 0.317	0.8 / 0.020	0 / 0.000	104 / 1.704		4.5 / 0.127			0.25		Al 0.05; (a)		17	76	0	0.8		USGS
Jul 11 1315	186	75	10.2	120	182	7.6	19 / 0.948	7.9 / 0.652	7.8 / 0.339	0.9 / 0.023	9 / 0.300	82 / 1.344		4.2 / 0.118			0.23				17	80	0	0.8		USGS
Aug 1 1215	195	77	11.0	131	188	7.7	20 / 0.998	7.2 / 0.602	6.7 / 0.291	1.1 / 0.028	0 / 0.000	104 / 1.704		6.0 / 0.169			0.25				15	80	0	3		USGS
Sep 12 1520	177	79	10.6	130	178	7.6	21 / 1.048	6.1 / 0.500	6.9 / 0.300	0.5 / 0.013	13 / 0.433	71 / 1.164	9.0 / 0.187	4.1 / 0.116	0.6 / 0.010	0.2 / 0.011	0.40	9.3	Fe 0.03; Cu 0.01; (a)	106[b]	16	77	0	4.0		USGS
Oct 3 1600	204	64	11.2	117	196	7.9	22 / 1.098	7.5 / 0.618	7.3 / 0.318	0.8 / 0.020	0 / 0.000	108 / 1.770		2.7 / 0.076			0.46				15	86	0	2		USGS
Nov 14 1415	245	51	11.4	102	199	6.8	24 / 1.198	6.7 / 0.554	7.8 / 0.339	1.0 / 0.026	0 / 0.000	111 / 1.819		4.2 / 0.118			0.57				16	88	0	2		USGS
Dec 5 1500	249	48	9.0	77	226	6.9	25 / 1.248	8.2 / 0.672	11 / 0.478	1.0 / 0.026	0 / 0.000	116 / 1.901		7.7 / 0.217			0.76				20	96	1	1		USGS
																									median 18 minimum .045 – maximum 1300	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analyzed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Russian River near Hopland																										
1956																										
Jan 16 1320	6,680	52	10.0	91	122	6.9	11 / 0.549	6.2 / 0.511	4.6 / 0.200	1.4 / 0.036	0 / 0.000	64 / 1.049		1.2 / 0.034			0.05				15	53	1	600		USGS
Feb 17 1205	650	45	11.0	91	191	6.9	20 / 0.998	8.2 / 0.674	6.8 / 0.296	0.9 / 0.023	0 / 0.000	104 / 1.705		2.9 / 0.082			0.27				15	84	0			USGS
Mar 5 1300	2,330	50	11.0	97	165	7.2	17 / 0.848	7.7 / 0.632	5.5 / 0.239	1.1 / 0.028	0 / 0.000	89 / 1.459		3.5 / 0.099			0.09				14	74	1	75		USGS
Apr 2 1115	575		10.6		184	7.7	18 / 0.898	8.8 / 0.722	6.9 / 0.300	0.9 / 0.023	0 / 0.000	114 / 1.868		2.0 / 0.056			0.77				15	81	0	25		USGS
May 7 1340	428	62	9.8	100	193	7.7	24 / 1.198	5.5 / 0.450	7.2 / 0.313	1.0 / 0.026	0 / 0.000	105 / 1.721	9.6 / 0.200	2.6 / 0.073	0.9 / 0.015	0.3 / 0.016	0.25	13	Fe 0.02; Cu 0.02; Zn 0.01; PO_4 0.10 (a)	116[b]	16	82	0	15		USGS
June 11 1530	255	75	9.3	109	208	6.9	23 / 1.148	7.7 / 0.632	8.7 / 0.378	1.2 / 0.031	0 / 0.000	112 / 1.836		5.8 / 0.164			0.20				17	89	0	4		USGS
July 2 1300	260	75	10.4	121	182	8.2	20 / 0.998	8.3 / 0.682	6.8 / 0.296	1.1 / 0.028	0 / 0.000	106 / 1.737		3.5 / 0.099			0.39				15	84	0	1		USGS
Aug 6 1350	181	77	12.6	150	172	7.4	19 / 0.948	7.7 / 0.632	6.3 / 0.274	1.0 / 0.026	0 / 0.000	100 / 1.639		2.5 / 0.070			0.18				15	79	0	3		USGS
Sept 11 1110	223	70	9.3	104	182	6.8	20 / 0.998	7.3 / 0.602	6.1 / 0.265	0.9 / 0.023	0 / 0.000	104 / 1.705	4.8 / 0.100	3.5 / 0.099	0.6 / 0.010	0.0 / 0.000	0.35	13	Al 0.01; Cu 0.01; PO_4 0.10; (a)	108[b]	14	80	0	1.0		USGS
Oct 5 1810	169	70	9.2	102	208	7.9	22 / 1.098	8.0 / 0.662	9.4 / 0.409	0.9 / 0.023	0 / 0.000	110 / 1.803		4.4 / 0.124			0.59				19	88	0	10		USGS
Nov 4 1145	331	77	11.0	131	219	7.5	22 / 1.098	9.3 / 0.762	9.2 / 0.400	0.9 / 0.023	0 / 0.000	118 / 1.934		6.6 / 0.186			0.62				18	93	0	9		USGS
Dec 3 1320	331	49	13.6	119	227	8.0	26 / 1.30	8.4 / 0.69	8.9 / 0.39	0.8 / 0.02	0 / 0.000	128 / 2.10		6.5 / 0.18			0.30				16	100	0	5	median 23 minimum .62 maximum 2400	USGS
*Lab pH																										

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Russian River near Ukiah																										
1955																										
Jan	Not sampled																									
Feb 7 1335		53	12.2	112	234	8.2	28 / 1.397	8.8 / 0.723	8.9 / 0.387	1.0 / 0.026	0 / 0.000	126 / 2.065		4.8 / 0.135			0.20				15	106	3	110		USGS
Mar 6 1400		54	12.5	116	241	8.9	26 / 1.297	9.8 / 0.807	9.6 / 0.417	1.3 / 0.033	0 / 0.000	128 / 2.098		6.6 / 0.186			0.16				16	105	0	2		USGS
Apr 4 1330		58	10.6	103	222	8.1	23 / 1.148	8.9 / 0.732	9.8 / 0.426	1.1 / 0.028	0 / 0.000	121 / 1.983		6.0 / 0.169			0.52				18	94	0	4		USGS
May 2 1305		64	9.6	100	240	7.4	31 / 1.547	8.2 / 0.673	8.0 / 0.348	1.1 / 0.028	0 / 0.000	138 / 2.262	10 / 0.208	5.8 / 0.164	0.1 / 0.002	0.1 / 0.005	0.14	17	Mn 0.005; (a) PO_4 0.10	149[b]	13	111	0	10		USGS
Jun 23 1315		69	9.4	103	177	7.3	27 / 1.347	2.2 / 0.183	6.5 / 0.283	0.8 / 0.020	0 / 0.000	98 / 1.606		0.6 / 0.017			0.30		Al 0.05 (a)		15	76	0	8		USGS
Jul 11 1400		76	8.7	102	179	7.3	21 / 1.048	6.5 / 0.532	6.7 / 0.291	1.1 / 0.028	0 / 0.000	101 / 1.655		3.8 / 0.107			0.35				15	79	0	20		USGS
Aug	Not sampled																									
Sept 12 1600		76	8.8	104	206	7.7	22 / 1.098	8.2 / 0.674	8.7 / 0.378	1.0 / 0.026	0 / 0.000	113 / 1.852	8.2 / 0.171	5.2 / 0.147	0.2 / 0.003	0.2 / 0.011	0.38	10	Fe 0.06; Al 0.01; (a)	120[b]	17	89	0	110		USGS
Oct 3 1635		66	9.0	96	187	7.3	21 / 1.048	6.8 / 0.560	6.9 / 0.300	0.7 / 0.018	0 / 0.000	103 / 1.688		2.7 / 0.076			0.42				16	80	0	6		USGS
Nov 14 1445		50	11.0	97	197	6.9	22 / 1.098	7.4 / 0.610	8.0 / 0.348	1.1 / 0.028	0 / 0.000	105 / 1.721		4.7 / 0.133			0.45				17	85	0	10		USGS
Dec 5 1600		48	9.5	82	203	6.9	20 / 0.998	8.3 / 0.686	9.4 / 0.409	1.2 / 0.031	0 / 0.000	103 / 1.688		6.3 / 0.178			0.67				19	84	0	35		USGS
																									median 62	
1955 Flows not rated																									minimum .12	
																									maximum 7000	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{ooo}$ except as shown.

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							Russian River near Ukiah																			
1956																										
Jan 16 1400		52	10.0	91	209	7.6	28 / 1.397	6.1 / 0.503	4.5 / 0.196	1.4 / 0.036	0 / 0.000	119 / 1.950		3.5 / 0.099			0.08				9	95	0	250		USGS
Feb 17 1130		45	11.6	96	197	7.4	23 / 1.148	7.3 / 0.604	6.6 / 0.287	0.9 / 0.023	0 / 0.000	110 / 1.803		2.6 / 0.073			0.25				14	88	0	30		USGS
Mar 5 1350		50	11.2	99	202	7.1	24 / 1.198	8.0 / 0.662	6.7 / 0.291	1.1 / 0.028	0 / 0.000	113 / 1.852		4.5 / 0.127			0.22				13	93	0	40		USGS
Apr 2 1150		56	11.6	110	202	7.5	22 / 1.098	8.8 / 0.722	7.2 / 0.313	0.9 / 0.023	0 / 0.000	121 / 1.983		3.0 / 0.085			1.3				15	91	0	15		USGS
May 7 1415		63	9.6	99	209	7.6	24 / 1.193	8.7 / 0.718	7.5 / 0.326	1.3 / 0.033	0 / 0.000	118 / 1.934	11 / 0.229	2.8 / 0.079	0.9 / 0.015	0.1 / 0.005	0.21	13	Al 0.05; Cu 0.01; Zn 0.01; PO_4 0.23 (a)	128[b]	14	96	0	80		USGS
June 11 1600		75	7.8	91	181	7.0	20 / 0.998	7.0 / 0.574	7.6 / 0.331	1.1 / 0.028	0 / 0.000	101 / 1.655		2.9 / 0.082			0.29				17	79	0	10		USGS
July 2 1420		75	8.0	94	170	7.8	18 / 0.898	7.1 / 0.582	8.0 / 0.348	1.0 / 0.026	0 / 0.000	100 / 1.639		2.5 / 0.070			0.34				19	74	0	3		USGS
Aug 6 1500		76	9.4	111	160	7.1	18 / 0.898	7.3 / 0.602	6.1 / 0.265	1.0 / 0.026	0 / 0.000	95 / 1.557		2.5 / 0.070			0.19				15	75	0	3		USGS
Sept 11 1200		71	10.0	112	178	6.6	20 / 0.998	6.6 / 0.546	7.2 / 0.313	0.9 / 0.023	0 / 0.000	100 / 1.639	5.8 / 0.121	4.3 / 0.121	0.5 / 0.008	0.0 / 0.000	0.26	10	Fe 0.01; Al 0.02; Cu 0.01; Zn 0.01; PO_4 0.15; (a)	105[b]	17	77	0	5		USGS
Oct 5 1700		71	9.4	106	179	7.9	22 / 1.098	6.1 / 0.502	5.9 / 0.257	0.8 / 0.020	0 / 0.000	106 / 1.737		3.6 / 0.102			0.31				14	80	0	2		USGS
Nov 4 1115		55	11.2	105	215	7.5	23 / 1.148	8.1 / 0.664	9.5 / 0.413	0.8 / 0.020	0 / 0.000	115 / 1.885		7.3 / 0.206			0.68				18	91	0	9		USGS
Dec 3 1410		49	11.6	101	219	7.6	26 / 1.30	7.5 / 0.62	8.6 / 0.37	1.0 / 0.03	0 / 0.000	126 / 2.07		5.5 / 0.16			0.57				16	96	0	15	median 23 minimum 2.3 maximum 7000	USGS
195t Flows not rated																										
*Lab pH																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							(equivalents per million)																			
Smith River near Crescent City																										
1955																										
Jan 6 1315	4,520	46	13.0	108	86.6	7.6	5.3 / 0.264	7.1 / 0.586	1.6 / 0.070	0.2 / 0.005	0 / 0.000	51 / 0.836		2.5 / 0.071			0.06				8	42	0	0.9		USGS
Feb 10 0905	4,250	41	13.2	104	92.9	7.3	5.3 / 0.264	8.2 / 0.676	1.8 / 0.078	0.1 / 0.003	0 / 0.000	55 / 0.901		2.8 / 0.079			0.00				8	47	2	0.8		USGS
Mar 13 1150	5,130	46	12.8	107	87.2	7.0	3.1 / 0.155	8.0 / 0.657	1.9 / 0.083	0.5 / 0.013	0 / 0.000	51 / 0.836		2.3 / 0.065			0.00				9	41	0	1		USGS
Apr [illegible] 1500	4,030	53	11.0	100		7.3																				
May 12 1000	3,570	55	10.8	102	74.8	6.8	2.6 / 0.130	7.2 / 0.598	1.7 / 0.074	0.3 / 0.008	0 / 0.000	48 / 0.787	1.5 / 0.031	0.4 / 0.011	0.0 / 0.000	0.1 / 0.005	0.01	27	Fe 0.04; Al 0.02; (a) PO_4 0.05	65[b]	9	36	0	2		USGS
Jun 7 0930	1,400	60	10.4	104	88.3	7.7	11 / 0.549	3.4 / 0.277	2.0 / 0.087	0.2 / 0.005	0 / 0.000	51 / 0.836		2.2 / 0.062			0.00		Al 0.03 (a)		9	41	0	0.0		USGS
Jul 13 1610	461	70	10.4	116	121	7.4	6.8 / 0.339	10 / 0.821	2.5 / 0.109	0.3 / 0.008	0 / 0.000	71 / 1.164		2.5 / 0.071			0.00				9	58	0	0.6		USGS
Aug 2 1300	356	70	10.4	116	128	7.2	6.8 / 0.339	11 / 0.901	2.4 / 0.104	0.4 / 0.010	0 / 0.000	78 / 1.278		3.0 / 0.085			0.00				8	62	0	0.3		USGS
Sep 15 1010	389	59	10.6	102	134		8.1 / 0.404	10 / 0.828	2.7 / 0.117	0.4 / 0.010	0 / 0.000	76 / 1.241	2.6 / 0.054	2.9 / 0.082	0.1 / 0.002	0.1 / 0.005	0.03	14	Fe 0.02; Al 0.08; Cu 0.01; (a)	78[b]	9	62	0	2.0		USGS
Oct 6 0845	310	57	10.4	100	140	7.2	7.2 / 0.359	12 / 0.969	2.7 / 0.117	0.3 / 0.008	0 / 0.000	80 / 1.311		2.3 / 0.065			0.02				8	66	0	4		USGS
Nov 16 1600	845	48	12.8	110	123	6.8	5.6 / 0.279	12 / 1.001	2.3 / 0.100	0.3 / 0.008	0 / 0.000	71 / 1.164		3.0 / 0.085			0.00				7	64	6	4		USGS
Dec 8 0900	8,420	50	11.0	97	80.9	6.8	4.4 / 0.220	6.8 / 0.560	1.7 / 0.074	0.3 / 0.008	0 / 0.000	47 / 0.770		1.8 / 0.051			0.00				9	39	0	4		USGS
																									median 0.23 minimum 0.045- maximum 13	

* Sample broken

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Smith River near Crescent City																										
1956																										
Jan 18 1547	18,000	49	13.0	113	70.0	6.7	4.2 / 0.210	5.4 / 0.440	1.6 / 0.070	0.1 / 0.003	0 / 0.000	40 / 0.656		2.0 / 0.056			0.00				10	32	0	50		USGS
Feb 10 0900	2,480	41	12.2	95	102	6.8	5.0 / 0.250	7.1 / 0.586	4.9 / 0.213	0.2 / 0.005	0 / 0.000	52 / 0.852		0.8 / 0.023			0.01				20	42	0	8		USGS
Mar 7 1705	5,790	47	12.5	106	75.3	7.1	5.7 / 0.284	4.8 / 0.396	2.7 / 0.117	0.3 / 0.008	0 / 0.000	47 / 0.770		0.4 / 0.011			0.00				15	34	0	9		USGS
Apr 3 1250	4,900	50	12.5	110	78.1	6.6	4.4 / 0.220	6.8 / 0.560	1.7 / 0.074	0.3 / 0.008	0 / 0.000	51 / 0.836		0.0 / 0.000			0.00				9	39	0	3		USGS
May 10 1500	2,700	52	11.8	107	77.6	7.8*	6.4 / 0.319	4.9 / 0.405	1.4 / 0.061	0.3 / 0.008	0 / 0.000	45 / 0.738	1.0 / 0.021	1.0 / 0.028	0.2 / 0.003	0.1 / 0.005	0.00	13	Fe 0.01; Cu 0.01; Zn 0.01; PO_4 0.00; (a)	50[b]	8	36	0	2		USGS
June 14 1500	1,080	59	10.2	100	95.6	6.9	5.6 / 0.279	7.6 / 0.621	2.8 / 0.122	0.4 / 0.010	0 / 0.000	57 / 0.934		1.4 / 0.039			0.00				12	45	0	0.8		USGS
July 4 1445	572	64	9.7	101	111	7.5	7.2 / 0.359	9.0 / 0.741	2.1 / 0.091	0.5 / 0.013	0 / 0.000	68 / 1.115		0.5 / 0.014			0.00				8	55	0	0.5		USGS
Aug 9 1500	321	78	10.0	121	130	6.8	8.0 / 0.399	11 / 0.901	2.5 / 0.109	0.2 / 0.005	0 / 0.000	80 / 1.311		2.5 / 0.070			0.01				8	65	0	1		USGS
Sept 13 1530	262	65	12.8	135	138	7.4	8.4 / 0.419	12 / 1.001	2.5 / 0.109	0.4 / 0.010	0 / 0.000	82 / 1.344	3.8 / 0.079	3.1 / 0.087	0.3 / 0.005	0.0 / 0.000	0.04	14	Al 0.02; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	85[b]	7	71	4	0.4		USGS
Oct 2 1715	225	66	10.3	110	141	7.6	8.1 / 0.404	12 / 1.004	2.7 / 0.117	0.3 / 0.008	0 / 0.000	86 / 1.410		3.4 / 0.096			0.00				8	70	0	0.3		USGS
Nov 2 1315	8,810	46	12.8	107	101	7.4	7.2 / 0.359	7.8 / 0.641	2.3 / 0.100	0.4 / 0.010	0 / 0.000	63 / 1.033		2.6 / 0.073			0.00				9	50	0	6		USGS
Dec 6 1400	1,240	39	13.6	103	98.9	7.5	5.4 / 0.27	8.4 / 0.69	1.8 / 0.08	0.2 / 0.01	0 / 0.00	60 / 0.98		2.9 / 0.08			0.00				8	48	0	0.5	median .56 minimum .045 - maximum 230	USGS

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 10
ANALYSES OF SURFACE WATER

REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million												Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents				Total ppm	N.C. ppm			
												Trinity River near Hoopa													
1955																									
Jan 5 1030	5,670	42	13.2	104	148	7.1	18 / 0.898	6.6 / 0.542	2.8 / 0.122	0.5 / 0.013	0 / 0.000	83 / 1.360		4.2 / 0.118			0.09				8	72	4	7		USGS
Feb 8 1600	4,120	46	12.0	100	170	7.8	20 / 0.998	8.3 / 0.682	3.9 / 0.170	0.4 / 0.010	0 / 0.000	96 / 1.573		3.5 / 0.099			0.00				9	84	5	2		USGS
Mar 13 0845	4,280	48	12.4	103	155	7.5	17 / 0.848	7.7 / 0.632	3.5 / 0.152	0.5 / 0.013	0 / 0.000	90 / 1.475		3.5 / 0.099			0.02				9	74	0	4		USGS
Apr 5 1500	4,140	53	11.2	101	141	8.1	15 / 0.749	6.9 / 0.571	3.2 / 0.139	0.5 / 0.013	0 / 0.000	81 / 1.327		3.2 / 0.09			0.04				9	66	0	9		USGS
May 9 1615	11,000	62	7.4	75	97.8	6.7	7.0 / 0.349	8.3 / 0.683	2.5 / 0.109	0.5 / 0.013	0 / 0.000	64 / 1.049	3.5 / 0.073	0.4 / 0.011	0.3 / 0.005	0.2 / 0.011	0.04	21	Fe 0.1; Al 0.1; (a) PO_4 0.10	76[b]	9	52	0	30		USGS
Jun 7 1600	4,900	74	9.0	104	178	7.9	24 / 1.198	3.7 / 0.302	7.9 / 0.344	0.9 / 0.023	0 / 0.000	97 / 1.590		5.2 / 0.147			0.07		Al 0.04		18	75	0	0.3		USGS
Jul 12 1630	1,150	76	9.6	113	166	7.6	18 / 0.898	7.8 / 0.642	4.1 / 0.178	0.5 / 0.013	0 / 0.000	91 / 1.491		5.0 / 0.141			0.02				10	77	2	2		USGS
Aug 2 1040	609	74	9.0	105	190	8.2	21 / 1.048	8.7 / 0.712	4.8 / 0.209	0.8 / 0.020	0 / 0.000	108 / 1.770		6.0 / 0.169			0.04				11	88	0	0.3		USGS
Sep 13 1615	338	66	9.2	98	226		26 / 1.297	9.1 / 0.747	5.7 / 0.248	0.6 / 0.015	0 / 0.000	117 / 1.917	10 / 0.208	9.4 / 0.265	0.1 / 0.002	0.1 / 0.005	0.06	17	Fe 0.02; Al 0.02; Cu 0.01; (a)	136[b]	11	102	6	1.0		USGS
Oct 5 1300	383	62	7.3	75	228	10.0	24 / 1.198	11 / 0.870	6.2 / 0.270	0.8 / 0.020	0 / 0.000	116 / 1.901		8.8 / 0.248			0.05				11	103	8	2		USGS
Nov 15 1615	581	49	12.0	104	228	6.8	25 / 1.248	10 / 0.836	6.8 / 0.296	0.6 / 0.015	0 / 0.000	112 / 1.836		10 / 0.282			0.08				12	104	12	5		USGS
Dec 7 1330	9,580	46	11.0	92	128	7.0	16 / 0.798	4.6 / 0.382	39 / 0.170	1.6 / 0.041	0 / 0.000	67 / 1.098		2.7 / 0.076			0.09				12	59	4	75	median 2.3 minimum 0.045 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 10
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REGION 1

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Trinity River near Hoopa																										
1956																										
Jan	Not sampled																									
Feb 14 1710	7,130	45	9.6	79	184	6.9	19 / 0.948	8.6 / 0.708	5.5 / 0.239	1.0 / 0.026	0 / 0.000	101 / 1.655		2.5 / 0.070			0.05				12	83	0	45		USGS
Mar 8 1500	10,400	48	11.4	98	143	6.9	20 / 0.998	4.5 / 0.370	2.9 / 0.126	0.6 / 0.015	0 / 0.000	89 / 1.459		0.0 / 0.000			0.04				8	68	0	20		USGS
Apr 3 1015	9,160	50	11.8	104	131	8.1	14 / 0.699	6.8 / 0.561	28 / 0.122	0.6 / 0.015	0 / 0.000	82 / 1.344		1.5 / 0.042			0.03				9	63	0	20		USGS
May 9 1600	9,780	56	11.0	104	106	7.9*	13 / 0.649	4.4 / 0.363	2.4 / 0.104	0.5 / 0.013	0 / 0.000	67 / 1.098	0.6 / 0.012	0.1 / 0.003	0.1 / 0.002	0.3 / 0.016	0.04	14	Fe 0.04; Al 0.05; Cu C.01; (a) PO_4 0.05	68[b]	9	51	0	30		USGS
June 13 1400	6,110	66	9.6	102	97.9	6.9	9.5 / 0.474	5.2 / 0.426	2.4 / 0.104	C.6 / C.015	C / 0.000	59 / 0.967		1.0 / 0.028			0.02				10	45	0	15		USGS
July 5 1300	2,780	70	9.0	100	124	7.8	14 / 0.699	5.8 / 0.481	2.9 / 0.126	0.6 / 0.015	0 / 0.000	73 / 1.196		2.5 / 0.070			0.12				10	59	0	2		USGS
Aug 8 1400	1,030	78	8.2	99	184	6.9	20 / 0.998	9.0 / 0.742	5.5 / 0.239	1.0 / 0.026	0 / 0.000	102 / 1.672		5.5 / 0.155			0.06				12	87	3	1		USGS
Sept 12 1415	562	71	11.4	128	218	7.4	25 / 1.248	9.1 / 0.752	6.1 / 0.265	1.0 / 0.026	0 / 0.000	119 / 1.950	6.7 / 0.139	7.6 / 0.214	0.2 / 0.003	0.0 / 0.000	0.12	13	Zn 0.05; PO_4 0.05 (a)	128[b]	12	100	2	0.4		USGS
Oct 1 1720	498	69	10.3	113	227	7.5	26 / 1.297	9.7 / 0.799	6.6 / 0.287	0.8 / 0.020	0 / 0.000	122 / 2.000		9.6 / 0.271			0.09				12	105	5	0.3		USGS
Nov 1 1420	2,880	48	12.8	110	163	7.2	18 / 0.898	7.0 / 0.574	4.2 / 0.183	0.6 / 0.015	0 / 0.000	84 / 1.377		5.0 / 0.141			0.05				11	74	5	40		USGS
Dec	Not Sampled																								median .62 minimum .045 - maximum 62	

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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Trinity River at Lewiston																										
1955																										
Jan 20 1030	618	38	13.6	102	119	7.4	7.6 / 0.379	8.8 / 0.721	3.6 / 0.157	0.3 / 0.008	0 / 0.000	68 / 1.114		4.0 / 0.113			0.01				12	55	0	2		USGS
Feb 9 1500	798	44	11.2	91	112	7.7	5.3 / 0.264	11 / 0.896	3.7 / 0.161	0.3 / 0.008	0 / 0.000	72 / 1.180		3.5 / 0.099			0.00				12	58	0	3		USGS
Mar 9 1500	856	47	11.0	93	115	7.5	5.5 / 0.274	10 / 0.854	3.6 / 0.157	0.5 / 0.013	0 / 0.000	71 / 1.164		4.9 / 0.138			0.00				12	56	0	35		USGS
Apr 14 1000	1,590	48	11.1	98	99.9	7.6	5.3 / 0.264	8.2 / 0.676	2.4 / 0.104	0.4 / 0.010	0 / 0.000	61 / 1.000		2.0 / 0.056			0.04				10	47	0	35		USGS
May 12 1100	4,530	52	11.4	103	76.8	7.4	4.6 / 0.230	6.4 / 0.530	1.6 / 0.070	0.4 / 0.010	0 / 0.000	48 / 0.787	1.8 / 0.037	0.8 / 0.023	0.2 / 0.003	0.2 / 0.011	0.02	14	Fe 0.1; Al 0.2; (a) PO_4 0.05	54[b]	8	38	0	9		USGS
Jun 20 1400	856	68	8.9	97	90.3	7.6	5.1 / 0.254	7.1 / 0.586	2.3 / 0.100	0.5 / 0.013	0 / 0.000	54 / 0.885		2.0 / 0.056			0.06				10	42	0	0.8		USGS
Jul 18 1400	307	74	7.9	92	119	8.2	8.1 / 0.404	8.9 / 0.736	3.5 / 0.152	0.6 / 0.015	0 / 0.000	72 / 1.180		3.5 / 0.099			0.04				12	57	0	1		USGS
Aug	Not sampled																									
Sep 12 1430	114	69	9.6	106	157	8.1	12 / 0.599	9.8 / 0.805	4.1 / 0.178	0.7 / 0.018	0 / 0.000	85 / 1.393	2.0 / 0.042	6.2 / 0.175	0.1 / 0.002	0.1 / 0.005	0.02	18	Cu 0.03; Zn 0.01; (a)	95[b]	11	70	0	1		USGS
Oct 11 1530	205	59	9.5	94	152	7.6	9.2 / 0.459	11 / 0.913	4.5 / 0.196	0.5 / 0.013	0 / 0.000	82 / 1.344		5.6 / 0.158			0.09				12	69	2	2		USGS
Nov 15 1500	186	46	11.3	94	163	7.6	10 / 0.499	11 / 0.941	5.6 / 0.244	0.6 / 0.015	0 / 0.000	85 / 1.393		9.8 / 0.276			0.05				14	72	2	10		USGS
Dec 12 1400	1120	44	11.6	94	111	7.4	6.8 / 0.339	7.8 / 0.641	4.1 / 0.178	0.6 / 0.015	0 / 0.000	61 / 1.000		3.5 / 0.099			0.06				15	49	0	45	median 0.62 minimum 0.06 maximum 62	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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Trinity River at Lewiston																										
1956																										
Jan 12 1515	4,640	38	10.7	80	81.0	7.6	5.0 / 0.250	6.2 / 0.510	2.0 / 0.087	0.4 / 0.010	0 / 0.000	48 / 0.787		0.3 / 0.008			0.00				10	38	0	15		USGS
Feb 14 1200	1,750	48	11.8	101	100	7.6	7.0 / 0.349	7.0 / 0.579	2.7 / 0.117	0.3 / 0.008	0 / 0.000	60 / 0.983		0.0 / 0.000			0.06				11	46	0	40		USGS
Mar 12 1020	1,940	36	11.7	85	102	7.5	6.8 / 0.339	7.8 / 0.641	2.6 / 0.113	0.5 / 0.013	0 / 0.000	61 / 1.000		1.8 / 0.051			0.04				10	49	0	45		USGS
Apr 10 1030	5,170	46	10.7	90	90.4	7.5	4.4 / 0.220	8.3 / 0.680	2.8 / 0.122	0.5 / 0.013	0 / 0.000	61 / 1.000		1.0 / 0.028			0.03				12	45	0	35		USGS
May 14 1015	3,780	51	10.9	97	82.5	7.4	6.0 / 0.299	6.6 / 0.541	3.1 / 0.135	0.6 / 0.015	0 / 0.000	55 / 0.901	1.0 / 0.021	2.0 / 0.056	0.2 / 0.003	0.1 / 0.005	0.08	11	Fe 0.03; Al 0.09; Cu 0.01; (a) PO_4 0.05	58[b]	14	42	0	10		USGS
June 12 1200	3,650	56	9.2	87	64.3	7.3	3.5 / 0.175	5.0 / 0.409	2.5 / 0.109	0.7 / 0.018	0 / 0.000	40 / 0.656		0.5 / 0.014			0.06				15	29	0	20		USGS
July 10 1630	1,090	72	7.5	85	85.8	7.5	4.6 / 0.230	6.3 / 0.550	3.7 / 0.161	0.7 / 0.018	0 / 0.000	54 / 0.885		2.3 / 0.065			0.05				17	39	0	0.5		USGS
Aug 15 1630	284	75	7.1	83	144	7.6	7.2 / 0.359	11 / 0.901	7.2 / 0.313	0.8 / 0.020	0 / 0.000	81 / 1.328		6.5 / 0.183			0.10				20	63	0	2		USGS
Sept 13 1145	195	70	8.4	93	165	7.6	9.4 / 0.469	11 / 0.891	8.2 / 0.357	0.9 / 0.023	0 / 0.000	88 / 1.442	3.6 / 0.075	7.8 / 0.220	0.3 / 0.005	0.0 / 0.000	0.16	18	Al 0.03; Cu 0.01; Pb 0.01; Zn 0.01; (a)	102[b]	21	68	0	1		USGS
Oct 16 0945	218	59	8.9	88	184	7.6	10 / 0.499	12 / 0.961	10 / 0.435	0.6 / 0.015	0 / 0.000	97 / 1.590		11 / 0.310			0.23				23	73	0	0.4		USGS
Nov 13 1130	443	53	9.8	90	149	7.5	7.9 / 0.394	9.3 / 0.766	8.7 / 0.378	0.6 / 0.015	0 / 0.000	81 / 1.328		7.0 / 0.197			0.18				24	58	0	0.6		USGS
Dec 12 1300	1,300	46	11.4	95	99.5	7.4	5.8 / 0.29	6.0 / 0.49	4.7 / 0.20	0.7 / 0.02	0 / 0.00	54 / 0.89		4.4 / 0.12			0.08				20	39	0	130	median 2.3 minimum .06 maximum 130	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH),

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Alameda Creek near Niles																			
1955																										
Jan 17 1215	20	41	11.9	93	979	8.2	5.7 / 0.28	79 / 6.50	81 / 3.52	7.1 / 0.18	0 / 0.00	334 / 5.47		98 / 2.76			0.52				34	339	65	1		USGS
Feb 17 1100	6.8	54	9.5	88	1040	8.2	75 / 3.74	45 / 3.70	87 / 3.78	7.3 / 0.19	0 / 0.00	380 / 6.23		94 / 2.65			0.73				33	372	60	0.5		USGS
Mar 21 1130	6.2	53	7.0	64	916	8.2	21 / 1.05	69 / 5.69	75 / 3.26	5.0 / 0.13	0 / 0.00	366 / 6.00		72 / 2.03			0.59				32	337	37	1		USGS
Apr 25 1040	6.2	56	7.9	75	1060	8.1	64 / 3.19	54 / 4.48	88 / 3.83	6.8 / 0.17	0 / 0.00	429 / 7.03		91 / 2.57			0.98				33	384	32	3		USGS
May 20 1015	3.5	72	6.7	76	1070	8.0	32 / 1.60	76 / 6.22	90 / 3.91	6.5 / 0.17	6 / 0.20	437 / 7.16	90 / 1.87	93 / 2.62	0.3 / 0.00	0.3 / 0.02	0.87	15	Fe 0.005; Al 0.005; PO_4 1.9; (a)	625[b]	33	391	23	0.8		USGS
Jun 22 0930	1.3	66	7.5	80	1090	7.8	94 / 4.69	40 / 3.27	95 / 4.13	5.9 / 0.15	10 / 0.33	439 / 7.19		96 / 2.71			1.1				34	398	38	0.2		USGS
Jul 20 1250	0.3	73	8.6	99	1100	7.4	52 / 2.59	66 / 5.45	89 / 3.87	6.1 / 0.16	0 / 0.00	459 / 7.52		98 / 2.76			1.2				32	402	26	2		USGS
Aug 24 1130	0.2	69	8.2	90	1240	7.9	80 / 3.99	56 / 4.59	107 / 4.65	6.6 / 0.17	0 / 0.00	479 / 7.85		132 / 3.72			1.4				35	429	36	7		USGS
Sep	Not sampled																									
Oct 19 1330	0.3	64	10.4	108	1170	7.4	80 / 3.99	49 / 3.99	104 / 4.52	5.4 / 0.14	0 / 0.00	441 / 7.23		112 / 3.16			1.3				36	399	37	3		USGS
Nov 22 1230	0.9	51	9.6	86	1180	7.6	88 / 4.39	51 / 4.21	100 / 4.35	7.4 / 0.19	0 / 0.00	448 / 7.34		124 / 3.50			1.1				33	430	63	1		USGS
Dec 19 1130	16	53	8.6	79	567	7.3	43 / 2.15	22 / 1.79	41 / 1.78	6.7 / 0.17	0 / 0.00	184 / 3.02		48 / 1.35			0.55				30	197	46	280		USGS
																									median 2.3 minimum .045 maximum 7000	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Alameda Creek near Niles														
1956																										
Jan 23 1100	1,530	53	11.0	101	305	7.0	26 / 1.297	12 / 0.983	18 / 0.783	2.0 / 0.051	0 / 0.000	133 / 2.180		13 / 0.367			0.24				25	114	5	400		USGS
Feb 14 1115	285	48	11.6	100	448	7.6	45 / 2.246	16 / 1.354	26 / 1.131	2.0 / 0.051	3 / 0.100	184 / 3.016		22 / 0.620			0.26				24	180	24	25		USGS
Mar 20 1415	94	56	13.3	126	532	7.8	50 / 2.50	21 / 1.76	31 / 1.35	2.3 / 0.06	6 / 0.20	207 / 3.39		28 / 0.79			0.39				24	213	33	3		USGS
Apr 18 1000	56	58	10.6	103	549	7.4	48 / 2.40	23 / 1.92	37 / 1.61	2.7 / 0.07	0 / 0.00	237 / 3.88		29 / 0.82			0.41				27	216	22	4		USGS
May 17 1215	7.0	70	8.6	96	899	7.6	76 / 3.79	41 / 3.41	60 / 2.61	4.0 / 0.10	0 / 0.00	349 / 5.72	113 / 2.35	60 / 1.69	1.0 / 0.02	0.1 / 0.01	0.82	9.3	Al 1.3; Cu 0.01; Zn 0.01; PO_4 0.80 (a)	537[b]	26	360	74	1		USGS
June 21 1240	5.1	72	9.1	104	971	7.7	73 / 3.64	48 / 3.96	77 / 3.35	4.4 / 0.11	0 / 0.00	367 / 6.02		80 / 2.26			1.1				30	380	79	1		USGS
July 25 0930	1.4	74	8.2	95	918	7.7	52 / 2.59	53 / 4.35	76 / 3.31	4.2 / 0.11	0 / 0.00	356 / 5.83		68 / 1.92			0.92				32	347	55	3		USGS
Aug 23 1330	0.9	76	9.7	115	965	7.4	50 / 2.50	55 / 4.51	80 / 3.48	1.9 / 0.05	0 / 0.00	343 / 5.62		88 / 2.48			1.2				33	350	69	2		USGS
Sept 14 1230	0.6	71	9.9	111	966	7.9	69 / 3.44	45 / 3.72	88 / 3.83	3.7 / 0.09	0 / 0.00	330 / 5.41	142 / 2.96	82 / 2.31	0.4 / 0.01	0.4 / 0.02	1.0	15	Al 0.13; Cu 0.02; Zn 0.01; PO_4 0.05; (a)	610[b]	35	358	87	5		USGS
Oct 11 1330	1.3	65	9.1	96	946	7.6	58 / 2.89	46 / 3.79	80 / 3.48	3.7 / 0.09	0 / 0.00	360 / 5.90		83 / 2.34			0.96				34	334	39	2		USGS
Nov 16 1330	8.0	50	12.5	110	366	7.4	36 / 1.80	14 / 1.18	20 / 0.87	1.7 / 0.04	0 / 0.00	173 / 2.84		15 / 0.42			0.35				22	149	7	1.2		USGS
Dec 18 1500	7.2	47	13.3	113	477	8.1	43 / 2.15	20 / 1.63	29 / 1.26	2.2 / 0.06	0 / 0.00	215 / 3.52		26 / 0.73			0.46				25	189	13	1		USGS
																									median 13 minimum .06 maximum 62	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH),

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
												Coyote Creek near Madrone														
1955																										
Jan 17 1350	30	50	11.3	100	450	8.0	45 / 2.246	16 / 1.344	20 / 0.870	2.3 / 0.059	0 / 0.000	218 / 3.573		14 / 0.395			0.11				19	180	1	2		USGS
Feb 17 1300	17	54	13.4	124	453	8.2	48 / 2.40	21 / 1.70	20 / 0.87	2.3 / 0.06	10 / 0.33	203 / 3.33		14 / 0.39			0.09				17	205	22	1		USGS
Mar 21 1320	28	53	11.2	101	456	8.1	43 / 2.146	22 / 1.834	20 / 0.870	2.7 / 0.069	0 / 0.000	218 / 3.573		13 / 0.367			0.04				18	199	20	3		USGS
Apr 25 1230	54	50	10.7	97	444	7.9	42 / 2.096	23 / 1.896	20 / 0.870	2.7 / 0.069	0 / 0.000	224 / 3.671		13 / 0.367			0.11				18	200	16	1		USGS
May 18 1340	50	55	10.8	101	448	8.2	47 / 2.35	20 / 1.67	20 / 0.87	3.1 / 0.08	5 / 0.17	219 / 3.59	44 / 0.92	14 / 0.39	1.0 / 0.02	0.3 / 0.02	0.15	9.2	Fe 0.005; Al 0.005; PO_4 0.00; (a)	272[b]	18	201	13	2		USGS
Jun 22 1140	84	54	10.8	100	463	7.6	51 / 2.54	19 / 1.57	20 / 0.87	2.3 / 0.06	0 / 0.00	233 / 3.82		13 / 0.37			0.09				17	206	15	1		USGS
Jul 20 1400	31	59	10.9	107	459	7.6	38 / 1.896	26 / 2.124	20 / 0.870	2.7 / 0.069	0 / 0.000	299 / 3.753		13 / 0.367			0.07				18	201	13	2		USGS
Aug 24 1300	74	62	9.5	97	450	7.8	43 / 2.146	22 / 1.834	20 / 0.870	2.3 / 0.059	0 / 0.000	227 / 3.720		14 / 0.395			0.13				18	199	13	4		USGS
Sep 21 1415	74	67	8.6	93	462	7.4	44 / 2.20	23 / 1.88	19 / 0.83	2.5 / 0.06	0 / 0.00	222 / 3.64	45 / 0.94	14 / 0.39	1.1 / 0.02	0.5 / 0.03	0.16	12	Fe 0.01; Al 0.12; (a)	270[b]	17	204	22	2		USGS
Oct 19 1500	70	65	9.1	96	502	7.6	50 / 2.50	23 / 1.89	22 / 0.96	2.7 / 0.07	0 / 0.00	241 / 3.95		15 / 0.42			0.16				18	220	22	5		USGS
Nov 22- 1345	17	57	10.0	96	524	7.4	53 / 2.64	26 / 2.10	24 / 1.04	3.1 / 0.08	2 / 0.07	245 / 4.02		17 / 0.48			0.22				18	237		10		USGS
Dec 10 1340	5.6	54	10.2	94	527	7.3	51 / 2.54	26 / 2.16	24 / 1.04	3.0 / 0.08	0 / 0.00	243 / 3.98		18 / 0.51			0.29				18	235		35		USGS
																									median 13 minimum .23 maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Coyote Creek near Madrone																			
1956																										
Jan 23 1215	1.8	54	10.0	93	416	7.0	38 / 1.896	21 / 1.764	14 / 0.609	2.0 / 0.051	0 / 0.000	131 / 2.147		9.0 / 0.254			0.14				14	183	76	330		USGS
Feb 14 1230	1.8	51	16.0	143	475	8.0	45 / 2.246	25 / 2.034	18 / 0.783	1.8 / 0.046	6 / 0.200	161 / 2.639		13 / 0.367			0.12				15	214	72	50		USGS
Mar 20 1200	3.0	54	16.0	148	344	7.6	31 / 1.547	19 / 1.573	13 / 0.566	1.9 / 0.049	5 / 0.167	140 / 2.295		9.5 / 0.268			0.16				15	156	33	45		USGS
Apr 17 1440	31	56	11.1	106	280	7.0	24 / 1.198	13 / 1.102	13 / 0.566	2.3 / 0.059	0 / 0.000	128 / 2.098		7.0 / 0.197			0.05				19	115	10	50		USGS
May 16 1215	93	52	10.1	92	269	7.4	26 / 1.297	13 / 1.063	13 / 0.566	2.3 / 0.059	0 / 0.000	122 / 2.000	31 / 0.645	8.5 / 0.240	4.4 / 0.071	0.1 / 0.005	0.16	11	Fe 0.18; Al 1.0; Cu 0.01; Zn 0.01; (a) PO_4 0.25	170[b]	19	118	18	80		USGS
June 20 1245	70	54	11.5	107	293	7.5	28 / 1.397	12 / 1.003	15 / 0.652	2.5 / 0.064	0 / 0.000	122 / 2.000		9.2 / 0.259			0.00				21	120	20	45		USGS
July 25 1130	64	54	13.3	123	273	7.9	26 / 1.297	12 / 0.995	13 / 0.566	2.2 / 0.056	0 / 0.000	126 / 2.065		8.6 / 0.243			0.14				19	115	12	20		USGS
Aug 22 1240	62	56	14.1	134	274	7.5	26 / 1.297	12 / 0.995	13 / 0.566	1.9 / 0.049	0 / 0.000	125 / 2.049		8.0 / 0.226			0.06				19	115	13	7		USGS
Sept 13 1000	58	52	12.7	115	272	7.9	27 / 1.347	12 / 1.013	13 / 0.566	1.8 / 0.046	0 / 0.000	127 / 2.082	28 / 0.583	8.2 / 0.231	2.6 / 0.042	0.2 / 0.011	0.08	15	Fe 0.03; Al 0.16; Cu 0.02; PO_4 0.10; (a)	171[b]	19	118	14	3		USGS
Oct 11 1110	54	54	13.0	121	276	8.1	26 / 1.297	12 / 1.023	13 / 0.566	2.0 / 0.051	0 / 0.000	128 / 2.098		8.5 / 0.240			0.00				19	116	11	0.4		USGS
Nov 16 1200	54	53	12.1	111	280	7.2	27 / 1.35	12 / 0.99	13 / 0.57	2.0 / 0.05	0 / 0.00	134 / 2.20		9.2 / 0.26			0.00				19	117	7	3.1		USGS
Dec 17 1200	34	53	11.5	105	308	7.9	32 / 1.60	13 / 1.03	14 / 0.61	2.2 / 0.06	0 / 0.00	149 / 2.44		9.0 / 0.25			0.10				18	131	9	0.9	median 6.2 minimum .23 maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in ppm / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Los Gatos Creek at Los Gatos																										
1955																										
Jan 19 0900	5.6	46	11.8	98	298	7.8	33 / 1.647	13 / 1.033	10 / 0.435	1.3 / 0.033	0 / 0.000	142 / 2.327		7.0 / 0.197			0.00				14	134	18	55		USGS
Feb 18 1220	45	49	11.5	100	378	7.6	41 / 2.046	16 / 1.314	15 / 0.652	1.5 / 0.038	0 / 0.000	142 / 2.327		7.5 / 0.212			0.08				16	168	52	25		USGS
Mar 25 1330	3.9	51	11.2	100	369	7.7	40 / 1.996	19 / 1.524	15 / 0.652	1.5 / 0.038	4 / 0.133	153 / 2.507		8.5 / 0.240			0.06				15	176	44	10		USGS
Apr 26 1300	1.2	55	11.2	98	436	8.0	38 / 1.896	26 / 2.104	15 / 0.652	1.3 / 0.033	0 / 0.000	197 / 3.229		7.9 / 0.223			0.12				14	200	38	12		USGS
May 20 0830	58	65	8.2	87	445	8.0	35 / 1.747	27 / 2.253	17 / 0.739	1.8 / 0.046	0 / 0.000	178 / 2.917	74 / 1.541	9.5 / 0.268	0.9 / 0.015	0.1 / 0.005	0.02	14	Al 0.005; PO_4 0.05; (a)	267[b]	15	200	54	10		USGS
Jun 24 0850	1.2	63	9.5	98	693	7.6	84 / 4.19	29 / 2.42	28 / 1.22	2.5 / 0.06	0 / 0.00	311 / 5.10		18 / 0.51			0.13				15	330	75	3		USGS
Jul 22 0825	0.4	64	9.4	97	730	7.8	84 / 4.19	35 / 2.91	29 / 1.26	2.5 / 0.06	0 / 0.00	347 / 5.69		19 / 0.54			0.25				15	355	70	8		USGS
Aug 25 1025	0.2	59	9.6	95	746	7.8	82 / 4.09	39 / 3.17	27 / 1.17	2.2 / 0.06	0 / 0.00	362 / 5.93		20 / 0.56			0.18				14	363	66	3		USGS
Sep 22 1300	0.6	64	9.6	100	724	7.9	81 / 4.04	34 / 2.82	29 / 1.26	2.5 / 0.06	0 / 0.00	332 / 5.44	103 / 2.14	20 / 0.56	0.1 / 0.00	0.4 / 0.02	0.15	18	Al 0.18; Cu 0.01; Zn 0.01; (a)	452[b]	15	343	71	2		USGS
Oct 20 1245	0.9	60	9.8	98	621	7.8	70 / 3.49	28 / 2.31	27 / 1.17	2.3 / 0.06	5 / 0.17	282 / 4.62		16 / 0.45			0.18				17	290	51	3		USGS
Nov 23 1300	1.1	49	11.0	96	416	7.2	47 / 2.345	19 / 1.535	15 / 0.652	1.8 / 0.046	0 / 0.000	206 / 3.376		9.0 / 0.254			0.24				14	194	25	3		USGS
Dec 20 1230	24	55	10.1	95	236	7.0	26 / 1.297	8.5 / 0.703	8.6 / 0.374	1.7 / 0.043	0 / 0.000	101 / 1.655		7.0 / 0.197			0.15				15	100	17	55	median 23 minimum .23 maximum 2400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Equivalents per million																			
							Los Gatos Creek at Los Gatos																			
1956																										
Jan 24 1330	120	51	10.9	97	221	6.8	24 / 1.198	8.0 / 0.662	6.9 / 0.300	1.9 / 0.049	0 / 0.000	93 / 1.524		6.0 / 0.169			0.11				14	93	17	120		USGS
Feb 15 1230	38	49	12.3	107	267	7.0	29 / 1.447	11 / 0.881	9.8 / 0.426	1.4 / 0.036	0 / 0.000	119 / 1.950		5.9 / 0.166			0.09				15	116	18	40		USGS
Mar 19 1215	37	54	11.5	107	241	7.4	25 / 1.248	10 / 0.832	8.7 / 0.378	1.7 / 0.043	0 / 0.000	107 / 1.754		6.0 / 0.169			0.22				15	104	16	45		USGS
Apr 16 1340	124	50	11.0	97	245	7.2	26 / 1.297	10 / 0.843	9.3 / 0.405	1.6 / 0.041	0 / 0.000	118 / 1.934		4.0 / 0.113			0.19				16	107	10	25		USGS
May 17 1015	60	51	10.6	95	253	7.0	28 / 1.397	11 / 0.923	9.4 / 0.409	1.8 / 0.046	0 / 0.000	116 / 1.901	31 / 0.645	6.2 / 0.175	0.8 / 0.013	0.3 / 0.016	0.04	13	Fe 0.12; Al 0.42; PO_4 0.10 (a) Zn 0.01	159[b]	15	116	21	14		USGS
June 21 1100	57	52	10.7	97	266	7.3	28 / 1.397	13 / 1.063	9.5 / 0.413	1.7 / 0.043	0 / 0.000	125 / 2.049		5.5 / 0.155			0.08				14	123	21	5		USGS
July 26 1210	47	54	10.2	95	283	7.3	33 / 1.647	12 / 0.973	10 / 0.435	1.6 / 0.041	0 / 0.000	138 / 2.262		6.1 / 0.172			0.08				14	131	18	3		USGS
Aug 23 1045	32	58	9.8	95	301	7.1	32 / 1.597	13 / 1.103	11 / 0.478	2.1 / 0.054	0 / 0.000	149 / 2.442		6.3 / 0.178			0.03				15	135	13	2		USGS
Sept 14 1030	53	61	9.0	91	308	7.3	37 / 1.846	12 / 0.974	11 / 0.478	2.0 / 0.051	0 / 0.000	156 / 2.557	28 / 0.583	7.5 / 0.212	1.6 / 0.026	0.2 / 0.011	0.06	18	Al 0.13; Cu 0.01; Zn 0.01; PO_4 0.20;	194[b]	14	141	13	3		USGS
Oct 10 1240	6.4	66	9.5	101	366	7.6	41 / 2.046	15 / 1.230	13 / 0.566	2.2 / 0.056	0 / 0.000	180 / 2.950		8.0 / 0.226			0.00				15	164	16	0.4		USGS
Nov 15 1320	37	58	11.5	112	374	7.3	43 / 2.15	16 / 1.29	12 / 0.52	2.4 / 0.06	0 / 0.00	183 / 3.00		8.8 / 0.25			1.0				13	172	22	20		USGS
Dec 18 1320	36	50	11.4	101	406	7.7	47 / 2.35	18 / 1.45	14 / 0.61	2.5 / 0.06	0 / 0.00	201 / 3.29		9.0 / 0.25			0.00				14	190	25	4	median 2.3 minimum .06 maximum 62	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LAOPH),

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Napa River near St. Helena																			
1955																										
Jan 13 1300	124	45	11.5	95	179	7.4	14 / 0.699	7.8 / 0.641	8.9 / 0.387	2.1 / 0.054	0 / 0.000	80 / 1.311		7.8 / 0.220			0.18				22	67	1	5		USGS
Feb 10 1120	32	48	9.8	84	224	7.4	17 / 0.848	7.0 / 0.572	17 / 0.739	3.6 / 0.092	0 / 0.000	91 / 1.491		14 / 0.395			0.31				33	71	0	2		USGS
Mar 4 1345	38	48	9.8	84	237	7.4	18 / 0.898	8.8 / 0.722	18 / 0.783	3.0 / 0.077	0 / 0.000	100 / 1.639		15 / 0.423			0.36				32	81	0	9		USGS
Apr 6 1315	11	59	10.2	100	282	7.4	16 / 0.798	12 / 1.002	22 / 0.957	3.2 / 0.082	0 / 0.000	123 / 2.016		19 / 0.536			0.58				34	90	0	3		USGS
May 17 0800	13	61	7.8	78	273	7.2	19 / 0.948	9.1 / 0.752	22 / 0.957	2.9 / 0.074	0 / 0.000	118 / 1.934	14 / 0.291	19 / 0.536	2.4 / 0.039	0.5 / 0.026	0.54	41	Fe 0.02; Al 0.005; PO_4 0.60; (a)	188[b]	35	85	0	3		USGS
Jun 21 0830	2.4	66	7.6	81	335	7.3	30 / 1.497	13 / 1.031	20 / 0.870	2.7 / 0.069	0 / 0.000	162 / 2.655		17 / 0.479			0.44				25	126	0	1		USGS
Jul 19 0925	0	67	6.0	65	359	7.2	27 / 1.347	18 / 1.473	21 / 0.913	3.7 / 0.095	0 / 0.000	195 / 3.196		12 / 0.338			0.49				24	141	0	1		USGS
Aug	Not sampled																									
Sep	Not sampled																									
Oct 17 1420	0	64	6.7	70	391	7.2	30 / 1.497	17 / 1.407	28 / 1.218	4.3 / 0.110	0 / 0.000	210 / 3.442		11 / 0.310			0.35				29	145	0	9		USGS
Nov 21 1630	1.9	52	7.4	67	433	7.0	37 / 1.846	19 / 1.534	22 / 0.957	8.3 / 0.212	0 / 0.000	194 / 3.180		26 / 0.733			0.44				21	169	10	6		USGS
Dec 13 0930	5.3	49	8.9	78	357	6.8	24 / 1.198	12 / 0.982	29 / 1.262	4.6 / 0.118	0 / 0.000	120 / 1.967		38 / 1.072			1.0				35	109	11	1	median 62; minimum 1.3; maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 11
ANALYSES OF SURFACE WATER

REGION 2

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Napa River near St. Helena																			
1956																										
Jan 19 1000	406	53	10.3	94	142	7.0	11 / 0.549	5.0 / 0.411	6.6 / 0.287	1.8 / 0.046	0 / 0.000	60 / 0.983		5.0 / 0.141			0.10				22	48	0	20		USGS
Feb 9 0920	90	50	11.4	100	195	7.0	16 / 0.798	7.1 / 0.582	11 / 0.478	2.0 / 0.051	0 / 0.000	84 / 1.377		6.1 / 0.172			0.19				25	69	0	4		USGS
Mar 15 1015	66	52	11.4	103	190	7.0	17 / 0.848	7.7 / 0.632	11 / 0.478	1.9 / 0.049	0 / 0.000	87 / 1.426		8.0 / 0.226			0.05				24	74	3	5		USGS
Apr 12 1005	41	55	10.1	95	233	6.8	18 / 0.898	9.5 / 0.782	15 / 0.652	2.6 / 0.067	0 / 0.000	103 / 1.688		10 / 0.282			0.31				27	84	0	15		USGS
May 14 1500	22	68	9.5	103	231	7.1	20 / 0.998	8.8 / 0.722	16 / 0.696	2.7 / 0.069	0 / 0.000	116 / 1.901	4.0 / 0.083	11 / 0.310	6.2 / 0.100	0.3 / 0.016	0.39	38	Fe 0.02; Al 0.85; Cu 0.02; Zn 0.02; PO_4 0.35 (a)	164[b]	28	86	0	6		USGS
June 18 1430	3.2	74	11.9	138	298	7.5	26 / 1.297	13 / 1.103	18 / 0.783	2.8 / 0.072	0 / 0.000	142 / 2.327		13 / 0.367			0.29				24	120	4	1		USGS
July 23 1540	0.50	80	12.5	154	339	7.9	31 / 1.547	16 / 1.293	18 / 0.783	3.2 / 0.082	0 / 0.000	178 / 2.917		10 / 0.282			0.33				21	142	0	3		USGS
Aug 20 1530	0	75	15.0	175	345	7.9	30 / 1.497	17 / 1.423	18 / 0.783	4.1 / 0.105	0 / 0.000	186 / 3.049		10 / 0.282			0.33				21	146	0	0.4		USGS
Sept 11 1600	0.1	71	13.9	156	319	8.2	28 / 1.397	13 / 1.103	22 / 0.957	2.2 / 0.056	0 / 0.00	181 / 2.967	13 / 0.271	10 / 0.282	1.1 / 0.018	0.3 / 0.016	0.25	37	Fe 0.01; Al 0.05; Cu 0.02; PO_4 0.20; (a)	216[b]	27	125	0	0.6		USGS
Oct 26 0750	0.8	55	10.0	94	363	7.5	34 / 1.697	16 / 1.343	18 / 0.783	2.4 / 0.061	0 / 0.000	198 / 3.245		10 / 0.282			0.24				20	152	0	0.8		USGS
Nov 13 1510	3.1	57	10.0	96	367	6.9	30 / 1.50	15 / 1.25	22 / 0.96	3.4 / 0.09	0 / 0.00	166 / 2.72		29 / 0.82			0.14				25	138	2	4.6		USGS
Dec 12 1410	3.5	50	10.1	89	368	7.1	26 / 1.30	14 / 1.16	27 / 1.17	3.2 / 0.08	0 / 0.00	142 / 2.33		40 / 1.13			0.97				32	123	7	3	median 42 minimum .62 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million												Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonates (CO_3)	Bicarbonates (HCO_3)	Sulfates (SO_4)	Chlorids (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
							equivalents per million																		
							Carmel River near Carmel																		
1955																									
Jan 18 0930	No Record	46	10.5	88	283	7.3	27 / 1.347	7.5 / 0.613	17 / 0.739	2.7 / 0.069	0 / 0.000	97 / 1.590		19 / 0.536			0.00				27	98	18	80		USGS
Feb 17 1640	"	56	9.0	85	314	7.4	30 / 1.497	9.0 / 0.743	19 / 0.826	2.3 / 0.059	C / 0.000	109 / 1.786		17 / 0.479			0.02				26	112	23	0.8		USGS
Mar 22 0920	"	51	10.2	91	289	7.4	28 / 1.397	10 / 0.823	17 / 0.739	2.6 / 0.067	0 / 0.000	111 / 1.819		16 / 0.451			0.09				24	111	20	0.5		USGS
Apr.26 0900	"	52	10.2	92	239	7.6	20 / 0.998	11 / 0.906	13 / 0.565	2.1 / 0.054	0 / 0.000	105 / 1.721		9.5 / 0.268			0.04				22	95	9	2		USGS
May 19 0830	Est. 50	62	9.4	96	319	7.6	39 / 1.946	5.3 / 0.434	20 / 0.870	2.8 / 0.072	C / 0.000	123 / 2.016	36 / 0.749	16 / 0.451	0.2 / 0.003	0.4 / 0.021	0.0	22	PO_4 0.05; (a)	203[b]	26	119	18	2		USGS
Jun 23 0930	Est. 20	68	8.7	95	460	7.5	45 / 2.246	12 / 0.974	31 / 1.348	3.1 / 0.079	0 / 0.000	149 / 2.442		34 / 0.959			0.04				29	161	39	0.3		USGS
Jul 21 0840	Est. 5	60	8.6	86	563	7.2	41 / 2.05	23 / 1.89	39 / 1.70	3.4 / 0.09	0 / 0.00	172 / 2.82		46 / 1.30			0.04				30	197	56	1		USGS
Aug 24 1620	Est. 5	73	10.1	116	667	7.7	63 / 3.14	19 / 1.58	47 / 2.04	3.2 / 0.08	0 / 0.00	206 / 3.38		58 / 1.64			0.09				30	236	67	1		USGS
Sep 22 0900	Est. 1	57	6.2	60	675	7.0	64 / 3.19	20 / 1.65	45 / 1.96	4.4 / 0.11	0 / 0.00	202 / 3.31	99 / 2.06	56 / 1.58	0.0 / 0.00	0.5 / 0.03	0.05	24	Fe 0.02; Al 0.07; (a)	413[b]	28	242	76	0.3		USGS
Oct	Dry																								
Nov 23 0920	Est. 3	46	9.0	75	678	7.0	65 / 3.24	19 / 1.57	53 / 2.31	4.0 / 0.10	0 / 0.00	194 / 3.18		62 / 1.75			0.06				32	240	81	1		USGS
Dec 19 1700	No Record	58	9.2	90	556	7.2	52 / 2.59	16 / 1.33	40 / 1.74	3.5 / 0.09	0 / 0.00	162 / 2.66		47 / 1.33			0.24				30	196	63	1	median 6.2 minimum .06 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Carmel River near Carmel																			
1956																										
Jan 23 1550	Est 500+	55	10.4	98	243	7.4	22 / 1.098	7.3 / 0.602	15 / 0.652	2.2 / 0.056	0 / 0.000	90 / 1.475		16 / 0.451			0.05				27	85	11	60		USGS
Feb 14 1610	Est 35	51	11.2	100	275	7.3	26 / 1.297	8.5 / 0.695	17 / 0.740	2.0 / 0.051	0 / 0.000	102 / 1.672		16 / 0.451			0.03				27	100	16	3		USGS
Mar 19 1630	Est 35	54	11.3	105	288	7.0	26 / 1.297	9.8 / 0.803	18 / 0.783	2.5 / 0.064	0 / 0.000	111 / 1.819		14 / 0.395			0.03				27	105	14	6		USGS
Apr 17 1050	Est 25	57	10.8	104	325	7.3	28 / 1.397	11 / 0.943	19 / 0.826	2.3 / 0.059	0 / 0.000	126 / 2.065		18 / 0.508			0.05				26	117	14	.3		USGS
May 16 1515	Est 40	59	11.7	129	362	7.6	34 / 1.697	13 / 1.063	23 / 1.000	2.6 / 0.067	0 / 0.000	130 / 2.131	48 / 0.999	23 / 0.649	0.0 / 0.000	0.4 / 0.021	0.09	21	Fe 0.01; Cu 0.01; Zn 0.01; PO_4 0.00 Al 0.07 (a)	229[b]	26	138	31	8		USGS
June 20 1545	Est 20	72	11.4	130	424	7.9	39 / 1.946	14 / 1.174	28 / 1.218	3.0 / 0.077	0 / 0.000	143 / 2.344		30 / 0.846			0.00				28	156	39	1		USGS
July 26 0740	Est 20	64	7.1	74	555	7.3	51 / 2.54	19 / 1.53	38 / 1.65	3.5 / 0.09	0 / 0.00	168 / 2.75		43 / 1.21			0.12				28	204	66	0.8		USGS
Aug 22 1550	Est 6	73	16.4	188	586	8.0	58 / 2.89	16 / 1.35	42 / 1.83	3.7 / 0.09	3 / 0.10	153 / 2.51		51 / 1.44			0.02				30	212	82	0.8		USGS
Sept 13 1330	Est 4	68	15.7	171	613	8.1	58 / 2.89	21 / 1.70	46 / 2.00	3.7 / 0.09	0 / 0.00	172 / 2.82	102 / 2.12	57 / 1.61	0.2 / 0.00	0.3 / 0.02	0.00	24	Al 0.12; Cu 0.01; (a) Zn 0.01	397[b]	30	229	88	0.8	-	USGS
Oct 10 1615	Est 2	66	12.9	137	621	8.1	51 / 2.54	23 / 1.87	44 / 1.91	3.7 / 0.09	0 / 0.00	178 / 2.92		58 / 1.64			0.00				30	221	75	0.4		USGS
Nov 15 1640	Est 10	52	9.4	85	635	7.1	60 / 2.99	20 / 1.65	41 / 1.78	3.8 / 0.10	0 / 0.00	183 / 3.00		54 / 1.52			0.00				27	232	82	2.8		USGS
Dec 18 0845	Est 7	46	10.0	84	616	7.3	56 / 2.79	21 / 1.69	43 / 1.87	3.7 / 0.09	0 / 0.00	180 / 2.95		52 / 1.47			0.00				29	224	76	0.4	median 2.3 minimum .045 - maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Pajaro River near Chittenden																			
1955																										
Jan 17 1530	43	45	11.4	94	917	7.8	54 / 2.69	41 / 3.35	85 / 3.70	2.6 / 0.07	0 / 0.00	271 / 4.44		72 / 2.03			0.51				38	302	80	4		USGS
Feb 17 1500	7.8	60	10.5	104	1400	8.2	76 / 3.79	64 / 5.25	144 / 6.26	3.8 / 0.10	0 / 0.00	404 / 6.62		133 / 3.75			1.0				41	452	121	1		USGS
Mar 21 1500	7.3	60	11.0	110	1130	8.2	72 / 3.59	52 / 4.25	107 / 4.65	3.0 / 0.08	0 / 0.00	357 / 5.85		105 / 2.96			0.81				37	392	99	2		USGS
Apr 25 1430	22	58	8.2	80	899	8.1	51 / 2.54	43 / 3.56	83 / 3.61	2.5 / 0.06	0 / 0.00	287 / 4.70		65 / 1.83			0.57				37	305	70	7		USGS
May 18 1540	3.2	72	6.9	78	1500	8.1	86 / 4.29	65 / 5.35	146 / 6.35	5.0 / 0.13	6 / 0.20	448 / 7.34	244 / 5.08	147 / 4.15	0.3 / 0.00	0.3 / 0.02	1.2	16	PO_4 0.35; (a)	938[b]	36	482	105	7		USGS
Jun 22 1315	2.0	67	9.4	101	1980	7.8	149 / 7.44	51 / 4.22	235 / 10.22	4.0 / 0.10	0 / 0.00	536 / 8.78		217 / 6.12			1.2				46	583	143	1		USGS
Jul 20 1515	0.4	64	10.0	105	1920	7.6	91 / 4.54	9.1 / 7.46	224 / 9.74	5.0 / 0.13	9 / 0.30	537 / 8.80		210 / 5.92			1.1				45	600	143	1		USGS
Aug 24 1430	1.4	61	10.3	104	1850	8.0	89 / 4.44	94 / 7.74	200 / 8.70	3.8 / 0.10	0 / 0.00	577 / 9.46		190 / 5.36			0.92				41	609	136	2		USGS
Sep 21 1545	0.9*	60	9.3	93	1890	7.8	84 / 4.19	87 / 7.17	217 / 9.44	3.8 / 0.10	0 / 0.00	586 / 9.60	296 / 6.16	191 / 5.39	2.5 / 0.04	0.6 / 0.03	0.98	21	Al 0.24; (a)	1190[b]	45	568	87	1		USGS
Oct 19 1640	0.8	59	8.7	85	1820	7.6	81 / 4.04	77 / 6.37	217 / 9.44	4.4 / 0.11	7 / 0.23	590 / 9.67		194 / 5.47			1.1				47	520	25	3		USGS
Nov 22 1515	0.8 *	48	9.8	84	1720	7.3	81 / 4.04	66 / 5.41	228 / 9.92	4.4 / 0.11	19 / 0.63	565 / 9.26		209 / 5.89			1.1				51	472	0	2		USGS
Dec 19 1530	3.5	56	7.8	74	1940	7.4	90 / 4.49	71 / 5.83	244 / 10.61	5.6 / 0.14	0 / 0.00	563 / 9.23		285 / 8.04			1.9				50	516	54	5	median .23 minimum .23 maximum 2400	USGS

* Not Revised

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TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

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							equivalents per million																			
							Pajaro River near Chittenden																			
1956																										
Jan 23 1415	1,440	55	9.7	91	422	7.8	28 / 1.397	17 / 1.403	29 / 1.262	2.6 / 0.067	0 / 0.000	158 / 2.590		23 / 0.649			0.35				31	140	10	1600		USGS
Feb 14 1440	192	53	10.1	93	628	7.4	54 / 2.69	25 / 2.04	42 / 1.83	2.0 / 0.05	4 / 0.13	220 / 3.61		35 / 0.99			0.26				28	236	49	25		USGS
Mar 20 1010	56	56	10.0	95	904	7.3	67 / 3.34	46 / 3.80	63 / 2.74	2.6 / 0.07	0 / 0.00	292 / 4.79		60 / 1.69			0.56				28	357	118	40		USGS
Apr 17 1300	24	61	9.0	91	1,130	7.4	75 / 3.74	56 / 4.58	92 / 4.00	3.5 / 0.09	0 / 0.00	152 / 2.49		80 / 2.26			0.63				32	416	291	15		USGS
May 16 1345	18	70	8.0	89	1,310	7.4	93 / 4.64	70 / 5.76	111 / 4.83	3.1 / 0.08	0 / 0.00	378 / 6.20	304 / 6.33	88 / 2.48	2.9 / 0.05	0.0 / 0.00	0.68	20	Al 0.21; Zn 0.01; PO_4 0.15; (a)	879[b]	32	520	210	5		USGS
June 20 1400	6.1	70	9.8	109	1,540	7.5	70 / 3.49	84 / 6.87	164 / 7.13	4.0 / 0.10	0 / 0.00	459 / 7.52		144 / 4.06			0.96				41	518	142	1		USGS
July 25 1315	6.5	67	8.6	93	1,700	7.7	91 / 4.54	88 / 7.26	181 / 7.87	5.0 / 0.13	0 / 0.00	530 / 9.51		155 / 4.37			1.1				40	590	114	1		USGS
Aug 22 1410	4.3	72	9.0	102	1,570	7.5	83 / 4.14	77 / 6.34	168 / 7.31	5.6 / 0.14	0 / 0.00	550 / 9.01		156 / 4.40			0.83				41	524	73	0.4		USGS
Sept 13 1130	3.1	62	10.0	102	1,630	7.9	86 / 4.29	82 / 6.75	195 / 8.48	5.8 / 0.15	0 / 0.00	569 / 9.33	230 / 4.79	175 / 4.94	0.9 / 0.01	0.6 / 0.03	0.93	24	Fe 0.01; Al 0.26; Cu 0.06; Zn 0.01; PO_4 1.0; (a)	1,080[b]	43	552	85	2		USGS
Oct 11 0940	2.7	60	9.1	91	1,740	7.8	84 / 4.19	76 / 6.29	206 / 8.96	5.6 / 0.14	0 / 0.00	605 / 9.92		196 / 5.53			1.0				46	524	28	0.7		USGS
Nov 16 1040	2.8	50	10.5	93	1,710	7.8	76 / 3.79	76 / 6.21	200 / 8.70	5.2 / 0.13	0 / 0.00	572 / 9.38		200 / 5.64			0.95				46	500	31	3.8		USGS
Dec 17 1345	4.1	51	14.0	125	2,400	8.3	38 / 1.90	91 / 7.50	145 / 6.31	4.4 / 0.11	0 / 0.00	522 / 8.56		163 / 4.60			0.89				40	470	42	2		USGS
																									median 6.2 minimum .23 maximum 2400	

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b Determined by addition of analysed constituents.

c Gravimetric determination.

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e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH),

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Lorenzo River at Big Trees (near Felton)																										
1955																										
Jan 18 1400	1,100	45	11.5	95	168	7.2	22 / 1.098	1.0 / 0.082	10 / 0.435	2.2 / 0.056	0 / 0.000	52 / 0.852		6.5 / 0.183			0.00				26	59	16	350			USGS
Feb 18 1120	70	51	11.4	102	365	7.8	40 / 1.996	11 / 0.904	21 / 0.913	1.7 / 0.043	0 / 0.000	126 / 2.065		18 / 0.508			0.07				24	145	42	0.6			USGS
Mar 22 1230	55	52	12.3	111	369	8.0	41 / 2.046	8.9 / 0.734	22 / 0.957	1.7 / 0.043	0 / 0.000	130 / 2.131		20 / 0.564			0.00				25	139	32	1			USGS
Apr 26 1230	182	49	10.9	98	283	7.4	22 / 1.098	12 / 0.958	17 / 0.739	1.6 / 0.041	0 / 0.000	95 / 1.557		14 / 0.395			0.10				26	103	25	28			USGS
May 19 1230	51	65	9.2	97	365	7.9	41 / 2.046	9.7 / 0.794	21 / 0.913	2.2 / 0.056	0 / 0.000	136 / 2.229	51 / 1.062	18 / 0.508	0.5 / 0.008	0.1 / 0.005	0.08	23	Fe 0.005; PO_4 0.35; (a)	234[b]	24	142	30	5		USGS
Jun 23 1230	27	57	8.8	94	370	7.4	43 / 2.146	6.5 / 0.534	23 / 1.000	1.9 / 0.049	0 / 0.000	140 / 2.294		21 / 0.592			0.08				27	134	19	1			USGS
Jul 21 1115	21	64	10.5	110	354	7.4	39 / 1.946	8.2 / 0.674	21 / 0.913	1.9 / 0.049	0 / 0.000	142 / 2.327		21 / 0.592			0.13				25	131	15	3			USGS
Aug 25 0920	15	58	9.8	95	333	7.6	36 / 1.796	7.6 / 0.624	20 / 0.870	1.6 / 0.041	0 / 0.000	134 / 2.196		22 / 0.620			0.06				26	121	11	4			USGS
Sep 15 1140	15	57	10.6	102	338	7.2	37 / 1.846	6.4 / 0.530	21 / 0.913	1.8 / 0.046	0 / 0.000	130 / 2.131	28 / 0.583	24 / 0.677	0.4 / 0.006	0.2 / 0.011	0.02	28	Fe 0.05; Al 0.03; Cu 0.01; (a)	211[b]	27	119	12	4.0		USGS
Oct 20 1145	17	56	12.0	114	369	7.4	40 / 1.996	8.4 / 0.692	23 / 1.000	1.9 / 0.049	0 / 0.000	141 / 2.311		26 / 0.733			0.08				27	134	18	20			USGS
Nov 23 1145	21	45	10.9	90	379	7.8	41 / 2.046	8.7 / 0.718	25 / 1.088	2.1 / 0.054	0 / 0.000	138 / 2.262		27 / 0.761			0.16				28	138	25	10			USGS
Dec 20 1130	1,320	53	10.0	92	173	6.8	19 / 0.948	3.1 / 0.252	11 / 0.478	2.5 / 0.064	0 / 0.000	48 / 0.787		10 / 0.282			0.21				27	60	21	2400	median 42 minimum .19 maximum 2400	USGS

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REGION 3

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							San Lorenzo River at Big Trees (near Felton)																			
1956																										
Jan 24 1230	603	49	11.1	97	274	7.1	31 / 1.547	6.0 / 0.493	12 / 0.522	2.1 / 0.054	0 / 0.000	93 / 1.524		10 / 0.282			0.09				20	102	26	40		USGS
Feb 15 1120	203	45	12.7	105	320	7.1	37 / 1.846	8.2 / 0.674	16 / 0.696	1.7 / 0.043	0 / 0.000	119 / 1.950		14 / 0.395			0.05				21	126	28	10		USGS
Mar 19 1320	158	51	11.3	101	339	7.0	38 / 1.896	9.5 / 0.784	17 / 0.740	2.5 / 0.064	0 / 0.000	125 / 2.049		14 / 0.395			0.16				21	134	32	10		USGS
Apr 16 1445	97	55	11.2	105	344	7.0	38 / 1.896	8.6 / 0.704	18 / 0.783	1.9 / 0.049	0 / 0.000	138 / 2.262		15 / 0.423			0.07				23	130	17	6		USGS
May 17 0915	76	58	10.2	100	352	7.5	41 / 2.046	9.9 / 0.814	19 / 0.826	2.0 / 0.051	0 / 0.000	139 / 2.278	47 / 0.979	18 / 0.508	0.1 / 0.002	0.2 / 0.011	0.10	24	Fe 0.01; Al 0.05; Cu 0.02; Zn 0.01; PO_4 0.30; (a)	229[b]	22	143	29	3		USGS
June 21 0955	50	63	10.5	108	357	7.5	41 / 2.046	9.4 / 0.774	20 / 0.870	2.0 / 0.051	0 / 0.000	144 / 2.360		18 / 0.508			0.00				23	141	23	5		USGS
July 26 1050	33	66	10.7	114	351	7.7	42 / 2.096	8.1 / 0.664	21 / 0.914	2.2 / 0.056	0 / 0.000	147 / 2.409		20 / 0.564			0.18				25	138	17	1		USGS
Aug 23 0940	24	64	10.1	105	349	7.2	40 / 1.996	8.6 / 0.704	21 / 0.914	2.3 / 0.059	0 / 0.000	145 / 2.377		21 / 0.592			0.00				25	135	16	0.8		USGS
Sept 14 0930	21	58	10.5	102	343	7.7	42 / 2.096	6.4 / 0.524	20 / 0.870	2.0 / 0.051	0 / 0.000	144 / 2.360	33 / 0.687	21 / 0.592	0.3 / 0.005	0.2 / 0.011	0.09	26	Al 0.05; Cu 0.02; Zn 0.01; PO_4 0.70; (a)	222[b]	25	131	13	2		USGS
Oct 10 1330	26	60	11.2	112	374	7.2	42 / 2.096	7.9 / 0.648	23 / 1.000	2.0 / 0.051	0 / 0.000	153 / 2.508		24 / 0.677			0.04				26	137	12	1.0		USGS
Nov 15 1415	25	49	13.2	115	356	7.0	40 / 2.00	8.8 / 0.72	22 / 0.96	1.8 / 0.05	0 / 0.00	145 / 2.38		23 / 0.65			0.10				26	136	17	2.0		USGS
Dec 18 1210	25	44	14.1	115	365	7.9	41 / 2.05	8.1 / 0.67	22 / 0.96	1.7 / 0.04	0 / 0.00	150 / 2.46		23 / 0.65			0.00				26	136	13	2	median 23; minimum .5; maximum 2400	USGS

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											Salinas River near Spreckels															
1955																										
Jan	Dry																									
Feb 10 1200			0.6		1470	7.4	96 / 4.79	45 / 3.69	129 / 5.61	28 / 0.72	0 / 0.00	624 / 10.23		125 / 3.53			0.34				38	424	0	0.8		USGS
Mar	Dry																									
Apr	Dry																									
May	Dry																									
Jun	Dry																									
Jul	Dry																									
Aug	Dry																									
Sep	Dry																									
Oct	Dry																									
Nov	Dry																									
Dec	Dry																									

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											Salinas River near Spreckels															
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Jan	Dry																									
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Mar	Dry																									
Apr	Dry																									
May	Dry																									
June	Dry																									
July	Dry																									
Aug	Dry																									
Sept	Dry																									
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Dec	Dry																									

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ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							equivalents per million																			
							Salinas River at Paso Robles																			
1955																										
Jan 24 1430	34	59	8.4	83	585	7.8					0 / 0.00	260 / 4.26		27 / 0.76			0.04				20	279		5-		DWR
Feb 9 1050	31	50	10.6	93	649	8.0					0 / 0.00	266 / 4.36		25 / 0.99			0.14				21	308		5-		DWR
Mar 7 1600	64	62	8.2	84	652	7.8					0 / 0.00	244 / 4.00		29 / 0.82			0.06				20	275		8		DWR
Apr 7 1830	9.0	50	9.4	83	758	7.8					0 / 0.00	305 / 5.00		46 / 1.30			0.36				24	339		5-		DWR
May 9 1645	42	75	7.8	91	648	7.9	79 / 3.94	23 / 1.89	37 / 1.61	2.0 / 0.05	0 / 0.00	281 / 4.60	106 / 2.21	33 / 0.93	1.0 / 0.02	0.4 / 0.02	0.14	25	CrO_3 0.0; (a)	457	21	292	62	5-		DWR
June 8	Dry																									
July 8	Dry																									
Aug 9	Dry																									
Sept 23	Dry																									
Oct 5	Dry																									
Nov 9	Dry																									
Dec 6	Dry																									
																									median 62	
																									minimum 1.3	
																									maximum 700+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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ANALYSES OF SURFACE WATER

REGION 3

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							equivalents per million																			
							Salinas River at Paso Robles																			
1956																										
Jan 12 0840	Est 30	48	10	86	1213	7.8					0 / 0.00	246 / 4.03		32 / 0.90			0.80				19	527		-5		DWR
Feb 9 0700	Est 50	46	9.8	83	696	7.4					0 / 0.00	246 / 4.03		31 / 0.87			0.38				18	290		-5		DWR
Mar 6 1630	20	57	7.4	71	715	8.2					0 / 0.00	264 / 4.33		33 / 0.93			0.24				19	311		-5		DWR
Apr 11 1100	10	50	8.2	72	976	8.0					0 / 0.00	305 / 5.00		41 / 1.16			0.10				18	433		16		DWR
May 8 1200	50	61	10	101	714	8.4	82 / 4.09	34 / 2.79	45 / 1.96	7.2 / 0.184	0 / 0.00	303 / 4.96	130 / 2.71	39 / 1.10	0.5 / 0.008	0.5 / 0.026	0.16	25	PO_4 0.5; (a)	516[b]	22	344	96	15		DWR
June 7 1400	.5	79	8.2	100	942	8.0					0 / 0.00	317 / 5.20		50 / 1.41			0.22				22	384		-5		DWR
July 3	Dry																									
Aug	No Report																									
Sept	No Report																									
Oct	No Report																									
Nov	No Report																									
Dec	No Report																									
																									median 43 minimum .62 maximum 240	

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b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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REGION 3

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											Santa Ynez River below Gibraltar Dam															
1955																										
Jan 25 1130	0.2	50	8.0	71	1230	7.5					0 / 0.00	284 / 4.66		32 / 0.90			0.66				20	553		5-		DWR
Feb 28 1200	Dry																									
Mar 22 0900	Dry																									
Apr 7 0800	Dry																									
May 10	Dry																									
Jun 8	Dry																									
Jul 7	Dry																									
Aug 9	Dry																									
Sep 23	Dry																									
Oct 5	Dry																									
Nov 9	Dry																									
Dec 6	Dry																									

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REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Ynez River below Gibraltar Dam																										
1956																										
Jan 12 1700		50	8.4	74	696	8.0					0 / 0.00	242 / 3.97		30 / 0.85			0.15				18	296		-5		USGS
Feb	Not sampled																									
Mar	Discontinued																								median .68 minimum .06 maximum 1.3	

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ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							(equivalents per million)																			
							Santa Ynez River below Los Laureles Canyon																			
1955																										
Jan 24 1000	1.4	50	6.0	53	1123	7.4					0 / 0.00	346 / 5.67		26 / 0.73			0.20				15	593		5-		DWR
Feb 28 0855	20	54	9.2	86	1235	8.0					0 / 0.00	293 / 4.80		29 / 0.82			0.30				17	590		5-		DWR
Mar 22 1130	3.8	59	9.4	93	1282	7.8					0 / 0.00	295 / 4.84		30 / 0.85			0.36				17	611		5-		DWR
Apr 7 1030	1.0	57	7.0	67	1277	7.4					0 / 0.00	307 / 5.03		30 / 0.85			0.76				15	625		5-		DWR
May 10 1630	7	77	13.0	155	1091	8.2	132 / 6.59	53 / 4.36	56 / 2.44	2.1 / 0.05	10 / 0.32	246 / 4.04	412 / 3.58	26 / 0.73	1.0 / 0.02	0.6 / 0.03	0.44	15		898	18	548		5-		DWR
Jun 8 0945	0.2	66	4.8	51	1220	7.4					0 / 0.00	325 / 5.33		29 / 0.82			0.62				16	598		5-		DWR
Jul 7	Dry																									
Aug 9	Dry																									
Sep 23	Dry																									
Oct 5	Dry																									
Nov 9	Dry																									
Dec 6	Dry																								median 5.0 minimum 2.1 maximum 700	

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b Determined by addition of analysed constituents

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REGION 3

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							Santa Ynez River below Los Laureles Canyon																			
1956																										
Jan 12 1500	Est 0.5	63	8.0	82	1270	7.6					0 / 0.00	332 / 5.44		29 / 0.82			0.39				16	594		-5		DWR
Feb 9 1045	36	54	9.6	80	1037	8.0					7 / 0.23	244 / 4.00		21 / 0.59			0.72				18	462		-5		DWR
Mar 7 0900	7.6	48	9.8	85	1161	8.0					0 / 0.00	285 / 4.67		28 / 0.79			0.84				18	529		-5		DWR
Apr 12 1000	0.4	52	7.4	71	980	8.0					0 / 0.00	244 / 4.00		25 / 0.70			0.30				18	437		-5		DWR
May 9 1000	72	57	8.6	83	485	8.0	48 / 2.40	25 / 2.06	23 / 1.00	2.6 / 0.067	0 / 0.00	149 / 2.44	130 / 2.70	13 / 0.37	1.3 / 0.021	0.4 / 0.021	0.20	15	PO_4 0.25; (a)	333[b]	18	223	101	1400		DWR
June 8 0900	4.1	64	7.4	77	1091	8.0					0 / 0.00	278 / 4.56		26 / 0.73			0.42				17	517		-5		DWR
July 3 0800	0.8	63	5.6	57	1119	8.0					0 / 0.00	344 / 5.64		25 / 0.71			0.30				16	541		-5		DWR
Aug	Not Sampled																									
Sept	Not Sampled																									
Oct	Not Sampled																									
Nov	Not Sampled																									
Dec	Not Sampled																									
																								median 62		
																								minimum 2.3		
																								maximum 700+		

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Santa Ynez River at Solvang																										
1955																										
Jan 24 1100	9.0	55	7.2	68	1058	8.2					0 / 0.00	433 / 7.10		44 / 1.24			0.20				17	551		5-		DWR
Feb 28 1010	12	55	10.0	94	1143	7.8					0 / 0.00	398 / 6.52		46 / 1.30			0.24				19	526		5-		DWR
Mar 22 1030	16.	59	11.8	116	1129	8.0					19 / 0.63	322 / 5.28		43 / 1.21			0.32				18	526		5-		DWR
Apr 7 0940	4.5	62	10.6	108	1153	8.0					14 / 0.47	346 / 5.67		42 / 1.18			0.36				18	542		5-		DWR
May 10 1530	Est 15	75	12.1	142	998	8.4	106 / 5.29	62 / 5.10	56 / 2.44	2.8 / 0.07	12 / 0.40	339 / 5.56	277 / 5.78	43 / 1.21	0.0 / 0.0	0.5 / 0.03	0.34	30		812	19	520	222	5-		DWR
Jun 8 0830	3.0	66	5.4	58	1185	7.6					0 / 0.00	386 / 6.33		43 / 1.21			0.30				19	546		5-		DWR
Jul 7 1700	1	75	6.2	73	1054	7.6					2 / 0.07	370 / 6.06		51 / 1.44			0.31				19	528		5-		DWR
Aug 9	Dry																									
Sep 23	Dry																									
Oct 5	Dry																									
Nov 9	Dry																									
Dec 6 1600	Est 2.0	61	6.2	62	1237	8.0					0 / 0.00	378 / 6.20		48 / 1.35			0				18	590		5-	median 23 minimum 2.3 maximum 700	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

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Santa Ynez River at Solvang																										
1956																										
Jan 12 1400	Est 10	59	13.0	128	1192	8.2					12 / 0.40	371 / 6.08		50 / 1.41			0.21				17	546		-5		DWR
Feb 9 1000	Est 36	54	11.8	108	1171	8.0					0 / 0.00	368 / 6.03		47 / 1.32			0.60				18	521		-5		DWR
Mar 7 0800	11.0	48	7.6	66	1155	8.2					0 / 0.00	386 / 6.33		48 / 1.35			0.72				19	521		-5		DWR
Apr 12 0800	30	52	9.2	83	441	8.2					0 / 0.00	144 / 2.36		27 / 0.76			0.22				25	162		450		DWR
May 9 0900	26	57	8.2	79	855	8.4	92 / 4.59	49 / 4.03	48 / 2.09	7.0 / 0.179	0 / 0.00	317 / 5.20	215 / 4.48	37 / 1.04	1.0 / 0.016	0.6 / 0.032	0.26	25	PO_4 0.0 ; (a)	634[b]	19	431	171	100		DWR
June 8 0800	7.8	63	7.6	78	1114	8.0					0 / 0.00	373 / 6.11		43 / 1.21			0.35				18	521		-5		DWR
July 3 0700	1.4	64	5.8	61	1176	8.0					0 / 0.00	398 / 6.52		46 / 1.30			0.23				18	556		-5		DWR
Aug	Not Sampled																									
Sept	Not Sampled																									
Oct	Not Sampled																									
Nov	Not Sampled																									
Dec	Not Sampled																									
																									median 14.6 minimum 2.3 maximum 700+	

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Soquel Creek at Soquel																										
1955																										
Jan 18 1230	330	45	11.5	95		7.4	Sample broken																			
Feb 18 1010	21	50	12.3	108	642	8.1	69 / 3.44	20 / 1.66	40 / 1.74	3.4 / 0.09	3 / 0.10	206 / 3.38		35 / 0.99			0.09				25	255	81	0.8		USGS
Mar 22 1110	19	53	12.0	110	652	8.1	63 / 3.14	25 / 2.04	41 / 1.78	3.4 / 0.09	6 / 0.20	210 / 3.44		38 / 1.07			0.20				25	259	77	0.5		USGS
Apr 26 1040	49	51	10.5	97	470	8.1	48 / 2.395	16 / 1.281	27 / 1.174	2.6 / 0.067	0 / 0.00	166 / 2.721		19 / 0.536			0.05				24	184	48	20		USGS
May 19 1030	15	64	9.9	103	646	8.2	75 / 3.74	16 / 1.32	41 / 1.78	3.9 / 0.10	5 / 0.17	219 / 3.59	105 / 2.19	36 / 1.02	0.5 / 0.01	0.3 / 0.02	0.11	28	PO_4 0.25; (a)	419[b]	26	253	65	1		USGS
Jun 23 1100	7.7	65	10.9	114	728	7.8	78 / 3.89	20 / 1.62	47 / 2.04	4.6 / 0.12	5 / 0.17	239 / 3.92		55 / 1.55			0.13				27	276	72	0.6		USGS
Jul 21 1020	4.1	61	9.8	99	750	7.6	78 / 3.89	23 / 1.89	47 / 2.04	5.5 / 0.14	0 / 0.00	259 / 4.24		60 / 1.69			0.10				26	289	77	2		USGS
Aug 25 0815	2.6	58	9.5	93	748	7.8	75 / 3.74	24 / 1.98	48 / 2.09	4.7 / 0.12	0 / 0.00	262 / 4.29		65 / 1.83			0.23				26	286	71	20		USGS
Sep 22 1045	3.3	58	9.5	92	727	7.4	74 / 3.69	24 / 1.97	47 / 2.04	4.9 / 0.13	0 / 0.00	253 / 4.15	87 / 1.81	59 / 1.66	0.4 / 0.01	0.5 / 0.03	0.05	40	Fe 0.03; Al 0.09; (a)	462[b]	26	283	76	0.8		USGS
Oct 20 1050	3.3	56	9.8	93	776	7.4	76 / 3.79	21 / 1.73	50 / 2.18	6.8 / 0.17	0 / 0.00	251 / 4.11		72 / 2.03			0.09				28	276	70	1		USGS
Nov 23 1045	4.5	45	10.2	84	908	7.3	83 / 4.14	28 / 2.34	73 / 3.18	5.8 / 0.15	3 / 0.10	258 / 4.23		102 / 2.88			0.32				32	324	108	3		USGS
Dec 20 1020	344	53	10.3	94	278	7.1	28 / 1.397	7.3 / 0.603	15 / 0.652	2.8 / 0.072	0 / 0.000	78 / 1.278		12 / 0.338			0.18				24	100	36	140	median 56; minimum 2.3; maximum 2400	USGS

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Soquel Creek at Soquel																			
1956																										
Jan 24 1045	163	49	10.3	90	409	7.1	45 / 2.246	13 / 1.054	20 / 0.870	2.2 / 0.056	0 / 0.000	136 / 2.229		13 / 0.367			0.10				21	165	53	75		USGS
Feb 15 1000	49	51	12.6	112	543	7.2	62 / 3.09	17 / 1.38	30 / 1.30	2.8 / 0.07	2 / 0.07	184 / 3.02		21 / 0.59			0.09				20	224	70	40		USGS
Mar 19 1430	44	55	11.2	105	565	7.6	65 / 3.24	18 / 1.46	30 / 1.30	3.2 / 0.08	0 / 0.00	209 / 3.43		24 / 0.68			0.16				21	235	64	0.5		USGS
Apr 16 1800	28	62	9.6	98	595	7.2	63 / 3.14	19 / 1.58	34 / 1.48	3.4 / 0.09	0 / 0.00	219 / 3.59		25 / 0.70			0.08				24	236	56	5		USGS
May 17 0820	30	59	9.8	96	588	7.3	66 / 3.29	20 / 1.65	30 / 1.30	3.6 / 0.09	0 / 0.000	216 / 3.54	98 / 2.04	29 / 0.82	0.1 / 0.00	0.0 / 0.00	0.08	24	Al 0.09; Cu 0.01; Zn 0.01; PO_4 0.20 (a)	377[b]	21	247	70	25		USGS
June 21 0915	9.0	61	10.8	108	682	7.7	69 / 3.44	27 / 2.26	43 / 1.87	4.3 / 0.11	12 / 0.40	277 / 3.72		44 / 1.24			0.12				24	285	79	1		USGS
July 26 1000	8.0	63	9.8	101	722	7.7	76 / 3.79	25 / 2.02	45 / 1.96	4.8 / 0.12	0 / 0.00	258 / 4.23		54 / 1.52			0.13				25	290	78	0.8		USGS
Aug 23 0900	13	61	9.9	100	743	7.4	62 / 3.09	34 / 2.82	46 / 2.00	5.0 / 0.13	0 / 0.00	262 / 4.29		60 / 1.69			0.06				25	295	80	0.4		USGS
Sept 14 0845	4.5	58	9.8	96	755	7.7	83 / 4.14	27 / 2.22	48 / 2.09	4.7 / 0.12	0 / 0.00	263 / 4.31	100 / 2.08	65 / 1.83	0.1 / 0.00	0.3 / 0.02	0.10	36	Fe 0.01; Al 0.08; Cu 0.02; Zn 0.01; PO_4 0.45; (a)	494[b]	24	318	102	3		USGS
Oct 10 1440	2.5	66	9.8	105	777	7.4	75 / 3.74	25 / 2.04	50 / 2.18	4.8 / 0.12	0 / 0.00	260 / 4.26		73 / 2.06			0.07				27	289	76	0.4		USGS
Nov 15 1515	4.8	56	10.6	101	792	7.2	82 / 4.09	24 / 1.99	51 / 2.22	4.5 / 0.12	0 / 0.00	264 / 4.33		70 / 1.97			0.00				26	304	88	1.4		USGS
Dec 18 1115	7.4	47	12.3	104	777	7.9	79 / 3.94	28 / 2.28	53 / 2.31	4.3 / 0.11	0 / 0.00	249 / 4.08		72 / 2.03			0.06				27	311	107	1	median 23 minimum 2.3 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{0.0}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), [illegible] Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million												Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
							Uvas Creek near Morgan Hill																			
1955																									
Jan 17 1430	22	45	12.0	100	366	7.8	39 / 1.946	18 / 1.464	12 / 0.522	0.6 / 0.015	0 / 0.000	186 / 3.048		8.0 / 0.226			0.12				13	170	17	0.3		USGS
Feb 17 1345	14	55	9.5	89	392	7.7	43 / 2.146	20 / 1.614	13 / 0.565	0.8 / 0.020	0 / 0.000	202 / 3.310		6.0 / 0.169			0.15				13	188	22	0.4		USGS
Mar 21 1400	12	54	9.5	90	388	7.6	37 / 1.846	23 / 1.894	13 / 0.565	0.8 / 0.020	0 / 0.000	206 / 3.376		7.0 / 0.197			0.04				13	187	18	0.3		USGS
Apr 25 1330	21	51	10.0	90	331	7.6	33 / 1.647	19 / 1.553	12 / 0.522	0.6 / 0.015	0 / 0.000	185 / 3.032		4.7 / 0.133			0.05				14	160	8	2		USGS
May 18 1440	7.8	65	7.5	79	388	7.8	51 / 2.545	14 / 1.135	14 / 0.609	1.3 / 0.033	0 / 0.000	213 / 3.491	32 / 0.666	5.5 / 0.155	0.3 / 0.005	0.2 / 0.011	0.09	19	PO_4 0.00; (a)	242[b]	14	184	9	1		USGS
Jun 22 1220	2.4	66	7.5	80	392	7.4	47 / 2.345	16 / 1.347	14 / 0.609	0.9 / 0.023	0 / 0.000	218 / 3.573		6.0 / 0.169			0.01				14	185	6	0.0		USGS
Jul 20 1430	0.5	66	6.7	72	432	7.2	39 / 1.946	25 / 2.034	15 / 0.652	1.2 / 0.031	0 / 0.000	238 / 3.900		6.5 / 0.183			0.15				14	199	4	0.8		USGS
Aug 24 1330	0.4	63	7.2	75	429	7.3	47 / 2.345	22 / 1.795	14 / 0.609	0.8 / 0.020	0 / 0.000	238 / 3.900		8.5 / 0.240			0.15				13	207	12	15		USGS
Sep 21 1450	0.2	62	6.7	68	441	7.2	13 / 0.649	42 / 3.471	15 / 0.652	1.0 / 0.026	0 / 0.000	235 / 3.851	35 / 0.729	7.5 / 0.212	0.4 / 0.006	0.1 / 0.005	0.15	26	Al 0.08; Cu 0.02; (a)	256[b]	14	206	13	0.8		USGS
Oct 19 1550	0.2	62	8.4	85	441	7.2	49 / 2.445	21 / 1.695	15 / 0.652	0.9 / 0.023	0 / 0.000	238 / 3.901		6.6 / 0.186			0.14				14	207	12	2		USGS
Nov 22 1430	1.9	55	7.7	72	438	7.0	50 / 2.495	21 / 1.709	15 / 0.652	1.2 / 0.031	0 / 0.000	227 / 3.721		7.6 / 0.214			0.13				13	210	24	2		USGS
Dec 19 1420	252	54	9.9	92	252	7.3	24 / 1.198	10 / 0.842	9.0 / 0.392	3.7 / 0.095	0 / 0.000	98 / 1.606		6.5 / 0.183			0.27				16	102	22	140		USGS

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 12
ANALYSES OF SURFACE WATER

REGION 3

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Uvas Creek near Morgan Hill																										
1956																										
Jan 23 1315	112	54	11.4	106	291	7.4	30 / 1.497	15 / 1.203	7.9 / 0.344	0.8 / 0.020	6 / 0.200	141 / 2.311		6.5 / 0.183			0.10				11	135	10	7		USGS
Feb 14 1310	63	51	11.8	105	343	7.8	36 / 1.796	18 / 1.484	9.9 / 0.431	0.7 / 0.018	6 / 0.200	173 / 2.835		5.6 / 0.158			0.22				12	164	12	2		USGS
Mar 20 1115	28	53	10.7	98	365	7.2	38 / 1.896	20 / 1.624	12 / 0.522	0.8 / 0.020	0 / 0.000	201 / 3.294		4.5 / 0.127			0.09				13	176	11	0.4		USGS
Apr 17 1400	26	61	9.4	95	374	7.4	39 / 1.946	20 / 1.654	12 / 0.522	0.9 / 0.023	0 / 0.000	198 / 3.245		6.6 / 0.186			0.09				13	180	18	0.5		USGS
May 16 1245	17	69	9.6	106	361	7.8	40 / 1.996	18 / 1.444	13 / 0.566	1.0 / 0.026	0 / 0.000	193 / 3.163	34 / 0.708	5.4 / 0.152	0.3 / 0.005	0.2 / 0.011	0.07	22	Fe 0.01; Zn 0.02; PO_4 0.10; (a)	229[b]	14	172	14	2		USGS
June 20 1315	4.0	75	8.9	104	374	7.5	38 / 1.896	20 / 1.680	14 / 0.609	1.2 / 0.031	0 / 0.000	205 / 3.360		6.4 / 0.180			0.14				14	179	11	0.4		USGS
July 25 1215	1.5	72	7.7	87	380	7.3	42 / 2.096	19 / 1.584	14 / 0.609	1.1 / 0.028	0 / 0.000	213 / 3.491		6.9 / 0.195			0.10				14	184	9	0.6		USGS
Aug 22 1320	0.7	80	6.4	79	392	7.1	46 / 2.295	18 / 1.485	14 / 0.609	0.9 / 0.023	0 / 0.000	220 / 3.606		4.8 / 0.135			0.10				14	189	9	7		USGS
Sept 13 1040	No flow	66	8.8	94	406	7.7	46 / 2.295	19 / 1.525	16 / 0.696	1.0 / 0.026	0 / 0.000	221 / 3.622	33 / 0.687	8.8 / 0.248	0.7 / 0.011	0.0 / 0.000	0.22	23	Fe 0.02; Mn 0.08; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	257[b]	15	191	10	130		USGS
Oct	Not Sampled																									
Nov 16 1130	1.9	59	9.7	96	392	7.2	35 / 1.75	24 / 2.01	41 / 1.78	0.9 / 0.02	0 / 0.00	210 / 3.44		7.0 / 0.20			0.03				32	188	16	0.4		USGS
Dec 17 1250	2.0	56	10.0	95	386	7.5	38 / 1.90	22 / 1.78	13 / 0.57	1.0 / 0.03	0 / 0.00	210 / 3.44		5.7 / 0.16			0.12				13	184	12	0.4		USGS

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{\text{oo}}{\text{ooo}}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH) Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH Lab	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							equivalents per million																			
							Los Angeles River at Los Angeles																			
1955																										
Jan 5 1100	2.0	54	8.4	78		7.6					0 / 0.00	280 / 4.59		350 / 9.87							37	720				LADPH
Feb 2 1100	1.0	58	6.8	67		7.7					0 / 0.00	250 / 4.10		350 / 9.87			1.24				31	690				LADPH
Mar 2 1250	6.8	72	4.5	52		7.8					0 / 0.00	240 / 3.93		320 / 9.02			1.3				29	649				LADPH
Apr 7 0915	2.7	64	11.7	122		8.1					20 / 0.67	175 / 2.87		260 / 7.33			1.16				49	465				LADPH
May 31 1645	2.1	68	21.0	229	1653	8.4*	75 / 3.74	34 / 2.79	240 / 10.44	6.5 / 0.17	10 / 0.32	146 / 2.40	277 / 5.77	303 / 8.54	3.0 / 0.05	0.6 / 0.03	0.82	20		1015	61	326	190	18		DWR
Jun 1 1410	2.1	74	12.5	147		8.5					50 / 1.67	130 / 2.13		255 / 7.19			1.4				31	449				LADPH
Jul 6 1230	2.5	78	14.1	171		8.3					30 / 1.00	145 / 2.38		250 / 7.05			2.67				52	396				LADPH
Aug 3 1115	3.4	76	10.9	131		8.1					20 / 0.67	160 / 2.62		300 / 8.46			1.1				59	355				LADPH
Oct 3 1530	2.1	73	21.0	242	1700	8.4*	94 / 4.69	34 / 2.79	230 / 10.01	6.0 / 0.154	48 / 1.60	139 / 2.28	263 / 5.47	292 / 8.23	0 / 0.00	0.6 / 0.032	0.78	30	Fe 0.15; PO_4 0.34; (a)	1100	57	374	180	5-		DWR
Oct 5 1400	2.4	74	12.2	142		8.3					30 / 1.00	165 / 2.70		300 / 8.46			0.9				50	446				LADPH
Nov 2 1100	5.1	64	10.5	110		8.2					20 / 0.67	185 / 3.03		250 / 7.05			3.5				54	395				LADPH
Dec 7 1315	9.0	64	6.2	65		7.5*					0 / 0.00	150 / 2.46		116 / 3.27			0.7				34	349				LADPH
																								median 425		
																								minimum 13		
																								maximum 2400		

* Field

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Los Angeles River at Los Angeles																
1956																										
Jan 4 1315	7.2	62	12.1	124		8.0					20 / 0.67	170 / 2.79		157 / 4.43			0.9				26	527				LADPH
Feb 1 1115	10.6	50	6.9	61		7.9*					0 / 0.00	190 / 3.11		430 / 12.13			1.2				53	633				LADPH
Mar 7 1400	5.4	68	16.9	184		8.7*					120 / 4.00	85 / 1.39		260 / 7.33			0.6				36	775				LADPH
Apr 4 1320	11.4	69	13.2	147		8.3*					60 / 2.00	120 / 1.97		220 / 6.20			0				31	580				LADPH
May16 0800	7.6	73	20	234	1443	8.4	95 / 4.74	41 / 3.37	152 / 6.61	9.4 / 0.24	14 / 0.48	144 / 2.36	349 / 7.28	160 / 4.51	1.5 / 0.024	0.7 / 0.037	0.68	25	PO_4 0.8; (a) CrO_3 0.01	920[b]	44	405	263	15		DWR
June 7	3.3	83	18.4	232							100 / 3.33	80 / 1.31		290 / 8.18			0.8				39	536				LADPH
July 5 1000	2.2	88	17.6	235		9.0*					110 / 3.67	95 / 1.56		330 / 9.31			0.9				21.8	543				LADPH
Aug 1 1340	1.6	90	13.6	185		8.4*					30 / 1.00	190 / 3.11		385 / 10.86			1.7				55.1	519				LADPH
Sept 28 1230	3.5	88	16.0	214	1773	8.5	101 / 5.04	43 / 3.53	252 / 10.96	7.4 / 0.189	24 / 0.80	200 / 3.28	353 / 7.36	306 / 8.63	0.0 / 0.00	0.8 / 0.042	0.90	25	PO_4 0.78; (a)	1274[c]	55	428	224	-5		DWR
Oct 3 1050	0.6	86	16.96	222		8.1*					95 / 3.17	92.5 / 1.52		345 / 9.73			0.55				28.7	807				LADPH
Nov 14 1050	1.0	68	17.52	191		8.4*					60 / 2.00	215 / 3.52		400 / 11.28			0.9				31.5	899				LADPH
Dec 5 1400	1.3	60	9.52	96		8.0*						290 / 4.75		350 / 9.87			1.3				28	926		median 60 minimum 23 maximum 620		LADPH

* Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH Lab	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
														equivalents per million												
												Los Angeles River at Long Beach														
1955																										
Jan 5 1000	Est 7.2	48	8.2	69		7.8					0 / 0.00	190 / 3.11		350 / 9.87							59	386				LBDPH
Feb 2 1000	11.7	46	8.8	74		7.8					0 / 0.00	136 / 2.23		172 / 4.85							61	268				LBDPH
Mar 2 1000	19.0	57	7.8	75		7.9					0 / 0.00	176 / 2.88		253 / 7.13							55	315				LBDPH
Apr 6	19.0	Not sampled																								
May 26 1730	10.8	63	9.8	102	1640	8.4*	91 / 4.54	25 / 2.06	245 / 10.66	7.8 / 0.20	0 / 0.00	249 / 4.08	192 / 4.01	314 / 8.85	2.0 / 0.03	0.6 / 0.03	0.34	20	As 0.1; (a)	1050	61	330	126	55		DWR
Jun 1	Not sampled																									
Jul 6	Not sampled																									
Aug 3 0930	Est 18	77	0.2	2.4		7.7					0 / 0.00	220 / 5.25		4160 / 117.31							68	1898				LBDPH
Oct 3 1400	18.4	79	0.0	0	20408	8.4*	337 / 16.82	148 / 12.17	4600 / 200.1	41 / 1.05	0 / 0.00	551 / 9.04	105 / 2.19	7775 / 219.3	2.0 / 0.032	0.4 / 0.021	17.8	20	Fe 0.45; As 1.0; PO_4 1.2; (a)	13950	86	1450	998	14		DWR
Oct 5 0930	18.0	72	0.3	3.4		7.7					0 / 0.00	391 / 6.41		6770 / 190.92							70	3212				LBDPH
Nov 2 0930	12.4	61	0.3	1.9		7.3					0 / 0.00	355 / 5.82		7420 / 209.24							86	1215				LBDPH
Dec 7 0930	21±	61	2.5	25		7.6*					0 / 0.00	234 / 3.84		1980 / 55.84							84	503				LBDPH
																								median 23		
																								minimum 12		
																								maximum 62		

* Field

a Iron (Fe), aluminum (Al), arsenic (As); copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Los Angeles River at Long Beach														
1956																										
Jan 4 0930	37±	57	0.8	7.7		7.5					0 / 0.00	337 / 5.52		4620 / 130.28							84	1144				LBDPH
Feb 1 0930	217±	52	5.6	51		7.6*					0 / 0.00	146 / 2.39		1280 / 36.08							77	398				LBDPH
Mar 7 1000	16.8	57	1.2	12		7.8*					0 / 0.00	361 / 5.92		4200 / 118.44							81	903				LBDPH
Apr 4 1000	37	66	1.1	12		7.8*					0 / 0.00	320 / 5.25		3780 / 106.6							84	929				LBDPH
May 14 1620	26.6	81	0.0	0	18519	7.9	348 / 17.37	157 / 12.91	5000 / 217.5	46 / 1.18	0 / 0.00	747 / 12.24	88 / 1.83	8275 / 233.36	6.0 / 0.097	3.2 / 0.168	16.4	40	Fe 0.5; Mn 0.3; As 2.0; NH_4 40; (a) PO_4 3.0	14377[b]	87	1515	903	35		DWR
June 6	15.0	69.8	6.2	69.1		7.9*					0 / 0.00	263 / 4.31		1800 / 50.76							81	497				LBDPH
July 5 1000	10.6	79	3.6	31.5		7.9*								631 / 17.79							55.5	1691				LBDPH
Aug	Not Sampled																									
Sept 28 1330	13.5	88	10.2	136	15150	8.3	238 / 11.88	123 / 10.11	3220 / 140.07	30.5 / 0.78	0.0 / 0.00	700 / 11.48	100 / 2.09	5390 / 152.00	6.4 / 0.104	1.4 / 0.074	8.5	30	NH 29.0; As 1.5; PO_4 5.5; (a)	10317[c]	85	1100	526	40		DWR
Oct 3 1000	13.0	73.4	0.40	4.6		7.2*					0.0 / 0.00	365 / 5.98		4090 / 115.34							99	510				LBDPH
Nov 7 0945	9.5	69.8	3.0	33		7.5*					0.0 / 0.00	260 / 4.26		5520 / 155.66												LBDPH
Dec 5 1100	15.9	61	2.10	21		7.5*					0.0 / 0.00	364 / 5.97		4852 / 136.83							87	958			median 60; minimum 60; maximum 230	LBDPH

* Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
											Matilija Creek above Matilija Dam															
1955																										
Jan 26 1410	9.5	61	7.6	77	1090	8.0					0 / 0.00	433 / 7.10		40 / 1.13			0.98				20	432		5-		DWR
Feb 28 1540	8.2	62	8.2	84	1026	8.0					10 / 0.33	241 / 3.95		37 / 1.04			0.84				32	284		5-		DWR
Mar 15 1400	10	64	8.4	81	1015	8.2					14 / 0.47	210 / 3.44		36 / 1.01			0.86				25	402		5-		DWR
Apr 13 1620	5.2	72	8.0	91	1050	7.7					0 / 0.00	234 / 3.84		45 / 1.27			1.44				27	406		5-		DWR
May 11 0920	14	62	7.6	78	952	8.2	118 / 5.89	31 / 2.55	54 / 2.35	2.5 / 0.06	10 / 0.32	244 / 4.00	278 / 5.80	29 / 0.82	1.0 / 0.02	0.8 / 0.04	0.84	20		793	22	422	206	5-		DWR
Jun 8 1300	5.2	77	7.0	84	1000	8.4					0 / 0.00	239 / 3.92		40 / 1.13			0.86				24	410		5-		DWR
Jul 7 0930	3.5	66	6.6	71	1071	7.6					0 / 0.00	261 / 4.28		70 / 1.97			2.15				29	401		5-		DWR
Aug 9 1100	1.6	73	5.2	60	1224	7.6						254 / 4.16		102 / 2.88			3.30				31	429		5-		DWR
Sep 23 1530	0.6	82	5.0	63	1140	7.7	121 / 6.04	31 / 2.55	105 / 4.57	3.5 / 0.089	0.0 / 0.0	268 / 4.40	240 / 5.00	125 / 3.53	0.0 / 0.0	1.8 / 0.094	2.64	20	PO_4 0.04; (a)	826	34	430	210	5-		DWR
Oct 5 0900	1.2	68	4.8	50	1348	7.6						263 / 4.31		155 / 4.37			3.20				36	444		5-		DWR
Nov 9 1430	1.5	72	4.4	50	1398	8.0					0 / 0.00	288 / 4.72		167 / 4.71			4.3				38	449		5-		DWR
Dec 7 1200	2.4	50	6.6	58	1430	8.0					0 / 0.00	268 / 4.39		162 / 4.57			4.32				36	480		5-	median 2.3 minimum .45 – maximum 7000+	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Matilija Creek above Matilija Dam																			
1956																										
Jan 13 1100	7.5	59	9.2	91	1129	8.0					0 / 0.00	271 / 4.44		53 / 1.49			1.60				24	435		-5		DWR
Feb 9 1400	20	59	6.4	63	1024	8.2					10 / 0.33	237 / 3.88		22 / 0.62			1.06				18	439		-5		DWR
Mar 7 1130	20	54	8.4	77	1030	8.2					0 / 0.00	259 / 4.25		31 / 0.87			1.75				20	447		-5		DWR
Apr 12 1330	34	57	8.0	77	921	8.2					0 / 0.00	227 / 3.72		27 / 0.76			0.57				19	389		-5		DWR
May 9 1330	108.	59	8.8	87	775	8.2	101 / 5.04	27 / 2.22	31 / 1.35	9.0 / 0.23	10 / 0.32	183 / 3.00	240 / 5.00	17 / 0.48	1.0 / 0.016	0.6 / 0.032	0.30	15	PO_4 0.5; (a)	544[b]	15	363	197	700		DWR
June 8 1230	9.9	70	6.4	71.5	955	8.0					0 / 0.00	229 / 3.75		35 / 0.99			0.89				20	404		-5		DWR
July 3 1030	5.1	64	8.4	88	1034	8.4					0 / 0.00	264 / 4.33		50 / 1.41			0.98				24	434		-5		DWR
Aug 14 1100	2.4	68	9.8	107	1133	8.0					0 / 0.00	266 / 4.36		87 / 2.45			1.64				28	426		-5		DWR
Sept 12 0830	1.8	66	8.4	90	1181	8.0	126 / 6.29	32 / 2.63	98 / 4.26	3.1 / 0.079	0 / 0.00	293 / 4.80	248 / 5.16	118 / 3.33	0.4 / 0.006	1.2 / 0.063	3.1	20	PO_4 0.06; (a)	896[c]	32	446	206	-5		DWR
Oct 3 0900	1.6	68	9.0	98	1246	8.2					0 / 0.00	288 / 4.72		130 / 3.67			3.45				33	442		-5		DWR
Nov 1 0930	1.71	59	9.8	97	1273	8.0					0 / 0.00	297 / 4.87		133 / 3.75			4.30				34	444		-5		DWR
Dec 11 1000	1.9	59	8.8	87	1240	8.0					0 / 0.00	293 / 4.80		128 / 3.61			3.26				33	444		-5	median 6.2 minimum .45 - maximum 700+	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH Lab	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							equivalents per million																			
							Metropolitan Water District Aqueduct at La Verne																			
1955																										
Jan	No report																									
Feb	*	51			1050	8.3					1 / 0.03	150 / 2.46		80 / 2.26							38	331				MWD
Mar	*	54			1055	8.5					2 / 0.07	149 / 2.44		81 / 2.28							38	334				MWD
Apr	*	60			1050	8.6					2 / 0.07	146 / 2.39		81 / 2.28							39	333				MWD
May	No report																									
Jun	*	66	8.9	95	1090	8.3					0 / 0.00	143 / 2.34		86 / 2.43			0.18				39	337				MWD
Jul	*	70			1115	8.2					0 / 0.00	133 / 2.18		90 / 2.54							41	331				MWD
Aug	*	74			1145	8.2					0 / 0.00	127 / 2.08		94 / 2.65							42	334				MWD
Sep	*				1145	8.2	83 / 4.14	33 / 2.71	111 / 4.83	5 / 0.13	0 / 0.00	132 / 2.16	333 / 6.93	95 / 2.68	0.4 / 0.01	0.3 / 0.02		10.4		737	41	343	235			MWD
Oct	No report																									
Nov	No report																									
Dec	*	58			1200	8.4					1 / 0.03	145 / 2.38		96 / 2.71			0.17				40	367				MWD

* Composite Sample

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/000 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CoCO_3$ Total ppm	Hardness as $CoCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Metropolitan Water District Aqueduct at La Verne																										
1956																										
Jan		56	11.0	102	1205	8.4					1 / 0.03	140 / 2.44		99 / 2.79							41	370				MWD
Feb		52			1210	8.5*					1 / 0.03	151 / 2.47		98 / 2.77							39	373				MWD
Mar		55			1235	8.5*					2 / 0.07	154 / 2.52		102 / 2.88							40	376				MWD
Apr		57			1245	8.4*					1 / 0.03	156 / 2.56		101 / 2.85							39	382				MWD
May		60	9.8	103	1240	8.3	96 / 4.79	34 / 2.79	115 / 5.00	5 / 0.13	0 / 0.00	153 / 2.51	353 / 7.34	102 / 2.88	1.2 / 0.02	0.4 / 0.02		10.1		793[c]	39	380	255			MWD
June		65			1235	8.2*					0 / 0.00	143 / 2.34		102 / 2.88			0.17				40	375				MWD
July		71			1245	8.1*					0 / 0.00	133 / 2.18		103 / 2.90							41	367				MWD
Aug		75			1260	8.2*					0 / 0.00	127 / 2.08		109 / 3.07							41	366				MWD
Sept		76			1270	8.3*	92 / 4.59	34.5 / 2.84	120 / 5.22	5 / 0.13	1 / 0.03	132 / 2.16	361 / 7.51	110 / 3.10	0.8 / 0.01	0.4 / 0.02		10.2		801[c]	41	372	262			MWD
Oct		71			1255	8.4*					1 / 0.03	139 / 2.28		108 / 3.05							41	377				MWD
Nov		62			1260	8.4*					1 / 0.03	151 / 2.48		110 / 3.10							40	389				MWD
Dec		56			1260	8.5*					2 / 0.07	154 / 2.52		110 / 3.10			0.15				40	393				MWD
Composite Sample January thru December																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

BASIN 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							equivalents per million																			
							Mission Creek at Whittier Narrows																			
1955																										
Jan 10 1100	Est 10	54	8.6	80	580	7.6					0 / 0.00	271 / 4.44		19 / 0.51			0.14				14	288		5-		DWR
Feb 9 1030	6.3	59	11.0	108	54°	8.2					7 / 0.23	224 / 3.67		16 / 0.45			0.10				18	232		5-		DWR
Mar 9 1040	5.9	61	9.4	94	547	8.2					0 / 0.00	242 / 3.97		17 / 0.48			0.06				17	242		5-		DWR
Apr 4 [illegible]	4.7	61	9.8	99	535	8.2					5 / 0.17	222 / 3.64		18 / 0.51			0.10				18	228		5-		DWR
May 9 1015	5.5	61	9.8	100	490	8.2	44 / 2.20	33 / 2.71	24 / 1.04	2.5 / 0.06	0 / 0.00	244 / 4.00	56 / 1.17	19 / 0.54	5.5 / 0.09	0.6 / 0.03	0.10	25		330	17	246	46	5-		DWR
Jun 6 1005	3.7	64	7.6	80	521	7.9					0 / 0.00	244 / 4.00		21 / 0.59			0.14				19	234		5-		DWR
Jul 11 1110	2.7	64	8.8	92	439	8.2					2 / 0.07	215 / 3.52		18 / 0.51			0.12				23	172		14		DWR
Aug 9 1030	1.9	66	8.6	92	473	8.2					10 / 0.33	193 / 3.16		14 / 0.39			0.14				18	209		5-		DWR
Sep 13 1030	1.1	64	9.4	99	497	8.4	61 / 3.04	15 / 1.23	23 / 1.00	1.8 / 0.046	0 / 0.00	227 / 3.72	43 / 0.89	14 / 0.39	8.4 / 0.136	0.6 / 0.032	0.08	20	PO_4 0.12; (a)	321	19	214	28	5-		DWR
Oct 11 1515	1.1	57	9.6	93	520	8.0						226 / 3.70		17 / 0.48			0.25				18	221		5-		DWR
Nov 7 920	1.2	57	9.4	91	5.21	8.2					5 / 0.17	227 / 3.72		16 / 0.45			0.28				17	229		5-		DWR
Dec 13 1050	3.5	57	7.2	69	569	7.8					0 / 0.00	227 / 3.72		18 / 0.51			0.10				21	240		5-		DWR
																									median 230; minimum 13; maximum 2,400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million (Calcium (Ca) / equivalents per million)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Mission Creek at Whittier Narrows																										
1956																										
Jan 10 1115	5.2	55	8.6	81	726	8.0					0 / 0.00	264 / 4.33		20 / 0.56			0.02				11	332		18		DWR
Feb 15 1135	3.1	57	9.0	87	690	7.8					0 / 0.00	276 / 4.52		24 / 0.67			0.26				12	349		18		DWR
Mar 6 1115	4.2	57	9.8	94	663	8.4					0 / 0.00	256 / 4.20		24 / 0.67			0.24				13	294		-5		DWR
Apr 10 1130	3.7	59	9.4	93	616	8.1					7 / 0.23	217 / 3.56		22 / 0.62			0.04				16	267		-5		DWR
May 16 1110	4.4	67	9.0	97	581	8.0	82 / 4.09	21 / 1.73	26 / 1.13	9.2 / 0.236	0 / 0.00	254 / 4.16	100 / 2.08	23 / 0.65	7.0 / 0.113	0.8 / 0.042	0.12	20	PO_4 0.2	416[b]	16	291	83	-5		DWR
June 12 1030	2	68	9.0	98	594	8.3					7 / 0.23	217 / 3.56		25 / 0.71			0.31				16	261		-5		DWR
July 10 1025	2.1	66	9.8	105	536	8.2					0 / 0.00	227 / 3.72		17 / 0.48			0.01				16	240		-5		DWR
Aug 7 1120	1.0	68	10.0	109	452	8.1					7 / 0.23	205 / 3.36		17 / 0.48			0.00				21	180		-5		DWR
Sept 12 0900	1.1	61	9.0	90	449	8.0	54 / 2.69	16 / 1.32	19 / 0.83	1.6 / 0.41	0.0 / 0.00	218 / 3.58	43 / 0.90	12 / 0.34	4.0 / 0.064	0.6 / 0.032	0.08	20	PO_4 0.42; (a)	297[c]	17	200	21	-5		DWR
Oct 8 1425	5.2	64	8.4	88	515	7.8					0 / 0.00	227 / 3.72		15 / 0.42			0.09				16	234		-5		DWR
Nov 13 1645	5.2	61	8.2	82	820	7.7	74 / 3.69	23 / 1.89	63 / 2.74	5.7 / 0.146	0 / 0.00	237 / 3.88	137 / 2.86	53 / 1.49	10.8 / 0.174	0.8 / 0.042	0.09	30		561[c]	33	277		-5		DWR
Dec 11 1130	3.1	61	9.4	94	790	7.4	92 / 4.59	16 / 1.32	44 / 1.91	3.9 / 0.10	0 / 0.00	261 / 4.28	75 / 1.56	69 / 1.95	7.0 / 0.113	0.6 / 0.032	0.18	20		465[c]	24	296		-5	median 170; minimum 2.3; maximum 7000	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), mangonese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm [b]	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
											Mono-Owens Aqueduct near San Fernando															
1955																										
Jan 18	311	54	13.1	121	346	8.2					2 / 0.07	127 / 2.08		16 / 0.45			0.54				49	90		5		LADW&P
Feb 17	318	46	11.1	92	353	8.4					5 / 0.17	124 / 2.03		19 / 0.54			0.59				47	91		3		LADW&P
Mar 22	399	50	11.3	100	363	8.5					3 / 0.10	130 / 2.13		19 / 0.54			0.70				49	92		7		LADW&P
Apr 19	404	56	9.7	92	382	8.5					3 / 0.10	130 / 2.13		21 / 0.59			0.57				48	98		5		LADW&P
May 17	442	61	8.9	89	370	8.5	27 / 1.36	6 / 0.49	45 / 1.95	4.8 / 0.12	4 / 0.13	136 / 2.72	25 / 0.53	22 / 0.62	0.1 / 0.002	0.8	0.63	27	Fe 0.02; (a)	230	50	93	0	4		LADW&P
Jun 21	443	68	8.3	91	352	8.5					3 / 0.10	123 / 2.02		21 / 0.59			0.57				50	87		2		LADW&P
Jul 19	435	72	7.4	84	305	8.4					2 / 0.07	107 / 1.75		16 / 0.45			0.38				46	80		3		LADW&P
Aug 9	438	75	7.2	84	288	8.4					2 / 0.07	97 / 1.59		13 / 0.37			0.26				44	76		3		LADW&P
Sep 20	450	69	8.0	88	290	8.5	23 / 1.15	4.8 / 0.40	30 / 1.30	4.0 / 0.10	3 / 0.10	98 / 1.61	20 / 0.42	12 / 0.34	0.14 / 0.002	0.5 / 0.026	0.31	22	Fe 0.03; (a)	169	44	78	0	4		LADW&P
Oct 18	459	60	8.9	89	372	8.3					2 / 0.07	129 / 2.11		18 / 0.51			0.43				45	99		3		LADW&P
Nov 22	406	55	9.7	90	307	8.6					3 / 0.10	100 / 1.64		15 / 0.42			0.30				44	81		2		LADW&P
Dec 20	406	50	10.6	93	303	8.5					3 / 0.10	107 / 1.75		16 / 0.45			0.37				44	83		3		LADW&P

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b Determined by addition of analyzed constituents

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REGION 4

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							equivalents per million																			
							Mono-Owen Aqueduct near San Fernando																			
1956																										
Jan 17	401	48	10.0	86	312	8.3					2 / 0.07	108 / 1.77		16 / 0.45			0.35				47	80		6		LADWP
Feb 14 1100	410	46	10.5	89	350	8.3					3 / 0.10	105 / 1.72		21 / 0.59			0.33				46	86		16		LADWP
Mar 20 1100	452	49	10.3	90	346	8.4					3 / 0.10	108 / 1.77		20 / 0.56			0.36				39	86		9		LADWP
Apr 17 1100	474	53	9.8	81	348	8.6					3 / 0.10	112 / 1.84		20 / 0.56			0.40				46	88		9		LADWP
May 22 1100	456	63	8.5	88	364	8.3	27 / 1.35	5.5 / .45	39 / 1.70	4.8 / .12	2 / 0.08	117 / 1.92	28 / 0.60	20 / 0.60	0.0	0.6 / 0.032	0.41	22	Fe .1 (a)	208[b]	47	91		7		LADWP
June 19 1100	446	67	8.4	92.5	329	8.4					2 / 0.07	105 / 1.72		18 / 0.51			0.39				49	80		3		LADWP
July 17 1100	437	70	7.9	88	279	8.4					3 / 0.10	91 / 1.49		17 / 0.48			0.29				43	75		3		LADWP
Aug 21 1100	438	70	7.5	83.5	267	8.2					2 / 0.07	86 / 1.41		15 / 0.42			0.25				41	71		3		LADWP
Sept 18 1100	424	72	7.8	88	275	8.2	22 / 1.10	4.5 / 0.37	26 / 1.13	4.3 / 0.11	3 / 0.10	95 / 1.56	19 / 0.40	13 / 0.37	0.1	0.5 / 0.026	0.29	19	Fe 0.08; (a)	159[b]	42	75	C	0		LADWP
Oct 16 1100	459	57	10.2	98	343	8.1						118 / 1.93		17 / 0.48			0.59				47	94		1		LADWP
Nov 13 1100	463	55	9.6	91	300	8.6						103 / 1.69		17 / 0.48			0.42				47	84		8		LADWP
Dec 18 1100	464	46	10.4	88	315	8.5						111 / 1.82		16 / 0.45			0.35				42	90		10		LADWP

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												Rio Hondo at Whittier Narrows														
1965																										
Jan 10 0945	6.84	43	12.0	97	182	8.2					0 / 0.00	94 / 1.54		6 / 0.169			0.06				15	63		1150		D.W.R
Feb 1000	5.1	64	12.0	126	740	8.4					0 / 0.00	64 / 1.05		52 / 1.47			0.08				33	253		5+		D.W.R
Mar 8 1005	5.4	70	16.2	180	769	8.4					7 / 0.23	244 / 4.00		74 / 2.09			0.14				35	244		10		D.W.R
Apr 4 1010	5.2	72	13.2	150	666	8.4					0 / 0.00	264 / 4.33		44 / 1.21			0.18				29	234		5+		D.W.R
May 9 0945	5.47	73	6.2	71	654	8.2	64 / 3.19	18 / 1.48	42 / 1.83	5.3 / 0.14	0 / 0.00	268 / 4.40	53 / 1.11	30 / 0.84	7.9 / 0.13	0.6 / 0.03	0.18	25		380	28	234	14	5+		D.W.R
Jun 6 1830	4.9	72	7.0	79	781	8.4					0 / 0.00	256 / 4.20		56 / 1.58			0.24				37	230		5+		D.W.R
Jul 11 1030	3.8	81	8.2	102	842	8.3					7 / 0.23	271 / 4.44		68 / 1.92			0.27				46	229		5+		D.W.R
Aug 9 1000	3.4	77	9.8	117	800	8.4					2 / 0.07	259 / 4.25		93 / 2.62			0.12				35	262		5+		D.W.R
Sep 13 1000	2.9	75	11.8	138	1028	8.4	81 / 4.04	24 / 1.97	110 / 4.79	5.8 / 0.148	0 / 0.00	256 / 4.20	94 / 1.96	161 / 4.54	7.9 / 0.128	0.8 / 0.042	0.08	3	PO_4 0.38 ; (a)	678	44	301	91	5+		D.W.R
Oct 11 1540	3.3	68	9.2	100	982	8.4						256 / 4.20		95 / 2.68			0.35				45	255		5+		D.W.R
Nov 7 0900	3.4	55	7.8	74	1042	7.9					0 / 0.00	257 / 4.21		113 / 3.18			0.28				47	257		5+		D.W.R
Dec 13 1030	4.3	59	6.2	61	860	7.9					0 / 0.00	246 / 4.03		64 / 1.80			0				42	255		5+		D.W.R
																									median 1460	
																									minimum 620	
																									maximum 7000+	

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c Gravimetric determination.

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ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Rio Hondo at Whittier Narrows																										
1956																										
Jan 10 1035	4.6	57	11.6	112	811	8.4					0 / 0.00	244 / 4.00		64 / 1.80			0.13				43	223		-5		DWR
Feb 15 1045	6.6	63	8.8	90	962	8.2					0 / 0.00	271 / 4.44		85 / 2.40			0.36				38	288		9		DWR
Mar 6 1040	6.4	63	7.0	72	2532	8.4					0 / 0.00	342 / 5.61		312 / 8.80			0.48				72	328		45		DWR
Apr 10 1055	7.6	63	8.8	90	995	8.3					0 / 0.00	234 / 3.84		76 / 2.14			0.06				47	265		-5		DWR
May 16 1150	8.0	90	10.2	140	694	8.4	60 / 2.99	22 / 1.81	54 / 2.35	5.5 / 0.14	0 / 0.00	264 / 4.32	72 / 1.50	50 / 1.41	2.5 / 0.04	1.2 / 0.063	0.24	25	PO_4 2.0 ; (a)	426[b]	32	240	24	20		DWR
June 12 1000	10	81	7.6	95	898	8.4					0 / 0.00	261 / 4.28		75 / 2.12			0.21				32	299		-5		DWR
July 10 0955	3.8	77	9.4	112	821	8.2					0 / 0.00	266 / 4.36		54 / 1.52			0.05				32	279		-5		DWR
Aug 7 1050	3.2	82	11.0	139	887	8.4					10 / 0.33	242 / 3.97		67 / 1.89			0.12				37	287		-5		DWR
Sept 12 0815	3.1	64	7.2	75	919	7.7	78 / 3.89	23 / 1.89	80 / 3.48	6.5 / 0.166	0.0 / 0.00	266 / 4.36	154 / 3.20	63 / 1.78	7.25 / 0.117	0.9 / 0.047	0.18	30	PO_4 2.9; (a) Zn 0.26	615[c]	37	289	71	-5		DWR
Oct 8 1405	4.2	75	5.0	59	1101	7.9					0 / 0.00	234 / 3.84		86 / 2.43			0.22				40	331		-5		DWR
Nov 8 1015	3.2	67	9.5	102	838	8.3					0 / 0.00	264 / 4.33		52 / 1.47			0.14				35	279		-5		DWR
Dec 11 1100	4.7	57	9.0	87	806	7.7					10 / 0.33	234 / 3.84		52 / 1.47			0.16				33	273		-5	median 1000 minimum 23 maximum 7000+	DWR

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														equivalents per million												
											San Gabriel River at Whittier Narrows															
1955																										
Jan 10 1030	431	43	11.4	93	157	8.2					0 / 0.00	103 / 1.69		3 / 0.085			0.06				17	70		3200		DWR
Feb 8 1100	Est 8.0	62	16.6	171	641	8.4					0 / 0.00	237 / 3.88		21 / 0.59			0.10				15	242		5-		DWR
Mar 8 1130	7.5	68	15.8	162	597	8.4					12 / 0.40	210 / 3.44		13 / 0.37			0.10				15	269		10		DWR
Apr 4 1120	Est 4	62	14.8	152	599	8.4					0 / 0.00	249 / 4.08		21 / 0.59			0.06				14	269		5-		DWR
May 5 1035	Est 7	72	18.0	205	503	8.4	75 / 3.74	15 / 1.23	22 / 0.96	4.5 / 0.12	12 / 0.40	220 / 3.60	68 / 1.41	22 / 0.62	7.4 / 0.12	0.4 / 0.02	0.04	18		350	16	248	48	7		DWR
Jun 6 1745	Est 9.0	75	18.4	216	382	8.4					10 / 0.33	117 / 1.92		14 / 0.39			0.08				20	149		5-		DWR
Jul 11 1130	Est 2	75	15.2	178	377	8.4					5 / 0.17	171 / 2.80		14 / 0.39			0.01				18	172		5-		DWR
Aug 9 1100	Ponded	79	8.2	100	462	8.0					2 / 0.07	205 / 3.36		15 / 0.42			0.04				11	216		5-		DWR
Sep 13 1130	Dry																									
Oct 11 1445	Dry																									
Nov 7 0935	Est 100	57	9.6	93	1188	8.4					0 / 0.00	144 / 2.36		99 / 2.79			0.24				38	354		180		DWR
Dec 13 1100	Est 100	54	10.8	100	1192	8.4					0 / 0.00	151 / 2.47		98 / 2.77			0.07				38	367		46		DWR
																									median 62 minimum 2.3 maximum 2400	

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San Gabriel River at Whittier Narrows																										
1956																										
Jan 10 1140	Est 2	55	18.0	170	656	8.4					10 / 0.33	203 / 3.33		30 / 0.85			0.05				15	281		-5		DWR
Feb 15 1215	Est 10	63	14.0	144	508	8.4					12 / 0.40	161 / 2.64		23 / 0.64			0.26				20	208		-5		DWR
Mar 6 1140	Est 2	63	12.2	126	505	8.4					7 / 0.23	193 / 3.16		21 / 0.59			0.20				18	208		-5		DWR
Apr 10 1210	Dry																									
May 16 1030	Est 125	66	9.2	98	1155	8.4	82 / 4.09	36 / 2.96	105 / 4.57	10.0 / 0.256	0 / 0.00	159 / 2.60	319 / 6.64	98 / 2.76	2.0 / 0.032	0.6 / 0.032	0.12	10	PO_4 0.2	742[b]	39	352	222	125		DWR
June 12 1045	Est 1	86	15.4	202	360	8.5					10 / 0.33	139 / 2.28		14 / 0.39			0.21				18	147		-5		DWR
July 10 1045	Dry																									
Aug 7	Dry																									
Sept 12	Dry																									
Oct 8 1435	No Record	77	10.0	119	1269	8.4					0 / 0.00	142 / 2.33		112 / 3.16			0.23				38	386		-5		DWR
Nov 8 1100	Est 75	63	9.5	98	1272	8.5					0 / 0.00	159 / 2.61		110 / 3.10			0.21				40	390		32		DWR
Dec 11 1200	Est 0.5	57	13.0	125	755	8.2					19 / 0.63	176 / 2.88		54 / 1.52			0.10				28	289		-5	median 18; minimum .6; maximum 240	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.0/0.00 except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

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TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million (equivalents per million): Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
													San Gabriel River near Azusa													
1955																										
Jan 10 1000	Dry																									
Feb 16 1000	Dry	54	12.0		345	8.4	49 / 2.45	12 / 0.99	14 / 0.61	3.4 / 0.087	0 / 0.00	200 / 3.28	32 / 0.66	4 / 0.11	0 / 0.0		0.02			215	15	172	8	5-		
Mar 16 1045	Dry																									
Apr 5 1105	Dry																									
May 11 1125	Dry																									
Jun 6 1700	Dry																									
Jul 12 1045	Dry																									
Aug 17 1200	Dry																									
Sep 20 1700	0.2	68	6.0	65	1096	7.4	72 / 3.59	20 / 1.64	126 / 5.48	5.4 / 0.138	0 / 0.00	173 / 2.84	268 / 5.59	85 / 2.40	3.5 / 0.056	0.4 / 0.021	0.16	20	PO_4 0.05; (a)	655	51	262	120	5-		DWR
Oct 11 1400	Dry																									
Nov 7 1100	Dry																									
Dec 21 1130	Dry																									
																									median 4.1	
																									minimum .45-	
																									maximum 60	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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REGION 4

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											San Gabriel River near Azusa															
1956																										
Jan 18 1045	Dry																									
Feb 16 1015	Dry																									
Mar 14 1030	Dry																									
Apr 18 1005	Dry																									
May 9 0930	Dry																									
June 20 1000	Dry																									
July 18 0945	Dry																									
Aug	Dry																									
Sept	Dry																									
Oct 10 1635	39	58	10.5	101	378	8.6	46 / 2.30	13 / 1.07	12 / 0.52	3.3 / 0.084	0 / 0.00	198 / 3.25	26 / 0.54	8 / 0.23	0.7 / 0.011	0.6 / 0.032	0.01	10		224	13	170		-5		DWR
Nov 8 0835	Est 41	55	10.5	99	382	8.7					0 / 0.00	205 / 3.36		4 / 0.11			0.05				11	182		--5		DWR
Dec	Dry																								median 4.5 - minimum .45 - maximum 6	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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ANALYSES OF SURFACE WATER

REGION 4

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Santa Clara River at Los Angeles-Ventura County Line																										
1955																										
Jan 10 1400	80	48	10.0	86	1265	8.1					0 / 0.00	204 / 3.34		62 / 1.75			0.44				29	512		2300		DWR
Feb 7 1030	16.0	52	15.0	136	1724	8.4					0 / 0.00	344 / 5.64		65 / 1.83			0.46				30	743		5-		DWR
Mar 7 1025	15.8	59	11.8	116	1748	8.4					0 / 0.00	315 / 5.16		65 / 1.83			0.36				30	696		28		DWR
Apr 6 1015	5.0	59	11.0	108	1923	8.4					0 / 0.00	320 / 5.25		78 / 2.20			0.58				30	737		20		DWR
May 10 1105	14.8	77	9.0	107	1880	8.0	211 / 10.53	65 / 5.34	156 / 6.79	5.7 / 0.15	14 / 0.48	351 / 5.76	696 / 14.50	69 / 1.95	1.0 / 0.02	1.0 / 0.05	0.92	20		1485	30	794	482	60		DWR
Jun 6 1030	9.0	72	10.0	113	2070	8.2					0 / 0.00	317 / 5.20		76 / 2.14			0.62				29	836		90		DWR
Jul 12 1100	2.2	79	10.6	129	1835	8.4					0 / 0.00	288 / 4.72		74 / 2.09			0.96				29	850		5-		DWR
Aug 8 1010	1.2	77	10.0	120	2740	8.4						300 / 4.92		146 / 4.12			1.52				35	944		8		DWR
Sep 14 1105	0.42	82	9.8	124	3086	8.4	229 / 11.43	126 / 10.36	400 / 17.40	6.5 / 0.166	0.0 / 0.0	329 / 5.40	1343 / 27.98	184 / 5.19	0.0 / 0.0	1.2 / 0.063	0.94	10	PO_4 0.05; (a)	2689	44	1090	820	5-		DWR
Oct 12 1100	1.0	77	11.4	136	3021	8.3						303 / 4.97		161 / 4.54			1.04				42	980		5-		DWR
Nov 8 1045	0.82	63	12.0	123	3144	8.4					0 / 0.00	349 / 5.72		174 / 4.90			0.5				42	1042		5-		DWR
Dec 14 0945	1.25	50	10.8	95	2969	8.2					0 / 0.00	351 / 5.75		160 / 4.51			0.47				39	1069		5-		DWR
																									median 23	
																									minimum 1.3	
																									maximum 700+	

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TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Clara River at Los Angeles-Ventura County Line																										
1956																										
Jan 9 1100	1.5	50	11.8	104	2808	8.4					10 / 0.33	342 / 5.61		145 / 4.09			0.85				39	991		-5		DWR
Feb 14 1030	17.8	54	10.4	96	2028	8.1					0 / 0.00	361 / 5.92		78 / 2.20			1.15				30	815		-5		DWR
Mar 5 1100	16.5	61	9.8	90	1942	8.3					0 / 0.00	325 / 5.33		77 / 2.17			1.30				30	767		11		DWR
Apr 9 1050	4.9	68	10.4	113	2347	8.2					0 / 0.00	303 / 4.97		115 / 3.24			0.58				37	874		-5		DWR
May 14 0840	12.4	63	9.6	100	1835	8.2	189 / 9.43	75 / 6.17	156 / 6.79	9.5 / 0.243	0 / 0.00	364 / 5.96	682 / 14.20	74 / 2.09	2.8 / 0.045	0.7 / 0.037	0.46	20	PO_4 0.0; (a)	1392[b]	30	780	482	30		DWR
June 11 0955	Est 2	79	10.2	112.5	1739	8.4					0 / 0.00	281 / 4.61		72 / 2.03			0.64				27	721		-5		DWR
July 9 0915	1.2	72	11.0	125	2639	8.3					0 / 0.00	373 / 6.11		137 / 3.86			0.72				37	949		-5		DWR
Aug 6 1000	0.86	77	9.6	115	3030	8.0					0 / 0.00	395 / 6.47		168 / 4.74			0.88				40	1075		-5		DWR
Sept 11 1030	0.66	77	10.2	122	3257	8.1	246 / 12.28	128 / 10.52	385 / 16.75	6.6 / 0.169	0 / 0.00	386 / 6.32	1355 / 28.23	195 / 5.50	0.4 / 0.006	1.0 / 0.052	1.15	20	PO_4 0.12; (a)	2747[c]	42	1140	824	-5		DWR
Oct 9 0930	0.6	64	10.6	111	3257	8.2					0 / 0.00	288 / 4.72		183 / 5.16			1.14				43	1054		-5		DWR
Nov 7 0950	0.7	63	12.5	129	3636	8.2					0 / 0.00	403 / 6.61		162 / 4.57			1.42				35	1450		-5		DWR
Dec 10 1045	0.9	57	13.6	131	2940	8.3					0 / 0.00	364 / 5.97		190 / 5.36			1.16				40	1170		-5	median 13 minimum .45 – maximum 7000+	DWR

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REGION 4

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							equivalents per million																			
							Santa Clara River near Santa Paula																			
1955																										
Jan 10 1530	Est 100	50	9.0	79	1754	8.0					0 / 0.00	256 / 4.20		66 / 1.86			0.96				23	711		4800		DWR
Feb 7 1200	Est 40	59	13.0	128	2083	8.2					0 / 0.00	312 / 5.11		82 / 2.31			0.73				30	824		5-		DWR
Mar 7 1130	Est 35	59	11.4	112	2028	8.1					12 / 0.40	288 / 4.72		82 / 2.31			0.64				29	811		12		DWR
Apr 6 1145	Est 20	59	12.0	118	2128	8.0					22 / 0.73	285 / 4.67		93 / 2.62			0.86				26	894		5-		DWR
May 10 1300	Est 50	70	8.6	96	1307	7.8	145 / 7.24	45 / 3.70	93 / 4.05	4.4 / 0.11	0 / 0.00	288 / 4.68	456 / 9.51	42 / 1.18	0 / 0.0	1.2 / 0.06	1.54	20		970	27	547	313	975		DWR
Jun 6 1145	Est 35	64	11.6	122	2180	8.1					0 / 0.00	354 / 5.80		92 / 2.59			0.32				28	940		5-		DWR
Jul 12 1200	Est 25	68	12.4	126	2083	8.4					0 / 0.00	249 / 4.08		66 / 1.86			0.83				41	730		5		DWR
Aug 8 1115	Est 20	72	11.6	132	1486	8.4						229 / 3.75		55 / 1.55			0.62				25	620		5-		DWR
Sep 14 1315	Est 15	75	10.0	117	1486	8.4	174 / 8.68	62 / 5.10	110 / 4.79	5.2 / 0.133	0.0 / 0.0	305 / 5.00	563 / 11.72	56 / 1.58	0.5 / 0.008	0.8 / 0.042	0.32	20	PO_4 0.14; (a)	1256	26	689	439	5-		DWR
Oct 12 1325	Est 15	68	10.2	112	1664	8.2						312 / 5.11		52 / 1.49			0.70				26	693		5-		DWR
Nov 8 1200	Est 20	63	10.2	105	1579	8.2					0 / 0.00	272 / 4.46		52 / 1.47			0.68				27	636		5-		DWR
Dec 14 1045	Est 30	54	9.2	85	1683	8.0					0 / 0.00	315 / 5.16		57 / 1.61			0				25	708		5-		DWR
																									median 23 minimum 2.3 maximum 700+	

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											Santa Clara River near Santa Paula															
1956																										
Jan 9 1200	Est 25	55	12.8	121	2179	8.2					0 / 0.00	332 / 5.44		94 / 2.65			0.92				26	911		-5		DWR
Feb 14 1215	Est 40	59	10.4	103	2342	7.9					0 / 0.00	332 / 5.44		98 / 2.77			1.78				29	949		-5		DWR
Mar 5 1230	Est 40	61	11.8	119	1890	8.2					10 / 0.33	293 / 4.80		81 / 2.28			1.55				25	783		-5		DWR
Apr 9 1240	Est 30	64	16.2	170	1862	8.4					0 / 0.00	275 / 4.51		77 / 2.17			0.68				28	764		-5		DWR
May 14 1120	Est 20	67	8.6	93	1271	8.1	138 / 6.89	46 / 3.78	81 / 3.52	9.3 / 0.238	0 / 0.00	273 / 4.48	412 / 8.58	45 / 1.27	3.0 / 0.048	0.8 / 0.042	0.60	25	PO_4 0.0	898[b]	24	533	309	18		DWR
June 11 1200	Est 25	75	14.4	169	2160	8.4					0 / 0.00	299 / 4.90		103 / 2.90			0.92				35	792		-5		DWR
July 9 1030	Est 20	68	11.6	126	1799	8.2					0 / 0.00	334 / 5.47		70 / 1.97			0.62				25	774		-5		DWR
Aug 6 1115	Est 20	70	11.4	127	1838	8.0					0 / 0.00	344 / 5.64		73 / 2.06			0.52				25	802		-5		DWR
Sept 11 1200	Est 8.0	70	9.8	109	1773	7.9	197 / 9.83	68 / 5.59	125 / 5.44	5.6 / 0.143	0 / 0.00	338 / 5.54	658 / 13.71	68 / 1.92	1.25 / 0.020	0.9 / 0.047	0.80	25	PO_4 0.12; (a)	1525[c]	26	771	494	-5		DWR
Oct 9 1105	Est 18	61	7.4	94	2342	7.6					0 / 0.00	251 / 4.11		109 / 3.07			1.00				32	909		-5		DWR
Nov 7 1105	15.0	60	9.0	90	1876	8.0					0 / 0.00	344 / 5.64		74 / 2.09			0.98				27	792		-5		DWR
Dec 10 1200	Est 25	54	10.4	98	1503	7.9					7 / 0.23	244 / 4.00		68 / 1.92			0.72				26	695		-5	median 62; minimum 2.3; maximum 700 +	DWR

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Santa Clara River at Blue Cut																										
1955																										
May 10 1200	14.8	79	9.0	110	2058	8.0	216 / 10.78	76 / 6.25	176 / 7.66	5.8 / 0.15	0 / 0.00	390 / 6.40	769 / 16.02	75 / 2.11	1.0 / 0.02	1.1 / 0.06	0.76	20		1535[b]	31	852	532	80		DWR
Sept. 14 1215	Est. 1	79	11.0	134	3425	8.4	278 / 13.87	168 / 13.81	340 / 14.79	7.6 / 0.20	0 / 0.00	339 / 5.56	1570 / 32.71	142 / 4.00	0 / 0.00	0.7 / 0.037	0.74	10	PO_4 0.15; (a)	2687[b]	35	1384	1106	-5	median 34; minimum 6; maximum 62	DWR
1956																										
May 14 0950	12.4	65	9.0	95	1923	8.2	194 / 9.68	84 / 6.90	168 / 7.31	8.2 / 0.21	0 / 0.00	356 / 5.84	760 / 15.83	78 / 2.20	2.5 / 0.040	0.8 / 0.042	0.58	20		1494[b]	30	829	537	35		DWR
Sept. 11 1050	0.66	77	11.4	136	3484	8.0	307 / 15.32	160 / 14.15	352 / 15.31	7.6 / 0.20	0 / 0.00	384 / 6.30	1623 / 33.82	155 / 4.37	1.0 / 0.02	1.2 / 0.06	1.03	20	PO_4 0.13; (a)	2820[b]	34	1474	1159	-5	median 235; minimum 62; maximum 700	DWR

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ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
														equivalents per million												
												Ventura River near Ventura														
1955																										
Jan 10 1650	0.65	50	10.4	92	976	7.2					11 / 0.37	232 / 3.80		53 / 1.49			0.26				22	407		5-		DWR
Feb 7 1300	0.6	54	13.0	121	1163	7.4					0 / 0.00	203 / 4.97		60 / 1.69			0.46				20	501		5-		DWR
Mar 7 1315	2.9	59	15.0	148	1111	8.1					10 / 0.33	268 / 4.39		59 / 1.66			0.46				22	474		5-		DWR
Apr 6 1305	0.3	61	11.7	110	1170	7.3					19 / 0.63	264 / 4.33		62 / 1.75			0.48				22	470		5-		DWR
May 10 1345	1.4	64	13.6	142	1005	7.5	137 / 6.84	33 / 2.71	60 / 2.61	2.0 / 0.05	0 / 0.00	315 / 5.16	254 / 5.30	60 / 1.69	1.0 / 0.02	0.5 / 0.03	0.44	18		735	22	478	220	5-		DWR
Jun 6 1300	1.5	64	10.0	105	1155	7.6					12 / 0.40	295 / 4.84		64 / 1.80			0.42				23	468		5-		DWR
Jul 12 1330	0.4	68	9.4	103	1068	7.5					0 / 0.00	305 / 5.00		67 / 1.89			0.46				24	467		5-		DWR
Aug 8 1230	0.8	66	7.4	79	1125	7.6						298 / 4.88		68 / 1.92			1.32				19	530		5-		DWR
Sep 14 1410	0.5	66	5.6	52	1412	7.4	157 / 7.83	36 / 2.96	63 / 2.74	2.0 / 0.051	0 / 0.00	317 / 5.20	307 / 6.39	62 / 1.75	0.5 / 0.008	0.6 / 0.032	0.44	20	PO_4 0.04; (a)	868	20	540	280	5-		DWR
Oct 12 1415	0.4	61	6.5	68	1225	7.3						305 / 5.00		70 / 1.97			0.64				20	539		5-		DWR
Nov 8 1330	Est 0.01	57	6.4	62	1256	7.2					0 / 0.00	332 / 5.44		71 / 2.00			0.60				19	561		5-		DWR
Dec 14 1200	Pond	52	6.2	56	1527	7.2					0 / 0.00	342 / 5.61		140 / 3.95			0.47				27	601		5-		DWR
																									median 37 minimum .45- maximum 240	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 13
ANALYSES OF SURFACE WATER

REGION 4

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Ventura River near Ventura																										
1956																										
Jan 9 1300	ponded	50	13.0	115	1298	7.4					0 / 0.00	312 / 5.11		87 / 2.45			0.42				21	554		-5		DWR
Feb 14 1320	12	57	12.4	120	1046	8.1					0 / 0.00	285 / 4.67		56 / 1.58			0.76				20	435		-5		DWR
Mar 5 1330	10	55	13.2	113	1074	8.1					0 / 0.00	290 / 4.75		55 / 1.55			0.68				21	441		-5		DWR
Apr 9 1335	4.9	63	15.6	160	1105	8.3					0 / 0.00	281 / 4.61		60 / 1.69			0.48				21	462		-5		DWR
May 14 1240	7.8	68	10.9	119	962	8.2	111 / 5.54	35 / 2.88	54 / 2.35	6.0 / 0.154	0 / 0.00	310 / 5.08	202 / 4.20	51 / 1.44	3.0 / 0.048	0.6 / 0.032	0.42	20	PO_4 0.0 ; (a)	638[b]	22	421	167	-5		DWR
June 11 1345	3.9	72	16.2	184	1055	8.4					0 / 0.00	290 / 4.75		53 / 1.49			0.72				20	457		-5		DWR
July 9 1305	0.7	68	14.6	159	1178	7.6					0 / 0.00	322 / 5.28		60 / 1.69			0.43				20	509		-5		DWR
Aug 6 1245	ponded	68	14.0	153	1083	7.8					0 / 0.00	334 / 5.47		60 / 1.69			0.41				23	446		-5		DWR
Sept 11 1245	ponded	68	8.0	87	1215	7.2	153 / 7.63	41 / 3.37	62 / 2.70	1.7 / 0.044	0 / 0.00	348 / 5.70	294 / 6.13	62 / 1.75	2.75 / 0.044	0.6 / 0.032	0.59	15	PO_4 0.14; (a)	888[c]	20	550	265	-5		DWR
Oct 9 1215	ponded	63	6.0	62	1274	7.2					0 / 0.00	339 / 5.56		60 / 1.69			0.61				19	533		-5		DWR
Nov 7 1215	0.46	61	6.2	62	1164	7.8					0 / 0.00	322 / 5.28		64 / 1.81			0.59				21	519		-5		DWR
Dec 10 1400	0.5	51	9.4	80	1204	7.2					0 / 0.00	342 / 5.61		61 / 1.72			0.54				21	535		-5	median 6.1; minimum .45 – ; maximum 700+	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
American River at Sacramento																										
1955																										
Jan 18 1250	2,600	42	11.8	93	103	7.2	10 / 0.499	3.9 / 0.321	5.1 / 0.222	0.5 / 0.013	0 / 0.000	50 / 0.819		4.0 / 0.113			0.00				21	41	0	10		USGS
Feb 15 0940	1,190	46	10.8	90	92.1	7.2	9.3 / 0.464	3.4 / 0.276	3.7 / 0.161	0.5 / 0.013	0 / 0.000	46 / 0.754		3.8 / 0.107			0.01				18	37	0	1		USGS
Mar 18 1430	2,010	55	11.0	103	70.9	7.3	7.6 / 0.379	3.7 / 0.301	2.9 / 0.126	0.7 / 0.018	0 / 0.000	36 / 0.590		2.5 / 0.071			0.00				15	34	4	5		USGS
Apr 19 0920	170	53	11.1	101	83.4	7.2	3.8 / 0.190	5.5 / 0.454	3.3 / 0.143	0.8 / 0.020	0 / 0.000	38 / 0.623		3.2 / 0.090			0.00				18	32	1	6		USGS
May 16 0940	3,200	54	11.4	106	55.2	7.2	5.9 / 0.294	2.3 / 0.186	2.3 / 0.100	0.5 / 0.013	0 / 0.000	30 / 0.492	2.6 / 0.054	1.0 / 0.028	0.5 / 0.008	0.0 / 0.000	0.06	12	Al 0.01; Zn 0.02; (a) PO_4 0.05	42[b]	17	24	0	1		USGS
Jun 20 0930	2,690	59	8.8	87	37.7	6.9	3.4 / 0.170	1.5 / 0.126	2.3 / 0.100	0.6 / 0.015	0 / 0.000	23 / 0.377		0.2 / 0.006			0.05				24	15	0	2		USGS
Jul 18 0715	1,910	62	8.0	81	57.2	6.8	4.3 / 0.215	2.2 / 0.185	3.2 / 0.139	1.0 / 0.026	0 / 0.000	17 / 0.279		1.0 / 0.028			0.00				25	20	6	2		USGS
Aug 22 0905	1,870	68	6.0	66	49.8	7.0	5.3 / 0.264	1.7 / 0.136	1.8 / 0.078	1.0 / 0.026	0 / 0.000	27 / 0.442		0.5 / 0.014			0.11				15	20	0	0.9		USGS
Sep 19 1330	520	70	7.3	87	63.1	7.3	7.0 / 0.349	2.1 / 0.175	2.2 / 0.096	1.0 / 0.026	0 / 0.000	34 / 0.557	1.8 / 0.037	1.1 / 0.031	0.2 / 0.003	0.2 / 0.011	0.02	11	Fe 0.06; Cu 0.01; (a)	44[b]	15	26	0	2.0		USGS
Oct 14 1330	986	66	7.8	83	72.5	7.1	7.1 / 0.354	2.4 / 0.198	2.8 / 0.122	1.1 / 0.028	0 / 0.000	36 / 0.590		1.8 / 0.051			0.00				17	28	0	3		USGS
Nov 18 1430	511	52	9.3	89	73.5	7.1	8.4 / 0.419	1.8 / 0.145	3.2 / 0.139	1.0 / 0.026	0 / 0.000	37 / 0.606		3.2 / 0.090			0.00				19	28	0	40		USGS
Dec 16 1520	636	51	10.1	90	76.4	7.1	8.7 / 0.434	2.2 / 0.178	3.2 / 0.139	1.1 / 0.028	0 / 0.000	38 / 0.623		3.3 / 0.093			0.00				18	31	0	7		USGS
																									median 23 minimum .06 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp. in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
American River at Sacramento																										
1956																										
Jan 19 1430	25,400 MD	47	13.0	110	56.6	7.3	6.2 / 0.309	2.0 / 0.163	1.8 / 0.078	0.7 / 0.018	0 / 0.000	29 / 0.475		0.9 / 0.025			0.03				14	24	0	55		USGS
Feb 10 0835	7,040 MD	43	12.2	98	60.4	7.1	8.1 / 0.404	0.8 / 0.066	2.2 / 0.096	0.7 / 0.018	0 / 0.000	31 / 0.508		0.0 / 0.000			0.07				16	24	0	45		USGS
Mar 16 1500	6,760 MD	49	12.7	111	64.8	7.3	7.2 / 0.359	2.1 / 0.175	2.2 / 0.096	0.5 / 0.013	0 / 0.000	35 / 0.574		1.5 / 0.042			0.02				15	27	0	8		USGS
Apr 19 1440	2,830 MD	54	11.9	110	57.1	7.3	5.6 / 0.279	2.2 / 0.177	2.1 / 0.091	0.7 / 0.018	0 / 0.000	32 / 0.524		1.3 / 0.037			0.04				16	23	0	3		USGS
May 11 1145	3,140 MD	52	10.7	97	49.9	7.1	6.8 / 0.339	1.7 / 0.141	2.0 / 0.087	0.6 / 0.015	0 / 0.000	28 / 0.459	4.0 / 0.083	1.5 / 0.042	0.1 / 0.002	0.0 / 0.000	0.00	13	Fe 0.03; PO_4 0.05; (a)	44[b]	15	24	1	8		USGS
June 22 0815	4,170 MD	56	10.1	96	42.1	6.8	4.8 / 0.240	1.3 / 0.104	1.6 / 0.070	0.7 / 0.018	0 / 0.000	25 / 0.410		0.7 / 0.020			0.04				16	17	0	1		USGS
July 25 1600	3,710 MD	65	9.6	101	39.5	7.0	3.8 / 0.190	1.6 / 0.130	2.0 / 0.087	0.7 / 0.018	0 / 0.000	25 / 0.410		0.4 / 0.011			0.06				21	16	0	1		USGS
Aug 23 0850	3,610 MD	60	9.0	90	38.3	6.9	4.4 / 0.220	1.0 / 0.080	1.5 / 0.065	0.7 / 0.018	0 / 0.000	23 / 0.377		0.1 / 0.003			0.00				17	15	0	0.8		USGS
Sept 21 0935	2,210 MD	63	8.4	87	42.6	6.9	4.4 / 0.220	2.2 / 0.180	1.6 / 0.070	0.7 / 0.018	0 / 0.000	27 / 0.443	1.9 / 0.040	0.0 / 0.000	0.0 / 0.000	0.1 / 0.005	0.03	11	Fe 0.01; Cu 0.04; PO_4 0.00 (a)	35[b]	14	20	0	1		USGS
Oct 18 1315	1,160 MD	66	9.2	98	54.0	6.8	6.4 / 0.319	1.1 / 0.091	2.2 / 0.096	1.0 / 0.026	0 / 0.000	27 / 0.443		0.5 / 0.014			0.00				18	20	0	0.7		USGS
Nov 16 1515	1,170	55	11.2	105	60.8	7.3	7.0 / 0.35	2.1 / 0.17	2.0 / 0.09	0.8 / 0.02	0 / 0.00	35 / 0.57		1.9 / 0.05			0.00				14	26	0	3		USGS
Dec 14 1505	924	52	11.0	100	62.6	7.1	6.4 / 0.32	2.4 / 0.20	2.3 / 0.10	1.0 / 0.03	0 / 0.00	31 / 0.51		1.5 / 0.04			0.08				15	26	1	3	median 23; minimum .62; maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Bear Creek near Stevinson																			
1955																										
Jan 12 1505		43	11.5	92	379	7.8	23 / 1.148	9.4 / 0.772	45 / 1.957	3.9 / 0.100	0 / 0.000	162 / 2.655		25 / 0.705			0.21				49	96	0	10		USGS
Feb 8 1500		52	11.3	102	498	8.0	32 / 1.60	12 / 1.00	55 / 2.39	3.4 / 0.09	0 / 0.00	184 / 3.02		46 / 1.30			0.05				47	130	0	35		USGS
Mar 10 1330		61	10.9	110	695	8.2	42 / 2.10	16 / 1.34	78 / 3.39	3.9 / 0.10	0 / 0.00	173 / 2.84		89 / 2.51			0.27				49	172	30	55		USGS
Apr 14 0915		60	9.0	90	970	8.0	52 / 2.59	18 / 1.51	120 / 5.22	4.6 / 0.12	0 / 0.00	131 / 2.97		171 / 4.82			0.19				55	205	57	25		USGS
May 18 0950		66	7.8	83	898	8.4	51 / 2.54	19 / 1.54	106 / 4.61	4.4 / 0.11	0 / 0.00	204 / 3.34	89 / 1.85	130 / 3.67	1.1 / 0.02	0.4 / 0.02	0.29	20	Al 0.005; (a) PO_4 0.25	521[b]	52	204	37	30		USGS
Jun 16 0820		67	9.1	98	826	8.3	48 / 2.40	17 / 1.42	98 / 4.26	4.2 / 0.11	0 / 0.00	214 / 3.51		122 / 3.44			0.36				52	191	16	10		USGS
Jul 12 1400		83			1060	8.1	38 / 1.90	25 / 2.04	146 / 6.35	5.4 / 0.14	0 / 0.00	207 / 3.39		195 / 5.50			0.18				61	197	27	30		USGS
Aug 15 1330		82	9.4	118	1240	8.0	25 / 1.75	18 / 1.51	196 / 8.52	3.2 / 0.08	0 / 0.00	241 / 3.95		228 / 6.43			0.11				72	163	0	10		USGS
Sep 15 1150		67	10.4	112	1420	7.5	44 / 2.20	19 / 1.49	223 / 9.70	4.0 / 0.10	0 / 0.00	253 / 4.15	76 / 1.58	276 / 7.78	1.1 / 0.02	0.6 / 0.03	0.23	31	Fe 0.07; Cu 0.01;	799[b]	72	184	0	20		USGS
Oct 12 1250		63	10.7	110	1710	7.9	45 / 2.25	22 / 1.85	289 / 12.57	3.5 / 0.09	6 / 0.20	342 / 5.61		311 / 8.77			0.16				75	205	0	30		USGS
Nov	Not sampled																									
Dec	Dry																									
Not Rated in 1955																										

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b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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Bear Creek near Stevinson																										
1956																										
Jan 11 1400		48	8.9	76	137	7.1	11 / 0.549	3.7 / 0.307	11 / 0.478	2.5 / 0.064	0 / 0.000	64		5.3 / 0.149			0.06				34	43	0	45		USGS
Feb 8 1215		48	10.9	94	144	7.7	10 / 0.499	4.2 / 0.349	12 / 0.522	1.9 / 0.049	0 / 0.000	66 / 1.082		5.6 / 0.158			0.09				37	42	0	30		USGS
Mar 14 1445		51	10.5	94	308	7.5	21 / 1.048	7.9 / 0.652	27 / 1.174	2.1 / 0.054	0 / 0.000	99 / 1.623		28 / 0.790			0.17				40	85	4	60		USGS
Apr 11 1320		51	9.4	84	314	7.5	23 / 1.148	9.1 / 0.752	27 / 1.174	2.9 / 0.074	0 / 0.000	128 / 2.098		26 / 0.733			0.38				37	95	0	50		USGS
May 10 0745		62	8.0	81	193	7.3	17 / 0.848	5.2 / 0.428	17 / 0.740	2.0 / 0.051	0 / 0.000	95 / 1.557	8.6 / 0.179	8.4 / 0.237	1.8 / 0.029	0.5 / 0.026	0.04	21	Fe 0.22; Al 0.20; (a)	129[b]	36	64	0	50		USGS
June 13 1345		72	8.4	95	104	7.0	8.8 / 0.439	3.4 / 0.281	10 / 0.435	1.3 / 0.033	0 / 0.000	54 / 0.885		4.5 / 0.127			0.11				37	36	0	80		USGS
July 18 1130		80	9.3	115	399	7.1	24 / 1.198	7.6 / 0.622	48 / 2.088	2.6 / 0.067	0 / 0.000	130 / 2.131		45 / 1.269			0.07				53	91	0	50		USGS
Aug 13 1240		80	10.5	129	940	8.0	36 / 1.80	12 / 1.01	141 / 6.13	2.8 / 0.07	C / 0.00	188 / 3.08		172 / 4.85			0.10				63	141	0	25		USGS
Sept 19 0900		69	7.6	84	293	7.1	19 / 0.948	7.8 / 0.644	32 / 1.392	2.3 / 0.059	0 / 0.000	144 / 2.360	11 / 0.229	16 / 0.451	1.7 / 0.027	0.0 / 0.000	0.03	27	Fe 0.03; Al 0.17; Cu 0.01; Zn 0.01; PO_4 2.40; (a)	188[b]	46	80	0	30		USGS
Oct 10 1020		66	8.7	93	250	7.5	18 / 0.898	5.6 / 0.458	25 / 1.088	2.7 / 0.069	0 / 0.000	116 / 1.901		17 / 0.479			0.03				43	63	0	20		USGS
Nov 15 0945		52	10.9	96	451	8.2	26 / 1.30	11 / 0.92	53 / 2.31	3.7 / 0.09	C / 0.00	195 / 3.20		39 / 1.10			0.07				50	111	0	20		USGS
Dec 12 1100		49	11.4	100	496	7.8	36 / 1.80	14 / 1.16	46 / 2.00	3.2 / 0.08	0 / 0.00	171 / 2.80		63 / 1.78			0.09				40	148	8	30		USGS
Not Rated in 1956																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Bear River near Wheatland																										
1955																										
Jan 12 0850	698	41	12.9	100	92.4	7.0	10 / 0.499	3.4 / 0.281	2.7 / 0.117	0.6 / 0.015	0 / 0.000	39 / 0.639		3.0 / 0.085			0.11				13	39	7	65		USGS
Feb 9 0800	145	42	11.0	87	186	7.4	21 / 1.048	9.1 / 0.752	5.6 / 0.244	0.8 / 0.020	0 / 0.000	82 / 1.344		4.8 / 0.135			0.00				12	90	23	25		USGS
Mar 8 1245	188	55	10.0	94	169	7.6	21 / 1.048	6.7 / 0.552	4.8 / 0.209	1.2 / 0.031	0 / 0.000	70 / 1.147		3.5 / 0.099			0.00				11	80	23	240		USGS
Apr 5 1200	9.6	60	10.4	104	351	8.0	35 / 1.747	20 / 1.653	7.1 / 0.309	1.1 / 0.028	0 / 0.000	158 / 2.589		6.6 / 0.186			0.01				8	170	40	2		USGS
May 13 1130	240	71	9.0	101	106	7.9	11 / 0.549	5.0 / 0.411	3.5 / 0.152	0.7 / 0.018	0 / 0.000	51 / 0.836	8.6 / 0.179	3.8 / 0.107	0.0 / 0.000	0.0 / 0.000	0.00	12	Fe 0.03; Al 0.005; Pb 0.005 (a) FO_4 0.00	70[b]	13	48	6	3		USGS
Jun 17 1220	22	81	8.7	108	262	7.8	30 / 1.497	12 / 0.951	5.8 / 0.252	1.2 / 0.031	0 / 0.000	127 / 2.081		5.5 / 0.155			0.00				9	122	18	0.2		USGS
Jul 15 1030	8.9	81	9.7	120	301	7.6	32 / 1.597	16 / 1.343	6.9 / 0.300	1.2 / 0.031	2 / 0.067	153 / 2.507		6.5 / 0.183			0.08				9	147	18	1		USGS
Aug 19 1020	6.4	79	9.2	112	280	7.8	31 / 1.547	13 / 1.093	6.6 / 0.287	1.2 / 0.031	0 / 0.000	149 / 2.442		7.5 / 0.212			0.00				10	132	10	70		USGS
Sep 16 1220	6.1	76	9.0	106	305	7.6	37 / 1.846	13 / 1.062	7.1 / 0.309	0.9 / 0.023	0 / 0.000	151 / 2.475	27 / 0.562	7.3 / 0.206	0.1 / 0.002	0.2 / 0.011	0.00	21	Fe 0.01; Al 0.01; Cu 0.01; Zn 0.01; (a)	188[b]	9	145	21	0.4		USGS
Oct 14 1140	69	67	9.0	97	244	7.2	26 / 1.297	10 / 0.831	7.3 / 0.318	1.5 / 0.038	0 / 0.000	107 / 1.754		9.0 / 0.254			0.02				13	106	18	4		USGS
Nov 18 1200	80	48	11.0	95	248	7.1	26 / 1.297	9.5 / 0.783	7.9 / 0.344	1.8 / 0.046	0 / 0.000	96 / 1.573		10 / 0.282			0.08				14	104	25	10		USGS
Dec 16 1015	102	49	12.2	106	179	6.8	19 / 0.948	7.0 / 0.572	5.2 / 0.226	1.1 / 0.028	0 / 0.000	69 / 1.131		6.5 / 0.183			0.02				13	76	19	35		USGS
																									median 6.2 minimum .5 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Bear River near Wheatland																			
1956																										
Jan 16 0930	7,240	49	12.8	111	57.5	6.8	6.0 / 0.299	2.2 / 0.181	1.6 / 0.070	0.7 / 0.018	0 / 0.000	27 / 0.443		1.0 / 0.028			0.00				12	24	2	500		USGS
Feb 6 1130	1,000	43	12.3	99	82.0	6.8	9.1 / 0.454	2.7 / 0.226	2.7 / 0.117	0.6 / 0.015	0 / 0.000	36 / 0.590		0.9 / 0.025			0.03				14	34	4	110		USGS
Mar 12 1020	626	47	12.5	106	86.7	6.8	8.4 / 0.419	3.8 / 0.311	2.9 / 0.126	0.6 / 0.015	0 / 0.000	39 / 0.639		3.2 / 0.090			0.69				14	36	4	20		USGS
Apr 9 1050	254	50	10.0	100	90.3	7.3	8.4 / 0.419	4.1 / 0.341	2.9 / 0.126	0.6 / 0.015	0 / 0.000	46 / 0.754		2.0 / 0.056			0.03				14	38	0	10		USGS
May 7 1015	640	60	10.0	100	83.8	6.8	8.9 / 0.444	3.3 / 0.268	2.9 / 0.126	0.8 / 0.020	0 / 0.000	42 / 0.688	6.0 / 0.125	1.8 / 0.051	0.2 / 0.003	0.1 / 0.005	0.00	11	Fe 0.14; Al 0.17; Cu 0.01; Zn 0.01; PO_4 0.01; (a)	56[b]	15	36	2	40		USGS
June 11 1115	26	77	8.6	102	165	7.7	18 / 0.898	8.0 / 0.662	3.6 / 0.157	0.7 / 0.018	0 / 0.000	80 / 1.311		3.8 / 0.107			0.08				9	78	12	1		USGS
July 16 1015	4.4	82	9.7	122	293	7.7	32 / 1.597	16 / 1.303	6.5 / 0.283	1.0 / 0.026	0 / 0.000	142 / 2.327		6.6 / 0.186			0.05				9	145	29	0.8		USGS
Aug 13 0930	11	75	9.0	105	283	7.7	30 / 1.497	15 / 1.235	6.8 / 0.296	1.1 / 0.028	0 / 0.000	142 / 2.327		8.1 / 0.228			0.00				10	137	21	0.4		USGS
Sept 17 0950	7.2	70	9.8	109	303	7.2	34 / 1.697	15 / 1.223	7.5 / 0.326	1.0 / 0.026	0 / 0.000	152 / 2.491	29 / 0.604	8.5 / 0.240	0.1 / 0.002	0.1 / 0.005	0.00	22	Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.00	192[b]	10	146	21	0.8		USGS
Oct 15 1030	98	62	10.0	102	239	7.9	25 / 1.248	10 / 0.832	8.2 / 0.357	1.6 / 0.041	0 / 0.000	111 / 1.819		10 / 0.282			0.00				14	104	13	1.0		USGS
Nov 21 1000	105	45	12.3	102	119	6.8	13 / 0.65	4.4 / 0.36	3.6 / 0.16	0.8 / 0.02	0 / 0.00	57 / 0.93		4.0 / 0.11			0.00				13	50	3	1.8		USGS
Dec 10 1030	98	50	13.1	116	134	7.3	15 / 0.75	5.0 / 0.41	4.0 / 0.17	1.0 / 0.03	0 / 0.00	63 / 1.03		4.5 / 0.13			0.00				12	58	6	0.7	median 3.7 minimum .23 maximum 230	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Big Chico Creek near Chico																			
1955																										
Jan 11 1200	67	41	11.9	90	166	7.6	13 / 0.649	6.1 / 0.501	10 / 0.435	0.7 / 0.018	0 / 0.000	81 / 1.327		8.8 / 0.248			0.13				27	58	0	0.8		USGS
Feb 7 1230	85	44	10.2	83	132	7.6	12 / 0.599	5.1 / 0.421	7.9 / 0.344	1.0 / 0.026	0 / 0.000	71 / 1.164		5.0 / 0.141			0.06				25	51	0	0.3		USGS
Mar 7 1245	100	45	11.6	96	130	7.6	11 / 0.549	6.2 / 0.511	7.6 / 0.330	0.8 / 0.020	0 / 0.000	71 / 1.164		5.0 / 0.141			0.00				23	53	0	3		USGS
Apr 4 1130	66	46	11.0	92	142	8.0	9.4 / 0.469	7.9 / 0.647	8.8 / 0.383	0.9 / 0.023	0 / 0.000	82 / 1.344		5.8 / 0.164			0.09				25	56	0	2		USGS
May 12 1115	102	61	10.0	100	130	7.9	11 / 0.549	6.0 / 0.491	6.9 / 0.300	0.9 / 0.023	0 / 0.000	71 / 1.164	3.6 / 0.075	6.0 / 0.169	0.1 / 0.002	0.0 / 0.000	0.02	34	Zn 0.01; (a) PO4 0.00	104[b]	22	52	0	2		USGS
Jun 16 0950	38	65	8.7	92	185	7.6	15 / 0.749	7.3 / 0.597	12 / 0.522	1.3 / 0.033	0 / 0.000	98 / 1.606		8.3 / 0.234			0.10				27	67	0	0.3		USGS
Jul 14 0920	28	72	9.1	103	201	7.6	16 / 0.798	8.0 / 0.662	14 / 0.609	1.3 / 0.033	0 / 0.000	108 / 1.770		10 / 0.282			0.24				29	73	0	0.4		USGS
Aug 18 0950	25	67	9.3	100	206	7.8	16 / 0.798	9.8 / 0.802	15 / 0.652	1.4 / 0.036	0 / 0.000	115 / 1.885		12 / 0.338			0.24				28	80	0	6		USGS
Sep 15 0940	37	62	9.6	98	210	7.3	17 / 0.848	8.2 / 0.672	14 / 0.609	1.6 / 0.041	0 / 0.000	110 / 1.803	4.6 / 0.096	10 / 0.282	0.2 / 0.003	0.2 / 0.011	0.00	42	Al 0.06; Mn 0.01; Cu 0.01; (a)	152[b]	28	76	0	0.6		USGS
Oct 13 1010	29	58	10.0	98	209	7.4	16 / 0.798	8.8 / 0.722	14 / 0.609	1.3 / 0.033	0 / 0.000	107 / 1.754		11 / 0.310			0.16				28	76	0	0.4		USGS
Nov 17 1010	36	42	11.3	90	223	7.0	16 / 0.798	8.3 / 0.686	17 / 0.740	1.3 / 0.033	0 / 0.000	103 / 1.688		14 / 0.395			0.21				33	74	0	2		USGS
Dec 15 1015	48	47	11.6	99	164	6.8	13 / 0.649	6.9 / 0.571	11 / 0.478	0.9 / 0.023	0 / 0.000	84 / 1.377		9.0 / 0.254			0.10				28	61	0	1		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Big Chico Creek near Chico																										
1956																										
Jan 17 1200	1,280	46	12.0	100	71.1	7.2	6.3 / 0.314	3.0 / 0.250	2.8 / 0.122	0.5 / 0.013	0 / 0.000	40 / 0.656		0.4 / 0.011			0.01				17	28	0	15		USGS
Feb 7 0930	188	42	13.1	104	104	6.8	8.8 / 0.439	4.8 / 0.393	5.1 / 0.222	0.5 / 0.013	0 / 0.000	59 / 0.967		2.8 / 0.079			0.06				21	42	0	2		USGS
Mar 13 0920	216	42	12.5	99	90.9	7.2	4.0 / 0.200	6.7 / 0.550	4.3 / 0.187	0.5 / 0.013	0 / 0.000	50 / 0.820		3.5 / 0.099			0.01				20	38	0	3		USGS
Apr 10 0940	123	52	11.1	101	118	6.8	11 / 0.549	5.0 / 0.411	6.7 / 0.291	1.0 / 0.026	0 / 0.000	70 / 1.147		3.5 / 0.099			0.15				23	48	0	0.5		USGS
May 8 0840	172	50	10.8	95	107	7.3	9.5 / 0.474	4.9 / 0.406	5.4 / 0.235	0.8 / 0.020	0 / 0.000	62 / 1.016	3.4 / 0.071	3.3 / 0.093	0.0 / 0.000	0.0 / 0.000	0.06	30	Al 0.03; Cu 0.01; Zn 0.01; (a) PO_4 0.00	88[b]	21	44	0	1		USGS
June 12 0840	51	64	9.2	96	160	7.7	14 / 0.699	7.6 / 0.621	9.8 / 0.426	1.1 / 0.028	0 / 0.000	92 / 1.508		6.2 / 0.175			0.09				24	66	0	1		USGS
July 17 0740	36	71	8.7	98	183	7.5	14 / 0.699	8.5 / 0.701	12 / 0.522	1.3 / 0.033	0 / 0.000	102 / 1.672		8.3 / 0.234			0.17				27	70	0	0.8		USGS
Aug 14 0730	30	67	9.0	97	193	7.7	15 / 0.748	8.7 / 0.712	13 / 0.565	1.4 / 0.036	0 / 0.000	106 / 1.737		9.5 / 0.268			0.08				27	73	0	0.3		USGS
Sept 18 0745	29	65	9.7	102	199	7.1	16 / 0.798	8.9 / 0.730	14 / 0.609	1.0 / 0.026	0 / 0.000	108 / 1.770	4.8 / 0.100	9.8 / 0.276	0.0 / 0.000	0.2 / 0.011	0.11	39	Al 0.04; PO_4 0.00; (a)	147[b]	28	76	0	0.4		USGS
Oct 16 0845	29	54	10.8	100	201	7.7	16 / 0.798	8.0 / 0.662	14 / 0.609	1.1 / 0.028	0 / 0.000	111 / 1.819		10 / 0.282			0.09				29	73	0	0.3		USGS
Nov 20 0850	30	42	13.0	103	202	7.0	16 / 0.80	8.5 / 0.70	14 / 0.61	1.3 / 0.03	0 / 0.00	109 / 1.79		11 / 0.31			0.13				29	75	0	0.3		USGS
Dec 11 0840	34	39	13.0	99	204	7.7	16 / 0.80	8.8 / 0.72	14 / 0.61	1.1 / 0.03	0 / 0.00	110 / 1.80		11 / 0.31			0.05				28	76	0	0.2		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Burney Creek near Burney																			
1955																										
Jan	No sample																									
Feb	No sample																									
Mar 2 1530	60 est.	40	10.6	82	94.4	6.8	11 / 0.549	4.0 / 0.331	4.1 / 0.178	1.3 / 0.033	0 / 0.000	59 / 0.967		0.5 / 0.014			0.00				16	44	0	8			USGS
Apr 1 0815	75 est.	42	10.4	83	65.4	7.2	3.5 / 0.175	4.5 / 0.369	3.2 / 0.139	0.7 / 0.018	0 / 0.000	42 / 0.688		0.0 / 0.000			0.03				20	27	0	10			USGS
May 11 1000	200 est.	50	10.5	93	49.5	7.2	5.1 / 0.254	1.8 / 0.146	2.4 / 0.104	0.8 / 0.020	0 / 0.000	32 / 0.524	0.5 / 0.010	0.8 / 0.023	0.1 / 0.002	0.2 / 0.011	0.02	18	Fe 0.05; Al 0.1; (a) PO_4 0.05	46[b]	20	20	0	3			USGS
Jun 15 1000	40 est.	57	8.6	83	91.1	7.3	10 / 0.499	3.4 / 0.281	3.7 / 0.161	1.2 / 0.031	0 / 0.000	58 / 0.951		0.4 / 0.011			0.00				17	39	0	0.7			USGS
Jul 13 1040	20 est.	58	9.2	90	102	7.4	10 / 0.499	4.4 / 0.361	4.2 / 0.183	1.3 / 0.033	0 / 0.000	66 / 1.082		0.5 / 0.014			0.04				17	43	0	2			USGS
Aug 17 1015	25 est.	53	9.4	86	108	7.4	11 / 0.549	5.5 / 0.451	4.6 / 0.200	0.9 / 0.023	0 / 0.000	71 / 1.164		0.8 / 0.023			0.00				16	50	0	1			USGS
Sep 14 1050	50 est.	55	9.0	85	108	7.2	11 / 0.549	4.6 / 0.381	4.3 / 0.187	1.0 / 0.026	0 / 0.000	70 / 1.147	0.0 / 0.000	0.0 / 0.000	0.2 / 0.003	0.0 / 0.000	0.00	29	Fe 0.13; Al 0.01; (a)	84[b]	16	46	0	0.8			USGS
Oct 12 1120	25 est.	45	10.0	83	111	7.2	10 / 0.499	5.6 / 0.457	4.5 / 0.196	1.2 / 0.031	0 / 0.000	71 / 1.164		0.0 / 0.000			0.03				17	48	0	3			USGS
Nov 16 1230	35 est.	36	11.8	86	107	7.0	10 / 0.499	5.2 / 0.425	4.2 / 0.183	1.1 / 0.028	0 / 0.000	70 / 1.147		0.0 / 0.000			0.00				16	46	0	6			USGS
Dec	Not sampled																								median 62 minimum .62 maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
													Burney Creek near Burney													
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 0930	Est 100	45	11.4	94	41.7	6.8	4.8 / 0.240	1.9 / 0.160	2.0 / 0.087	0.4 / 0.010	0 / 0.000	28 / 0.459	1.0 / 0.021	1.0 / 0.028	0.1 / 0.002	0.0 / 0.000	0.00	17	Fe 0.02; Cu 0.01; Zn 0.02; PO_4 0.00; (a)	42[b]	18	20	0	6		USGS
June 13 0815	Est 100	53	9.2	84	64.8	7.1	6.7 / 0.334	2.8 / 0.230	2.6 / 0.113	0.9 / 0.023	0 / 0.000	44 / 0.721		0.4 / 0.011			0.06				16	28	0	1		USGS
July 18 0940	Est 60	61	9.1	92	92.1	7.3	8.8 / 0.439	4.4 / 0.361	4.0 / 0.174	1.0 / 0.026	0 / 0.000	60 / 0.983		0.3 / 0.008			0.00				18	40	0	0.4		USGS
Aug 15 0950	Est 30	59	9.3	92	102	7.3	9.9 / 0.494	5.2 / 0.426	4.2 / 0.183	1.1 / 0.028	0 / 0.000	68 / 1.115		0.0 / 0.000			0.00				16	46	0	1		USGS
Sept 19 0915	Est 40	54	9.4	87	106	6.8	11 / 0.549	5.0 / 0.411	4.5 / 0.196	1.2 / 0.031	0 / 0.000	71 / 1.164	1.0 / 0.021	0.5 / 0.014	0.0 / 0.000	0.0 / 0.000	0.01	33	Fe 0.10; Cu 0.03; (a)	91[b]	16	48	0	1		USGS
Oct 17 0930	Est 50	47	9.7	82	107	7.0	10 / 0.499	4.9 / 0.401	4.5 / 0.196	1.5 / 0.038	0 / 0.000	67 / 1.098		0.2 / 0.006			0.00				17	45	0	30		USGS
Nov	Not sampled																									
Dec	Not sampled																								median 13; minimum 1.3; maximum 130	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown..

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Butte Creek near Chico																										
1955																										
Jan 11 1330	270	39	13.0	99	102	7.4	11 / 0.549	4.5 / 0.371	3.3 / 0.143	0.6 / 0.015	0 / 0.000	61 / 1.000		1.5 / 0.042			0.10				13	46	0	3		USGS
Feb 7 1515	242	44	12.3	100	105	7.8	12 / 0.599	4.0 / 0.331	3.8 / 0.165	0.7 / 0.018	0 / 0.000	63 / 1.032		0.8 / 0.023			0.00				15	46	0	3		USGS
Mar 7 1400	237	46	11.5	96	103	7.3	11 / 0.549	4.5 / 0.371	3.8 / 0.165	0.8 / 0.020	0 / 0.000	61 / 1.000		1.0 / 0.028			0.00				15	46	0	1		USGS
Apr 4 1415	571	46	11.4	95	80.2	7.4	5.2 / 0.259	5.2 / 0.429	3.4 / 0.148	0.8 / 0.020	0 / 0.000	52 / 0.852		0.8 / 0.023			0.01				17	34	0	2		USGS
May 12 1150	577	58	10.4	101	67.6	7.4	6.8 / 0.339	3.4 / 0.281	2.5 / 0.109	0.7 / 0.018	0 / 0.000	41 / 0.672	1.3 / 0.027	0.5 / 0.014	0.3 / 0.005	0.0 / 0.000	0.06	20	Zn 0.01; (a) PO_4 0.00	56[b]	15	31	0	2		USGS
Jun 16 1040	227	63	9.9	102	93.6	7.5	9.8 / 0.489	3.4 / 0.281	3.3 / 0.143	0.8 / 0.020	0 / 0.000	56 / 0.918		0.4 / 0.011			0.00				15	38	0	0.3		USGS
Jul 14 1000	160	65	7.6	80	101	7.4	16 / 0.798	1.2 / 0.102	3.7 / 0.161	0.9 / 0.023	0 / 0.000	65 / 1.065		0.5 / 0.014			0.08				15	45	0	1		USGS
Aug 18 1025	133	62	9.5	97	108	7.4	11 / 0.549	5.0 / 0.411	4.1 / 0.178	1.0 / 0.026	0 / 0.000	68 / 1.114		0.8 / 0.022			0.04				15	48	0	6		USGS
Sep 15 1030	160	58	10.1	98	108	7.4	12 / 0.599	4.2 / 0.349	3.2 / 0.143	0.9 / 0.023	0 / 0.000	66 / 1.082	1.2 / 0.025	0.0 / 0.000	0.1 / 0.002	0.1 / 0.005	0.00	23	Al 0.02; Cu 0.01; (a)	78[b]	13	47	0	0.9		USGS
Oct 13 1100	74	54	10.9	101	118	7.0	11 / 0.549	5.8 / 0.479	4.2 / 0.183	1.1 / 0.028	0 / 0.000	70 / 1.147		0.0 / 0.000			0.07				15	51	0	2		USGS
Nov 17 1100	115	41	12.1	95	127	7.0	13 / 0.649	5.4 / 0.443	4.8 / 0.209	0.9 / 0.023	0 / 0.000	74 / 1.213		0.3 / 0.008			0.09				16	55	0	5		USGS
Dec 15 1100	203	44	12.0	98	107	6.8	11 / 0.549	4.8 / 0.391	3.7 / 0.161	0.8 / 0.020	0 / 0.000	64 / 1.049		0.5 / 0.014			0.00				14	47	0	1		USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Butte Creek near Chico																			
1956																										
Jan 16 1530	3,400	48	11.1	96	57.3	6.8	5.0 / 0.250	2.8 / 0.234	1.8 / 0.078	0.5 / 0.013	0 / 0.000	33 / 0.541		0.0 / 0.000			0.01					14	24	0	35		USGS
Feb 7 0950	652	41	12.5	98	73.7	7.1	9.6 / 0.479	1.5 / 0.125	4.0 / 0.174	0.5 / 0.013	0 / 0.000	44 / 0.721		0.0 / 0.000			0.04					22	30	0	4		USGS
Mar 13 1010	610	52	12.6	100	73.3	7.0	10 / 0.499	1.6 / 0.131	2.5 / 0.109	0.3 / 0.008	0 / 0.000	42 / 0.688		2.0 / 0.056			0.04					15	32	0	5		USGS
Apr 10 1020	640	50	10.8	95	64.8	6.8	4.8 / 0.240	3.6 / 0.300	2.7 / 0.117	0.7 / 0.018	0 / 0.000	43 / 0.705		0.0 / 0.000			0.04					17	27	0	6		USGS
May 8 0940	762	48	11.4	98	57.7	6.8	5.8 / 0.289	3.1 / 0.251	2.0 / 0.087	0.5 / 0.013	0 / 0.000	36 / 0.590	2.0 / 0.042	0.5 / 0.014	0.0 / 0.000	0.0 / 0.000	0.00	17	Al 0.01; Cu 0.01; Zn 0.01; (a) PO_4 0.00	49[b]	14	27	0	7		USGS
June 12 0800	370	57	10.0	96	72.2	7.3	8.8 / 0.439	2.9 / 0.241	2.5 / 0.109	0.6 / 0.015	0 / 0.000	47 / 0.770		0.5 / 0.014			0.00					14	34	0	3		USGS
July 17 0825	191	65	9.5	100	95.5	7.5	9.8 / 0.489	4.3 / 0.355	3.6 / 0.157	1.0 / 0.026	0 / 0.000	62 / 1.016		0.3 / 0.008			0.02					15	42	0	0.8		USGS
Aug 14 0810	155	60	10.0	100	103	7.7	11 / 0.549	4.5 / 0.371	3.6 / 0.157	1.1 / 0.028	0 / 0.000	66 / 1.082		0.3 / 0.008			0.00					14	46	0	0.3		USGS
Sept 18 0830	124	58	10.0	98	103	6.8	12 / 0.599	4.5 / 0.373	3.6 / 0.157	0.7 / 0.018	0 / 0.000	70 / 1.147	0.0 / 0.000	0.0 / 0.000	0.1 / 0.002	0.2 / 0.011	0.00	22	Al 0.05; PO_4 0.05; (a)	77[b]	14	49	0	0.5		USGS
Oct 16 0935	165	50	11.4	101	106	7.5	11 / 0.549	4.9 / 0.399	3.6 / 0.157	0.8 / 0.020	0 / 0.000	69 / 1.131		0.2 / 0.006			0.00					14	47	0	0.4		USGS
Nov 20 0940	135	40	13.3	103	115	6.8	12 / 0.60	4.9 / 0.40	3.6 / 0.16	0.9 / 0.02	0 / 0.00	75 / 1.23		1.2 / 0.03			0.00					14	50	0	1.4		USGS
Dec 10 1600	127	38	13.4	100	113	7.2	12 / 0.60	4.9 / 0.40	3.8 / 0.17	1.0 / 0.03	0 / 0.00	72 / 1.18		0.5 / 0.01			0.00					14	50	0	0.4		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/000 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Cache Creek near Caray																			
1955																										
Jan 14 0930	91	41	12.5	98	825	8.3	41 / 2.05	34 / 2.77	71 / 3.09	2.9 / 0.07	10 / 0.33	264 / 4.33		100 / 2.82			3.3				39	241	8	0.6		USGS
Feb 25 1020	83	52	10.1	91	725	8.1	39 / 1.95	36 / 2.93	61 / 2.65	2.7 / 0.07	10 / 0.33	260 / 4.26		80 / 2.26			2.0				35	244	14	0.9		USGS
Mar 22 1205	93	59			729		11 / 0.55	50 / 4.11	61 / 2.65	0.8 / 0.02	0 / 0.00	276 / 4.52		78 / 2.20			1.6				36	233	7	3		USGS
Apr 6 1630	62	63	10.4	107	734	8.4	37 / 1.85	38 / 3.12	69 / 3.00	3.5 / 0.09	8 / 0.27	280 / 4.59		88 / 2.48			2.4				37	248	5	2		USGS
May 16 1230	258	76	9.2	108	548	8.2	37 / 1.85	27 / 2.25	39 / 1.70	2.7 / 0.07	0 / 0.00	266 / 4.36	22 / 0.46	40 / 1.13	0.6 / 0.01	0.1 / 0.01	1.5	11	Al 0.07; Zn 0.02; PO_4 0.05	312[b]	29	205	0	2		USGS
Jun	Not sampled																									
Jul 18 1030	476	80	9.2	114	496	7.8	33 / 1.68	27 / 2.23	35 / 1.52	2.7 / 0.07	4 / 0.13	253 / 4.15		32 / 0.90			1.5				28	194	0	1		USGS
Aug	Not sampled																									
Sep 19 1300	110	69	9.1	100	488	7.6	23 / 1.65	23 / 1.91	30 / 1.30	2.9 / 0.07	0 / 0.00	224 / 3.67	17 / 0.35	36 / 1.02	2.4 / 0.04	0.3 / 0.02	1.6	7.7	Al 0.08; (a)	264[b]	26	173	0	20		USGS
Oct 17 1120	10	69	9.9	108	680	7.8	44 / 2.20	32 / 2.63	57 / 2.48	2.5 / 0.06	9 / 0.30	262 / 4.29		73 / 2.06			2.1				34	242	12	2		USGS
Nov 24 1000	5	50	10.0	98	768	7.4	50 / 2.50	32 / 2.66	72 / 3.13	2.3 / 0.06	5 / 0.17	208 / 4.72		94 / 2.65			1.8				37	258	14	0		USGS
Dec 13 1220	81	50	11.1	98	834	6.8	42 / 2.10	37 / 3.02	82 / 3.57	3.3 / 0.08	7 / 0.23	248 / 4.06		128 / 3.61			4.0				41	256	41	3		USGS
																									median 5.6 minimum .023 maximum 50	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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REGION 5

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Cache Creek near Capay																										
1956																										
Jan 18 1545	5,350	51	11.0	98	331	7.8	24 / 1.198	19 / 1.594	16 / 0.696	1.6 / 0.041	0 / 0.000	169 / 2.770		12 / 0.338			0.85				20	140	1	300		USGS
Feb 8 1430	3,490	50	12.0	106	366	7.6	28 / 1.397	21 / 1.743	17 / 0.740	1.9 / 0.049	4 / 0.133	183 / 2.999		13 / 0.367			1.1				19	157	0	100		USGS
Mar 15 1240	3,290	52	11.3	102	331	7.3	24 / 1.198	20 / 1.662	15 / 0.652	1.8 / 0.046	0 / 0.000	169 / 2.770		12 / 0.338			0.85				18	143	4	30		USGS
Apr 12 1330	306	56	10.2	97	785	7.4	45 / 2.25	45 / 3.71	58 / 2.52	2.7 / 0.07	0 / 0.00	329 / 5.39		64 / 1.80			1.8				29	298	28	10		USGS
May 14 1200	480	66	9.0	96	447	7.8	29 / 1.447	27 / 2.193	29 / 1.262	2.2 / 0.056	0 / 0.000	211 / 3.458	27 / 0.562	28 / 0.790	1.2 / 0.019	0.0 / 0.000	1.3	11	Al 0.09; Cu 0.01; Zn 0.01; (a) PO_4 0.00	260[b]	25	182	9	0.9		USGS
June 18 1200	426	74	9.5	110	368	7.4	27 / 1.347	20 / 1.653	22 / 0.957	2.2 / 0.056	0 / 0.000	184 / 3.016		20 / 0.564			1.2				24	150	0	1		USGS
July 23 1230	410	84	8.3	107	319	7.9	25 / 1.248	18 / 1.464	17 / 0.740	2.3 / 0.059	0 / 0.00	167 / 2.737		15 / 0.423			1.0				21	136	0	1		USGS
Aug 20 1250	322	76	9.2	109	324	7.4	25 / 1.248	18 / 1.452	17 / 0.740	2.2 / 0.056	0 / 0.000	173 / 2.835		14 / 0.395			0.93				21	135	0	7		USGS
Sept 11 1320	201	72	9.5	108	358	7.9	28 / 1.397	18 / 1.483	21 / 0.914	0.2 / 0.005	0 / 0.000	186 / 3.049	14 / 0.291	20 / 0.564	0.4 / 0.006	0.1 / 0.005	0.93	12	Fe 0.01; Al 0.04; Cu 0.01; PO_4 0.10	207[b]	24	144	0	9		USGS
Oct 25 1410	11	59	10.5	103	693	7.9	40 / 2.00	33 / 2.75	57 / 2.48	2.3 / 0.06	0 / 0.00	274 / 4.49		81 / 2.28			1.7				34	237	12	0.4		USGS
Nov 13 1200	18	56	11.2	106	816	7.6	48 / 2.40	41 / 3.36	66 / 2.87	2.6 / 0.07	0 / 0.00	343 / 5.62		110 / 3.10			1.6				33	288	7	0.8		USGS
Dec 12 1110	24	49	10.8	94	959	8.1	50 / 2.50	54 / 4.46	84 / 3.65	3.0 / 0.08	0 / 0.00	306 / 5.02		149 / 4.20			2.8				34	348	97	0.4	median 2.3; minimum .23; maximum 62	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	NC ppm			
Cache Creek near Lower Lake																										
1955																										
Jan 13 1000	0.4	39	10.5	80	247	7.3	21 / 1.048	12 / 0.992	11 / 0.478	1.9 / 0.049	0 / 0.000	123 / 2.016		5.2 / 0.147			0.37				19	102	1	20		USGS
Feb 10 0930	0.4	41	10.0	78	268	7.8	24 / 1.198	13 / 1.062	13 / 0.565	1.7 / 0.043	0 / 0.000	130 / 2.131		5.5 / 0.155			0.37				20	113	6	7		USGS
March	Not sampled																									
Apr 6 1030	32	54	10.4	98	313	7.8	25 / 1.248	17 / 1.416	15 / 0.652	2.0 / 0.051	0 / 0.000	142 / 2.327		6.8 / 0.192			0.32				19	133	17	3		USGS
May 17 1100	226	62	8.0	82	322	7.8	34 / 1.697	14 / 1.183	13 / 0.565	2.3 / 0.059	0 / 0.000	183 / 2.999	12 / 0.250	7.5 / 0.212	0.8 / 0.013	0.0 / 0.000	0.96	2.5	Al 0.01; (a) PO_4 0.00	177[b]	16	144	0	5		USGS
Jun 21 1050	411	74	9.0	104	311	7.8	29 / 1.447	16 / 1.313	13 / 0.565	2.2 / 0.056	0 / 0.000	179 / 2.934		7.2 / 0.203			1.0				17	138	0	1		USGS
Jul 19 1115	449	72	8.2	94	311	7.8	27 / 1.347	18 / 1.453	13 / 0.565	2.5 / 0.064	0 / 0.000	184 / 3.016		7.0 / 0.197			0.90				16	140	0	4		USGS
Aug 23 1020	345	75	8.1	95	324	8.0	26 / 1.297	21 / 1.703	13 / 0.565	2.2 / 0.056	0 / 0.000	192 / 3.147		8.0 / 0.226			1.2				16	150	0	9		USGS
Sep 20 0930	79	66	8.0	85	349	7.5	27 / 1.347	20 / 1.613	13 / 0.565	2.9 / 0.074	0 / 0.000	200 / 3.278	11 / 0.229	7.5 / 0.212	0.1 / 0.002	0.5 / 0.026	1.2	2.7	Fe 0.01; Al 0.12; Pb 0.01; Zn 0.01; (a)	185[b]	16	148	0	2		USGS
Oct 17 1640	1.1	64	6.4	67	361	7.2	31 / 1.547	20 / 1.673	15 / 0.652	2.8 / 0.072	0 / 0.000	198 / 3.245		7.2 / 0.203			1.2				17	161	0	2		USGS
Nov 21 1130	.5	49	7.5	65	355	7.3	30 / 1.497	20 / 1.683	15 / 0.652	2.9 / 0.074	0 / 0.000	200 / 3.278		8.5 / 0.240			1.2				17	159	0	2		USGS
Dec 12 1345	.4	51	9.8	87	351	6.8	30 / 1.497	20 / 1.663	15 / 0.652	2.6 / 0.067	0 / 0.000	199 / 3.262		8.0 / 0.226			1.1				17	158	0	2	median 42 minimum 2.3 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Cache Creek near Lower Lake																										
1956																										
Jan 19 1220	2,940	47	10.5	89	310	7.2	26 / 1.297	17 / 1.419	12 / 0.522	2.5 / 0.064	0 / 0.000	170 / 2.786		6.7 / 0.189			1.1				16	136	0	20		USGS
Feb 9 1130	2,610	45	11.4	94	302	7.2	26 / 1.297	16 / 1.303	13 / 0.566	2.2 / 0.056	0 / 0.000	167 / 2.737		5.5 / 0.155			1.1				18	130	0	20		USGS
Mar 14 1215	2,640	48	11.0	95	261	7.2	21 / 1.048	16 / 1.292	10 / 0.435	2.0 / 0.051	0 / 0.000	142 / 2.327		7.2 / 0.203			0.82				15	117	1	15		USGS
Apr 11 1230	3.2	58	9.2	90	298	7.0	18 / 0.898	19 / 1.522	16 / 0.696	3.4 / 0.087	0 / 0.000	160 / 2.622		12 / 0.338			0.83				22	121	0	15		USGS
May 15 0915	220	63	9.3	96	250	7.3	22 / 1.098	14 / 1.130	10 / 0.435	2.1 / 0.054	0 / 0.000	140 / 2.295	11 / 0.229	5.4 / 0.152	2.0 / 0.032	0.1 / 0.005	0.86	9.7	Fe 0.01; Al 0.03; Cu 0.01; Zn 0.06; PO_4 0.12; (a)	146[b]	16	111	0	7		USGS
June 19 0910	372	70	8.6	96	249	7.5	27 / 1.347	11 / 0.873	9.9 / 0.431	2.1 / 0.054	0 / 0.000	142 / 2.327		5.0 / 0.141			0.80				16	111	0	20		USGS
July 24 0815	446	81	7.8	97	250	7.7	22 / 1.098	14 / 1.182	10 / 0.435	1.9 / 0.049	0 / 0.000	144 / 2.360		5.5 / 0.155			0.63				16	114	0	6		USGS
Aug 21 0900	337	76	8.5	100	255	7.2	23 / 1.148	14 / 1.132	10 / 0.435	2.2 / 0.056	0 / 0.000	145 / 2.377		5.3 / 0.149			0.87				16	114	0	3		USGS
Sept 12 0830	220	69	8.6	95	261	7.7	24 / 1.198	14 / 1.134	10 / 0.435	2.0 / 0.051	0 / 0.000	150 / 2.458	7.7 / 0.160	5.3 / 0.149	0.9 / 0.015	0.3 / 0.016	0.77	10	Al 0.07; Cu 0.02; (a)	149[b]	15	117	0	15		USGS
Oct 26 1015	2.0*	57	8.5	82	277	7.5	25 / 1.25	15 / 1.22	11 / 0.48	2.2 / 0.06	0 / 0.00	160 / 2.62		6.0 / 0.17			0.88				16	123	0	2		USGS
Nov 14 1020	2.2	55	8.8	83	277	7.2	24 / 1.20	15 / 1.27	11 / 0.48	2.2 / 0.06	0 / 0.00	162 / 2.66		6.8 / 0.19			0.69				16	124	0	3.9		USGS
Dec 13 0950	3.2	44	10.5	85	283	7.7	24 / 1.20	17 / 1.36	11 / 0.48	2.2 / 0.06	0 / 0.00	166 / 2.72		6.0 / 0.17			0.78				15	128	0	1	median 5.6 minimum .23 maximum 2400	USGS

* Not revised

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Cache Creek-North Fork near Lower Lake																			
1955																										
Jan 12 1500	64	46	13.4	112	426	8.3	28 / 1.397	24 / 2.003	25 / 1.087	1.2 / 0.031	14 / 0.467	176 / 2.884		35 / 0.987			1.9				24	170	3	0.4		USGS
Feb 9 1330	94		12.3		359	8.4	25 / 1.248	21 / 1.732	20 / 0.870	0.9 / 0.023	7 / 0.233	168 / 2.753		24 / 0.677			1.5				22	149	0	1		USGS
Mar 9 0745	97	50	9.8	86	379	8.0	25 / 1.248	22 / 1.772	23 / 1.000	1.2 / 0.031	0 / 0.000	185 / 3.032		24 / 0.677			1.7				25	151	0	0.7		USGS
Apr 6 0730	50	48	10.4	89	401	8.2	24 / 1.198	25 / 2.086	26 / 1.131	1.3 / 0.033	0 / 0.000	212 / 3.474		28 / 0.790			2.1				25	164	0	1		USGS
May 17 1200	76	70	9.0	100	352	8.2	25 / 1.248	20 / 1.612	20 / 0.870	1.3 / 0.033	5 / 0.167	174 / 2.852	11 / 0.229	14 / 0.395	0.5 / 0.008	0.0 / 0.000	1.4	21	Al 0.01; (a) PO_4 0.05	205[b]	23	143	0	0.8		USGS
Jun 21 1200	14	78	9.5	114	458	7.9	33 / 1.647	23 / 1.869	30 / 1.305	1.5 / 0.038	15 / 0.500	193 / 3.163		38 / 1.072			2.7				27	176	0	0.3		USGS
Jul 19 1210	4.9	83	9.3	118	518	7.8	33 / 1.65	27 / 2.19	36 / 1.57	2.1 / 0.05	10 / 0.33	211 / 3.46		52 / 1.47			3.7				29	192	0	0.6		USGS
Aug 23 1120	0.9	80	8.8	108	601	7.8	36 / 1.80	32 / 2.64	40 / 1.74	2.0 / 0.05	0 / 0.00	254 / 4.16		68 / 1.92			4.9				28	222	14	0.6		USGS
Sep 20 1045	1.2	69	10.6	107	672	7.7	21 / 1.05	46 / 3.81	44 / 1.91	2.0 / 0.05	0 / 0.00	257 / 4.21	13 / 0.27	87 / 2.45	0.3 / 0.00	0.1 / 0.01	4.5	21	Fe 0.01; Al 0.11; Cu 0.01; (a)	366[b]	28	243	32	0.5		USGS
Oct 18 0845	0.8	60	8.9	89	667	7.4	40 / 2.00	29 / 2.42	50 / 2.18	1.9 / 0.05	0 / 0.00	251 / 4.11		84 / 2.37			5.6				33	221	15	2		USGS
Nov 21 1315	3.6	56	13.5	128	603	7.5	35 / 1.75	27 / 2.19	53 / 2.31	2.2 / 0.06	9 / 0.30	193 / 3.16		83 / 2.34			6.1				37	197	24	2		USGS
Dec 12 1450	67	51	10.9	97	632	6.8	37 / 1.85	34 / 2.77	44 / 1.91	1.7 / 0.04	6 / 0.20	222 / 3.64		80 / 2.26			4.7				29	231	39	1		USGS
																									median 2.6 minimum .06 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Cache Creek-North Fork near Lower Lake																										
1956																										
Jan 19 1300	1,290	51	11.0	98	224	7.0	18 / 0.898	14 / 1.118	8.1 / 0.352	0.8 / 0.020	0 / 0.000	125 / 2.049		5.2 / 0.147			0.40				15	101	0	180		USGS
Feb 9 1245	397	51	11.9	106	325	7.2	23 / 1.148	22 / 1.784	13 / 0.566	0.8 / 0.020	2 / 0.067	176 / 2.885		8.2 / 0.231			0.68				16	147	0	30		USGS
Mar 14 1115	322	50	11.0	97	309	7.8	23 / 1.148	21 / 1.692	12 / 0.522	0.8 / 0.020	3 / 0.100	168 / 2.754		11 / 0.310			0.58				15	142	0	15		USGS
Apr 11 1100	160	52	10.9	99	403	7.8	28 / 1.397	26 / 2.163	21 / 0.914	1.2 / 0.031	0 / 0.000	223 / 3.655		16 / 0.451			1.4				20	178	0	0.5		USGS
May 15 1000	63	63	9.9	102	413	7.6	29 / 1.447	28 / 2.273	22 / 0.957	1.3 / 0.033	6 / 0.200	223 / 3.458	19 / 0.396	22 / 0.620	0.4 / 0.006	0.1 / 0.005	1.5	17	Al 0.11; Cu 0.01; Zn 0.01; (a)	250[b]	20	186	3	1		USGS
June 19 1015	24	71	10.0	112	474	7.7	34 / 1.697	28 / 2.343	27 / 1.174	1.6 / 0.041	0 / 0.000	238 / 3.901		34 / 0.959			2.2		PO_4 0.00		22	202	7	2		USGS
July 24 0930	76*	78	8.8	106	521	7.9	36 / 1.80	30 / 2.45	31 / 1.35	2.1 / 0.05	0 / 0.00	241 / 3.95		46 / 1.30			2.7				24	212	14	0.4		USGS
Aug 21 1030	62*	78	10.0	120	524	7.8	31 / 1.55	31 / 2.51	34 / 1.48	2.1 / 0.05	0 / 0.00	226 / 3.70		53 / 1.49			3.3				26	203	18	0.4		USGS
Sept 12 0930	0	68	8.4	92	617	7.3	45 / 2.25	36 / 2.99	40 / 1.74	1.8 / 0.05	0 / 0.00	284 / 4.65	21 / 0.44	62 / 1.75	0.1 / 0.00	0.1 / 0.01	3.0	24	Al 0.06; Cu 0.01; PO_4 0.05; (a)	373[b]	25	262	29	0.9		USGS
Oct 26 1335	0	66	7.1	76	655	7.3	37 / 1.85	38 / 3.15	44 / 1.91	1.9 / 0.05	0 / 0.00	287 / 4.70		71 / 2.00			3.0				27	250	15	0.4		USGS
Nov 14 1120	12	52	12.9	126	884	7.8	50 / 2.50	49 / 4.06	56 / 2.44	2.5 / 0.06	0 / 0.00	287 / 4.70		141 / 3.98			7.1				27	328	93	0.9		USGS
Dec 13 1045	13	52	13.0	118	880	8.3	50 / 2.50	52 / 4.38	54 / 2.35	2.1 / 0.05	0 / 0.00	284 / 4.65		145 / 4.09			7.4				25	344	111	0.4	median 2.3; minimum .19; maximum 230	USGS

* Not revised

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Calaveras River near Jenny Lind																			
1955																										
Jan 18 1700	2,770	42	11.8	93	138	7.2	14 / 0.699	5.6 / 0.461	5.1 / 0.222	1.1 / 0.028	0 / 0.000	62 / 1.016		3.0 / 0.085			0.10				16	58	7	60		USGS
Feb 15 1300	94	52	11.2	101	230	7.8	25 / 1.248	9.6 / 0.792	7.6 / 0.330	1.2 / 0.031	0 / 0.000	110 / 1.803		6.0 / 0.169			0.03				14	102	12	2		USGS
Mar 15 1130	6.2	57	10.0	98	311	7.5	22 / 1.098	20 / 1.622	11 / 0.478	1.4 / 0.036	0 / 0.000	148 / 2.426		10 / 0.282			0.04				15	136	15	10		USGS
Apr 19 1320	104	53	11.8	108	198	6.8	15 / 0.749	12 / 0.991	6.4 / 0.278	1.2 / 0.031	0 / 0.000	98 / 1.606		4.8 / 0.135			0.05				14	87	7	3		USGS
May 20 0940	111	62	9.7	100	185	8.1	23 / 1.148	5.5 / 0.452	7.6 / 0.330	2.9 / 0.074	0 / 0.000	102 / 1.672	9.6 / 0.200	3.5 / 0.099	0.4 / 0.006	0.1 / 0.005	0.00	17	Fe 0.01; Al 0.01; (a) PO_4 0.00	120[b]	16	80	0	6		USGS
Jun 24 0910	160	62	9.6	98	197	7.7	23 / 1.148	7.2 / 0.592	6.2 / 0.270	1.4 / 0.036	0 / 0.000	109 / 1.786		4.2 / 0.118			0.04				13	87	0	3		USGS
Jul 1P 1115	171	72	9.0	102	222	7.4	23 / 1.148	8.9 / 0.732	8.3 / 0.361	2.5 / 0.064	0 / 0.000	108 / 1.770		5.0 / 0.141			0.20				16	94	5	7		USGS
Aug 22 1300	0	81	6.5	81	254	7.4	27 / 1.347	12 / 0.973	7.4 / 0.322	1.9 / 0.049	0 / 0.000	141 / 2.311		5.8 / 0.164			0.12				12	116	0	2		USGS
Sep	No Flow																									
Oct	Dry																									
[illegible]	Dry																									
Dec 19 1400	80	51	9.9	88	243	7.3	27 / 1.347	8.9 / 0.733	8.3 / 0.361	1.7 / 0.043	0 / 0.000	106 / 1.737		9.0 / 0.254			0.17				15	104	17	9	median 6.2; minimum .06; maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Calaveras River near Jenny Lind																			
1956																										
Jan 16 1245	4,030	51	10.8	97	101	7.3	12 / 0.599	2.9 / 0.241	2.4 / 0.104	1.3 / 0.033	0 / 0.000	52 / 0.852		0.5 / 0.014			0.08				11	42	0	80		USGS
Feb 14 1250	281	47	11.7	99	189	7.5	20 / 0.998	8.0 / 0.658	5.6 / 0.244	1.3 / 0.033	1 / 0.033	96 / 1.573		3.1 / 0.087			0.01				13	83	3	10		USGS
Mar 19 1230	12	58	10.8	105	247	7.5	23 / 1.148	13 / 1.092	7.8 / 0.339	1.3 / 0.033	0 / 0.000	126 / 2.065		7.5 / 0.212			0.18				13	112	9	1		USGS
Apr 16 1215	7.0	60	10.2	102	290	7.3	28 / 1.397	15 / 1.255	10 / 0.435	1.5 / 0.038	0 / 0.000	150 / 2.458		9.3 / 0.262			0.08				14	133	10	1		USGS
May 14 1130	59	66	10.3	110	200	7.7	22 / 1.098	9.4 / 0.776	6.9 / 0.300	1.4 / 0.036	0 / 0.000	111 / 1.819	13 / 0.271	4.6 / 0.130	0.3 / 0.005	0.3 / 0.016	0.04	17	Fe 0.01; Al 0.02; Cu 0.01; PO_4 0.00; (a)	130[b]	14	94	3	1		USGS
June 19 1220	176	63	10.0	103	179	7.7	20 / 0.998	5.6 / 0.462	6.5 / 0.283	1.4 / 0.036	0 / 0.000	100 / 1.639		3.2 / 0.090			0.08				16	73	0	2		USGS
July 26 0950	182	72	8.8	100	199	7.3	22 / 1.098	8.8 / 0.722	6.5 / 0.283	1.6 / 0.041	0 / 0.000	113 / 1.852		4.1 / 0.116			0.09				13	91	0	1		USGS
Aug 20 1100	158*	73	9.4	108	210	7.9	25 / 1.248	8.0 / 0.656	6.2 / 0.270	1.8 / 0.046	0 / 0.000	116 / 1.901		4.0 / 0.113			0.00				12	95	0	2		USGS
Sept 11 1300	107*	73	9.5	109	227	7.0	26 / 1.297	9.3 / 0.763	7.0 / 0.304	1.7 / 0.043	0 / 0.000	126 / 2.065	11 / 0.229	3.6 / 0.102	1.1 / 0.018	0.3 / 0.016	0.00	18	Cu 0.01; (a)	140[b]	13	103	0	2		USGS
Oct 18 0945	7	61	8.5	86	314	7.6	36 / 1.796	14 / 1.172	9.6 / 0.418	2.1 / 0.054	0 / 0.000	181 / 2.967		9.0 / 0.254			0.00				12	148	0	0.4		USGS
Nov 19 1140	21	49	10.9	95	305	7.9	30 / 1.497	11 / 0.895	11 / 0.478	1.6 / 0.041	0 / 0.000	141 / 2.311		10 / 0.282			0.00				16	120	0	1.0		USGS
Dec 17 1135	25	46	12.2	102	241	7.7	28 / 1.40	10 / 0.84	7.5 / 0.33	1.6 / 0.04	0 / 0.00	127 / 2.08		2.5 / 0.07			0.08				13	112	8	7	median 2.3 minimum .045 – maximum 7000	USGS

* Not revised

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Clear Lake near Clearlake Oaks																										
1955																										
Jan 12 1530		45	10.6	87	290	8.0	26 / 1.297	16 / 1.343	11 / 0.478	2.0 / 0.051	0 / 0.000	166 / 2.721		7.2 / 0.203			0.38				15	132	0	9		USGS
Feb 9 1420		48	10.3	88	294	7.6	26 / 1.297	17 / 1.423	12 / 0.522	2.0 / 0.051	0 / 0.000	166 / 2.721		8.8 / 0.248			0.79				16	136	0	2		USGS
Mar 9 0845		48	10.3	89	291	7.9	26 / 1.297	16 / 1.323	12 / 0.522	2.2 / 0.056	0 / 0.000	164 / 2.688		7.0 / 0.197			0.64				16	131	0	1		USGS
Apr 6 0830		52	10.0	91	286	8.0	21 / 1.048	18 / 1.512	12 / 0.522	2.2 / 0.056	0 / 0.000	168 / 2.753		6.4 / 0.181			0.92				17	128	0	2		USGS
May 17 1300		63	10.2	105	294	8.1	25 / 1.248	17 / 1.372	11 / 0.478	2.2 / 0.056	0 / 0.000	168 / 2.753	12 / 0.250	6.0 / 0.169	0.4 / 0.006	0.0 / 0.000	0.87	0.9	Fe 0.005; Mn 0.01; (a) PO_4 0.00	158[b]	15	131	0	3		USGS
Jun 21 1300		73	10.8	124	299	7.8	29 / 1.447	15 / 1.233	12 / 0.522	2.1 / 0.054	5 / 0.167	164 / 2.688		6.5 / 0.183			0.87				16	134	0	0.4		USGS
Jul 19 1310		78	10.5	126	308	7.8	22 / 1.098	20 / 1.662	12 / 0.522	2.3 / 0.059	0 / 0.000	180 / 2.950		7.0 / 0.197			1.1				16	138	0	2		USGS
Aug 23 1240		79	11.6	142	311	8.2	28 / 1.397	18 / 1.443	13 / 0.565	2.2 / 0.056	11 / 0.367	164 / 2.688		7.0 / 0.197			1.2				16	142	0	2		USGS
Sep 20 1150		72	12.2	138	321	8.0	20 / 0.998	22 / 1.822	13 / 0.565	2.5 / 0.064	0 / 0.000	175 / 2.868	15 / 0.312	7.5 / 0.212	3.7 / 0.060	0.2 / 0.011	1.4	4.8	Fe 0.02; Cu 0.01; (a) Al 0.08	176[b]	16	141	0	5		USGS
Oct 18 0930		64	10.5	110	340	7.8	29 / 1.447	19 / 1.549	14 / 0.609	2.5 / 0.064	0 / 0.000	187 / 3.065		7.1 / 0.200			1.3				17	150	0	10		USGS
Nov 21 1400		53	11.6	106	333	7.4	29 / 1.447	19 / 1.581	14 / 0.609	2.5 / 0.064	4 / 0.133	181 / 2.967		7.5 / 0.212			1.3				16	151	0	10		USGS
Dec 12 1445		51	13.0	116	341	6.8	28 / 1.397	20 / 1.623	14 / 0.609	2.5 / 0.064	0 / 0.000	185 / 3.032		8.5 / 0.240			1.3				16	151	0	9		USGS
																									median .62 minimum .045- maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp. in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Clear Lake near Clearlake Oaks																			
1956																										
Jan 19 1430		50	9.8	87	240	7.0	20 / 0.998	13 / 1.098	8.9 / 0.387	1.7 / 0.043	0 / 0.000	130 / 2.131		5.2 / 0.147			0.75				15	105	0	75		USGS
Feb 9 1410		48	10.0	86	228	7.3	20 / 0.998	12 / 0.970	9.0 / 0.392	1.8 / 0.046	0 / 0.000	125 / 2.049		3.9 / 0.110			0.59				16	98	0	65		USGS
Mar 14 1345		53	11.0	107	196	6.8	17 / 0.848	12 / 0.972	7.3 / 0.318	1.8 / 0.046	0 / 0.000	110 / 1.803		5.2 / 0.147			0.44				15	91	1	40		USGS
Apr 11 1400		56	10.4	99	211	7.0	18 / 0.898	12 / 0.962	8.5 / 0.370	1.8 / 0.046	0 / 0.000	120 / 1.967		4.5 / 0.127			0.64				16	93	0	20		USGS
May 15 1045		62	9.3	95	223	7.2	19 / 0.948	13 / 1.044	8.9 / 0.387	1.8 / 0.046	0 / 0.000	124 / 2.032	11 / 0.229	4.3 / 0.121	2.3 / 0.037	0.1 / 0.005	0.67	15	Fe 0.04; Al 0.08; Cu 0.01; Zn 0.01; PO_4 0.08; (a)	137[b]	16	100	0	3		USGS
June 19 1045		68	8.6	94	229	7.5	24 / 1.198	10 / 0.842	8.9 / 0.387	1.9 / 0.046	0 / 0.000	129 / 2.114		4.2 / 0.118			0.67				16	102	0	10		USGS
July 24 1020		80	8.6	106	236	7.9	22 / 1.098	13 / 1.062	9.4 / 0.409	1.9 / 0.049	0 / 0.000	136 / 2.2		5.0 / 0.141			0.71				16	108	0	4		USGS
Aug 21 1220		80	9.0	111	241	7.2	21 / 1.048	14 / 1.144	9.6 / 0.418	2.0 / 0.051	0 / 0.000	139 / 2.2		5.0 / 0.141			0.73				16	110	0	5		USGS
Sept 12 1025		70	8.2	91	249	7.7	23 / 1.143	13 / 1.100	9.6 / 0.418	2.0 / 0.051	0 / 0.000	142 / 2.327	7.7 / 0.16	5.5 / .155	0.6 / 0.010	0.3 / 0.016	0.67	11	Al 0.07; Cu 0.01; (a)	143[b]	15	112	0	4		USGS
Oct 26 1115		59	9.1	90	256	7.9	23 / 1.15	14 / 1.15	9.9 / 0.43	1.9 / 0.05	0 / 0.00	148 / 2.43		5.6 / 0.16			0.72				15	115	0	20		USGS
Nov 14 1200		56	11.1	106	260	7.2	23 / 1.15	14 / 1.17	10 / 0.44	2.0 / 0.05	0 / 0.00	152 / 2.49		6.2 / 0.17			0.79				16	116	0	20		USGS
Dec 13 1135		49	11.3	98	263	7.9	23 / 1.15	14 / 1.19	10 / 0.44	2.4 / 0.06	0 / 0.00	153 / 2.51		5.0 / 0.14			0.72				15	117	0	10	median 2.3 minimum .13 maximum 7000+	USGS

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Clear Lake at Lakeport																			
1955																										
Jan 12 1620		45	10.0	82	286	7.8	26 / 1.297	15 / 1.193	11 / 0.478	1.9 / 0.049	0 / 0.000	160 / 2.622		6.5 / 0.183			0.65				16	124	0	30		USGS
Feb 5 1520		50			281	8.0	25 / 1.248	16 / 1.312	11 / 0.478	1.9 / 0.049	0 / 0.000	159 / 2.606		6.5 / 0.183			0.74				15	128	0	10		USGS
Mar 9 0930		50	11.3	100	279	8.3	22 / 1.098	17 / 1.402	11 / 0.478	2.2 / 0.056	0 / 0.000	158 / 2.589		6.5 / 0.183			0.36				16	125	0	10		USGS
Apr 6 0915		56	10.0	95	287	8.1	22 / 1.098	17 / 1.422	11 / 0.478	2.0 / 0.051	0 / 0.000	164 / 2.688		6.0 / 0.169			0.63				16	126	0	2		USGS
May 17 1700		66	8.6	92	288	8.2	24 / 1.198	17 / 1.382	11 / 0.478	2.1 / 0.054	0 / 0.000	166 / 2.721	10 / 0.208	6.0 / 0.169	0.5 / 0.008	0.0 / 0.000	0.70	1.9	Al 0.005; (a) PO_4 0.05	155[b]	15	129	0	2		USGS
Jun 21 1350		76	9.8	115	302	7.9	30 / 1.497	14 / 1.171	12 / 0.522	2.2 / 0.056	0 / 0.000	174 / 2.852		6.3 / 0.178			0.80				16	133	0	0.4		USGS
Jul 19 1410		80	9.0	111	308	7.8	24 / 1.198	19 / 1.542	12 / 0.522	2.6 / 0.067	0 / 0.000	179 / 2.934		7.0 / 0.197			0.95				16	137	0	4		USGS
Aug 23 1330		83	8.3	106	323	8.1	27 / 1.347	19 / 1.593	13 / 0.565	2.3 / 0.059	0 / 0.000	190 / 3.114		7.5 / 0.212			1.1				16	147	0	20		USGS
Sep 20 1240		76	15.4	182	337	8.2	28 / 1.397	19 / 1.543	12 / 0.522	2.5 / 0.064	0 / 0.000	195 / 3.196	11 / 0.229	7.2 / 0.203	0.1 / 0.002	0.4 / 0.021	1.1	7.2	Fe 0.02; Al 0.05; (a)	184[b]	15	147	0	8		USGS
Oct 18 1045		63	9.0	93	354	8.0	29 / 1.447	19 / 1.541	14 / 0.609	2.5 / 0.064	0 / 0.000	212 / 3.475		6.1 / 1.720			1.1				17	149	0	20		USGS
Nov 21 1450		51	9.2	82	331	7.1	28 / 1.397	19 / 1.583	14 / 0.609	2.5 / 0.064	0 / 0.000	184 / 3.016		8.0 / 0.226			1.2				17	149	0	25		USGS
Dec 12 1600		51	9.3	83	323	6.8	28 / 1.397	18 / 1.503	13 / 0.566	2.5 / 0.064	0 / 0.000	182 / 2.983		8.5 / 0.240			1.1				16	145	0	20		USGS
																									median 23 minimum .045- maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Clear Lake at Lakeport																										
1956																										
Jan 19 1515		49	10.1	88	218	7.0	18 / 0.898	12 / 0.962	6.7 / 0.291	1.7 / 0.043	0 / 0.000	118 / 1.934		5.0 / 0.141			0.62				13	93	0	65		USGS
Feb 9 1520		48	10.3	89	221	7.2	19 / 0.948	11 / 0.940	8.3 / 0.361	1.7 / 0.043	0 / 0.000	121 / 1.983		4.0 / 0.113			0.54				16	94	0	85		USGS
Mar 14 1500		56	10.8	103	195	7.0	18 / 0.898	10 / 0.842	7.1 / 0.309	1.8 / 0.046	0 / 0.000	107 / 1.754		5.0 / 0.141			0.45				15	87	0	40		USGS
Apr 11 1500		52	9.4	85	205	7.0	17 / 0.848	12 / 0.972	7.8 / 0.339	1.8 / 0.046	0 / 0.000	120 / 1.967		3.5 / 0.099			0.58				15	91	0	35		USGS
May 15 1130		66	11.2	119	213	7.6	18 / 0.898	12 / 1.002	8.3 / 0.361	1.8 / 0.046	0 / 0.000	121 / 1.983	9.4 / 0.196	3.8 / 0.107	1.8 / 0.029	0.1 / 0.005	0.58	14	Fe 0.04; Al 0.06; Cu 0.01; PO_4 0.06; (a)	130[b]		16	95	0	5		USGS
June 19 1145		72	9.3	106	225	7.7	23 / 1.148	10 / 0.856	8.7 / 0.378	1.9 / 0.046	0 / 0.000	128 / 2.098		4.2 / 0.118			0.58				16	100	0	10		USGS
July 24 1120		78	7.2	87	237	7.5	22 / 1.098	13 / 1.042	9.6 / 0.418	1.8 / 0.046	0 / 0.000	136 / 2.229		5.0 / 0.141			0.67				16	107	0	10		USGS
Aug 21 1315		80	9.3	115	246	7.2	21 / 1.048	14 / 1.160	9.6 / 0.418	2.0 / 0.051	0 / 0.000	138 / 2.262		5.0 / 0.141			0.78				16	110	0	5		USGS
Sept 12 1115		72	7.6	86	247	7.7	22 / 1.098	14 / 1.122	9.6 / 0.418	2.0 / 0.051	0 / 0.000	141 / 2.311	7.7 / 0.160	5.0 / 0.141	0.6 / 0.010	0.3 / 0.016	0.71	14	Al 0.07; Cu 0.04; (a)	145[b]		16	111	0	20		USGS
Oct 26 1210		58	9.2	89	256	7.9	23 / 1.15	14 / 1.14	9.9 / 0.43	2.2 / 0.06	0 / 0.00	148 / 2.43		5.4 / 0.15			0.72				15	114	0	25		USGS
Nov 14 1300		56	10.0	95	258	7.2	23 / 1.15	14 / 1.16	9.4 / 0.41	2.0 / 0.05	0 / 0.00	149 / 2.44		6.2 / 0.17			0.62				15	116	0	19		USGS
Dec 13 1230		48	9.9	85	258	7.7	23 / 1.15	14 / 1.17	10 / 0.44	2.1 / 0.05	0 / 0.00	156 / 2.56		6.0 / 0.17			0.73				16	116	0	15	median 1.8 minimum .045 - maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Colusa Trough near Colusa																										
1955																										
Jan 12 1330	464	43	10.8	87	1220	8.2	49 / 2.45	39 / 3.19	160 / 6.96	2.6 / 0.07	0 / 0.00	281 / 4.61		107 / 3.02			0.21				55	282	52	35		USGS
Feb 9 1150	147	50	10.3	91	1670	8.4	70 / 3.49	59 / 4.87	224 / 9.74	1.2 / 0.03	12 / 0.40	328 / 5.38		164 / 4.63			0.37				54	418	129	20		USGS
Mar 8 1730	92	57	11.3	108	1420	8.4	51 / 2.54	55 / 4.52	185 / 8.04	2.2 / 0.06	10 / 0.33	319 / 5.23		126 / 3.55			0.15				53	353	75	40		USGS
Apr 5 1500	294	56	10.0	95	432	8.2	21 / 1.048	18 / 1.512	42 / 1.826	2.3 / 0.059	0 / 0.000	158 / 2.589		24 / 0.677			0.16				41	128	0	36		USGS
May 13 0930	1,010	68	7.3	80	453	7.7	23 / 1.148	16 / 1.292	51 / 2.218	2.6 / 0.067	0 / 0.000	174 / 2.852	57 / 1.187	26 / 0.733	1.1 / 0.018	0.2 / 0.011	0.20	17	Fe 0.1; Al 0.1; (a) PO_4 0.60	280[b]	47	122	0	160		USGS
Jun 17 1040	613	75	7.5	88	493	7.6	26 / 1.30	16 / 1.33	56 / 2.44	1.5 / 0.38	0 / 0.00	194 / 3.18		28 / 0.79			0.02				45	131	0	29		USGS
Jul 15 1000	707	76	7.0	83	469	7.4	23 / 1.15	20 / 1.61	51 / 2.22	1.7 / 0.04	0 / 0.00	209 / 3.43		22 / 0.62			0.22				44	138	0	45		USGS
Aug 19 0850	827	71	7.5	84	453	7.4	26 / 1.297	19 / 1.543	48 / 2.087	1.6 / 0.041	0 / 0.000	205 / 3.360		23 / 0.649			0.25				42	142	0	145		USGS
Sep 19 1050	591	66	8.1	87	525	7.4	27 / 1.35	21 / 1.71	51 / 2.22	2.2 / 0.06	0 / 0.00	207 / 3.39	57 / 1.19	29 / 0.82	1.2 / 0.02	0.5 / 0.03	0.20	18	Fe 0.05; Al 0.12; Cu 0.02; (a)	309[b]	42	153	0	65		USGS
Oct 14 0930	350	65	8.0	85	485	7.4	26 / 1.297	18 / 1.475	51 / 2.218	2.5 / 0.064	0 / 0.000	183 / 2.999		26 / 0.733			0.11				44	139	0	65		USGS
Nov 18 1020	1,368	48	10.8	93	609	7.3	29 / 1.45	21 / 1.71	74 / 3.22	3.2 / 0.08	0 / 0.00	210 / 3.44		35 / 0.99			0.23				50	158	0	80		USGS
Dec 13 1415	252	50	10.2	90	1020	6.8	44 / 2.20	37 / 3.04	131 / 5.70	2.8 / 0.07	0 / 0.00	288 / 4.72		77 / 2.17			0.35				52	262	26	50		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform.[d] MPN/ml	Analyzed by[e]
Colusa Trough near Colusa																										
1956																										
Jan 18 1215	3,170	49	9.8	86	269	7.2	15 / 0.748	9.4 / 0.772	26 / 1.131	3.0 / 0.077	0 / 0.000	110 / 1.803		11 / 0.310			0.09				41	76	0	200		USGS
Feb 8 1100	529	52	10.8	98	1,070	7.8	58 / 2.89	37 / 3.03	126 / 5.48	1.8 / 0.05	10 / 0.33	290 / 4.75		87 / 2.45			0.26				48	296	42	80		USGS
Mar 14 0930	249	51	10.8	97	1,110	7.8	58 / 2.89	45 / 3.67	144 / 6.26	1.4 / 0.04	9 / 0.30	310 / 5.08		103 / 2.90			0.26				49	328	59	15		USGS
Apr 11 0945	493	52	9.7	98	445	7.0	27 / 1.347	17 / 1.393	41 / 1.784	2.1 / 0.054	0 / 0.000	172 / 2.819		23 / 0.649			0.26				39	137	0	80		USGS
May 14 1030	1,290	63	8.2	85	380	7.7	20 / 0.998	15 / 1.222	41 / 1.784	1.7 / 0.043	0 / 0.000	151 / 2.475	53 / 1.103	18 / 0.508	0.8 / 0.013	0.2 / 0.011	0.17	9.9	Fe 0.06; Al 0.10; Cu 0.01; Zn 0.02; (a) PO_4 0.20	234[b]	42	111	0	100		USGS
June 18 1020	661	73	7.3	84	405	7.5	23 / 1.148	16 / 1.292	42 / 1.827	1.3 / 0.033	0 / 0.000	166 / 2.721		20 / 0.564			0.00				42	122	0	35		USGS
July 23 1110	843	81	6.7	83	383	7.5	24 / 1.198	16 / 1.310	38 / 1.653	1.6 / 0.041	0 / 0.000	188 / 3.081		15 / 0.423			0.21				39	125	0	20		USGS
Aug 20 1120	993	72	8.0	91	385	7.4	25 / 1.248	15 / 1.212	38 / 1.653	1.4 / 0.036	0 / 0.000	181 / 2.967		14 / 0.395			0.12				40	123	0	16		USGS
Sept 11 1140	1,380	67	7.8	84	390	7.5	24 / 1.198	16 / 1.322	39 / 1.696	1.9 / 0.049	0 / 0.000	184 / 3.016	33 / 0.687	17 / 0.479	0.9 / 0.015	0.4 / 0.021	0.10	17	Al 0.15; Cu 0.02; PO_4 0.25; (a)	240[b]	40	126	0	30		USGS
Oct 25 1210	406	54	10.0	93	405	7.7	22 / 1.098	15 / 1.202	42 / 1.827	2.2 / 0.056	0 / 0.000	163 / 2.672		22 / 0.620			0.00				44	115	0	30		USGS
Nov 19 0930	269	46	12.0	100	571	7.4	28 / 1.40	21 / 1.72	62 / 2.70	2.7 / 0.07	0 / 0.00	200 / 3.28		23 / 0.93			0.7				46	156	0	40		USGS
Dec 11 1600	294	44	12.4	101	508	7.7	25 / 1.25	17 / 1.39	54 / 2.35	2.5 / 0.06	0 / 0.00	178 / 2.92		30 / 0.85			0.01				47	132	0	20	median 960 minimum 620 maximum 1300	USGS

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c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Cosumnes River near Michigan Bar																										
1955																										
Jan 18 1355	1,800	42	11.9	94	105	7.1	10 / 0.499	4.4 / 0.361	4.7 / 0.204	0.6 / 0.015	0 / 0.000	51 / 0.836		1.8 / 0.051			0.00				19	43	1	40		USGS
Feb 15 1030	223	46	11.6	97	122	7.2	11 / 0.549	6.1 / 0.501	4.6 / 0.200	0.9 / 0.023	0 / 0.000	60 / 0.983		2.5 / 0.071			0.02				16	52	3	0.5		USGS
Mar 15 0900	420	47	11.8	100	82.2	7.2	8.0 / 0.399	3.9 / 0.321	3.6 / 0.157	0.9 / 0.023	0 / 0.000	43 / 0.705		1.5 / 0.042			0.03				17	36	1	1		USGS
Apr 19 1015	574	48	11.7	100	116	7.4	8.2 / 0.409	7.2 / 0.591	4.2 / 0.183	0.9 / 0.023	0 / 0.000	64 / 1.049		1.4 / 0.039			0.00				15	50	0	10		USGS
May 20 1210	448	58	9.7	94	59.9	7.7	8.8 / 0.439	0.5 / 0.041	3.6 / 0.157	1.7 / 0.043	0 / 0.000	36 / 0.590	2.7 / 0.056	0.5 / 0.014	0.3 / 0.005	0.1 / 0.005	0.00	19	Fe 0.04; (a) PO_4 0.00	55[b]	23	24	0	1		USGS
Jun 24 1220	79	72	10.0	113	66.8	8.0	6.8 / 0.339	2.7 / 0.221	3.4 / 0.148	1.0 / 0.026	0 / 0.000	40 / 0.656		0.8 / 0.023			0.06				20	28	0	1		USGS
Jul 18 0830	25	72	6.3	72	111	6.8	8.1 / 0.404	4.3 / 0.356	5.6 / 0.244	1.7 / 0.043	0 / 0.000	46 / 0.754		2.5 / 0.071			0.24				23	38	0	4		USGS
Aug 22 1000	4.0*	80	10.7	132	120	8.0	11 / 0.549	5.7 / 0.471	4.8 / 0.209	1.3 / 0.033	3 / 0.100	65 / 1.065		2.5 / 0.071			0.00				17	51	0	1		USGS
Sep 20 1120	9.1	71	10.1	114	139	8.1	13 / 0.649	6.1 / 0.501	53 / 0.230	1.3 / 0.033	0 / 0.000	77 / 1.262	2.0 / 0.042	2.5 / 0.071	0.0 / 0.000	0.2 / 0.011	0.02	16	Fe 0.06; Al 0.02; Cu 0.01; Zn 0.02; (a)	84[b]	16	58	0	1		USGS
Oct 17 1010	9.1	64	9.1	95	132	7.7	11 / 0.549	6.3 / 0.519	5.6 / 0.244	1.3 / 0.033	0 / 0.000	76 / 1.246		3.0 / 0.085			0.08				18	53	0	2		USGS
Nov 21 0920	60	49	10.1	88	96.5	7.3	9.2 / 0.459	3.4 / 0.281	4.2 / 0.183	1.4 / 0.036	0 / 0.000	48 / 0.787		3.5 / 0.099			0.00				19	37	0	20		USGS
Dec 19 1030	352	49	10.5	92	106	7.3	9.2 / 0.459	4.6 / 0.381	4.4 / 0.191	1.0 / 0.026	0 / 0.000	47 / 0.770		3.0 / 0.085			0.11				18	42	3	5		USGS

* Not revised

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[a]
							Cosumnes River near Michigan Bar																			
1956																										
Jan 16 0945	8,350	47	12.0	102	54.1	7.3	4.8 / 0.240	2.2 / 0.180	1.8 / 0.078	1.1 / 0.028	0 / 0.000	28 / 0.459		1.0 / 0.028			0.03				15	21	0	80		USGS
Feb 14 1000	830	43	12.4	99	76.3	7.5	7.2 / 0.359	2.9 / 0.239	3.1 / 0.135	0.9 / 0.023	0 / 0.000	41 / 0.672		1.4 / 0.039			0.00				18	30	0	4		USGS
Mar 19 0930	776	50	11.4	100	72.2	7.3	6.2 / 0.309	3.2 / 0.261	3.1 / 0.135	0.9 / 0.023	0 / 0.000	38 / 0.623		3.5 / 0.099			0.19				19	28	0	2		USGS
Apr 16 0935	722	49	11.5	100	66.6	7.3	5.5 / 0.274	3.0 / 0.246	2.9 / 0.126	1.0 / 0.026	0 / 0.000	39 / 0.639		1.0 / 0.028			0.01				19	26	0	5		USGS
May 14 0840	1,360	52	11.3	102	50.7	7.3	5.4 / 0.269	1.7 / 0.151	2.6 / 0.113	0.8 / 0.020	0 / 0.000	32 / 0.524	1.6 / 0.033	0.0 / 0.000	0.1 / 0.002	0.2 / 0.011	0.00	17	Fe 0.06; Al 0.05; Cu 0.01; Zn 0.02; (a) PO_4 0.00	45[b]	21	21	0	1		USGS
June 19 0840	254	70	8.7	97	54.6	7.3	5.0 / 0.250	2.2 / 0.178	2.8 / 0.122	1.3 / 0.033	0 / 0.000	34 / 0.557		0.4 / 0.011			0.06				21	21	0	2		USGS
July 26 1410	51	84	8.5	109	69.6	6.8	6.4 / 0.319	2.8 / 0.229	3.5 / 0.152	1.4 / 0.036	0 / 0.000	42 / 0.688		1.0 / 0.028			0.07				21	27	0	0.4		USGS
Aug 20 0930	32	72	8.6	97	80.4	7.5	8.5 / 0.424	2.6 / 0.214	2.8 / 0.165	1.3 / 0.033	0 / 0.000	48 / 0.787		0.7 / 0.020			0.00				20	32	0	2		USGS
Sept 11 1020	21	72	9.3	105	89.0	7.2	8.9 / 0.444	3.4 / 0.278	4.0 / 0.174	1.5 / 0.038	0 / 0.000	52 / 0.852	1.9 / 0.040	1.0 / 0.028	0.0 / 0.000	0.3 / 0.016	0.00	16	Fe 0.02; Al 0.01; Cu 0.02; Zn 0.01; PO_4 0.00; (a)	63[b]	19	36	0	0.3		USGS
Oct 18 1200	31	63	10.8	111	84.3	6.8	8.0 / 0.399	3.2 / 0.261	2.8 / 0.165	1.2 / 0.031	0 / 0.00	48 / 0.787		2.4 / 0.068			0.00				19	33	0			USGS
Nov 19 0920	52	55	11.2	105	81.0	7.3	8.0 / 0.40	2.6 / 0.21	3.6 / 0.16	1.4 / 0.04	0 / 0.00	44 / 0.72		1.7 / 0.05			0.00				20	30	0	0.4		USGS
Dec 17 0845	70	42	12.9	102	82.4	7.1	8.2 / 0.41	2.6 / 0.21	3.5 / 0.15	1.4 / 0.04	0 / 0.00	42 / 0.69		1.5 / 0.04			0.02				19	31	0	1.0		USGS

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Cottonwood Creek near Cottonwood																										
1955																										
Jan 10 1500	492	45	11.7	97	263	7.5	26 / 1.297	10 / 0.823	11 / 0.478	0.9 / 0.023	0 / 0.000	122 / 1.999		13 / 0.367			0.02				18	108	8	15		USGS
Feb 7 0900	520	42	11.0	87	278	7.5	28 / 1.397	12 / 1.023	12 / 0.522	0.8 / 0.020	0 / 0.000	138 / 2.262		9.5 / 0.268			0.03				18	121	8	1		USGS
Mar 3 1140	369	50	11.0	99	263	7.9	27 / 1.347	12 / 0.973	11 / 0.478	1.0 / 0.025	2 / 0.067	127 / 2.081		11 / 0.310			0.00				17	116	9	3		USGS
Apr 1 0915	369	53	10.0	92	232	7.3	24 / 1.198	11 / 0.922	9.5 / 0.413	0.8 / 0.020	0 / 0.000	126 / 2.065		9.4 / 0.265			0.05				16	106	3	3		USGS
May 11 1315	779	71	7.5	84	150	7.2	13 / 0.649	7.4 / 0.611	7.0 / 0.304	2.7 / 0.069	0 / 0.000	77 / 1.262	9.8 / 0.204	2.8 / 0.079	1.2 / 0.019	0.2 / 0.011	0.16	23	Fe 0.02; Al 0.14; (a) PO_4 0.65	105[b]	19	63	0	1		USGS
Jun 15 1230	239	70	9.0	100	203	7.6	21 / 1.048	8.4 / 0.688	9.3 / 0.404	1.7 / 0.043	0 / 0.000	112 / 1.835		6.2 / 0.175			0.07				19	87	0	0.3		USGS
Jul 13 1320	92	75	9.1	110	214	7.2	17 / 0.848	12 / 0.992	8.7 / 0.375	1.2 / 0.031	0 / 0.000	117 / 1.917		6.5 / 0.183			0.16				17	92	0	1		USGS
Aug 17 1310	67	73	9.4	108	172	7.2	12 / 0.599	8.8 / 0.721	8.3 / 0.361	1.4 / 0.035	0 / 0.000	99 / 1.622		4.0 / 0.113			0.08				20	71	0	1		USGS
Sep 14 1315	86	66	7.3	89	165	7.0	14 / 0.699	7.4 / 0.611	6.3 / 0.261	1.8 / 0.046	0 / 0.000	92 / 1.508	4.0 / 0.083	3.5 / 0.099	0.5 / 0.008	0.3 / 0.016	0.02	27	Fe 0.05; Al 0.02; (a)	112[b]	21	66	0	0.8		USGS
Oct 12 1245	67	66	10.0	106	171	7.1	14 / 0.699	9.1 / 0.745	8.6 / 0.374	1.4 / 0.036	[c]	98 / 1.606		4.1 / 0.116			0.00				20	72	0	1		USGS
Nov	Not Sampled																									
Dec 14 1130	620	48	11.3	96	266	6.8	25 / 1.248	11 / 0.922	11 / 0.478	1.0 / 0.026	0 / 0.000	117 / 1.918		15 / 0.423			0.00				18	109	13	5		USGS
																									median 23	
																									minimum .23	
																									maximum 620	

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Cottonwood Creek near Cottonwood																										
1956																										
Jan 17 1530	6,750	47	11.3	96	172	7.0	19 / 0.948	8.0 / 0.660	5.0 / 0.218	0.9 / 0.023	0 / 0.000	94 / 1.541		1.5 / 0.042			0.11				12	80	3	200		USGS
Feb 7 1545	785	46	11.6	97	259	7.4	28 / 1.397	11 / 0.935	8.8 / 0.383	0.9 / 0.023	3 / 0.100	132 / 2.163		3.6 / 0.102			0.01				14	117	4	20		USGS
Mar 13 1440	1,560	49	10.0	87	251	7.4	27 / 1.347	11 / 0.941	7.7 / 0.335	0.7 / 0.018	2 / 0.067	130 / 2.131		3.8 / 0.107			0.03				13	114	4	15		USGS
Apr 10 1445	1,210	56	9.8	93	209	7.3	2.5 / 1.248	7.7 / 0.632	6.6 / 0.287	1.2 / 0.031	0 / 0.000	119 / 1.950		3.4 / 0.096			0.00				13	94	0	25		USGS
May 8 1350	1,840	58	9.9	97	196	7.4	20 / 0.998	9.6 / 0.790	6.6 / 0.287	0.8 / 0.020	0 / 0.000	110 / 1.803	10 / 0.208	2.2 / 0.062	0.4 / 0.006	0.2 / 0.011	0.03	18	Fe 0.08; Al 0.06; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	122[b]	14	89	0	75		USGS
June 12 1315	465	74	8.5	98	209	7.3	21 / 1.048	10 / 0.820	7.1 / 0.309	1.1 / 0.028	0 / 0.000	114 / 1.868		4.8 / 0.135			0.00				14	93	0	1		USGS
July 17 1410	177	83	8.7	110	224	7.5	23 / 1.148	10 / 0.852	8.9 / 0.387	1.4 / 0.036	0 / 0.000	128 / 2.098		6.8 / 0.192			0.03				16	100	0	2		USGS
Aug 14 1230	92	73	9.1	104	206	7.3	20 / 0.998	10 / 0.822	8.6 / 0.374	1.5 / 0.038	0 / 0.000	119 / 1.950		3.2 / 0.090			0.13				17	91	0	3		USGS
Sept 18 1315	90	67	8.1	87	187	6.8	18 / 0.898	9.0 / 0.742	7.8 / 0.339	1.2 / 0.031	0 / 0.000	110 / 1.803	6.1 / 0.127	3.8 / 0.107	0.6 / 0.010	0.1 / 0.005	0.02	26	Fe 0.08; Al 0.10; Cu 0.01; Zn 0.01; (a)	127[b]	17	82	0	95		USGS
Oct 16 1330	137	61	10.2	103	181	7.3	18 / 0.898	7.6 / 0.626	7.9 / 0.344	1.0 / 0.026	0 / 0.000	101 / 1.655		6.9 / 0.195			0.01				18	76	0	4		USGS
Nov 19 1230	100	50	10.9	96	272	7.0	25 / 1.248	13 / 1.056	12 / 0.522	1.0 / 0.026	0 / 0.000	139 / 2.278		15 / 0.423			0.02				18	115	1	1.0		USGS
Dec 11 1240	95	47	11.3	96	279	7.3	27 / 1.35	13 / 1.06	11 / 0.48	0.9 / 0.02	0 / 0.00	142 / 2.33		16 / 0.45			0.04				16	120	4	0.9		USGS
																									median 23 minimum .62 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[a]
Deer Creek near Vina																										
1955																										
Jan 11 0900	158	37	12.1	89	145	7.4	12 / 0.599	5.4 / 0.441	8.6 / 0.374	1.3 / 0.033	0 / 0.000	82 / 1.344		4.2 / 0.118			0.03				26	52	0	1		USGS
Feb 7 1045	144	43	11.0	88	146	7.8	12 / 0.599	6.5 / 0.531	9.0 / 0.391	1.6 / 0.041	0 / 0.000	83 / 1.360		4.0 / 0.113			0.09				25	56	0	0.5		USGS
Mar 2 0930	122	45	11.3	94	144	7.4	12 / 0.599	6.8 / 0.561	8.9 / 0.387	1.5 / 0.038	0 / 0.000	84 / 1.377		4.5 / 0.127			0.10				24	58	0	0.8		USGS
Apr 4 0930	127	46	11.5	98	121	7.4	7.7 / 0.384	7.0 / 0.572	7.0 / 0.304	1.3 / 0.033	0 / 0.000	76 / 1.246		2.5 / 0.071			0.07				24	48	0	2		USGS
May 11 1510	317	68	9.1	99	88.0	7.8	8.5 / 0.424	3.8 / 0.316	4.8 / 0.209	1.3 / 0.033	0 / 0.000	52 / 0.852	1.1 / 0.023	1.2 / 0.034	0.3 / 0.005	0.2 / 0.011	0.01	27	Al 0.03; Zn 0.03; (a) PO_4 0.05	74[b]	21	37	0	1		USGS
Jun 15 1500	6.0	85	10.0	130	185	8.1	13 / 0.649	9.9 / 0.811	10 / 0.435	2.1 / 0.054	3.0 / 0.100	107 / 1.754		4.0 / 0.113			0.13				22	73	0	2		USGS
Jul 13 1515	2.0	94	11.3	113	256	7.8	17 / 0.848	16 / 1.292	14 / 0.609	2.7 / 0.069	6 / 0.200	152 / 2.491		5.0 / 0.141			0.22				22	107	0	0.8		USGS
Aug 17 1500	0.4	84	11.6	100	332	7.6	27 / 1.347	20 / 1.633	16 / 0.696	2.9 / 0.074	0 / 0.000	215 / 3.524		6.0 / 0.169			0.18				19	149	0	1		USGS
Sep 14 1515	1.1	71	11.0	124	326	7.4	34 / 1.697	14 / 1.151	15 / 0.652	3.1 / 0.079	0 / 0.000	203 / 3.327	4.8 / 0.100	6.5 / 0.183	0.1 / 0.002	0.1 / 0.005	0.12	46	Al 0.05; Cu 0.01; (a)	224[b]	18	142	0	0.7		USGS
Oct 12 1540	19	74	9.9	115	183	7.5	14 / 0.699	7.8 / 0.641	13 / 0.566	3.4 / 0.087	0 / 0.000	105 / 1.721		4.8 / 0.135			0.19				28	67	0	3		USGS
Nov 16 1700	83	43	11.7	94	170	6.8	12 / 0.599	7.0 / 0.573	12 / 0.522	1.8 / 0.046	0 / 0.000	95 / 1.557		5.5 / 0.155			0.14				30	59	0	3		USGS
Dec 14 1420	120	47	12.0	102	144	6.8	11 / 0.549	6.2 / 0.511	9.2 / 0.400	1.6 / 0.041	0 / 0.000	84 / 1.377		4.0 / 0.113			0.09				27	53	0	2		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Deer Creek near Vina																
1956																										
Jan 17 1240	2,080	45	12.5	103	65.5	6.8	6.0 / 0.299	2.8 / 0.231	2.8 / 0.122	0.8 / 0.020	0 / 0.000	40 / 0.656		0.8 / 0.023			0.02				18	26	0	30		USGS
Feb 7 1300	393	46	11.8	99	102	6.8	7.5 / 0.374	4.7 / 0.390	5.7 / 0.248	1.2 / 0.031	0 / 0.000	59 / 0.967		2.3 / 0.065			0.08				24	38	0	2		USGS
Mar 13 1240	429	48	11.9	102	98.5	7.0	8.0 / 0.399	4.4 / 0.361	5.2 / 0.226	1.0 / 0.026	0 / 0.000	56 / 0.918		3.0 / 0.085			0.02				22	38	0	4		USGS
Apr 10 1240	429	52	10.9	99	76.6	7.2	6.0 / 0.299	3.4 / 0.281	4.5 / 0.196	1.1 / 0.028	0 / 0.000	45 / 0.738		0.0 / 0.000			0.09				24	29	0	2		USGS
May 8 1200	731	55	10.6	100	63.8	6.8	5.6 / 0.279	3.2 / 0.261	3.3 / 0.144	0.9 / 0.023	0 / 0.000	43 / 0.705	0.0 / 0.000	0.5 / 0.014	0.2 / 0.003	0.1 / 0.005	0.07	25	Fe 0.03; Al 0.01; (a) PO_4 0.00	60[b]	20	27	0	3		USGS
June 12 1100	208	68	9.0	109	91.6	7.5	8.8 / 0.439	3.4 / 0.281	5.1 / 0.222	1.3 / 0.033	0 / 0.000	55 / 0.901		2.2 / 0.062			0.00				23	36	0	1		USGS
July 17 1100	23	78	8.6	104	139	7.5	11 / 0.549	6.6 / 0.543	8.6 / 0.374	1.9 / 0.049	0 / 0.000	88 / 1.442		2.5 / 0.070			0.12				25	55	0	0.7		USGS
Aug 14 1040	2.3	74	7.1	82	218	7.3	18 / 0.898	12 / 0.982	11 / 0.478	2.6 / 0.067	0 / 0.000	136 / 2.229		2.7 / 0.076			0.08				20	94	0	0.9		USGS
Sept 18 1215	7.5	70	6.7	75	256	7.0	20 / 0.998	15 / 1.274	13 / 0.566	2.9 / 0.074	0 / 0.000	161 / 2.639	3.8 / 0.079	4.0 / 0.113	0.2 / 0.003	0.3 / 0.016	0.11	41	Fe 0.02; Al 0.06; PO_4 0.15; (a)	179[b]	19	114	0	0.8		USGS
Oct 16 1140	9.0	63	9.8	101	221	7.3	18 / 0.898	11 / 0.902	12 / 0.522	2.2 / 0.056	0 / 0.000	134 / 2.196		5.4 / 0.152			0.08				22	90	0	0.6		USGS
Nov 19 1400	72	48	12.2	105	150	6.8	12 / 0.60	6.3 / 0.52	10 / 0.44	2.0 / 0.05	0 / 0.00	89 / 1.46		4.0 / 0.11			0.09				27	56	0	0.3		USGS
Dec 11 1100	76	40	12.7	98	150	7.5	11 / 0.55	7.4 / 0.61	10 / 0.44	1.9 / 0.05	0 / 0.00	90 / 1.48		4.0 / 0.11			0.20				27	58	0	0.3		USGS

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
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Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tidal Area							Delta-Cross Channel near Walnut Grove																			
1955																										
Jan 21 1430		44	10.6	86	145	7.3	12 / 0.599	5.6 / 0.461	9.2 / 0.400	1.0 / 0.026	0 / 0.000	63 / 1.032		7.0 / 0.197			0.21				27	53	1	55		USGS
Feb 14 1030		50	10.2	90	253	7.4	18 / 0.898	10 / 0.842	18 / 0.783	1.2 / 0.031	0 / 0.000	98 / 1.606		19 / 0.536			0.06				31	87	7	3		USGS
Mar 14 1030		52	9.8	89	157	7.3	13 / 0.649	7.4 / 0.611	9.2 / 0.400	1.1 / 0.028	0 / 0.000	74 / 1.213		7.0 / 0.197			0.12				24	63	2	7		USGS
Apr 18 0940		56	8.7	83	160	7.4	11 / 0.549	6.4 / 0.527	9.6 / 0.417	1.4 / 0.036	0 / 0.000	78 / 1.278		8.2 / 0.231			0.16				27	54	0	7		USGS
May 16 1230		61	9.3	93	149	7.3	11 / 0.549	4.8 / 0.391	11 / 0.478	1.0 / 0.026	0 / 0.000	64 / 1.049	10 / 0.208	8.2 / 0.231	0.7 / 0.011	0.1 / 0.005	0.06	17	Al 0.05; (a) PO_4 0.15	96[b]	33	47	0	10		USGS
Jun 20 1145		69	8.9	98	190	7.6	12 / 0.599	7.6 / 0.621	15 / 0.652	1.2 / 0.031	0 / 0.000	81 / 1.327		12 / 0.338			0.06				34	61	0	7		USGS
Jul 20 0815		70	8.0	89	210	7.0	13 / 0.649	8.4 / 0.691	17 / 0.739	1.9 / 0.049	0 / 0.000	76 / 1.246		12 / 0.338			0.14				35	67	5	9		USGS
Aug 26 0950		72	6.3	72	220	7.3	15 / 0.749	7.9 / 0.651	17 / 0.739	1.3 / 0.033	0 / 0.000	99 / 1.622		12 / 0.338			0.12				34	70	0	20		USGS
Sep 23 0945		65	6.0	63	257	7.3	18 / 0.898	11 / 0.882	17 / 0.739	1.8 / 0.046	0 / 0.000	118 / 1.934	14 / 0.291	14 / 0.395	0.6 / 0.010	0.2 / 0.011	0.07	26	Fe 0.01; Al 0.09; Cu 0.02; (a)	161[b]	29	89	0	15		USGS
Oct 20 1220		64	6.6	69	188	7.3	15 / 0.748	7.4 / 0.608	12 / 0.522	1.6 / 0.041	0 / 0.000	88 / 1.442		7.0 / 0.197			0.06				27	68	0	10		USGS
Nov 25 1250		48	8.8	76	141	7.3	10 / 0.499	4.9 / 0.401	8.9 / 0.387	1.5 / 0.038	0 / 0.000	52 / 0.852		8.2 / 0.231			0.08				29	45	0	340		USGS
Dec 22 1115		53	9.5	87	116	7.3	8.8 / 0.439	4.5 / 0.373	6.9 / 0.300	2.2 / 0.056	0 / 0.000	48 / 0.787		6.1 / 0.172			0.00				26	41	2	35		USGS
																									median 620 minimum 13 maximum 7000+	

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %oSat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Delta-Cross Channel near Walnut Grove																										
1956																										
Jan 19 1130		48	11.2	96	64.9	7.1	5.9 / 0.294	3.1 / 0.258	2.3 / 0.100	0.9 / 0.023	0 / 0.000	33 / 0.541		1.3 / 0.037			0.06				15	28	1	110		USGS
Feb 17 1120		44	11.1	90	149	7.5	13 / 0.649	6.2 / 0.511	7.1 / 0.309	1.1 / 0.028	0 / 0.000	74 / 1.213		4.9 / 0.138			0.03				21	58	0	60		USGS
Mar 22 1130		52	10.7	97	131	7.3	12 / 0.599	5.4 / 0.441	6.1 / 0.265	0.9 / 0.023	0 / 0.000	66 / 1.082		6.0 / 0.169			0.17				20	52	0	35		USGS
Apr 18 1430		54	10.4	96	129	7.3	11 / 0.549	5.5 / 0.451	7.0 / 0.304	1.0 / 0.026	0 / 0.000	65 / 1.065		5.1 / 0.144			0.02				23	50	0	35		USGS
May 16 1330		59	9.9	98	105	7.3	12 / 0.599	2.7 / 0.225	5.6 / 0.244	1.1 / 0.028	0 / 0.000	57 / 0.934	4.0 / 0.083	2.8 / 0.079	0.5 / 0.008	0.3 / 0.016	0.08	19	Fe[r3] 0.11; Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.20; (a)	76[b]	22	41	0	30		USGS
June 21 1130		68	7.7	84	125	7.5	10 / 0.499	7.1 / 0.581	7.9 / 0.344	0.9 / 0.023	0 / 0.000	61 / 1.000		5.0 / 0.141			0.08				24	54	4	6		USGS
July 20 1020		70	8.1	90	163	7.0	12 / 0.599	6.5 / 0.537	12 / 0.522	1.1 / 0.028	0 / 0.000	76 / 1.246		9.4 / 0.265			0.17				31	57	0	5		USGS
Aug 17 1010		70	7.7	86	166	7.0	12 / 0.599	6.8 / 0.561	13 / 0.566	1.0 / 0.026	0 / 0.000	78 / 1.278		7.2 / 0.203			0.04				32	58	0	8		USGS
Sept 12 0840		68	7.5	82	199	6.8	15 / 0.748	7.9 / 0.648	15 / 0.652	1.5 / 0.038	0 / 0.000	96 / 1.573	11 / 0.229	9.8 / 0.276	0.8 / 0.013	0.0 / 0.000	0.07	20	Fe 0.02; Al 0.05; Cu 0.01; PO_4 0.25; (a)	128[b]	31	70	0	15		USGS
Oct 11 1230		65	8.3	88	151	7.3	12 / 0.599	6.5 / 0.533	8.9 / 0.387	1.4 / 0.036	0 / 0.000	77 / 1.262		6.3 / 0.178			0.02				25	57	0	4		USGS
Nov 21 1240		49	10.5	92	140	7.3	11 / 0.55	6.0 / 0.49	8.3 / 0.36	1.5 / 0.04	0 / 0.00	70 / 1.15		5.5 / 0.16			0.00				25	52	0	5		USGS
Dec 14 1205		48	11.1	96	152	7.3	13 / 0.65	6.2 / 0.51	9.2 / 0.40	1.5 / 0.04	0 / 0.00	80 / 1.31		5.0 / 0.14			0.02				25	58	0	3	median 96 minimum 23 maximum 2400	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

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ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							(parts per million equivalents per million)																			
							Delta-Kendota Canal near Mendota																			
1955																										
Jan 12 0910	No Flow	43	11.5	93	946	8.1	45 / 2.25	21 / 1.72	116 / 5.04	3.2 / 0.08	0 / 0.00	136 / 2.23		132 / 3.72			0.61				55	198	86	10		USGS
Feb 9 1045	0	50	12.2	103	1220	8.3	58 / 2.89	27 / 2.23	162 / 7.04	3.2 / 0.08	0 / 0.00	141 / 2.31		145 / 4.09			0.82				58	256	140	9		USGS
Mar 7 1720	925	55	10.6	100	596	8.1	30 / 1.50	14 / 1.14	64 / 2.78	2.5 / 0.06	0 / 0.00	95 / 1.56		88 / 2.48			0.18				51	132	54	45		USGS
Apr 11 1710	1,940	62	9.5	98	456	8.0	25 / 1.248	15 / 1.216	42 / 1.826	2.5 / 0.064	0 / 0.000	95 / 1.557		60 / 1.692			0.15				42	123	45	28		USGS
May 9 1620	1,750	65	9.4	100	425	7.8	24 / 1.198	13 / 1.102	42 / 1.826	2.7 / 0.069	0 / 0.000	98 / 1.606	46 / 0.958	53 / 1.495	1.9 / 0.031	0.3 / 0.016	0.17	46	Fe 0.1; Al 0.1; (a) PO_4 0.20	277[b]	44	115	35	22		USGS
Jun 13 1520	2,620	73	8.9	102	307	7.8	20 / 0.998	8.3 / 0.682	28 / 1.218	2.1 / 0.054	0 / 0.000	79 / 1.295		36 / 1.015			0.17				41	84	19	75		USGS
Jul 14 1230	2,590	77	8.0	96	456	7.0	26 / 1.297	13 / 1.083	45 / 1.957	3.1 / 0.079	0 / 0.000	95 / 1.557		65 / 1.833			0.18				44	119	41	60		USGS
Aug 16 1020	2,960	75	7.5	98	455	7.5	21 / 1.048	11 / 0.892	51 / 2.218	2.8 / 0.072	0 / 0.000	93 / 1.524		73 / 2.059			0.04				52	97	21	40		USGS
Sep 12 1740	1,600	76	7.4	88	599	7.5	22 / 1.10	14 / 1.18	73 / 3.17	3.6 / 0.09	0 / 0.00	98 / 1.61	42 / 0.87	108 / 3.05	1.0 / 0.02	0.2 / 0.01	0.18	19	Fe 0.16; (a)	331[b]	57	114	34	40		USGS
Oct 10 1705	1,590	65	7.9	84	823	7.8	40 / 2.00	20 / 1.64	95 / 4.13	3.6 / 0.09	0 / 0.00	156 / 2.56		143 / 4.03			0.26				53	182	54	30		USGS
Nov 16 1155	230	49	9.6	84	866	7.8	42 / 2.10	21 / 1.72	104 / 4.52	4.2 / 0.11	0 / 0.00	157 / 2.57		146 / 4.12			0.28				53	191	62	100		USGS
Dec 12 1445	0	50	10.4	92	954	7.5	50 / 2.50	21 / 1.73	117 / 5.09	5.2 / 0.13	0 / 0.00	157 / 2.57		166 / 4.68			0.35				54	212	83	20		USGS
																									median 23	
																									minimum .045–	
Note: All flows are Unrevised-Mean Daily																									maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Delta-Mendota Canal near Mendota																			
1956																										
Jan 9 1610	0	50	12.6	111	935	7.9	49 / 2.45	21 / 1.71	114 / 4.96	4.2 / 0.11	0 / 0.00	154 / 2.52		158 / 4.46			0.45				54	208	82	6		USGS
Feb 6 1500	0	49	11.0	96	991	8.1	42 / 2.10	23 / 1.87	124 / 5.39	4.0 / 0.10	0 / 0.00	118 / 1.93		160 / 4.51			0.56				57	198	101	20		USGS
Mar 12 1445	0	54	13.0	120	929	8.1	42 / 2.10	21 / 1.76	117 / 5.09	3.4 / 0.09	4 / 0.13	249 / 4.08		135 / 3.81			0.65				56	193	0	3		USGS
Apr 9 1450	0	70	13.0	144	517	8.1	26 / 1.297	11 / 0.883	60 / 2.610	2.2 / 0.056	0 / 0.000	91 / 1.491		60 / 1.692			0.48				54	109	34	15		USGS
May 9 1245	410	65	8.9	94	393	7.9	21 / 1.048	10 / 0.856	44 / 1.914	2.1 / 0.054	0 / 0.000	79 / 1.295	48 / 0.999	51 / 1.438	1.7 / 0.027	0.3 / 0.016	0.24	19	Fe 0.09; Al 0.07; Zn 0.01; PO_4 0.25	236[b]	49	95	30	50		USGS
June 13 0940	0	76	8.6	102	448	7.0	29 / 1.447	10 / 0.853	47 / 2.044	2.7 / 0.069	0 / 0.000	93 / 1.524		49 / 1.382			0.00				46	115	39	40		USGS
July 16 1450	240	78	8.7	105	386	7.0	20 / 0.998	10 / 0.826	40 / 1.740	2.2 / 0.056	0 / 0.000	79 / 1.295		58 / 1.636			0.15				48	91	26	50		USGS
Aug 15 1050	2370	76	8.8	104	286	7.0	18 / 0.898	7.3 / 0.602	28 / 1.218	1.8 / 0.046	0 / 0.000	71 / 1.164		34 / 0.959			0.14				44	75	17	30		USGS
Sept 17 1400	1360	72	9.9	113	577	7.7	30 / 1.50	14 / 1.16	65 / 2.83	3.1 / 0.08	0 / 0.00	120 / 1.97	36 / 0.75	100 / 2.82	1.5 / 0.02	0.2 / 0.01	0.14	21	Fe 0.02; Al 0.08; Cu 0.01; PO_4 0.40; (a)	330[b]	51	133	35	20		USGS
Oct 8 1440	890	71	8.5	96	589	7.7	32 / 1.60	13 / 1.06	64 / 2.78	3.0 / 0.08	0 / 0.00	126 / 2.07		93 / 2.62			0.20				50	133	30	15		USGS
Nov 13 1410	0	57	12.1	116	576	8.4	30 / 1.50	13 / 1.06	65 / 2.83	3.3 / 0.08	0 / 0.00	117 / 1.92		91 / 2.57			0.21				52	128	32	20		USGS
Dec 10 1320	0	49	12.5	109	589	8.3	30 / 1.50	15 / 1.22	65 / 2.83	3.0 / 0.08	0 / 0.00	124 / 2.03		91 / 2.57			0.19				50	136	34	20	median 4.2 minimum 0.045- maximum 62	USGS

Note: All flows are Unrevised-Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Delta-Mendota Canal near Tracy																										
1955																										
Jan 20 0910	Not Pumping	44	9.7	79	717	7.3	33 / 1.65	16 / 1.28	89 / 3.87	3.8 / 0.10	0 / 0.00	118 / 1.93		119 / 3.36			0.34				56	146	49	40		USGS
Feb 21 1430	"	56	10.2	97	651	7.6	33 / 1.65	16 / 1.29	74 / 3.22	2.8 / 0.07	0 / 0.00	107 / 1.75		98 / 2.76			0.31				52	147	59	7		USGS
Mar 7 1030	860	55	13.1	123	656	8.2	29 / 1.45	17 / 1.39	72 / 3.13	2.3 / 0.06	0 / 0.00	105 / 1.72		104 / 2.93			0.21				52	142	56	15		USGS
Apr 11 1100	2574	62	8.9	91	370	7.6	22 / 1.098	13 / 1.098	36 / 1.565	2.3 / 0.059	0 / 0.000	90 / 1.475		51 / 1.438			0.15				41	110	36	14		USGS
May 9 1015	1730	64	8.1		360	7.4	21 / 1.048	11 / 0.912	31 / 1.348	1.8 / 0.046	0 / 0.000	89 / 1.459	31 / 0.645	46 / 1.297	1.4 / 0.023	0.3 / 0.016	0.14	20	PO_4 0.20	208[b]	40	98	25	25		USGS
Jun 13 0950	3300	68	8.1	88	222	7.6	14 / 0.699	7.3 / 0.601	20 / 0.870	1.5 / 0.038	0 / 0.000	54 / 0.885		29 / 0.818			0.07				39	65	21	15		USGS
Jul 19 0800	3406	71	7.1	80	298	7.0	14 / 0.699	10 / 0.841	26 / 1.131	2.1 / 0.054	0 / 0.000	73 / 1.196		30 / 0.846			0.18				42	77	17	40		USGS
Aug 23 0900	2490	76	6.8	80	583	7.3	26 / 1.30	15 / 1.26	63 / 2.74	3.4 / 0.09	0 / 0.00	114 / 1.87		104 / 2.93			0.00				51	128	35	40		USGS
Sep 22 0740	1660	67	6.3	68	765	7.5	36 / 1.80	19 / 1.56	90 / 3.91	4.0 / 0.10	0 / 0.00	140 / 2.29	50 / 1.04	138 / 3.89	2.8 / 0.05	0.5 / 0.03	0.24	19	Fe 0.06; Al 0.03; Cu 0.02; (a)	429[b]	53	168	53	55		USGS
Oct 19 1145	865	64	9.2	96	1010	7.9	52 / 2.59	23 / 1.93	117 / 5.09	4.6 / 0.12	0 / 0.00	186 / 3.05		177 / 4.99			0.33				52	226	73	15		USGS
Nov 22 1315	Not Pumping	52	10.0	90	1030	7.7	54 / 2.69	23 / 1.93	119 / 5.18	5.2 / 0.13	0 / 0.00	171 / 2.80		188 / 5.30			0.22				52	231	91	70		USGS
Dec 20 1520	"	54	9.9	92	731	7.5	35 / 1.75	16 / 1.34	88 / 3.83	3.6 / 0.09	0 / 0.00	123 / 2.02		127 / 3.58			0.33				55	154	53	34	median 42 minimum .50 maximum 7000+	USGS

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REGION 5

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Delta-Mendota Canal near Tracy																										
1956																										
Jan 18 0830	*	49	8.7	76	468	7.3	19 / 0.948	9.9 / 0.812	59 / 2.566	2.9 / 0.074	0 / 0.000	84 / 1.377		73 / 2.059			0.68				58	88	19	80		USGS
Feb 16 0830	*	42	9.6	76	421	7.3	19 / 0.948	10 / 0.832	49 / 2.132	2.0 / 0.051	0 / 0.000	86 / 1.410		61 / 1.720			0.46				54	89	18	40		USGS
Mar 20 1430	*	59	10.7	105	466	7.5	26 / 1.297	11 / 0.923	45 / 1.958	2.2 / 0.056	0 / 0.000	96 / 1.573		72 / 2.030			0.33				46	111	32	20		USGS
Apr 17 1350	878	58	9.8	95	284	7.3	15 / 0.748	7.9 / 0.652	29 / 1.262	1.8 / 0.046	0 / 0.000	66 / 1.082		39 / 1.100			0.10				47	70	16	35		USGS
May 15 1330	*	65	9.0	95	182	7.3	14 / 0.699	2.9 / 0.241	18 / 0.783	1.3 / 0.033	0 / 0.000	47 / 0.770	15 / 0.312	25 / 0.705	1.0 / 0.016	0.3 / 0.016	0.11	14	Fe^{+3} 0.15; Al 0.05; Cu 0.02; Zn 0.01; PO_4 0.30 (a)	115[b]	44	47	8	20		USGS
June 20 1040	878	70	8.2	91	190	7.6	10 / 0.499	4.8 / 0.393	20 / 0.870	1.5 / 0.038	0 / 0.000	53 / 0.869		26 / 0.733			0.18				48	45	2	40		USGS
July 24 0900	3,406	79	7.0	85	204	6.8	13 / 0.649	5.4 / 0.443	18 / 0.783	1.5 / 0.038	0 / 0.000	58 / 0.951		25 / 0.705			0.14				41	55	7	40		USGS
Aug 21 1245	2,546	74	8.1	94	305	7.3	18 / 0.898	8.6 / 0.706	30 / 1.305	1.8 / 0.046	0 / 0.000	78 / 1.278		39 / 1.100			0.12				44	80	16	20		USGS
Sept 13 1500	1,660	72	9.6	109	557	8.9	30 / 1.50	14 / 1.12	62 / 2.70	3.3 / 0.08	0 / 0.00	122 / 2.00	37 / 0.77	20 / 2.54	2.1 / 0.03	0.2 / 0.01	0.12	21	Fe 0.02; Al 0.10; Cu 0.01; PO_4 0.39; (a)	320[b]	50	131	31	15		USGS
Oct 16 0945	850	66	9.6	102	597	7.6	34 / 1.70	13 / 1.03	65 / 2.83	3.1 / 0.08	0 / 0.00	131 / 2.15		97 / 2.74			0.02				50	136	29	10		USGS
Nov 20 1105	*	51	9.1	82	732	7.7	36 / 1.80	18 / 1.46	85 / 3.70	3.4 / 0.09	0 / 0.00	130 / 2.13		124 / 3.50			0.38				52	163	56	20		USGS
Dec 18 1130	*	51	8.7	78	537	7.3	27 / 1.35	15 / 1.21	55 / 2.39	2.8 / 0.07	0 / 0.00	102 / 1.67		88 / 2.48			0.23				48	128	44	7		USGS
																									median 23 minimum .62 maximum 7000	

* Not Pumping

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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Region 5

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Feather River at Nicolaus																										
1955																										
Jan 12 0945	4,790	39	11.7	90	108	7.2	12 / 0.599	3.3 / 0.271	4.1 / 0.178	0.8 / 0.020	0 / 0.000	53 / 0.869		3.0 / 0.085			0.01				17	44	1	45		USGS
Feb 9 0850	2,770	44	11.4	93	124	7.4	13 / 0.649	6.0 / 0.491	4.8 / 0.209	0.7 / 0.018	0 / 0.000	65 / 1.065		4.0 / 0.113			0.02				15	57	4	6		USGS
Mar 8 1340	2,960	50	11.5	101	122	7.4	13 / 0.649	5.2 / 0.431	4.8 / 0.209	0.9 / 0.023	0 / 0.000	65 / 1.065		2.5 / 0.071			0.00				16	54	1	10		USGS
Apr 5 1300	4,720	52	11.9	107	91.4	7.4	5.3 / 0.264	6.0 / 0.496	3.7 / 0.161	0.7 / 0.018	0 / 0.000	52 / 0.852		0.6 / 0.017			0.00				17	38	0	7		USGS
May 13 1230	12,600	61	9.2	93	69.9	7.3	7.6 / 0.379	2.7 / 0.221	2.4 / 0.104	0.8 / 0.020	0 / 0.000	30 / 0.639	3.0 / 0.062	0.5 / 0.014	0.3 / 0.005	0.1 / 0.005	0.10	15	Al 0.1; (a) PO_4 0.35	52[a]	14	30	0	65		USGS
Jun 17 1330	1,950	75	8.7	102	95.0	7.4	10 / 0.499	3.3 / 0.273	4.2 / 0.183	1.0 / 0.026	0 / 0.000	53 / 0.869		1.2 / 0.034			0.00				19	39	0	0.9		USGS
Jul 15 1110	397	79	7.6	93	125	7.5	12 / 0.599	4.9 / 0.401	4.4 / 0.191	1.2 / 0.031	0 / 0.000	64 / 1.049		2.5 / 0.071			0.07				16	50	0	5		USGS
Aug 19 1120	369	79	8.0	98	138	7.6	14 / 0.699	5.6 / 0.461	5.1 / 0.222	1.4 / 0.036	0 / 0.000	75 / 1.229		3.5 / 0.099			0.00				16	58	0	45		USGS
Sep 16 1320	972	69	9.3	102	151	7.4	15 / 0.749	6.0 / 0.491	6.7 / 0.291	1.5 / 0.038	0 / 0.000	86 / 1.409	4.0 / 0.083	3.0 / 0.085	0.2 / 0.003	0.1 / 0.005	0.04	18	Al 0.03; Cu 0.01; (a)	97[b]	19	62	0	3		USGS
Oct 14 1045	1,450	64	8.8	92	152	7.3	14 / 0.699	6.2 / 0.509	6.6 / 0.287	1.6 / 0.041	0 / 0.000	81 / 1.328		2.9 / 0.082			0.11				19	60	0	6		USGS
Nov 18 1345	2,470	48	11.4	98	145	7.0	14 / 0.699	7.6 / 0.621	5.9 / 0.257	1.5 / 0.038	0 / 0.000	76 / 1.246		2.7 / 0.076			0.03				16	66	4	20		USGS
Dec 16 1110	3,710	47	11.6	98	120	6.8	12 / 0.599	4.9 / 0.401	4.6 / 0.200	1.1 / 0.028	0 / 0.000	64 / 1.049		2.5 / 0.070			0.06				16	50	0	10	median 62; minimum .23; maximum 7000	USGS

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c Gravimetric determination.

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Feather River at Nicolaus														
1956																										
Jan	Not sampled																									
Feb 6 1030	21,600	43	11.8	95	87.1	7.1	10 / 0.499	2.5 / 0.209	3.3 / 0.144	0.7 / 0.018	0 / 0.000	46 / 0.754		0.4 / 0.011			0.05				17	35	0	100		USGS
Mar 12 0950	17,300 MD	46	12.1	101	93.8	7.3	9.4 / 0.469	3.5 / 0.291	3.6 / 0.157	0.7 / 0.018	0 / 0.000	51 / 0.836		0.8 / 0.023			0.05				17	38	0	25		USGS
Apr 9 1010	16,900 MD	56	12.0	114	78.2	7.2	8.8 / 0.439	2.4 / 0.201	3.1 / 0.135	0.9 / 0.023	0 / 0.000	48 / 0.787		0.0 / 0.000			0.00				17	32	0	15		USGS
May 7 0930	28,200 MD	53	10.8	99	61.1	7.2	6.4 / 0.319	2.4 / 0.201	2.4 / 0.104	0.7 / 0.018	0 / 0.000	37 / 0.606	0.0 / 0.000	1.0 / 0.028	0.0 / 0.000	0.1 / 0.005	0.00	14	Fe 0.09; Al 0.09; Cr+6 0.01; Cu 0.01 PO_4 0.00; (a)	45[b]	16	26	0	80		USGS
June 11 1010	12,500 MD	65	9.3	98	60.6	7.3	7.6 / 0.379	2.2 / 0.183	2.3 / 0.100	0.8 / 0.020	0 / 0.000	40 / 0.656		1.0 / 0.028			0.00				15	28	0	20		USGS
July 16 0900	1,570 MD	76	8.0	95	132	7.5	13 / 0.649	6.2 / 0.511	5.2 / 0.226	1.3 / 0.033	0 / 0.000	77 / 1.262		2.6 / 0.073			0.03				16	53	0	20		USGS
Aug 13 0830	1,420 MD	73	8.8	101	129	7.5	14 / 0.699	4.9 / 0.401	5.1 / 0.222	1.5 / 0.038	-0 / 0.000	74 / 1.213		1.0 / 0.028			0.00				16	55	0	9		USGS
Sept 17 0900	2,540 MD	70	9.2	102	115	6.9	11 / 0.549	5.7 / 0.471	4.6 / 0.200	1.2 / 0.031	0 / 0.000	69 / 1.131	4.8 / 0.100	0.5 / 0.014	0.1 / 0.002	0.1 / 0.005	0.05	15	Cu 0.05; Zn 0.07; PO_4 0.15; (a)	77[b]	16	51	0	2		USGS
Oct 15 0750	3,070 MD	62	9.6	98	121	7.5	12 / 0.599	5.1 / 0.421	4.9 / 0.213	1.1 / 0.028	0 / 0.000	71 / 1.164		1.7 / 0.048			0.00				17	51	0	5		USGS
Nov 21 0900	3,490	46	12.0	100	113	6.8	11 / 0.549	4.7 / 0.387	4.3 / 0.187	1.1 / 0.028	0 / 0.000	68 / 1.115		1.0 / 0.028			0.01				16	47	0	1.0		USGS
Dec 10 0930	2,520	51	12.9	115	124	7.3	12 / 0.60	6.1 / 0.50	4.8 / 0.21	1.3 / 0.03	0 / 0.00	73 / 1.20		2.0 / 0.06			0.03				16	55	0	2	median 62 minimum 6.2 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Feather River near Oroville																			
1955																										
Jan 11 1430	1,980	41	13.4	104	100	7.4	11 / 0.549	3.4 / 0.281	3.8 / 0.165	0.7 / 0.018	0 / 0.000	56 / 0.918		2.0 / 0.056			0.15				16	42	0	0.9		USGS
Feb 8 0940	1,480	40	12.1	93	114	6.8	12 / 0.599	4.4 / 0.361	4.9 / 0.213	0.9 / 0.023	0 / 0.000	64 / 1.049		1.8 / 0.051			0.00				18	48	0	0.7		USGS
Mar 7 1515	2,360	43	12.3	99	112	7.8	13 / 0.649	4.0 / 0.331	5.3 / 0.230	1.1 / 0.028	0 / 0.000	62 / 1.016		2.0 / 0.056			0.00				19	49	0	3		USGS
Apr 4 1530	4,170	46	11.6	97	87.9	7.6	6.1 / 0.304	5.0 / 0.412	3.8 / 0.165	0.7 / 0.018	0 / 0.000	51 / 0.836		0.6 / 0.017			0.16				18	36	0	4		USGS
May 12 1300	9,780	55	10.4	97	59.1	7.4	6.8 / 0.339	2.2 / 0.181	2.3 / 0.100	0.5 / 0.013	0 / 0.000	36 / 0.590	1.7 / 0.035	0.5 / 0.014	0.5 / 0.008	0.0 / 0.000	0.12	14	Al 0.06; (a) PO_4 0.05	47[b]	16	26	0	5		USGS
Jun 16 1250	2,960	64	10.1	105	101	7.4	9.7 / 0.484	3.9 / 0.322	4.2 / 0.183	0.9 / 0.023	0 / 0.000	58 / 0.951		1.3 / 0.037			0.00				18	40	0	1		USGS
Jul 14 1120	2,000	69	9.6	106	112	7.4	12 / 0.599	4.1 / 0.341	4.6 / 0.200	1.2 / 0.031	0 / 0.000	67 / 1.098		1.0 / 0.028			0.01				17	47	0	0.8		USGS
Aug 18 1140	1,830	68	9.2	100	115	7.6	11 / 0.549	6.2 / 0.511	5.0 / 0.217	1.4 / 0.036	0 / 0.000	69 / 1.131		1.8 / 0.051			0.15				17	53	0	10		USGS
Sep 15 1140	1,810	66	9.4	100	129	7.4	14 / 0.699	4.4 / 0.361	5.1 / 0.222	1.4 / 0.036	0 / 0.000	74 / 1.213	5.2 / 0.108	0.7 / 0.020	0.5 / 0.008	0.2 / 0.011	0.00	21	Al 0.09; Cu 0.01; Zn 0.02 (a)	89[b]	17	53	0	1		USGS
Oct 13 1200	1,630	58	10.4	101	123	7.2	11 / 0.549	5.7 / 0.471	5.6 / 0.244	1.4 / 0.036	0 / 0.000	72 / 1.180		0.9 / 0.025			0.05				19	51	0	2		USGS
Nov 17 1215	2,020	45	12.4	102	124	7.4	11 / 0.549	5.9 / 0.483	5.6 / 0.244	1.4 / 0.036	0 / 0.000	71 / 1.164		0.8 / 0.023			0.05				19	52	0	5		USGS
Dec 15 1220	2,920	43	12.6	101	120	6.3	12 / 0.599	4.4 / 0.361	4.6 / 0.200	1.1 / 0.028	0 / 0.000	65 / 1.065		1.5 / 0.042			0.04				17	43	0	2		USGS
																									median 6.2 minimum .045 maximum 1300	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Feather River near Oroville																										
1956																										
Jan 16 1430	45,100	45	12.9	107	57.6	6.8	6.1 / 0.304	1.8 / 0.152	2.3 / 0.100	0.6 / 0.015	0 / 0.000	32 / 0.524		0.0 / 0.000			0.03				18	23	0	100		USGS
Feb 6 1630	8,820	41	13.0	102	81.4	6.8	10 / 0.499	1.7 / 0.139	3.7 / 0.161	0.8 / 0.020	0 / 0.000	46 / 0.754		0.0 / 0.000			0.02				20	32	0	6		USGS
Mar 12 1530	11,700	42	13.1	104	94.9	7.3	10 / 0.499	3.0 / 0.243	4.1 / 0.178	1.1 / 0.028	0 / 0.000	55 / 0.901		0.3 / 0.008			0.01				19	37	0	7		USGS
Apr 9 1550	12,900	51	11.5	103	70.8	6.8	9.4 / 0.469	1.5 / 0.125	3.1 / 0.135	0.8 / 0.020	0 / 0.000	45 / 0.738		0.3 / 0.000			0.00				18	30	0	15		USGS
May 7 1440	17,500	59	11.6	102	72.3	6.9	8.0 / 0.399	2.7 / 0.221	2.6 / 0.113	0.6 / 0.015	0 / 0.000	39 / 0.639	3.0 / 0.062	1.0 / 0.028	0.0 / 0.000	0.1 / 0.005	0.00	15	Fe 0.05; Al 0.14; PO_4 0.55; (a)	52[b]	15	31	0	20		USGS
June 11 1625	7,240	61	10.0	101	67.6	7.3	7.6 / 0.379	2.3 / 0.191	2.6 / 0.113	0.9 / 0.023	0 / 0.000	41 / 0.672		0.6 / 0.017			0.02				16	28	0	2		USGS
July 16 1500	2,970	68	9.5	103	97.6	7.7	10 / 0.499	4.0 / 0.333	4.2 / 0.183	1.1 / 0.028	0 / 0.000	62 / 1.016		0.8 / 0.023			0.00				18	42	0	1		USGS
Aug 13 1420	2,800	67	9.7	105	101	7.7	11 / 0.549	3.8 / 0.311	4.0 / 0.174	1.3 / 0.033	0 / 0.000	62 / 1.016		0.1 / 0.003			0.07				16	43	0	2		USGS
Sept 17 1410	2,710	65	10.0	106	116	7.1	12 / 0.599	5.4 / 0.441	4.8 / 0.209	1.2 / 0.031	0 / 0.000	72 / 1.180	2.0 / 0.000	1.0 / 0.028	0.1 / 0.002	0.1 / 0.005	0.04	21	Al 0.03; Cu 0.02; Zn 0.05; PO_4 0.05; (a)	84[b]	16	52	0	1		USGS
Oct 15 1510	2,950	58	10.7	104	116	7.9	11 / 0.549	5.0 / 0.411	5.0 / 0.218	1.3 / 0.033	0 / 0.000	72 / 1.180		0.7 / 0.020			0.02				18	48	0	1		USGS
Nov 20 1050	3,280	44	13.1	107	109	6.9	10 / 0.499	5.0 / 0.413	4.6 / 0.200	1.2 / 0.031	0 / 0.000	68 / 1.115		0.2 / 0.006			0.02				17	46	0	0.9		USGS
Dec 10 1445	2,770	37	14.0	103	118	7.5	12 / 0.60	5.8 / 0.48	4.8 / 0.21	1.3 / 0.03	0 / 0.00	69 / 1.13		6.0 / 0.17			0.09				16	54	0	2	median 6.2 minimum .62 maximum 62	USGS

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Honcut Creek-South near Bangor																
1955																										
Jan 11 1530	19	45	12.6	103	123	7.4	10 / 0.499	5.1 / 0.421	7.0 / 0.304	0.5 / 0.013	0 / 0.000	60 / 0.983		4.8 / 0.135			0.15				25	46	0	2		USGS
Feb 8 1045	13	42	12.0	95	121	7.4	11 / 0.549	4.3 / 0.351	7.7 / 0.335	0.4 / 0.010	0 / 0.000	61 / 1.000		3.8 / 0.107			0.01				27	45	0	0.6		USGS
Mar 8 0745	16	44	11.0	90	120	7.3	11 / 0.549	4.3 / 0.351	7.6 / 0.330	0.4 / 0.010	0 / 0.000	63 / 1.032		4.0 / 0.113			0.00				27	45	0	2		USGS
Apr 5 0730	.6.4	48	11.7	100	153	7.4	9.5 / 0.474	7.9 / 0.646	11 / 0.478	0.3 / 0.08	0 / 0.000	77 / 1.262		4.8 / 0.135			0.02				30	56	0	1		USGS
May 12 1430	.8.7	73	8.1	93	147	7.6	12 / 0.599	5.8 / 0.481	9.8 / 0.426	0.5 / 0.013	0 / 0.000	78 / 1.278	7.9 / 0.164	4.5 / 0.127	0.1 / 0.002	0.1 / 0.005	0.03	27	Fe 0.02; (a) PO_4 0.00	106[b]	28	54	0	0.9		USGS
Jun 16 1400	1.3	77	8.5	101	206	7.7	18 / 0.898	6.0 / 0.490	17 / 0.739	0.4 / 0.010	0 / 0.000	99 / 1.622		5.9 / 0.166			0.07				35	69	0	0.3		USGS
Jul 14 1240	0.1	84	9.0	116	321	7.4	23 / 1.148	11 / 0.872	29 / 1.261	0.4 / 0.010	0 / 0.000	134 / 2.196		19 / 0.536			0.14				38	101	0	0.8		USGS
Aug	No sample																									
Sep	Dry																									
Oct	Dry																									
Nov 17 1340	5.9	47	11.5	97	273	6.8	18 / 0.898	9.2 / 0.758	23 / 1.000	0.5 / 0.013	0 / 0.000	68 / 1.115		15 / 0.423			0.38				37	83	27	2		USGS
Dec 15 1345	6.8	49	12.5	109	151	6.8	11 / 0.549	6.1 / 0.499	11 / 0.478	0.4 / 0.010	0 / 0.000	63 / 1.033		6.3 / 0.178			0.03				31	52	0	2		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

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REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Honcut Creek-South near Bangor																			
1956																										
Jan 16 1315	386	52	11.5	104	64.7	6.8	6.0 / 0.299	2.7 / 0.225	3.4 / 0.148	0.3 / 0.008	0 / 0.000	35 / 0.574		0.8 / 0.023			0.04				22	26	0	20		USGS
Feb 6 1500	46	50	11.2	99	98.9	7.3	8.5 / 0.424	3.6 / 0.298	5.9 / 0.257	0.2 / 0.005	0 / 0.000	52 / 0.852		2.3 / 0.065			0.00				26	36	0	4		USGS
Mar 12 1420	37	53	10.0	92	103	7.0	8.4 / 0.419	4.4 / 0.361	6.2 / 0.270	0.2 / 0.005	0 / 0.000	56 / 0.918		3.5 / 0.099			0.06				26	39	0	15		USGS
Apr 9 1450	10	68	9.6	106	132	6.8	11 / 0.549	4.5 / 0.371	9.9 / 0.431	0.5 / 0.013	0 / 0.000	72 / 1.180		3.5 / 0.099			0.09				32	46	0	0.6		USGS
May 7 1345	32	60	10.0	100	117	7.0	10 / 0.499	5.5 / 0.453	7.1 / 0.309	0.4 / 0.010	0 / 0.000	68 / 1.115	5.0 / 0.104	2.0 / 0.056	0.0 / 0.000	0.0 / 0.000	0.00	27	Fe 0.04; Al 0.04; Cu 0.01; Zn 0.01; (a) PO_4 0.00	90[b]	24	48	0	3		USGS
June 11 1530	3.0	80	7.8	96	169	7.5	14 / 0.699	7.6 / 0.621	13 / 0.566	0.3 / 0.008	0 / 0.000	87 / 1.426		6.5 / 0.183			0.00				30	66	0	2		USGS
July 16 1400	0.3	85	8.3	108	244	7.5	17 / 0.848	9.6 / 0.788	22 / 0.957	0.5 / 0.013	0 / 0.000	111 / 1.819		1.3 / 0.037			0.17				37	82	0	0.8		USGS
Aug 13 1330	0.1	79	8.9	108	170	7.7	13 / 0.649	6.0 / 0.491	14 / 0.609	0.6 / 0.015	0 / 0.000	89 / 1.459		6.3 / 0.178			0.00				35	57	0	0.4		USGS
Sept 17 1310	0	74	9.1	105	343	7.4	26 / 1.297	14 / 1.183	29 / 1.262	0.8 / 0.020	0 / 0.000	173 / 2.835	17 / 0.354	17 / 0.479	0.9 / 0.015	0.3 / 0.016	0.10	37	Al 0.11; PO_4 0.00; (a)	227[b]	34	124	0	1.0		USGS
Oct 15 1420	0.1	66	9.8	104	238	7.5	14 / 0.699	6.1 / 0.501	26 / 1.131	0.3 / 0.008	0 / 0.000	77 / 1.262		15 / 0.423			0.14				48	60	0	0.3		USGS
Nov 20 1200	2.8	46	13.3	111	201	6.9	15 / 0.75	6.6 / 0.54	16 / 0.70	0.5 / 0.01	0 / 0.00	83 / 1.36		9.5 / 0.27			0.07				35	64	0	0.3		USGS
Dec 10 1355	3.7	43	12.5	101	165	7.3	12 / 0.60	6.1 / 0.50	13 / 0.57	0.4 / 0.01	0 / 0.00	74 / 1.21		7.2 / 0.20			0.00				34	55	0	0.4		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
											Indian Creek near Crescent Mills															
1955																										
Jan	No sample																									
Feb	No sample																									
Mar	No sample																									
Apr	No sample																									
May 10 1050	1,110	51	9.4	84	81.3	7.2	9.3 / 0.464	2.1 / 0.176	3.8 / 0.165	1.1 / 0.028	0 / 0.000	48 / 0.787	2.2 / 0.046	0.5 / 0.014	0.4 / 0.006	0.2 / 0.011	0.03	21	Fe 0.5; Al 0.7; (a) PO_4 0.15	65[b]	20	32	0	40		USGS
Jun 14 1215	214	67	7.5	81	131	7.2	16 / 0.798	3.7 / 0.302	5.8 / 0.252	1.6 / 0.041	0 / 0.000	79 / 1.295		0.00 / 0.000			0.00				18	55	0	15		USGS
Jul 12 1400	20	73	7.7	89	239	6.8	26 / 1.297	8.5 / 0.703	13 / 0.565	2.1 / 0.054	0 / 0.000	140 / 2.294		4.2 / 0.118			0.06				22	100	0	10		USGS
Aug 16 1245	4.4	67	7.0	76	291	6.8	33 / 1.647	8.4 / 0.693	17 / 0.739	1.8 / 0.046	0 / 0.000	174 / 2.852		6.8 / 0.192			0.20				24	117	0	75		USGS
Sep 13 1215	3.0	62	7.5	76	363	6.8	36 / 1.796	12 / 0.984	21 / 0.913	1.6 / 0.041	0 / 0.000	201 / 3.294	10 / 0.208	12 / 0.338	0.3 / 0.005	0.0 / 0.000	0.14	29	Fe 0.01; Al 0.03; Cu 0.01; (a)	221[b]	24	139	0	5		USGS
Oct 11 1045	18	50	9.5	84	236	6.8	25 / 1.248	8.9 / 0.736	12 / 0.522	1.4 / 0.036	0 / 0.000	133 / 2.180		4.9 / 0.138			0.10				21	99	0	15		USGS
Nov 15 1245	49	40	10.0	77	189	6.8	19 / 0.948	6.7 / 0.548	9.8 / 0.426	1.3 / 0.033	0 / 0.000	104 / 1.705		2.6 / 0.073			0.09				22	75	0	20		USGS
Dec	No sample																									
																									median 14.6 minimum .62 maximum 7000+	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million — Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfates (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Indian Creek near Crescent Mills																			
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 1010	2,700	46	9.9	83	71.0	6.8	8.0 / 0.399	2.2 / 0.181	3.5 / 0.152	0.3 / 0.020	0 / 0.000	43 / 0.705	1.0 / 0.021	1.0 / 0.023	0.1 / 0.002	0.2 / 0.011	0.00	23	Fe 0.12; Al 0.03; Cr^{+6} 0.01; Cu 0.01; Zn 0.01; PO_4 0.00; (a)	61[b]	20	29	0	30		USGS
June 14 1030	610	54	8.7	81	89.8	7.1	9.9 / 0.494	2.8 / 0.230	4.1 / 0.178	1.4 / 0.036	0 / 0.000	55 / 0.901		0.7 / 0.020			0.02				19	36	0	10		USGS
July 19 0830	86	68	7.2	79	168	7.0	18 / 0.898	5.6 / 0.462	9.4 / 0.409	1.8 / 0.046	0 / 0.000	102 / 1.672		1.8 / 0.051			0.06				23	68	0	4		USGS
Aug 16 0900	33	60	7.9	79	213	6.9	23 / 1.148	7.9 / 0.652	11 / 0.478	2.5 / 0.064	0 / 0.000	123 / 2.016		2.0 / 0.056			0.00				20	90	0	5		USGS
Sept 20 0850	91	56	8.6	82	170	6.8	17 / 0.848	7.0 / 0.572	9.2 / 0.400	2.4 / 0.061	0 / 0.000	96 / 1.573	9.6 / 0.200	3.5 / 0.099	0.2 / 0.003	0.2 / 0.011	0.13	25	Fe 0.05; Cu 0.03; Zn 0.10; PO_4 0.10; (a)	121[b]	21	71	0	20		USGS
Oct 18 0935	87	48	9.6	83	169	7.0	18 / 0.898	5.5 / 0.454	9.0 / 0.392	1.4 / 0.036	0 / 0.000	100 / 1.639		2.6 / 0.073			0.00				22	68	0	1.0		USGS
Nov	Not sampled																									
Dec	Not sampled																								median 23 minimum .62 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Indian Slough near Brentwood																										
1955																										
Jan 20 1415		48	9.5	81	1180	7.9	69 / 3.44	34 / 2.82	131 / 5.70	3.6 / 0.09	0 / 0.00	259 / 4.24		176 / 4.96			1.7				47	313	101	45		USGS
Feb 16 1440		53	16.1	149	1430	8.1	61 / 3.04	41 / 3.40	176 / 7.65	4.2 / 0.11	0 / 0.00	196 / 3.21	-	237 / 6.68			1.6				54	322	161	8		USGS
Mar 16 1130		53	10.5	98	1110	8.0	9.7 / 0.48	72 / 5.94	114 / 4.96	2.6 / 0.07	0 / 0.00	292 / 4.79		150 / 4.23			1.5				43	321	82	3		USGS
Apr 20 1045		58	7.5	73	396	7.3	22 / 1.098	12 / 0.982	39 / 1.696	2.0 / 0.051	0 / 0.000	92 / 1.508		52 / 1.467			0.24				44	104	29	40		USGS
May 18 1515		78	8.3	100	398	7.9	21 / 1.048	13 / 1.072	39 / 1.696	2.3 / 0.059	0 / 0.000	101 / 1.655	33 / 0.791	50 / 1.410	0.9 / 0.015	0.3 / 0.016	0.27	16	Fe 0.01; Al 0.1; (a) PO_4 0.15	231[b]	44	106	23	40		USGS
Jun 21 1320		77	7.5	89	240	7.4	13 / 0.649	8.9 / 0.731	20 / 0.870	1.4 / 0.036	0 / 0.000	77 / 1.262		24 / 0.677			0.11				38	69	6	20		USGS
Jul 19 1000		77	6.9	82	309	7.0	6.4 / 0.319	16 / 1.281	30 / 1.305	2.5 / 0.064	0 / 0.000	81 / 1.327		36 / 1.015			0.26				44	80	14	70		USGS
Aug 23 1210		80	7.2	89	708	7.3	23 / 1.15	17 / 1.41	86 / 3.74	3.8 / 0.10	0 / 0.00	104 / 1.70		140 / 3.95			0.36				58	128	43	35		USGS
Sep 22 1010		67	7.4	80	783	7.3	27 / 1.35	21 / 1.71	91 / 3.96	4.0 / 0.10	0 / 0.00	124 / 2.03	54 / 1.12	146 / 4.12	3.7 / 0.06	0.4 / 0.02	0.51	18	Fe 0.14; Al 0.04; Cu 0.02; Zn 0.01; (a)	427[b]	56	153	51	40		USGS
Oct 19 1410		62	7.6	77	755	7.3	29 / 1.45	21 / 1.74	92 / 4.00	3.0 / 0.08	0 / 0.00	148 / 2.43		126 / 3.55			0.75				55	160	39	20		USGS
Nov 23 0840		49	9.7	85	1140	7.5	71 / 3.54	36 / 2.96	120 / 5.22	2.4 / 0.06	0 / 0.00	312 / 5.11		148 / 4.17			2.0				44	325	69	120		USGS
Dec 21 1040		57	9.0	86	1110	7.5	75 / 3.74	36 / 2.98	111 / 4.83	2.8 / 0.07	0 / 0.00	309 / 5.06		143 / 4.03			1.8				42	336	83	30		USGS
Not Rated in 1955																									median 23 minimum 2.3 maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Indian Slough near Brentwood																			
1956																										
Jan 18 1030		53	9.9	91	1,110	7.5	71 / 3.54	35 / 2.87	117 / 5.09	2.6 / 0.07	0 / 0.00	294 / 4.82		74 / 2.09			1.8				44	320	79	25		USGS
Feb 16 1120		46	9.0	75	2,220	7.7	102 / 5.09	77 / 6.31	264 / 11.48	2.0 / 0.05	5 / 0.17	350 / 5.74		390 / 11.00			4.1				50	570	275	50		USGS
Mar 21 1045		58	10.2	99	1,220	7.7	70 / 3.49	39 / 3.21	136 / 5.92	2.0 / 0.05	0 / 0.00	320 / 5.24		160 / 4.51			2.2				47	335	73	5		USGS
Apr 18 0830		58	8.6	84	728	7.3	33 / 1.65	21 / 1.70	82 / 3.57	2.7 / 0.07	0 / 0.00	125 / 2.05		121 / 3.41			0.73				51	167	65	25		USGS
May 16 0730		63	8.4	87	189	7.1	11 / 0.549	4.9 / 0.403	18 / 0.783	1.4 / 0.036	0 / 0.000	49 / 0.803	15 / 0.312	22 / 0.620	0.8 / 0.013	0.3 / 0.016	0.25	14	Fe 0.16; Al 0.07; Zn 0.01; PO_4 0.20; (a)	112[b]	44	48	8	45		USGS
June 20 1345		72	6.6	76	249	7.3	13 / 0.649	6.9 / 0.571	27 / 1.174	1.9 / 0.049	0 / 0.000	64 / 1.049		33 / 0.931			0.22				48	61	9	40		USGS
July 24 1040		83	6.5	82	251	6.8	14 / 0.699	6.5 / 0.533	26 / 1.131	1.8 / 0.046	0 / 0.000	65 / 1.065		32 / 0.902			0.24				47	62	9	30		USGS
Aug 22 0800		72	6.7	76	359	7.3	20 / 0.998	9.7 / 0.794	37 / 1.610	1.9 / 0.049	0 / 0.000	92 / 1.508		45 / 1.269			0.36				47	90	15	25		USGS
Sept 13 1030		72	7.7	88	430	6.8	21 / 1.048	11 / 0.932	50 / 2.175	1.8 / 0.046	0 / 0.000	98 / 1.606	34 / 0.708	62 / 1.748	0.9 / 0.015	0.3 / 0.016	0.49	11	Fe 0.07; Al 0.13; Cu 0.01; PO_4 0.15	241[b]	52	99	19	15		USGS
Oct 16 1140		65	13.2	139	853	7.7	38 / 1.90	22 / 1.80	99 / 4.31	2.4 / 0.06	0 / 0.00	170 / 2.79		136 / 3.84			1.1				53	185	46	6		USGS
Nov 20 1250		50	10.9	96	1,240	8.1	78 / 3.89	41 / 3.41	130 / 5.66	2.4 / 0.06	0 / 0.00	330 / 5.41		177 / 4.99			2.1				43	365	94	10		USGS
Dec 18 1345		54	8.3	77	1,150	8.1	65 / 3.24	49 / 4.06	123 / 5.35	1.8 / 0.05	0 / 0.00	295 / 4.84		158 / 4.46			1.9				42	365	123	35		USGS
Not Rated in 1956																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.0/0.00 except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chlorides (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tidal Area																										
												Italian Slough near Mouth														
1955																										
Jan 20 1030		46	8.5	71	701	6.8	42 / 2.10	16 / 1.31	69 / 3.00	4.4 / 0.11	0 / 0.00	75 / 1.23		103 / 2.90			0.44				46	170	108	40			USGS
Feb 21 1545		51	9.5	85	680	7.3	34 / 1.70	17 / 1.38	77 / 3.35	2.9 / 0.07	0 / 0.00	106 / 1.74		104 / 2.93			0.30				52	154	67	7			USGS
Mar 16 0940		57	9.3	90	629	7.4	32 / 1.60	15 / 1.26	69 / 3.00	2.7 / 0.07	0 / 0.00	96 / 1.57		106 / 2.99			0.37				51	143	64	35			USGS
Apr 20 1000		58	9.1	88	383	7.2	25 / 1.248	12 / 0.952	33 / 1.435	2.0 / 0.051	0 / 0.000	84 / 1.377		46 / 1.297			0.09				39	110	41	15			USGS
May 18 1400		72	8.2	94	338	7.4	22 / 1.098	9.8 / 0.802	30 / 1.305	2.1 / 0.054	0 / 0.000	86 / 1.409	33 / 0.687	41 / 1.156	1.0 / 0.016	0.3 / 0.016	0.10	17	Fe 0.2; Al 0.3; PO_4 0.20 (a)	198[b]	40	95	24	30			USGS
Jun 21 1140		76	8.1	95	253	7.4	16 / 0.798	8.0 / 0.662	22 / 0.957	1.7 / 0.043	0 / 0.000	76 / 1.246		27 / 0.761			0.08				39	73	11	45			USGS
Jul 19 0930		73	7.2	83	275	7.3	14 / 0.699	10 / 0.821	25 / 1.087	1.8 / 0.046	0 / 0.000	78 / 1.278		30 / 0.846			0.15				41	76	12	9			USGS
Aug 23 1050		77	6.6	79	556	7.0	20 / 1.00	14 / 1.16	64 / 2.78	3.3 / 0.08	0 / 0.00	93 / 1.52		105 / 2.96			0.28				55	108	32	25			USGS
Sep 22 0915		68	6.5	71	526	7.3	22 / 1.10	12 / 1.01	60 / 2.61	3.2 / 0.08	0 / 0.00	98 / 1.61	29 / 0.60	95 / 2.68	0.6 / 0.01	0.4 / 0.02	0.01	19	Fe 0.16; Cr^{+6} 0.01; Cu 0.01; Zn 0.01; (a)	289[b]	54	106	26	35			USGS
Oct 17 1325		62	6.7	68	447	7.3	20 / 0.998	13 / 1.090	48 / 2.088	2.7 / 0.069	0 / 0.000	112 / 1.836		67 / 1.889			0.23				49	104	12	20			USGS
Nov 22 1445		50	10.1	89	965	7.5	51 / 2.54	22 / 1.78	109 / 4.74	4.4 / 0.11	0 / 0.00	151 / 2.47		175 / 4.94			0.25				52	216	92	80			USGS
Dec 21 0945		53	8.4	77	657	7.1	36 / 1.80	16 / 1.30	75 / 3.26	3.5 / 0.09	0 / 0.00	91 / 1.49		109 / 3.07			0.42				51	155	80	35			USGS
																									median 230 minimum 2.3 maximum 1300	

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

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							Italian Slough near Mouth																			
1956																										
Jan	Not Sampled																									
Feb 16 1030		45	9.8	81	389	7.3	20 / 0.998	10 / 0.838	39 / 1.696	2.1 / 0.054	0 / 0.000	71 / 1.164		59 / 1.664			0.29				47	92	34	20		USGS
Mar 21 0950		56	9.0	86	512	7.1	29 / 1.447	13 / 1.033	51 / 2.218	2.5 / 0.064	0 / 0.000	93 / 1.524		80 / 2.256			0.23				47	124	48	20		USGS
Apr 17 1300		60	9.3	93	347	7.3	18 / 0.898	9.3 / 0.762	36 / 1.566	1.8 / 0.046	0 / 0.000	66 / 1.082		54 / 1.523			0.19				48	83	29	15		USGS
May 15 1240		63	8.7	90	171	7.1	12 / 0.599	3.5 / 0.289	16 / 0.696	1.3 / 0.033	0 / 0.000	44 / 0.721	14 / 0.291	21 / 0.592	0.8 / 0.013	0.3 / 0.016	0.10	13	Fe 0.07; Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.20 (a)	104[b]	43	44	8	20		USGS
June 20 1225		72	7.5	85	203	7.3	13 / 0.649	5.1 / 0.423	19 / 0.826	1.5 / .038	0 / 0.000	56 / 0.918		26 / 0.733			0.27				43	54	8	20		USGS
July 24 1000		80	7.3	90	167	6.8	10 / 0.499	4.2 / 0.349	16 / 0.696	1.6 / 0.041	0 / 0.000	47 / 0.770		21 / 0.592			0.06				44	42	3	55		USGS
Aug 21 1145		75	8.0	93	333	7.3	20 / 0.998	8.7 / 0.714	32 / 1.392	1.8 / 0.046	0 / 0.000	72 / 1.180		47 / 1.325			0.11				44	86	27	10		USGS
Sept 13 1400		74	8.1	94	360	7.0	21 / 1.048	9.0 / 0.740	40 / 1.740	1.9 / 0.049	0 / 0.000	87 / 1.426	26 / 0.541	52 / 1.466	1.0 / 0.016	0.3 / 0.016	0.11	11	Fe 0.03; Al 0.10; PO_4 0.15; (a)	205[b]	49	89	18	10		USGS
Oct 16 1050		66	9.1	97	607	7.0	34 / 1.70	13 / 1.11	64 / 2.78	2.9 / 0.07	0 / 0.00	122 / 2.00		100 / 2.82			0.17				49	141	41	15		USGS
Nov 20 1210		50	8.8	78	665	7.3	36 / 1.80	16 / 1.32	73 / 3.18	3.0 / 0.08	0 / 0.00	106 / 1.74		113 / 3.19			0.25				50	156	69	10		USGS
Dec 18 1300		51	8.6	77	600	6.9	35 / 1.75	15 / 1.23	60 / 2.61	2.4 / 0.06	0 / 0.00	77 / 1.26		92 / 2.59			0.22				46	149	86	15		USGS
																									median 62; minimum 2.3; maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Kaweah River near Three Rivers																			
1955																										
Jan 11 1110	147	40	12.2	94	134	7.3	17 / 0.848	1.7 / 0.142	7.2 / 0.313	1.1 / 0.028	0 / 0.000	68 / 1.114		5.8 / 0.164			0.13				24	50	0			USGS
Feb 10 0910	179	42	12.0	95	116	7.2	15 / 0.749	1.5 / 0.121	6.4 / 0.278	1.1 / 0.028	0 / 0.000	60 / 0.983		4.0 / 0.113			0.01				24	44	0	0.6		USGS
Mar 9 0900	383	51	10.6	97	96.4	7.3	11 / 0.549	1.6 / 0.131	5.0 / 0.217	1.2 / 0.031	0 / 0.000	48 / 0.787		2.0 / 0.056			0.06				23	34	0	0.5		USGS
Apr 12 1540	516	59	11.5	113	58.3	7.3	3.8 / 0.190	2.7 / 0.218	3.3 / 0.143	0.8 / 0.020	0 / 0.000	32 / 0.524		1.6 / 0.045			0.00				25	20	0	4		USGS
May 11 0750	1,380	54	9.9	92	41.0	7.2	4.2 / 0.210	1.3 / 0.106	2.4 / 0.104	0.7 / 0.018	0 / 0.000	24 / 0.393	1.2 / 0.025	0.3 / 0.008	0.1 / 0.002	0.3 / 0.016	0.01	13	Mn 0.005; (a) PO_4 0.05	36[b]	24	16	0	3		USGS
Jun 14 1645	989	58	9.5	92	35.8	7.2	4.7 / 0.235	0.8 / 0.065	1.8 / 0.078	0.4 / 0.010	0 / 0.000	22 / 0.361		0.5 / 0.014			0.00				20	15	0	1		USGS
Jul 13 1700	213	82	8.0	102	85.2	7.1	8.9 / 0.444	1.2 / 0.096	5.5 / 0.239	2.2 / 0.056	0 / 0.000	36 / 0.590		3.8 / 0.107			0.00				29	27	0	6		USGS
Aug 17 0945	50	72	9.3	106	109	7.5	13 / 0.649	1.8 / 0.151	5.7 / 0.248	1.4 / 0.036	0 / 0.000	55 / 0.901		5.5 / 0.155			0.06				23	40	0	0.6		USGS
Sep 13 1600	26	78	8.1	98	134	7.9	16 / 0.798	1.5 / 0.122	7.7 / 0.335	1.7 / 0.043	0 / 0.000	63 / 1.032	3.0 / 0.062	8.5 / 0.240	0.2 / 0.003	0.1 / 0.005	0.02	16	Fe 0.02; Pb 0.01;	86[b]	26	46	0	0.5		USGS
Oct 11 1100	21	60	9.1	91	152	7.5	17 / 0.848	2.5 / 0.204	8.8 / 0.383	1.8 / 0.046	0 / 0.000	71 / 1.164		10 / 0.282			0.03				26	53	0	0.5		USGS
Nov 15 1100	74	46	10.2	85	164	7.5	19 / 0.948	2.4 / 0.200	8.9 / 0.387	1.9 / 0.049	0 / 0.000	80 / 1.311		9.0 / 0.254			0.01				24	57	0	25		USGS
Dec 13 1100	247	46	10.4	87	95.9	7.3	12 / 0.599	1.4 / 0.117	5.4 / 0.235	1.2 / 0.031	0 / 0.000	48 / 0.787		4.0 / 0.113			0.03				24	36	0	2	median 2.3 minimum 0.23 maximum 2400	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Kaweah River near Three Rivers																										
1956																										
Jan 10 1115	1,070	44	11.4	93	78.1	7.3	9.8 / 0.489	1.3 / 0.111	3.4 / 0.148	1.4 / 0.036	0 / 0.000	42 / 0.688		1.8 / 0.051			0.02				19	34	0	7		USGS
Feb 7 1020	924	40	12.4	95	92.1	7.3	13 / 0.649	0.6 / 0.047	4.4 / 0.191	1.4 / 0.036	0 / 0.000	50 / 0.820		1.2 / 0.034			0.05				21	35	0	2		USGS
Mar 13 1130	635	47	11.8	100	81.9	7.3	11 / 0.549	1.3 / 0.111	3.8 / 0.165	1.5 / 0.038	0 / 0.000	46 / 0.754		1.8 / 0.051			0.05				19	33	0	1		USGS
Apr 10 1205	1,180	45	10.8	89	51.0	7.5	6.8 / 0.339	0.7 / 0.061	2.8 / 0.122	1.2 / 0.031	0 / 0.000	33 / 0.541		0.7 / 0.020			0.04				22	26	0	5		USGS
May 8 1100	1,580	52	10.6	96	46.0	7.3	5.9 / 0.294	0.8 / 0.066	2.5 / 0.109	0.8 / 0.020	0 / 0.000	30 / 0.492	0.0 / 0.000	0.3 / 0.008	0.0 / 0.000	0.0 / 0.000	0.00	13	Fe 0.03; Al 0.02; Cu 0.01; (a) PO_4 0.00	38[b]	22	18	0	5		USGS
June 12 1200	1,790	61	9.8	99	32.3	6.8	4.6 / 0.230	0.6 / 0.050	1.4 / 0.061	0.7 / 0.018	0 / 0.000	21 / 0.344		0.1 / 0.003			0.06				17	14	0	5		USGS
July 17 1030	478	70	9.1	91	57.4	6.8	8.0 / 0.399	0.4 / 0.031	3.1 / 0.135	1.2 / 0.031	0 / 0.000	33 / 0.541		0.2 / 0.006			0.04				23	22	0	2		USGS
Aug 14 1010	154	71	9.6	108	84.4	6.8	11 / 0.549	1.1 / 0.093	4.1 / 0.178	1.8 / 0.046	0 / 0.000	49 / 0.803		1.8 / 0.051			0.00				21	32	0	0.3		USGS
Sept 18 1030	54	67	9.7	104	123	7.7	16 / 0.798	1.3 / 0.146	6.1 / 0.265	2.4 / 0.061	0 / 0.000	66 / 1.082	1.9 / 0.040	4.7 / 0.133	0.4 / 0.006	0.2 / 0.011	0.00	15	Al 0.01; (a)	82[b]	21	47	0	2		USGS
Oct 9 1110	78	64	9.9	104	129	7.9	17 / 0.85	2.2 / 0.18	5.9 / 0.26	2.0 / 0.05	0 / 0.00	71 / 1.16		4.6 / 0.13			0.06				19	52	0	3		USGS
Nov 14 1030	76	51	11.1	99	134	7.7	17 / 0.85	2.3 / 0.19	6.4 / 0.28	1.9 / 0.05	0 / 0.00	75 / 1.23		5.7 / 0.16			0.00				20	52	0	1.4		USGS
Dec 11 1015	82	42	13.1	104	146	7.5	18 / 0.90	2.2 / 0.26	7.7 / 0.33	1.8 / 0.05	0 / 0.00	77 / 1.26		8.5 / 0.24			0.03				21	58	0	1	median 2.3 minimum .06 maximum 62	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Mineral constituents in parts per million; equivalents per million

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Kern River near Bakersfield																										
1955																										
Jan 11 0755	302	41	11.5	90	205	7.3	19 / 0.948	2.6 / 0.212	20 / 0.870	1.8 / 0.046	0 / 0.000	86 / 1.409		11 / 0.310			0.29				42	58	0	1		USGS
Feb 10 1230	321	49	11.5	100	227	7.6	20 / 0.998	3.4 / 0.282	23 / 1.000	2.1 / 0.054	0 / 0.000	100 / 1.639		12 / 0.338			0.15				43	64	0	0.6		USGS
Mar 9 1300	418	61	9.7	99	201	7.8	19 / 0.948	2.3 / 0.192	19 / 0.826	1.7 / 0.043	0 / 0.000	88 / 1.442		9.5 / 0.268			0.13				41	57	0	4		USGS
Apr 13 1030	643	57	11.0	106	199	7.7	9.7 / 0.484	7.9 / 0.648	18 / 0.783	2.1 / 0.054	0 / 0.000	91 / 1.491		8.2 / 0.231			0.16				40	57	0	2		USGS
May 11 1130	557	66	8.6	92	125	7.5	8.8 / 0.439	3.4 / 0.281	12 / 0.522	1.4 / 0.036	0 / 0.000	58 / 0.951	8.7 / 0.181	3.6 / 0.102	0.1 / 0.002	0.3 / 0.016	0.06	26	Mn 0.01; (a) PO_4 0.05; Pb 0.005	93[b]	41	36	0	7		USGS
Jun 15 1015	1,258	65	9.4	99	71.5	7.4	7.8 / 0.389	1.1 / 0.091	6.0 / 0.261	0.8 / 0.020	0 / 0.000	35 / 0.574		2.0 / 0.056			0.07				34	24	0	4		USGS
Jul 14 1530	787	76			100		8.9 / 0.444	1.7 / 0.136	9.0 / 0.391	1.2 / 0.031	0 / 0.000	46 / 0.754		4.5 / 0.127			0.07				39	29	0	2		USGS
Aug 17 1350	478	79	7.8	95	139	7.4	11 / 0.549	2.3 / 0.191	13 / 0.565	1.6 / 0.041	0 / 0.000	63 / 1.032		6.5 / 0.183			0.04				42	37	0	0.3		USGS
Sep 14 1330	274	77	7.6	91	200	7.5	18 / 0.898	2.7 / 0.222	17 / 0.739	2.1 / 0.054	0 / 0.000	84 / 1.377	13 / 0.271	11 / 0.310	0.2 / 0.003	0.4 / 0.021	0.18	11	Fe 0.02; Al 0.04; Cu 0.01; Pb 0.01; Zn 0.04; As 0.01 (a)	117[b]	39	56	0	1		USGS
Oct 11 1500	144	68	8.4	92	243	7.7	18 / 0.898	3.3 / 0.274	26 / 1.131	2.3 / 0.059	0 / 0.000	86 / 1.410		15 / 0.423			0.23				48	59	0	0.6		USGS
Nov 15 1500	281	49	10.4	91	251	7.7	22 / 1.098	3.4 / 0.282	25 / 1.088	3.2 / 0.082	0 / 0.000	106 / 1.737		14 / 0.395			0.24				43	69	0	30		USGS
Dec 9 1440	348	48	10.8	93	189	7.7	17 / 0.848	3.6 / 0.292	17 / 0.740	2.3 / 0.059	0 / 0.000	84 / 1.377		7.2 / 0.203			0.20				38	57	0	30		USGS
																									median 5.6 minimum .06 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Kern River near Bakersfield																										
1956																										
Jan 10 1500	618	43	11.9	95	125	7.3	11 / 0.549	2.0 / 0.161	11 / 0.478	1.4 / 0.036	0 / 0.000	56 / 0.918		5.8 / 0.164			0.11				39	36	0	6		USGS
Feb 7 1500	608	47	11.3	96	145	7.5	14 / 0.699	1.9 / 0.157	12 / 0.522	2.3 / 0.059	0 / 0.000	66 / 1.082		5.1 / 0.144			0.16				36	43	0	35		USGS
Mar 13 1540	1,176	52	11.6	105	139	7.5	13 / 0.649	2.3 / 0.191	12 / 0.522	2.1 / 0.054	0 / 0.000	65 / 1.065		5.5 / 0.155			0.30				37	42	0	35		USGS
Apr 10 1515	711	58	9.8	95	146	7.7	14 / 0.699	2.1 / 0.171	13 / 0.566	2.0 / 0.051	0 / 0.000	72 / 1.180		6.0 / 0.169			0.21				38	44	0	7		USGS
May 8 1445	1,396	62	9.6	98	119	7.7	11 / 0.549	2.0 / 0.163	10 / 0.435	1.7 / 0.043	0 / 0.000	62 / 1.016	3.6 / 0.075	4.4 / 0.124	0.3 / 0.005	0.0 / 0.000	0.08	16	Fe 0.09; Al 0.07; Cu 0.01; Zn 0.01; PO_4 0.06; (a)	80[b]	37	36	0	8		USGS
June 12 1510	1,683	70	9.3	104	91.1	6.9	9.7 / 0.484	0.7 / 0.058	7.8 / 0.339	1.5 / 0.038	0 / 0.000	47 / 0.770		2.5 / 0.070			0.15				37	27	0	15		USGS
July 17 1420	1,974	72	8.9	101	82.8	7.0	8.6 / 0.429	0.9 / 0.077	6.8 / 0.296	1.3 / 0.033	0 / 0.000	43 / 0.705		2.1 / 0.059			0.10				35	25	0	6		USGS
Aug 14 1330	2,002	74	9.0	104	89.8	6.9	8.6 / 0.429	1.5 / 0.125	7.6 / 0.331	1.6 / 0.041	0 / 0.000	47 / 0.770		2.5 / 0.070			0.00				36	28	0	0.8		USGS
Sept 18 1345	835	72	9.1	103	116	7.7	11 / 0.549	1.8 / 0.147	10 / 0.435	1.9 / 0.049	0 / 0.000	59 / 0.967	0.0 / 0.000	5.0 / 0.141	1.1 / 0.018	0.4 / 0.021	0.02	10	Al 0.02; Cu 0.01; (a)	70[b]	37	35	0	2		USGS
Oct 9 1440	635	70	8.9	99	400	7.7	64 / 3.19	2.2 / 0.18	13 / 0.57	2.3 / 0.06	0 / 0.00	74 / 1.21		5.8 / 0.16			0.13				14	168	107	95		USGS
Nov 14 1140	310	56	10.0	95	187	7.7	18 / 0.90	2.3 / 0.19	15 / 0.65	2.4 / 0.06	0 / 0.00	77 / 1.26		1.1 / 0.03			0.07				36	54	0	10		USGS
Dec 11 1445	260	49	11.7	102	201	7.6	19 / 0.95	2.3 / 0.19	18 / 0.78	2.2 / 0.06	0 / 0.00	82 / 1.34		13 / 0.37			0.16				39	57	0	5	median 5.6 minimum .23 maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Kern River below Isabella Dam																			
1955																										
Sep 14 1015	135	70	7.0	78	184	7.7	20 / 0.998	2.1 / 0.170	14 / 0.609	2.9 / 0.074	0 / 0.000	99 / 1.622	6.8 / 0.142	2.3 / 0.065	0.2 / 0.003	0.4 / 0.021	0.20	7.9	Fe 0.03; As 0.01; (a)	106[b]	33	58	0	0.8		USGS
Oct 11 0900	16	63	8.1	94	233		24 / 1.198	3.8 / 0.310	18 / 0.783	3.6 / 0.092	0 / 0.000	121 / 1.983		4.7 / 0.133			0.26				33	75	0	3		USGS
Nov 28 1100	13	45	10.6	88	277		29 / 1.447	5.0 / 0.413	24 / 1.044	4.0 / 0.102	0 / 0.000	148 / 2.426		9.0 / 0.254			0.32				35	93	0	5		USGS
Dec	Not sampled																								median 1.51 minimum .21 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

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Kern River below Isabella Dam																										
1956																										
Jan 5 1100	3.2	38			101	7.5*	9.1 / 0.454	1.8 / 0.146	8.4 / 0.365	1.1 / 0.028	0 / 0.000	49 / 0.803		2.0 / 0.056			0.12				37	30	0	10		USGS
Feb 25 1300	202	45	10.2	84	116	7.9*	11 / 0.549	2.6 / 0.211	9.4 / 0.409	2.0 / 0.051	0 / 0.000	57 / 0.934		4.0 / 0.113			0.12				34	38	0	15		USGS
Mar 21 1300	389	49			154	7.7*	16 / 0.798	0.3 / 0.022	11 / 0.478	2.2 / 0.056	0 / 0.000	71 / 1.164		4.0 / 0.113			0.19				35	41	0	40		USGS
Apr 19 1130	111	54	9.0	83	127	7.4*	12 / 0.599	2.0 / 0.161	10 / 0.435	1.9 / 0.049	0 / 0.000	63 / 1.033		3.5 / 0.099			0.09				35	38	0	3		USGS
May 14 1700	896	58	8.3	81	103	7.3*	9.9 / 0.494	2.1 / 0.174	8.7 / 0.378	1.5 / 0.038	0 / 0.000	56 / 0.918	6.0 / 0.125	2.7 / 0.076	0.3 / 0.005	0.0 / 0.000	0.11	17	Fe 0.05; Al 0.06; Cu 0.01; PO_4 0.10; (a)	76[b]	35	33	0	2		USGS
June 22 1000	1,590	63	8.4	87	76.6	6.9*	8.4 / 0.419	0.7 / 0.059	6.0 / 0.261	1.3 / 0.033	0 / 0.000	41 / 0.672		1.2 / 0.034			0.11				34	24	0	2		USGS
July 20 0845	1,340	66	7.9	84	66.4	7.1*	7.6 / 0.379	0.6 / 0.051	5.0 / 0.218	1.1 / 0.028	0 / 0.000	36 / 0.590		0.7 / 0.020			0.09				32	22	0	2		USGS
Aug 15 1350	1,440	67	8.0	86	80.6	6.9*	8.8 / 0.439	0.7 / 0.061	6.2 / 0.270	1.3 / 0.033	0 / 0.000	42 / 0.688		2.0 / 0.056			0.06				34	25	0	2		USGS
Sept 17 1000	294	70			98.9	7.2*	11 / 0.549	0.9 / 0.075	7.9 / 0.344	1.9 / 0.049	0 / 0.000	53 / 0.869	1.9 / 0.040	2.4 / 0.068	1.3 / 0.021	0.4 / 0.021	0.02	10	Fe 0.03; Al 0.02; Cu 0.01; (a)	64[b]	34	31	0	2		USGS
Oct 16 1100	6.2	64	8.9	93	123	7.1*	13 / 0.65	1.9 / 0.16	10 / 0.44	2.0 / 0.05	0 / 0.00	66 / 1.08		4.0 / 0.11			0.11				34	40	0	0.6		USGS
Nov 14 1500	2.5	54	10.0	93	134	7.6*	13 / 0.65	1.9 / 0.16	11 / 0.48	1.9 / 0.05	0 / 0.00	70 / 1.15		5.0 / 0.14			0.02				36	40	0	1.9		USGS
Dec 13 1615	.7.	51	9.6	86	146	7.5*	14 / 0.70	2.9 / 0.24	12 / 0.52	2.0 / 0.05	0 / 0.00	77 / 1.26		5.0 / 0.14			0.07				34	47	0	1	median 2.3 minimum .045 - maximum 2400	USGS

* Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept. of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Kern River near Kernville																										
1955																										
Sep 19 0930	148				156		14 / 0.699	2.0 / 0.161	15 / 0.652	1.6 / 0.041	0 / 0.000	69 / 1.131	11 / 0.229	4.0 / 0.113	0.4 / 0.006	0.3 / 0.016	0.20	17	Fe 0.01; Al 0.03; Cu 0.01; (a)	100[b]	42	43	0	0.8		USGS
Oct 10 1500	132	60	9.2	92	167		14 / 0.699	2.6 / 0.217	17 / 0.740	1.8 / 0.046	0 / 0.000	73 / 1.196		6.9 / 0.195			0.19				43	46	0	1		USGS
Nov.28 1200	202	43	11.0	98	168		15 / 0.748	1.8 / 0.152	17 / 0.740	1.8 / 0.046	0 / 0.000	72 / 1.180		7.5 / 0.212			0.19				44	45	0	1		USGS
Dec	Not sampled																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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							equivalents per million																			
Kern River near Kernville																										
1956																										
Jan 12 1100	680	44	10.1	82	106	7.4*	9.4 / 0.469	2.0 / 0.167	8.8 / 0.383	1.2 / 0.031	0 / 0.000	52 / 0.852		2.5 / 0.070			0.03				36	32	0	4		USGS
Feb 25 1200	625	40	11.1	86	117	7.3*	11 / 0.549	2.1 / 0.171	11 / 0.478	1.2 / 0.031	0 / 0.000	58 / 0.951		4.5 / 0.127			0.04				39	36	0	5		USGS
Mar 21 1100	908	44			101	7.5*	6.4 / 0.319	3.9 / 0.321	9.0 / 0.392	1.3 / 0.033	0 / 0.000	56 / 0.918		2.5 / 0.070			0.11				37	32	0	15		USGS
Apr 19 1100	1,220	50	10.0	88	83.2	7.4*	7.8 / 0.389	1.1 / 0.091	7.5 / 0.326	1.2 / 0.031	0 / 0.000	44 / 0.721		1.6 / 0.045			0.06				39	24	0	3		USGS
May 14 1500	1,530	54	9.6	89	64.8	7.3*	7.0 / 0.349	1.5 / 0.121	5.4 / 0.235	1.0 / 0.026	0 / 0.000	38 / 0.623	3.6 / 0.075	1.1 / 0.031	0.1 / 0.002	0.0 / 0.000	0.03	16	Fe 0.05; Al 0.03; Cu 0.01; PO_4 0.05; (a)	55[b]	32	23	0	3		USGS
June 22 0900	2,410	60	8.5	85	40.2	6.8*	4.5 / 0.225	0.3 / 0.025	2.9 / 0.126	0.7 / 0.018	0 / 0.000	23 / 0.377		0.3 / 0.008			0.10				32	12	0	5		USGS
July 20 1000	1,410	64	9.2	96	50.5	7.0*	5.6 / 0.279	0.6 / 0.049	4.0 / 0.174	0.7 / 0.018	0 / 0.000	28 / 0.459		1.0 / 0.028			0.07				33	16	0	3		USGS
Aug 15 1300	545	63	8.9	92	75.3	6.7*	8.0 / 0.399	0.5 / 0.045	6.2 / 0.270	1.3 / 0.033	0 / 0.000	34 / 0.557		2.0 / 0.056			0.06				36	22	0	0.7		USGS
Sept 17 0900	258	60	8.1	81	112	7.1*	9.6 / 0.479	1.6 / 0.133	11 / 0.478	1.2 / 0.031	0 / 0.000	53 / 0.869	7.7 / 0.160	3.6 / 0.102	0.1 / 0.002	0.0 / 0.000	0.06	15	Fe 0.01; Al 0.05; Cu 0.01; Zn 0.01; PO_4 0.00; (a)	76[b]	43	31	0	0.7		USGS
Oct 16 1015	245	52	9.9	90	123	7.3*	11 / 0.55	1.6 / 0.13	12 / 0.52	1.4 / 0.04	0 / 0.00	60 / 0.98		5.0 / 0.14			0.16				42	34	0	0.4		USGS
Nov 14 1430	223	47	10.3	87	136	7.4*	12 / 0.60	1.9 / 0.16	13 / 0.57	1.4 / 0.04	0 / 0.00	67 / 1.10		6.0 / 0.17			0.06				42	38	0	0.8		USGS
Dec 13 1530	240	44	10.6	87	142	7.9*	13 / 0.65	2.3 / 0.19	14 / 0.61	1.5 / 0.04	0 / 0.00	74 / 1.21		5.5 / 0.16			0.09				41	42	0	1	median 2.3 minimum .21 maximum 230	USGS

* Lab pH

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b Determined by addition of analysed constituents

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Kings River Below North Fork																										
1955																										
Sep 13 1200	176	69	7.4	81	59.3	7.1	6.4 / 0.319	0.8 / 0.065	3.6 / 0.157	1.0 / 0.026	0 / 0.000	26 / 0.426	4.8 / 0.100	1.6 / 0.045	0.00 / 0.000	0.2 / 0.011	0.00	11	Fe 0.02; Cu 0.01;	42[b]	28	19	0	0.9		USGS
Oct 11 1200	136	66	9.6	103	68.1		6.7 / 0.334	1.2 / 0.098	4.4 / 0.191	1.1 / 0.028	0 / 0.000	28 / 0.459		1.3 / 0.037			0.04				29	22	0	2		USGS
Nov 9 1400	132	60	9.6	96	71.7		7.6 / 0.379	0.5 / 0.041	4.5 / 0.196	1.2 / 0.031	0 / 0.000	30 / 0.492		3.8 / 0.107			0.00				30	21	0	6		USGS
Dec 9 1330	1,470	50	10.3	91	51.2		6.0 / 0.229	1.0 / 0.081	2.7 / 0.117	1.0 / 0.026	0 / 0.000	23 / 0.377		0.5 / 0.014			0.04				22	19	0	15	median 1.46 minimum .23 maximum 21	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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Kings River Below North Fork																										
1956																										
Jan 11 1330	1,860	46	12.0	100	44.0	7.6*	5.4 / 0.269	0.1 / 0.011	2.8 / 0.122	0.9 / 0.023	0 / 0.000	22 / 0.361		0.0 / 0.000			0.08				29	14	0	3		USGS
Feb 10 1430	1,500	48	10.3	89	50.3	7.7*	5.6 / 0.279	1.0 / 0.081	3.1 / 0.135	0.9 / 0.023	0 / 0.000	27 / 0.443		1.5 / 0.042			0.01				26	18	0	4		USGS
Mar 9 1330	1,360	52	12.1	110	48.4	7.5*	6.0 / 0.299	0.5 / 0.039	3.1 / 0.135	1.0 / 0.026	0 / 0.000	28 / 0.459		0.2 / 0.006			0.00				27	17	0	2		USGS
Apr 13 1100	3,200	52	11.6	105	33.7	7.0*	3.8 / 0.190	0.5 / 0.042	2.2 / 0.096	0.8 / 0.020	0 / 0.000	20 / 0.328		0.4 / 0.011			0.01				28	12	0	2		USGS
May 11 1300	4,590	50	10.3	91	29.1	7.1*	3.0 / 0.150	0.9 / 0.070	2.3 / 0.100	1.3 / 0.033	0 / 0.000	20 / 0.328	1.4 / 0.029	0.2 / 0.006	0.2 / 0.003	0.0 / 0.000	0.00	11	Fe 0.02; Al 0.05; Cu 0.01; IO_4 0.04; (a)	30[b]	28	11	0	2		USGS
June 7 1300	9,270	52	10.2	92	18.2	6.9*	2.1 / 0.105	0.3 / 0.025	1.0 / 0.044	0.5 / 0.013	0 / 0.000	12 / 0.197		0.0 / 0.000			0.09				24	6	0	8		USGS
July 11 1400	4,070	64	9.7	101	19.1	6.5*	2.2 / 0.110	0.2 / 0.020	1.0 / 0.044	0.7 / 0.018	0 / 0.000	11 / 0.180		0.1 / 0.003			0.00				23	6	0	0.4		USGS
Aug 8 1230	1,380	68	9.6	105	30.0	6.6*	3.2 / 0.160	0.5 / 0.044	1.6 / 0.070	0.8 / 0.020	0 / 0.000	17 / 0.279		0.1 / 0.003			0.00				24	10	0	0.3		USGS
Sept 18 1330	343	65	9.8	103	49.5	7.2*	6.4 / 0.319	0.5 / 0.041	2.7 / 0.117	1.0 / 0.026	0 / 0.000	26 / 0.426	1.9 / 0.040	1.0 / 0.028	0.3 / 0.005	0.3 / 0.016	0.00	10		37[b]	23	18	0	0.4		USGS
Oct 11 1200	391	61	18.0	181	52.6	6.9*	6.3 / 0.31	0.5 / 0.04	2.8 / 0.12	1.0 / 0.03	0 / 0.00	24 / 0.39		1.5 / 0.04			0.04				24	18	0	1		USGS
Nov 28 1130	234	48	11.9	102	64.6	6.9*	7.2 / 0.36	0.9 / 0.07	3.9 / 0.17	1.1 / 0.03	0 / 0.00	33 / 0.54		2.4 / 0.07			0.03				27	21	0	2		USGS
Dec 28 1515	222	41	13.7	107	65.3	7.1*	6.0 / 0.30	1.9 / 0.16	4.2 / 0.18	1.0 / 0.03	0 / 0.00	29 / 0.48		2.5 / 0.07			0.02				27	23	0	1	median 6.2 minimum .06 maximum 2400	USGS

* Lab pH

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							equivalents per million																			
							Kings River below Peoples Weir (near Kingsburg)																			
1955																										
Jan 10 1600	35	46	10.3	86	212	7.3	22 / 1.098	5.6 / 0.462	14 / 0.609	2.1 / 0.054	0 / 0.000	109 / 1.786		7.0 / 0.197			0.17				27	78	0	4		USGS
Feb 10 1600	94	56	9.8	93	207	7.8	19 / 0.948	8.7 / 0.712	13 / 0.565	2.0 / 0.051	0 / 0.000	108 / 1.770		5.5 / 0.155			0.06				25	83	0	1		USGS
Mar 9 1530	250	61	9.1	91	103	7.2	9.6 / 0.479	3.4 / 0.281	5.9 / 0.257	1.4 / 0.036	0 / 0.000	50 / 0.819		3.5 / 0.099			0.04				24	38	0	2		USGS
Apr 13 1330	73	65	8.8	93	159	7.4	11 / 0.549	7.4 / 0.611	10 / 0.435	1.9 / 0.049	0 / 0.000	86 / 1.409		4.8 / 0.135			0.05				26	58	0	2		USGS
May 10 1550	140	73	8.4	97	116	7.3	11 / 0.549	3.3 / 0.271	7.2 / 0.313	1.5 / 0.038	0 / 0.000	59 / 0.967	5.1 / 0.106	3.8 / 0.107	0.1 / 0.018	0.1 / 0.005	0.04	16	PO_4 0.10	78[b]	27	41	0	1		USGS
Jun 15 1350	1,090	64	9.0	94	35.8	6.8	4.0 / 0.200	1.2 / 0.100	2.5 / 0.109	1.0 / 0.026	0 / 0.000	20 / 0.328		0.5 / 0.014			0.02				25	15	0	2		USGS
Jul 14 0945	692	73	8.8	101	48.7	7.0	4.0 / 0.200	0.9 / 0.070	3.3 / 0.143	1.1 / 0.028	0 / 0.000	18 / 0.295		1.8 / 0.051			0.00				32	14	0	7		USGS
Aug 17 0815	1,096	74	7.8	90	40.7	7.2	4.2 / 0.210	1.0 / 0.080	2.2 / 0.096	0.8 / 0.020	0 / 0.000	21 / 0.344		0.5 / 0.014			0.11				24	14	0	2		USGS
Sep 14 1720	377	68	7.9	86	43.9	6.9	4.7 / 0.235	1.1 / 0.093	2.5 / 0.109	0.7 / 0.018	0 / 0.000	23 / 0.377	2.6 / 0.054	0.5 / 0.014	0.3 / 0.005	0.2 / 0.011	0.01	7.8	Fe 0.13; Cu 0.01 (a)	32[b]	24	16	0	2.0		USGS
Oct 11 0900	13	62	6.4	65	106	7.1	9.9 / 0.494	4.6 / 0.382	6.5 / 0.283	1.5 / 0.038	0 / 0.000	56 / 0.918		2.3 / 0.065			0.04				24	44	0	2		USGS
Nov 15 0915	69	49	9.7	85	234	7.3	20 / 0.998	6.7 / 0.554	16 / 0.696	3.2 / 0.082	0 / 0.000	118 / 1.934		8.0 / 0.226			0.00				30	78	0	30		USGS
Dec 13 1500	53	50	9.9	87	228	7.3	21 / 1.048	7.5 / 0.620	14 / 0.609	3.8 / 0.097	0 / 0.000	112 / 1.836		6.4 / 0.180			0.04				26	83	0	4	median 96 minimum 0.13 maximum 7000+	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{ooo}$ except as shown.

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e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Kings River below Peoples Weir (Near Kingsburg)																										
1956																										
Jan 11 0950	54	50	10.2	90	232	7.3	21 / 1.048	8.7 / 0.712	14 / 0.609	3.0 / 0.077	0 / 0.000	119 / 1.950		5.2 / 0.147			0.00				25	88	0	7		USGS
Feb 7 0840	850	45	11.5	95	71.5	7.3	8.0 / 0.399	1.4 / 0.117	3.7 / 0.161	1.7 / 0.043	0 / 0.000	36 / 0.590		0.1 / 0.003			0.07				22	26	0	35		USGS
Mar 14 1000	1,500	49	11.2	98	64.5	7.1	7.6 / 0.379	1.2 / 0.101	2.8 / 0.122	1.6 / 0.041	0 / 0.000	34 / 0.557		0.8 / 0.023			0.02				19	24	0	20		USGS
Apr 11 0940	380	55	9.9	93	104	7.1	10 / 0.499	2.9 / 0.241	6.2 / 0.270	1.8 / 0.046	0 / 0.000	59 / 0.967		1.9 / 0.054			0.06				26	37	0	9		USGS
May 6 0915	805	57	9.7	93	61.5	7.1	6.4 / 0.319	2.2 / 0.181	3.5 / 0.152	1.3 / 0.033	0 / 0.000	25 / 0.574	4.0 / 0.083	1.2 / 0.034	0.3 / 0.005	0.0 / 0.000	0.00	11	Fe 0.06; Cu 0.01; FO_4 0.10; (a)	47[b]	22	25	0	12		USGS
June 12 1030	2,775	61	9.2	99	35.3	6.8	4.5 / 0.225	0.7 / 0.055	2.0 / 0.087	0.9 / 0.023	0 / 0.000	22 / 0.361		0.1 / 0.003			0.12				22	14	0	6		USGS
July 17 0850	2,520	58	10.0	98	37.1	6.8	4.5 / 0.225	0.6 / 0.051	2.0 / 0.087	0.8 / 0.020	0 / 0.000	22 / 0.361		0.1 / 0.003			0.06				23	14	0	6		USGS
Aug 14 0850	2,650	60	9.9	99	27.5	6.8	3.0 / 0.150	0.5 / 0.040	1.5 / 0.065	0.8 / 0.020	0 / 0.000	16 / 0.262		0.1 / 0.003			0.00				24	10	0	0.8		USGS
Sept 18 0910	610	66	9.2	98	51.4	7.1	6.0 / 0.299	1.0 / 0.081	2.8 / 0.122	0.8 / 0.020	0 / 0.000	29 / 0.475	0.0 / 0.000	1.0 / 0.028	0.8 / 0.013	0.3 / 0.016	0.00	9.0	Al 0.01; Cu 0.01; (a)	36[b]	23	19	C	3		USGS
Oct 9 1000	108	65	9.0	95	107	7.3	9.9 / 0.49	2.3 / 0.27	6.5 / 0.28	1.4 / 0.04	0 / 0.00	57 / 0.93		3.0 / 0.08			0.02				26	38	0	0.8		USGS
Nov 14 0910	3.0	56	6.6	63	191	7.1	18 / 0.90	5.5 / 0.45	12 / 0.52	1.9 / 0.05	0 / 0.00	101 / 1.66		6.1 / 0.17			0.10				27	67	0	3		USGS
Dec 11 0830	4.0	46	10.1	95	232	7.3	22 / 1.10	7.5 / 0.62	16 / 0.70	2.3 / 0.06	0 / 0.00	124 / 2.03		8.5 / 0.24			0.04				28	86	0	2	median 23 minimum .23 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							.. Kings River below Pine Flat Dam																			
1955																										
Sep 13 0900	986	59	9.8	97	28.1	7.1	3.4 / 0.170	0.4 / 0.030	1.3 / 0.057	0.5 / 0.013	0 / 0.000	16 / 0.262	0.0 / 0.000	0.5 / 0.014	0.4 / 0.006	0.0 / 0.000	0.03	7.7	Fe 0.13; (a)	22[b]	21	10	0	2		USGS
Oct 11 1330	62	71	8.1	91	62.9		6.4 / 0.319	1.6 / 0.133	2.3 / 0.144	1.1 / 0.028	0 / 0.000	29 / 0.475	3.2 / 0.067	1.0 / 0.028			0.03	10	Fe 0.06; (a)		23	23	0	3		USGS
Nov 9 1600	11	64	9.9	103	62.3		6.6 / 0.329	1.1 / 0.091	3.3 / 0.144	1.1 / 0.028	0 / 0.000	28 / 0.459		2.2 / 0.062			0.02				24	21	0	15		USGS
Dec 9 1540	54	55	11.1	104	62.0		6.6 / 0.329	1.3 / 0.107	3.8 / 0.165	1.3 / 0.033	0 / 0.000	28 / 0.459		2.5 / 0.070			0.00				26	22	0	4	median 116 minimum .05 maximum 230	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

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REGION 5

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Kings River below Pine Flat Dam																										
1956																										
Jan 11 1530	70	46	10.5	88	50.8	6.7*	6.4 / 0.319	0.7 / 0.057	1.8 / 0.078	2.1 / 0.054	0 / 0.000	25 / 0.410		0.0 / 0.000			0.06				15	19	0	230		USGS
Feb 10 1030	3,010	52	11.5	104	49.9	7.6*	6.1 / 0.304	0.7 / 0.054	2.4 / 0.104	1.4 / 0.036	0 / 0.000	26 / 0.426		0.0 / 0.000			0.05				21	18	0	50		USGS
Mar 9 1100	2,870	52	11.9	108	53.8	7.4*	6.3 / 0.314	1.3 / 0.106	2.8 / 0.122	1.6 / 0.041	0 / 0.000	31 / 0.508		0.0 / 0.000			0.00				21	21	0	15		USGS
Apr 15 1700	1,820	51	10.9	91	55.4	7.2*	6.0 / 0.299	1.3 / 0.109	2.8 / 0.122	1.4 / 0.036	0 / 0.000	32 / 0.524		0.6 / 0.017			0.03				22	20	0	8		USGS
May 8 1310	1,920	56	11.9	113	49.5	7.4*	5.4 / 0.269	1.6 / 0.131	2.6 / 0.113	1.2 / 0.031	0 / 0.000	29 / 0.475	3.2 / 0.067	0.4 / 0.011	0.5 / 0.008	0.0 / 0.000	0.00	12	Fe 0.08; PO_4 0.10; Al 0.08 (a)	41[b]	21	20	0	6		USGS
June 13 1400	8,360	58	10.4	101	28.8	7.0*	3.6 / 0.180	0.4 / 0.036	1.5 / 0.065	0.8 / 0.020	0 / 0.000	18 / 0.295		0.0 / 0.000			0.12				22	11	0	4		USGS
July 13 1030	7,650	67	10.3	111	19.5	6.8*	2.1 / 0.105	0.3 / 0.025	1.7 / 0.074	1.1 / 0.028	0 / 0.000	14 / 0.229		0.1 / 0.003			0.00				32	6	0	0.4		USGS
Aug 10 1100	5,960	66	11.1	118	21.6	6.5*	2.4 / 0.120	0.2 / 0.020	1.7 / 0.074	0.8 / 0.020	0 / 0.000	14 / 0.229		0.1 / 0.003			0.00				32	7	0	0.3		USGS
Sept 18 1430	1,640	62	9.5	97	21.6	6.7*	2.5 / 0.125	0.2 / 0.019	1.0 / 0.044	0.4 / 0.010	0 / 0.000	12 / 0.197	0.0 / 0.000	0.0 / 0.000	0.0 / 0.000	0.0 / 0.000	0.0	5.2	Fe 0.01; Cu 0.01; Zn 0.01; PO_4 0.00; (a)	15[b]	22	7	0	0.4		USGS
Oct 11 1530	141	62	10.0	102	28.4	6.9*	3.7 / 0.18	0.5 / 0.04	1.2 / 0.05	0.7 / 0.02	0 / 0.00	14 / 0.23	0.4 / 0.01	0.3 / 0.01			0.01				17	11	0	0.9		USGS
Nov 28 1445	156	62	10.5	107	36.2	6.9*	4.8 / 0.24	0.6 / 0.05	1.3 / 0.06	0.7 / 0.02	0 / 0.00	19 / 0.31		0.4 / 0.01			0.07				16	14	0	1		USGS
Dec 28 1220	109	59	10.5	103	35.1	7.1*	3.6 / 0.18	1.5 / 0.12	1.6 / 0.07	0.7 / 0.02	0 / 0.00	18 / 0.30		1.0 / 0.03			0.03				18	15	0	1	median 1.9 minimum .13 maximum 620	USGS

* Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 14
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Region 5

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Kings River Above North Fork																										
1955																										
Jan 11 1505	262	39	12.0	91	62.3	6.9	7.7 / 0.384	0.3 / 0.026	4.2 / 0.183	0.6 / 0.015	0 / 0.000	27 / 0.442		3.0 / 0.085			0.22				30	20	0			USGS
Feb 9 1520	304	47	11.4	97	62.0	7.1	7.3 / 0.364	0.4 / 0.036	4.3 / 0.187	0.6 / 0.015	0 / 0.000	27 / 0.442		2.5 / 0.071			0.01				31	20	0	0.2		USGS
Mar 8 1345	548	50	10.4	92	57.8	7.2	7.2 / 0.359	1.0 / 0.081	3.9 / 0.170	0.8 / 0.020	0 / 0.000	25 / 0.410		1.5 / 0.042			0.00				27	22	2	0.6		USGS
Apr 12 1220	1,080	51	11.4	101	36.1	7.1	1.8 / 0.090	1.4 / 0.114	2.9 / 0.126	0.6 / 0.015	0 / 0.000	16 / 0.262		1.5 / 0.042			0.00				37	10	0	2		USGS
May 10 1245	2,100	56	10.0	95	30.6	7.2	3.6 / 0.180	0.2 / 0.020	2.2 / 0.096	0.5 / 0.013	0 / 0.000	16 / 0.262	1.7 / 0.035	1.0 / 0.028	0.2 / 0.003	0.2 / 0.011	0.03	9.9	PO_4 0.05	28[b]	31	10	0	0.2		USGS
Jun 14 1245	3,830	55	10.3	96	20.4	7.0	3.4 / 0.170	0.1 / 0.010	1.2 / 0.052	0.4 / 0.010	0 / 0.000	10 / 0.164		0.8 / 0.023			0.02				21	9	1	1		USGS
Jul 13 1045	1,370	70	9.1	101	39.6	6.8	3.4 / 0.170	0.2 / 0.020	3.1 / 0.135	1.1 / 0.028	0 / 0.000	11 / 0.180		1.8 / 0.051			0.00				38	10	1	2		USGS
Aug 16 1450	363	74	8.3	96	40.9	7.2	5.1 / 0.254	0.2 / 0.016	2.4 / 0.104	0.7 / 0.018	0 / 0.000	19 / 0.311		1.5 / 0.042			0.14				27	14	0	0.3		USGS
Sep	Discontinued																									
																									median .56 minimum .045- maximum 230	

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{0.0}{0.00}$ except as shown.

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							Kings River at Piedra																			
1955																										
Jan 11 1325	85	46	10.9	91	162	7.3	17 / 0.848	5.4 / 0.442	10 / 0.435	1.7 / 0.043	0 / 0.000	79 / 1.295		9.8 / 0.276			0.09				25	64	0	35		USG
Feb 9 1635	224	49			87.6	7.6	8.9 / 0.444	2.1 / 0.176	5.3 / 0.230	1.0 / 0.026	0 / 0.000	40 / 0.656		3.5 / 0.099			0.00				26	31	0	2		USGS
Mar 8 1200	605	57	10.9	104	88.2	7.4	8.4 / 0.419	2.0 / 0.161	4.2 / 0.183	1.1 / 0.028	0 / 0.000	36 / 0.590		3.0 / 0.085			0.06				23	29	0	0.7		USGS
Apr 12 1100	1,640	51	13.0	116	59.3	6.8	4.2 / 0.210	2.3 / 0.190	3.7 / 0.161	1.0 / 0.026	0 / 0.000	28 / 0.459		2.0 / 0.056			0.04				27	20	0	1		USGS
May 10 1030	727	61	10.0	101	46.9	7.2	2.5 / 0.125	2.2 / 0.179	3.2 / 0.139	0.8 / 0.020	0 / 0.000	24 / 0.393	2.3 / 0.048	0.8 / 0.023	0.2 / 0.003	0.1 / 0.005	0.01	14	(a) PO_4 0.10	38[b]	30	15	0	2		USGS
Jun 14 1045	5,280	55	11.1	104	27.6	7.8	2.5 / 0.125	1.0 / 0.085	1.4 / 0.061	0.4 / 0.010	0 / 0.000	13 / 0.213		0.8 / 0.023			0.05				22	10	0	1		USGS
Jul 13 0900	3,840	70	9.8	109	35.6	6.8	2.8 / 0.140	0.4 / 0.030	3.4 / 0.148	1.4 / 0.036	0 / 0.000	9 / 0.147		1.2 / 0.034			0.02				42	8	1	3.		USGS
Aug 16 1305	2,400	53	11.5	105	51.8	7.2	6.0 / 0.299	0.7 / 0.061	3.2 / 0.139	0.8 / 0.020	0 / 0.000	26 / 0.426		1.0 / 0.028			0.07				27	18	0	0.8		USGS
Sep	Discontinued																								median 2.3 minimum .06 maximum 620	

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	Tidal Area											Lindsey Slough near Rio Vista														
1955																										
Jan 21 1245		46	10.3	86	334	7.5	19 / 0.948	15 / 1.232	25 / 1.087	1.8 / 0.046	0 / 0.000	119 / 1.950		27 / 0.761			0.41				33	109	11	35		USGS
Feb 14 1300		51	10.1	90	338	7.4	20 / 0.998	16 / 1.282	27 / 1.174	1.5 / 0.038	0 / 0.000	124 / 2.032		25 / 0.705			0.20				34	114	12	20		USGS
Mar 14 1340		54	9.5	88	311	7.7	18 / 0.898	15 / 1.262	24 / 1.044	2.9 / 0.074	0 / 0.000	118 / 1.934		24 / 0.677			0.18				32	108	11	40		USGS
Apr 18 1230		58	9.0	87	202	7.4	14 / 0.699	8.8 / 0.721	13 / 0.565	1.5 / 0.038	0 / 0.000	89 / 1.459		12 / 0.338			0.11				28	71	0	30		USGS
May 16 1350		68	9.4	102	187	7.7	13 / 0.649	8.6 / 0.711	12 / 0.522	1.3 / 0.033	0 / 0.000	78 / 1.278	15 / 0.312	12 / 0.338	0.7 / 0.011	0.1 / 0.005	0.05	20	Fe 0.05; Al 0.07; Zn 0.01; Cu 0.01; (a) PO_4 0.15	121[b]	27	68	4	25		USGS
Jun 20 1315		71	8.7	97	175	7.6	11 / 0.549	7.7 / 0.631	13 / 0.565	1.2 / 0.031	0 / 0.000	76 / 1.246		11 / 0.310			0.12				32	59	0	60		USGS
Jul 20 1000		70	8.1	90	230	7.2	15 / 0.749	9.4 / 0.771	20 / 0.870	2.2 / 0.056	0 / 0.000	91 / 1.491		13 / 0.367			0.12				36	76	1	70		USGS
Aug 25 1500		72	8.1	92	230	7.5	15 / 0.749	9.1 / 0.751	18 / 0.783	1.6 / 0.041	0 / 0.000	101 / 1.655		14 / 0.395			0.09				34	75	0	40		USGS
Sep 23 0835		63	6.7	69	349	7.5	20 / 0.998	15 / 1.202	29 / 1.261	1.9 / 0.049	0 / 0.000	138 / 2.262	24 / 0.500	26 / 0.733	0.6 / 0.010	0.3 / 0.016	0.25	24	Fe 0.10; Al 0.03; (a)	209[b]	36					USGS
Oct 20 1000		62	7.3	74	236	7.3	15 / 0.748	10 / 0.852	17 / 0.740	1.9 / 0.049	0 / 0.000	104 / 1.705		14 / 0.395			0.15				31	80	0	45		USGS
Nov 23 1205		48	9.1	78	212	7.6	15 / 0.748	8.4 / 0.692	15 / 0.652	2.0 / 0.051	0 / 0.000	97 / 1.590		12 / 0.338			0.09				30	72	0	160		USGS
Dec 22 1000		53	8.8	80	205	7.3	12 / 0.599	10 / 0.841	15 / 0.652	2.3 / 0.084	0 / 0.000	77 / 1.262		12 / 0.338			0.16				30	72	9	700		USGS
																									median 230 minimum 2.3 maximum 2400	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropoliton Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Lindsey Slough near Rio Vista																										
1956																										
Jan 19 0950		49	9.1	79	342	7.3	21 / 1.048	17 / 1.436	23 / 1.000	1.9 / 0.049	0 / 0.000	145 / 2.377		15 / 0.423			0.42				28	124	5	180		USGS
Feb 17 0955		44	10.8	88	377	7.7	24 / 1.198	19 / 1.574	25 / 1.083	2.1 / 0.054	0 / 0.000	160 / 2.622		18 / 0.508			0.48				28	139	8	160		USGS
Mar 22 1000		54	9.9	92	356	7.7	24 / 1.198	19 / 1.562	22 / 0.957	1.8 / 0.046	0 / 0.000	158 / 2.590		16 / 0.451			0.40				25	138	8	75		USGS
Apr 18 1330		57	9.5	91	279	7.5	17 / 0.848	15 / 1.244	18 / 0.783	1.4 / 0.036	0 / 0.000	121 / 1.983		15 / 0.423			0.23				27	105	6	40		USGS
May 16 1220		69	9.0	99	252	7.5	16 / 0.798	12 / 1.012	19 / 0.826	1.9 / 0.049	0 / 0.000	109 / 1.787	24 / 0.500	13 / 0.367	1.1 / 0.018	0.4 / 0.021	0.18	17	Fe 0.15; Al 0.12; Cr+6 0.02; Cu 0.01; Zn 0.01; PO_4 0.20; (a)	159[b]	31	90	1	50		USGS
June 21 1010		70	8.0	89	164	7.5	11 / 0.549	7.2 / 0.591	12 / 0.522	1.5 / 0.038	0 / 0.000	76 / 1.246		8.0 / 0.226			0.12				31	57	0			USGS
July 23 1115		78	8.3	100	175	7.0	12 / 0.599	7.7 / 0.633	13 / 0.566	1.4 / 0.036	0 / 0.000	82 / 1.344		8.4 / 0.237			0.16				31	62	0	55		USGS
Aug 22 1230		74	9.0	104	182	7.5	14 / 0.699	6.5 / 0.533	14 / 0.609	1.4 / 0.036	0 / 0.000	84 / 1.377		0.11 / 0.231			0.11				32	62	0	50		USGS
Sept 12 1000		68	8.5	93	219	7.0	15 / 0.748	8.8 / 0.724	17 / 0.740	1.4 / 0.036	0 / 0.000	102 / 1.672	13 / 0.271	12 / 0.338	1.0 / 0.016	0.0 / 0.000	0.06	21	Fe 0.03; Al 0.12; Zn 0.01; PO_4 0.25; Cu 0.01; (a)	139[b]	33	74	0	40		USGS
Oct 15 1200		66	8.0	85	180	7.0	13 / 0.649	8.0 / 0.655	12 / 0.522	1.6 / 0.041	0 / 0.000	89 / 1.459		8.8 / 0.248			0.08				28	65	0	120		USGS
Nov 21 1120		49	9.9	86	177	7.9	14 / 0.70	7.9 / 0.65	10 / 0.44	1.8 / 0.05	0 / 0.00	87 / 1.43		8.0 / 0.23			0.12				24	67	0	400		USGS
Dec 19 1245		48	10.8	93	170	7.3	12 / 0.60	8.3 / 0.68	11 / 0.48	1.3 / 0.03	0 / 0.00	84 / 1.38		6.0 / 0.17			0.04				27	64	0	75		USGS
																									median 62 minimum 2.3 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						Little Potato Slough at Terminous							equivalents per million												
1955																										
Jan 19 1020		43	10.2	81	214	7.0	16 / 0.798	7.3 / 0.602	13 / 0.565	1.6 / 0.041	0 / 0.000	56 / 0.918	13 / 0.271	28 / 0.790	4.2 / 0.068	0.2 / 0.011	0.05	17	Fe 0.20	128[b]	28	70	24	40		USGS
Feb 14 1400		50	9.4	83	295	7.2	21 / 1.048	12 / 0.952	19 / 0.826	1.5 / 0.038	0 / 0.000	78 / 1.278	19 / 0.396	38 / 1.072	2.8 / 0.045	0.3 / 0.016	0.02	16	Fe 0.10	168[b]	29	100	36	15		USGS
Mar 17 1430		55	9.6	90	233	7.3	17 / 0.848	8.7 / 0.712	15 / 0.652	1.3 / 0.033	0 / 0.000	78 / 1.278	11 / 0.229	26 / 0.733	0.9 / 0.015	0.2 / 0.011	0.07	18	Fe 0.07	136[b]	29	78	14	10		USGS
Apr 18 1320		58	8.6	84	186	7.3	15 / 0.749	6.7 / 0.551	12 / 0.522	1.4 / 0.036	0 / 0.000	80 / 1.311	9.2 / 0.192	13 / 0.367	0.9 / 0.015	0.1 / 0.005	0.10	21	Fe 0.04	118[b]	28	65	0			USGS
May 16 1550		65	8.5	90	156	7.3	12 / 0.599	5.4 / 0.441	9.9 / 0.430	1.1 / 0.028	0 / 0.000	58 / 0.951	7.7 / 0.160	14 / 0.395	0.8 / 0.013	0.1 / 0.005	0.08	19	Al 0.1; (a) PO_4 0.15	99[b]	29	52	4	30		USGS
Jun 23 1120		68	8.2	89	231	7.4	14 / 0.699	8.8 / 0.721	18 / 0.783	1.3 / 0.003	0 / 0.000	81 / 1.327	16 / 0.333	21 / 0.592	0.9 / 0.015	0.2 / 0.011	0.07	19	Fe 0.09	139[b]	35	71	5	15		USGS
Jul 18 1330		74	6.9	80	288	7.4	19 / 0.948	11 / 0.892	23 / 1.000	1.8 / 0.046	0 / 0.000	97 / 1.590	14 / 0.291	32 / 0.903	0.7 / 0.011	0.0 / 0.000	0.10	22	Fe 0.13	172[b]	35	92	12	15		USGS
Aug 25 1230		74	7.0	81	236	7.3	16 / 0.798	8.3 / 0.682	18 / 0.783	1.5 / 0.038	0 / 0.000	102 / 1.672	12 / 0.250	15 / 0.423	0.5 / 0.008	0.1 / 0.005	0.14	22	Fe 0.00	144[b]	34	74	0	6		USGS
Sep 21 0800		65	6.1	65	303	7.4	19 / 0.948	12 / 0.972	24 / 1.044	1.8 / 0.046	0 / 0.000	127 / 2.081	15 / 0.312	22 / 0.620	0.6 / 0.010	0.2 / 0.011	0.08	24	Fe 0.03; Al 0.24; Cu 0.01; PO_4 0.20; (a)	182[b]	35	96	0	15		USGS
Oct 18 0845		60	7.8	78	254	7.3	16 / 0.798	11 / 0.882	18 / 0.783	1.7 / 0.043	0 / 0.000	94 / 1.541	10 / 0.208	25 / 0.705	1.1 / 0.018	0.3 / 0.016	0.03	25	Fe 0.02	154[b]	31	84	7	15		USGS
Nov 21 1330		50	8.3	73	252	7.1	18 / 0.898	9.0 / 0.742	17 / 0.740	1.8 / 0.046	0 / 0.000	87 / 1.426	13 / 0.271	26 / 0.733	2.7 / 0.044	0.3 / 0.016	0.00	23	Fe 0.03	154[b]	30	82	11	10		USGS
Dec 20 0850		49	10.0	87	244	7.3	17 / 0.848	9.1 / 0.748	17 / 0.740	1.6 / 0.041	0 / 0.000	72 / 1.180	21 / 0.437	24 / 0.677	5.9 / 0.095	0.5 / 0.026	0.05	21	Fe 0.09	152[b]	31	80	21	30		USGS
																								median 230; minimum 2.3; maximum 7000+		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Little Potato Slough at Terminous																			
1956																										
Jan 17 0845		48	8.3	72	188	6.9	14 / 0.699	7.1 / 0.581	9.9 / 0.431	1.9 / 0.049	0 / 0.000	44 / 0.721	17 / 0.354	20 / 0.564	7.8 / 0.126	0.4 / 0.021	0.14	16		116[b]	24	64	28	45		USGS
Feb 15 0830		45	10.5	87	223	7.3	17 / 0.848	8.2 / 0.672	13 / 0.566	1.3 / 0.033	0 / 0.000	64 / 1.049	17 / 0.354	23 / 0.649	2.7 / 0.044	0.3 / 0.016	0.07	19		134[b]	27	76	24	40		USGS
Mar 19 1415		52	10.4	94	167	7.1	8.8 / 0.439	8.3 / 0.681	11 / 0.478	1.1 / 0.028	0 / 0.000	56 / 0.918	9 / 0.187	19 / 0.536	0.40 / 0.006	0.4 / 0.021	0.05	16		102[b]	29	56	10	31		USGS
Apr 16 1400		51	10.3	92	140	7.3	9.7 / 0.484	5.4 / 0.440	8.7 / 0.378	1.1 / 0.028	0 / 0.000	44 / 0.721	4.0 / 0.083	19 / 0.536	0.3 / 0.005	0.3 / 0.016	0.01	12		83[b]	28	46	10	10		USGS
May 14 1320		58	10.0	97	90.6	7.1	5.2 / 0.259	4.9 / 0.401	5.5 / 0.239	0.9 / 0.023	0 / 0.000	33 / 0.541	4.2 / 0.087	10 / 0.282	0.4 / 0.006	0.4 / 0.021	0.00	14	Fe 0.10; Al 0.05; Cr^{+6} 0.01; As 0.01; (a) PO_4 0.00	62[b]	26	33	6	30		USGS
June 19 1930		67	8.0	86	99.6	7.1	7.4 / 0.369	3.1 / 0.259	6.8 / 0.296	1.0 / 0.026	0 / 0.000	35 / 0.574	2.4 / 0.050	12 / 0.338	0.8 / 0.013	0.3 / 0.016	0.00	15	Fe 0.13 (a)	66[b]	31	31	2	30		USGS
July 23 1300		77	6.3	75	215	6.8	15 / 0.748	8.2 / 0.672	16 / 0.696	1.3 / 0.033	0 / 0.000	74 / 1.213	11 / 0.229	26 / 0.733	0.9 / 0.015	0.1 / 0.005	0.06	15		130[b]	32	71	10	15		USGS
Aug 20 1440		73	8.6	99	207	7.3	14 / 0.699	7.6 / 0.625	16 / 0.696	1.1 / 0.028	0 / 0.000	81 / 1.328	9.2 / 0.192	20 / 0.564	1.0 / 0.016	0.3 / 0.016	0.06	17		125[b]	34	66	0	10		USGS
Sept 12 1200		69	8.5	94	221	7.0	16 / 0.798	8.2 / 0.678	17 / 0.740	1.5 / 0.038	0 / 0.000	93 / 1.524	13 / 0.271	16 / 0.451	1.2 / 0.019	0.1 / 0.005	0.07	17	Fe 0.02; Al 0.04; Cu 0.01; PO_4 0.15; (a)	136[b]	33	74	0	10		USGS
Oct 15 1345		68	8.3	91	213	6.8	15 / 0.749	8.4 / 0.691	15 / 0.652	1.5 / 0.038	0 / 0.000	77 / 1.262	6.7 / 0.139	26 / 0.733	1.0 / 0.016	0.0 / 0.000	0.10	20	Fe 0.02; (a)	132[b]	31	72	9			USGS
Nov 19 1345		50	9.5	84	165	7.3	12 / 0.60	6.3 / 0.52	10 / 0.44	1.3 / 0.03	0 / 0.00	58 / 0.95	6.7 / 0.14	16 / 0.45	1.1 / 0.02	0.2 / 0.01	0.12	17	Fe 0.08; (a)	100[b]	28	56	8	20		USGS
Dec 14 1025		48	9.8	85	190	6.9	12 / 0.60	7.5 / 0.62	13 / 0.57	1.0 / 0.03	0 / 0.00	52 / 0.85	5.8 / 0.12	28 / 0.79	2.2 / 0.04	0.2 / 0.01	0.02	15	Fe 0.15; (a)	111[b]	31	61	18	15	median 56 minimum 6.2 maximum 2400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							McCloud River Above Shasta Lake																			
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 16 1500	1,780	55	10.8	102	92.7	7.5	11 / 0.549	2.6 / 0.211	4.0 / 0.174	0.9 / 0.023	0 / 0.000	57 / 0.934	2.3 / 0.048	1.0 / 0.028	0.2 / 0.003	0.0 / 0.000	0.02	27	Fe 0.005; (a) PO_4 0.10	77[b]	18	38	0	0.4		USGS
Jun 22 0930	1,150	52	10.7	96	97.4	7.6	10 / 0.499	3.2 / 0.261	4.8 / 0.209	1.2 / 0.031	0 / 0.000	59 / 0.967		1.0 / 0.028			0.01				21	38	0	2		USGS
Jul 13 1400	1,000	56	9.2	87	97.4	8.0	9.3 / 0.464	3.8 / 0.316	5.1 / 0.222	1.4 / 0.036	0 / 0.000	61 / 1.000		1.2 / 0.034			0.02				21	39	0	0.6		USGS
Aug	Not sampled																									
Sep 13 1350	916	54	10.5	98	96.5	7.7	11 / 0.549	2.1 / 0.171	4.6 / 0.200	1.5 / 0.038	0 / 0.000	57 / 0.934	1.6 / 0.033	0.9 / 0.025	0.1 / 0.002	0.0 / 0.000	0.00	33	Al 0.05; Cu 0.01; Zn 0.01; (a)	83[b]	21	36	0	0		USGS
Oct	Not sampled																									
Nov 21 1400	1,580	46	11.5	96	87.0	7.4	9.6 / 0.479	2.7 / 0.221	4.4 / 0.191	1.2 / 0.031	0 / 0.000	50 / 0.820		1.5 / 0.042			0.00				21	35	0	50		USGS
Dec	Not sampled																									
																								median .42 minimum .06 maximum 50		

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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REGION 5

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McCloud River above Shasta Lake																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr 11 1400	2,360	48	11.3	97	82.0	7.6	9.2 / 0.459	2.9 / 0.241	3.7 / 0.161	0.9 / 0.023	0 / 0.000	55 / 0.901		0.4 / 0.011			0.03				18	35	0	2			USGS
May 15 1100	2,220	52	11.1	100	82.7	7.5	10 / 0.499	3.2 / 0.261	3.5 / 0.152	1.1 / 0.028	0 / 0.000	52 / 0.852	2.0 / 0.042	0.8 / 0.023	0.3 / 0.005	0.1 / 0.005	0.00	22	Fe 0.02; Al 0.02; Cu 0.01; PO_4 0.05 (a)	69[b]	16	38	0	1			USGS
June 13 1100	1,670	52	10.5	93	86.2	7.5	8.8 / 0.439	3.2 / 0.261	3.9 / 0.170	1.2 / 0.031	0 / 0.000	54 / 0.885		1.0 / 0.028			0.03				19	35	0	3			USGS
July	No Report																									
Aug	No Report																									
Sept	No Report																									
Oct	No Report																									
Nov	No Report																									
Dec	No Report																									
																									median .23 minimum .23 maximum 6.2	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

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Merced River below Exchequer Dam																										
1955																										
Jan 13 0910	51	44	10.9	89	130	7.1	15 / 0.749	3.9 / 0.321	4.6 / 0.200	1.5 / 0.038	0 / 0.000	58 / 0.951		4.8 / 0.135			0.00				15	54	6	400		USGS
Feb 11 1100	52	48	11.7	100	136	7.3	16 / 0.798	4.5 / 0.372	5.6 / 0.244	1.0 / 0.026	0 / 0.000	63 / 1.032		5.0 / 0.141			0.01				17	58	6	3		USGS
Mar 11 0930	51	50	11.2	99	132	7.3	16 / 0.798	4.2 / 0.342	4.3 / 0.187	1.1 / 0.028	0 / 0.000	60 / 0.983		4.0 / 0.113			0.00				14	57	8	4		USGS
Apr 14 1200	1,500	54	11.1	103	70.1	7.2	5.4 / 0.269	3.2 / 0.263	3.2 / 0.139	0.7 / 0.018	0 / 0.000	34 / 0.557		2.8 / 0.079			0.01				20	27	0	3		USGS
May 12 1000	530	52	9.7	88	53.7	7.2	3.9 / 0.195	2.7 / 0.221	2.6 / 0.113	0.5 / 0.013	0 / 0.000	28 / 0.459	2.8 / 0.058	0.8 / 0.023	0.1 / 0.002	0.1 / 0.005	0.02	16	Mn 0.02; (a) FO_4 0.05	44[b]	21	21	0	7		USGS
Jun 16 1110	1,770	55	9.7	91	33.3	6.9	4.5 / 0.225	0.1 / 0.005	2.1 / 0.091	0.6 / 0.015	0 / 0.000	18 / 0.295		1.2 / 0.034			0.02				27	12	0	0.8		USGS
Jul 12 1130	1,760	67	9.3	100	38.8	6.7	3.4 / 0.170	0.6 / 0.050	2.9 / 0.126	0.9 / 0.023	0 / 0.000	9 / 0.147		0.8 / 0.023			0.03				34	11	4	4		USGS
Aug 18 1330	1,630	66	8.4	90	28.3	7.0	3.4 / 0.170	0.4 / 0.030	2.5 / 0.109	0.5 / 0.013	0 / 0.000	15 / 0.246		0.0 / 0.000			0.00				34	10	0	0.3		USGS
Sep 15 1440	58	75	6.5	76	122	7.3	17 / 0.848	3.3 / 0.268	3.4 / 0.148	1.1 / 0.028	0 / 0.000	66 / 1.082	5.8 / 0.121	1.8 / 0.051	0.9 / 0.015	0.2 / 0.011	0.04	10	Fe 0.05; Cu 0.01; (a)	77[b]	11	56	2	40		USGS
Oct 12 1440	50	68	7.8	85	204	7.5	27 / 1.347	5.5 / 0.449	5.5 / 0.239	1.9 / 0.049	0 / 0.000	104 / 1.705		5.2 / 0.147			0.02				11	90	5	25		USGS
Nov 17 0855	45	48	9.5	82	207	7.3	29 / 1.447	4.5 / 0.373	6.2 / 0.270	1.9 / 0.049	0 / 0.000	110 / 1.803		7.0 / 0.197			0.02				13	91	1	190		USGS
Dec 14 1500	52	48	10.2	88	181	7.3	24 / 1.198	4.7 / 0.390	5.3 / 0.231	1.6 / 0.041	0 / 0.000	82 / 1.344		4.8 / 0.135			0.02				12	79	12	20		USGS
																									median 6.2 minimum .21 maximum 620	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Merced River below Exchequer Dam																			
1956																										
Jan 12 0820	1,520	44	10.6	86	68.3	7.1	7.8 / 0.389	1.8 / 0.151	2.8 / 0.122	1.1 / 0.028	0 / 0.000	33 / 0.541		1.2 / 0.034			0.05				18	27	0	45		USGS
Feb 8 1400	1,540	44	11.2	91	76.1	7.5	9.4 / 0.469	1.6 / 0.131	2.8 / 0.122	0.9 / 0.023	0 / 0.000	38 / 0.623		0.0 / 0.000			0.01				16	30	0	40		USGS
Mar 15 0845	1,560	45	10.7	88	72.0	7.1	8.2 / 0.409	2.6 / 0.211	2.3 / 0.100	1.0 / 0.026	0 / 0.000	37 / 0.606		1.2 / 0.034			0.02				13	31	1	15		USGS
Apr 12 0900	1,610	47	9.7	82	67.5	7.1	8.5 / 0.424	1.4 / 0.116	2.5 / 0.109	1.1 / 0.028	0 / 0.000	40 / 0.656		0.0 / 0.000			0.01				16	27	0	13		USGS
May 7 1320	3,790	53	11.4	104	52.4	7.1	6.0 / 0.299	2.0 / 0.161	2.1 / 0.091	0.9 / 0.023	0 / 0.000	31 / 0.508	1.0 / 0.021	1.0 / 0.028	0.2 / 0.003	0.0 / 0.000	0.00	9.1	Fe 0.02; Cu 0.01; Zn 0.01; PO_4 0.05; (a)	37[b]	16	23	0	3		USGS
June 14 0820	5,100	58	11.4	111	23.7	7.0	3.6 / 0.180	0.2 / 0.016	1.0 / 0.044	0.5 / 0.013	0 / 0.000	17 / 0.279		0.0 / 0.000			0.04				17	10	0	5		USGS
July 19 0920	1,800	56	10.6	101	22.9	6.8	3.2 / 0.160	0.2 / 0.016	1.0 / 0.044	0.5 / 0.013	0 / 0.000	16 / 0.262		0.0 / 0.000			0.06				19	9	0	3		USGS
Aug 16 0920	1,540	58	9.2	90	21.0	6.8	2.4 / 0.120	0.4 / 0.030	1.0 / 0.044	0.5 / 0.013	0 / 0.000	12 / 0.197		0.2 / 0.005			0.00				21	3	0	0.3		USGS
Sept 19 1140	1,210	65	5.5	58	27.1	6.8	4.0 / 0.200	0.2 / 0.020	1.5 / 0.065	0.6 / 0.015	0 / 0.000	18 / 0.295	0.0 / 0.000	0.0 / 0.000	0.4 / 0.006	0.0 / 0.000	0.00	5.9	Cu 0.01; (a)	22[b]	22	11	0	0.3		USGS
Oct 10 1225	1,080	58	3.8	41.5	32.4	6.8	4.4 / 0.22	0.5 / 0.04	1.2 / 0.05	0.7 / 0.02	0 / 0.00	16 / 0.26		0.4 / 0.01			0.01				15	13	0	3		USGS
Nov 15 1315	38	60	9.7	97	64.7	7.3	7.6 / 0.38	1.3 / 0.11	1.9 / 0.08	0.8 / 0.02	0 / 0.00	34 / 0.56		1.8 / 0.05			0.05				14	25	0	20		USGS
Dec 12 1430	38	56	10.7	101	66.1	7.3	8.0 / 0.40	1.7 / 0.14	2.3 / 0.10	0.8 / 0.02	0 / 0.00	32 / 0.52		1.0 / 0.03			0.05				15	27	1	10	median 6.2 minimum .13 maximum 230	USGS

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Merced River near Stevinson																										
1955																										
Jan 12 1345	246	48	10.3	89	218	7.3	17 / 0.848	6.0 / 0.492	19 / 0.826	2.7 / 0.069	0 / 0.000	104 / 1.704		9.0 / 0.254			0.15				37	67	0	60		USGS
Feb 8 1410	174	55	10.3	97	279	7.6	21 / 1.048	7.0 / 0.572	29 / 1.261	2.3 / 0.059	0 / 0.000	127 / 2.081		16 / 0.451			0.00				43	81	0	6		USGS
Mar 10 1450	157	64	9.8	101	276	7.8	20 / 0.998	6.8 / 0.562	28 / 1.218	2.5 / 0.064	0 / 0.000	124 / 2.032		16 / 0.451			0.15				43	78	0	8		USGS
Apr 14 1000	149	61	10.0	100	234	7.4	14 / 0.699	8.0 / 0.661	24 / 1.044	1.9 / 0.049	0 / 0.000	110 / 1.803		17 / 0.479			0.12				43	68	0	2		USGS
May 18 0930	118	69	9.1	100	285	7.9	20 / 0.998	6.3 / 0.522	30 / 1.305	2.2 / 0.056	0 / 0.000	132 / 2.163	6.5 / 0.135	22 / 0.620	2.8 / 0.045	0.0 / 0.000	0.04	31	Al 0.02; (a) PO_4 0.25	186[b]	45	76	0	3		USGS
Jun 16 0910	102	67	8.2	88	261	7.4	19 / 0.948	7.4 / 0.612	29 / 1.261	1.9 / 0.049	0 / 0.000	112 / 1.836		22 / 0.620			0.03				44	78	0	3		USGS
Jul 12 1300	91	83	8.7	110	300	7.1	17 / 0.848	6.2 / 0.512	36 / 1.565	1.7 / 0.043	0 / 0.000	100 / 1.639		38 / 1.072			0.11				53	68	0	2		USGS
Aug 15 1415	129	79	8.5	104	241	7.4	16 / 0.798	4.9 / 0.402	26 / 1.131	1.8 / 0.046	0 / 0.000	106 / 1.737		18 / 0.508			0.05				48	60	0	7		USGS
Sep 15 1030	148	68	7.9	96	213	7.3	15 / 0.749	5.0 / 0.411	21 / 0.913	1.7 / 0.043	0 / 0.000	96 / 1.573	8.2 / 0.171	14 / 0.395	1.9 / 0.031	0.4 / 0.021	0.04	26	Fe 0.08; Zn 0.01; (a)	140[b]	43	58	0	6.		USGS
Oct 12 1130	116	64	9.7	101	323	7.3	21 / 1.048	7.4 / 0.608	36 / 1.566	2.5 / 0.064	0 / 0.000	143 / 2.344		23 / 0.649			0.06				48	83	0	7		USGS
Nov 16 1445	110	50	9.7	86	312	7.3	21 / 1.048	6.9 / 0.564	34 / 1.479	2.6 / 0.067	0 / 0.000	141 / 2.311		22 / 0.620			0.05				47	81	0	40		USGS
Dec 14 1135	141	52	9.1	82	288	7.3	21 / 1.048	6.9 / 0.564	33 / 1.436	3.0 / 0.077	0 / 0.000	132 / 2.163		17 / 0.479			0.01				46	81	0	15	median 23 minimum 2.3 maximum 620	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
Merced River near Stevinson																										
1956																										
Jan 11 1255	2,140	48	10.0	86	98.2	7.1	10 / 0.499	2.8 / 0.231	4.7 / 0.204	1.4 / 0.036	0 / 0.000	47 / 0.770		2.5 / 0.070			0.05				21	36	0	30		USGS
Feb 8 1115	2,260	46	10.7	90	96.4	7.3	12 / 0.599	1.5 / 0.127	4.7 / 0.204	1.1 / 0.028	0 / 0.000	48 / 0.787		2.0 / 0.056			0.05				21	36	0	15		USGS
Mar 14 1320	1,440	51	10.8	97	104	7.1	11 / 0.549	3.3 / 0.271	5.6 / 0.244	1.1 / 0.028	0 / 0.000	52 / 0.852		3.5 / 0.099			0.01				22	41	0	10		USGS
Apr 11 1420	483	57	9.0	86	186	7.1	16 / 0.798	3.6 / 0.294	17 / 0.740	1.7 / 0.043	0 / 0.000	87 / 1.426		11 / 0.310			0.01				39	55	0	8		USGS
May 10 0840	3,120	58	9.5	93	58.1	7.1	7.2 / 0.359	2.2 / 0.181	2.6 / 0.113	1.0 / 0.026	0 / 0.000	33 / 0.541	5.0 / 0.104	0.5 / 0.014	0.2 / 0.003	0.0 / 0.000	0.01	10	Fe 0.02; Cu 0.01; PO_4 0.10; (a)	45[b]	17	27	0	16		USGS
June 13 1230	4,390	64	9.2	96	33.6	6.8	4.8 / 0.240	0.3 / 0.026	1.6 / 0.070	0.7 / 0.018	0 / 0.000	22 / 0.361		0.0 / 0.000			0.08				20	13	0	14		USGS
July 18 1210	342	75	8.4	98	221	6.9	16 / 0.798	4.8 / 0.398	23 / 1.000	1.7 / 0.043	0 / 0.000	95 / 1.557		16 / 0.451			0.05				45	60	0	5		USGS
Aug 13 1150	223	74	9.1	105	224	7.3	17 / 0.848	4.3 / 0.352	24 / 1.044	1.9 / 0.049	0 / 0.000	96 / 1.573		18 / 0.508			0.00				46	60	0	1.0		USGS
Sept 19 0930	224	69	7.7	85	228	7.3	17 / 0.848	4.5 / 0.372	24 / 1.044	1.9 / 0.049	0 / 0.000	100 / 1.639	5.2 / 0.108	17 / 0.479	2.4 / 0.039	0.2 / 0.011	0.03	26	Fe 0.02; Al 0.03; Cu 0.01; PO_4 0.20; (a)	147[b]	45	61	0	3		USGS
Oct 10 1045	243	67	8.7	94	223	7.5	17 / 0.85	4.7 / 0.39	22 / 0.96	2.0 / 0.05	0 / 0.00	104 / 1.70		14 / 0.39			0.06				43	62	0	6		USGS
Nov 15 1040	173	54	10.3	96	281	7.6	21 / 1.05	6.4 / 0.53	27 / 1.17	2.3 / 0.06	0 / 0.00	132 / 2.16		17 / 0.48			0.03				42	79	0	2		USGS
Dec 12 1200	159	54	10.3	95	296	7.5	22 / 1.10	7.3 / 0.60	32 / 1.39	2.4 / 0.06	0 / 0.00	136 / 2.23		21 / 0.59			0.01				44	85	0		median 18 minimum .046 maximum 620	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Mill Creek near Los Molinos																			
1955																										
Jan 11 0830	161	37	12.8	95	171	7.2	13 / 0.649	4.0 / 0.331	14 / 0.609	1.9 / 0.049	0 / 0.000	62 / 1.016		16 / 0.451			0.37				37	49	0	0.4		USGS
Feb 7 1015	139	42	12.6	100	186	7.4	13 / 0.649	5.7 / 0.471	16 / 0.696	2.2 / 0.056	0 / 0.000	66 / 1.082		17 / 0.479			0.46				37	56	2	0.3		USGS
Mar 7 0900	141	44	11.7	95	186	7.2	13 / 0.649	5.0 / 0.411	16 / 0.696	2.6 / 0.067	0 / 0.000	64 / 1.049		18 / 0.508			0.25				38	53	1	0.8		USGS
Apr 4 0930	112	46	11.8	99	145	7.6	7.7 / 0.384	5.1 / 0.416	12 / 0.522	2.1 / 0.054	0 / 0.000	54 / 0.885		13 / 0.367			0.39				38	40	0	2		USGS
May 11 1430	337	62	9.7	99	101	7.6	7.6 / 0.379	2.4 / 0.201	7.3 / 0.317	1.6 / 0.041	0 / 0.000	36 / 0.590	10 / 0.208	6.5 / 0.183	0.2 / 0.003	0.1 / 0.005	0.19	27	Fe 0.05; Al 0.07; (a) FO_4 0.10	81[b]	34	29	0	3		USGS
Jun 15 1430	109	68	9.8	106	130	7.7	12 / 0.599	1.1 / 0.093	11 / 0.478	3.1 / 0.079	0 / 0.000	38 / 0.623		9.0 / 0.254			0.06				38	35	4	2		USGS
Jul 13 1450	No flow	83	9.8	124	214	7.4	15 / 0.749	7.9 / 0.651	15 / 0.652	3.1 / 0.079	0 / 0.000	81 / 1.327		16 / 0.451			0.52				31	70	4	0.8		USGS
Aug 17 1445	No flow	79	9.7	118	235	7.4	16 / 0.798	9.3 / 0.762	17 / 0.739	3.2 / 0.082	0 / 0.000	92 / 1.508		18 / 0.508			0.49				31	78	3	1		USGS
Sep 14 1430	No flow	69	7.7	85	252	7.0	18 / 0.898	9.3 / 0.762	16 / 0.696	3.8 / 0.097	0 / 0.000	98 / 1.606	16 / 0.333	19 / 0.536	0.5 / 0.008	0.0 / 0.000	0.46	40	Fe 0.04; Al 0.01; Cu 0.02; (a)	171[b]	28	83	3	0.8		USGS
Oct 12 1500	15	64	10.0	104	202	7.3	12 / 0.599	6.1 / 0.505	17 / 0.740	2.8 / 0.072	0 / 0.000	65 / 1.065		20 / 0.564			0.65				39	55	2	3		USGS
Nov 16 1630	97	43	11.6	93	229	6.8	14 / 0.699	5.5 / 0.453	21 / 0.914	3.0 / 0.077	0 / 0.000	66 / 1.082		24 / 0.677			0.73				43	58	4	7		USGS
Dec 14 1400	156	42	11.4	91	191	6.8	12 / 0.599	5.1 / 0.421	17 / 0.740	2.6 / 0.067	0 / 0.000	60 / 0.983		20 / 0.564			0.58				41	51	2	1		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Mill Creek near Los Molinos																										
1956																										
Jan 17 1340	1,590	45	12.0	99	75.6	6.8	6.4 / 0.319	2.9 / 0.237	4.3 / 0.187	1.0 / 0.026	0 / 0.000	35 / 0.574		2.5 / 0.070			0.14				24	28	0	40		USGS
Feb 7 1350	319	44	12.3	100	132	6.9	9.3 / 0.464	4.1 / 0.336	9.6 / 0.418	1.5 / 0.038	0 / 0.000	50 / 0.820		9.8 / 0.276			0.29				33	40	0	1		USGS
Mar 13 1315	276	47	11.9	101	136	6.9	9.2 / 0.459	4.3 / 0.351	10 / 0.435	1.5 / 0.038	0 / 0.000	53 / 0.869		11 / 0.310			0.27				34	40	0	3		USGS
Apr 10 1310	308	53	10.9	100	108	6.8	8.0 / 0.399	2.7 / 0.221	9.0 / 0.392	1.6 / 0.041	0 / 0.000	44 / 0.721		6.5 / 0.183			0.32				37	31	0	1		USGS
May 8 1230	642	53	11.1	102	86.9	6.8	7.2 / 0.359	2.2 / 0.181	6.4 / 0.278	1.4 / 0.036	0 / 0.000	37 / 0.606	6.0 / 0.125	5.2 / 0.147	0.0 / 0.000	0.0 / 0.000	0.17	27	Fe 0.02; Al 0.03; Cu 0.01; Zn 0.01; As 0.01; PO_4 0.03; (a)	74[b]	33	27	0	6		USGS
June 12 1150	447	61	9.7	98	91.2	7.7	7.6 / 0.379	2.4 / 0.201	6.0 / 0.261	1.5 / 0.038	0 / 0.000	32 / 0.524		4.8 / 0.135			0.00				30	29	3	20		USGS
July 17 1230	81	75	8.7	102	130	7.5	10 / 0.499	3.2 / 0.265	9.6 / 0.418	2.0 / 0.051	0 / 0.000	45 / 0.738		8.0 / 0.226			0.25				34	38	1	2		USGS
Aug 14 1120	3.5	71	12.0	135	160	7.9	12 / 0.599	4.1 / 0.341	12 / 0.522	2.3 / 0.059	0 / 0.000	58 / 0.951		12 / 0.338			0.21				34	47	0	0.3		USGS
Sept 18 1145	5.9	69	10.9	120	226	7.2	17 / 0.848	9.1 / 0.752	15 / 0.652	3.5 / 0.090	0 / 0.000	93 / 1.524	17 / 0.354	15 / 0.423	0.7 / 0.011	0.0 / 0.000	0.37	40	Al 0.07; Cu 0.01; As 0.01; PO_4 0.20; (a)	164[b]	28	80	4	1.0		USGS
Oct 16 1210	28	56	10.8	103	187	7.5	13 / 0.649	4.8 / 0.391	15 / 0.652	2.5 / 0.064	0 / 0.000	63 / 1.033		18 / 0.508			0.43				37	52	0	0.8		USGS
Nov 19 1340	125	46	12.2	102	191	6.8	12 / 0.60	5.5 / 0.45	16 / 0.70	2.9 / 0.07	0 / 0.00	63 / 1.03		18 / 0.51			0.46				38	53	1	0.4		USGS
Dec 11 1125	105	41	12.5	98	195	7.3	13 / 0.65	6.7 / 0.55	17 / 0.74	2.4 / 0.06	0 / 0.00	65 / 1.07		20 / 0.56			0.65				37	60	7	0.4		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mokelumne River near Lancha Plana																			
1955																										
Jan 18 1530	812	47	10.9	92	76.9	6.7	6.1 / 0.304	2.4 / 0.196	3.4 / 0.148	0.7 / 0.018	0 / 0.000	22 / 0.361		3.5 / 0.099			0.00				22	25	7	10		USGS
Feb 15 1140	666	50	11.3	100	51.4	7.0	5.1 / 0.254	1.3 / 0.106	2.8 / 0.122	0.6 / 0.015	0 / 0.000	24 / 0.393		3.0 / 0.085			0.01				25	18	0	2		USGS
Mar 15 1030	63	50	11.9	105	81.5	6.8	6.3 / 0.314	2.3 / 0.186	3.4 / 0.148	0.8 / 0.020	0 / 0.000	24 / 0.393		3.5 / 0.099			0.00				22	25	5	2		USGS
Apr 19 1200	698	48	12.0	103	48.6	6.8	3.2 / 0.160	2.6 / 0.212	3.1 / 0.135	0.8 / 0.020	0 / 0.000	24 / 0.393		3.2 / 0.090			0.02				26	19	0	1		USGS
May 20 1040	698	49	11.4	99	53.4	7.2	7.2 / 0.359	0.3 / 0.021	4.0 / 0.174	1.7 / 0.043	0 / 0.000	25 / 0.410	2.6 / 0.054	3.5 / 0.099	0.2 / 0.003	0.2 / 0.011	0.00	11	Fe 0.03; Al 0.02; (a) PO_4 0.00	43[b]	29	19	0	5		USGS
Jun 24 1030	654	49	11.4	99	50.1	7.1	5.7 / 0.284	2.1 / 0.176	3.1 / 0.135	0.7 / 0.018	0 / 0.000	27 / 0.442		3.5 / 0.099			0.05				22	23	1	1		USGS
Jul 18 1000	649	54	11.5	107	74.9	6.8	6.0 / 0.299	1.5 / 0.121	4.8 / 0.209	1.6 / 0.041	0 / 0.000	19 / 0.311		3.0 / 0.085			0.10				31	21	5	3		USGS
Aug 22 1130	654	56	11.2	107	54.1	7.2	2.8 / 0.140	2.9 / 0.240	3.1 / 0.135	0.7 / 0.018	0 / 0.000	27 / 0.442		3.0 / 0.085			0.00				25	19	0	1		USGS
Sep 20 1350	654	56	10.0	95	45.3	7.5	5.7 / 0.284	0.3 / 0.022	2.2 / 0.096	0.7 / 0.018	0 / 0.000	21 / 0.344	1.4 / 0.029	1.9 / 0.054	0.0 / 0.000	0.1 / 0.005	0.14	12	Fe 0.02; Al 0.05; Cu 0.02; (a)	34[b]	23	15	0	1		USGS
Oct 17 1330	650	58	8.8	86	41.3	7.0	3.8 / 0.190	1.0 / 0.086	2.6 / 0.113	0.7 / 0.018	0 / 0.000	21 / 0.344		0.7 / 0.020			0.08				28	14	0	3		USGS
Nov 21 1120	332	54	9.5	88	40.9	7.3	4.0 / 0.200	0.5 / 0.040	2.8 / 0.122	0.7 / 0.018	0 / 0.000	19 / 0.311		2.2 / 0.062			0.00				32	12	0	10		USGS
Dec 19 1240	350	52	10.2	92	42.9	7.0	3.2 / 0.160	1.5 / 0.120	2.3 / 0.100	0.6 / 0.015	0 / 0.000	17 / 0.279		3.2 / 0.090			0.12				25	14	0	2	median 6.2 minimum .06 maximum 2400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Mokelumne River near Lancha Plana																			
1956																										
Jan 16 1130	5,020	46	12.2	102	42.5	7.1	3.6 / 0.180	1.5 / 0.120	1.7 / 0.074	0.8 / 0.020	0 / 0.000	20 / 0.328		1.5 / 0.042			0.04				19	15	0	80		USGS
Feb 14 1130	1,510	43	12.6	101	43.3	7.1	4.8 / 0.240	0.9 / 0.072	2.2 / 0.096	0.8 / 0.020	0 / 0.000	22 / 0.361		0.9 / 0.025			0.05				22	16	0	15		USGS
Mar 19 1100	1,530	44	12.8	104	46.1	7.1	4.4 / 0.220	1.2 / 0.100	2.7 / 0.117	1.1 / 0.028	0 / 0.000	23 / 0.377		2.8 / 0.079			0.20				25	16	0	5		USGS
Apr 16 1100	1,200	47	12.3	104	44.1	7.1	4.0 / 0.200	1.3 / 0.108	2.1 / 0.091	0.9 / 0.023	0 / 0.000	24 / 0.393		0.7 / 0.020			0.04				22	15	0	6		USGS
May 14 1000	1,400	50	11.6	102	41.4	7.1	3.8 / 0.190	1.5 / 0.122	2.0 / 0.087	0.9 / 0.023	0 / 0.000	25 / 0.410	1.0 / 0.021	1.0 / 0.028	0.2 / 0.003	0.0 / 0.000	0.01	16	Fe 0.01; Al 0.07; Cu 0.02; Zn 0.02; PO_4 0.20; (a)	38[b]	21	16	0	25		USGS
June 19 1045	2,180	58	10.2	99	29.2	7.3	4.0 / 0.200	0.4 / 0.034	1.6 / 0.070	0.7 / 0.018	0 / 0.000	19 / 0.311		0.3 / 0.008			0.07				22	12	0	2		USGS
July 26 1100	737	60	10.0	100	30.1	6.9	3.6 / 0.180	0.6 / 0.046	1.7 / 0.074	0.7 / 0.018	0 / 0.000	18 / 0.295		0.7 / 0.020			0.17				23	11	0	20		USGS
Aug 20 1000	720	58	10.2	99	26.6	6.9	3.2 / 0.160	0.2 / 0.020	1.4 / 0.061	0.6 / 0.015	0 / 0.000	15 / 0.246		0.3 / 0.008			0.00				24	9	0	7		USGS
Sept 11 1150	715	61	10.0	101	32.9	6.8	3.2 / 0.160	0.7 / 0.060	2.4 / 0.104	0.7 / 0.018	0 / 0.000	18 / 0.295	1.0 / 0.021	0.9 / 0.025	0.3 / 0.005	0.1 / 0.005	0.01	9.0	Cu 0.07; PO_4 0.00; (a)	27[b]	30	11	0	1		USGS
Oct 18 1050	710	60	10.1	101	31.3	6.8	3.7 / 0.185	0.3 / 0.023	1.5 / 0.065	0.6 / 0.015	0 / 0.000	16 / 0.262		0.3 / 0.008			0.13				23	10	0	0.7		USGS
Nov 19 1030	710	53	10.4	95	31.1	7.0	3.3 / 0.16	0.9 / 0.07	1.5 / 0.07	0.7 / 0.02	0 / 0.00	16 / 0.26		1.2 / 0.03			0.03				22	12	0	2		USGS
Dec 27 1030	704	51	11.3	101	32.0	6.8	3.6 / 0.18	2.7 / 0.22	1.5 / 0.07	0.7 / 0.02	0 / 0.00	16 / 0.26		0.0 / 0.00			0.12				14	20	7	1	median 2.3 minimum .045 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

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ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Mokelumne River at Woodbridge																										
1955																										
Jan 19 1110	1,040	44	11.2	91	68.9	6.7	6.5 / 0.324	1.7 / 0.136	3.8 / 0.165	1.6 / 0.041	0 / 0.000	23 / 0.377		3.0 / 0.085			0.03				25	23	4	40		USGS
Feb 15 1730	456	50	10.6	93	54.6	7.0	5.8 / 0.289	1.7 / 0.141	3.0 / 0.130	0.7 / 0.018	0 / 0.000	24 / 0.393		2.8 / 0.079			0.05				22	22	2	2		USGS
Mar 17 1520	475	54	10.2	95	59.8	7.1	5.9 / 0.294	1.3 / 0.106	3.4 / 0.148	0.9 / 0.023	0 / 0.000	26 / 0.426		3.0 / 0.085			0.00				20	20	0	2		USGS
Apr 21 1350	276	55	10.0	94	65.5	7.2	4.0 / 0.200	3.2 / 0.260	3.4 / 0.148	0.8 / 0.020	0 / 0.000	26 / 0.426		3.4 / 0.096			0.03				24	23	2	2		USGS
May 20 0820	14	68	9.2	100	78.9	6.8	8.4 / 0.419	2.0 / 0.161	4.5 / 0.196	0.9 / 0.023	0 / 0.000	37 / 0.606	4.2 / 0.087	4.2 / 0.118	0.5 / 0.008	0.2 / 0.011	0.01	15	Al 0.01; (a) PO_4 0.10	58[b]	25	29	0	1		USGS
Jun 23 1230	12	70	8.3	92	85.4	7.0	7.6 / 0.379	2.2 / 0.181	4.2 / 0.183	0.9 / 0.023	0 / 0.000	35 / 0.574		3.2 / 0.090			0.02				24	28	0	1		USGS
Jul 15 1100	11	70	8.2	91	81.3	6.8	6.4 / 0.319	2.2 / 0.181	4.9 / 0.213	1.4 / 0.036	0 / 0.000	27 / 0.442		4.0 / 0.113			0.14				28	25	3	7		USGS
Aug 26 0820	18	63	8.5	88	67.9	7.1	6.4 / 0.319	2.2 / 0.181	3.8 / 0.165	0.7 / 0.018	0 / 0.000	33 / 0.541		2.8 / 0.079			0.00				24	25	0	5		USGS
Sep 16 1450	303	63	8.8	91	56.5	7.3	4.9 / 0.245	1.3 / 0.111	3.2 / 0.139	0.7 / 0.018	0 / 0.000	26 / 0.426	3.0 / 0.062	1.4 / 0.039	0.00 / 0.000	0.1 / 0.005	0.03	13	Fe 0.05; Cu 0.01; Zn 0.01; (a)	41[b]	27	18	0	4.0		USGS
Oct 14 0925	322	61	8.8	89	52.2	7.0	4.6 / 0.230	1.9 / 0.154	2.6 / 0.113	0.8 / 0.020	0 / 0.000	25 / 0.410		1.9 / 0.054			0.00				22	19	0	8		USGS
Nov 18 1000	340	51	9.7	87	41.4	6.9	3.9 / 0.195	1.5 / 0.125	2.3 / 0.100	0.7 / 0.018	0 / 0.000	23 / 0.377		2.2 / 0.062			0.00				23	16	0	40		USGS
Dec 16 0910	303	49	10.3	90	43.1	6.9	4.4 / 0.200	1.7 / 0.140	2.5 / 0.109	0.7 / 0.018	0 / 0.000	20 / 0.328		1.9 / 0.054			0.00				22	18	2	8		USGS
																									median 62 minimum 2.3 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Mokelumne River at Woodbridge																										
1956																										
Jan 13 0905	2,030	46	10.9	91	49.0	6.9	4.8 / 0.240	1.3 / 0.110	2.3 / 0.100	1.0 / 0.026	0 / 0.000	22 / 0.361		2.0 / 0.056			0.02				21	18	0	40		USGS
Feb 9 1330	1,740	45	11.5	95	48.7	7.1	5.4 / 0.269	0.8 / 0.069	2.4 / 0.104	0.9 / 0.023	0 / 0.000	23 / 0.377		0.4 / 0.011			0.08				22	17	0	20		USGS
Mar 16 0930	1,010	46	11.7	98	49.5	7.1	5.4 / 0.269	1.0 / 0.085	2.4 / 0.104	0.9 / 0.023	0 / 0.000	24 / 0.393		0.7 / 0.020			0.03				22	18	0	20		USGS
Apr 13 0925	1,040	47	11.7	99	48.9	7.1	4.4 / 0.220	1.3 / 0.110	2.4 / 0.104	0.9 / 0.023	0 / 0.000	26 / 0.426		0.8 / 0.023			0.12				23	16	0	15		USGS
May 11 0815	2,580	50	11.2	99	42.4	7.0	4.4 / 0.220	1.7 / 0.140	2.3 / 0.100	0.9 / 0.023	0 / 0.000	22 / 0.361	2.0 / 0.042	2.5 / 0.070	0.1 / 0.002	0.0 / 0.000	0.00	12	Fe 0.01; PO_4 0.00 (a)	37[b]	21	18	0	10		USGS
June 15 1020	1,750	69	10.1	111	31.7	6.8	3.5 / 0.175	0.8 / 0.065	1.6 / 0.070	0.7 / 0.018	0 / 0.000	19 / 0.311		0.8 / 0.023			0.07				21	12	0	4		USGS
July 20 0930	214	68	9.4	103	32.3	6.8	3.6 / 0.180	0.7 / 0.060	1.9 / 0.083	0.9 / 0.023	0 / 0.000	20 / 0.328		0.7 / 0.020			0.07				25	12	0	9		USGS
Aug 17 0900	49	69	9.0	99	42.3	6.8	4.4 / 0.220	0.9 / 0.070	2.1 / 0.091	0.9 / 0.023	0 / 0.000	23 / 0.377		0.3 / 0.008			0.00				23	14	0	5		USGS
Sept 11 1430	236	68	9.3	101	31.1	6.8	2.0 / 0.100	1.9 / 0.160	1.8 / 0.078	0.7 / 0.018	0 / 0.000	20 / 0.328	1.0 / 0.021	0.1 / 0.003	0.0 / 0.000	0.1 / 0.005	0.02	9.3	Fe 0.02; PO_4 0.00 Cu 0.08; (a)	27[b]	22	13	0	1		USGS
Oct 11 1150	473	61	9.6	97	37.6	7.1	4.0 / 0.200	0.6 / 0.046	2.0 / 0.087	1.0 / 0.026	0 / 0.000	18 / 0.295		0.4 / 0.011			0.02				24	12	0	2		USGS
Nov 16 1330	692	53	10.3	94	34.1	6.9	3.6 / 0.18	1.0 / 0.08	1.6 / 0.07	0.6 / 0.02	0 / 0.00	17 / 0.28		1.3 / 0.04			0.06				20	13	0	5		USGS
Dec 14 0910	670	50	11.3	100	38.8	6.9	3.6 / 0.18	2.2 / 0.18	1.6 / 0.07	0.8 / 0.02	0 / 0.00	18 / 0.30		0.0 / 0.00			0.09				16	18	3	9	median 180 minimum 6.2 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Min[illegible] analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						Old River at Clifton Court Ferry																			
1955																										
Jan 20 0940		45	9.4	78	383	7.3	22 / 1.098	9.5 / 0.782	43 / 1.870	3.8 / 0.097	0 / 0.000	85 / 1.393	37 / 0.770	56 / 1.579	3.5 / 0.056	0.7 / 0.037	0.07	22	Fe 0.21	240[b]	49	94	24	55		USGS
Feb 21 1515		50	9.7	86	602	7.4	31 / 1.55	14 / 1.17	67 / 2.91	2.6 / 0.07	0 / 0.00	102 / 1.67	68 / 1.42	88 / 2.48	2.0 / 0.03	0.1 / 0.01	0.22	17	Fe 0.02	340[b]	51	136	52	6		USGS
Mar 16 0900		55	9.1	85	598	7.4	31 / 1.55	14 / 1.17	66 / 2.87	2.5 / 0.06	0 / 0.00	97 / 1.59	60 / 1.25	96 / 2.71	1.3 / 0.02	0.2 / 0.01	0.28	16	Fe 0.03	335[b]	51	136	56	10		USGS
Apr 20 0920		58	8.5	83	370	7.2	23 / 1.148	11 / 0.892	33 / 1.435	2.9 / 0.074	0 / 0.000	90 / 1.475	35 / 0.729	46 / 1.297	1.6 / 0.026	0.3 / 0.016	0.14	19	Fe 0.16	216[b]	40	102	28			USGS
May 18 1300		69	7.5	82	398	7.6	25 / 1.248	13 / 1.052	36 / 1.565	2.2 / 0.056	0 / 0.000	94 / 1.541	37 / 0.770	56 / 1.579	1.2 / 0.019	0.2 / 0.011	0.15	18	Fe 0.03; Al 0.09; Cu 0.01; Zn 0.01; (a) PO_4 0.20	235[b]	40	115	38	25		USGS
Jun 21 1030		71	7.4	83	267	7.4	16 / 0.798	8.8 / 0.722	23 / 1.000	1.7 / 0.043	0 / 0.000	76 / 1.246	22 / 0.458	30 / 0.846	0.8 / 0.013	0.2 / 0.011	0.11	14	Fe 0.28	154[b]	39	76	14	30		USGS
Jul 19 0830		72	7.0	80	289	7.2	16 / 0.798	8.8 / 0.722	25 / 1.087	2.1 / 0.054	0 / 0.000	78 / 1.278	26 / 0.541	30 / 0.846	0.7 / 0.011	0.2 / 0.011	0.12	17	Fe 0.25	164[b]	41	76	12	35		USGS
Aug 23 1000		75	6.8	80	596	7.3	20 / 1.00	14 / 1.12	62 / 2.70	3.3 / 0.08	0 / 0.00	92 / 1.51	32 / 0.67	100 / 2.82	0.9 / 0.01	0.2 / 0.01	0.19	19	Fe 0.15	297[b]	55	106	32	35		USGS
Sep 22 0830		68	6.2	68	616	7.3	28 / 1.40	14 / 1.16	67 / 2.91	3.6 / 0.09	0 / 0.00	118 / 1.93	35 / 0.73	110 / 3.10	0.5 / 0.01	0.3 / 0.02	0.08	22	Fe 0.08; Al 0.06; Cu 0.01; (a) PO_4 0.25	339[b]	52	128	31	35		USGS
Oct 19 1235		64	7.1	74	595	7.5	18 / 0.90	22 / 1.82	65 / 2.83	3.2 / 0.08	0 / 0.00	131 / 2.15	35 / 0.73	95 / 2.68	0.9 / 0.01	0.3 / 0.02	0.07	22	Fe 0.04	327[b]	50	136	29	45		USGS
Nov 22 1350		50	9.6	85	1020	7.6	52 / 2.59	23 / 1.89	116 / 5.05	5.0 / 0.13	0 / 0.00	167 / 2.74	79 / 1.64	188 / 5.30	4.7 / 0.08	0.4 / 0.02	0.25	31	Fe 0.01	581[b]	52	224	87	9		USGS
Dec 21 0850		52	8.3	75	567	7.3	31 / 1.55	13 / 1.07	60 / 2.61	3.3 / 0.08	0 / 0.00	104 / 1.70	48 / 1.00	94 / 2.65	3.0 / 0.05	0.3 / 0.02	0.15	22	Fe 0.02	326[b]	49	131	46	15	median 230 minimum .23 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Old River at Clifton Court Ferry																										
1956																										
Jan 18 0910		47	9.6	82	160	7.1	11 / 0.549	4.8 / 0.391	12 / 0.522	2.0 / 0.051	0 / 0.000	50 / 0.820	12 / 0.250	14 / 0.395	1.3 / 0.029	0.4 / 0.021	0.15	17		100[b]	35	47	6	35		USGS
Feb 16 0930		43	9.9	79	240	7.3	15 / 0.748	5.9 / 0.484	24 / 1.044	1.7 / 0.043	0 / 0.000	66 / 1.082	19 / 0.396	27 / 0.761	1.0 / 0.016	0.3 / 0.016	0.07	16		143[b]	45	62	8	35		USGS
Mar 21 0850		57	9.3	90	455	7.3	24 / 1.198	12 / 0.982	44 / 1.914	2.2 / 0.056	0 / 0.000	96 / 1.573	31 / 0.645	68 / 1.918	1.0 / 0.016	0.2 / 0.011	0.18	22		252[b]	46	109	30	22		USGS
Apr 17 1225		55	9.9	93	218	7.3	13 / 0.649	5.8 / 0.479	21 / 0.914	1.6 / 0.041	0 / 0.000	62 / 1.016	15 / 0.312	28 / 0.790	1.4 / 0.023	0.3 / 0.016	0.01	17		134[b]	44	56	5	10		USGS
May 15 1155		60	9.2	92	140	7.3	10 / 0.499	3.3 / 0.269	13 / 0.566	1.3 / 0.033	0 / 0.000	45 / 0.738	10 / 0.208	15 / 0.423	0.6 / 0.010	0.3 / 0.016	0.09	14	Fe 0.06; Al 0.03; Zn 0.01; PO_4 0.15; (a)	90[b]	41	38	1	15		USGS
June 20 1130		68	8.0	87	178	7.3	12 / 0.599	4.0 / 0.325	17 / 0.740	1.5 / 0.038	0 / 0.000	50 / 0.820	12 / 0.250	23 / 0.649	1.1 / 0.018	0.2 / 0.011	0.00	15	Fe 0.03 (a)	111[b]	43	46	5	30		USGS
July 24 0940		78	6.9	83	200	6.8	12 / 0.599	5.8 / 0.481	18 / 0.783	1.6 / 0.041	0 / 0.000	54 / 0.885	14 / 0.291	25 / 0.705	0.6 / 0.010	0.3 / 0.016	0.04	12		116[b]	41	54	10	45		USGS
Aug 21 1230		74	7.5	87	573	7.5	33 / 1.65	13 / 1.07	62 / 2.70	2.8 / 0.07	0 / 0.00	119 / 1.95	36 / 0.75	76 / 2.71	1.0 / 0.02	0.3 / 0.02	0.13	20		323[b]	49	136	38	20		USGS
Sept 13 1420		72	8.1	92	372	6.9	21 / 1.048	9.5 / 0.784	41 / 1.784	2.1 / 0.054	0 / 0.000	80 / 1.459	26 / 0.541	55 / 1.551	1.1 / 0.018	0.3 / 0.016	0.16	12	Fe 0.03; Al 0.09; Cu 0.01; PO_4 0.20; Zn 0.04; (a)	212[b]	49	92	19	20		USGS
Oct 16 1010		65	9.7	102	601	7.0	32 / 1.60	14 / 1.16	65 / 2.83	2.2 / 0.08	0 / 0.00	130 / 2.13	31 / 0.65	100 / 2.82	2.3 / 0.04	0.1 / 0.01	0.17	26		338[b]	50	138	31			USGS
Nov 20 1135		49	10.1	88	600	7.6	30 / 1.50	15 / 1.24	67 / 2.91	2.6 / 0.07	0 / 0.00	115 / 1.89	44 / 0.92	100 / 2.82	2.3 / 0.04	0.2 / 0.01	0.27	23	Fe 0.03; (a)	341[b]	51	137	43	12		USGS
Dec 18 1210		51	8.9	80	460	7.3	25 / 1.25	12 / 0.99	48 / 2.09	2.0 / 0.05	0 / 0.00	92 / 1.51	35 / 0.73	75 / 2.12	2.4 / 0.04	0.1 / 0.01	0.06	19	Fe 0.03; (a)	264[b]	48	112	37	25	median 62; minimum 2.3; maximum 2400	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LACPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						Old River at Mandeville Island							equivalents per million												
1955																										
Jan 19 1520		43	10.8	87	495	7.2	32 / 1.597	14 / 1.173	44 / 1.913	2.9 / 0.074	0 / 0.000	83 / 1.360	56 / 1.166	71 / 2.002	8.0 / 0.129	0.5 / 0.026	0.12	23	Fe 0.10	292[b]	40	138	70	20		USGS
Feb 16 1600		50	8.6	76	495	7.2	31 / 1.547	15 / 1.253	45 / 1.957	2.7 / 0.069	0 / 0.000	98 / 1.606	61 / 1.270	66 / 1.861	4.8 / 0.077	0.4 / 0.021	0.10	20	Fe 0.13	294[b]	41	140	60	15		USGS
Mar 17 1130		54	9.6	89	353	7.4	22 / 1.098	11 / 0.902	31 / 1.348	1.6 / 0.041	0 / 0.000	86 / 1.409	32 / 0.666	43 / 1.213	1.9 / 0.031	0.2 / 0.011	0.15	20	Fe 0.06	205[b]	40	100	29	8		USGS
Apr 21 1020		56	9.0	85	241	7.3	16 / 0.798	8.0 / 0.662	20 / 0.870	1.7 / 0.043	0 / 0.000	82 / 1.344	17 / 0.354	23 / 0.649	0.9 / 0.015	0.2 / 0.011	0.14	19	Fe 0.14	146[b]	37	73	6			USGS
May 19 1250		68	8.3	96	190	7.4	13 / 0.649	6.7 / 0.551	14 / 0.609	1.4 / 0.036	0 / 0.000	69 / 1.131	14 / 0.291	17 / 0.479	0.6 / 0.010	0.3 / 0.016	0.06	17	Fe 0.1; Al 0.3; (a) PO_4 0.15	118[b]	33	60	3	25		USGS
Jun 22 1350		69	8.6	94	183	7.4	12 / 0.599	6.8 / 0.561	15 / 0.652	1.3 / 0.033	0 / 0.000	69 / 1.131	13 / 0.271	15 / 0.423	0.5 / 0.008	0.2 / 0.011	0.03	15	Fe 0.15	113[b]	35	58	1	20		USGS
Jul 19 1315		75	8.2	96	297	7.3	15 / 0.749	6.9 / 0.571	32 / 1.391	2.1 / 0.054	0 / 0.000	83 / 1.360	18 / 0.375	38 / 1.072	0.5 / 0.008	0.0 / 0.000	0.07	18	Fe 0.24	172[b]	50	66	0	25		USGS
Aug 24 0800		72	7.7	88	651	7.4	19 / 0.95	15 / 1.21	82 / 3.57	4.0 / 0.10	0 / 0.00	93 / 1.52	32 / 0.67	130 / 3.67	0.6 / 0.01	0.2 / 0.01	0.22	19	Fe 0.08	348[b]	61	108	32	30		USGS
Sep 21 1320		69	6.1	67	446	7.4	17 / 0.848	14 / 1.132	48 / 2.087	2.9 / 0.074	0 / 0.000	109 / 1.786	24 / 0.500	70 / 1.974	0.6 / 0.010	0.3 / 0.016	0.13	21	Fe 0.13; Al 0.04; PO_4 0.25; (a)	252[b]	50	99	10	40		USGS
Oct 18 1215		62	7.5	76	350	7.3	16 / 0.798	13 / 1.062	34 / 1.479	2.5 / 0.064	0 / 0.000	110 / 1.803	19 / 0.396	42 / 1.184	0.9 / 0.015	0.3 / 0.016	0.09	22	Fe 0.07	204[b]	43	93	3	20		USGS
Nov 22 0855		50	9.2	81	356	7.3	21 / 1.048	12 / 0.952	32 / 1.392	2.3 / 0.059	0 / 0.000	104 / 1.705	27 / 0.562	42 / 1.184	2.1 / 0.034	0.5 / 0.026	0.06	22	Fe 0.08	212[b]	40	100	15	15		USGS
Dec 20 1135		53	10.1	92	337	7.3	21 / 1.048	11 / 0.892	31 / 1.348	2.6 / 0.067	0 / 0.000	87 / 1.426	28 / 0.583	42 / 1.184	2.3 / 0.037	0.5 / 0.026	0.09	19	Fe 0.07	201[b]	40	97	26	30	median 48 minimum 1.3 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (No)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Old River at Mandeville Island																			
1956																										
Jan 17 1140		48	8.8	76	268	7.1	18 / 0.898	8.0 / 0.662	21 / 0.914	2.2 / 0.056	0 / 0.000	53 / 0.869	38 / 0.791	26 / 0.733	5.4 / 0.087	0.4 / 0.021	0.17	17		162	36	78	35	30		USGS
Feb 15 1140		48	9.9	85	299	7.3	20 / 0.998	7.0 / 0.578	27 / 1.174	2.0 / 0.051	0 / 0.000	72 / 1.180	30 / 0.625	34 / 0.959	1.8 / 0.029	0.2 / 0.011	0.07	18		175	42	79	20	40		USGS
Mar 20 0955		54	10.0	93	277	7.3	16 / 0.798	8.3 / 0.682	25 / 1.088	1.7 / 0.043	0 / 0.000	72 / 1.180	21 / 0.437	34 / 0.959	1.4 / 0.023	0.6 / 0.032	0.29	19		162	42	74	15	24		USGS
Apr 17 0935		57	9.2	88	363	7.3	20 / 0.998	11 / 0.890	35 / 1.522	2.0 / 0.051	0 / 0.000	82 / 1.344	32 / 0.666	53 / 1.495	1.2 / 0.019	0.3 / 0.016	0.08	16		211	44	94	27	20		USGS
May 15 0850		63	8.4	87	138	7.1	9.6 / 0.479	3.9 / 0.321	11 / 0.478	1.4 / 0.036	0 / 0.000	45 / 0.738	1.0 / 0.021	17 / 0.479	0.9 / 0.015	2.0 / 0.105	0.12	21	Fe 0.11; Al 0.15; Cu 0.02; Zn 0.01; PO_4 0.15; (a)	90[b]	36	40	1	6		USGS
June 19 1450		70	7.7	86	151	7.4	13 / 0.649	4.3 / 0.351	11 / 0.478	1.3 / 0.033	0 / 0.000	56 / 0.918	9.4 / 0.196	14 / 0.395	1.0 / 0.016	0.2 / 0.011	0.00	15	Fe 0.14 (a)	97[b]	32	50	4	35		USGS
July 25 0900		74	8.2	95	174	7.0	12 / 0.599	5.1 / 0.421	15 / 0.652	1.4 / 0.036	0 / 0.000	60 / 0.983	10 / 0.208	18 / 0.508	0.3 / 0.005	0.1 / 0.005	0.00	13		105[b]	38	51	2	35		USGS
Aug 21 0900		70	9.2	91	240	7.3	14 / 0.699	6.7 / 1.549	23 / 1.000	1.5 / 0.038	0 / 0.000	72 / 1.180	14 / 0.291	29 / 0.813	0.5 / 0.008	0.3 / 0.016	0.04	13		137[b]	44	62	3	10		USGS
Sept 13 0830		69	8.4	93	283	7.0	15 / 0.748	8.4 / 0.692	28 / 1.218	1.7 / 0.043	0 / 0.000	79 / 1.295	16 / 0.333	38 / 1.072	0.9 / 0.015	0.2 / 0.011	0.00	14	Fe 0.03; Al 0.10; Cu 0.01; Zn 0.05; PO_4 0.15 (a)	161[b]	45	72	7	10		USGS
Oct 17 1045		67	9.0	97	300	7.0	18 / 0.898	9.0 / 0.742	28 / 1.218	1.9 / 0.049	0 / 0.000	94 / 1.541	17 / 0.354	37 / 1.043	0.7 / 0.011	0.2 / 0.011	0.10	16	Fe 0.03; (a)	174[b]	42	82	5			USGS
Nov 20 0820		49	10.1	88	360	7.3	20 / 1.00	10 / 0.84	34 / 1.48	2.3 / 0.06	0 / 0.00	91 / 1.49	17 / 0.35	50 / 1.41	1.4 / 0.02	0.3 / 0.02	0.18	17	Fe 0.05; (a)	197[b]	44	92	17	20		USGS
Dec 18 0815		48	9.9	85	383	7.1	23 / 1.15	11 / 0.93	36 / 1.57	2.0 / 0.05	0 / 0.00	96 / 1.57	31 / 0.65	55 / 1.55	2.5 / 0.04	0.1 / 0.01	0.17	21		229[b]	42	104	25	25	median 23; minimum 2.3; maximum 2400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual mean and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						Old River at Orwood Bridge																			
1955																										
Jan 20 1500		45	9.2	76	682	7.3	39 / 1.95	18 / 1.51	67 / 2.91	3.5 / 0.09	0 / 0.00	100 / 1.64	92 / 1.92	96 / 2.71	7.7 / 0.12	0.3 / 0.02	0.13	26	Fe 0.05	398[b]	45	173	91	20		USGS
Feb 16 1400		52	8.4	76	759		41 / 2.05	19 / 1.55	83 / 3.61	3.3 / 0.08	0 / 0.00	125 / 2.05	84 / 1.75	117 / 3.30	3.4 / 0.05	0.3 / 0.02	0.28	23	Fe 0.05	436[b]	50	180	78	15		USGS
Mar 16 1230		57	9.7	93	663	7.6	34 / 1.70	17 / 1.38	73 / 3.17	2.9 / 0.07	0 / 0.00	98 / 1.61	80 / 1.67	102 / 2.88	2.4 / 0.04	0.3 / 0.02	0.33	18	Fe 0.07	378[b]	50	154	74	15		USGS
Apr 20 1200		57	8.9	85	312	7.3	19 / 0.948	10 / 0.852	27 / 1.174	2.1 / 0.054	0 / 0.000	88 / 1.442	27 / 0.562	34 / 0.959	1.1 / 0.018	0.3 / 0.016	0.13	19	Fe 0.13	183[b]	39	90	18			USGS
May 19 1110		68	8.2	89	272	7.3	19 / 0.948	8.9 / 0.732	22 / 0.957	1.8 / 0.046	0 / 0.000	80 / 1.311	22 / 0.458	30 / 0.846	1.0 / 0.016	0.2 / 0.011	0.10	20	Al 0.05; (a) PO_4 0.15	164[b]	36	84	18	50		USGS
Jun 22 0840		70	7.0	78	269	7.2	17 / 0.848	9.1 / 0.752	23 / 1.000	1.7 / 0.043	0 / 0.000	78 / 1.278	19 / 0.396	32 / 0.903	0.7 / 0.011	0.3 / 0.016	0.08	12	Fe 0.28	153[b]	38	80	16	45		USGS
Jul 19 1030		75	6.8	80	266	7.3	15 / 0.749	8.4 / 0.691	25 / 1.087	2.1 / 0.054	0 / 0.000	81 / 1.327	19 / 0.396	31 / 0.874	0.6 / 0.010	0.2 / 0.011	0.14	16	Fe 0.28	158[b]	42	72	6	25		USGS
Aug 24 1010		75	6.8	80	680	7.3	21 / 1.05	16 / 1.29	81 / 3.52	3.8 / 0.10	0 / 0.00	92 / 1.51	38 / 0.79	136 / 3.84	0.8 / 0.01	0.2 / 0.01	0.13	18	Fe 0.13	360[b]	59	117	42	45		USGS
Sep 22 1125		69	6.5	71	536	7.4	17 / 0.85	15 / 1.25	61 / 2.65	3.3 / 0.08	0 / 0.00	100 / 1.64	29 / 0.60	98 / 2.76	0.4 / 0.01	0.3 / 0.02	0.03	19	Fe 0.13; Al 0.08; Cu 0.01; PO_4 0.15; (a)	292[b]	55	105	23	35		USGS
Oct 19 1500		62	6.9	69	426	7.3	16 / 0.798	15 / 1.222	45 / 1.958	2.8 / 0.072	0 / 0.000	112 / 1.836	23 / 0.479	60 / 1.692	0.8 / 0.013	0.3 / 0.016	0.03	22	Fe 0.10	240[b]	48	101	9	30		USGS
Nov 25 1010		48	9.4	81	848	7.3	42 / 2.10	21 / 1.70	95 / 4.13	3.8 / 0.10	0 / 0.00	142 / 2.33	67 / 1.39	152 / 4.29	1.6 / 0.03	0.3 / 0.02	0.20	26	Fe 0.01	479[b]	51	190	74	15		USGS
Dec 20 1145		51	9.6	86	694	7.3	39 / 1.95	17 / 1.39	73 / 3.18	3.9 / 0.10	0 / 0.00	107 / 1.75	73 / 1.52	114 / 3.21	5.1 / 0.08	0.5 / 0.03	0.34	21	Fe 0.07	400[b]	48	167	79	25		USGS
																								median 62 minimum 2.3 maximum 7000+		

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Old River at Orwood Bridge																										
1956																										
Jan 18 1115		48	9.1	78	255	7.1	16 / 0.798	7.1 / 0.582	22 / 0.957	2.2 / 0.056	0 / 0.000	55 / 0.901	28 / 0.583	30 / 0.846	3.3 / 0.053	0.4 / 0.021	0.29	18		154	40	69	24	40		USGS
Feb 16 1230		44	10.3	84	299	7.5	18 / 0.898	7.2 / 0.594	29 / 1.262	1.9 / 0.049	0 / 0.000	71 / 1.164	27 / 0.562	37 / 1.043	1.3 / 0.021	0.2 / 0.011	0.13	17		174	45	75	17	55		USGS
Mar 21 1215		56	9.5	91	375	7.3	20 / 0.998	10 / 0.842	34 / 1.479	1.8 / 0.046	0 / 0.000	80 / 1.311	23 / 0.479	54 / 1.523	0.9 / 0.015	0.4 / 0.021	0.20	16		199	44	92	26	21		USGS
Apr 18 0915		56	9.2	87	283	7.2	15 / 0.748	7.9 / 0.652	29 / 1.262	1.6 / 0.041	0 / 0.000	67 / 1.098	24 / 0.500	40 / 1.128	1.2 / 0.019	0.3 / 0.016	0.10	16		168	47	70	15	20		USGS
May 16 0815		61	8.6	87	148	7.1	11 / 0.549	3.0 / 0.243	14 / 0.609	1.3 / 0.033	0 / 0.000	44 / 0.721	10 / 0.208	17 / 0.479	0.7 / 0.011	0.3 / 0.016	0.13	13	Fe 0.08; Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.25; (a)	93[b]	42	40	4	25		USGS
June 20 1435		70	7.7	86	151	7.3	10 / 0.499	3.8 / 0.313	14 / 0.609	1.3 / 0.033	0 / 0.000	45 / 0.738	11 / 0.229	18 / 0.508	1.0 / 0.016	0.3 / 0.016	0.03	15	Fe 0.05 (a)	96[b]	42	41	4	40		USGS
July 24 1110		77	7.3	87	183	7.2	12 / 0.599	5.4 / 0.441	16 / 0.695	1.5 / 0.038	0 / 0.000	56 / 0.918	15 / 0.312	20 / 0.564	0.6 / 0.010	0.2 / 0.011	0.00	12		111[b]	39	52	6	45		USGS
Aug 22 0850		73	7.6	87	245	7.1	15 / 0.748	6.9 / 0.569	23 / 1.000	1.5 / 0.038	0 / 0.000	71 / 1.164	18 / 0.375	30 / 0.846	0.7 / 0.011	0.3 / 0.016	0.08	11		141[b]	42	66	8	10		USGS
Sept13 1100		72	7.8	89	294	7.0	17 / 0.848	7.9 / 0.652	30 / 1.305	1.6 / 0.041	0 / 0.000	78 / 1.278	19 / 0.396	40 / 1.128	0.7 / 0.011	0.3 / 0.016	0.15	11	Fe 0.04; Al 0.12; Cu 0.01; PO_4 0.15; (a)	166[b]	46	75	11	15		USGS
Oct 16 1215		68	8.3	91	485	7.0	26 / 1.297	13 / 1.031	52 / 2.262	2.7 / 0.069	0 / 0.000	111 / 1.819	27 / 0.562	77 / 2.171	1.0 / 0.016	0.3 / 0.016	0.09	18	Fe 0.02; (a)	272[b]	49	116	25			USGS
Nov 20 1335		51	9.2	82	636	7.4	31 / 1.55	16 / 1.33	66 / 2.87	2.7 / 0.07	0 / 0.00	114 / 1.87	22 / 0.46	116 / 3.27	2.1 / 0.03	0.3 / 0.02	0.25	24	Fe 0.03; (a)	336[b]	49	144	51	12		USGS
Dec 18 1450		50	9.2	81	500	7.2	28 / 1.40	13 / 1.05	49 / 2.13	2.1 / 0.05	0 / 0.00	84 / 1.38	50 / 1.04	80 / 2.26	3.7 / 0.06	0.1 / 0.01	0.17	20		287[b]	46	122	53	50	median 62 minimum 2.1 maximum 2400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area																									
												Old River near Tracy														
1955																										
Jan 20 0825		45	8.6	72	406	7.2	23 / 1.148	9.0 / 0.742	45 / 1.957	3.9 / 0.100	0 / 0.000	93 / 1.524		53 / 1.495			0.07				50	94	18	55		USGS
Feb 21 1055		50	9.1	80	641	7.4	33 / 1.65	16 / 1.31	71 / 3.09	3.0 / 0.08	0 / 0.00	107 / 1.75		95 / 2.68			0.27				50	148	60	6		USGS
Mar 15 1730		55	9.8	92	576	7.7	22 / 1.10	19 / 1.54	64 / 2.78	1.7 / 0.04	0 / 0.00	95 / 1.56		92 / 2.59			0.27				51	132	54	30		USGS
Apr 15 1100		61	9.8	99	1060	8.2	58 / 2.89	25 / 2.03	116 / 5.04	5.0 / 0.13	0 / 0.00	172 / 2.82		209 / 5.89			0.26				50	246	105	15		USGS
May 17 0900		66	7.1	76	875	8.3	50 / 2.50	20 / 1.66	93 / 4.04	4.0 / 0.10	0 / 0.00	169 / 2.77	65 / 1.35	150 / 4.23	3.7 / 0.06	0.3 / 0.02	0.21	18	(a) PO_4 0.50	487[b]	49	208	69	20		USGS
Jun 21 1020		69	6.1	67	457	7.4	25 / 1.248	12 / 1.012	42 / 1.826	2.6 / 0.067	0 / 0.000	94 / 1.541		76 / 2.143			0.13				44	113	36	10		USGS
Jul 1[c] 0730		70	7.0	78	1040	7.6	49 / 2.45	31 / 2.51	112 / 4.87	5.0 / 0.13	0 / 0.00	167 / 2.74		178 / 5.02			0.63				49	248	111	30		USGS
Aug 24 1500		77	8.1	97	945	7.6	44 / 2.20	26 / 2.16	99 / 4.30	5.6 / 0.14	0 / 0.00	190 / 3.11		170 / 4.79			0.08				49	218	62	45		USGS
Sep 21 1500		71	6.5	72	985	7.7	56 / 2.79	22 / 1.77	106 / 4.61	5.4 / 0.14	0 / 0.00	199 / 3.26	61 / 1.27	174 / 4.91	2.5 / 0.04	0.3 / 0.02	0.30	23	Fe 0.03; Al 0.11; Cu 0.01; (a)	549[b]	50	228	65	25		USGS
Oct 18 1440		64			1050	7.9	59 / 2.94	24 / 1.98	120 / 5.22	6.4 / 0.16	0 / 0.00	205 / 3.36		181 / 5.10			0.35				51	246	78	25		USGS
Nov 22 1045		50	5.5	48	956	7.3	54 / 2.69	21 / 1.75	106 / 4.61	6.4 / 0.16	0 / 0.00	182 / 2.98		170 / 4.79			0.27				50	222	73	110		USGS
Dec 20 1330		54	7.2	67	592	7.3	34 / 1.70	14 / 1.14	64 / 2.78	4.3 / 0.11	0 / 0.00	121 / 1.98		96 / 2.71			0.24				49	142	43	20		USGS
																									median 56 minimum 2.3 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Old River near Tracy																										
1956																										
Jan 17 1410		49	9.1	79	190	7.1	13 / 0.649	5.0 / 0.411	15 / 0.652	2.5 / 0.064	0 / 0.000	59 / 0.967		20 / 0.564			0.14				37	53	5	50		USGS
Feb 15 1400		49	9.6	84	334	7.3	19 / 0.948	9.0 / 0.744	32 / 1.392	2.0 / 0.051	0 / 0.000	77 / 1.262		45 / 1.269			0.15				44	85	22	35		USGS
Mar 20 1210		57	9.4	91	473	7.3	28 / 1.397	12 / 0.963	47 / 2.044	2.5 / 0.064	0 / 0.000	100 / 1.639		71 / 2.002			0.12				46	118	36	30		USGS
Apr 17 1130		58	9.4	92	280	7.3	16 / 0.798	7.4 / 0.606	28 / 1.218	1.8 / 0.046	0 / 0.000	69 / 1.131		38 / 1.072			0.08				46	70	13	15		USGS
May 15 1050		61	9.1	91	146	7.3	10 / 0.499	3.8 / 0.311	13 / 0.566	1.3 / 0.033	0 / 0.000	44 / 0.721	10 / 0.208	17 / 0.479	0.9 / 0.015	0.4 / 0.021	0.00	13	Fe 0.09; Al 0.05; Cr 0.01; Cu 0.01; Cu 0.01; Zn 0.01; (a) PO_4 0.00	91[b]	40	40	4	30		USGS
June 20 0920		67	7.6	82	163	7.3	10 / 0.499	5.6 / 0.461	15 / 0.652	1.5 / 0.038	0 / 0.000	49 / 0.803		22 / 0.620			0.15				40	48	8	80		USGS
July 25 1045		81	5.4	67	804	7.0	44 / 2.20	21 / 1.72	85 / 3.70	3.8 / 0.10	0 / 0.00	152 / 2.49		141 / 3.98			0.27				48	196	71	25		USGS
Aug 21 1040		72	6.5	74	734	7.5	43 / 2.15	17 / 1.37	78 / 3.39	2.8 / 0.10	0 / 0.00	144 / 2.36		130 / 3.67			0.16				48	176	58	10		USGS
Sept 14 0940		70	7.3	81	590	7.4	34 / 1.70	13 / 1.04	68 / 2.96	3.2 / 0.08	0 / 0.00	130 / 2.13	36 / 0.75	95 / 2.68	2.1 / 0.03	0.1 / 0.01	0.18	21	Fe 0.01; Al 0.10; Cu 0.01; PO_4 0.45; (a)	337[b]	51	137	30	15		USGS
Oct 17 1245		66	8.0	85	602	7.4	35 / 1.75	13 / 1.06	64 / 2.78	3.4 / 0.09	0 / 0.00	135 / 2.21		100 / 2.82			0.08				49	140	29	20		USGS
Nov 20 1010		48	7.2	62	627	7.5	34 / 1.70	17 / 1.40	68 / 2.96	3.6 / 0.09	0 / 0.00	132 / 2.16		102 / 2.88			0.18				48	155	47	7		USGS
Dec 18 1010		51	6.9	62	489	7.3	29 / 1.45	12 / 0.99	50 / 2.18	2.8 / 0.07	0 / 0.00	107 / 1.75		80 / 2.26			0.00				46	122	34	7	median 62; minimum .62; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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							equivalents per million																			
							Pit River near Canby																			
1955																										
Jan	No sample																									
Feb	No sample																									
Mar 2 1020	119	36	10.5	76	252	7.4	19 / 0.948	6.7 / 0.552	25 / 1.087	5.0 / 0.128	0 / 0.000	135 / 2.212		7.0 / 0.197			0.00				40	75	0	80		USGS
Apr 1 1020	202	47	9.3	79	201	7.8	11 / 0.549	9.9 / 0.811	18 / 0.783	3.5 / 0.090	0 / 0.000	106 / 1.737		6.4 / 0.181			0.12				35	68	0	60		USGS
May 11 0800	234	59			177	7.5	15 / 0.749	5.0 / 0.411	15 / 0.652	3.7 / 0.095	0 / 0.000	97 / 1.590	7.1 / 0.148	3.0 / 0.085	1.3 / 0.021	0.4 / 0.021	0.13	34	Fe 0.05; Al 0.20; Zn 0.01; Cu 0.01; (a) PO_4 0.25	133[b]	34	58	0	25		USGS
Jun 15 0800	41	62	7.8	80	311	7.6	26 / 1.297	8.5 / 0.695	29 / 1.261	5.7 / 0.176	0 / 0.000	182 / 2.983		3.7 / 0.104			0.16				37	100	0	20		USGS
Jul 13 0830	75	70	7.1	79	303	7.6	21 / 1.048	11 / 0.872	30 / 1.305	4.9 / 0.125	0 / 0.000	173 / 2.835		4.0 / 0.113			0.19				39	96	0	40		USGS
Aug 17 0800	5.6	59	7.2	71	302	7.8	25 / 1.248	10 / 0.852	25 / 1.087	5.3 / 0.136	0 / 0.000	183 / 2.999		4.5 / 0.127			0.10				33	105	0	25		USGS
Sep 14 0850	67	60	7.9	79	275	7.4	22 / 1.098	10 / 0.822	21 / 0.913	5.1 / 0.130	0 / 0.000	160 / 2.622	5.0 / 0.104	4.0 / 0.113	0.6 / 0.010	0.5 / 0.026	0.10	32	Fe 0.06; Al 0.01; (a)	179[b]	31	96	0	10		USGS
Oct 12 0920	41	51	9.8	88	315	7.9	22 / 1.098	9.4 / 0.774	32 / 1.392	6.1 / 0.156	0 / 0.000	177 / 2.901		6.5 / 0.183			0.18				41	94	0	40		USGS
Nov 16 0930	36	34	11.6	82	280	7.1	19 / 0.948	6.7 / 0.552	31 / 1.348	5.8 / 0.148	0 / 0.000	145 / 2.377		8.4 / 0.237			0.16				45	75	0	40		USGS
Dec	No sample																									
																								median 23 minimum .62 maximum 7000+		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Pit River near Canby																			
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1140	750	54	9.0	85	174	7.0	15 / 0.748	5.5 / 0.452	15 / 0.652	3.0 / 0.077	0 / 0.000	100 / 1.639	9.0 / 0.187	2.5 / 0.070	0.6 / 0.010	0.2 / 0.011	0.02	30	Fe 0.14; Al 0.15; Cr+6 0.01; PO_4 0.00 (a)	130[b]	34	60	0	25		USGS
June 13 1030	195	67	7.4	80	187	7.7	17 / 0.848	5.8 / 0.478	15 / 0.652	3.2 / 0.082	0 / 0.000	114 / 1.868		0.8 / 0.023			0.13				32	66	0	25		USGS
July 18 1030	124	74	7.7	89	189	7.7	17 / 0.848	5.4 / 0.444	16 / 0.696	3.6 / 0.092	0 / 0.000	117 / 1.918		1.7 / 0.048			0.07				33	65	0	20		USGS
Aug 15 1140	93	67	8.0	87	221	7.7	18 / 0.898	6.7 / 0.554	19 / 0.826	5.1 / 0.130	0 / 0.000	126 / 2.065		3.0 / 0.085			0.10				34	73	0	9		USGS
Sept 19 1115	114	60	8.1	81	225	7.0	17 / 0.848	8.4 / 0.692	20 / 0.870	4.6 / 0.118	0 / 0.000	135 / 2.213	12 / 0.250	1.5 / 0.042	0.9 / 0.015	0.2 / 0.011	0.10	38	Fe 0.29; Cu 0.02; Zn 0.03; PO_4 0.35; (a)	170[b]	34	77	0	20		USGS
Oct 17 1130	138	50	9.8	87	270	7.7	20 / 0.998	7.6 / 0.622	26 / 1.131	5.9 / 0.151	0 / 0.000	154 / 2.524		5.5 / 0.155			0.05				39	81	0	20		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median 23 minimum .62 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{0.0}{0.00}$ except as shown.

b Determined by addition of analysed constituents

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TABLE 14
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Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Pit River near Montgomery Creek																										
1955																										
Jan	Not sampled																									
Feb 10 1400	4,020	44	11.7	95	148	8.0	9.7 / 0.484	7.3 / 0.604	10 / 0.435	1.9 / 0.049	0	90 / 1.475		3.5 / 0.099			0.0				28	54	0	6		USGS
Mar	Not sampled																									
Apr	Not sampled																									
May 12 1400	4,960	60	10.0	100	138	7.6	12 / 0.599	4.9 / 0.401	9.2 / 0.400	2.2 / 0.056	0 / 0.0	80 / 1.311	3.5 / 0.073	3.0 / 0.085	0.4 / 0.006	0.2 / 0.011	0.06	29	Fe 0.08; Al 0.02 (a) PO_4 0.20	103[b]	27	50	0	2		USGS
Jun 21 1730	4,040	66	9.0	96	153	7.6	10 / 0.499	7.1 / 0.581	11 / 0.478	2.3 / 0.059	0 / 0.000	91 / 1.491		4.0 / 0.113			0.06				30	54	0	1		USGS
Jul 14 0800	2,560	64	7.2	75	153	7.8	12 / 0.599	6.3 / 0.521	11 / 0.478	2.2 / 0.056	0 / 0.000	92 / 1.508		4.0 / 0.113			0.11				29	56	0	2		USGS
Aug	Not sampled																									
Sep	Not sampled																									
Oct	Not sampled																									
Nov 21 1130	4,600	48	11.2	96	[illegible]	7.6	12 / 0.599	4.9 / 0.401	9.6 / 0.418	2.1 / 0.054	0 / 0.000	79 / 1.295		4.5 / 0.127			0.09				28	50	0	60		USGS
Dec	Not sampled																									
																									median 2.3 minimum .06 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

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							equivalents per million																			
							Pit River near Montgomery Creek																			
1956																										
Jan	Not sampled																									
Feb 16 1030	5,400	36	12.2	89	143	7.7	11 / 0.549	6.1 / 0.503	9.0 / 0.392	1.7 / 0.043	0 / 0.000	82 / 1.344		2.1 / 0.059			0.03				26	53	0	10		USGS
Mar	Not sampled																									
Apr 11 1030	7,170	54	10.7	99	120	7.6	10 / 0.499	4.9 / 0.401	7.4 / 0.322	1.6 / 0.041	0 / 0.000	74 / 1.213		1.6 / 0.045			0.07				25	45	0	20		USGS
May 15 1400	6,740	59	9.9	97	120	7.5	14 / 0.699	3.7 / 0.301	7.5 / 0.326	1.7 / 0.043	0 / 0.000	57 / 0.934	17 / 0.354	2.2 / 0.062	0.4 / 0.006	0.0 / 0.000	0.06	23	Fe 0.04; Al 0.03; Cu 0.01; FO_4 0.10; (a)	98[b]	24	50	3	10		USGS
June 13 1500	4,340	58	10.5	102	144	7.6	12 / 0.599	5.6 / 0.461	9.6 / 0.418	2.0 / 0.051	0 / 0.000	86 / 1.410		3.0 / 0.085			0.11				27	53	0	1		USGS
July	Not sampled																									
Aug 20 0915	1,170	68	7.7	84	158	7.6	13 / 0.649	6.9 / 0.567	10 / 0.435	2.0 / 0.051	0 / 0.000	93 / 1.524		4.0 / 0.113			0.09				26	61	0	0.5		USGS
Sept	Not sampled																									
Oct	Not sampled																									
Nov	Not sampled																									
Dec	Not sampled																								median 3.5 minimum .06 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Putah Creek near Winters																										
1955																										
Jan 13 1445	105	45	12.2	100	449	8.2	22 / 1.10	41 / 3.37	13 / 0.57	0.9 / 0.02	10 / 0.33	240 / 3.93		12 / 0.34			0.29				11	224	11	2		USGS
Feb 10 1250	94	50	11.7	103	464	8.4	24 / 1.20	44 / 3.60	14 / 0.61	1.0 / 0.03	12 / 0.40	250 / 4.10		10 / 0.28			0.36				11	240	15	0.9		USGS
Mar 9 1530	180	50	9.8	87	440	8.4	23 / 1.15	40 / 3.29	14 / 0.61	1.0 / 0.03	9 / 0.30	239 / 3.91		10 / 0.28			0.12				12	222	11	5		USGS
Apr 6 1450	61	61	10.4	105	517	8.4	25 / 1.25	49 / 3.99	18 / 0.78	1.6 / 0.04	12 / 0.40	295 / 4.83		12 / 0.34			0.52				13	262	0	2		USGS
May 16 1330	88	70	10.4	116	467	8.4	24 / 1.20	41 / 3.40	15 / 0.65	1.3 / 0.03	0 / 0.00	280 / 4.59	23 / 0.48	10 / 0.28	0.5 / 0.01	0.1 / 0.01	0.38	27	Fe 0.005; (a) PO_4 0.05	280[b]	12	230	0	1		USGS
Jun 20 1320	6.0	78	9.2	111	603	7.8	37 / 1.85	48 / 3.93	28 / 1.22	1.8 / 0.05	13 / 0.43	334 / 5.47		19 / 0.54			0.85				17	289	0	1		USGS
Jul 18 1150	2.4	74	9.6	111	682	7.8	23 / 1.15	65 / 5.33	37 / 1.61	2.5 / 0.06	18 / 0.60	372 / 6.10		28 / 0.79			1.1				20	324	0	3		USGS
Aug 22 1250	No flow	80	8.5	105	814	8.2	33 / 1.65	70 / 5.77	50 / 2.17	3.1 / 0.08	25 / 0.83	412 / 6.75		46 / 1.30			1.7				22	371	0	80		USGS
Sep 19 1410	3.9	70	2.0	22	789	8.0	29 / 1.45	64 / 5.23	55 / 2.39	2.6 / 0.07	25 / 0.83	351 / 5.75	54 / 1.12	50 / 1.41	0.2 / 0.00	0.4 / 0.02	1.7	21	Al 0.21; Cu 0.01; (a)	476[b]	26	334	4	5		USGS
Oct 17 1300	0.2	65	9.7	102	798	8.1	37 / 1.85	64 / 5.27	48 / 2.09	2.7 / 0.07	13 / 0.43	415 / 6.80		35 / 0.99			1.4				23	356	0	7		USGS
Nov 24 0900	4.1	48	11.9	102	741	7.5	37 / 1.85	59 / 4.89	41 / 1.78	1.8 / 0.05	6 / 0.20	384 / 6.29		32 / 0.90			1.4				21	337	12	5		USGS
Dec 13 1110	26	49	11.4	99	503	6.8	27 / 1.35	41 / 3.41	23 / 1.00	1.5 / 0.04	0 / 0.00	287 / 4.70		18 / 0.51			0.71				17	238	3	1	median .78 minimum .06 maximum 23	USGS

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ANALYSES OF SURFACE WATER

REGION 5

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							equivalents per million																			
							Putah Creek near Winters																			
1956																										
Jan 18 1650	2,440	51	11.0	98	334	7.4	21 / 1.048	26 / 2.112	10 / 0.435	1.2 / 0.031	0 / 0.000	181 / 2.967		6.0 / 0.169			0.20				12	158	10	60		USGS
Feb 8 1545	920	51	11.1	99	527	7.2	30 / 1.50	46 / 3.82	17 / 0.74	1.1 / 0.03	10 / 0.33	281 / 4.61		9.5 / 0.27			0.35				12	266	19	15		USGS
Mar 15 1130	654	52	10.8	98	581	7.4	31 / 1.55	51 / 4.17	21 / 0.91	1.0 / 0.03	2 / 0.07	314 / 5.15		14 / 0.39			0.38				14	286	25	50		USGS
Apr 12 1140	471	54	10.7	99	609	7.3	30 / 1.50	57 / 4.70	21 / 0.91	1.1 / 0.03	0 / 0.00	357 / 5.85		12 / 0.34			0.44				13	310	17	50		USGS
May 14 1330	179	69	9.6	106	569	7.7	29 / 1.45	52 / 4.31	20 / 0.87	1.4 / 0.04	0 / 0.00	319 / 5.23	40 / 0.83	14 / 0.39	0.8 / 0.01	0.0 / 0.00	0.47	27	Al 0.13; Zn 0.01; (a) PO_4 0.00	342[b]	13	288	26	2		USGS
June 18 1310	38	76	9.2	109	695	7.9	39 / 1.95	62 / 5.07	30 / 1.30	2.0 / 0.05	0 / 0.00	393 / 6.44		21 / 0.59			0.73				16	351	29	3		USGS
July 23 1400	11	84	9.2	118	750	7.9	37 / 1.85	67 / 5.47	40 / 1.74	2.2 / 0.06	13 / 0.43	409 / 6.70		25 / 0.70			1.3				19	366	9	1		USGS
Aug 20 1400	12	76	9.3	110	732	7.6	30 / 1.50	66 / 5.41	43 / 1.87	2.2 / 0.06	0 / 0.00	420 / 6.88		25 / 0.70			1.1				21	346	2	1.0		USGS
Sept 11 1430	9.0	71	9.5	106	752	8.1	40 / 2.00	65 / 5.32	45 / 1.96	0.2 / 0.01	0 / 0.00	437 / 7.16	50 / 1.04	28 / 0.79	0.3 / 0.00	0.2 / 0.01	1.3	27	Al 0.17; Cu 0.01; PO_4 0.05; (a)	472[b]	21	366	8	5		USGS
Oct 25 1540	7.4	58	12.4	121	788	8.3	25 / 1.75	68 / 5.57	14 / 0.61	2.2 / 0.06	0 / 0.00	448 / 7.34		28 / 0.79			1.3				8	366	0	0.7		USGS
Nov 13 1330	41	56	13.0	123	594	8.1	32 / 1.60	52 / 4.24	23 / 1.00	1.9 / 0.05	0 / 0.00	350 / 5.74		19 / 0.54			0.37				15	292	5	1.8		USGS
Dec 12 1240	26	47	13.1	111	674	8.3	35 / 1.75	61 / 4.99	9.3 / 0.40	1.5 / 0.04	0 / 0.00	406 / 6.65		19 / 0.54			0.86				6	337	4	1.0	median 2.3 minimum .23 maximum 130	USGS

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	Tidal Area						Rock Slough near Knightsen																			
1955																										
Jan 20 1550		45	10.0	82	861	7.3	46 / 2.30	25 / 2.02	89 / 3.87	3.2 / 0.08	0 / 0.00	110 / 1.80		129 / 3.64			0.35				47	216	126	15		USGS
Feb 16 1220		51	8.4	75	846	7.2	41 / 2.05	24 / 1.99	91 / 3.96	3.4 / 0.09	0 / 0.00	128 / 2.10		129 / 3.64			0.46				49	202	97	10		USGS
Mar 16 1400		55	9.9	93	746	7.6	35 / 1.75	20 / 1.63	80 / 3.48	3.0 / 0.08	0 / 0.00	114 / 1.87		116 / 3.27			0.39				50	169	76	35		USGS
Apr 20 1330		58	8.5	82	320	7.2	20 / 0.998	10 / 0.842	27 / 1.174	2.0 / 0.051	0 / 0.000	92 / 1.508		35 / 0.987			0.16				38	92	17	30		USGS
May 19 0950		70	5.9	66	277	7.2	20 / 0.998	7.8 / 0.642	24 / 1.044	2.5 / 0.064	0 / 0.000	84 / 1.377	24 / 0.500	28 / 0.790	0.7 / 0.011	0.3 / 0.016	0.10	17	Al 0.06; (a) PO_4 0.15	165[b]	38	82	13	40		USGS
Jun 22 0920		71	7.0	79	211	7.2	15 / 0.749	7.2 / 0.591	17 / 0.739	1.5 / 0.038	0 / 0.000	36 / 0.590		18 / 0.508			0.09				35	67	37	35		USGS
Jul 19 1115		75	6.1	72	273	7.0	15 / 0.749	9.1 / 0.751	28 / 1.218	2.6 / 0.067	0 / 0.000	78 / 1.278		30 / 0.846			0.09				44	75	11	35		USGS
Aug 24 1120		73	6.3	72	723	7.3	20 / 1.00	17 / 1.42	91 / 3.96	4.2 / 0.11	0 / 0.00	94 / 1.54		152 / 4.29			0.30				61	121	44	25		USGS
Sep 22 1225		69	5.7	63	579	7.3	20 / 1.00	15 / 1.20	68 / 2.96	3.7 / 0.09	0 / 0.00	101 / 1.66	29 / 0.60	109 / 3.07	0.3 / 0.00	0.2 / 0.01	0.08	19	Fe 0.07; Al 0.12; Cu 0.01; (a)	314[b]	56	110	27	45		USGS
Oct 19 1615		63	6.9	70	414	7.3	19 / 0.948	13 / 1.076	45 / 1.958	2.8 / 0.072	0 / 0.000	114 / 1.868		58 / 1.636			0.22				48	101	8	40		USGS
Nov 23 0945		48	8.5	73	496	7.1	25 / 1.248	14 / 1.192	54 / 2.349	3.0 / 0.077	0 / 0.000	118 / 1.934		71 / 2.002			0.27				48	122	25	110		USGS
Dec 21 1300		54	9.5	88	696	7.3	36 / 1.80	18 / 1.48	76 / 3.31	3.7 / 0.09	0 / 0.00	122 / 2.00		113 / 3.19			0.37				50	164	64	30		USGS
																									median 22 minimum 1.3 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Rock Slough near Knightsen																			
1956																										
Jan 18 1300		49	8.1	71	521	7.1	25 / 1.248	14 / 1.192	51 / 2.218	2.7 / 0.069	0 / 0.000	74 / 1.213		72 / 2.030			0.52				47	122	61	40		USGS
Feb 16 1350		44	10.6	86	467	7.3	22 / 1.098	14 / 1.142	51 / 2.218	2.3 / 0.059	0 / 0.000	95 / 1.557		63 / 1.777			0.34				49	112	34	65		USGS
Mar 21 1345		58	8.5	83	408	7.3	22 / 1.098	11 / 0.902	40 / 1.740	2.0 / 0.051	0 / 0.000	88 / 1.442		56 / 1.579			0.26				46	100	28	40		USGS
Apr 18 1020		60	7.4	74	542	7.3	27 / 1.35	14 / 1.19	60 / 2.61	2.6 / 0.07	0 / 0.00	103 / 1.69		86 / 2.43			0.29				50	127	43	20		USGS
May 16 0925		66	6.2	66	171	7.0	12 / 0.599	3.7 / 0.301	16 / 0.696	1.5 / 0.038	0 / 0.000	50 / 0.820	14 / 0.291	19 / 0.536	0.8 / 0.013	0.3 / 0.016	0.13	14	Fe+3 0.17; Al 0.11; Cu 0.01; Zn 0.01; PO_4 0.35; (a)	107[b]	42	45	4	15		USGS
June 20 1540		75	5.9	69	148	7.1	9.2 / 0.459	3.9 / 0.321	13 / 0.566	1.4 / 0.036	0 / 0.000	48 / 0.787		17 / 0.479			0.04				41	39	0			USGS
July 24 1150		79	5.8	71	182	6.8	12 / 0.599	5.6 / 0.457	16 / 0.696	1.5 / 0.038	0 / 0.000	58 / 0.951		20 / 0.564			0.19				39	53	5	20		USGS
Aug 22 0945		73	6.4	74	242	7.1	15 / 0.748	7.1 / 0.580	23 / 1.000	1.5 / 0.033	0 / 0.000	71 / 1.164		29 / 0.818			0.06				42	66	8	10		USGS
Sept 13 1150		71	7.4	83	304	7.2	15 / 0.748	9.3 / 0.764	30 / 1.305	2.0 / 0.051	0 / 0.000	78 / 1.278	21 / 0.437	42 / 1.184	0.6 / 0.010	0.0 / 0.000	0.04	13	Fe 0.01; Cu 0.01; Zn 0.01; PO_4 0.15; Al 0.13; (a)	171[b]	46	76	12	20		USGS
Oct 16 1300		67	7.2	78	371	7.2	21 / 1.048	9.6 / 0.792	36 / 1.566	2.1 / 0.054	0 / 0.000	96 / 1.573		51 / 1.438			0.18				45	92	13	20		USGS
Nov 21 0835		47	9.5	81	661	7.6	34 / 1.70	17 / 1.40	72 / 3.13	3.4 / 0.09	0 / 0.00	128 / 2.10		109 / 3.07			0.19				50	155	50	10		USGS
Dec 19 0830		48	8.9	77	519	7.2	28 / 1.40	8.3 / 0.68	54 / 2.35	2.1 / 0.05	0 / 0.00	94 / 1.54		80 / 2.26			0.18				52	104	27	10	median 23; minimum 1.3; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Sacramento River at Delta																			
1955																										
Jan 19 1700	512	36	13.0	94	115	7.5	8.0 / 0.399	6.3 / 0.521	6.4 / 0.278	0.7 / 0.018	0 / 0.000	63 / 1.032		6.0 / 0.169			0.08				23	46	0	1		USGS
Feb 10 0930	629	38	12.2	91	116	7.9	5.7 / 0.284	8.0 / 0.660	5.7 / 0.248	0.6 / 0.015	0	64 / 1.049		4.4 / 0.124			0.06				21	47	0	4		USGS
Mar 10 1100	646	48	11.7	100	115	7.7	6.1 / 0.304	7.5 / 0.616	5.7 / 0.248	0.7 / 0.018	0	64 / 1.049		3.9 / 0.110			0.04				21	46	0	2		USGS
Apr 14 1530	788	49	11.8	101	102	7.8	5.7 / 0.284	7.0 / 0.576	4.1 / 0.178	0.5 / 0.013	0 / 0.000	59 / 0.967		3.2 / 0.090			0.10				17	43	0	2		USGS
May 16 1300	1240	54	10.9	101	87.2	7.5	5.7 / 0.284	6.0 / 0.496	3.2 / 0.139	0.4 / 0.010	0 / 0.000	53 / 0.869	2.5 / 0.052	2.0 / 0.056	0.1 / 0.002	0.1 / 0.005	0.04	18	Fe 0.01; Al 0.005 (a) PO_4 0.05	64[b]	15	39	0	0.4		USGS
Jun 22 1330	358	64	10.1	105	127	7.6	7.2 / 0.359	7.8 / 0.641	6.9 / 0.300	0.7 / 0.018	0 / 0.000	72 / 1.180		5.5 / 0.155			0.12				23	50	0	1		USGS
Jul 13 0900	248	67	9.5	102	141	7.6	8.9 / 0.444	7.5 / 0.616	8.8 / 0.383	0.9 / 0.023	0 / 0.000	77 / 1.262		6.5 / 0.183			0.28				26	53	0	2		USGS
Aug	Not sampled																									
Sep 13 1100	158	62	9.6	97	163	8.0	11 / .549	6.4 / 0.525	15 / 0.652	1.5 / 0.038	0 / 0.000	84 / 1.377	50 / 0.104	8.9 / 0.251	0.1 / 0.002	0.1 / 0.005	0.25	29	Fe 0.02; Al 0.01; Cu 0.01; Zn 0.01; (a)	118[b]	37	54	0	0		USGS
Oct 14 0930	191	56	9.9	94	159	7.5	9.7 / 0.484	7.4 / 0.608	12 / 0.522	1.3 / 0.033	0 / 0.000	82 / 1.344		8.2 / 0.231			0.28				32	55	0	2		USGS
Nov 16 1600	232	38	13.1	98	153	7.6	8.8 / 0.439	7.3 / 0.601	11 / 0.478	1.3 / 0.033	0 / 0.000	77 / 1.262		10 / 0.282			0.18				31	52	0	20		USGS
Dec 16 1330	656	46	11.6	97	116	7.6	7.6 / 0.379	6.6 / 0.541	6.4 / 0.278	0.8 / 0.020	0 / 0.000	63 / 1.033		5.0 / 0.141			0.17				23	46	0	3		USGS
																									median 9.6 minimum .046 maximum 7000	

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Sacramento River at Delta																			
1956																										
Jan 16 1215	8,320	46	10.5	88	59.7	7.4	3.9 / 0.195	4.0 / 0.325	1.7 / 0.074	0.2 / 0.005	0 / 0.000	35 / 0.574		0.0 / 0.000			0.02				12	26	0	30		USGS
Feb 15 0930	1,150	36	12.3	90	94.5	7.5	6.0 / 0.299	5.6 / 0.461	4.2 / 0.183	0.5 / 0.013	0 / 0.000	53 / 0.869		1.6 / 0.045			0.06				19	38	0	35		USGS
Mar 13 0900	1,460	39	12.2	93	86.4	7.4	6.4 / 0.319	5.4 / 0.441	3.2 / 0.139	0.5 / 0.013	0 / 0.000	50 / 0.820		2.2 / 0.062			0.01				15	38	0	10		USGS
Apr 9 1500	2,030	50	10.4	92	81.5	7.6	5.2 / 0.259	6.8 / 0.561	2.5 / 0.109	0.5 / 0.013	0 / 0.000	53 / 0.869		1.8 / 0.051			0.08				12	41	0	5		USGS
May 16 1230	2,110	57	10.8	104	73.1	7.5	5.6 / 0.279	5.8 / 0.481	2.0 / 0.087	0.5 / 0.013	0 / 0.000	48 / 0.787	1.0 / 0.021	1.0 / 0.028	0.0 / 0.000	0.2 / 0.011	0.07	12	Fe 0.01; Al 0.04; Cu 0.01; PO_4 0.05; (a)	52[b]	10	38	0	2		USGS
June 13 1500	1,010	60	9.1	91	83.0	7.6	3.8 / 0.190	6.5 / 0.534	3.1 / 0.135	0.5 / 0.013	0 / 0.000	49 / 0.803		1.6 / 0.045			0.02				15	36	0	1		USGS
July 12 0900	430	65	8.1	86	119	7.6	7.2 / 0.359	8.1 / 0.669	6.8 / 0.296	1.0 / 0.026	0 / 0.000	72 / 1.180		4.1 / 0.116			0.05				22	51	0	2		USGS
Aug 21 1000	247	67	8.3	90	144	7.6	8.0 / 0.399	8.0 / 0.661	10 / 0.435	1.5 / 0.038	0 / 0.000	81 / 1.328		7.0 / 0.197			0.07				28	53	0	3		USGS
Sept 18 1330	235	60	8.4	84	146	7.6	9.2 / 0.459	6.8 / 0.561	11 / 0.478	1.1 / 0.028	0 / 0.000	80 / 1.311	2.3 / 0.048	6.2 / 0.175	0.5 / 0.008	0.3 / 0.016	0.16	41	Fe 0.02; Al 0.04; Cu 0.01; As 0.01; (a)	118[b]	31	51	0	3		USGS
Oct 15 1605	250	57	10.2	98	147	7.6	8.9 / 0.444	7.5 / 0.616	10 / 0.435	1.2 / 0.031	0 / 0.000	81 / 1.328		7.8 / 0.220			0.21				29	53	0	2		USGS
Nov 16 1015	276	46	11.4	96	144	7.6	8.0 / 0.399	7.5 / 0.613	10 / 0.435	1.3 / 0.033	0 / 0.000	78 / 1.278		7.0 / 0.197			0.15				29	51	0	0.6		USGS
Dec 14 1515	286	47	12.0	102	145	7.6	8.3 / 0.41	8.4 / 0.69	9.6 / 0.42	1.1 / 0.03	0 / 0.00	80 / 1.31		7.1 / 0.20			0.19				27	55	0	0.8	median 23; minimum .62; maximum 230	USGS

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							equivalents per million																			
							Sacramento River near Hamilton City																			
1955																										
Jan 11 1000	1,300	43	11.3	91	130	7.4	11 / 0.549	4.9 / 0.401	6.8 / 0.296	1.0 / 0.026	0 / 0.000	66 / 1.082		4.8 / 0.135			0.00				23	48	0	7		USGS
Feb 7 1800	7,400	48	10.8	93	158	7.4	15 / 0.749	6.7 / 0.551	8.8 / 0.383	1.2 / 0.031	0 / 0.000	84 / 1.377		5.0 / 0.141			0.06				22	65	0	1		USGS
Mar 7 1100	5,320	53	10.3	94	161	7.4	14 / 0.699	6.8 / 0.561	9.5 / 0.413	1.5 / 0.038	0 / 0.000	84 / 1.377		5.0 / 0.141			0.10				24	63	0	1		USGS
Apr 4 1000	5,140	52	10.4	94	144	7.6	12 / 0.599	6.1 / 0.505	8.7 / 0.378	1.5 / 0.038	0 / 0.000	78 / 1.278		3.2 / 0.090			0.06				25	55	0	2		USGS
May 12 0900	7,550	65	8.3	87	134	7.4	12 / 0.599	5.4 / 0.441	6.9 / 0.300	1.3 / 0.033	0 / 0.000	70 / 1.147	7.3 / 0.152	4.2 / 0.118	0.3 / 0.005	0.0 / 0.000	0.04	25	Fe 0.04; Zn 0.01; (a)	96[b]	22	52	0	4		USGS
Jun 16 0820	6,802	59	9.8	96	133	7.5	13 / 0.649	3.9 / 0.319	7.8 / 0.339	1.5 / 0.038	0 / 0.000	72 / 1.180		3.2 / 0.090			0.08				25	48	0	1		USGS
Jul 14 0800	8,980	58	9.9	96	129	7.4	11 / 0.549	5.2 / 0.431	7.7 / 0.335	1.3 / 0.033	0 / 0.000	73 / 1.196		3.2 / 0.090			0.10				25	49	0	1		USGS
Aug 18 0840	7.790	58	9.7	95	133	7.4	12 / 0.599	5.1 / 0.421	7.4 / 0.322	1.6 / 0.041	0 / 0.000	74 / 1.213		3.2 / 0.090			0.00				23	51	0	20		USGS
Sep 15 1500	6,850	59	9.5	93	127	7.4	11 / 0.549	5.3 / 0.435	6.0 / 0.261	1.3 / 0.033	0 / 0.000	70 / 1.147	5.2 / 0.108	2.0 / 0.056	0.2 / 0.003	0.2 / 0.011	0.01	27	Fe 0.03; Al 0.07; Cu 0.02; Zn 0.02; (a)	92[b]	20	49	0	1		USGS
Oct 13 0850	5,390	59	9.5	93	132	7.4	11 / 0.549	6.0 / 0.495	7.1 / 0.309	1.4 / 0.036	0 / 0.000	71 / 1.164		1.9 / 0.054			0.07				22	52	0	4		USGS
Nov 17 0850	5,950	49	10.5	92	144	7.0	12 / 0.599	5.6 / 0.457	9.0 / 0.392	1.6 / 0.041	0 / 0.000	79 / 1.295		3.4 / 0.096			0.06				26	53	0	3		USGS
Dec 14 1600	6,290	50	11.1	98	157	6.8	14 / 0.699	6.1 / 0.501	8.4 / 0.365	1.4 / 0.036	0 / 0.000	75 / 1.229		6.5 / 0.183			0.03				23	60	0	4		USGS
																									median 62	
																									minimum .06	
																									maximum 2400	

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c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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							Sacramento River near Hamilton City																			
1956																										
Jan 17 1000	Recorder removed due to flood	47	11.0	93	98.5	6.8	11 / 0.549	3.1 / 0.251	4.2 / 0.183	1.1 / 0.028	0 / 0.000	52 / 0.852		0.0 / 0.000			0.10				18	40	0	350		USGS
Feb 7 1100		46	11.6	97	142	6.8	13 / 0.649	6.3 / 0.515	6.6 / 0.287	1.1 / 0.028	0 / 0.000	73 / 1.196		2.0 / 0.056			0.01				19	58	0	60		USGS
Mar 13 1110	*	46	11.3	95	144	7.0	14 / 0.699	5.7 / 0.465	6.1 / 0.265	1.0 / 0.026	0 / 0.000	74 / 1.213		1.9 / 0.054			0.06				18	58	0	20		USGS
Apr 10 1100	*	56	10.0	95	138	6.9	15 / 0.748	4.3 / 0.356	6.6 / 0.287	1.4 / 0.036	0 / 0.000	76 / 1.246		1.2 / 0.034			0.05				20	55	0	15		USGS
May 8 1030	*	52	10.7	97	108	6.9	10 / 0.499	4.7 / 0.385	5.3 / 0.231	1.0 / 0.026	0 / 0.000	60 / 0.983	4.2 / 0.087	1.4 / 0.039	0.5 / 0.008	0.3 / 0.016	0.02	22	Fe 0.15; Al 0.14; Zn 0.02; As 0.01; Cu 0.07; PO_4 0.1; (a)	80[b]	20	44	0	75		USGS
June 12 0930	*	60	9.1	91	117	7.3	11 / 0.549	4.6 / 0.379	5.6 / 0.244	1.2 / 0.031	0 / 0.000	62 / 1.016		2.3 / 0.065			0.00				20	46	0	9		USGS
July 17 0915	8,360	80	10.2	102	109	7.3	10 / 0.499	5.8 / 0.473	5.6 / 0.244	1.2 / 0.031	0 / 0.000	62 / 1.016		2.0 / 0.056			0.02				20	49	0	7		USGS
Aug 14 0930	6,980	58	10.5	102	108	7.3	11 / 0.549	3.7 / 0.307	5.5 / 0.000	2.1 / 0.054	0 / 0.000	62 / 1.016		0.8 / 0.023			0.00				21	43	0	5		USGS
Sept 18 0930	7,740	57	10.1	97	108	6.8	9.8 / 0.489	4.5 / 0.371	5.4 / 0.235	1.0 / 0.026	0 / 0.000	63 / 1.033	2.9 / 0.060	0.7 / 0.020	0.2 / 0.003	0.3 / 0.016	0.00	22	Fe 0.05; Al 0.04; Cu 0.01; Zn 0.01; (a)	78[b]	21	43	0	4		USGS
Oct 16 1020	7,320	54	10.5	98	114	7.5	10 / 0.499	5.7 / 0.465	6.1 / 0.265	1.0 / 0.026	0 / 0.000	66 / 1.082		2.6 / 0.073			0.07				21	48	0	3		USGS
Nov 19 1515	7,370	50	11.2	99	124	6.8	10 / 0.499	5.5 / 0.453	6.9 / 0.300	1.4 / 0.036	0 / 0.000	71 / 1.164		2.4 / 0.068			0.03				23	48	0	3		USGS
Dec 11 0935	7,340	46	11.3	95	138	7.3	12 / 0.60	5.8 / 0.48	8.2 / 0.36	1.7 / 0.04	0 / 0.00	79 / 1.29		3.9 / 0.11			0.04				24	54	0	2	median 96 minimum 13 maximum 7000+	USGS

* No Record

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Sacramento River at Keswick																										
1955																										
Jan 19 1400	8,620	48	10.03	86	110	7.0	11 / 0.549	3.5 / 0.291	6.0 / 0.261	1.0 / 0.026	0 / 0.00	57 / 0.934		3.0 / 0.085			0.02				23	42	0	4		USGS
Feb 10 1130	4,290	46	10.1	84	133	7.2	9.7 / 0.484	6.2 / 0.512	7.9 / 0.344	1.8 / 0.046	0 / 0.000	73 / 1.196		2.8 / 0.079			0.00				25	50	0	6		USGS
Mar 8 1500	3,130	50	12.0	106	118	7.3	8.8 / 0.439	5.6 / 0.461	7.0 / 0.304	1.9 / 0.049	0	67 / 1.098		2.9 / 0.082			0.0				24	45	0	2		USGS
Apr 14 1230	6,840	50	11.4	100	127	7.3	11 / 0.549	4.8 / 0.391	7.3 / 0.317	1.5 / 0.038	0 / 0.000	71 / 1.164		3.5 / 0.099			0.06				24	47	0	2		USGS
May 12 0800	6,370	50	11.9	105	127	7.6	11 / 0.549	4.8 / 0.391	7.3 / 0.317	1.5 / 0.038	0 / 0.000	67 / 1.098	8.0 / 0.167	3.0 / 0.085	0.2 / 0.003	0.1 / 0.005	0.06	25	Fe 0.05; Al 0.02; Zn 0.005; PO_4 0.05; (a)	94[b]	24	47	0	1		USGS
Jun 20 1600	9,090	50	10.0	88	124	7.4	11 / 0.549	4.8 / 0.391	6.9 / 0.300	1.3 / 0.033	0 / 0.000	70 / 1.147		2.8 / 0.079			0.04				24	47	0	1		USGS
Jul 18 1700	11,300	60	9.4	94	125	7.3	11 / 0.549	5.0 / 0.411	7.3 / 0.317	1.4 / 0.036	0 / 0.000	71 / 1.164		3.0 / 0.085			0.07				24	48	0	0.4		USGS
Aug	Not sampled																									
Sep 13 0900	7,760	52	9.2	83	119	7.2	12 / 0.599	3.7 / 0.303	5.6 / 0.244	1.3 / 0.033	0 / 0.000	66 / 1.082	3.0 / 0.062	1.8 / 0.051	0.1 / 0.002	0.1 / 0.005	0.09	24	Al 0.03; Cu 0.02; Zn 0.02 (a)	85[b]	21	45	0	1		USGS
Oct 13 1600	6,340	55	8.9	84	119	7.2	10 / 0.499	6.0 / 0.497	6.0 / 0.261	1.4 / 0.036	0 / 0.000	68 / 1.115		1.3 / 0.042			0.11				20	50	0	2		USGS
Nov 16 1100	4,350	56	9.2	87	121	7.2	11 / 0.549	4.8 / 0.391	6.8 / 0.296	1.6 / 0.041	0 / 0.000	67 / 1.098		3.5 / 0.099			0.01				23	47	0	20		USGS
Dec 12 1600	1,110	54	8.8	81	138	7.0	10 / 0.499	6.1 / 0.505	8.0 / 0.348	1.6 / 0.041	0 / 0.000	71 / 1.164		3.0 / 0.085			0.17				25	50	0		median 0.36; minimum .2; maximum 230	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million — Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
1956							Sacramento River at Keswick																			
Jan 11 1215	37,300	42	11.8	93	97.8	7.6	8.3 / 0.414	4.0 / 0.326	4.9 / 0.213	1.1 / 0.028	0 / 0.000	51 / 0.836		0.0 / 0.000			0.05				22	37	0	80		USGS
Feb 15 1100	8,220	54	11.3	104	106	7.3	10 / 0.499	3.9 / 0.321	6.0 / 0.261	1.4 / 0.036	0 / 0.000	56 / 0.918		0.0 / 0.000			0.00				23	41	0	35		USGS
Mar 12 1600	7,480	41	11.1	87	106	7.2	10 / 0.499	4.6 / 0.381	4.7 / 0.204	1.1 / 0.028	0 / 0.000	54 / 0.885		1.8 / 0.051			0.06				18	44	0	40		USGS
Apr 9 1800	4,130	48	10.7	92	106	7.4	10 / 0.499	3.8 / 0.311	6.0 / 0.261	1.2 / 0.031	0 / 0.000	59 / 0.967		1.8 / 0.051			0.09				24	40	0	30		USGS
May 14 1400	12,200	50	12.7	112	95.4	7.4	9.6 / 0.479	3.9 / 0.321	4.8 / 0.209	1.5 / 0.038	0 / 0.000	55 / 0.901	4.0 / 0.083	2.0 / 0.056	0.3 / 0.005	0.0 / 0.000	0.05	15	Fe 0.07; Al 0.09; Cu 0.01; Zn 0.02; PO_4 0.05; (a)	68[b]	20	40	0	30		USGS
June 12 1500	7,160	49	10.6	92	101	7.3	9.8 / 0.489	3.6 / 0.299	5.2 / 0.226	1.1 / 0 028	0 / 0.000	55 / 0.901		1.4 / 0.039			0.00				22	39	0	15		USGS
July 10 1400	8,370	50	9.5	84	97.7	7.3	10 / 0.499	3.5 / 0.285	5.5 / 0.239	1.4 / 0.036	0 / 0.000	56 / 0.918		1.5 / 0.042			0.02				23	39	0	15		USGS
Aug 15 0815	8,770	50	9.4	83	97.3	7.3	8.8 / 0.439	4.9 / 0.401	5.0 / 0.218	0.8 / 0.020	0 / 0.000	59 / 0.967		1.0 / 0.028			0.06				20	42	0	3		USGS
Sept 19 0810	8,110	52	9.0	81	95.9	7.3	10 / 0.499	3.4 / 0.277	4.6 / 0.200	0.8 / 0.020	0 / 0.000	57 / 0.934	2.9 / 0.060	0.5 / 0.014	0.5 / 0.008	0.3 / 0.016	0.00	22	Fe 0.07; Al 0.13; Cu 0.01; Zn 0.02; (a)	73[b]	20	39	0	8		USGS
Oct 15 1450	7,220	53	8.8	81	99.9	6.9	9.6 / 0.479	3.9 / 0.321	5.0 / 0.218	1.0 / 0.026	0 / 0.000	59 / 0.967		1.5 / 0.042			0.05				21	40	0	3		USGS
Nov 9 1500	7,180	52	8.8	80	104	7.1	9.6 / 0.479	3.8 / 0.309	5.2 / 0.226	1.2 / 0.031	0 / 0.000	60 / 0.983		1.2 / 0.034			0.00				22	39	0	2		USGS
Dec 10 1345	6,200	52	9.7	88	125	7.3	11 / 0.55	6.0 / 0.49	7.1 / 0.31	1.6 / 0.04	0 / 0.00	74 / 1.21		1.9 / 0.05			0.06				22	52	0	2	median .62 minimum .045 – maximum 9.5	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million (equivalents per million) Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River at Knights Landing																										
1955																										
Jan 12 1030	12,600	43	12.0	97	261	7.4	17 / 0.848	8.9 / 0.732	23 / 1.000	1.2 / 0.031	0 / 0.000	92 / 1.508		18 / 0.508			0.01				38	79	4	30		USGS
Feb 9 1038	8,670	44	10.6	86	314	8.0	20 / 0.998	13 / 1.042	27 / 1.174	1.4 / 0.036	0 / 0.000	112 / 1.836		20 / 0.564			0.07				36	102	10	8		USGS
Mar 8 1500	6,720	51	10.5	94	293	7.8	20 / 0.998	11 / 0.902	24 / 1.044	1.6 / 0.041	0 / 0.000	113 / 1.852		18 / 0.508			0.00				35	95	2	9		USGS
Apr 5 1415	5,610	56	10.1	96	267	8.2	12 / 0.599	15 / 1.201	23 / 1.000	1.8 / 0.046	0 / 0.000	114 / 1.868		15 / 0.423			0.13				35	90	0	20		USGS
May 16 0930	7,420	64	8.3	87	401	7.8	21 / 1.048	14 / 1.192	45 / 1.957	2.7 / 0.069	0 / 0.000	155 / 2.540	49 / 1.020	22 / 0.620	0.9 / 0.015	0.3 / 0.016	0.19	19	Al 0.04; (a) PO_4 0.25	250[b]	46	112	0	120		USGS
Jun 20 1010	6,050	73	7.6	87	520	7.8	26 / 1.30	16 / 1.34	63 / 2.74	1.7 / 0.04	0 / 0.00	188 / 3.08		36 / 1.02			0.40				51	132	0	37		USGS
Jul 18 0910	7,120	71	8.8	99	330	7.2	18 / 0.898	12 / 1.022	34 / 1.478	1.6 / 0.041	0 / 0.000	144 / 2.360		18 / 0.508			0.21				43	96	0	45		USGS
Aug 22 0930	6,610	73	7.7	88	460	7.6	23 / 1.148	19 / 1.532	50 / 2.174	1.7 / 0.043	0 / 0.000	203 / 3.327		26 / 0.733			0.26				44	134	0	170		USGS
Sep 19 0910	7,960	65			512	7.4	36 / 1.80	13 / 1.08	51 / 2.22	2.6 / 0.07	0 / 0.00	201 / 3.29	52 / 1.08	32 / 0.90	1.2 / 0.02	0.5 / 0.03	0.25	21	Fe 0.09; Cu 0.02 (a)	309[b]	43	144	0	70		USGS
Oct 17 1000	5,750	65	8.7	92	354	7.3	21 / 1.048	12 / 1.020	33 / 1.436	1.9 / 0.049	0 / 0.000	140 / 2.295		19 / 0.536			0.16				40	103	0	35		USGS
Nov 24 1120	11,400	48	9.9	85	314	7.0	16 / 0.798	11 / 0.882	34 / 1.479	2.3 / 0.059	0 / 0.000	98 / 1.606		21 / 0.592			0.24				46	84	4	140		USGS
Dec 12 1050	12,900	48	11.9	102	317	6.8	17 / 0.848	11 / 0.872	33 / 1.436	1.8 / 0.046	0 / 0.000	92 / 1.508		22 / 0.620			0.17				45	86	11	50		USGS
																									median 23 minimum .046 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River at Knights Landing																										
1956																										
Jan 18 1430	25,500	50	10.8	95	106	7.2	9.3 / 0.464	4.9 / 0.400	4.9 / 0.213	1.4 / 0.036	0 / 0.000	48 / 0.787		2.2 / 0.062			0.05				19	43	4	360		USGS
Feb 8 1320	20,300 MD	49	11.2	97	176	6.8	15 / 0.748	7.6 / 0.624	9.3 / 0.405	1.2 / 0.031	0 / 0.000	84 / 1.377		4.8 / 0.135			0.04				22	69	0	70		USGS
Mar 15 1415	17,900 MD	51	11.3	101	197	7.3	17 / 0.848	7.8 / 0.640	11 / 0.478	1.1 / 0.028	0 / 0.000	90 / 1.475		7.3 / 0.206			0.05				24	74	0	50		USGS
Apr 12 1450	9,810 MD	56	9.8	93	158	7.0	16 / 0.798	5.6 / 0.462	7.9 / 0.344	1.2 / 0.031	0 / 0.000	88 / 1.442		3.3 / 0.093			0.01				21	63	0	25		USGS
May 14 0850	18,700 MD	56	10.2	91	127	7.2	11 / 0.549	5.0 / 0.415	7.6 / 0.331	1.1 / 0.028	0 / 0.000	64 / 1.049	6.4 / 0.133	3.8 / 0.107	0.4 / 0.006	0.1 / 0.005	0.08	23	Fe 0.15; Al 0.03; Cu 0.01; PO_4 0.17; (a)	91[b]	25	48	0	50		USGS
June 18 0900	6,950 MD	70	8.4	93	311	7.4	19 / 0.948	11 / 0.932	30 / 1.305	1.4 / 0.036	0 / 0.000	127 / 2.082		17 / 0.479			0.27				41	94	0	50		USGS
July 23 0930	7,260 MD	76	8.2	97	225	7.5	15 / 0.748	9.4 / 0.772	19 / 0.826	1.4 / 0.036	0 / 0.000	110 / 1.803		9.0 / 0.254			0.13				35	76	0	25		USGS
Aug 20 0930	6,700 MD	68	8.9	97	172	6.8	12 / 0.599	8.3 / 0.681	12 / 0.522	1.2 / 0.031	0 / 0.000	86 / 1.410		7.0 / 0.197			0.02				28	64	0	20		USGS
Sept 11 1000	8,680 MD	67	9.0	97	187	7.5	14 / 0.699	7.6 / 0.625	14 / 0.609	1.2 / 0.031	0 / 0.000	95 / 1.557	12 / 0.250	6.2 / 0.175	0.1 / 0.002	0.3 / 0.016	0.03	23	Fe 0.04; Al 0.04; Cu 0.01; Zn 0.01; (a)	125[b]	31	66	0	45		USGS
Oct 25 1020	7,940 MD	54	10.1	94	133	7.5	12 / 0.599	5.5 / 0.449	7.6 / 0.331	1.2 / 0.031	0 / 0.000	74 / 1.213		3.8 / 0.107			0.02				23	52	0	7		USGS
Nov 13 1050	8,840 MD	56	10.3	98	215	6.8	14 / 0.699	8.1 / 0.669	17 / 0.740	1.8 / 0.046	0 / 0.000	94 / 1.541		9.5 / 0.268			0.12				34	68	0	20		USGS
Dec 12 0945	7,880 MD	44	11.9	97	162	7.6	8.8 / 0.44	9.2 / 0.76	11 / 0.48	1.6 / 0.04	0 / 0.00	90 / 1.48		5.5 / 0.16			0.09				28	60	0	5	median 23 minimum 6.2 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
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Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River near Redding																										
1955																										
Jan 19 1100	7,400	46	10.16	85	112	7.2	11 / 0.549	4.0 / 0.331	6.8 / 0.296	1.4 / 0.036	0 / 0.000	64 / 1.049		3.0 / 0.085			0.00				24	44	0	7		USGS
Feb 9 1400	4,360	50	12.2	108	123	7.4	11 / 0.549	5.3 / 0.435	8.2 / 0.357	1.6 / 0.041	0	72 / 1.180		3.2 / 0.090			0.00				26	49	0	2		USGS
Mar 8 1400	3,010	51	12.6	112	120	7.9	8.1 / 0.404	6.3 / 0.516	7.4 / 0.322	1.6 / 0.041	0	66 / 1.082		2.8 / 0.079			0.00				25	46	0	4		USGS
Apr 13 1430	6,050	50	11.6	101	128	7.7	11 / 0.549	4.8 / 0.391	7.1 / 0.309	1.4 / 0.036	0 / 0.000	71 / 1.164		3.2 / 0.090			0.06				24	47	0	2		USGS
May 11 1600	5,510	54	12.2	113	135	7.6	11 / 0.549	4.8 / 0.391	7.4 / 0.322	1.4 / 0.036	0 / 0.000	66 / 1.082	8.5 / 0.177	3.2 / 0.090	0.2 / 0.003	0.1 / 0.005	0.06	25	Fe 0.06; Al 0.02; Zn 0.005; (a) PO_4 0.05	95[b]	25	47	0	1		USGS
Jun 20 1000	8,920	52	12.4	112	125	7.6	10 / 0.499	5.1 / 0.421	7.1 / 0.309	1.3 / 0.033	0 / 0.000	69 / 1.131		2.8 / 0.079			0.02				24	46	0	2		USGS
Jul 14 2000	11,200	52	10.1	91	121	7.4	10 / 0.499	5.1 / 0.421	7.1 / 0.309	1.4 / 0.036	0 / 0.000	70 / 1.147		2.8 / 0.079			0.05				24	46	0	1		USGS
Aug	Not sampled																									
Sep 12 1130	7,230	52	10.9	98	117	7.4	13 / 0.649	3.0 / 0.245	6.0 / 0.261	1.3 / 0.033	0 / 0.000	66 / 1.082	3.0 / 0.062	2.0 / 0.056	0.4 / 0.006	0.1 / 0.005	0.05	23	Fe 0.03; Cu 0.02; Zn 0.03 (a)	85[b]	20	45	0	0		USGS
Oct 10 1400	6,080	54	10.2	95	120	7.3	11 / 0.549	5.7 / 0.471	6.3 / 0.274	1.2 / 0.031	0 / 0.000	67 / 1.098		1.1 / 0.031			0.08				21	51	0	3		USGS
Nov 16 1300	4,680	56	10.2	97	131	7.4	12 / 0.599	4.9 / 0.401	7.6 / 0.331	1.7 / 0.043	0 / 0.000	72 / 1.180		3.8 / 0.107			0.09				24	50	0	25		USGS
Dec 12 1100	3,340	54	10.0	93	132	7.2	11 / 0.549	5.2 / 0.431	7.9 / 0.344	1.6 / 0.041	0 / 0.000	69 / 1.131		3.5 / 0.099			0.08				25	49	0	7		USGS
																									median 180 minimum .06 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Sacramento River near Redding																			
1956																										
Jan 11 1115	39,200	42	12.3	97	98.1	7.5	8.5 / 0.424	3.9 / 0.320	5.0 / 0.218	1.2 / 0.031	0 / 0.000	51 / 0.836		0.0 / 0.000			0.02				22	37	0	95		USGS
Feb 14 1500	7,230	66	11.0	117	111	7.2	11 / 0.549	3.8 / 0.315	6.0 / 0.261	1.3 / 0.033	0 / 0.000	56 / 0.918		0.0 / 0.000			0.01				23	43	0	65		USGS
Mar 12 1130	8,180	42	11.5	91	109	7.3	11 / 0.549	3.3 / 0.271	6.1 / 0.265	1.1 / 0.028	0 / 0.000	62 / 1.016		0.0 / 0.000			0.03				24	41	0	15		USGS
Apr 9 1300	3,980	52	11.4	103	107	7.4	11 / 0.549	3.4 / 0.281	5.8 / 0.252	1.2 / 0.031	0 / 0.000	58 / 0.951		1.6 / 0.045			0.07				23	42	0	35		USGS
May 11 1430	14,200	52	11.8	106	98.9	7.4	9.2 / 0.459	4.6 / 0.381	5.2 / 0.226	1.2 / 0.031	0 / 0.000	57 / 0.934	3.0 / 0.062	2.0 / 0.056	0.3 / 0.005	0.0 / 0.000	0.10	17	Fe 0.09; Al 0.17; Cu 0.01; Zn 0.02; PO_4 0.10; (a)	71[b]	21	42	0	25		USGS
June 12 0900	6,830	50	11.7	104	99.4	7.3	10 / 0.499	3.3 / 0.273	5.3 / 0.231	1.3 / 0.033	0 / 0.000	55 / 0.901		1.4 / 0.039			0.01				22	39	0	20		USGS
July 9 1400	8,240	53	11.1	101	99.1	7.4	9.9 / 0.494	3.2 / 0.262	5.1 / 0.222	1.3 / 0.033	0 / 0.000	56 / 0.918		1.2 / 0.034			0.00				22	38	0	15		USGS
Aug 15 0900	8,570	51	10.2	91	96.5	7.3	9.6 / 0.479	5.1 / 0.421	4.8 / 0.209	1.0 / 0.026	0 / 0.000	58 / 0.951		1.5 / 0.042			0.00				18	45	0	3		USGS
Sept 19 0845	8,060	54	9.4	87	97.2	7.3	10 / 0.499	3.4 / 0.281	4.8 / 0.209	1.0 / 0.026	0 / 0.000	56 / 0.918	3.5 / 0.073	0.5 / 0.014	0.3 / 0.005	0.3 / 0.016	0.01	20	Fe 0.06; Al 0.16; Cu 0.02; Zn 0.03; (a)	72[b]	21	39	0	5		USGS
Oct 15 1345	7,050	55	9.9	93	99.4	7.5	9.5 / 0.474	4.5 / 0.366	4.9 / 0.213	0.9 / 0.023	0 / 0.000	59 / 0.967		1.3 / 0.037			0.01				20	42	0	3		USGS
Nov 9 1400	6,910	53	9.8	90	106	7.3	9.6 / 0.479	3.7 / 0.305	5.4 / 0.235	1.1 / 0.028	0 / 0.000	60 / 0.983		1.2 / 0.034			0.03				22	39	0	3		USGS
Dec 10 1545	5,770	52	11.2	101	126	7.5	11 / 0.55	5.5 / 0.45	7.4 / 0.32	1.5 / 0.04	0 / 0.00	75 / 1.23		2.4 / 0.07			0.07				24	50	0	2	median 365 minimum 23 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River at Rio Vista																										
1955																										
Jan 21 1200	Tidal Area	44	10.2	83	164	7.2	12 / 0.599	7.1 / 0.581	10 / 0.435	1.3 / 0.033	0 / 0.000	71 / 1.164		9.5 / 0.268			0.19				26	59	1	60		USGS
Feb 14 1130		50	10.0	88	256	7.4	18 / 0.898	12 / 0.982	18 / 0.783	1.2 / 0.031	0 / 0.000	104 / 1.704		16 / 0.451			0.11				29	94	9	10		USGS
Mar 14 1300		57	9.6	92	222	7.4	17 / 0.848	9.1 / 0.752	14 / 0.609	1.1 / 0.028	0 / 0.000	91 / 1.491		13 / 0.367			0.16				27	80	5	15		USGS
Apr 18 1120		58	9.3	90	179	7.5	12 / 0.599	8.3 / 0.681	11 / 0.478	1.2 / 0.031	0 / 0.000	81 / 1.327		9.2 / 0.259			0.04				27	64	0	12		USGS
May 16 1440		62	8.8	90	149	7.4	11 / 0.549	6.0 / 0.491	9.6 / 0.417	0.9 / 0.023	0 / 0.000	66 / 1.082	3.1 / 0.065	11 / 0.310	0.6 / 0.010	0.1 / 0.005	0.09	19	Fe 0.02; Al 0.07; Zn 0.01 (a) PO_4 0.10	94[b]	28	52	0	10		USGS
Jun 20 1400		67	8.9	96	161	7.7	10 / 0.499	7.1 / 0.581	11 / 0.478	1.1 / 0.028	0 / 0.000	70 / 1.147		10 / 0.282			0.08				30	54	0	25		USGS
Jul 20 1100		70	8.0	89	229	6.8	13 / 0.649	9.6 / 0.791	18 / 0.783	1.9 / 0.049	0 / 0.000	76 / 1.246		14 / 0.395			0.21				34	72	10	40		USGS
Aug 25 1410		72	8.3	95	222	7.5	12 / 0.599	10 / 0.841	18 / 0.783	1.5 / 0.038	0 / 0.000	100 / 1.639		13 / 0.367			0.11				35	72	0	15		USGS
Sep 23 1800		63	7.2	74	279	7.5	19 / 0.948	11 / 0.912	23 / 1.000	2.0 / 0.051	0 / 0.000	126 / 2.065	17 / 0.354	16 / 0.451	0.5 / 0.008	0.3 / 0.016	0.01	24	Fe 0.05; Al 0.05; (a)	175[b]	34	93	0	20		USGS
Oct 20 1110		62	7.6	77	207	7.5	14 / 0.699	8.7 / 0.713	14 / 0.609	1.5 / 0.038	0 / 0.000	95 / 1.557		9.9 / 0.279			0.09				30	71	0	4		USGS
Nov 25 1130		50	9.1	80	190	7.3	15 / 0.748	7.0 / 0.572	13 / 0.566	1.7 / 0.043	0 / 0.000	90 / 1.475		10 / 0.282			0.03				29	66	0	95		USGS
Dec 22 0900		52	9.1	82	109	7.1	88 / 0.439	4.5 / 0.369	6.1 / 0.265	2.3 / 0.059	0 / 0.000	43 / 0.705		4.5 / 0.127			0.12				23	40	5	600		USGS
																									median 230 minimum 6.2 maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Sacramento River at Rio Vista																			
1956	Tidal Area																									
Jan 19 0850		48	9.8	84	118	7.3	10 / 0.499	5.4 / 0.441	5.4 / 0.235	1.3 / 0.033	0 / 0.000	57 / 0.934		3.1 / 0.087			0.12				19	47	0	290		USGS
Feb 17 0855		43	11.0	88	221	7.3	17 / 0.848	10 / 0.832	13 / 0.566	1.4 / 0.036	0 / 0.000	100 / 1.639		10 / 0.282			0.21				25	84	2	75		USGS
Mar 22 0845		53	10.4	95	216	7.3	16 / 0.798	11 / 0.882	12 / 0.522	1.3 / 0.033	0 / 0.000	101 / 1.655		10 / 0.282			0.39				23	84	1	55		USGS
Apr 18 1230		53	10.4	95	152	7.3	12 / 0.599	7.1 / 0.581	8.6 / 0.374	1.0 / 0.026	0 / 0.000	73 / 1.196		7.1 / 0.200			0.08				24	59	0	25		USGS
May 16 1130		59	9.8	97	119	7.5	12 / 0.599	4.5 / 0.367	7.9 / 0.344	1.0 / 0.026	0 / 0.000	62 / 1.016	9.0 / 0.187	4.5 / 0.127	0.4 / 0.006	0.4 / 0.021	0.05	18	Fe 0.13; Cr^{+6} 0.01; Al 0.06; Zn 0.05; Cu 0.01; FO_4 0.00; (a)	89[b]	26	48	0	30		USGS
June 21 0900		69	8.0	88	124	7.3	9.8 / 0.489	5.0 / 0.411	8.4 / 0.365	1.1 / 0.028	0 / 0.000	60 / 0.983		5.5 / 0.155			0.00				28	45	0	25		USGS
July 23 1145		75	8.6	101	163	7.0	12 / 0.599	6.8 / 0.561	12 / 0.522	1.3 / 0.033	0 / 0.000	78 / 1.278		9.0 / 0.254			0.06				30	58	0	20		USGS
Aug 27 1150		70	8.3	93	177	7.5	13 / 0.649	6.7 / 0.551	14 / 0.609	1.2 / 0.031	0 / 0.000	84 / 1.377		9.7 / 0.274			0.00				33	60	0	15		USGS
Sept 12 1040		69	8.9	98	205	7.0	15 / 0.748	8.4 / 0.692	15 / 0.652	1.1 / 0.028	0 / 0.000	98 / 1.606	13 / 0.271	8.5 / 0.240	0.7 / 0.011	0.3 / 0.016	0.02	19	Fe 0.03; Zn 0.01; Cu 0.01; (a)	129[b]	31	72	0	25		USGS
Oct 15 1240		65	8.6	91	153	6.9	12 / 0.599	6.1 / 0.505	9.9 / 0.431	1.4 / 0.036	0 / 0.000	78 / 1.278		6.3 / 0.178			0.00				27	55	0	10		USGS
Nov 21 1030		48	10.0	86	149	7.5	13 / 0.649	6.3 / 0.519	9.4 / 0.409	1.8 / 0.046	0 / 0.000	77 / 1.262		5.0 / 0.141			0.10				25	58	0	110		USGS
Dec 19 1130		47	10.8	92	155	7.3	13 / 0.65	6.4 / 0.53	10 / 0.44	1.4 / 0.04	0 / 0.00	81 / 1.33		6.0 / 0.17			0.11				27	59	0	20	median 42.5; minimum 1.3; maximum 7000+	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Sacramento River at Sacramento																			
1955																										
Jan 17 1440	23,800	44	10.9	89	195	7.3	15 / 0.749	7.2 / 0.591	15 / 0.652	1.1 / 0.028	0 / 0.000	80 / 1.311		12 / 0.338			0.00				32	67	1	70		USGS
Feb 15 0900	12,800	49	10.6	92	217	7.4	17 / 0.848	8.7 / 0.712	14 / 0.609	1.2 / 0.031	0 / 0.000	97 / 1.590		9.5 / 0.268			0.07				28	78	0	5		USGS
Mar 18 1330	14,300	55	10.4	99	176	7.5	14 / 0.699	7.1 / 0.581	9.9 / 0.430	2.3 / 0.059	0 / 0.000	83 / 1.360		8.0 / 0.226			0.18				24	64	0	9		USGS
Apr 19 0830	9,070	54	9.7	90	131	7.4	7.7 / 0.384	8.2 / 0.676	7.0 / 0.304	1.2 / 0.031	0 / 0.000	72 / 1.180		3.8 / 0.107			0.03				22	53	0	7		USGS
May 16 0730	21,700	60	9.2	92	167	7.6	13 / 0.649	6.0 / 0.491	12 / 0.522	1.0 / 0.026	0 / 0.000	73 / 1.196	13 / 0.271	9.2 / 0.259	0.5 / 0.008	0.2 / 0.011	0.06	10	Al 0.07; (a) FO_4 0.15	110[b]	31	57	0	15		USGS
Jun 20 0800	9,400	69	8.8	97	212	7.6	14 / 0.699	8.0 / 0.661	16 / 0.696	1.2 / 0.031	0 / 0.000	93 / 1.524	—	13 / 0.367			0.08				33	68	0	10		USGS
Jul 15 1300	9,200	72	8.4	96	221	7.3	14 / 0.699	8.0 / 0.661	18 / 0.783	1.8 / 0.046	0 / 0.000	92 / 1.508		12 / 0.338			0.29				36	68	0	15		USGS
Aug 22 0750	8,780	70	8.5	95	267	7.5	17 / 0.848	11 / 0.912	22 / 0.957	1.4 / 0.036	0 / 0.000	121 / 1.983		16 / 0.451			0.00				35	88	0	15		USGS
Sep 19 1015	11,200	64	7.6	79	269	7.5	18 / 0.898	12 / 0.978	21 / 0.913	1.8 / 0.046	0 / 0.000	126 / 2.065	17 / 0.354	16 / 0.451	0.3 / 0.005	0.2 / 0.011	0.19	25	Fe 0.09; Al 0.02; Cu 0.01; Zn 0.02; (a)	174[b]	32	94	0	40		USGS
Oct 14 1230	8,690	62	8.2	83	169	7.3	13 / 0.649	7.3 / 0.599	10 / 0.435	1.5 / 0.038	0 / 0.000	88 / 1.442		5.1 / 0.144			0.11				25	62	0	20		USGS
Nov 18 1225	9,960	47	10.0	85	178	7.3	13 / 0.649	7.5 / 0.619	12 / 0.522	1.7 / 0.043	0 / 0.000	88 / 1.442		7.5 / 0.212			0.05				28	63	0	70		USGS
Dec 22 1400	73,100	50	10.0	88	63.4	7.1	6.0 / 0.299	2.4 / 0.201	2.8 / 0.122	1.5 / 0.038	0 / 0.000	28 / 0.459		1.7 / 0.048			0.14				18	25	2	170		USGS
																									median 62 minimum .62 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{ooo}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	equivalents per million: Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River at Sacramento																										
1956																										
Jan 13 1330	64,500 MD	47	10.5	89	103	7.1	9.1 / 0.454	4.9 / 0.406	4.4 / 0.191	1.4 / 0.036	0 / 0.000	52 / 0.852		2.4 / 0.068			0.08				18	43	0	80		USGS
Feb 10 0945	52,700	45	11.2	93	148	7.3	12 / 0.599	6.4 / 0.529	7.8 / 0.339	1.1 / 0.028	0 / 0.000	71 / 1.164		5.7 / 0.161			0.13				23	56	0	60		USGS
Mar 16 1300	46,100 MD	49	11.3	99	143	7.3	13 / 0.649	6.2 / 0.511	6.3 / 0.274	1.2 / 0.031	0 / 0.000	72 / 1.180		5.8 / 0.164			0.01				19	58	0	45		USGS
Apr 19 1000	27,700 MD	54	10.3	96	125	7.3	11 / 0.549	5.4 / 0.443	8.6 / 0.374	1.1 / 0.028	0 / 0.000	66 / 1.082		3.8 / 0.107			0.07				27	50	0	30		USGS
May 11 1245	44,600 MD	54	10.4	97	97.1	7.3	9.6 / 0.479	4.4 / 0.361	6.0 / 0.261	0.8 / 0.020	0 / 0.000	54 / 0.885	2.0 / 0.042	5.2 / 0.147	0.3 / 0.005	0.1 / 0.005	0.00	17	Fe 0.09; Al 0.07; Cu 0.01; PO_4 0.00; (a)	72[b]	23	42	0	30		USGS
June 22 0850	18,000 MD	68	8.6	94	133	6.8	11 / 0.549	5.1 / 0.419	8.3 / 0.383	0.9 / 0.023	0 / 0.000	66 / 1.082		5.8 / 0.164			0.11				28	48	0	10		USGS
July 25 1430	11,300 MD	74	9.0	104	165	7.1	12 / 0.599	7.3 / 0.601	13 / 0.566	1.2 / 0.031	0 / 0.000	83 / 1.360		8.3 / 0.234			0.05				31	60	0	20		USGS
Aug 23 0720	11,300 MD	66	8.7	93	168	7.3	12 / 0.599	7.3 / 0.601	13 / 0.566	1.0 / 0.026	0 / 0.000	82 / 1.344		9.0 / 0.254			0.02				32	60	0	25		USGS
Sept 11 1730	13,300 MD	68	9.6	105	127	6.8	9.6 / 0.479	4.9 / 0.401	8.9 / 0.387	0.8 / 0.020	0 / 0.000	62 / 1.016	6.1 / 0.127	5.0 / 0.141	0.6 / 0.010	0.3 / 0.016	0.00	15	Fe 0.02; Cu 0.01; Zn 0.01; (a)	82[b]	30	44	0	10		USGS
Oct. 16 1700	12,500 MD	61	10.0	101	169	7.0	14 / 0.699	8.9 / 0.729	12 / 0.522	1.3 / 0.033	0 / 0.000	86 / 1.410		6.0 / 0.169			0.00				26	71	0	10		USGS
Nov 21 1450	13,500 MD	47	11.3	96	136	7.6	12 / 0.599	5.4 / 0.441	7.8 / 0.339	1.3 / 0.033	0 / 0.000	73 / 1.196		4.0 / 0.113			0.04				24	52	0	5		USGS
Dec 19 1445	12,200 MD	47	11.7	99	148	7.3	13 / 0.65	6.4 / 0.53	0.4 / 0.41	1.6 / 0.04	0 / 0.00	79 / 1.29		5.0 / 0.14			0.08				25	59	0	10	median 62; minimum .9; maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Sacramento River at Snodgrass Slough																			
1955	Tidal Area																									
Jan 21 1530		45	10.3	85	157	7.2	11 / 0.549	6.2 / 0.511	10 / 0.435	1.1 / 0.028	0 / 0.000	63 / 1.032	9.1 / 0.189	11 / 0.310	1.2 / 0.019	0.5 / 0.026	0.00	22	Fe 0.22	103[b]	29	53	1	40		USGS
Feb 14 1500		50	10.3	91	224	7.4	17 / 0.848	9.1 / 0.752	15 / 0.652	1.1 / 0.028	0 / 0.000	96 / 1.573	17 / 0.354	12 / 0.338	0.6 / 0.010	0.1 / 0.005	0.07	22	Fe 0.02	141[b]	29	80	1	8		USGS
Mar 14 1530		55	10.0	94	162	7.4	13 / 0.649	6.5 / 0.531	9.8 / 0.426	1.1 / 0.028	0 / 0.000	75 / 1.229	10 / 0.208	7.0 / 0.197	0.5 / 0.008	0.1 / 0.005	0.10	20	Fe 0.03	105[b]	26	59	0	8		USGS
Apr 18 0845		57	9.0	86	155	7.3	13 / 0.649	6.2 / 0.511	8.8 / 0.383	1.3 / 0.033	0 / 0.000	78 / 1.278	6.0 / 0.125	7.2 / 0.203	1.1 / 0.018	0.2 / 0.011	0.08	21	Fe 0.05	103[b]	24	58	0			USGS
May 16 1120		64	9.7	101	156	7.4	12 / 0.599	6.3 / 0.521	11 / 0.478	1.0 / 0.026	0 / 0.000	65 / 1.065	10 / 0.208	11 / 0.310	0.8 / 0.013	0.1 / 0.005	0.09	18	Al 0.06; Zn 0.01; (a) PO_4 0.15	102[b]	29	56	3	20		USGS
Jun 20 1020		70	8.4	93	206	7.4	14 / 0.699	6.1 / 0.501	15 / 0.652	1.0 / 0.026	0 / 0.000	80 / 1.311	12 / 0.250	11 / 0.310	0.8 / 0.013	0.0 / 0.000	0.08	19	Fe 0.03	118[b]	35	60	0	4		USGS
Jul 20 1430		73	7.2	83	200	7.3	14 / 0.699	7.1 / 0.581	15 / 0.652	1.5 / 0.038	0 / 0.000	86 / 1.409	12 / 0.250	12 / 0.338	0.6 / 0.010	0.3 / 0.016	0.13	22	Fe 0.05	127[b]	33	64	0	20		USGS
Aug 26 1030		71	7.2	81	217	7.3	15 / 0.749	7.9 / 0.651	17 / 0.739	1.3 / 0.033	0 / 0.000	98 / 1.606	12 / 0.250	12 / 0.338	0.6 / 0.010	0.1 / 0.005	0.11	22		136[b]	34	70	0	3		USGS
Sep 23 1030		65	5.9	62	245	7.4	17 / 0.848	11 / 0.892	15 / 0.652	1.8 / 0.046	0 / 0.000	114 / 1.868	14 / 0.291	12 / 0.338	1.0 / 0.016	0.1 / 0.005	0.01	26	Fe 0.01; Al 0.12; Cu 0.01; PO_4 0.30; (a)	154[b]	27	87	0	10		USGS
Oct 20 1345		66	6.9	74	203	7.3	14 / 0.699	8.5 / 0.701	14 / 0.609	1.7 / 0.043	0 / 0.000	92 / 1.508	11 / 0.229	9.0 / 0.254	1.0 / 0.016	0.3 / 0.016	0.01	24	Fe 0.01	129[b]	30	70	0	9		USGS
Nov 25 1400		50	8.9	79	129	7.2	9.6 / 0.479	4.9 / 0.401	7.6 / 0.331	1.6 / 0.041	0 / 0.000	50 / 0.820	9.0 / 0.187	8.0 / 0.226	1.1 / 0.018	0.5 / 0.026	0.02	17	Fe 0.16	84[b]	26	44	3	60		USGS
Dec 22 1220		51	9.5	85	66.7	7.1	6.2 / 0.309	2.3 / 0.187	2.9 / 0.126	1.3 / 0.033	0 / 0.000	29 / 0.475	4.2 / 0.087	1.2 / 0.034	1.1 / 0.018	1.0 / 0.053	0.09	12	Fe 0.12	46[b]	19	25	1	190	median 230 minimum 13 maximum 7000+	USGS

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), mangonese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento River at Snodgrass Slough																										
1956																										
Jan 19 1230		47	11.2	95	66.2	7.1	6.4 / 0.319	2.4 / 0.201	2.8 / 0.122	0.9 / 0.023	0 / 0.000	33 / 0.541	3.0 / 0.062	2.0 / 0.056	0.7 / 0.011	0.4 / 0.021	0.06	14		49[b]	18	26	0	65		USGS
Feb 17 1220		44	11.2	91	152	7.3	13 / 0.649	6.4 / 0.523	7.2 / 0.313	1.1 / 0.028	0 / 0.000	74 / 1.212	7.8 / 0.162	5.0 / 0.141	0.8 / 0.013	0.3 / 0.016	0.03	21		99[b]	21	59	0	100		USGS
Mar 22 1225		52	10.7	97	122	7.3	4.4 / 0.220	9.0 / 0.740	2.5 / 0.109	1.0 / 0.026	0 / 0.000	44 / 0.721	10 / 0.208	4.0 / 0.113	0.3 / 0.005	0.4 / 0.021	0.04	19		73[b]	10	48	12	33		USGS
Apr 19 0900		54	10.2	95	134	7.3	11 / 0.549	5.7 / 0.471	7.2 / 0.313	1.0 / 0.026	0 / 0.000	67 / 1.098	6.4 / 0.133	6.0 / 0.169	0.2 / 0.003	0.2 / 0.011	0.01	18		89[b]	23	51	0	10		USGS
May 16 1425		59	10.0	99	103	7.5	12 / 0.599	2.9 / 0.241	5.3 / 0.231	1.0 / 0.026	0 / 0.000	57 / 0.934	4.0 / 0.083	2.5 / 0.070	0.5 / 0.008	0.3 / 0.016	0.09	18	Fe^{+3} 0.01; Al 0.03; Cu 0.01; Zn 0.01; PO 0.20; (a)	75[b]	21	42	0	30		USGS
June 21 1235		68	7.4	81	129	7.3	11 / 0.549	5.2 / 0.431	8.4 / 0.365	1.0 / 0.026	0 / 0.000	62 / 1.016	8.6 / 0.179	6.2 / 0.175	0.8 / 0.013	0.3 / 0.016	0.00	21	Fe 0.01 (a)	94[b]	27	49	0	30		USGS
July 20 1100		70	8.3	93	158	7.1	12 / 0.599	6.6 / 0.541	12 / 0.522	1.3 / 0.033	0 / 0.000	75 / 1.229	10 / 0.208	8.5 / 0.240	0.9 / 0.015	0.1 / 0.005	0.09	18		106[b]	31	57	0	10		USGS
Aug 17 1045		70	7.5	83	169	6.9	14 / 0.699	5.4 / 0.441	13 / 0.566	1.0 / 0.026	0 / 0.000	80 / 1.311	9.4 / 0.196	8.7 / 0.245	0.8 / 0.013	0.3 / 0.016	0.09	19		110[b]	33	57	0	4		USGS
Sept 12 0800		68	7.5	82	224	6.8	16 / 0.798	8.8 / 0.722	18 / 0.783	1.5 / 0.038	0 / 0.000	103 / 1.683	12 / 0.250	14 / 0.395	1.0 / 0.016	0.0 / 0.000	0.10	21	Fe 0.01; Al 0.05; Cu 0.01; PO_4 0.25; (a)	143[b]	33	76	0	15		USGS
Oct 11 1310		63	8.3	86	155	7.3	13 / 0.649	5.6 / 0.463	10 / 0.435	1.3 / 0.033	0 / 0.000	77 / 1.262	6.7 / 0.139	7.0 / 0.197	0.9 / 0.015	0.0 / 0.000	0.09	24		107[b]	28	56	0			USGS
Nov 21 1325		49	10.6	93	138	7.3	12 / 0.60	4.9 / 0.40	8.2 / 0.36	1.3 / 0.03	0 / 0.00	72 / 1.18	2.9 / 0.06	5.5 / 0.16	0.7 / 0.01	0.1 / 0.01	0.10	18	Fe 0.04; (a)	89[b]	26	50	0	7		USGS
Dec 14 1335		48	11.6	100	153	7.5	12 / 0.60	7.1 / 0.58	9.4 / 0.41	1.3 / 0.03	0 / 0.00	78 / 1.28	5.8 / 0.12	5.5 / 0.16	1.0 / 0.02	0.1 / 0.01	0.03	22	Fe 0.03; (a)	102[b]	25	59	0	5		USGS
																								median 180 minimum 2.3 maximum 7000		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento Slough near Knights Landing																										
1955																										
Jan 12 1115	897	41	11.6	91	366	7.8	27 / 1.347	19 / 1.573	24 / 1.044	1.9 / 0.049	0 / 0.000	198 / 3.245		18 / 0.508			0.18				26	146	0	20		USGS
Feb 9 1000	345	48	10.0	86	477	7.8	34 / 1.70	25 / 2.02	32 / 1.39	1.7 / 0.04	0 / 0.00	236 / 3.87		32 / 0.90			0.04				27	186	0	25		USGS
Mar 8 1430	178	57	9.5	91	479	8.0	35 / 1.75	25 / 2.05	32 / 1.39	2.1 / 0.05	0 / 0.00	239 / 3.92		36 / 1.02			0.00				27	190	0	30		USGS
Apr 5 1340	354	60	9.9	99	351	8.2	22 / 1.098	20 / 1.626	21 / 0.913	1.8 / 0.046	0 / 0.000	177 / 2.901		22 / 0.620			0.06				25	136	0	10		USGS
May 16 1000	765	68	8.3	90	414	8.0	27 / 1.347	20 / 1.633	29 / 1.261	2.1 / 0.054	0 / 0.000	192 / 3.147	14 / 0.291	35 / 0.987	0.9 / 0.015	0.2 / 0.011	0.07	28	Al 0.11; Zn 0.01; (a) PO_4 0.55	251[b]	29	149	0	25		USGS
Jun 20 0920	631	74	6.6	76	435	7.6	34 / 1.697	17 / 1.383	32 / 1.391	1.3 / 0.033	0 / 0.000	199 / 3.261		38 / 1.072			0.03				31	154	0	20		USGS
Jul 18 0850	415	76	6.5	77	621	7.5	36 / 1.80	30 / 2.48	50 / 2.17	1.3 / 0.03	0 / 0.00	259 / 4.24		68 / 1.92			0.11				33	214	2	40		USGS
Aug 22 0900	553	76	6.7	79	539	7.8	35 / 1.75	27 / 2.25	44 / 1.91	1.6 / 0.04	0 / 0.00	272 / 4.46		44 / 1.24			0.02				30	200	0	220		USGS
Sep 19 0830	859	67	7.5	81	422	7.4	30 / 1.497	21 / 1.743	31 / 1.348	2.3 / 0.059	0 / 0.000	222 / 3.638	7.0 / 0.146	24 / 0.677	0.5 / 0.008	0.3 / 0.016	0.08	32	Fe 0.02; Al 0.08; (a)	257[b]	29	162	0	20		USGS
Oct 17 0915	237	66	7.8	83	512	7.3	36 / 1.80	25 / 2.04	36 / 1.57	1.8 / 0.05	0 / 0.00	253 / 4.15		40 / 1.13			0.11				29	192	0	40		USGS
Nov 24 1145	771	49	9.5	83	419	7.2	28 / 1.397	21 / 1.763	30 / 1.305	3.0 / 0.077	0 / 0.000	202 / 3.311		32 / 0.902			0.17				29	158	0	25		USGS
Dec 12 1020	1,030	48	9.7	84	290	7.0	19 / 0.948	14 / 1.172	19 / 0.826	2.6 / 0.067	0 / 0.000	141 / 2.311		18 / 0.508			0.07				27	106	0	55	median 230; minimum 2.3; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Sacramento Slough near Knights Landing																										
1956																										
Jan	Not Sampled																									
Feb 8 1230	Flood Water	51	10.9	97	586	7.0	34 / 1.70	23 / 1.93	50 / 2.18	1.2 / 0.03	3 / 0.10	171 / 2.80		85 / 2.40			0.08				37	182	37	110		USGS
Mar 15 1400	2,260	57	11.1	107	240	7.3	20 / 0.998	10 / 0.846	14 / 0.609	1.5 / 0.038	0 / 0.000	123 / 2.016		10 / 0.282			0.00				24	92	0	200		USGS
Apr 12 1420	487	58	9.5	92	522	7.2	40 / 2.00	17 / 1.43	42 / 1.83	1.6 / 0.04	0 / 0.00	186 / 3.05		68 / 1.92			0.08				35	171	18	30		USGS
May 14 0830	2,280	63	9.4	97	194	7.2	16 / 0.798	8.2 / 0.674	12 / 0.522	1.4 / 0.036	0 / 0.000	97 / 1.590	5.0 / 0.104	9.7 / 0.274	0.7 / 0.011	0.1 / 0.005	0.02	20	Fe 0.02; Al 0.05; Cu 0.01; (a) PO_4 0.20	121[b]	26	74	0	35		USGS
June 18 0830	705	75	6.3	74	363	7.3	26 / 1.297	19 / 1.551	25 / 1.088	1.3 / 0.033	0 / 0.000	194 / 3.180		20 / 0.564			0.16				27	142	0	55		USGS
July 23 0900	504	83	6.3	80	400	7.7	29 / 1.447	21 / 1.693	29 / 1.262	1.4 / 0.036	0 / 0.000	213 / 3.491		24 / 0.677			0.11				28	157	0	40		USGS
Aug 20 0900	678	72	7.1	81	427	7.1	28 / 1.397	24 / 1.963	30 / 1.305	1.2 / 0.031	0 / 0.000	228 / 3.737		26 / 0.733			0.07				28	168	0	55		USGS
Sept 11 0930	273	71	7.7	87	385	7.5	28 / 1.397	20 / 1.615	27 / 1.174	1.5 / 0.038	0 / 0.000	219 / 3.589	8.1 / 0.169	17 / 0.479	0.5 / 0.008	0.3 / 0.016	0.06	28	Fe 0.02; Al 0.11; Cu 0.01; Zn 0.01; (a)	238[b]	28	151	0	20		USGS
Oct 25 0940	215	56	9.0	86	404	7.9	30 / 1.497	20 / 1.623	28 / 1.218	2.4 / 0.061	0 / 0.000	215 / 3.524		27 / 0.761			0.01				28	156	0	20		USGS
Nov 13 1015	490	57	8.2	79	441	7.2	30 / 1.497	23 / 1.855	29 / 1.262	2.8 / 0.072	0 / 0.000	230 / 3.770		30 / 0.846			0.04				27	168	0	20		USGS
Dec 12 0910	213	44	10.4	85	575	7.9	43 / 2.15	27 / 2.21	42 / 1.83	2.3 / 0.06	0 / 0.00	269 / 4.41		58 / 1.64			0.13				29	218	0	20	median 18 minimum .62 maximum 7000	USGS

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											San Joaquin River at Antioch															
1955																										
Jan 21 1010	Tidal Area	44	10.2	82	418	7.3	26 / 1.297	13 / 1.053	35 / 1.522	2.0 / 0.051	0 / 0.000	83 / 1.360	45 / 0.937	54 / 1.523	5.3 / 0.085	0.3 / 0.016	0.00	23	Fe 0.10	245[b]	39	118	50	30		USGS
Feb 16 1100		50	9.3	82	401	7.2	24 / 1.198	13 / 1.062	26 / 1.565	2.5 / 0.064	0 / 0.000	88 / 1.442	42 / 0.874	50 / 1.410	3.3 / 0.053	0.3 / 0.016	0.11	20	Fe 0.11	234[b]	40	113	41	10		USGS
Mar 16 1520		59	10.9	107	381	7.8	22 / 1.098	12 / 0.982	33 / 1.435	2.1 / 0.054	0 / 0.000	87 / 1.459	35 / 0.729	47 / 1.326	2.3 / 0.037	0.2 / 0.011	0.14	21	Fe 0.10	219[b]	40	104	31	20		USGS
Apr 29 1430		58	9.7	94	955	7.4	22 / 1.10	23 / 1.90	126 / 5.48	6.2 / 0.16	0 / 0.00	88 / 1.44	48 / 1.00	218 / 6.15	1.8 / 0.03	0.3 / 0.02	0.17	18	Fe 0.08	506[b]	63	150	78			USGS
May 19 0840		69	8.8	97	192	7.9	13 / 0.649	7.2 / 0.591	15 / 0.652	1.5 / 0.038	0 / 0.000	69 / 1.131	14 / 0.291	16 / 0.451	0.6 / 0.010	0.0 / 0.000	0.18	20	Fe 0.03; Al 0.01; (a) PO_4 0.10	121[b]	34	62	5	10		USGS
Jun 22 1030		69	9.3	102	1270	7.8	18 / 0.90	28 / 2.34	184 / 8.00	8.0 / 0.20	0 / 0.00	69 / 1.13	59 / 1.23	314 / 8.86	2.7 / 0.04	0.2 / 0.01	0.31	14	Fe 0.14	662[b]	70	162	105	60		USGS
Jul 20 1200		71	8.9	100	2550	7.5	31 / 1.55	52 / 4.29	398 / 17.31	17 / 0.43	0 / 0.00	79 / 1.29	195 / 4.06	625 / 17.63	2.0 / 0.03	0.2 / 0.01	0.30	13	Fe 0.16	1370[b]	73	292	227	45		USGS
Aug 24 1230		72	8.3	94	6530	7.5	61 / 3.04	138 / 11.36	1040 / 45.22	42 / 1.07	0 / 0.00	94 / 1.54	294 / 6.12	1950 / 55.00	2.3 / 0.04	0.3 / 0.02	0.53	9.4	Fe 0.09	3580[b]	75	720	643	50		USGS
Sep 22 1350		68	7.7	84	2630	7.7	33 / 1.65	54 / 4.41	405 / 17.61	17 / 0.43	0 / 0.00	104 / 1.70	114 / 2.37	720 / 20.31	1.2 / 0.02	0.3 / 0.02	0.24	17	Fe 0.09; Al 0.18; Zn 0.01; PO_4 0.20 (a)	1410[b]	73	303	218	55		USGS
Oct 20 0815		61	7.6	77	1020	7.3	18 / 0.90	26 / 2.12	138 / 6.00	72 / 0.18	0 / 0.00	116 / 1.90	43 / 0.90	228 / 6.43	2.6 / 0.04	0.3 / 0.02	0.08	22	Fe 0.12	607[b]	65	151	56	55		USGS
Nov 23 1110		51	8.6	77	991	7.3	20 / 1.00	24 / 1.94	135 / 5.87	6.8 / 0.17	0 / 0.00	99 / 1.62	45 / 0.94	229 / 6.46	2.8 / 0.05	0.4 / 0.02	0.08	23	Fe 0.24	535[b]	65	147	66	50		USGS
Dec 21 1440		52	9.5	86	375	7.3	16 / 0.798	11 / 0.922	42 / 1.827	2.9 / 0.074	0 / 0.000	80 / 1.311	23 / 0.479	61 / 1.720	1.3 / 0.021	0.5 / 0.026	0.18	21	Fe 0.16	218[b]	50	86	20	30	median 230 minimum 2.3 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River at Antioch																										
1956	Tidal Area																									
Jan 18 1430		49	9.3	81	231	7.1	15 / 0.748	7.2 / 0.592	17 / 0.740	2.1 / 0.054	0 / 0.000	50 / 0.820	29 / 0.604	24 / 0.677	3.5 / 0.056	0.4 / 0.021	0.16	16		139[b]	35	67	26	65		USGS
Feb 16 1600		46	10.8	90	266	7.5	17 / 0.848	8.2 / 0.672	22 / 0.957	1.9 / 0.049	0 / 0.000	70 / 1.147	26 / 0.541	28 / 0.790	2.0 / 0.032	0.3 / 0.016	0.08	18		157[b]	38	76	19	90		USGS
Mar 21 1500		54	10.1	94	318	7.3	16 / 0.798	7.3 / 0.602	22 / 0.957	1.9 / 0.049	0 / 0.000	92 / 1.508	20 / 0.416	12 / 0.338	0.9 / 0.015	0.8 / 0.042	0.19	20		146[b]	40	70	0	33		USGS
Apr 18 1115		58	9.4	92	217	7.3	14 / 0.699	7.8 / 0.641	17 / 0.740	1.4 / 0.036	0 / 0.000	71 / 1.164	15 / 0.312	24 / 0.677	0.4 / 0.006	0.3 / 0.016	0.10	15		130[b]	35	67	9	25		USGS
May 16 1030		63	8.9	92	151	7.3	11 / 0.549	4.7 / 0.387	12 / 0.522	1.4 / 0.036	0 / 0.000	53 / 0.869	11 / 0.229	15 / 0.423	0.8 / 0.013	0.1 / 0.005	0.05	17	Fe 0.14; Al 0.07; Cu 0.02; PO_4 0.17; (a)	99[b]	35	47	4	45		USGS
June 20 1705		70	7.8	87	126	7.5	9.2 / 0.459	4.0 / 0.329	10 / 0.435	1.3 / 0.033	0 / 0.000	47 / 0.770	7.4 / 0.154	12 / 0.338	1.0 / 0.016	0.2 / 0.011	0.00	16	Fe 0.10; (a)	84[b]	35	39	0	25		USGS
July 24 1245		74	8.5	99	599	7.0	16 / 0.80	13 / 1.08	77 / 3.35	3.9 / 0.10	0 / 0.00	67 / 1.10	29 / 0.60	130 / 3.67	0.4 / 0.01	0.1 / 0.01	0.00	10		312[b]	63	94	39	30		USGS
Aug 22 1045		70	8.4	93	1,130	7.5	21 / 1.05	23 / 1.91	172 / 7.48	6.8 / 0.17	0 / 0.00	76 / 1.25	50 / 1.04	284 / 8.01	0.2 / 0.01	0.2 / 0.02	0.16	14			70	148	86	40		USGS
Sept 13 1245		69	8.5	94	706	7.0	18 / 0.90	16 / 1.33	96 / 4.18	3.9 / 0.10	0 / 0.00	85 / 1.39	32 / 0.67	158 / 4.46	1.0 / 0.02	0.1 / 0.01	0.08	14	Fe 0.05; Al 0.13; Zn 0.01; PO_4 0.20; (a)	381[b]	64	112	42	15		USGS
Oct 16 1430		68	7.5	82	441	7.0	16 / 0.793	12 / 0.982	51 / 2.218	2.9 / 0.074	0 / 0.000	89 / 1.459	15 / 0.312	81 / 2.284	0.9 / 0.015	0.1 / 0.005	0.11	18	Fe 0.01; (a)	241[b]	54	89	16			USGS
Nov 21 0930		51	9.5	85	359	7.4	16 / 0.80	9.5 / 0.78	38 / 1.65	2.5 / 0.06	0 / 0.00	79 / 1.29	16 / 0.33	58 / 1.64	1.0 / 0.02	0.3 / 0.02	0.16	19	Fe 0.16; (a)	200[b]	50	79	14	36		USGS
Dec 19 1025		42	9.7	77	607	7.1	19 / 0.95	15 / 1.27	74 / 3.22	3.7 / 0.09	0 / 0.00	86 / 1.41	28 / 0.58	125 / 3.52	1.6 / 0.03	0.2 / 0.01	0.02	18	Fe 0.14; (a)	327[b]	58	111	40	40	median 230; minimum 2.3; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											San Joaquin River near Dos Palos															
1955																										
Jan 12 1125	Not Rated	44	11.6	95	169	7.1	12 / 0.599	2.8 / 0.231	18 / 7.83	1.1 / 0.028	0 / 0.000	53 / 0.869		19 / 0.536			0.16				48	42	0	45		USGS
Feb 9 0940	"	52	10.5	95	283	7.3	17 / 0.848	6.2 / 0.512	31 / 1.348	1.9 / 0.049	0 / 0.000	79 / 1.295		35 / 0.987			0.04				49	68	3	20		USGS
Mar 10 1130	"	58	9.4	92	630	7.6	32 / 1.60	14 / 1.16	71 / 3.09	2.8 / 0.07	0 / 0.00	96 / 1.57		94 / 2.65			0.34				52	138	59	30		USGS
Apr 11 1530	"	64	10.3	108	569	8.0	29 / 1.45	1.7 / 1.39	57 / 2.48	2.9 / 0.07	0 / 0.00	100 / 1.64		80 / 2.26			0.16				46	142	60	22		USGS
May 9 1420	"	72	9.7	110	558	8.0	33 / 1.65	13 / 1.03	58 / 2.52	3.0 / 0.08	0 / 0.00	115 / 1.88	55 / 1.15	80 / 2.26	1.2 / 0.02	0.4 / 0.02	0.21	19	PO_4 0.20	320[b]	48	134	40	35		USGS
Jun 13 1320	"	74	8.7	100	442	7.7	26 / 1.297	10 / 0.863	45 / 1.957	2.5 / 0.064	0 / 0.000	92 / 1.508		65 / 1.833			0.13				47	108	33	50		USGS
Jul 14 1300	"	83	7.8	99	392	7.0	26 / 1.297	10 / 0.843	38 / 1.652	2.8 / 0.072	0 / 0.000	94 / 1.541		47 / 1.326			0.16				43	107	30	35		USGS
Aug 16 0920	"	74	8.0	93	482	7.3	22 / 1.098	12 / 0.962	54 / 2.348	2.9 / 0.074	0 / 0.000	101 / 1.655		73 / 2.059			0.10				52	103	20	30		USGS
Sep 12 1435	"	76	5.5	65	610	7.3	25 / 1.25	15 / 1.25	73 / 3.17	3.3 / 0.08	0 / 0.00	106 / 1.74	43 / 0.90	110 / 3.10	0.6 / 0.01	0.1 / 0.01	0.18	17	Fe 0.01; Al 0.04; Cu 0.02; (a)	339[b]	55	125	38	5		USGS
Oct 10 1445	"	66	6.6	70	646	7.0	30 / 1.50	14 / 1.15	78 / 3.39	3.5 / 0.09	0 / 0.00	115 / 1.88		112 / 3.16			0.16				55	133	39	9		USGS
Nov 16 1250	"	47	7.4	63	653	7.1	34 / 1.70	15 / 1.27	73 / 3.18	3.7 / 0.09	0 / 0.00	129 / 2.11		111 / 3.13			0.13				51	149	43	35		USGS
Dec	Not accessible																								median 11.2 minimum .23 maximum 620	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{0.0}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							San Joaquin River near Dos Palos																			
1956																										
Jan 9 1340	Not Rated	47	10.2	87	57.7	6.9	4.6 / 0.230	0.9 / 0.078	4.3 / 0.187	1.4 / 0.036	0 / 0.000	21 / 0.344		0.0 / 0.000			0.03				35	15	0	45		USGS
Feb 6 1240	"	47	11.4	97	61.9	7.1	5.8 / 0.289	0.5 / 0.045	5.0 / 0.218	1.1 / 0.028	0 / 0.000	26 / 0.426		1.1 / 0.031			0.09				38	17	0	25		USGS
Mar 12 1240	"	53	10.0	92	332	7.3	17 / 0.848	7.3 / 0.600	39 / 1.696	1.9 / 0.049	0 / 0.000	72 / 1.180		43 / 1.213			0.31				53	72	13	75		USGS
Apr 9 1235	"	70	9.0	100	166	7.1	12 / 0.599	2.7 / 0.221	16 / 0.696	1.5 / 0.038	0 / 0.000	55 / 0.901		18 / 0.508			0.12				45	41	0	10		USGS
May 5 1350	"	65	7.9	84	147	7.1	10 / 0.499	2.7 / 0.221	15 / 0.652	1.5 / 0.038	0 / 0.000	51 / 0.836	8.0 / 0167	15 / 0.423	0.5 / 0.008	0.2 / 0.011	0.9	14	Fe 0.11; Zn 0.02; PO_4 0.00; (a)	92[b]	46	36	0	20		USGS
June 13 1040	"	65	9.0	95	45.5	7.0	4.0 / 0.200	0.8 / 0.066	3.8 / 0.165	0.8 / 0.020	0 / 0.000	23 / 0.377		2.8 / 0.079			0.03				37	13	0	15		USGS
July 16 1330	"	80	9.1	112	386	7.2	24 / 1.198	7.3 / 0.602	41 / 1.784	2.1 / 0.054	0 / 0.000	80 / 1.311		57 / 1.607			0.48				49	90	24	55		USGS
Aug 13 1415	"	80	10.0	123	358	7.2	21 / 1.048	8.4 / 0.692	36 / 1.566	2.2 / 0.056	0 / 0.000	79 / 1.295		50 / 1.410			0.09				47	87	22	30		USGS
Sept 17 1230	"	73	10.5	120	547	7.9	31 / 1.55	12 / 1.01	61 / 2.65	2.9 / 0.07	0 / 0.00	115 / 1.88	47 / 0.98	85 / 2.40	0.9 / 0.01	0.2 / 0.01	0.18	17	Fe 0.04; Al 0.05; Cu 0.01; PO_4 0.25; (a)	314[b]	50	128	34	15		USGS
Oct 8 1300	"	70	9.4	104	167	7.5	11 / 0.549	3.4 / 0.279	17 / 0.740	1.5 / 0.038	0 / 0.000	51 / 0.836		19 / 0.536			0.01				46	41	0	10		USGS
Nov 13 1225	"	57	10.1	97	240	7.7	16 / 0.80	4.5 / 0.37	23 / 1.00	1.6 / 0.04	0 / 0.00	68 / 1.11		29 / 0.82			0.03				45	58	2	6		USGS
Dec 10 1100	"	45	12.8	106	659	7.5	38 / 1.90	13 / 1.10	73 / 3.18	3.0 / 0.08	0 / 0.00	104 / 1.70		74 / 2.09			0.31				51	150	65	3	median 6.2; minimum .62; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{ooo}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							San Joaquin River at Friant																			
1955																										
Jan 10 1350	113	49	11.4	99	70.1	7.0	6.9 / 0.344	0.6 / 0.046	6.0 / 0.261	1.0 / 0.026	0 / 0.000	26 / 0.426		6.0 / 0.169			0.12				39	20	0	35		USGS
Feb 11 0900	54	46	11.1	93	70.9	6.8	6.2 / 0.309	0.9 / 0.071	6.3 / 0.274	0.8 / 0.020	0 / 0.000	29 / 0.475		5.8 / 0.164			0.04				41	19	0	2		USGS
Mar 8 0930	70	52	11.6	105	70.0	7.2	5.9 / 0.294	0.8 / 0.066	6.1 / 0.265	1.1 / 0.028	0 / 0.000	28 / 0.459		4.5 / 0.127			0.06				41	18	0	2		USGS
Apr 12 0850	128	49	13.0	113	49.6	7.1	1.9 / 0.095	2.1 / 0.169	4.6 / 0.200	0.8 / 0.020	0 / 0.000	22 / 0.361		4.4 / 0.124			0.02				41	13	0	1		USGS
May 10 0840	78	50	12.1	107	59.9	7.3	2.5 / 0.125	2.4 / 0.199	5.8 / 0.252	0.7 / 0.018	0 / 0.000	28 / 0.459	1.2 / 0.025	3.4 / 0.096	0.0 / 0.000	0.2 / 0.011	0.02	15	Fe 0.03; Al 0.04; (a) PO_4 0.10	45[b]	42	16	0	4		USGS
Jun 14 0845	166	49	12.4	108	50.9	7.2	4.7 / 0.235	0.7 / 0.055	4.7 / 0.204	0.8 / 0.020	0 / 0.000	22 / 0.361		2.8 / 0.107			0.07				40	14	0	3		USGS
Jul 13 0715	190	52	11.5	104	67.5	7.2	4.2 / 0.210	1.0 / 0.080	6.7 / 0.291	1.2 / 0.031	0 / 0.000	24 / 0.393		5.2 / 0.147			0.02				48	14	0	3		USGS
Aug 18 1100	195	54	12.3	114	52.1	7.2	3.8 / 0.190	1.3 / 0.110	4.8 / 0.209	0.6 / 0.015	0 / 0.000	22 / 0.361		3.5 / 0.099			0.02				40	15	0	2		USGS
Sep 15 0750	164	48	10.0	86	50.5	7.1	4.6 / 0.230	0.5 / 0.042	4.5 / 0.196	0.6 / 0.015	0 / 0.000	22 / 0.361	2.0 / 0.042	2.6 / 0.073	0.2 / 0.003	0.2 / 0.011	0.07	11	Fe 0.03; Cu 0.01. (a)	37[b]	41	14	0	2		USGS
Oct 12 0900	119	49	11.1	97	53.0	7.1	3.9 / 0.195	1.0 / 0.085	5.1 / 0.222	1.0 / 0.026	0 / 0.000	22 / 0.361		4.2 / 0.118			0.05				42	14	0	8		USGS
Nov 16 0845	61	45	10.2	84	55.5	6.9	4.2 / 0.210	0.4 / 0.034	4.3 / 0.187	0.7 / 0.018	0 / 0.000	20 / 0.328		4.2 / 0.118			0.00				42	12	0	30		USGS
Dec 14 0920	808	48	11.3	97	47.3	7.0	4.9 / 0.245	0.4 / 0.035	4.2 / 0.183	0.7 / 0.018	0 / 0.000	20 / 0.328		3.2 / 0.090			0.01				38	14	0	7		USGS
																									median 6.2 minimum .62 maximum 7000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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c Gravimetric determination.

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San Joaquin River at Friant																										
1956																										
Jan 10 0855	5,140	44	11.9	97	40.2	7.0	3.8 / 0.190	0.5 / 0.040	2.8 / 0.122	1.1 / 0.028	0 / 0.000	20 / 0.328		1.8 / 0.051			0.01				32	12	0	25		USGS
Feb 8 0900	6,040	44	12.6	102	44.1	7.1	4.5 / 0.225	0.4 / 0.031	3.4 / 0.148	1.0 / 0.026	0 / 0.000	22 / 0.361		0.9 / 0.025			0.07				34	13	0	30		USGS
Mar 13 0840	1,570	43	13.7	110	44.7	7.1	4.6 / 0.230	0.4 / 0.030	3.7 / 0.161	0.9 / 0.023	0 / 0.000	23 / 0.377		2.0 / 0.056			0.01				36	13	0	6		USGS
Apr 10 0850	1,570	45	13.2	109	43.4	7.0	4.0 / 0.200	0.7 / 0.060	3.9 / 0.170	1.1 / 0.028	0 / 0.000	25 / 0.410		1.9 / 0.054			0.11				37	13	0	5		USGS
May 8 0810	1,190	47	12.6	107	38.1	6.9	4.8 / 0.240	1.2 / 0.100	3.2 / 0.139	0.7 / 0.018	0 / 0.000	23 / 0.377	2.0 / 0.042	2.5 / 0.070	0.3 / 0.005	0.0 / 0.000	0.02	13	Zn 0.01; PO_4 0.00 (a)	39[b]	28	17	0	5		USGS
June 12 0900	4,180	53	11.6	106	28.6	7.0	3.2 / 0.160	0.2 / 0.020	2.1 / 0.091	0.7 / 0.018	0 / 0.000	18 / 0.295		0.6 / 0.017			0.02				31	9	0	2		USGS
July 18 0920	126	57	10.8	104	26.6	6.8	2.4 / 0.120	0.6 / 0.050	2.1 / 0.091	0.8 / 0.020	0 / 0.000	16 / 0.262		0.6 / 0.017			0.05				33	8	0	0.8		USGS
Aug 15 0845	177	56	11.0	104	27.3	6.8	2.6 / 0.130	0.3 / 0.023	2.1 / 0.091	0.8 / 0.020	0 / 0.000	16 / 0.267		0.0 / 0.000			0.00				34	8	0	1		USGS
Sept 18 0730	146	54	10.3	96	25.8	7.1	2.4 / 0.120	1.2 / 0.100	2.0 / 0.087	0.8 / 0.020	0 / 0.000	16 / 0.262	1.9 / 0.040	0.5 / 0.014	0.3 / 0.005	0.0 / 0.000	0.02	10	Cu 0.08; PO_4 0.00; (a)	27 [b]	27	11	0	1		USGS
Oct 9 0835	712	54	11.5	107	25.3	6.8	2.8 / 0.140	0.0 / 0.000	1.8 / 0.078	0.6 / 0.015	0 / 0.000	12 / 0.197		0.0 / 0.000			0.00				33	7	0	1.0		USGS
Nov 13 1620	598	56	10.7	102	33.0	6.8	3.3 / 0.16	0.4 / 0.03	2.4 / 0.10	0.7 / 0.02	0 / 0.000	14 / 0.23		2.0 / 0.06			0.03				32	10	0	5		USGS
Dec 10 1625	284	51	11.1	99	39.2	6.8	4.0 / 0.20	1.7 / 0.14	2.7 / 0.12	0.9 / 0.02	0 / 0.00	16 / 0.26		2.0 / 0.06			0.10				25	17	4	3	median 6.2 minimum .23 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micrombos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											San Joaquin River at Garwood Bridge															
1955	Tidal Area																									
Jan 19 1300		46	9.8	81	234	7.1	15 / 0.749	5.4 / 0.441	23 / 1.000	4.7 / 0.120	0 / 0.000	66 / 1.082		26 / 0.733			0.07				43	60	6	75		USGS
Feb 15 1420		54	9.1	84	529	7.4	28 / 1.40	13 / 1.04	58 / 2.52	2.5 / 0.06	0 / 0.000	102 / 1.67		78 / 2.20			0.17				50	122	38	10		USGS
Mar 15 1330		57	9.9	95	546	7.4	24 / 1.20	16 / 1.28	59 / 2.57	2.7 / 0.07	0 / 0.00	101 / 1.66		86 / 2.43			0.14				50	124	41	12		USGS
Apr 21 0910		59	8.1	80	611	7.6	34 / 1.70	15 / 1.22	65 / 2.83	5.6 / 0.14	0 / 0.00	159 / 2.61		90 / 2.54			0.22				48	146	16	10		USGS
May 19 1520		72	5.3	60	763	7.8	42 / 2.10	20 / 1.64	82 / 3.57	4.8 / 0.12	0 / 0.00	174 / 2.85	42 / 0.87	125 / 3.53	3.8 / 0.06	0.2 / 0.01	0.22	21	Fe 0.01; Al 0.08; PO_4 0.70	427[b]	48	187	44	190		USGS
Jun 23 0845		71	5.6	63	442	7.4	25 / 1.248	12 / 0.952	47 / 2.044	3.1 / 0.079	0 / 0.000	106 / 1.737		70 / 1.974			0.21				47	110	23	30		USGS
Jul 18 1430		76	8.8	104	575	7.3	18 / 0.90	21 / 1.76	63 / 2.74	5.1 / 0.13	0 / 0.00	131 / 2.15		85 / 2.40			0.16				50	133	26	60		USGS
Aug 25 0900		75	1.6	19	612	7.3	31 / 1.55	14 / 1.17	60 / 2.61	4.9 / 0.13	0 / 0.00	182 / 2.98		90 / 2.54			0.14				48	136	0	1		USGS
Sep 21 1100		72	3.2	35	745	7.5	46 / 2.30	12 / 0.95	84 / 3.65	5.9 / 0.15	0 / 0.00	166 / 2.72	23 / 0.48	132 / 3.72	4.3 / 0.07	0.5 / 0.03	0.27	7.4	Fe 0.02; Al 0.04; Cu 0.01; Zn 0.01; (a)	397[b]	52	162	26	20		USGS
Oct 17 1605		66	3.6	38	1020	7.5	54 / 2.69	22 / 1.85	119 / 5.18	6.2 / 0.16	0 / 0.00	199 / 3.26		179 / 5.05			0.30				52	227	64	15		USGS
Nov 21 1550		51	9.4	84	1000	7.5	52 / 2.59	22 / 1.81	114 / 4.96	5.6 / 0.14	0 / 0.00	170 / 2.79		182 / 5.13			0.19				52	220	8	75		USGS
Dec 19 1535		52	9.3	84	548	7.3	30 / 1.50	12 / 0.98	61 / 2.65	3.5 / 0.09	0 / 0.00	105 / 1.72		92 / 2.59			0.26				51	124	38	25	median 960 minimum 62 maximum 7000+	USGS

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River at Garwood Bridge																										
1956																										
Jan 16 1430		51	9.1	81	181	7.3	12 / 0.599	5.6 / 0.461	15 / 0.652	2.1 / 0.054	0 / 0.000	57 / 0.934		15 / 0.423			0.12				37	53	6	60		USGS
Feb 14 1440		49	10.2	89	243	7.3	16 / 0.798	6.3 / 0.522	24 / 1.044	1.7 / 0.043	0 / 0.000	71 / 1.164		30 / 0.846			0.11				38	66	8	55		USGS
Mar 20 0840		56	9.5	90	446	7.3	26 / 1.297	10 / 0.863	41 / 1.784	2.3 / 0.059	0 / 0.000	99 / 1.623		68 / 1.918			0.28				45	108	27	20		USGS
Apr 17 0830		55	10.0	94	214	7.3	13 / 0.649	5.7 / 0.467	20 / 0.870	1.7 / 0.043	0 / 0.000	62 / 1.016		26 / 0.733			0.07				43	56	5	15		USGS
May 15 0745		60	9.3	93	137	7.3	11 / 0.549	2.6 / 0.211	13 / 0.566	1.3 / 0.033	0 / 0.000	46 / 0.754	8.0 / 0.167	14 / 0.395	0.6 / 0.010	0.3 / 0.016	0.10	14	Fe 0.07; Al 0.03; Cu 0.01; Zn 0.01; PO_4 0.20; (a)	88[b]	42	38	0	25		USGS
June 15 0845		66	8.5	91	123	6.8	9.2 / 0.459	3.7 / 0.301	11 / 0.478	1.2 / 0.031	0 / 0.000	44 / 0.721		13 / 0.367			0.13				38	38	2	80		USGS
July 23 1530		82	6.1	77	642	7.3	37 / 1.85	16 / 1.35	68 / 2.96	3.5 / 0.09	0 / 0.00	149 / 2.44		104 / 2.93			0.18				47	160	38	9		USGS
Aug 20 1220		75	5.9	69	680	7.7	40 / 2.00	15 / 1.22	73 / 3.18	3.6 / 0.09	0 / 0.00	143 / 2.34		115 / 3.24			0.12				49	161	44	15		USGS
Sept 14 0800		70	9.3	104	552	6.9	31 / 1.55	12 / 0.99	63 / 2.74	3.1 / 0.08	0 / 0.00	126 / 2.07	35 / 0.73	88 / 2.48	1.9 / 0.03	0.1 / 0.01	0.15	19	Fe 0.01; Al 0.08; Cu 0.01; PO_4 0.35; (a)	315[b]	51	127	24	20		USGS
Oct 17 0950		64	9.3	97	547	7.2	31 / 1.55	12 / 0.97	58 / 2.52	3.1 / 0.08	0 / 0.00	125 / 2.05		88 / 2.48			0.11				49	126	24	15		USGS
Nov 19 1615		51	10.2	91	567	7.7	30 / 1.50	13 / 1.10	62 / 2.70	2.8 / 0.07	0 / 0.00	121 / 1.98		92 / 2.59			0.14				50	130	31	6		USGS
Dec 17 1615		52	9.3	84	425	7.3	23 / 1.15	11 / 0.87	41 / 1.78	2.3 / 0.06	0 / 0.00	92 / 1.51		68 / 1.92			0.13				46	101	26	2	median 146; minimum 6.2; maximum 7000	USGS

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b Determined by addition of analysed constituents.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							San Joaquin River near Grayson																			
1955																										
Jan 13 1530	815	45	10.3	85	825	7.7	39 / 1.95	17 / 1.38	104 / 4.52	4.6 / 0.12	0 / 0.00	175 / 2.87		116 / 3.27			0.31				57	166	22	30		USGS
Feb 8 1145	710	52	9.8	88	1180	7.7	53 / 2.64	28 / 2.28	154 / 6.70	3.6 / 0.09	0 / 0.00	200 / 3.28		174 / 4.91			0.45				57	246	82	20		USGS
Mar 7 1330	525	59	11.5	113	1390	8.1	56 / 2.79	35 / 2.87	176 / 7.65	4.0 / 0.10	0 / 0.00	194 / 3.18		218 / 6.15			0.40				57	283	124	7		USGS
Apr 11 1245	520	64	14.5	151	1060	8.4	47 / 2.35	23 / 1.89	133 / 5.78	4.4 / 0.11	0 / 0.00	178 / 2.92		177 / 4.99			0.32				57	212	66	20		USGS
May 9 1200	760	68	11.0	120	782	8.2	39 / 1.95	18 / 1.45	95 / 4.13	3.4 / 0.09	0 / 0.00	158 / 2.59	82 / 1.71	114 / 3.22	2.8 / 0.05	0.4 / 0.02	0.22	21	PO_4 0.40	454[b]	54	170	40	30		USGS
Jun 13 1110	605	72	10.0	114	1060	8.1	52 / 2.59	25 / 2.09	135 / 5.87	4.2 / 0.11	0 / 0.00	190 / 3.11		176 / 4.96			0.38				55	234	78	9		USGS
Jul 15 0730	225	74	7.3	85	1200	7.7	56 / 2.79	32 / 2.61	148 / 6.44	4.2 / 0.11	0 / 0.00	201 / 3.29		191 / 5.39			0.38				54	270	105	55		USGS
Aug 15 1130	245	75	10.5	123	1020	7.7	41 / 2.05	28 / 2.29	124 / 5.39	3.2 / 0.08	0 / 0.00	191 / 3.13		159 / 4.48			0.41				55	217	60	10		USGS
Sep 16 1020	285	67	10.0	108	1130	7.7	53 / 2.64	27 / 2.18	144 / 6.26	3.4 / 0.09	0 / 0.00	199 / 3.26	121 / 2.52	184 / 5.19	1.2 / 0.02	0.4 / 0.02	0.36	24	Fe 0.07; Al 0.01; Cu 0.01; (a)	656[b]	56	241	78	25		USGS
Oct 15 0950	285	63	9.2	95	1370	7.5	62 / 3.09	32 / 2.61	174 / 7.57	3.6 / 0.09	0 / 0.00	209 / 3.43		234 / 6.60			0.38				57	285	114	15		USGS
Nov 17 1310	290	49	9.5	83	1310	7.3	58 / 2.89	31 / 2.57	165 / 7.18	4.0 / 0.10	0 / 0.00	204 / 3.31		222 / 6.26			0.35				56	273	107	80		USGS
Dec 15 0900	340	50	8.2	72	1150	7.3	54 / 2.69	27 / 2.18	154 / 6.70	3.8 / 0.10	0 / 0.00	184 / 3.02		191 / 5.39			0.30				57	243	92	10		USGS
																									median 62	
																									minimum 2.3	
																									maximum 7000	

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River near Grayson																										
1956																										
Jan 12 1250	10,600	48	8.6	74	205	7.1	14 / 0.699	4.5 / 0.373	20 / 0.870	2.3 / 0.059	0 / 0.000	64 / 1.049		17 / 0.479			0.13				43	54	2	60		USGS
Feb 9 0930	9,580	48	10.3	89	244	7.3	15 / 0.748	5.4 / 0.444	25 / 1.088	1.8 / 0.046	0 / 0.000	69 / 1.131		25 / 0.705			0.13				47	60	3	35		USGS
Mar 15 1320	2,890	53	10.3	94	518	7.3	25 / 1.248	12 / 1.024	61 / 2.654	2.2 / 0.056	0 / 0.000	93 / 1.524		78 / 2.200			0.24				53	114	58	50		USGS
Apr 12 1300	1,340	58	9.5	93	771	7.7	36 / 1.80	18 / 1.46	89 / 3.87	2.9 / 0.07	0 / 0.000	142 / 2.33		120 / 3.38			0.23				54	163	47	35		USGS
May 10 1145	4,120	62	8.8	90	220	7.3	13 / 0.649	6.2 / 0.511	22 / 0.957	1.8 / 0.046	0 / 0.000	58 / 0.951	18 / 0.375	28 / 0.790	1.0 / 0.016	0.3 / 0.016	0.06	14	Fe 0.04; Cu 0.01; Zn 0.01; PO_4 0.20; (a)	133[b]	44	58	7.5	20		USGS
June 14 1320	4,560	68	8.5	93	113	6.8	8.1 / 0.404	2.1 / 0.176	11 / 0.478	1.1 / 0.028	0 / 0.000	39 / 0.639		12 / 0.338			0.01				44	29	0	20		USGS
July 18 1240	860	77	9.8	117	850	7.5	42 / 2.10	21 / 1.70	103 / 4.48	2.8 / 0.07	0 / 0.000	146 / 2.39		132 / 3.72			0.32				54	190	70	20		USGS
Aug 15 1310	565	76	9.7	114	988	7.4	48 / 2.40	23 / 1.93	120 / 5.22	3.8 / 0.10	0 / 0.00	175 / 2.87		154 / 4.34			0.49				54	216	72	16		USGS
Sept 20 0810	680	68	7.9	87	799	7.5	41 / 2.05	18 / 1.47	99 / 4.31	3.1 / 0.08	0 / 0.00	162 / 2.66	82 / 1.71	122 / 3.44	2.9 / 0.05	0.1 / 0.01	0.23	21	Fe 0.03; Al 0.08; Zn 0.01; PO_4 0.45; (a)	469[b]	54	176	43	20		USGS
Oct 11 0840	720	65	8.7	92	742	7.5	35 / 1.75	18 / 1.45	92 / 4.00	2.6 / 0.07	0 / 0.00	152 / 2.49		118 / 3.33			0.15				55	160	35	10		USGS
Nov 16 0955	488	51	10.0	89	1,190	7.7	54 / 2.69	28 / 2.34	150 / 6.52	3.2 / 0.08	0 / 0.00	208 / 3.41		192 / 5.41			0.26				56	252	81	5		USGS
Dec 13 1340	438	55	10.4	98	1,240	7.7	55 / 2.74	31 / 2.52	159 / 6.92	3.4 / 0.09	0 / 0.00	207 / 3.39		198 / 5.58			0.37				56	263	93	7	median 62; minimum 6.2; maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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Region 5

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							equivalents per million																			
							San Joaquin River at Maze Road Bridge																			
1955																										
Jan 13 1450	1,800	46	9.8	82	548	7.3	28 / 1.40	11 / 0.92	64 / 2.78	3.5 / 0.09	0 / 0.00	110 / 1.80		81 / 2.28			0.07				54	116	26	40		USGS
Feb 11 1430	2,075	51	10.1	90	562	7.3	26 / 1.30	13 / 1.10	64 / 2.78	2.2 / 0.06	0 / 0.00	94 / 1.54		86 / 2.43			0.17				53	120	43	7		USGS
Mar 7 1230	1,360	56	10.7	101	692	7.7	33 / 1.65	16 / 1.31	79 / 3.44	3.2 / 0.08	0 / 0.00	108 / 1.77		112 / 3.16			0.28				53	148	59	6		USGS
Apr 14 1540	610	65	12.1	128	1060	8.3	54 / 2.69	25 / 2.07	124 / 5.39	6.0 / 0.15	0 / 0.00	188 / 3.08		213 / 6.01			0.29				52	238	84	28		USGS
May 17 1210	515	70	12.6	141	1120	8.4	59 / 2.94	24 / 1.94	130 / 5.65	6.2 / 0.16	0 / 0.00	178 / 2.92	75 / 1.56	216 / 6.09	4.5 / 0.07	0.3 / 0.02	0.27	26	Fe 0.01; Al 0.005; (a) PO_4 0.50	629[b]	53	244	98	15		USGS
Jun 17 0820	450	70	9.2	102	985	8.0	53 / 2.64	21 / 1.76	107 / 4.65	6.6 / 0.17	0 / 0.00	169 / 2.77		199 / 5.61			0.31				50	220	81	35		USGS
Jul 15 0900	380	75	7.8	91	1010	7.5	54 / 2.69	22 / 1.79	144 / 4.96	6.8 / 0.17	0 / 0.00	189 / 3.10		198 / 5.58			0.30				52	224	69	110		USGS
Aug 19 1130	445	76	10.5	124	1020	7.8	52 / 2.59	24 / 1.95	114 / 4.96	5.0 / 0.13	0 / 0.00	187 / 3.06		191 / 5.39			0.38				52	227	74	45		USGS
Sep 16 1100	490	69	9.0	99	1040	7.7	58 / 2.89	21 / 1.71	116 / 5.04	5.8 / 0.15	0 / 0.00	194 / 3.18	48 / 1.00	187 / 5.27	2.8 / 0.05	0.4 / 0.02	0.28	33	Fe 0.03; Cu 0.03; (a)	567[b]	52	230	71	25		USGS
Oct 13 1040	540	65	9.1	96	1120	7.7	56 / 2.79	25 / 2.06	138 / 6.00	5.0 / 0.13	0 / 0.00	185 / 3.03		206 / 5.81			0.36				55	243	91	15		USGS
Nov 17 1350	865	50	7.8	69	912	7.3	45 / 2.25	20 / 1.63	104 / 4.52	6.0 / 0.15	0 / 0.00	148 / 2.43		174 / 4.91			0.18				53	194	73	60		USGS
Dec 15 0940	730*	50	8.0	70	687	7.3	35 / 1.75	15 / 1.20	82 / 3.57	3.8 / 0.10	0 / 0.00	108 / 1.77		124 / 3.50			0.14				54	148	60*	10		USGS
																									median 230	
																									minimum 2.3	
																									maximum 7000	

* Derived from gage reading made by sampler

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River at Maze Road Bridge																										
1956																										
Jan 12 1330	18,520	48	9.0	78	186	7.1	12 / 0.599	5.4 / 0.441	15 / 0.652	2.2 / 0.056	0 / 0.000	56 / 0.918		18 / 0.508			0.08				37	52	6	45		USGS
Feb 9 1000	13,770	47	10.3	87	228	7.3	14 / 0.699	5.4 / 0.445	22 / 0.957	1.8 / 0.046	0 / 0.000	64 / 1.049		23 / 0.649			0.12				45	57	5	35		USGS
Mar 15 1405	No Record	52	10.4	94	381	7.3	21 / 1.048	8.6 / 0.708	40 / 1.740	2.0 / 0.051	0 / 0.000	76 / 1.246		56 / 1.579			0.15				49	88	26	35		USGS
Apr 12 1340	No Record	56	9.4	89	469	7.5	24 / 1.198	11 / 0.902	51 / 2.218	2.5 / 0.064	0 / 0.000	92 / 1.508		76 / 2.143			0.15				51	105	30	35		USGS
May 10 1240	11,200	59	9.3	92	145	7.3	10 / 0.499	3.2 / 0.261	15 / 0.652	1.2 / 0.031	0 / 0.000	4.1 / 0.672	7.0 / 0.146	19 / 0.536	0.6 / 0.010	0.6 / 0.032	0.09	12	Fe 0.02; Cu 0.01; Zn 0.01; PO_4 0.15 (a)	89[b]	45	38	4	12		USGS
June 14 1120	8,030	68	8.0	88	153	6.8	11 / 0.549	2.8 / 0.231	14 / 0.609	1.3 / 0.033	0 / 0.000	46 / 0.754		20 / 0.564			0.06				43	39	1	30		USGS
July 18 1340	1,960	77	12.4	148	850	7.3	47 / 2.35	18 / 1.49	98 / 4.26	4.0 / 0.10	0 / 0.00	146 / 2.39		154 / 4.34			0.26				52	192	72	15		USGS
Aug 15 1520	1,440	76	9.8	116	709	7.1	38 / 1.90	16 / 1.28	79 / 3.44	3.8 / 0.10	0 / 0.00	129 / 2.11		127 / 3.58			0.11				51	159	53	12		USGS
Sept 20 0845	1,705	68	7.1	78	546	7.3	30 / 1.50	11 / 0.93	64 / 2.78	3.0 / 0.08	0 / 0.00	112 / 1.84	36 / 0.75	91 / 2.57	2.1 / 0.03	0.0 / 0.00	0.15	20	Fe 0.02; Al 0.06; Zn 0.02; PO_4 0.35; (a)	312[b]	53	122	30	8		USGS
Oct 11 0915	1,640	66	8.3	88	582	7.3	30 / 1.50	13 / 1.06	67 / 2.91	3.2 / 0.08	0 / 0.00	120 / 1.97		103 / 2.90			0.10				52	128	30	7		USGS
Nov 16 1020	1,450	53	9.5	87	676	7.4	34 / 1.70	14 / 1.18	77 / 3.35	1.4 / 0.04	0 / 0.00	118 / 1.93		117 / 3.30			0.16				53	144	47	4		USGS
Dec 13 1445	1,735	54	9.7	90	502	7.3	24 / 1.20	13 / 1.04	56 / 2.44	1.9 / 0.05	0 / 0.00	90 / 1.48		84 / 2.37			0.16				52	112	38	5	median 230; minimum 21; maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.0 / 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							San Joaquin River near Mendota																				
1955																										
Jan 12 0945		42	11.8	93	83.0	6.9	7.7 / 0.384	1.3 / 0.106	8.3 / 0.361	0.9 / 0.023	0 / 0.000	39 / 0.639		5.2 / 0.147			0.17				41	24	0	9		USGS
Feb 9 1120		54	9.7	90	184	7.2	13 / 0.649	4.3 / 0.351	18 / 0.783	1.6 / 0.041	0 / 0.000	68 / 1.114		17 / 0.479			0.02				43	50	0	9		USGS
Mar 10 0940		56	10.0	95	692	7.7	35 / 1.75	17 / 1.37	77 / 3.35	2.8 / 0.07	0 / 0.00	100 / 1.64		104 / 2.93			0.38				51	156	74	40		USGS
Apr 11 1645		63	9.8	100	517	7.8	30 / 1.50	1.5 / 1.22	54 / 2.35	2.7 / 0.07	0 / 0.00	100 / 1.64		76 / 2.14			0.17				46	136	54	22		USGS
May 9 1545		70	9.5	106	537	8.0	27 / 1.35	17 / 1.41	59 / 2.57	3.2 / 0.08	0 / 0.00	114 / 1.87	52 / 1.08	81 / 2.28	1.0 / 0.02	0.3 / 0.02	0.18	31	Mn 0.02; Cr 0.005; PO_4 0.25; (a)	328[b]	48	138	45	44		USGS
Jun 13 1445		76	8.8	104	401	7.8	23 / 1.148	9.0 / 0.740	42 / 1.826	2.5 / 0.064	0 / 0.000	82 / 1.344		60 / 1.692			0.17				48	94	27	42		USGS
Jul 14 1200		80	8.0	99	303	7.2	19 / 0.948	8.7 / 0.712	21 / 1.348	3.0 / 0.077	0 / 0.000	76 / 1.246		31 / 0.874			0.16				44	83	21	170		USGS
Aug 16 1045		79	8.2	100	466	7.4	21 / 1.048	12 / 0.992	48 / 2.087	2.9 / 0.074	0 / 0.000	95 / 1.557		73 / 2.059			0.09				50	102	24	55		USGS
Sep 12 1630		79	7.3	89	595	7.7	22 / 1.10	15 / 1.24	70 / 3.04	3.4 / 0.09	0 / 0.00	102 / 1.67	40 / 0.83	106 / 2.99	0.9 / 0.01	0.2 / 0.01	0.18	19	Fe 0.15; Cu 0.01; (a)	327[b]	55	117	33	30		USGS
Oct 10 1615		68	8.1	88	591	7.5	26 / 1.30	16 / 1.28	69 / 3.00	3.3 / 0.08	0 / 0.00	122 / 2.00		96 / 2.71			0.21				53	129	29	6		USGS
Nov 16 1100		49	9.9	86	899	7.7	46 / 2.30	21 / 1.71	99 / 4.31	4.4 / 0.11	0 / 0.00	158 / 2.59		152 / 4.29			0.38				51	200	70	80		USGS
Dec 12 1400		51	10.9	97	741	7.5	36 / 1.80	18 / 1.51	90 / 3.92	3.9 / 0.10	0 / 0.00	142 / 2.33		125 / 3.52			0.25				53	166	50	40		USGS
Not Rated in 1955																									median 23; minimum 2.1; maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
							San Joaquin River near Mendota																			
1956																										
Jan 9 1505		47	10.6	90	53.5	6.9	4.6 / 0.230	0.7 / 0.060	4.0 / 0.174	1.2 / 0.031	0 / 0.000	21 / 0.344		3.0 / 0.085			0.13				35	14	0	45		USGS
Feb 6 1405		46	11.5	96	53.0	7.1	5.4 / 0.269	0.4 / 0.037	4.5 / 0.196	1.1 / 0.028	0 / 0.000	24 / 0.393		1.0 / 0.028			0.09				37	15	0	20		USGS
Mar 12 1400		53	10.8	99	61.0	7.1	6.0 / 0.299	0.7 / 0.057	5.1 / 0.222	1.0 / 0.026	0 / 0.000	29 / 0.475		2.9 / 0.082			0.03				37	18	0	15		USGS
Apr 9 1400		65	9.5	100	56.0	6.9	5.2 / 0.259	0.6 / 0.051	5.4 / 0.235	1.0 / 0.026	0 / 0.000	29 / 0.475		3.0 / 0.085			0.04				41	16	0	9		USGS
May 9 1155		64	9.4	98	51.9	7.1	4.8 / 0.240	1.5 / 0.120	4.8 / 0.209	0.9 / 0.023	0 / 0.000	28 / 0.459	1.0 / 0.021	3.8 / 0.107	0.4 / 0.006	0.0 / 0.000	0.08	12	Fe 0.05; Zn 0.06; PO_4 0.10; (a)	43[b]	35	18	0	5		USGS
June 13 0900		66	10.0	106	35.4	6.8	3.6 / 0.180	0.5 / 0.040	2.7 / 0.117	0.7 / 0.018	0 / 0.000	21 / 0.344		1.4 / 0.039			0.01				33	11	0	9		USGS
July 16 1420		78	9.0	108	435	7.0	24 / 1.198	10 / 0.854	46 / 2.001	2.5 / 0.064	0 / 0.000	88 / 1.442		67 / 1.889			0.22				49	103	31	55		USGS
Aug 15 1020		75	9.1	107	350	7.0	21 / 1.048	8.3 / 0.680	35 / 1.522	2.2 / 0.056	0 / 0.000	80 / 1.311		49 / 1.382			0.01				46	86	20	25		USGS
Sept 17 1330		75	9.6	112	529	7.7	29 / 1.45	13 / 1.07	57 / 2.48	2.6 / 0.07	0 / 0.00	112 / 1.84	46 / 0.96	84 / 2.37	1.3 / 0.02	0.2 / 0.01	0.20	16	Fe 0.04; Al 0.07; Cu 0.01; Zn 0.02; PO_4 0.30; (a)	304[b]	49	126	34	20		USGS
Oct 8 1415		73	9.1	104	62.6	7.1	4.8 / 0.240	1.0 / 0.086	6.0 / 0.261	1.1 / 0.028	0 / 0.000	24 / 0.393		4.5 / 0.127			0.00				42	16	0	10		USGS
Nov 13 1335		62	11.5	117	85.7	7.3	6.2 / 0.31	1.7 / 0.14	7.8 / 0.34	1.0 / 0.03	0 / 0.00	33 / 0.54		8.8 / 0.25			0.00				41	23	0	5		USGS
Dec 10 1235		51	11.4	102	314	7.3	21 / 1.05	8.6 / 0.71	29 / 1.26	2.4 / 0.06	0 / 0.00	105 / 1.72		37 / 1.04			0.12				41	88	2	3	median 23 minimum .62 maximum 620	USGS
Not Rated in 1956																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						San Joaquin River at Mossdale Bridge																			
1955																										
Jan 19 1350		46	10.2	85	377	7.1	22 / 1.098	7.7 / 0.632	40 / 1.739	4.2 / 0.107	0 / 0.000	89 / 1.459		50 / 1.410			0.28				49	86	13	70		USGS
Feb 21 1010		49	11.0	96	501	7.4	28 / 1.397	12 / 0.963	54 / 2.348	2.2 / 0.056	0 / 0.000	91 / 1.491		71 / 2.002			0.19				49	118	43	5		USGS
Mar 15 1420		57	10.0	98	629	7.7	22 / 1.10	21 / 1.72	70 / 3.04	2.5 / 0.06	0 / 0.00	104 / 1.70		106 / 2.99			0.10				51	141	56	7		USGS
Apr.15 1140		62	16.6	168	954	8.4	53 / 2.64	21 / 1.74	109 / 4.74	5.8 / 0.15	0 / 0.00	176 / 2.88		180 / 5.08			0.22				51	219	75	15		USGS
May 17 0750		67	12.0	130	960	8.4	54 / 2.69	20 / 1.67	107 / 4.65	5.6 / 0.14	0 / 0.00	170 / 2.79	60 / 1.25	178 / 5.02	0.6 / 0.01	0.2 / 0.01	0.22	24	Al 0.05; Zn 0.02; (a) PO_4 0.25	534[b]	51	218	79	5		USGS
Jun 21 0810		70	11.4	127	692	8.4	38 / 1.90	17 / 1.38	72 / 3.13	3.6 / 0.09	0 / 0.00	139 / 2.28		121 / 3.41			0.15				48	164	50	20		USGS
Jul 18 1515		76	8.0	94	1000	8.0	22 / 1.10	44 / 3.62	106 / 4.61	6.0 / 0.15	0 / 0.00	178 / 2.92		196 / 5.53			0.37				49	236	90	45		USGS
Aug 22 1430		78	8.3	100	959	7.8	51 / 2.54	23 / 1.88	104 / 4.52	5.0 / 0.13	0 / 0.00	190 / 3.11		175 / 4.94			0.35				50	221	65	15		USGS
Sep 21 1610		72	13.8	156	912	8.1	56 / 2.79	16 / 1.30	102 / 4.44	4.2 / 0.11	0 / 0.00	181 / 2.97	59 / 1.23	159 / 4.48	1.1 / 0.02	0.3 / 0.02	0.26	28	Fe 0.01; Al 0.02; Cu 0.02; (a)	515[b]	51	205	57	15		USGS
Oct 19 1015		63	10.6	109	827	7.9	45 / 2.25	18 / 1.46	92 / 4.00	4.0 / 0.10	0 / 0.00	160 / 2.62		141 / 3.98			0.24				51	186	55	10		USGS
Nov 22 1135		52	9.6	87	696	7.5	37 / 1.85	15 / 1.21	79 / 3.44	3.5 / 0.09	0 / 0.00	123 / 2.02		120 / 3.38			0.14				52	153	52	55		USGS
Dec 20 1430		54	9.4	87	497	7.3	26 / 1.297	11 / 0.903	53 / 2.306	2.7 / 0.069	0 / 0.000	89 / 1.459		84 / 2.369			0.14				50	110	37	9		USGS
																									median 42 minimum 2.3 maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
San Joaquin River at Mossdale Bridge																										
1956																										
Jan 17 1500		48	9.6	82	145	7.1	10 / 0.499	4.5 / 0.369	10 / 0.435	2.0 / 0.051	0 / 0.000	51 / 0.836		9.3 / 0.262			0.03				32	43	1	70		USGS
Feb 15 1500		48	9.8	84	235	7.3	14 / 0.699	6.2 / 0.509	22 / 0.957	1.6 / 0.041	0 / 0.000	67 / 1.098		27 / 0.761			0.09				43	60	5	25		USGS
Mar 20 1310		56	9.6	91	430	7.3	24 / 1.198	11 / 0.922	40 / 1.740	2.1 / 0.054	0 / 0.000	91 / 1.491		62 / 1.748			0.26				44	106	31	55		USGS
Apr 17 1500		58	10.0	97	214	7.5	13 / 0.649	5.8 / 0.475	21 / 0.914	1.5 / 0.038	0 / 0.000	62 / 1.016		26 / 0.733			0.09				44	56	5	20		USGS
May 15 1430		62	9.1	93	143	7.3	12 / 0.599	2.2 / 0.181	13 / 0.566	1.3 / 0.033	0 / 0.000	48 / 0.787	10 / 0.208	14 / 0.395	0.7 / 0.011	0.3 / 0.016	0.09	15	Fe 0.07; Al 0.04; Cu 0.01; Zn 0.01; PO_4 0.20; (a)	93[b]	41	39	0	20		USGS
June 15 0815		66	8.3	88	135	6.8	10 / 0.499	5.1 / 0.421	12 / 0.522	1.3 / 0.033	0 / 0.000	45 / 0.738		17 / 0.479			0.09				35	46	9	95		USGS
July 25 1115		81	12.0	149	866	7.9	47 / 2.35	22 / 1.77	94 / 4.09	4.4 / 0.11	0 / 0.00	159 / 2.61		158 / 4.46			0.28				49	206	76	5		USGS
Aug 21 1240		74	10.6	123	647	7.9	39 / 1.95	13 / 1.06	71 / 3.09	3.5 / 0.09	0 / 0.00	139 / 2.28		108 / 3.05			0.12				50	150	36	10		USGS
Sept 14 0845		70	9.5	106	572	7.3	32 / 1.60	13 / 1.04	64 / 2.78	3.0 / 0.08	0 / 0.00	128 / 2.10	34 / 0.71	92 / 2.59	2.1 / 0.03	0.1 / 0.01	0.19	24	Fe 0.01; Cu 0.01; PO_4 0.35; Al 0.05; (a)	327[b]	51	132	27	15		USGS
Oct 17 1430		64	9.6	100	522	7.2	30 / 1.497	11 / 0.927	54 / 2.349	2.7 / 0.069	0 / 0.000	125 / 2.049		82 / 2.312			0.11				49	121	19	6		USGS
Nov 20 1500		49	10.9	95	535	7.5	29 / 1.40	13 / 1.09	56 / 2.44	2.6 / 0.07	0 / 0.00	107 / 1.75		89 / 2.51			0.12				49	125	37	5	median 62	USGS
Dec 18 1615		52	10.4	94	502	7.3	25 / 1.25	13 / 1.11	50 / 2.18	2.3 / 0.06	0 / 0.00	96 / 1.57		83 / 2.34			0.13				47	118	39	1.0	minimum 6.2 maximum 1300	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chlorids (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River near Vernalis																										
1955																										
Jan 13 1415	2,670	45	10.1	84	435	7.1	24 / 1.198	10 / 0.842	45 / 1.957	3.2 / 0.082	0 / 0.000	103 / 1.688	32 / 0.666	60 / 1.692	3.5 / 0.056	0.4 / 0.021	0.01	22	Fe 0.10	251[b]	48	102	18	45		USGS
Feb 11 1500	2,540	51	10.0	90	521	7.4	26 / 1.30	13 / 1.10	59 / 2.57	2.5 / 0.06	0 / 0.00	97 / 1.59	51 / 1.06	78 / 2.20	2.0 / 0.03	0.1 / 0.01	0.16	17	Fe 0.02	297[b]	51	120	40	5		USGS
Mar 15 1530	1,980	56	10.1	96	540	7.7	28 / 1.40	13 / 1.04	58 / 2.52	2.3 / 0.06	0 / 0.00	95 / 1.56	47 / 0.98	87 / 2.45	1.4 / 0.02	0.2 / 0.01	0.17	20	Fe 0.03	304[b]	50	122	44	7		USGS
Apr 15 0900	620	60	11.6	116	912	8.2	49 / 2.45	24 / 1.95	99 / 4.30	5.6 / 0.14	0 / 0.00	166 / 2.72	54 / 1.12	168 / 4.72	3.9 / 0.06	0.2 / 0.01	0.25	28	Fe 0.03	514[b]	49	220	84			USGS
May 17 1110	625	70	12.1	135	960	8.4	52 / 2.59	21 / 1.73	104 / 4.52	4.6 / 0.12	0 / 0.00	168 / 2.75	60 / 1.25	178 / 5.02	3.9 / 0.06	0.3 / 0.02	0.21	24	(a) PO_4 0.35	531[b]	50	216	78	10		USGS
Jun 17 0850	1,010	68	9.5	104	491	8.0	25 / 1.248	11 / 0.912	42 / 1.826	2.9 / 0.074	0 / 0.000	94 / 1.541	23 / 0.479	73 / 2.059	1.3 / 0.026	0.1 / 0.005	0.08	22	Fe 0.03	246[b]	45	108	31	15		USGS
Jul 15 0845	340	76	10.1	119	907	8.0	53 / 2.64	21 / 1.72	99 / 4.30	5.0 / 0.13	0 / 0.00	178 / 2.92	52 / 1.08	164 / 4.63	0.8 / 0.01	0.4 / 0.02	0.27	28	Fe 0.05	512[b]	49	218	72	9		USGS
Aug 19 1030	463	76	12.0	142	970	7.8	51 / 2.54	23 / 1.86	106 / 4.61	4.0 / 0.10	0 / 0.00	184 / 3.02	61 / 1.27	174 / 4.91	3.3 / 0.05	0.2 / 0.01	0.32	29		543[b]	51	220	69	3		USGS
Sep 16 1145	570	68	10.2	111	930	7.9	49 / 2.45	22 / 1.79	104 / 4.52	5.0 / 0.13	0 / 0.00	185 / 3.03	61 / 1.27	162 / 4.57	4.2 / 0.07	0.2 / 0.01	0.24	32	Fe 0.01; Al 0.02; Cu 0.01; Pb 0.01; PO_4 0.30; (a)	531[b]	51	212	60	15		USGS
Oct 13 1200	718	67	10.8	116	946	7.7	14 / 0.70	43 / 3.56	107 / 4.65	5.4 / 0.14	0 / 0.00	181 / 2.97	63 / 1.31	164 / 4.62	4.6 / 0.07	0.3 / 0.02	0.18	36	Fe 0.01	526[b]	51	213	65	7		USGS
Nov 17 1430	1,090	51	8.8	79	882	7.3	44 / 2.20	18 / 1.50	92 / 4.00	5.6 / 0.14	0 / 0.00	149 / 2.44	52 / 1.08	154 / 4.34	2.5 / 0.04	0.3 / 0.02	0.16	41		483[b]	51	185	63	4		USGS
Dec 15 1015	1,660	50	8.2	72	516	7.3	28 / 1.397	12 / 0.983	57 / 2.480	3.0 / 0.077	0 / 0.000	97 / 1.590	39 / 0.812	85 / 2.397	2.8 / 0.045	0.3 / 0.016	0.17	23	Fe 0.02	298[b]	50	119	39	30	median 170; minimum 23; maximum 2,400	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
San Joaquin River near Vernalis																										
1956																										
Jan 12 1440	21,200	47	9.4	80	151	7.1	10 / 0.499	4.4 / 0.361	12 / 0.522	2.0 / 0.051	0 / 0.000	50 / 0.820	12 / 0.250	13 / 0.367	1.7 / 0.027	0.4 / 0.021	0.16	15		96[b]	36	43	2	50		USGS
Feb 9 1100	16,400 MD	47	10.3	87	221	7.3	14 / 0.699	5.1 / 0.421	19 / 0.826	1.7 / 0.043	0 / 0.000	66 / 1.082	17 / 0.354	21 / 0.592	1.1 / 0.018	0.2 / 0.011	0.10	17		129[b]	42	56	2	35		USGS
Mar 15 1500	7,660 MD	52	10.7	97	225	7.3	20 / 0.998	6.8 / 0.562	28 / 1.218	2.1 / 0.054	0 / 0.000	74 / 1.213	21 / 0.437	44 / 1.241	1.2 / 0.019	0.2 / 0.011	0.20	17		176[b]	43	78	17	32		USGS
Apr 12 1425	5,840 MD	55	9.9	93	290	7.3	16 / 0.798	7.4 / 0.610	30 / 1.305	1.8 / 0.046	0 / 0.000	69 / 1.131	20 / 0.416	42 / 1.184	1.1 / 0.018	0.3 / 0.016	0.03	16		169[b]	47	70	13	30		USGS
May 10 1330	15,800 MD	58	9.5	93	120	7.5	8.6 / 0.439	3.4 / 0.281	11 / 0.478	1.1 / 0.028	0 / 0.000	42 / 0.688	6.0 / 0.125	14 / 0.395	0.8 / 0.013	0.4 / 0.021	0.05	12	Fe 0.02; Cu 0.01; (a) PO_4 0.15	79[b]	39	36	2	20		USGS
June 1100	11,700 MD	66	8.8	94	104	6.8	8.4 / 0.419	2.3 / 0.189	8.7 / 0.378	1.2 / 0.031	0 / 0.000	41 / 0.672	4.2 / 0.087	9.5 / 0.268	0.9 / 0.015	0.2 / 0.011	0.00	15	Fe 0.06; (a)	70 [b]	37	30	0	30		USGS
July 16 1115	2,550 MD	74	11.8	137	555	7.4	32 / 1.60	13 / 1.10	59 / 2.57	3.0 / 0.08	0 / 0.00	122 / 2.00	38 / 0.79	93 / 2.62	1.9 / 0.03	0.3 / 0.02	0.14	23		323[b]	48	135	35	6		USGS
Aug 15 1430	1,560 MD	76	11.3	133	659	7.4	38 / 1.90	15 / 1.20	73 / 3.18	3.5 / 0.09	0 / 0.00	135 / 2.21	40 / 0.83	115 / 3.24	2.6 / 0.04	0.2 / 0.01	0.20	24		378[b]	50	155	44	20		USGS
Sept 20 0925	2,060 MD	69	8.4	93	515	7.5	30 / 1.497	11 / 0.943	57 / 2.480	3.0 / 0.077	0 / 0.000	119 / 1.950	32 / 0.666	81 / 2.284	2.7 / 0.044	0.0 / 0.000	0.13	23	Fe 0.02; Al 0.03; Cu 0.01; PO_4 0.35; (a)	299[b]	50	122	24	8		USGS
Oct 11 0945	1,960 MD	66	8.3	89	581	7.3	32 / 1.60	13 / 1.08	63 / 2.74	2.3 / 0.08	0 / 0.00	130 / 2.13	31 / 0.65	97 / 2.74	2.6 / 0.04	0.1 / 0.01	0.20	31		337 [b]	50	134	27			USGS
Nov 16 1115	2,050	52	10.0	90	529	7.5	28 / 1.40	12 / 1.00	59 / 2.57	2.5 / 0.06	0 / 0.00	111 / 1.82	39 / 0.81	86 / 2.43	2.4 / 0.04	0.1 / 0.01	0.22	24	Fe 0.03; (a)	308 [b]	51	120	29	9		USGS
Dec 13 1520	2,300	55	10.1	95	450	7.5	23 / 1.15	12 / 1.01	48 / 2.09	1.8 / 0.05	0 / 0.00	94 / 1.54	34 / 0.71	69 / 1.95	2.6 / 0.04	0.1 / 0.01	0.06	19	Fe 0.04; (a)	256 [b]	49	108	31	5	median 230; minimum 6.2; maximum 7000+	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER
REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Stanislaus River near Knights Ferry																			
1956																										
July 19 1240	Not Rated	62	9.8	100	37.1	7.0	5.3 / 0.264	0.5 / 0.038	1.4 / 0.061	0.7 / 0.018	0 / 0.000	25 / 0.410		0.1 / 0.003			0.03			[illegible]	16	15	0	4		USGS
Aug 16 1230	"	66	9.4	101	45.7	6.8	6.0 / 0.299	1.0 / 0.081	1.6 / 0.070	1.0 / 0.026	0 / 0.000	30 / 0.492		0.0 / 0.000			0.00			[illegible]	15	19	0	8		USGS
Sept 20 1240	"	69	8.5	94	69.8	7.1	8.8 / 0.439	2.7 / 0.221	2.1 / 0.091	1.0 / 0.026	0 / 0.000	43 / 0.705	2.3 / 0.048	0.4 / 0.011	0.4 / 0.006	0.0 / 0.000	0.05	11	Fe 0.06; Al 0.02; Cu 0.01; PO_4 0.00; (a)	[illegible] 50 [b]	12	33	0	1		USGS
Oct 10 1450	"	64	9.3	97	80.5	7.3	9.2 / 0.49	2.7 / 0.22	2.3 / 0.10	1.3 / 0.03	0 / 0.00	48 / 0.79		0.2 / 0.01			0.13			[illegible]	12	36	0	7		USGS
Nov 15 1550	"	50	11.4	101	69.7	7.3	8.2 / 0.41	2.1 / 0.17	2.1 / 0.09	1.0 / 0.03	0 / 0.00	42 / 0.69		1.1 / 0.03			0.01			[illegible]	13	29	0	3		USGS
Dec 13 0920	"	43	12.3	99	97.7	7.3	11 / 0.55	3.5 / 0.29	3.1 / 0.13	1.1 / 0.03	0 / 0.00	55 / 0.90		1.0 / 0.03			0.03			[illegible]	13	42	0	7		USGS
																									median 5.6	
																									minimum .23	
																									maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Stanislaus River near mouth																			
1955																										
Jan 13 1340	684	43	11.2	90	170	6.9	17 / 0.848	6.6 / 0.542	6.6 / 0.287	1.7 / 0.043	0 / 0.000	75 / 1.229		4.2 / 0.118			0.02				17	70	8	30		USGS
Feb 21 1200	980	51	11.2	100	118	7.3	12 / 0.599	4.6 / 0.381	4.6 / 0.200	1.1 / 0.028	0 / 0.000	59 / 0.967		2.0 / 0.056			0.05				17	49	1	4		USGS
Mar 15 1630	1,040	56	9.9	94	112	7.4	11 / 0.549	4.0 / 0.331	4.4 / 0.191	1.1 / 0.028	0 / 0.000	54 / 0.885		2.0 / 0.056			0.00				17	44	0	8		USGS
Apr 15 0940	97	61	10.0	100	262	7.6	22 / 1.098	11 / 0.934	15 / 0.652	2.5 / 0.064	0 / 0.000	144 / 2.360		8.1 / 0.228			0.04				24	102	0	3		USGS
May 18 1140	108	74	10.0	116	217	7.8	25 / 1.248	8.9 / 0.732	14 / 0.609	2.5 / 0.064	0 / 0.000	133 / 2.180	9.2 / 0.192	9.5 / 0.268	1.6 / 0.026	0.0 / 0.000	0.00	31	Mn 0.03; (a) PO_4 0.20	168[b]	23	99	0	7		USGS
Jun 17 0920	694	67	8.4	91	94.6	7.2	9.3 / 0.464	3.8 / 0.316	4.2 / 0.183	1.1 / 0.028	0 / 0.000	54 / 0.885		1.5 / 0.042			0.06				18	39	0	8		USGS
Jul 15 0930	45	75	9.2	108	271	7.3	26 / 1.297	10 / 0.823	17 / 0.739	2.8 / 0.072	0 / 0.000	144 / 2.360		9.2 / 0.259			0.01				25	106	0	7		USGS
Aug 19 0945	44	73	8.2	94	281	7.4	26 / 1.297	10 / 0.823	16 / 0.696	2.3 / 0.059	0 / 0.000	153 / 2.507		7.5 / 0.212			0.00				24	106	0	5		USGS
Sep 16 1300	76	71	8.4	94	272	7.5	25 / 1.248	10 / 0.832	16 / 0.696	2.3 / 0.059	0 / 0.000	149 / 2.442	9.0 / 0.187	8.2 / 0.231	1.6 / 0.026	0.1 / 0.005	0.03	36	Fe 0.03; Pb 0.01;	181[b]	25	104	0	2		USGS
Oct 13 1310	116	68	8.3	90	283	7.3	25 / 1.248	12 / 0.968	16 / 0.696	2.7 / 0.069	0 / 0.000	155 / 2.540		8.0 / 0.226			0.00				23	111	0	7		USGS
Nov 17 1530	171	50	9.2	81	255	7.3	23 / 1.148	9.8 / 0.804	14 / 0.609	3.0 / 0.077	0 / 0.000	134 / 2.196		8.0 / 0.226			0.00				23	98	0	50		USGS
Dec 15 1115	502	49	9.9	86	169	7.3	18 / 0.898	5.9 / 0.482	8.1 / 0.352	1.9 / 0.049	0 / 0.000	84 / 1.377		4.8 / 0.135			0.00				20	69	0	15	median 23 minimum 2.3 maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl) equivalents per million	Nitrate (NO_3) equivalents per million	Fluoride (F) equivalents per million	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Stanislaus River near Mouth																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar 15 1600	backwater	52	10.9	99	117	7.3	11 / 0.549	4.6 / 0.375	5.0 / 0.218	1.1 / 0.028	0 / 0.000	62 / 1.016		1.8 / 0.051			0.04				19	46	0	30		USGS
Apr 12 1550	backwater	51	10.7	96	63.4	7.1	6.4 / 0.319	2.4 / 0.201	3.1 / 0.135	1.1 / 0.028	0 / 0.000	40 / 0.656		0.8 / 0.023			0.09				20	26	0	55		USGS
May 10 1430	backwater	54	10.1	93	54.7	7.7	6.01 / 0.299	2.0 / 0.161	2.3 / 0.100	0.9 / 0.023	0 / 0.000	33 / 0.541	C.0 / 0.000	0.8 / 0.023	0.4 / 0.006	0.0 / 0.000	0.01	12	Fe 0.04; Cu 0.01; Zn 0.01; PO_4 0.10; (a)	40[b]	17	23	0	30		USGS
June 14 1215	backwater	64	9.0	94	52.5	6.8	6.8 / 0.339	1.2 / 0.101	2.0 / 0.087	0.9 / 0.023	0 / 0.000	33 / 0.541		C.0 / 0.000			0.10				16	22	0	25		USGS
July 16 1040	900	70	8.4	93	134	7.1	16 / 0.798	3.2 / 0.262	6.9 / 0.300	1.4 / 0.036	0 / 0.000	73 / 1.196		2.1 / 0.059			0.08				21	53	0	10		USGS
Aug 15 1400	157	75	11.5	134	310	7.2	30 / 1.497	12 / 0.963	18 / 0.783	2.6 / 0.067	0 / 0.000	165 / 2.704		9.0 / 0.254			0.00				24	123	0	3		USGS
Sept 21 1000	229	69	8.4	92	239	7.5	24 / 1.198	8.1 / 0.666	15 / 0.652	2.6 / 0.067	0 / 0.000	131 / 2.147	8.6 / 0.179	7.4 / 0.209	2.2 / 0.035	0.2 / 0.011	0.03	31	Fe 0.01; Al 0.03; Cu 0.01; PO 0.25; (a)	164[b]	25	93	0	2		USGS
Oct 11 1010	249	65	8.4	89	267	7.3	26 / 1.30	8.9 / 0.73	16 / 0.70	3.1 / 0.08	0 / 0.00	149 / 2.44		8.0 / 0.23			0.08				25	102	0	3		USGS
Nov 16 1145	530	51	10.5	94	139	7.4	14 / 0.70	5.1 / 0.42	6.9 / 0.30	1.4 / 0.04	0 / 0.00	76 / 1.25		3.6 / 0.10			0.00				21	56	0	20		USGS
Dec 13 1645	375	53	10.9	100	191	7.4	18 / 0.90	8.0 / 0.66	10 / 0.44	1.8 / 0.05	0 / 0.00	101 / 1.66		4.5 / 0.13			0.12				21	78	0	9	median 62; minimum 2.3; maximum 620	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
	Tidal Area						Stockton Ship Channel on Rindge Island																			
1955																										
Jan 19 0900		43	10.0	79	316	6.9	20 / 0.998	9.0 / 0.742	27 / 1.174	3.1 / 0.079	0 / 0.000	77 / 1.262	26 / 0.541	38 / 1.072	4.8 / 0.077	0.4 / 0.021	0.00	20	Fe 0.37	186[b]	39	87	24	80		USGS
Feb 15 1630		52	7.3	66	609	7.2	34 / 1.70	15 / 1.22	66 / 2.87	3.1 / 0.08	0 / 0.00	124 / 2.03	53 / 1.10	90 / 2.54	3.4 / 0.05	0.2 / 0.01	0.17	21	Fe 0.02	347[b]	49	146	44	7		USGS
Mar 17 1300		57	8.5	82	619	7.3	33 / 1.65	15 / 1.23	66 / 2.87	3.0 / 0.08	0 / 0.00	106 / 1.74	61 / 1.27	97 / 2.74	3.1 / 0.05	0.2 / 0.01	0.27	19	Fe 0.04	349[b]	49	144	57	10		USGS
Apr 21 1250		59	10.7	105	553	8.1	31 / 1.55	14 / 1.17	57 / 2.48	3.1 / 0.08	0 / 0.00	112 / 1.84	43 / 0.90	85 / 2.40	1.9 / 0.03	0.2 / 0.01	0.20	11	Fe 0.42	302[b]	47	136	44			USGS
May 19 1630		72	11.7	132	515	8.4	30 / 1.497	13 / 1.083	53 / 2.305	3.5 / 0.090	0 / 0.000	122 / 1.999	34 / 0.708	80 / 2.256	0.7 / 0.011	0.3 / 0.016	0.19	6.8	Fe 0.005; Al 0.005; (a) FO_4 0.20	281[b]	46	129	29	15		USGS
Jun 23 0950		71	8.4	95	386	7.8	22 / 1.098	11 / 0.882	38 / 1.652	2.5 / 0.064	0 / 0.000	96 / 1.573	24 / 0.500	58 / 1.636	0.9 / 0.015	0.2 / 0.011	0.11	8.0	Fe 0.05	212[b]	45	99	20	20		USGS
Jul	Not sampled																									
Aug 25 1115		77	6.6	79	383	7.3	20 / 0.998	11 / 0.922	38 / 1.652	2.2 / 0.056	0 / 0.000	101 / 1.655	21 / 0.437	55 / 0.551	1.2 / 0.019	0.2 / 0.011	0.16	17	Fe 0.18	216[b]	45	96	13	40		USGS
Sep 21 0910		69	6.0	66	449	7.3	23 / 1.148	13 / 1.032	45 / 1.957	2.8 / 0.072	0 / 0.000	110 / 1.803	25 / 0.520	68 / 1.918	1.0 / 0.016	0.3 / 0.016	0.15	17	Fe 0.10; Al 0.05; Cu 0.01; PO_4 0.25; (a)	249[b]	46	109	19	45		USGS
Oct 18 1010		64	5.6	59	537	7.3	20 / 1.00	19 / 1.60	56 / 2.44	3.6 / 0.09	0 / 0.00	131 / 2.15	30 / 0.62	80 / 2.26	1.9 / 0.03	0.5 / 0.03	0.16	13	Fe 0.04	289[b]	48	130	23	15		USGS
Nov 21 1430		53	9.8	90	746	7.7	38 / 1.90	19 / 1.58	80 / 3.48	4.6 / 0.12	0 / 0.00	152 / 2.49	46 / 0.96	130 / 3.67	3.1 / 0.05	0.4 / 0.02	0.17	12	Fe 0.03	408[b]	49	174	49	9		USGS
Dec 20 1000		52	8.3	75	808	7.1	50 / 2.50	21 / 1.70	82 / 3.57	4.6 / 0.12	0 / 0.00	105 / 1.72	98 / 2.04	129 / 3.64	14 / 0.23	0.5 / 0.03	0.31	21	Fe 0.13	473[b]	45	210	124	20	median 180; minimum .62; maximum 7000	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Stockton Ship Channel on Rindge Island																										
1956																										
Jan 17 1000		47	9.3	79	166	7.1	12 / 0.599	4.9 / 0.401	12 / 0.522	2.6 / 0.067	0 / 0.000	58 / 0.951	10 / 0.208	14 / 0.395	2.3 / 0.037	0.6 / 0.032	0.17	18		106[b]	33	50	2	40		USGS
Feb 15 0950		48	9.6	82	252	7.3	17 / 0.848	5.7 / 0.472	24 / 1.044	2.1 / 0.054	0 / 0.000	73 / 1.196	22 / 0.458	28 / 0.790	1.3 / 0.021	0.3 / 0.016	0.07	17		153[b]	43	66	6	40		USGS
Mar 19 1520		56	8.5	81	343	7.1	14 / 0.700	12 / 0.980	30 / 1.305	1.9 / 0.049	0 / 0.000	78 / 1.278	24 / 0.500	46 / 1.297	1.8 / 0.029	0.4 / 0.021	0.13	18		186[b]	43	84	20	22		USGS
Apr 16 1455		59	8.4	83	322	7.1	18 / 0.898	8.4 / 0.690	34 / 1.479	2.2 / 0.056	0 / 0.000	78 / 1.278	23 / 0.479	46 / 1.297	1.7 / 0.027	0.3 / 0.016	0.05	18		190[b]	47	79	15	10		USGS
May 14 1425		64	8.7	91	130	7.1	12 / 0.599	1.5 / 0.121	12 / 0.522	1.3 / 0.033	0 / 0.000	44 / 0.721	7.6 / 0.158	14 / 0.395	0.8 / 0.013	0.3 / 0.016	0.10	14	Fe 0.07; Al 0.03; Zn 0.01; PO_4 0.20; (a)	86[b]	41	36	0	15		USGS
June 19 1805		69	7.9	87	148	7.3	10 / 0.499	3.8 / 0.309	14 / 0.609	1.4 / 0.036	0 / 0.000	47 / 0.770	9.4 / 0.196	18 / 0.508	1.2 / 0.019	0.3 / 0.016	0.00	[illegible]	Fe 0.03; (a)	97[b]	42	40	1	25		USGS
July 23 1400		84	9.2	118	396	7.0	23 / 1.148	10 / 0.852	40 / 1.740	2.3 / 0.059	0 / 0.000	92 / 1.508	28 / 0.583	61 / 1.720	1.2 / 0.019	0.1 / 0.005	0.11	15		226[b]	46	100	25	30		USGS
Aug 20 1345		77	9.2	110	398	7.5	24 / 1.198	8.6 / 0.710	41 / 1.784	2.3 / 0.059	0 / 0.000	91 / 1.491	25 / 0.520	63 / 1.777	1.3 / 0.021	0.1 / 0.005	0.13	7.1		218[b]	48	95	20	10		USGS
Sept 12 1510		74	8.4	97	597	7.1	34 / 1.70	13 / 1.05	68 / 2.96	4.1 / 0.10	0 / 0.00	142 / 2.33	27 / 0.56	99 / 2.79	1.7 / 0.03	0.2 / 0.01	0.18	11	Fe 0.01; Al 0.12; Cu 0.01; PO_4 0.55; (a)	328[b]	51	137	21	10		USGS
Oct 15 1445		70	12.5	139	618	7.5	35 / 1.75	14 / 1.14	69 / 3.00	4.3 / 0.11	0 / 0.00	143 / 2.34	27 / 0.56	106 / 2.99	2.7 / 0.04	0.2 / 0.01	0.20	23		351[b]	50	144	27			USGS
Nov 19 1440		52	10.3	93	626	7.7	34 / 1.70	15 / 1.20	68 / 2.96	3.5 / 0.09	0 / 0.00	121 / 1.98	51 / 1.06	106 / 2.99	4.1 / 0.07	0.1 / 0.01	0.23	23	Fe 0.03; (a)	365[b]	50	145	46	8		USGS
Dec 17 1430		50	7.6	67	487	7.1	26 / 1.30	13 / 1.08	49 / 2.13	2.4 / 0.06	0 / 0.00	88 / 1.44	27 / 0.77	77 / 2.17	6.9 / 0.11	0.1 / 0.01	0.15	18	Fe 0.02; (a)	273[b]	47	119	47	25	median 230 minimum 23 maximum 7000	USGS

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Stony Creek near Hamilton City																			
1955																										
Jan 11 1100	106	45	13.1	108	381	8.2	38 / 1.896	15 / 1.224	17 / 0.739	0.7 / 0.018	4 / 0.133	160 / 2.622		26 / 0.733			0.04				19	156	18	1		USGS
Feb 7 1230	100	50			404	8.4	41 / 2.046	16 / 1.314	20 / 0.870	0.6 / 0.015	7 / 0.233	160 / 2.622		29 / 0.818			0.09				20	168	25	0.6		USGS
Mar 7 1130	19	50	10.9	98	394	8.0	42 / 2.096	16 / 1.284	18 / 0.783	0.9 / 0.023	0 / 0.000	176 / 2.884		26 / 0.733			0.00				19	169	25	2		USGS
Apr 4 1045	0	52	11.0	100	390	8.1	39 / 1.946	18 / 1.446	18 / 0.783	0.7 / 0.018	0 / 0.000	193 / 3.163		21 / 0.592			0.10				19	170	12	0		USGS
May 12 0945	1.2	70	6.8	76	376	7.5	39 / 1.946	14 / 1.174	18 / 0.783	0.9 / 0.023	0 / 0.000	174 / 2.852	21 / 0.437	25 / 0.705	0.6 / 0.010	0.1 / 0.005	0.15	14	Fe 0.01; Al 0.005; Pb 0.005; (a) PO_4 0.10	219[b]	20	156	13	1		USGS
Jun	Dry																									
Jul	Dry																									
Aug	Dry																									
Sep	Dry																									
Oct	Dry																									
Nov	Dry																									
Dec	Dry																									
																									median 3.6	
																									minimum .62	
																									maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Stony Creek near Hamilton City																										
1956																										
Jan 17 1030	5,640	46	11.4	96	198	7.0	22 / 1.098	6.3 / 0.522	6.6 / 0.287	1.1 / 0.028	0 / 0.000	98 / 1.606		9.0 / 0.254			0.12				15	81	1	550		USGS
Feb 7 1145	385	47	11.4	97	334	7.0	36 / 1.796	11 / 0.932	14 / 0.609	0.8 / 0.020	3 / 0.100	151 / 2.475		14 / 0.395			0.06				18	136	7	60		USGS
Mar 13 1145	1,070	49	11.3	99	283	7.0	30 / 1.497	12 / 0.963	11 / 0.478	0.8 / 0.020	2 / 0.067	135 / 2.213		8.7 / 0.245			0.11				16	123	9	60		USGS
Apr 10 1145	338	56	10.4	99	280	7.1	33 / 1.647	9.2 / 0.753	12 / 0.522	1.0 / 0.026	0 / 0.000	144 / 2.360		8.8 / 0.248			0.08				18	120	2	15		USGS
May 8 1100	920	60	10.2	102	264	7.4	28 / 1.397	11 / 0.887	12 / 0.522	0.7 / 0.018	0 / 0.000	132 / 2.163	17 / 0.354	10 / 0.282	0.4 / 0.006	0.2 / 0.011	0.06	13	Fe 0.02; Al 0.03; Cu 0.01; PO_4 0.00; (a)	157[b]	18	114	6	40		USGS
June 12 1000	5.6	76	8.5	100	315	7.7	26 / 1.297	18 / 1.495	14 / 0.609	0.9 / 0.023	0 / 0.000	161 / 2.639		14 / 0.395			0.09				18	140	8	1		USGS
July 17 1000	6.7	79	8.3	101	325	7.7	30 / 1.497	16 / 1.291	15 / 0.652	1.1 / 0.028	0 / 0.000	168 / 2.754		15 / 0.423			0.20				19	139	1	0.4		USGS
Aug	Dry																									
Sept	Dry																									
Oct	Dry																									
Nov	Dry																									
Dec	Dry																									
																								median 23		
																								minimum .5		
																								maximum 230		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Tule River near Porterville																										
1955																										
Jan 11 0935	87	43	11.9	96	359	7.9	44 / 2.196	7.3 / 0.604	22 / 0.957	4.2 / 0.107	0 / 0.000	198 / 3.245		14 / 0.395			0.22				25	140	0	6		USGS
Feb 10 1100	71	49	11.7	102	332	8.0	44 / 2.196	6.9 / 0.564	18 / 0.783	2.3 / 0.059	0 / 0.000	194 / 3.179		10 / 0.282			0.09				22	138	0	0.6		USGS
Mar 9 1030	122	56	10.3	99	241	8.0	31 / 1.547	4.8 / 0.393	14 / 0.609	2.2 / 0.056	0 / 0.000	138 / 2.262		5.8 / 0.164			0.08				23	97	0	0.6		USGS
Apr 13 0850	80	54	13.4	124	239	8.0	34 / 1.697	3.2 / 0.263	12 / 0.522	2.1 / 0.054	0 / 0.000	144 / 2.360		6.2 / 0.175			0.09				21	98	0	0.9		USGS
May 11 0935	229	60	9.9	99	158	7.9	21 / 1.048	2.6 / 0.212	8.1 / 0.352	1.4 / 0.036	0 / 0.000	94 / 1.541	2.0 / 0.042	3.8 / 0.107	0.4 / 0.006	0.2 / 0.011	0.05	23	PO_4 0.05 (a)	109[b]	21	63	0	0.7		USGS
Jun 15 0840	71	64	9.1	95	221	8.0	33 / 1.647	3.3 / 0.273	11 / 0.478	1.8 / 0.046	0 / 0.000	137 / 2.245		4.8 / 0.135			0.19				20	96	0	0		USGS
Jul 14 0745	6.4	75	7.9	92	366	7.5	49 / 2.445	7.5 / 0.615	20 / 0.870	3.9 / 0.100	9 / 0.297	202 / 3.310		9.5 / 0.268			0.13				22	153	0	3		USGS
Aug 17 1200	0.3	82	11.7	147	399	7.8	54 / 2.695	8.1 / 0.665	21 / 0.913	3.0 / 0.077	0 / 0.000	243 / 3.982		12 / 0.338			0.19				21	168	0	1		USGS
Sep	Not Sampled																									
Oct 11 1250	0.4	68	11.4	124	421	7.7	52 / 2.595	9.9 / 0.813	26 / 1.131	3.2 / 0.082	3 / 0.100	236 / 3.868		16 / 0.451			0.14				24	170	0	1		USGS
Nov 15 1230	28	52	10.0	91	465	7.7	59 / 2.944	9.3 / 0.768	30 / 1.305	5.0 / 0.128	12 / 0.400	250 / 4.098		20 / 0.564			0.14				25	186	0	30		USGS
Dec 13 1240	102	48	10.4	90	271	7.5	35 / 1.746	5.8 / 0.474	15 / 0.652	2.5 / 0.064	0 / 0.000	154 / 2.524		9.2 / 0.259			0.07				22	111	0	3		USGS

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million (equivalents per million)												Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)									
Tule River near Porterville																										
1956																										
Jan 10 1300	188	48	10.5	90	198	7.5	26 / 1.297	3.2 / 0.263	9.4 / 0.409	2.2 / 0.056	0 / 0.000	111 / 1.819		5.0 / 0.141			0.06				20	78	0	5		USGS
Feb 7 1300	345	46	11.4	95	170	7.5	21 / 1.048	3.3 / 0.268	8.9 / 0.387	1.7 / 0.043	1 / 0.033	96 / 1.573		3.6 / 0.102			0.03				22	66	0	4		USGS
Mar 13 1305	193	51	11.1	99	194	7.5	25 / 1.248	3.8 / 0.312	9.6 / 0.418	1.8 / 0.046	2 / 0.067	109 / 1.787		5.5 / 0.155			0.22				21	78	0	7		USGS
Apr 10 1340	208	55	10.0	94	167	7.5	22 / 1.098	2.8 / 0.232	8.9 / 0.387	1.8 / 0.046	0 / 0.000	102 / 1.672		2.8 / 0.079			0.06				22	66	0	3		USGS
May 8 1250	377	57	9.8	94	123	7.9	16 / 0.798	2.4 / 0.198	6.8 / 0.296	1.4 / 0.036	0 / 0.000	77 / 1.262	1.0 / 0.021	2.4 / 0.068	0.2 / 0.003	0.1 / 0.005	0.09	19	Fe 0.05; Al 0.01; Cu 0.01; Zn 0.03; (a) PO_4 0.00	87[b]	22	50	0	2		USGS
June 12 1340	159	71	9.0	102	160	7.0	23 / 1.148	2.6 / 0.212	7.8 / 0.339	1.6 / 0.041	0 / 0.000	100 / 1.639		3.5 / 0.099			0.00				19	68	0	2		USGS
July 17 1230	34	78	8.9	107	318	7.3	33 / 1.647	14 / 1.129	15 / 0.652	3.0 / 0.077	0 / 0.000	200 / 3.278		7.6 / 0.214			0.22				19	139	0	0.8		USGS
Aug 14 1140	10	77	9.2	109	363	7.2	52 / 2.595	7.4 / 0.609	19 / 0.826	3.2 / 0.084	0 / 0.000	225 / 3.688		9.0 / 0.254			0.11				20	160	0	1		USGS
Sept 18 1210	6.8	75	9.6	112	401	7.7	51 / 2.545	12 / 0.975	22 / 0.957	3.6 / 0.092	0 / 0.000	251 / 4.114	5.8 / 0.121	11 / 0.310	0.6 / 0.010	0.2 / 0.011	0.14	35	Al 0.07; PO_4 0.05; (a)	265[b]	21	176	0	1.0		USGS
Oct 9 1230	23	71	8.8	99	405	7.9	44 / 2.196	15 / 1.244	23 / 1.000	3.7 / 0.095	0 / 0.000	249 / 4.081		13 / 0.367			0.08				22	172	0	0.4		USGS
Nov 14 1300	29	56	10.0	95	409	8.1	45 / 2.25	15 / 1.24	22 / 0.96	3.6 / 0.09	0 / 0.000	250 / 4.10		12 / 0.34			0.09				21	175	0	0.4		USGS
Dec 11 1235	34	50	11.2	99	411	8.1	38 / 1.90	20 / 1.66	22 / 0.96	3.6 / 0.09	0 / 0.000	252 / 4.13		12 / 0.34			0.09				21	178	0	0.4		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chlorids (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tuolumne River below Don Pedro Dam																										
1956																										
July 19 1045	2,190	58	9.4	92	16.2	6.8	2.0 / 0.100	0.2 / 0.020	1.0 / 0.044	0.4 / 0.010	0 / 0.000	12 / 0.197		0.0 / 0.000			0.10				25	6	0	1		USGS
Aug 16 1330	2,190	62	9.6	98	13.6	6.8	1.6 / 0.080	0.2 / 0.020	0.7 / 0.030	0.5 / 0.013	0 / 0.000	9 / 0.148		0.0 / 0.000			0.00				21	5	0	0.4		USGS
Sept 19 1340	2,260	64	6.7	70	18.8	6.8	2.2 / 0.110	0.4 / 0.030	1.0 / 0.044	0.4 / 0.010	0 / 0.000	14 / 0.229	0.0 / 0.000	0.2 / 0.006	0.2 / 0.003	0.0 / 0.000	0.00	4.5	Fe 0.02; Cu 0.01; PO_4 0.00; (a)	16[b]	23	7	0	2		USGS
Oct 10 1345	1,440	64	6.2	65	27.5	6.8	3.0 / 0.15	0.6 / 0.05	1.2 / 0.05	0.6 / 0.02	0 / 0.00	13 / 0.21		0.4 / 0.01			0.02				19	10	0	2		USGS
Nov 15 1445	2,080	57	9.0	87	26.9	6.8	3.0 / 0.15	0.6 / 0.05	1.1 / 0.05	0.5 / 0.01	0 / 0.00	14 / 0.23		0.5 / 0.01			0.04				19	10	0	3	median 2.3 minimum .23 maximum 62	USGS
Dec 13 0740	1,764	52	10.6	96	31.7	6.8	4.0 / 0.20	1.0 / 0.08	1.2 / 0.05	0.5 / 0.01	0 / 0.00	16 / 0.26		0.2 / 0.01			0.04				15	14	1	5		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Tuolumne River at Hickman - Waterford Bridge																			
1955																										
Jan 13 1130	715	47	10.4	88	136	6.9	11 / 0.549	2.8 / 0.231	11 / 0.478	1.3 / 0.033	0 / 0.000	32 / 0.524		20 / 0.564			0.00				37	39	13	15		USGS
Feb 11 1245	1,270	48	12.0	103	93.1	7.2	7.8 / 0.389	2.8 / 0.231	5.8 / 0.252	0.9 / 0.023	0 / 0.000	37 / 0.606		7.8 / 0.220			0.00				28	31	1	2		USGS
Mar 10 1600	690	54	13.0	120	120	8.2	8.8 / 0.439	3.9 / 0.321	9.4 / 0.409	1.3 / 0.033	0 / 0.000	39 / 0.639		15 / 0.423			0.02				34	38	6	2		USGS
Apr 14 1415	114	68	11.5	125	528	8.2	27 / 1.347	12 / 0.973	52 / 2.261	4.9 / 0.125	0 / 0.000	104 / 1.704		106 / 2.990			0.06				48	116	31	2		USGS
May 12 1330	125	77	11.4	136	501	8.4	29 / 1.447	9.6 / 0.793	51 / 2.218	4.9 / 0.125	0 / 0.000	104 / 1.704	3.0 / 0.062	100 / 2.820	0.6 / 0.010	0.2 / 0.011	0.10	40	FO_4 0.15	289[b]	48	112	27	1		USGS
Jun 16 1330	114	75	11.0	128	509	8.4	30 / 1.497	11 / 0.883	53 / 2.305	5.2 / 0.133	0 / 0.000	106 / 1.737		104 / 2.933			0.12				48	119	32	1		USGS
Jul 12 0930	100	75	8.5	100	613	8.1	32 / 1.60	12 / 0.98	65 / 2.83	6.8 / 0.17	0 / 0.00	110 / 1.80		132 / 3.72			0.16				51	129	39	5		USGS
Aug 18 1600	98	78	9.5	114	570	8.0	30 / 1.50	11 / 0.90	59 / 2.57	5.8 / 0.15	0 / 0.00	110 / 1.80		115 / 3.24			0.07				50	120	30	1		USGS
Sep 15 1745	96	71	9.2	103	567	7.9	32 / 1.60	11 / 1.87	57 / 2.48	5.9 / 0.15	0 / 0.00	107 / 1.75	3.6 / 0.07	118 / 3.33	0.7 / 0.01	0.1 / 0.01	0.13	55	Fe 0.04; Al 0.10; Cu 0.01; Zn 0.03; (a)	336[b]	49	123	35	2		USGS
Oct 12 1715	102	67	10.6	114	553	7.7	30 / 1.50	12 / 0.96	61 / 2.65	5.6 / 0.14	0 / 0.00	109 / 1.79		111 / 3.13			0.08				50	123	34	7		USGS
Nov 17 1115	1,558	53	9.1	83	123	7.1	7.6 / 0.379	2.4 / 0.197	11 / 0.478	1.3 / 0.033	0 / 0.000	32 / 0.524		19 / 0.536			0.00				44	29	3	30		USGS
Dec 15 1340	645	50	9.7	86	119	7.1	8.7 / 0.434	3.0 / 0.250	8.9 / 0.387	1.4 / 0.036	0 / 0.000	35 / 0.574		15 / 0.423			0.00				35	34	5	20		USGS
																									median 6.2 minimum .045- maximum 2400	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tuolumne River at Hickman-Waterford Bridge																										
1956																										
Jan 12 1045	7,700	45	11.6	96	60.2	7.1	5.8 / 0.289	2.2 / 0.183	2.2 / 0.096	1.0 / 0.026	0 / 0.000	29 / 0.475		0.0 / 0.000			0.04				16	24	0	35		USGS
Feb 8 1600	3,600	45	11.7	97	77.2	7.3	8.1 / 0.404	2.0 / 0.168	3.3 / 0.144	1.0 / 0.026	0 / 0.000	38 / 0.623		0.0 / 0.000			0.07				19	29	0	15		USGS
Mar 15 1100	1,880	46	12.5	105	84.5	7.3	7.8 / 0.389	3.8 / 0.311	3.8 / 0.165	1.1 / 0.028	0 / 0.000	40 / 0.656		4.8 / 0.135			0.01				18	35	2	4		USGS
Apr 12 1115	1,340	49	11.1	97	74.3	7.1	5.6 / 0.279	2.2 / 0.181	5.1 / 0.222	1.1 / 0.028	0 / 0.000	34 / 0.557		5.8 / 0.164			0.03				31	23	0	3		USGS
May 7 1040	5,600	54	10.8	100	41.9	7.1	4.4 / 0.220	1.5 / 0.120	2.4 / 0.104	0.8 / 0.020	0 / 0.000	25 / 0.410	0.0 / 0.000	2.0 / 0.056	0.3 / 0.005	0.0 / 0.000	0.04	9.2	Fe 0.04; Zn 0.01; PO_4 0.05; (a)	33[b]	22	17	0	6		USGS
June 14 1010	2,040	59	10.1	100	38.3	6.8	4.4 / 0.220	1.2 / 0.100	2.4 / 0.104	0.7 / 0.018	0 / 0.000	21 / 0.344		2.2 / 0.062			0.09				24	16	0	3		USGS
July 19 1330	127	80	10.0	123	455	7.1	26 / 1.297	10 / 0.843	46 / 2.001	4.7 / 0.120	0 / 0.000	102 / 1.672		67 / 2.453			0.09				47	107	23	4		USGS
Aug 16 1130	335	71	9.3	105	146	7.1	9.0 / 0.449	2.9 / 0.235	14 / 0.609	1.7 / 0.043	0 / 0.000	37 / 0.605		24 / 0.677			0.00				46	34	4	2		USGS
Sept 19 1500	549	68	9.4	102	124	7.1	7.9 / 0.394	2.7 / 0.226	12 / 0.522	1.4 / 0.036	0 / 0.000	34 / 0.557	1.5 / 0.031	22 / 0.620	0.5 / 0.008	0.0 / 0.000	0.01	14	Fe 0.01; Al 0.05; Cu 0.01; PO_4 0.05; (a)	79[b]	44	31	3	0.7		USGS
Oct 10 1550	324	67	10.0	108	159	7.5	10 / 0.50	3.4 / 0.28	15 / 0.65	1.7 / 0.04	0 / 0.00	41 / 0.67		28 / 0.79			0.18				44	39	5	2		USGS
Nov 16 0820	854	54	9.7	90	97.6	7.0	6.8 / 0.34	2.2 / 0.18	7.9 / 0.34	1.3 / 0.03	0 / 0.00	32 / 0.52		14 / 0.39			0.03				38	26	0	2		USGS
Dec 13 1045	984	53	10.9	100	75.6	7.1	6.0 / 0.30	2.2 / 0.18	5.4 / 0.23	1.1 / 0.03	0 / 0.00	26 / 0.43		8.5 / 0.24			0.08				31	24	3	3	median 13 minimum .62 maximum 2400	USGS

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TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Tuolumne River at La Grange																
1955																										
Jan 13 1035	582	46	11.2	94	55.1	6.7	5.7 / 0.284	1.8 / 0.146	2.3 / 0.100	0.5 / 0.013	0 / 0.000	27 / 0.442		1.2 / 0.034			0.00				18	22	0	40		USGS
Feb 11 1200	1,690	46	11.8	99	56.6	7.0	5.3 / 0.264	2.1 / 0.176	2.4 / 0.104	0.5 / 0.013	0 / 0.000	29 / 0.475		1.5 / 0.042			0.00				19	22	0	2		USGS
Mar 11 1050	582	52	11.8	107	51.8	7.2	5.5 / 0.274	2.0 / 0.166	2.4 / 0.104	0.7 / 0.018	0 / 0.000	25 / 0.410		1.0 / 0.028			0.03				19	22	2	3		USGS
Apr 14 1330	44	62	11.2	114	53.0	7.7	2.6 / 0.130	3.2 / 0.262	2.4 / 0.104	0.6 / 0.015	0 / 0.000	27 / 0.442		1.0 / 0.028			0.02				20	20	0	2		USGS
May 12 1145	39	68	9.1	99	48.1	7.0	1.6 / 0.080	3.4 / 0.280	2.6 / 0.113	0.7 / 0.018	0 / 0.000	26 / 0.426	3.0 / 0.062	0.5 / 0.014	0.2 / 0.003	0.1 / 0.005	0.00	19	Mn 0.02; (a) PO_4 0.05	44[b]	23	18	0	2		USGS
Jun 16 1230	22	70	9.1	101	48.4	7.2	5.3 / 0.264	1.9 / 0.156	2.2 / 0.096	0.5 / 0.013	0 / 0.000	27 / 0.442		0.5 / 0.014			0.00				18	21	0	4		USGS
Jul 12 1000	8.6	76	8.4	99	45.5	7.1	4.0 / 0.200	1.5 / 0.120	2.8 / 0.122	0.7 / 0.018	0 / 0.000	23 / 0.377		1.2 / 0.034			0.04				27	16	0	1		USGS
Aug 18 1450	23	78	8.5	102	40.3	7.2	3.8 / 0.190	1.3 / 0.110	1.7 / 0.074	0.3 / 0.008	0 / 0.000	21 / 0.344		0.5 / 0.014			0.00				19	15	0	6		USGS
Sep 15 1630	20	72	8.3	95	38.3	7.3	4.5 / 0.225	0.9 / 0.071	1.4 / 0.061	0.5 / 0.013	0 / 0.000	21 / 0.344	0.6 / 0.012	0.0 / 0.000	0.0 / 0.000	0.1 / 0.005	0.00	7.0	Fe 0.01; Cu 0.01; Zn 0.01; (a)	25[b]	16	15	0	2		USGS
Oct 12 1600	23	68	8.4	92	49.4	7.5	3.9 / 0.190	1.9 / 0.158	1.8 / 0.078	0.6 / 0.015	0 / 0.000	24 / 0.393		0.8 / 0.023			0.00				18	17	0	0.8		USGS
Nov 17 1015	556	54	9.2	85	27.1	6.9	3.0 / 0.150	0.5 / 0.040	1.8 / 0.078	0.5 / 0.013	0 / 0.000	16 / 0.262		1.0 / 0.028			0.00				26	10	0	40		USGS
Dec 14 1615	587	49	10.3	90	50.7	6.9	4.9 / 0.245	1.3 / 0.111	2.2 / 0.096	0.8 / 0.020	0 / 0.000	22 / 0.361		1.0 / 0.028			0.07				20	18	0	40		USGS
																									median 4.3 minimum 0.06 maximum 62	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1956							**Tuolumne River at La Grange**																			
Jan 12 0940	7,940	45	12.5	103	56.1	7.1	5.6 / 0.279	2.0 / 0.161	2.2 / 0.096	1.0 / 0.026	0 / 0.000	29 / 0.475		0.5 / 0.014			0.00				17	22	0	35		USGS
Feb 8 1500	2,210	44	12.6	102	65.4	7.3	7.1 / 0.354	2.0 / 0.164	2.6 / 0.113	0.9 / 0.023	0 / 0.000	34 / 0.557		0.0 / 0.000			0.07				17	26	0	15		USGS
Mar 15 1000	1,490	45	12.7	105	63.9	7.3	6.6 / 0.329	2.6 / 0.211	2.2 / 0.096	0.9 / 0.023	0 / 0.000	34 / 0.557		0.8 / 0.023			0.00				15	27	0	8		USGS
Apr 12 1015	1,500	48	11.7	101	40.1	7.3	4.9 / 0.245	0.7 / 0.055	1.8 / 0.078	0.8 / 0.020	0 / 0.000	24 / 0.393		0.0 / 0.000			0.00				20	15	0	7		USGS
May 7 1200	5,920	53	11.6	106	34.3	7.1	4.0 / 0.200	1.0 / 0.080	1.7 / 0.074	0.7 / 0.018	0 / 0.000	21 / 0.344	1.0 / 0.021	0.5 / 0.014	0.1 / 0.002	0.0 / 0.000	0.00	9.0	Fe 0.01; Cu 0.01; Zn 0.03; PO_4 0.05 (a)	28[b]	20	14	0	1	median .28 minimum .12 maximum 230	USGS
June 14 0915	2,180	56	10.9	104	21.1	6.8	2.5 / 0.125	0.2 / 0.015	2.0 / 0.087	0.5 / 0.013	0. / 0.000	14 / 0.229		0.0 / 0.000			0.08				36	7	0	3		USGS

Discontinued in June 1956.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

Region 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tuolumne River at Tuolumne City																										
1955																										
Jan 13 1610	990	47	8.4	71	334	7.0	21 / 1.048	6.0 / 0.492	32 / 1.391	3.1 / 0.079	0 / 0.000	64 / 1.049		63 / 1.777			0.19				46	77	25	35		USGS
Feb 8 1310	1,270	52	10.0	91	331	7.2	20 / 0.998	6.8 / 0.562	32 / 1.391	2.3 / 0.059	0 / 0.000	66 / 1.082		62 / 1.749			0.03				46	78	24	6		USGS
Mar 11 1320	855	61	9.2	93	359	7.2	22 / 1.098	6.3 / 0.522	36 / 1.565	2.9 / 0.074	0 / 0.000	67 / 1.098		72 / 2.031			0.07				48	81	26	3		USGS
Apr 14 1630	145	68	8.7	95	889	7.6	49 / 2.45	17 / 1.40	95 / 4.13	7.4 / 0.19	0 / 0.00	152 / 2.49		195 / 5.50			0.10				51	192	67	3		USGS
May 12 1510	280	78	8.8	106	863	7.9	47 / 2.35	16 / 1.29	95 / 4.13	7.8 / 0.20	0 / 0.00	142 / 2.33	8.1 / 0.17	186 / 5.25	2.5 / 0.04	0.3 / 0.02	0.12	57	Fe 0.03; Al 0.05; Mn 0.005; Pb 0.005; (a) PO_4 0.65	490[b]	52	182	66	5		USGS
Jun 17 0730	300	69	5.9	65	757	7.4	42 / 2.10	15 / 1.24	80 / 3.48	6.6 / 0.17	0 / 0.00	155 / 2.54		151 / 4.26			0.15				50	167	40	3		USGS
Jul 15 0800	260	74	4.7	55	758	7.3	45 / 2.25	14 / 1.19	80 / 3.48	6.3 / 0.16	0 / 0.00	157 / 2.57		150 / 4.23			0.12				49	172	43	20		USGS
Aug 15 1205	275	76	9.4	111	742	7.6	44 / 2.20	14 / 1.14	72 / 3.13	5.4 / 0.14	0 / 0.00	159 / 2.61		146 / 4.12			0.12				47	167	37	4		USGS
Sep 16 0945	275	67	3.9	42	786	7.3	45 / 2.25	15 / 1.24	85 / 3.70	5.8 / 0.15	0 / 0.00	173 / 2.84	9.0 / 0.19	151 / 4.26	1.0 / 0.02	0.2 / 0.01	0.12	44	Fe 0.03; Al 0.02; Cu 0.01; (a)	441[b]	50	174	32	4.0		USGS
Oct 13 0900	295	62	4.3	44	786	6.3	47 / 2.35	14 / 1.17	86 / 3.74	5.9 / 0.15	0 / 0.00	162 / 2.66		155 / 4.37			0.12				50	176	43	5		USGS
Nov 17 1230	650	51	6.5	58	572	7.1	34 / 1.70	10 / 0.84	60 / 2.61	6.1 / 0.16	0 / 0.00	102 / 1.67		121 / 3.41			0.04				49	127	43	35		USGS
Dec 15 0825	525	51	7.5	67	366	7.0	23 / 1.148	7.2 / 0.596	39 / 1.696	3.4 / 0.087	0 / 0.000	66 / 1.082		74 / 2.087			0.00				48	87	33	10		USGS
																									median 1850	
																									minimum 6.2	
																									maximum 7000+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), mangonese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tuolumne River at Tuolumne City																										
1956																										
Jan 12 1205	7,960	46	10.8	90	86.0	7.1	7.3 / 0.364	2.7 / 0.220	4.7 / 0.204	1.4 / 0.036	0 / 0.000	32 / 0.524		6.9 / 0.195			0.01				25	29	3	35		USGS
Feb 9 0845	4,100	45	10.8	89	160	7.1	11 / 0.549	4.9 / 0.399	12 / 0.522	1.5 / 0.038	0 / 0.000	49 / 0.803		20 / 0.564			0.07				35	47	7	30		USGS
Mar 15 1240	2,055	50	11.0	97	184	7.1	12 / 0.599	4.9 / 0.401	15 / 0.652	1.7 / 0.043	0 / 0.000	53 / 0.869		28 / 0.790			0.19				38	50	7	8		USGS
Apr 12 1230	1,610	53	9.8	90	212	7.3	14 / 0.699	3.8 / 0.311	20 / 0.870	1.9 / 0.049	0 / 0.000	52 / 0.852		38 / 1.072			0.06				45	50	7	10		USGS
May 10 1100	4,225	56	9.8	93	74.5	7.1	6.0 / 0.299	1.5 / 0.121	6.2 / 0.270	1.1 / 0.028	0 / 0.000	26 / 0.426	0.0 / 0.000	11 / 0.310	0.2 / 0.003	0.1 / 0.005	0.05	9.6	PO_4 0.00		38	21	0	8		USGS
June 14 1350	1,675	71	7.0	79	418	6.8	30 / 1.497	5.7 / 0.471	42 / 1.827	3.3 / 0.084	0 / 0.000	93 / 1.524		79 / 2.228			0.18				47	98	22	5		USGS
July 18 1300	680	78	16.4	198	757	8.0	48 / 2.40	13 / 1.06	85 / 3.70	5.7 / 0.15	0 / 0.00	154 / 2.52		56 / 1.58			0.14				51	173	47	4		USGS
Aug 15 1330	770	75	7.3	85	486	7.0	29 / 1.447	8.5 / 0.697	50 / 2.175	4.0 / 0.102	0 / 0.000	100 / 1.639		95 / 2.679			0.07				47	107	25	2		USGS
Sept 20 0740	910	68	5.8	63	366	7.1	23 / 1.148	6.0 / 0.492	38 / 1.653	3.0 / 0.077	0 / 0.000	75 / 1.229	4.2 / 0.087	73 / 2.059	1.8 / 0.029	0.1 / 0.005	0.06	20	Fe 0.01; Al 0.02; Cu 0.01; Zn 0.07; PO_4 0.30; (a)	206[b]	49	82	20	2		USGS
Oct 11 0815	815	65	7.0	74	374	7.1	23 / 1.15	6.3 / 0.52	38 / 1.65	3.0 / 0.08	0 / 0.00	77 / 1.26		74 / 2.09			0.10				49	84	21	3		USGS
Nov 16 0925	880	54	8.6	80	318	7.1	20 / 1.00	5.0 / 0.41	31 / 1.35	2.2 / 0.06	0 / 0.00	64 / 1.05		63 / 1.78			0.10				48	70	18	2		USGS
Dec 13 1250	1,325	54	9.5	88	236	7.1	15 / 0.75	5.2 / 0.43	23 / 1.00	1.9 / 0.05	0 / 0.00	57 / 0.93		46 / 1.30			0.00				45	59	12	5	median 2400 minimum 230 maximum 7000+	USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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Region 5

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							equivalents per million																			
							Yuba River at Marysville																			
1955																										
Jan 12 0745	1,080	39	12.2	94	99.0	7.2	12 / 0.599	3.7 / 0.301	2.7 / 0.117	0.5 / 0.013	0 / 0.000	50 / 0.819		1.8 / 0.051			0.11				11	45	4	55		USGS
Feb 8 1400	1,010	47	13.2	112	97.9	8.0	12 / 0.599	3.4 / 0.281	3.2 / 0.139	0.5 / 0.013	0 / 0.000	50 / 0.819		1.0 / 0.028			0.00				13	44	3	8		USGS
Mar 8 1115	1,130	49	11.8	103	101	7.4	12 / 0.599	4.1 / 0.341	3.3 / 0.143	0.5 / 0.013	0 / 0.000	52 / 0.852		1.5 / 0.042			0.00				13	47	4	8		USGS
Apr 5 1030	1,560	59	11.1	109	89.1	7.4	7.9 / 0.394	4.5 / 0.366	2.7 / 0.117	0.4 / 0.010	0 / 0.000	48 / 0.787		0.6 / 0.017			0.03				13	38	0	7		USGS
May 13 0750	5,120	55	10.9	101	61.7	7.2	8.5 / 0.424	1.9 / 0.156	1.8 / 0.078	0.4 / 0.010	0 / 0.000	34 / 0.557	4.6 / 0.096	0.3 / 0.023	0.2 / 0.003	0.1 / 0.005	0.04	12	Fe 0.01; Al 0.07; Cu 0.01; (a)	47[b]	12	29	1	20		USGS
Jun 17 0850	970	64	8.9	93	65.5	7.3	9.8 / 0.489	1.1 / 0.087	2.2 / 0.096	0.6 / 0.015	0 / 0.000	36 / 0.590		0.3 / 0.008			0.00		PO_4 0.05		14	29	0	12		USGS
Jul 15 0740	202	69	8.7	96	99.0	7.3	11 / 0.549	3.8 / 0.311	3.1 / 0.135	0.6 / 0.015	0 / 0.000	50 / 0.819		0.5 / 0.014			0.00				13	43	2	8		USGS
Aug 19 0745	157	70	8.2	91	116	7.3	12 / 0.599	4.9 / 0.401	3.3 / 0.143	0.8 / 0.020	0 / 0.000	62 / 1.016		1.5 / 0.042			0.14				12	50	0	20		USGS
Sep 16 - 0900	57	67	8.7	94	150	7.2	18 / 0.898	5.4 / 0.442	3.7 / 0.161	0.9 / 0.023	0 / 0.000	73 / 1.196	14 / 0.291	1.0 / 0.028	0.2 / 0.003	0.1 / 0.005	0.14	20	Fe 0.06; Al 0.04; Cu 0.01; Zn 0.01; (a)	99[b]	11	67	7	0.8		USGS
Oct 13 1545	92	68	9.7	106	131	7.1	14 / 0.699	6.0 / 0.497	3.7 / 0.161	0.7 / 0.018	0 / 0.000	67 / 1.098		0.3 / 0.008			0.00				12	60	5	3		USGS
Nov 18 0850	490	52	10.8	98	138	7.0	16 / 0.798	4.5 / 0.374	4.2 / 0.183	0.8 / 0.020	0 / 0.000	70 / 1.147		1.5 / 0.042			0.00				13	59	2	10		USGS
Dec 16 0920	803	48	12.1	104	112	6.8	13 / 0.649	3.8 / 0.311	3.6 / 0.157	0.7 / 0.018	0 / 0.000	57 / 0.934		1.5 / 0.042			0.09				14	48	1	30		USGS
																									median 6.2 minimum .23 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

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							Yuba River at Marysville																				
1956																										
Jan 16 1020	33,200	48	12.4	107	52.2	6.8	5.4 / 0.269	1.8 / 0.151	1.6 / 0.070	0.6 / 0.015	0 / 0.000	27 / 0.443		0.5 / 0.014			0.00				14	21	0	220		USGS
Feb 6 1230	4,450	48	12.2	105	68.4	7.2	9.5 / 0.474	1.2 / 0.098	2.4 / 0.104	0.4 / 0.010	0 / 0.000	36 / 0.590		0.0 / 0.000			0.01				15	29	0	50		USGS
Mar 12 1140	3,510	46	12.0	100	75.7	6.8	8.8 / 0.439	2.4 / 0.195	2.6 / 0.113	0.6 / 0.015	0 / 0.000	40 / 0.656		0.0 / 0.000			0.01				15	32	0	20		USGS
Apr 9 1145	4,080	53	11.0	101	71.5	7.0	8.5 / 0.424	2.2 / 0.180	2.3 / 0.100	0.5 / 0.013	0 / 0.000	43 / 0.705		0.0 / 0.000			0.00				14	30	0	7		USGS
May 7 1050	10,200	52	11.5	104	51.5	6.8	6.8 / 0.339	1.5 / 0.121	1.6 / 0.070	0.4 / 0.010	0 / 0.000	31 / 0.508	0.0 / 0.000	1.0 / 0.028	0.0 / 0.000	0.0 / 0.000	0.00	12	Fe 0.12; Cr^{+6} 0.02 Al 0.10; Cu 0.01; Zn 0.02; PO_4 0.00 (a)	38[b]	13	23	0	90		USGS
June 11 1300	5,540	62	10.0	102	46.4	7.3	6.0 / 0.299	1.2 / 0.101	1.5 / 0.065	0.4 / 0.010	0 / 0.000	29 / 0.475		0.4 / 0.011			0.01				14	20	0	30		USGS
July 16 1100	340	70	9.0	100	81.2	7.3	9.6 / 0.479	5.1 / 0.421	2.5 / 0.109	0.7 / 0.018	0 / 0.000	45 / 0.738		0.2 / 0.006			0.00				11	45	0	45		USGS
Aug 13 1030	349	69	8.9	98	107	7.5	13 / 0.649	3.5 / 0.291	2.8 / 0.122	0.9 / 0.023	0 / 0.000	58 / 0.951		0.0 / 0.000			0.00				11	47	0	9		USGS
Sept 17 1040	403	69	9.0	99	117	7.3	14 / 0.699	5.1 / 0.421	3.7 / 0.161	1.0 / 0.026	0 / 0.000	67 / 1.098	7.7 / 0.160	0.8 / 0.023	0.0 / 0.000	0.1 / 0.005	0.02	17	Al 0.02; Cu 0.04; PO_4 0.05; (a)	82[b]	12	56	1	15		USGS
Oct 15 1110	No Record	62	9.9	101	131	7.3	16 / 0.798	4.2 / 0.342	3.7 / 0.161	0.7 / 0.018	0 / 0.000	73 / 1.196		1.3 / 0.037			0.00				12	57	0	2		USGS
Nov 21 1220	"	50	11.4	101	112	6.8	13 / 0.65	4.3 / 0.35	2.8 / 0.12	0.7 / 0.02	0 / 0.00	61 / 1.00		1.8 / 0.05			0.00				11	50	0	2		USGS
Dec 10 1115	"	44	12.3	100	115	7.3	13 / 0.65	4.5 / 0.37	3.2 / 0.14	0.8 / 0.02	0 / 0.00	66 / 1.08		1.0 / 0.03			0.04				12	51	0	1		USGS
																									median 6.2	
																									minimum .62	
																									maximum 620	

Note: Flows not published, subject to revision

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

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d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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							equivalents per million																			
							Yuba River near Smartville																			
1955																										
Jan 11 1620	791	43	11.4	91	91.9	7.4	12 / 0.599	2.6 / 0.211	2.4 / 0.104	0.4 / 0.010	0 / 0.000	48 / 0.787		1.5 / 0.042			0.16				11	40	1	9		USGS
Feb 8 1415	571	46	12.5	104	93.0	7.6	11 / 0.549	3.5 / 0.291	3.0 / 0.130	0.5 / 0.013	0 / 0.000	48 / 0.787		1.5 / 0.042			0.02				13	42	3	5		USGS
Mar 8 0945	580	43	11.7	94	96.4	7.3	12 / 0.599	3.4 / 0.281	3.2 / 0.139	0.6 / 0.015	0 / 0.000	49 / 0.803		1.5 / 0.042			0.00				13	44	4	3		USGS
Apr 5 0830	560	48	11.3	97	83.8	7.4	7.0 / 0.349	4.9 / 0.399	2.6 / 0.113	0.6 / 0.015	0 / 0.000	46 / 0.754		0.6 / 0.017			0.00				13	37	0	2		USGS
May 12 1600	No Record	56	10.5	100	61.5	7.3	7.2 / 0.359	2.2 / 0.181	2.8 / 0.122	0.5 / 0.013	0 / 0.000	35 / 0.574	3.0 / 0.062	1.0 / 0.028	0.2 / 0.003	0.2 / 0.011	0.04	12	Fe 0.04; Al 0.06; (a) FO_4 0.00	46[b]	18	27	0	20		USGS
Jun 16 1510	736	69	9.4	104	59.6	7.5	7.2 / 0.359	2.7 / 0.221	2.2 / 0.096	0.5 / 0.013	0 / 0.000	32 / 0.524		0.0 / 0.000			0.00				14	29	3	0.0		USGS
Jul 14 1345	No Record	71	8.5	96	74.6	7.4	8.7 / 0.434	2.7 / 0.226	2.4 / 0.104	0.5 / 0.013	0 / 0.000	42 / 0.688		0.5 / 0.014			0.01				13	33	0	0.6		USGS
Aug 18 1515	"	76	8.1	96	101	7.6	13 / 0.649	3.5 / 0.291	3.0 / 0.130	0.8 / 0.020	0 / 0.000	62 / 1.016		1.8 / 0.051			0.00				12	47	0	15		USGS
Sep 15 1500	206	74	9.1	105	126	7.4	18 / 0.898	2.6 / 0.210	3.5 / 0.152	0.9 / 0.023	0 / 0.000	66 / 1.082	8.2 / 0.171	1.5 / 0.042	0.1 / 0.002	0.1 / 0.005	0.00	17	Zn 0.01; (a) Cu 0.01	85[b]	12	55	1	0.3		USGS
Oct 13 1430	266	67	10.0	108	136	7.2	16 / 0.798	5.3 / 0.434	4.1 / 0.178	0.7 / 0.018	0 / 0.000	72 / 1.180		1.8 / 0.051			0.03				12	62	3	2		USGS
Nov 17 1515	618	51	11.3	101	136	7.3	17 / 0.898	3.8 / 0.312	4.3 / 0.187	0.7 / 0.018	0 / 0.000	70 / 1.147		2.1 / 0.059			0.00				14	58	1	4		USGS
Dec 15 1500	710	46	11.7	98	103	6.8	12 / 0.599	3.9 / 0.321	3.0 / 0.130	0.6 / 0.015	0 / 0.000	55 / 0.901		2.5 / 0.070			0.03				12	46	1	20		USGS
																									median 6.2 minimum .62 maximum 2400	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), mongonese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 14
ANALYSES OF SURFACE WATER

REGION 5

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							parts per million / equivalents per million																			
Yuba River near Smartville																										
1956																										
Jan 16 1230	31,900	48	12.7	109	47.4	6.8	5.2 / 0.259	1.7 / 0.141	1.5 / 0.065	0.5 / 0.013	0 / 0.000	26 / 0.426		0.2 / 0.006			0.03				14	20	0	150		USGS
Feb 6 1410	3,779	44	12.2	99	61.6	6.8	8.1 / 0.404	1.4 / 0.114	2.1 / 0.091	0.4 / 0.010	0 / 0.000	34 / 0.557		0.0 / 0.000			0.02				15	26	0	15		USGS
Mar 12 1330	3,169	46	12.1	101	70.3	7.1	8.1 / 0.404	2.3 / 0.192	2.3 / 0.100	0.3 / 0.008	0 / 0.000	39 / 0.639		0.0 / 0.000			0.00				14	30	0	9		USGS
Apr 9 1400	3,606	53	11.1	102	66.4	6.8	8.8 / 0.439	1.6 / 0.131	2.0 / 0.087	0.5 / 0.013	0 / 0.000	40 / 0.656		0.0 / 0.000			0.01				13	28	0	3		USGS
May 7 1250	8,890	51	11.1	99	49.7	6.8	6.4 / 0.319	2.0 / 0.161	1.7 / 0.074	0.5 / 0.013	0 / 0.000	30 / 0.492	3.0 / 0.062	0.8 / 0.023	0.0 / 0.000	0.0 / 0.000	0.00	12	Fe 0.07; Al 0.05; Cr+6 0.01; Zn 0.04; PO_4 0.00; (a)	41[b]	13	24	0	60		USGS
June 11 1345	5,336	59	10.3	101	45.2	7.3	5.7 / 0.284	1.3 / 0.108	1.4 / 0.061	0.5 / 0.013	0 / 0.000	28 / 0.459		0.4 / 0.011			0.02				13	20	0	3		USGS
July 16 1230	775	68	9.1	99	60.6	7.3	7.4 / 0.369	1.6 / 0.131	2.2 / 0.096	0.8 / 0.020	0 / 0.000	37 / 0.606		0.3 / 0.008			0.00				15	25	0	0.7		USGS
Aug 13 1145	772	71	8.8	99	92.8	7.5	13 / 0.649	2.1 / 0.171	2.6 / 0.113	0.9 / 0.023	0 / 0.000	54 / 0.885		0.0 / 0.000			0.00				12	41	0	0.8		USGS
Sept 17 1200	661	72	9.4	107	113	6.9	14 / 0.699	4.1 / 0.341	3.3 / 0.144	0.7 / 0.018	0 / 0.00	66 / 1.082	3.8 / 0.079	1.0 / 0.028	0.0 / 0.00	0.1 / 0.005	0.04	18	Cu 0.02; PO_4 0.0; (a)		12	52	0	2		USGS
Oct 15 1255	639	65	9.9	104	124	7.5	16 / 0.798	3.4 / 0.282	3.7 / 0.161	0.9 / 0.023	0 / 0.000	70 / 1.147		1.2 / 0.034			0.00				13	54	0	0.7		USGS
Nov 20 1330	637	51	12.4	111	102	6.8	12 / 0.60	4.1 / 0.34	2.8 / 0.12	0.7 / 0.02	0 / 0.00	56 / 0.92		1.8 / 0.05			0.00				11	47	1	5		USGS
Dec 10 1240	645	45	13.3	110	107	7.7	13 / 0.65	4.3 / 0.35	2.9 / 0.13	0.8 / 0.02	0 / 0.00	63 / 1.03		1.0 / 0.03			0.09				11	50	0	2	median 2.3 minimum .23 maximum 2400	USGS

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Lake Tahoe at Tahoe Vista																			
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1220		51	9.4	84	95.9	7.5	8.9 / 0.444	2.9 / 0.236	5.9 / 0.257	1.8 / 0.046	0 / 0.000	58 / 0.951	1.8 / 0.037	1.2 / 0.034	0.2 / 0.003	0.1 / 0.005	0.07	13	Al 0.02; Zn 0.01; PO_4 0.25; (a)	65[b]	26	34	0	1		USGS
Jun 13 1215		61	9.3	94	95.1	7.6	9.2 / 0.459	2.6 / 0.213	6.3 / 0.274	1.8 / 0.046	0 / 0.000	55 / 0.901		2.0 / 0.056			0.00				28	34	0	0.2		USGS
Jul 11 1230		61	9.0	90	93.6	7.0	9.3 / 0.464	2.4 / 0.196	6.1 / 0.265	1.9 / 0.049	0 / 0.000	54 / 0.885		2.2 / 0.062			0.04				27	33	0	0.3		USGS
Aug 15 1330		67	8.0	86	94.0	7.4	9.2 / 0.459	3.4 / 0.281	5.9 / 0.257	1.8 / 0.046	0 / 0.000	57 / 0.934		2.2 / 0.062			0.05				25	37	0	6		USGS
Sep 12 1350		69	8.3	91	92.8	7.7	9.2 / 0.459	2.2 / 0.131	6.0 / 0.261	1.6 / 0.041	0 / 0.000	54 / 0.885	2.0 / 0.042	1.8 / 0.051	0.2 / 0.003	0.0 / 0.000	0.06	13	Al 0.01; (a)	63[b]	28	32	0	0.2		USGS
Oct 10 1230		54	8.6	80	96.6	7.2	3.6 / 0.429	2.8 / 0.231	6.0 / 0.261	1.9 / 0.049	0 / 0.000	56 / 0.918		1.7 / 0.048			0.05				27	33	0	1.0		USGS
Nov 14 1530		43	10.0	80	97.0	6.8	9.3 / 0.464	2.6 / 0.216	6.8 / 0.296	1.8 / 0.046	0 / 0.000	57 / 0.934		0.8 / 0.023			0.01				29	34	0	0.7		USGS
Dec	Not sampled																									
																									median .22 minimum .045- maximum 130	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Lake Tahoe at Tahoe Vista																			
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 11 0830		45	10.0	83	91.7	6.8	8.8 / 0.439	3.2 / 0.261	6.3 / 0.274	1.8 / 0.046	0 / 0.000	56 / 0.918	2.0 / 0.042	2.2 / 0.062	0.0 / 0.000	0.1 / 0.005	0.01	13	Al 0.01; Cu 0.01; (a) PO_4 0.00	65[b]	27	35	0	0.4		USGS
June 15 0715		50	8.9	78	92.3	7.9	10 / 0.499	2.0 / 0.161	5.9 / 0.257	1.8 / 0.046	0 / 0.000	56 / 0.918		0.2 / 0.006			0.05				27	33	0	0.5		USGS
July 20 0930		66	7.9	85	91.7	7.7	10 / 0.499	1.8 / 0.145	5.9 / 0.257	1.8 / 0.046	0 / 0.000	56 / 0.918		0.5 / 0.014			0.06				27	32	0	2		USGS
Aug 16 1430		67	8.0	87	93.1	7.9	8.8 / 0.439	2.7 / 0.221	6.1 / 0.265	1.8 / 0.046	0 / 0.000	57 / 0.934		1.3 / 0.037			0.00				27	33	0	0.1		USGS
Sept 21 1045		61	8.4	85	93.2	6.9	9.6 / 0.479	2.1 / 0.169	6.1 / 0.265	1.9 / 0.049	0 / 0.000	56 / 0.918	0.0 / 0.000	1.3 / 0.037	0.0 / 0.000	0.1 / 0.005	0.00	14	(a)	63	28	32	0	2		USGS
Oct 18 1520		55	8.5	80	93.7	7.5	9.4 / 0.47	2.6 / 0.21	5.9 / 0.26	1.6 / 0.04	0 / 0.00	56 / 0.92		2.3 / 0.06			0.07				27	34	0	0.4		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median .34 minimum .045 - maximum 62	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							(equivalents per million)																			
							Lake Tahoe at Tahoe City																			
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1300		57	9.7	93	95.3	7.8	11 / 0.549	1.6 / 0.131	5.9 / 0.257	1.8 / 0.046	0 / 0.000	54 / 0.885	4.1 / 0.085	1.2 / 0.034	0.5 / 0.008	0.1 / 0.005	0.06	11	Al 0.03; Zn 0.05; PO_4 0.00; (a)	64[b]	26	34	0	1		USGS
Jun 13 1250		60	9.0	90	94.7	7.4	9.6 / 0.479	2.1 / 0.173	6.0 / 0.261	1.8 / 0.046	0 / 0.000	56 / 0.918		2.0 / 0.056			0.00				27	33	0	0.0		USGS
Jul 11 1300		60	8.5	85	93.6	7.3	9.8 / 0.489	2.1 / 0.171	5.6 / 0.244	1.8 / 0.046	0 / 0.000	55 / 0.901		1.0 / 0.028			0.07				26	33	0	0.3		USGS
Aug 15 1415		67	8.2	89	94.2	7.6	9.2 / 0.459	2.7 / 0.221	6.1 / 0.265	1.8 / 0.046	0 / 0.000	55 / 0.901		2.5 / 0.071			0.00				27	34	0	6		USGS
Sep 12 1440		68	8.1	88	92.8	6.8	9.4 / 0.469	2.1 / 0.171	6.0 / 0.261	1.7 / 0.043	0 / 0.000	54 / 0.885	0.0 / 0.000	1.5 / 0.042	0.2 / 0.003	0.0 / 0.000	0.00	14	Al 0.01; (a)	62[b]	28	32	0	0.3		USGS
Oct 10 1145		53	9.2	84	94.7	7.0	8.3 / 0.414	2.7 / 0.226	5.9 / 0.257	1.8 / 0.046	0 / 0.000	52 / 0.852		1.2 / 0.034			0.04				27	32	0	2		USGS
Nov 14 1610		40	10.0	77	92.7	7.2	9.2 / 0.459	1.9 / 0.157	5.8 / 0.252	1.8 / 0.046	0 / 0.000	50 / 0.820		0.1 / 0.003			0.00				28	31	0	2		USGS
Dec	Not sampled																									
																									median .14 minimum .045- maximum 6.2	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Lake Tahoe at Tahoe City																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 1515		48	10.0	86	91.4	6.8	8.9 / 0.444	2.9 / 0.236	6.1 / 0.265	1.7 / 0.043	0 / 0.000	56 / 0.918	2.0 / 0.042	1.8 / 0.051	0.0 / 0.000	0.1 / 0.005	0.00	12	Al 0.02; Cu 0.01; (a) PO_4 0.00	64[b]	27	34	0	0.7		USGS
June 14 1500		50	9.2	81	92.1	7.3	10 / 0.499	2.0 / 0.161	5.9 / 0.257	1.8 / 0.046	0 / 0.000	56 / 0.918		1.0 / 0.028			0.06				27	33	0	0.6		USGS
July 19 1340		67	7.5	81	91.8	7.5	10 / 0.499	1.8 / 0.145	5.8 / 0.252	1.8 / 0.046	0 / 0.000	56 / 0.918		0.7 / 0.020			0.04				27	32	0	1		USGS
Aug 16 1400		65	8.2	87	91.6	7.4	8.9 / 0.444	2.4 / 0.196	6.0 / 0.261	1.8 / 0.046	0 / 0.000	55 / 0.901		1.5 / 0.042			0.00				28	32	0	0.2		USGS
Sept 20 1420		61	8.8	89	112	6.9	10 / 0.499	2.7 / 0.221	9.8 / 0.426	1.9 / 0.049	7 / 0.233	55 / 0.901	0.0 / 0.000	1.7 / 0.048	0.0 / 0.000	0.1 / 0.005	0.00	35	As 0.01; (a)	95[b]	36	36	0	0.4		USGS
Oct 18 1445		55	8.7	82	92.5	7.7	9.3 / 0.46	2.9 / 0.24	5.6 / 0.24	1.7 / 0.04	0 / 0.00	56 / 0.92		1.7 / 0.05			0.05				24	35	0	0.3		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median .42 minimum .045 - maximum 23	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Lake Tahoe at Bijou														
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1030		51	9.3	83	99.2	7.5	9.2 / 0.464	2.4 / 0.196	5.9 / 0.257	1.8 / 0.046	0 / 0.000	54 / 0.885	2.1 / 0.044	1.0 / 0.028	0.2 / 0.003	0.0 / 0.000	0.00	13	Fe 0.005; Al 0.005; Pb 0.02; (a)	63[b]	27	33	0	1		USGS
Jun 13 1015		65	7.8	82	92.2	7.4	9.2 / 0.459	1.6 / 0.133	6.1 / 0.265	1.7 / 0.042	0 / 0.000	50 / 0.819		1.0 / 0.028			0.00		PO_4 0.00		29	30	0	0.7		USGS
Jul 11 1030		62	7.8	79	108	7.4	9.8 / 0.489	1.8 / 0.151	6.7 / 0.291	2.1 / 0.054	0 / 0.000	56 / 0.918		2.0 / 0.056			0.05				30	32	0	1		USGS
Aug 15 1145		66	8.0	85	97.0	7.4	9.6 / 0.479	3.2 / 0.261	6.2 / 0.270	1.9 / 0.049	0 / 0.000	56 / 0.918		3.2 / 0.090			0.00				25	37	0	20		USGS
Sep 12 1200		65	7.3	77	93.0	7.5	9.7 / 0.484	1.7 / 0.136	6.0 / 0.261	1.7 / 0.043	0 / 0.000	55 / 0.901	0.0 / 0.000	1.5 / 0.042	0.2 / 0.003	0.0 / 0.000	0.00	14	Al 0.05; Cu 0.01; Zn 0.01; (a)	62[b]	28	31	0	0.3		USGS
Oct 10 1010		53	8.2	75	91.0	7.2	8.9 / 0.444	2.8 / 0.232	5.8 / 0.252	1.6 / 0.046	0 / 0.000	57 / 0.934		1.7 / 0.048			0.25				26	34	0	0.5		USGS
Nov 14 1400		34	11.4	80	93.3	7.2	9.4 / 0.469	1.8 / 0.151	5.9 / 0.257	1.7 / 0.043	0 / 0.000	53 / 0.869		0.4 / 0.011			0.00				28	31	0	9		USGS
Dec	Not sampled																									
																									median .06 minimum .045- maximum 6.2	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{oo}{ooo}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Lake Tahoe at Bijou														
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 11 1000		46	9.9	83	84.6	6.8	8.4 / 0.419	2.4 / 0.201	5.6 / 0.244	1.9 / 0.049	0 / 0.000	52 / 0.852	1.0 / 0.021	1.9 / 0.054	0.0 / 0.000	0.1 / 0.005	0.05	12	Cu 0.02; (a) PO_4 0.00	59[b]	27	31	0	0.6		USGS
June 15 1020		54	8.5	79	89.3	7.3	9.2 / 0.459	2.0 / 0.161	5.8 / 0.252	1.8 / 0.046	0 / 0.000	53 / 0.869		1.0 / 0.028			0.00				27	31	0	0.6		USGS
July 20 0730		67	7.7	83	90.2	7.5	9.3 / 0.464	2.2 / 0.184	6.0 / 0.261	1.8 / 0.046	0 / 0.000	54 / 0.885		1.5 / 0.042			0.14				27	32	0	0.4		USGS
Aug 17 0910		64	7.4	77	90.8	7.5	8.5 / 0.424	2.6 / 0.216	6.0 / 0.261	1.8 / 0.046	0 / 0.000	55 / 0.901		1.3 / 0.037			0.00				28	32	0	0.2		USGS
Sept 21 1200		61	8.3	84	91.3	6.9	8.3 / 0.439	2.2 / 0.181	6.1 / 0.265	1.8 / 0.046	0 / 0.000	55 / 0.901	0.0 / 0.000	1.5 / 0.042	0.0 / 0.000	0.1 / 0.005	0.00	14	Al 0.03; (a)	62[b]	28	31	0	0.3		USGS
Oct 19 0830		50	8.3	73	95.1	7.5	9.6 / 0.48	2.4 / 0.20	6.1 / 0.27	1.7 / 0.04	0 / 0.00	57 / 0.93		2.4 / 0.07			0.01				27	34	0	0.2		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median .42 minimum .06 maximum 620	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
Mojave River near Victorville																										
1955																										
Jan 11 1745	57	46	10.8	90	408	8.0					0 / 0.00	185 / 3.03		23 / 0.64			0.02				34	133		5-		DWR
Feb 8 1845	45	50	10.0	88	377	8.4					5 / 0.17	149 / 2.44		24 / 0.67			0.04				35	135		5-		DWR
Mar 8 1815	Est 40	59	9.2	91	474	8.2					10 / 0.33	146 / 2.39		33 / 0.93			0.10				35	147		5-		DWR
Apr 4 1730	Est 30	57	9.0	87	461	8.2					0 / 0.00	173 / 2.84		31 / 0.87			0.08				37	143		5-		DWR
May 9 1740	27	68	8.4	92	412	8.4	36 / 1.80	13 / 1.07	41 / 1.78	2.3 / 0.06	0 / 0.00	185 / 3.04	40 / 0.83	30 / 0.85	1.0 / 0.02	0.5 / 0.03	0.08	25		260	38	144	0	5-		DWR
Jun 7 1715	22	82	6.0	76	476	8.2					5 / 0.17	171 / 2.80		31 / 0.87			0.06				36	145		5-		DWR
Jul 11 1810	17	73	7.0	81	421	8.3					2 / 0.07	163 / 2.67		33 / 0.93			0.06				35	148		5-		DWR
Aug 10 1800	16	77	6.8	81	416	8.1						159 / 2.61		33 / 0.93			0.0				34	143		6		DWR
Sep 13 1745	18	73	7.8	90	459	8.2	43 / 2.15	7.9 / 0.65	38 / 1.65	2.2 / 0.056	0 / 0.00	166 / 2.72	45 / 0.94	32 / 0.90	0.5 / 0.008	0.4 / 0.021	0.02	30		276	37	140	4	5-		DWR
Oct 10 1235	26	73	7.4	85	454	8.0						166 / 2.72		32 / 0.90			0.16				37	141		5-		DWR
Nov 7 1700	30	59	8.0	79	456	8.0					0 / 0.00	178 / 2.92		33 / 0.93			0.16				35	145		5-		DWR
Dec 12 1300	35	57	9.2	89	440	8.2					0 / 0.00	163 / 2.67		30 / 0.85			0				34	145		5-		DWR
																									median 18	
																									minimum 0.5	
																									maximum 700	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by e
Mojave River near Victorville																										
1956																										
Jan 10 1730	39	52	8.6	78	520	8.0					5 / 0.17	156 / 2.56		31 / 0.87			0.05				34	137		-5		DWR
Feb 15 1830	42	50	8.8	78	432	8.0					0 / 0.00	159 / 2.61		28 / 0.79			0.14				34	137		-5		DWR
Mar 6 1730	32	50	9.0	79	476	8.1					0 / 0.00	173 / 2.84		34 / 0.96			0.33				35	149		-5		DWR
Apr 11 0900	34	52	10.0	90	467	8.0					0 / 0.00	173 / 2.84		35 / 0.99			0.20				32	149		-5		DWR
May 15 1030	26	70	8.5	96	461	8.0	36 / 1.80	15 / 1.23	38 / 1.65	2.6 / 0.067	0.0 / 0.00	176 / 2.88	45 / 0.93	33 / 0.93	1.75 / 0.028	0.5 / 0.026	0.06	20	PO_4 0.1; (a)	280[b]	35	152	8	-5		DWR
June 12 1730	18	77	6.4	77	464	8.1					0 / 0.00	181 / 2.97		33 / 0.93			0.07				34	147		-5		DWR
July 10 1700	13	81	7.6	94	491	8.1					0 / 0.00	185 / 3.03		36 / 1.02			0.03				35	168		-5		DWR
Aug 7 1705	17	81	7.2	89	489	8.0					0 / 0.00	185 / 3.03		35 / 0.99			0.00				36	156		-5		DWR
Sept 13 0900	18	64	8.2	86	480	7.8	44 / 2.20	11 / 0.90	40 / 1.74	1.6 / 0.041	0 / 0.00	188 / 3.08	47 / 0.97	34 / 0.96	1.0 / 0.016	0.5 / 0.026	0.05	25	PO 0.16; (a)	312	36	155	1	-5		DWR
Oct 10 1300	21	72	7.4	84	485	7.9					0 / 0.00	173 / 2.84		34 / 0.96			0.10				35	158		-5		DWR
Nov 9 1050	28	60	7.0	70	467	8.3					0 / 0.00	188 / 3.08		32 / 0.90			0.09				36	152		7		DWR
Dec 11 1800	35	54	8.8	81	446	8.0					0 / 0.00	181 / 2.97		30 / 0.85			0.10				35	147		-5	median 14.6 minimum .45 - maximum 7000	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.0/0.00 except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Susan River at Susanville																										
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 1530	106	55	9.6	90	94.	7.5	11 / 0.549	3.1 / 0.251	3.8 / 0.165	1.1 / 0.028	0 / 0.000	58 / 0.951	1.6 / 0.033	0.8 / 0.023	0.4 / 0.006	0.2 / 0.011	0.00	23	Fe 0.2; Al 0.2; PO_4 0.05; (a)	74[b]	17	40	0	3		USGS
Jun 14 1420	24	62	7.9	80	126	7.7	13 / 0.649	4.9 / 0.401	4.6 / 0.200	1.4 / 0.036	0 / 0.000	78 / 1.278		0.1 / 0.003			0.01				16	52	0	0.8		USGS
Jul 12 1540	5.6	73	7.3	84	163	7.4	15 / 0.749	8.9 / 0.731	6.0 / 0.261	2.0 / 0.051	0 / 0.000	105 / 1.721		0.0 / 0.000			0.00				15	74	0	0.8		USGS
Aug 16 1400	2.6	71	8.0	90	198	7.8	10 / 0.499	16 / 1.301	6.8 / 0.296	2.5 / 0.064	0 / 0.000	132 / 2.163		0.5 / 0.014			0.00				14	90	0	2		USGS
Sep 13 1415	3.1	62	8.4	86	192	7.6	18 / 0.898	10 / 0.822	5.8 / 0.252	2.7 / 0.069	0 / 0.000	126 / 2.065	0.9 / 0.000	0.0 / 0.000	0.2 / 0.003	0.0 / 0.000	0.00	41	Fe 0.10; Al 0.02; (a) Cu 0.01	140[b]	12	86	0	1		USGS
Oct 11 1300	5.5	49	9.5	83	178	7.4	17 / 0.848	8.9 / 0.736	6.2 / 0.270	2.5 / 0.064	0 / 0.000	116 / 1.901		0.3 / 0.008			0.00				14	79	0	3		USGS
Nov 15 1445	6.2	35	11.1	80	178	6.8	17 / 0.848	8.7 / 0.712	6.0 / 0.261	2.1 / 0.054	0 / 0.000	113 / 1.852		0.0 / 0.000			0.00				14	78	0	5		USGS
Dec	Not sampled																									
																									median 22 minimum .62 maximum 620	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[a]
												Susan River at Susanville.														
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 0830	798	44	11.4	93	55.5	6.8	6.4 / 0.319	2.4 / 0.201	2.4 / 0.104	0.6 / 0.015	0 / 0.000	36 / 0.590	2.0 / 0.042	0.8 / 0.023	0.1 / 0.002	0.0 / 0.000	0.00	17	Fe 0.04; Cu 0.01; (a) PO_4 0.00	50[b]	16	26	0	10		USGS
June 13 1415	131	61	8.1	81	77.4	7.4*	8.7 / 0.434	2.9 / 0.240	2.8 / 0.122	0.9 / 0.023	0 / 0.000	51 / 0.836		0.4 / 0.011			0.05				15	34	0	2		USGS
July 18 1515	104	72	7.7	88	67.0	7.7	6.6 / 0.329	3.3 / 0.271	2.6 / 0.113	0.9 / 0.023	0 / 0.000	44 / 0.721		0.1 / 0.003			0.01				16	30	0	2		USGS
Aug 15 1450	54	68	8.0	88	75.0	7.5	8.2 / 0.409	3.3 / 0.271	2.6 / 0.113	0.9 / 0.023	0 / 0.000	50 / 0.820		0.0 / 0.000			0.00				14	34	0	3		USGS
Sept 19 1440	30	58	8.8	86	149	7.0	14 / 0.699	8.3 / 0.681	5.4 / 0.235	2.1 / 0.054	0 / 0.000	98 / 1.606	2.9 / 0.060	0.2 / 0.006	0.0 / 0.000	0.1 / 0.005	0.02	37	Fe 0.06; Cu 0.05; Zn 0.02; (a) PO_4 0.05;	118[b]	14	69	0	5		USGS
Oct 17 1515	13	48	10.2	88	154	7.7	15 / 0.748	7.4 / 0.612	5.8 / 0.252	2.0 / 0.051	0 / 0.000	101 / 1.655		0.2 / 0.006			0.00				15	68	0	1.0		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median 13.6 minimum .23 maximum 230	

*Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Truckee River near Truckee																				
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1400	251	53	9.5	87	63.7	7.3	7.4 / 0.369	1.8 / 0.151	2.8 / 0.122	0.8 / 0.020	0 / 0.000	32 / 0.524	4.9 / 0.102	0.5 / 0.014	0.4 / 0.010	0.1 / 0.005	0.07	17	Al 0.04; Zn 0.02; PO_4 0.00; (a)	52[b]	18	26	0	1		USGS
Jun 13 1330	218	53	9.0	82	47.2	7.4	5.9 / 0.294	1.0 / 0.082	2.4 / 0.104	0.6 / 0.015	0 / 0.000	26 / 0.426		0.0 / 0.000			0.00				21	19	0	0.7		USGS
Jul 11 1400	420	62	8.4	85	91.9	7.4	9.5 / 0.474	2.5 / 0.206	5.9 / 0.257	1.5 / 0.038	0 / 0.000	55 / 0.901		2.2 / 0.062			0.02				26	34	0	1		USGS
Aug 15 1540	431	68	8.2	90	97.1	7.4	9.2 / 0.459	3.7 / 0.301	5.9 / 0.257	1.7 / 0.043	0 / 0.000	56 / 0.918		2.2 / 0.062			0.00				24	38	0	15		USGS
Sep 12 1530	455	57	7.5	81	95.2	7.4	9.0 / 0.449	2.6 / 0.211	5.7 / 0.248	1.6 / 0.041	0 / 0.000	55 / 0.901	1.0 / 0.021	1.5 / 0.042	0.1 / 0.002	0.0 / 0.000	0.00	13	Al 0.05; Zn 0.02; (a)	62[b]	26	33	0	0.7		USGS
Oct 10 1415	224	54	9.0	84	96.4	7.4	9.1 / 0.454	2.5 / 0.206	5.7 / 0.248	1.8 / 0.046	0 / 0.000	56 / 0.918		1.2 / 0.034			0.00				26	33	0	2		USGS
Nov 14 1715	146	39	9.9	75	97.6	7.0	9.8 / 0.489	2.3 / 0.191	6.1 / 0.265	1.8 / 0.046	0 / 0.000	55 / 0.901		3.0 / 0.085			0.08				27	34	0	6		USGS
Dec	Not sampled																									
																									median .96 minimum .045- maximum 23	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Truckee River near Truckee																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 1430	316	44	10.0	81	64.3	6.8	6.8 / 0.339	2.1 / 0.173	2.8 / 0.122	0.8 / 0.020	0 / 0.000	36 / 0.590	2.0 / 0.042	0.5 / 0.014	0.0 / 0.000	0.1 / 0.005	0.01	19	Al 0.07; Cu 0.01; Zn 0.09; (a)	52[b]	19	26	0	2		USGS
June 14 1425	387	46	9.2	77	53.4	7.3	6.9 / 0.344	0.9 / 0.078	2.4 / 0.104	0.9 / 0.023	0 / 0.000	33 / 0.541		0.0 / 0.000			0.05		PO_4 0.00		19	21	0	2		USGS
July 19 1300	114	62	8.4	86	65.7	7.7	6.5 / 0.324	2.1 / 0.176	3.8 / 0.165	1.2 / 0.031	0 / 0.000	39 / 0.639		0.4 / 0.011			0.00				24	25	0	0.4		USGS
Aug 16 1310	96	63	8.0	83	96.3	7.7	9.3 / 0.464	2.7 / 0.218	5.9 / 0.257	1.3 / 0.046	0 / 0.000	56 / 0.918		1.5 / 0.042			0.00				26	34	0	0.2		USGS
Sept. 20 1330	86	58	9.5	93	102	6.9	10 / 0.499	2.9 / 0.241	6.5 / 0.283	2.0 / 0.051	0 / 0.000	59 / 0.967	3.8 / 0.079	2.0 / 0.056	0.0 / 0.000	0.1 / 0.005	0.05	16	Fe 0.01; Al 0.06; Cu 0.01; Zn 0.07; PO_4 0.05; (a)	72[b]	26	37	0	0.8		USGS
Oct 18 1405	325	55	9.0	84	94.3	7.7	9.6 / 0.479	2.0 / 0.165	6.2 / 0.270	1.8 / 0.046	0 / 0.000	57 / 0.934		1.0 / 0.028			0.00				28	32	0	0.8		USGS
Nov	Not Sampled																								median .96	
Dec	Not Sampled																								minimum .13	
																									maximum 21	

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Truckee River near Farad																										
1955																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 9 1530	708	49	9.2	80	65.2	7.4	7.2 / 0.359	1.7 / 0.141	3.2 / 0.139	0.8 / 0.020	0 / 0.000	36 / 0.590	3.0 / 0.062	1.0 / 0.028	0.3 / 0.005	0.2 / 0.011	0.00	17	Fe 0.01; Al 0.02; PO_4 0.05; (a)	52[b]	21	25	0	5		USGS
Jun 14 0900	928	55	9.0	84	49.2	7.4	5.3 / 0.264	1.4 / 0.116	2.9 / 0.126	1.0 / 0.026	0 / 0.000	28 / 0.459		0.3 / 0.008			0.00				24	19	0	0.8		USGS
Jul 12 1000	507	59	9.0	88	94.1	7.4	8.9 / 0.444	3.4 / 0.276	5.7 / 0.248	1.8 / 0.046	0 / 0.000	56 / 0.918		2.0 / 0.056			0.02				24	36	0	2		USGS
Aug 16 0810	507	60	8.4	84	94.2	7.4	9.6 / 0.479	3.2 / 0.261	5.9 / 0.257	1.8 / 0.046	0 / 0.000	57 / 0.934		2.2 / 0.062			0.06				25	37	0	25		USGS
Sep 13 0845	493	59	8.2	81	99.7	7.2	9.4 / 0.469	2.7 / 0.221	5.9 / 0.257	1.9 / 0.049	0 / 0.000	57 / 0.934	2.0 / 0.042	1.8 / 0.051	0.1 / 0.002	0.0 / 0.000	0.00	15	Al 0.01; (a)	67[b]	26	34	0	0.8		USGS
Oct 10 1500	359	51	9.1	81	104	7.2	9.9 / 0.494	2.9 / 0.242	6.0 / 0.261	1.8 / 0.046	0 / 0.000	56 / 0.918		2.0 / 0.056			0.00				25	37	0	1.0		USGS
Nov 15 0915		34	10.7	75	98.3		9.6 / 0.479	2.8 / 0.229	5.6 / 0.244	1.6 / 0.041	0 / 0.000	55 / 0.901		1.0 / 0.028			0.04				25	35	0	2		USGS
Dec	Not sampled																									
																									median 5.6 minimum .06 maximum 230	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 15
ANALYSES OF SURFACE WATER

REGION 6

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Truckee River near Farad																										
1956																										
Jan	Not sampled																									
Feb	Not sampled																									
Mar	Not sampled																									
Apr	Not sampled																									
May 10 1340	2,088	44	10.1	82	62.3	6.9	6.9 / 0.344	2.4 / 0.196	3.1 / 0.135	0.9 / 0.023	0 / 0.000	38 / 0.623	2.0 / 0.042	0.5 / 0.014	0.0 / 0.000	0.1 / 0.005	0.00	21	Al 0.08; Cu 0.01; Zn 0.01; (a) PO_4 0.00	56[b]	19	27	0	4		USGS
June 14 1330	1,197	46	9.5	80	53.9	7.3	6.8 / 0.339	1.0 / 0.083	2.6 / 0.113	1.0 / 0.026	0 / 0.000	34 / 0.557		0.0 / 0.000			0.06				20	21	0	8		USGS
July 19 1140	515	61	8.5	86	66.1	7.5	6.4 / 0.319	2.3 / 0.189	3.4 / 0.148	1.2 / 0.031	0 / 0.000	41 / 0.672		0.5 / 0.014			0.09				22	25	0	0.8		USGS
Aug 16 1220	539	58	8.8	86	71.1	7.7	7.2 / 0.364	2.3 / 0.186	3.3 / 0.144	1.2 / 0.031	0 / 0.000	43 / 0.705		0.5 / 0.014			0.00				20	28	0	0.4		USGS
Sept 20 1240	531	60	9.1	91	82.2	6.8	8.8 / 0.439	2.4 / 0.201	4.1 / 0.178	1.4 / 0.036	0 / 0.000	49 / 0.803	1.0 / 0.021	2.0 / 0.056	0.1 / 0.002	0.1 / 0.005	0.00	20	Fe 0.06; Al 0.08; Cu 0.02; Zn 0.32; PO_4 0.05; (a)	64[b]	21	32	0	5		USGS
Oct 18 1315	556	49	9.7	85	94.5	7.7	9.2 / 0.459	2.6 / 0.217	5.6 / 0.244	1.7 / 0.043	0 / 0.000	57 / 0.934		1.0 / 0.028			0.00				25	34	0	0.8		USGS
Nov	Not Sampled																									
Dec	Not Sampled																								median 6.2 minimum .62 maximum 230	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
Alamo River at International Boundary																										
1955																										
Jan 18 0820	1.82	50	10.8	95	4,255	8.2					0 / 0.00	377 / 6.18		740 / 20.86			0.82				60	879		45		DWR
Feb 15 0800	1.82	54	10.4	97	4,608	8.4					0 / 0.00	366 / 6.00		865 / 24.40			1.32				63	903		5-		DWR
Mar 15 0800	2.0	59	11.4	112	3,922	8.2					0 / 0.00	337 / 5.52		695 / 19.60			0.82				60	816		20		DWR
Apr 12 0800	2.21	61	10.8	109	4,545	8.2					24 / 0.80	293 / 4.80		860 / 24.26			1.64				62	898		25		DWR
May 17 0705	3.15	64	10.4	108	4,082	8.2	214 / 10.68	91 / 7.48	740 / 32.19	10.2 / 0.26	0 / 0.00	349 / 5.72	923 / 19.23	860 / 24.25	1.0 / 0.02	1.0 / 0.05	1.54	12	(a)	3075	64	908	622	8		DWR
Jun 14 0720	2.91	64	7.4	78	4,240	8.1					0 / 0.00	322 / 5.28		810 / 22.84			1.06				61	894		12		DWR
Jul 19 0715	4.76	81	5.8	72	5,128	8.2					12 / 0.40	320 / 5.25		605 / 17.06			1.39				65	1025		15		DWR
Aug 16 0730	1.5	82	5.7	72	5,128	8.2						303 / 4.97		1055 / 29.75			1.46				56	1030		56		DWR
Sep 20 0700	3.41	66	7.4	79	4,566	8.0	202 / 10.08	106 / 8.71	675 / 29.36	9.2 / 0.236	0 / 0.00	312 / 5.12	901 / 18.78	865 / 24.39	5.0 / 0.080	0.8 / 0.042	1.10	10	PO_4 0.08; (a)	3142	61	940	684	11		DWR
Oct 18 0750	4.07	70	7.6	85	5,076	7.8						312 / 5.11		1060 / 29.90			1.40				60	1034		18		DWR
Nov 15 1500	2.32	59	11.8	116	5,682	8.4					6 / 0.20	334 / 5.47		1140 / 32.14			1.68				60	1188		5-		DWR
Dec 20 0745	2.79	50	9.6	85	5,882	8.0					0 / 0.00	390 / 6.39		1160 / 32.72			1.38				63	1184		5		DWR
																									median 62	
																									minimum 6.0	
																									maximum 700+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
Alamo River at International Boundary																										
1956																										
Jan 17 0730	2.55	50	9.8	87	4329	7.8					0 / 0.00	322 / 5.28		795 / 22.42			1.25				61	890		-5		DWR
Feb 7 0725	2.79	46	9.8	83	4694	7.9					0 / 0.00	344 / 5.64		850 / 23.96			1.43				60	945		19		DWR
Mar 13 0740	2.67	46	11.0	92	4525	8.2					0 / 0.00	346 / 5.67		825 / 23.26			1.60				62	893		-5		DWR
Apr 17 0710	3.67	61	10.0	100	4587	8.1					0 / 0.00	326 / 5.34					1.34				62	882		10		DWR
May 8 0600	2.79	64	9.2	96	5319	8.2	217 / 10.83	135 / 11.10	820 / 35.67	11.6 / 0.297	0 / 0.00	334 / 5.48	1090 / 22.70	1090 / 30.74	4.5 / 0.072	1.0 / 0.053	1.84	10	PO_4 0.2	3546[b]	62	1096	822	-5		DWR
June 19 0745	2.44	73	8.0	92	4902	7.8					0 / 0.00	339 / 5.56		993 / 28.00			0.95				55	1061	55	-5		DWR
July 17 0645	2.44	79	4.4	54	5680	7.8					0 / 0.00	373 / 6.11		1150 / 32.43			1.30				63	1119	63	-5		DWR
Aug 14 0635	3.28	81	5.0	62	3745	8.0					0 / 0.00	318 / 5.21		715 / 20.16			1.02				55	814		34		DWR
Sept 18 0650	2.21	75	4.8	56	5348	7.8	246 / 12.28	143 / 11.75	828 / 36.01	14.0 / 0.358	0 / 0.00	359 / 5.88	1089 / 22.68	1140 / 32.15	11.9 / 0.192	1.0 / 0.052	1.44	20	PO_4 0.06; (a)	3826[c]	60	1202	908	40		DWR
Oct	Not Sampled																									
Nov 8 0800	3.67	55	11.4	107	4901	8.0					0 / 0.00	356 / 5.83		935 / 26.37			1.38				59	1081		-5		DWR
Dec 11 1030	2.21	59	11.5	113	4000	8.1					24 / 0.80	281 / 4.61		785 / 22.14			0.92				59	895		15	median 23; minimum 6.0; maximum 620	DWR

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b Determined by addition of analysed constituents

c Gravimetric determination.

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TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million												Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	NC ppm			
Alamo River near Calipatria																									
1955																									
Jan 18 1010	573	48	12.0	103	4,545	8.4					0 / 0.00	246 / 4.03		935 / 26.36			0.30				56	1042		320		DWR
Feb 15 1030	894	54	11.0	102	2,740	8.3					0 / 0.00	190 / 3.11		515 / 14.52			0.30				53	708		400		DWR
Mar 15 1045	979	61	9.6	97	3,333	8.2					0 / 0.00	198 / 3.25		620 / 17.48			0.48				53	780		300		DWR
Apr 12 1030	945	64	8.8	92	3,195	8.2					0 / 0.00	203 / 3.33		574 / 16.19			0.40				54	729		350		DWR
May 17 1010	1,115	70	9.6	107	3,040	7.7	175 / 8.73	84 / 6.90	430 / 18.71	10.6 / 0.27	0 / 0.00	217 / 3.56	629 / 13.11	595 / 16.78	6.0 / 0.10	0.9 / 0.05	0.42	12	(a)	2135	54	782	604	475		DWR
Jun 14 0950	811	70	7.4	82	3,330	8.2					0 / 0.00	215 / 3.52		620 / 17.48			1.00				53	807		400		DWR
Jul 19 1100	977	84	6.6	85	3,210	8.2					10 / 0.33	176 / 2.88		645 / 18.19			0.35				53	763		310		DWR
Aug 16 1045	900	86	6.4	84	2,725	8.3					5 / 0.17	163 / 2.67		560 / 15.80			0.28				47	728		140		DWR
Sep 20 0930	980	70	7.8	87	2,666	8.2	158 / 7.88	76 / 6.25	340 / 14.79	8.9 / 0.228	0 / 0.00	181 / 2.96	599 / 12.48	510 / 14.38	6.0 / 0.096	0.8 / 0.042	0.38	10	PO_4 0.28; (a)	1918	51	707	559	164		DWR
Oct 18 1030	1,164	72	7.6	86	2,762	8.2					18 / 0.60	151 / 2.47		465 / 13.11			0.32				52	682		240		DWR
Nov 15 1700	1,051	57	9.6	93	3,546	8.4					0 / 0.00	211 / 3.46		650 / 18.33			0.65				53	825		200		DWR
Dec 20 1045	784	52	10.0	90	3,558	8.0					0 / 0.00	210 / 3.44		670 / 18.89			0.30				52	871		220		DWR
																								median 700 minimum 60 maximum 24,000	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub. Health (LAOPH), Long Beach Dept. of Pub. Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												Alamo River near Calipatria														
1956																										
Jan 17 1015	718	54	9.6	89	3745	8.3					0 / 0.00	220 / 3.61		765 / 21.57			0.46				54	874		200		DWR
Feb 7 1010	819	50	10.0	88	3559	8.0					0 / 0.00	239 / 3.92		670 / 18.90			0.60				52	830		250		DWR
Mar 13 1005	789	50	9.8	87	3300	8.0					0 / 0.00	205 / 3.36		602 / 16.98			0.42				52	819		300		DWR
Apr 17 1000	1,052	63	8.0	82	3175	8.0					0 / 0.00	209 / 3.43					0.30				51	777		200		DWR
May 8 1115	910	72	7.4	84	3185	8.1	165 / 8.23	96 / 7.89	390 / 16.97	11.0 / 0.282	0 / 0.00	210 / 3.44	674 / 14.05	580 / 16.36	6.8 / 0.110	0.8 / 0.042	0.44	15	PO_4 0.4 ; (a)	2044[b]	51	806	634	320		DWR
June 19 1130	954	79	7.0	86	3012	8.1					0 / 0.00	207 / 3.39		522 / 14.72			0.38				51	732		290		DWR
July 17 1100	1,017	84	7.4	95	3115	8.2					0 / 0.00	212 / 3.47		570 / 16.07			0.27				54	762		350		DWR
Aug 14 1030	978	84	6.8	87.5	3012	8.2					0 / 0.00	190 / 3.11		550 / 15.51			0.29				51	735		450		DWR
Sept 18 1300	1,080	82	7.2	91	2924	8.0	155 / 7.73	82 / 6.74	352 / 15.31	9.7 / 0.248	0 / 0.00	198 / 3.24	616 / 12.83	500 / 14.10	6.8 / 0.110	1.2 / 0.063	0.50	15	PO_4 0.50; (a)	1979	51	724	562	300		DWR
Oct 9 1630	1,183	74			3115	8.1					0 / 0.00	200 / 3.28		565 / 15.93			0.52				53	780		160		DWR
Nov 8 1115	1,023	59	9.6	95	3690	8.1					0 / 0.00	217 / 3.56		665 / 18.75			0.58				53	884		140		DWR
Dec 11 1410	880	50			3773	8.0*					c / 0.00	229 / 3.75		695 / 19.60			0.38				53	901		400	median 620 minimum 230 maximum 7000	DWR
* Lab pH																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determmed by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm c	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
All American Canal Near Pilot Knob																										
1955																										
May 24 1740	6,820	73	8.8	101	1184	8.4	101 / 5.04	31 / 2.55	114 / 4.96	5.3 / 0.14	10 / 0.32	159 / 2.60	337 / 7.02	107 / 3.02	1.0 / 0.02	0.6 / 0.03	0.18	15	(a) Sn 0.0	852	39	380	234	5-		DWR
Oct 1 1645	5,680	77	10.0	119	1200	8.4	99 / 4.94	34 / 2.79	129 / 5.61	5.1 / 0.131	10 / 0.32	137 / 2.24	351 / 7.31	118 / 3.33	1.0 / 0.016	0.4 / 0.021	0.16	15	PO_4 0.26; (a) Sn 0.0	875	42	387	259	5-	median 0.6 minimum .23 maximum 1.3	DWR
1956																										
May 8 0700	6,012	72	8.8	100	1333	8.4	95 / 4.74	41 / 3.37	122 / 5.31	5.0 / 0.128	0	171 / 2.80	365 / 7.60	123 / 3.47	1.6 / 0.027	0.6 / 0.032	0.22	10	(a); Sn 0.0 PO_4 0.0	905	39	405	265	5-		DWR
Sept 18 0750	5,350	82	8.2	103	1353	8.2	99 / 4.94	37 / 3.04	132 / 5.74	4.9 / 0.125	5 / 0.16	154 / 2.52	365 / 7.60	131 / 3.69	0.75 / 0.012	0.7 / 0.037	0.10	15	(a) PO_4 0.0	934	42	399	265	5-	median 3.4 minimum 0.6 maximum 6.2	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

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TABLE 16
ANALYSES OF SURFACE WATER

REGION 7

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											Colorado River at Topock, Arizona															
1955																										
May 23 1515	13,000	66	9.6	102	1109	8.4	96 / 4.79	34 / 2.79	111 / 4.83	5.0 / 0.13	7 / 0.24	163 / 2.68	330 / 6.88	97 / 2.74	2.0 / 0.03	0.6 / 0.03	0.24	15	Sn 0.6 ; (a)	831	38	379	233	5-	median .6	DWR
Sep 30 1830	10,500	66	9.2	98	1120	8.4	99 / 4.94	33 / 2.71	113 / 4.92	5.0 / 0.128	0.0 / 0.0	154 / 2.52	339 / 7.06	99 / 2.79	4.0 / 0.064	0.4 / 0.021	0.16	15	PO_4 0.11; (a) Sn 0.0	805	39	383	257	5-	minimum .23 maximum 2.3	DWR
1956																										
May 30 0800	14,000	63	9.6	99	1229	8.5	103 / 5.14	35 / 2.88	116 / 5.05	5.1 / 0.131	10 / 0.32	168 / 2.76	356 / 7.41	105 / 2.96	2.5 / 0.04	0.7 / 0.037	0.16	15	PO_4 0.0; Sn 0.0; (a)	855	38	397	243	5-		DWR
Oct 17 1410	9,900	69	8.5	94	1295	7.7	116 / 5.79	26 / 2.14	116 / 5.05	5.2 / 0.133	0 / 0.00	160 / 2.76	351 / 7.31	107 / 3.02	3.8 / 0.061	0.7 / 0.037	0.26	10	PO_4 0.0 ; (a)	858	38	396	258	60	median 6.2 minimum 6.2 maximum 6.2	DWR

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b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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ANALYSES OF SURFACE WATER

REGION 7

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Colorado River below Morelos Dam																										
1955																										
May 24 1625	3,530	79	8.0	98	1216	8.4	102 / 5.09	28 / 2.30	120 / 5.22	5.4 / 0.14	12 / 0.40	142 / 2.32	342 / 7.12	107 / 3.02	1.0 / 0.02	0.6 / 0.03	0.16	15	(a) Sn 0.0	850	41	370	234	12		DWR
Oct 1 1530	370	82	7.8	99	1222	8.3	104 / 5.19	34 / 2.79	132 / 5.74	5.3 / 0.136	0.0 / 0.0	178 / 2.92	343 / 7.15	125 / 3.53	4.0 / 0.064	0.4 / 0.021	0.16	15	PO_4 0.03; (a) Sn 0.0	895	41	399	253	16	median 96 minimum 62 maximum 240	DWR
1956																										
May 8 0750	Est. 30	66	8.4	90	1381	8.4	109 / 5.44	38 / 3.12	128 / 5.57	4.8 / 0.123	0.0	215 / 3.52	346 / 7.21	130 / 3.67	1.0 / 0.016	0.5 / 0.026	0.22	15	Sn 0.0; PO_4 0.0; (a)	919	40	428	252	-5		DWR
Sept 18 0955	Est. 30	82	8.2	104	1280	8.4	102 / 5.09	36 / 2.96	118 / 5.13	4.2 / 0.107	0.0 / 0.00	215 / 3.52	325 / 6.77	112 / 3.16	0.25 / 0.004	0.7 / 0.037	0.10	15	PO_4 0.0; (a)	882	39	402	226	-5	median 42 minimum 12 maximum 62	DWR

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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ANALYSES OF SURFACE WATER

REGION 7

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							equivalents per million																			
Colorado River near Blythe																										
1955																										
May 24 1320	Est 11,800	72	9.2	105	1203	8.4	101 / 5.04	31 / 2.55	111 / 4.83	5.0 / 0.13	14 / 0.48	149 / 2.44	330 / 6.87	99 / 2.79	2.5 / 0.04	0.6 / 0.03	0.14	15	(a) Sn 0.0	806	38	380	234	5-		DWR
Oct 1 1130	Est 10,500	73	9.0	104	1233	8.3	100 / 4.99	33 / 2.71	118 / 5.13	5.2 / 0.133	0.0 / 0.0	154 / 2.52	343 / 7.14	106 / 2.99	4.0 / 0.064	0.4 / 0.021	0.16	15	(a) PO_4 0.04 ; Sn 0.0	805	40	385	259	5-	median 2.3 minimum 1.3 maximum 6.2	DWR
1956																										
May 30 1600	9,750	73	9.0	105	1266	8.4	101 / 5.04	35 / 2.88	120 / 5.22	5.1 / 0.131	10 / 0.32	156 / 2.56	364 / 7.58	108 / 3.05	2.0 / 0.032	0.6 / 0.032	0.10	12	(a) PO_4 0.0; Sn 0.0	845	39	396	252	5-		DWR
Oct 17 0815	8,150	70	8.5	95	1191	8.1	101 / 5.04	35 / 2.88	120 / 5.22	5.4 / 0.138	0 / 0.00	161 / 2.64	357 / 7.44	116 / 3.27	2.0 / 0.032	0.3 / 0.042	0.20	10	(a) PO_4 0.0	910	39	396	264	5-	median 6.2 minimum 6.2 maximum 6.2	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

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							Colorado River at Parker Dam																			
1955																										
May 24 1000	13,900	68	9.6	105	1109	8.4	98 / 4.89	31 / 2.55	108 / 4.70	5.0 / 0.13	10 / 0.32	154 / 2.52	325 / 6.77	96 / 2.71	2.0 / 0.03	0.6 / 0.03	0.22	15	(a) Sn 0.0	800	38	372	230	5-		DWR
Oct 1 0830	9,040	73	7.6	83	1181	8.1	102 / 5.09	30 / 2.47	115 / 5.00	5.2 / 0.133	0.0 / 0.0	146 / 2.40	338 / 7.05	101 / 2.85	1.0 / 0.016	0.4 / 0.021	0.14	15	(a) PO_4 0.02; Sn 0.0	820	39	378	258	5-	median 1.46 minimum 0.6 maximum 2.3	DWR
1956																										
May 30 1300	17,200	66	9.0	96	1244	8.4	102 / 5.09	34 / 2.79	120 / 5.22	5.1 / 0.131	10 / 0.32	159 / 2.60	354 / 7.38	105 / 2.96	2.3 / 0.037	0.7 / 0.037	0.16	12	(a) PO_4 0.0; Sn 0.0	850	40	399	253	5-		DWR
Oct 17 1130	9,080	74	7.5	87	1288	7.2	99 / 4.94	36 / 2.96	113 / 4.92	5.2 / 0.133	0 / 0.00	159 / 2.60	360 / 7.49	109 / 3.07	3.4 / 0.054	0.7 / 0.037	0.30	10	(a) PO_4 0.0	881	38	395	265	5-	median .76 minimum .23 maximum 1.3	DWR

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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Colorado River at Yuma, Arizona																										
1955																										
May 24 1700	2,520	75	8.8	103	1184	8.4	102 / 5.09	33 / 2.71	123 / 5.35	5.4 / 0.14	10 / 0.32	163 / 2.68	348 / 7.26	115 / 3.24	1.5 / 0.02	0.6 / 0.03	0.18	15	(a) Sn 0.0	895	40	390	240	32		DWR
Oct 1 1625	815	81	8.6	106	1435	8.4	109 / 5.44	35 / 2.88	148 / 6.44	5.5 / 0.141	0.0 / 0.00	181 / 2.96	367 / 7.64	145 / 4.09	1.5 / 0.024	0.4 / 0.021	0.18	12	PO_4 0.04; (a) Sn 0.0	955	43	416	268	28	median 4.2 minimum 2.3 maximum 6.2	DWR
1956																										
May 8 0820	416	70	8.4	95	1582	8.4	111 / 5.54	45 / 3.70	1.56 / 6.79	5.4 / 0.138	0	220 / 3.60	380 / 7.91	176 / 4.96	1.50 / 0.024	0.6 / 0.032	0.56	15	PO_4 0.03; (a) Sn 0.00	1050	42	462	282	-5		DWR
Sept 18 0810	834	81	7.8	97	1359	8.1	107 / 5.34	40 / 3.29	145 / 6.31	5.3 / 0.136	0.0	193 / 3.16	379 / 7.90	154 / 4.34	2.0 / 0.032	0.8 / 0.042	0.12	15	PO_4 0.0; (a)	1002	42	432	274	-5	median 42 minimum 13 maximum 130	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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							Lake Havasu at Metropolitan Water District Intake																			
1955																										
Jan 11		52			1065	8.2					0 / 0.00	156 / 2.56		81 / 2.28							38	336				MWD
Feb 27		50			1070	8.1					0 / 0.00	161 / 2.64		80 / 2.26							38	337				MWD
Mar 22		58			1080	8.3					1 / 0.03	154 / 2.52		83 / 2.34							38	346				MWD
Apr	Not sampled																									
May 3		68			1130	8.5	92 / 4.59	30 / 2.51	106 / 4.61	4 / 0.10	4 / 0.13	150 / 2.46	318 / 6.61	83 / 2.48	0.9 / 0.01			9.5		728	39	355	229			MWD
Jun 14		77			1175	8.4					2 / 0.07	151 / 2.47		98 / 2.77							39	375				MWD
Jul 12		84			1215	7.9					0 / 0.00	154 / 2.52		100 / 2.82							41	370				MWD
Aug 16		87			1215	8.3					0 / 0.00	144 / 2.36		102 / 2.88							41	361				MWD
Sep 13		87			1220	8.5	86 / 4.29	33 / 2.71	115 / 5.00	5 / 0.13	4 / 0.13	123 / 2.02	349 / 7.26	100 / 2.82	0.8 / 0.01			10.8		765	41	351	244			MWD
Oct 25		75			1205	8.4					2 / 0.07	133 / 2.18		102 / 2.88							40	370				MWD
Nov 29		62			1245	7.9					0 / 0.00	156 / 2.56		104 / 2.93							39	389				MWD
Dec 27		57			1255	8.1*					0 / 0.00	159 / 2.61		102 / 2.88							39	387				MWD

* Field

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c Gravimetric determination.

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ANALYSES OF SURFACE WATER

REGION 7

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Lake Havasu at Metropolitan Water District Intake																			
1956																										
Jan 24		56			1255	8.2*					0 / 0.00	157 / 2.57		104 / 2.93							39	390				MWD
Feb 2		54			1260	8.3*					1 / 0.03	167 / 2.74		102 / 2.88							39	395				MWD
Mar 20 1035		58			1250	8.3*					0 / 0.00	168 / 2.75		102 / 2.83			0.15				39	388				MWD
Apr 18		72			1235	8.4*					0 / 0.00	149 / 2.44		102 / 2.88							39	375				MWD
May 8	Est 500	72			1235	8.4*	96 / 4.79	33 / 2.71	113 / 4.92	5 / 0.13	0 / 0.00	149 / 2.44	350 / 7.28	102 / 2.88	1.7 / 0.03			10.8		786	39	375	253			MWD
June 5 1030		72			1260	8.1*					0 / 0.00	155 / 2.54		107 / 3.02							39	384				MWD
July	No Report																									
Aug 14		84			1255	8.5*					2 / 0.07	133 / 2.18		108 / 3.05							41	370				MWD
Sept 18		85			1250	8.55*	88 / 4.39	35 / 2.88	120 / 5.22	5 / 0.13	4 / 0.13	128 / 2.10	363 / 7.55	105 / 2.95	0.4 / 0.01			9.8		794	41	364	253	5		MWD
Oct	No Report																									
Nov 6					1260	8.1*					0 / 0.00	155 / 2.54		109 / 3.07							40	390				MWD
Dec 1 1055		54			1290	8.2					0 / 0.00	163 / 2.67		109 / 3.07							39	400				MWD

* Lab pH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

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							New River near Calexico (International Boundary)																			
1955																										
Jan 18 0735	108	48	9.6	84	2,518	8.3					0 / 0.00	267 / 4.38		486 / 13.76			0.26				54	614		18		DWR
Feb 15 0715	65	54	6.6	62	6,410	7.9					0 / 0.00	254 / 4.16		1575 / 44.40			0.72				61	1352		5-		DWR
Mar 15 0725	46	59	1.8	18	5,405	7.3					0 / 0.00	256 / 4.20		1280 / 36.10			0.84				59	1151		23		DWR
Apr 12 0710	26	62	1.5	15	6,250	7.7					0 / 0.00	249 / 4.08		1595 / 44.99			0.94				57	1374		12		DWR
May 17 0615	27	66	1.8	19	4,587	7.3	254 / 12.67	115 / 9.45	740 / 32.19	15 / 0.38	0 / 0.00	293 / 4.80	703 / 14.65	1260 / 35.53	0 / 0.0	0.9 / 0.05	0.72	12	NH_4 3.9 / 0.22 ; (a) Fe 0.4	3520	59	1106	866	20		DWR
Jun 14 0630	23	68	0.0	0	7,580	7.6					0 / 0.00	254 / 4.16		2000 / 56.40			1.00				60	1643		70		DWR
Jul 19 0625	32	81	0.0	0	9,009	7.6						195 / 3.20		2815 / 79.40			0.72				60	2136		12		DWR
Aug 16 0645	50	82	0.0	0	9,434	7.8						190 / 3.11		2475 / 69.79			2.80				54	2299		8		DWR
Sep 20 0610	44	68	2.6	28	9,009	7.8	438 / 21.86	224 / 18.41	1350 / 58.73	25.5 / 0.653	0.0 / 0.0	200 / 3.28	1138 / 23.70	2540 / 71.63	3.7 / 0.060	0.8 / 0.042	0.98	10	PO_4 0.7; (a) Fe 0.2	6689	59	2014	1845	16		DWR
Oct 18 0710	74	72	1.8	20	8,850	7.4						238 / 3.90		2520 / 71.06			1.80				62	1820		10		DWR
Nov 15 1350	174	59	9.0	89	5,050	8.2					0 / 0.00	237 / 3.88		1225 / 34.55			1.00				58	1023		5-		DWR
Dec 20 0700	137	50	8.0	71	5,319	8.1					0 / 0.00	256 / 4.20		1300 / 36.66			0.67				61	1063		46		DWR
																									median 62,000	
																									minimum 1300	
																									maximum 700,000	

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											New River near Calexico (International Boundary)															
1956																										
Jan 17 0640	94	50	6.2	55	6803	8.0					0 / 0.00	281 / 4.61		1790 / 50.48			0.85				62	1296		12		DWR
Feb 7 0630	109	50	7.8	69	6452	7.8					0 / 0.00	273 / 4.47		1625 / 45.82			1.54				68	1172		14		DWR
Mar 13 0700	94	50	9.8	86	6536	8.0					0 / 0.00	273 / 4.47		1660 / 46.81			1.58				63	1195		10		DWR
Apr 17 0640	108	61	4.2	42	6289	8.0					0 / 0.00	271 / 4.44		1615 / 45.55			0.94				62	1218		21		DWR
May 8 0515	103	68	3.0	33	6329	7.7	247 / 12.33	153 / 12.53	956 / 41.59	29.0 / 0.742	0 / 0.00	276 / 4.52	854 / 17.80	1610 / 45.40	1.2 / 0.019	0.8 / 0.042	1.24	10	PO_4 0.4; (a)	3999[b]	62	1245	1019	5		DWR
June 19 0650	90	75	2.4	28	6369	7.8					0 / 0.00	281 / 4.61		1710 / 48.22			0.51				62	1242		5		DWR
July 17 0550	105	82	2.0	25	6410	7.9					0 / 0.00	244 / 4.00		1655 / 46.67			1.12				64	1226		12		DWR
Aug 14 0530	106	82	0.5	6	6579	7.9					0 / 0.00	246 / 4.03		1800 / 50.76			0.92				65	1290		25		DWR
Sept 18 0600	99	81	0.5	6	6211	7.8	242 / 12.08	158 / 12.98	1000 / 43.50	31.6 / 0.809	0.0 / 0.00	242 / 3.96	830 / 17.30	1670 / 47.09	6.4 / 0.104	0.8 / 0.042	1.15	20	PO_4 1.3; (a)	4603[c]	63	1253	1055	10		DWR
Oct 9 1310	74	80	1.0	12	6666	7.6					0 / 0.00	239 / 3.92		1778 / 50.14			1.22				64	1280		12		DWR
Nov 8 0705	118	57	6.0	58	5291	8.0					0 / 0.00	246 / 4.03		1297 / 36.58			1.12				60	1071		5		DWR
Dec 11 0950	84	49	8.5	73	4652	8.4					24 / 0.80	215 / 3.52		1175 / 33.14			0.72				61	1006		175	median 23,000; minimum 2300; maximum 700,000	DWR

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							equivalents per million																			
							New River near Westmorland																			
1955																										
Jan 18 1100	397	52	10.0	91	5,128	8.2					0 / 0.00	452 / 7.41		1205 / 33.98			0.80				63	953		140		DWR
Feb 15 1000	624	55	9.6	90	3,704	8.2					0 / 0.00	220 / 3.61		835 / 23.55			0.56				60	766		170		DWR
Mar 15 0950	639	61	9.0	91	3,922	7.8					0 / 0.00	222 / 3.64		840 / 23.68			0.72				59	799		210		DWR
Apr 12 0940	711	64	7.8	81	3,846	8.1					0 / 0.00	224 / 3.67		822 / 23.18			0.80				58	803		240		DWR
May 17 0930	602	68	8.4	92	3,077	7.6	174 / 8.68	74 / 6.08	460 / 20.00	11.4 / 0.29	0 / 0.00	232 / 3.80	560 / 11.67	685 / 19.32	4.5 / 0.07	0.8 / 0.04	0.68	12	(a)	2180	57	738	548	200		DWR
Jun 14 0915	584	70	6.8	76	3,650	8.1					0 / 0.00	228 / 3.74		760 / 21.44			0.68				59	774		260		DWR
Jul 19 1010	594	86	6.0	79	3,891	8.2					14 / 0.47	181 / 2.97		995 / 28.06			0.50				58	959		105		DWR
Aug 16 0915	750	86	5.2	68	4,237	8.3						198 / 3.25		1025 / 28.90			1.48				53	920		182		DWR
Sep 20 1000	697	72	7.8	88	2,994	8.2	165 / 8.23	74 / 6.08	430 / 18.71	9.6 / 0.246	0.0 / 0.0	188 / 3.08	546 / 11.37	675 / 19.04	5.5 / 0.088	0.4 / 0.021	0.52	10	PO_4 0.32; (a)	2134	56	716	562	144		DWR
Oct 18 0945	612	72	6.4	73	4,630	8.0						220 / 3.61		1055 / 29.75			0.90				59	935		100		DWR
Nov 15 1630	697	57	8.8	85	4,082	8.0					0 / 0.00	220 / 3.61		870 / 24.54			0.80				57	820		120		DWR
Dec 20 1000	520	52	8.8	79	5,319	8.0					0 / 0.00	256 / 4.20		1280 / 36.06			0.80				61	1043		175	median 2300 minimum 230 maximum 70,000	DWR

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												New River near Westmorland														
1956																										
Jan 17 0945	542	54	8.0	74	4975	8.2					0 / 0.00	249 / 4.08		1200 / 33.84			0.96				62	974		120		DWR
Feb 7 0930	587	50	9.2	81	4000	7.8					0 / 0.00	242 / 3.97		870 / 24.54			1.80				60	777		160		DWR
Mar 13 0935	624	52	9.0	82	4484	8.0					0 / 0.00	244 / 4.00		975 / 27.48			1.45				60	893		200		DWR
Apr 17 0930	827	63	7.4	76	3650	7.9					0 / 0.00	220 / 3.61		760 / 21.43			0.60				59	769		500		DWR
May 8 1030	677	70	6.6	74	4255	7.9	199 / 9.93	97 / 7.97	578 / 25.14	13.6 / 0.348	0 / 0.00	242 / 3.96	660 / 13.74	925 / 26.09	5.0 / 0.080	0.8 / 0.042	0.80	10	PO_4 0.7 ; (a)	2608[b]	58	895	697	250		DWR
June 19 1045	610	77	6.8	81	4347	8.0					0 / 0.00	237 / 3.88		955 / 26.93			0.78				58	869		125		DWR
July 17 0940	720	84	5.6	72	4115	8.0					0 / 0.00	232 / 3.80		930 / 26.23			0.73				60	867		250		DWR
Aug 14 0915	651	82	5.8	73	4785	8.0					0 / 0.00	239 / 3.92		1150 / 32.43			0.71				61	966		400		DWR
Sept 18 1210	611	82	7.0	89	4405	7.9	206 / 10.28	99 / 8.14	630 / 27.40	15.0 / 0.384	0 / 0.00	232 / 3.80	686 / 14.29	1020 / 28.76	7.9 / 0.128	0.8 / 0.042	0.92	15	PO_4 0.64; (a)	3391[c]	59	921	731	300		DWR
Oct 9 1540	656	76	6.5	76	4274	8.1					0 / 0.00	222 / 3.64		945 / 26.65			0.78				59	873		230		DWR
Nov 8 1030	652	59	8.0	79	4310	7.9					0 / 0.00	239 / 3.92		963 / 27.16			0.94				59	909		140		DWR
Dec 11 1330	495	51	9.0	81	4347	8.0					0 / 0.00	246 / 4.03		955 / 26.93			0.48				60	836		15	median 6200 minimum 230 maximum 70,000	DWR

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												Whitewater River at Whitewater														
1955																										
Jan 18 1400	15	48	12.4	107	421	8.4					7 / 0.23	213 / 3.49		3 / 0.085			0.04				12	200		35		DWR
Feb 15 1500	7.5	64	10.4	109	366	8.4					7 / 0.23	183 / 3.00		2 / 0.056			0.02				13	170		5-		DWR
Mar 15 1515	14	57	11.0	106	385	8.4					12 / 0.40	173 / 2.84		3 / 0.085			0.02				13	170		20		DWR
Apr 12 1815	9.0	62	9.6	99	400	8.4					12 / 0.40	178 / 2.92		4 / 0.113			0.02				13	178		5-		DWR
May 17 1500	8.4	70	11.0	123	386	8.3	49 / 2.45	15 / 1.23	14 / 0.61	5.0 / 0.13	10 / 0.32	210 / 3.44	32 / 0.66	4 / 0.11	0 / 0.00	1.0 / 0.05	0.0	15	(a)	225	14	184	0	5-		DWR
Jun 14 1330	14	66	8.8	94	413	8.2					7 / 0.23	200 / 3.28		4 / 0.113			0.14				14	182		5-		DWR
Jul 19 1410	7.0/10	70	8.4	93	364	8.4					0 / 0.00	205 / 3.36		6 / 0.169			0.16				17	148		5-		DWR
Aug 16 1315	13	77	7.4	88	365	8.4						176 / 2.88		9 / 0.254			0.0				12	165		48		DWR
Sep 20 1400	10/12	70	8.4	93	353	8.4	48 / 2.40	12 / 0.99	14 / 0.61	4.7 / 0.120	0.0 / 0.0	190 / 3.12	34 / 0.70	5 / 0.14	0.7 / 0.012	0.8 / 0.042	0.0	20	PO_4 0.05; (a)	229	15	170	14	5-		DWR
Oct 18 1345	Est. 8.0/9.0	66	8.4	90	407	8.2						196 / 3.21		13 / 0.37			0.10				14	176		5-		DWR
Nov 16 0830	10/8.5	46	10.5	89	380	8.2					0 / 0.00	192 / 3.15		5 / 0.141			0.06				13	169		14		DWR
Dec 20 1605	10.0	59	9.6	95	411	8.3					0 / 0.00	188 / 3.08		5 / 0.141			0 / 0				13	176		5-		DWR
																									median 6.2 minimum .6 maximum 62	

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							Whitewater River at Whitewater																			
1956																										
Jan 17 1530	Est 7.6	57	9.4	91	385	8.2					2 / 0.07	195 / 3.20		6 / 0.169			0.02				14	172		-5		DWR
Feb 7 1600	4.2	61	8.8	88	423	7.4					0 / 0.00	210 / 3.44		6 / 0.169			0				13	185		-5		DWR
Mar 13 1430	3.6	63	9.2	95	446	8.0					0 / 0.00	217 / 3.56		8 / 0.226			0				13	191		-5		DWR
Apr 17 1500	10	63	9.6	98	453	7.9					0 / 0.00	214 / 3.51		7 / 0.20			0.12				14	193		-5		DWR
May 8 1400	6.8	63	9.4	97	427	8.0	50 / 2.50	17 / 1.40	15 / 0.65	5.6 / 0.143	0 / 0.00	215 / 3.52	43 / 0.90	6 / 0.17	0.85 / 0.014	1.0 / 0.053	0.0	15	PO_4 0.00; (a)	261[b]	14	195	19	-5		DWR
June 19 1630	1.8	70	9.0	99	397	8.4					0 / 0.00	210 / 3.44		4 / 0.11			0.0				12	184		-5		DWR
July 17 1445	1.6	68	9.8	107	431	8.0					0 / 0.00	215 / 3.52		6 / 0.17			0.0				13	196		-5		DWR
Aug 14 1430	6.3	66	9.2	98.4	429	8.0					0 / 0.00	215 / 3.52		5 / 0.14			0.0				20	196		-5		DWR
Sept 18 1500	4.0	68	8.8	96	416	8.3	51 / 2.54	15 / 1.23	13 / 0.57	5.5 / 0.141	0 / 0.00	220 / 3.60	35 / 0.73	4 / 0.11	0.85 / 0.014	0.9 / 0.047	0.00	15	Zn 0.16; (a) PO_4 0.0	258[c]	13	188	8	-5		DWR
Oct 10 1300	9.5	69	8.5	94	396	8.3					0 / 0.00	168 / 2.75		5 / 0.14			0.04				14	154		-5		DWR
Nov 8 1500	3.4	63	9.4	97	356	8.4					0 / 0.00	203 / 3.33		4 / 0.11			0.00				14	182		-5		DWR
Dec 12 1040	9.8	65	8.5	89	305	8.2					14 / 0.47	185 / 3.03		6 / 0.169			0.0				14	192		-5	median 6.2 minimum .45- maximum 240	DWR

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										China Creek near Chino																
1955																										
Jan 11 1245	Est 5	59	9.0	89	714	7.9					0 / 0.00	288 / 4.72		30 / 0.85			0.08				32	242		30		DWR
Feb 8 1255	Est 3	62	8.2	84	678	7.9					0 / 0.00	281 / 4.61		37 / 1.04			0.06				36	244		12		DWR
Mar 8 1230	Est 2	73	7.0	81	722	8.0					0 / 0.00	273 / 4.47		33 / 0.93			0.22				39	240		25		DWR
Apr 4 1215	Est 2	62	8.8	90	794	8.2					0 / 0.00	332 / 5.44		34 / 0.96			0.18				35	269		9		DWR
May 9 1210	Est 1.5	77	7.6	91	800	8.2	83 / 4.14	22 / 1.81	57 / 2.48	11.5 / 0.29	0 / 0.00	361 / 5.92	84 / 1.74	27 / 0.76	26 / 0.42	0.40 / 0.02	0.16	30	(a)	505[c]	28	298	2	35		DWR
Jun 7 1130	Est 1	77	8.2	98	877	8.4					12 / 0.40	378 / 6.20		29 / 0.82			0.16				29	339		5-		DWR
Jul 11 1230	Dry																									
Aug 9 1205	Dry																									
Sep 13 1145	Dry																									
Oct 11 1300	Dry																									
Nov 14 1100	Est 40	50	8.4	74	317	8.4	42 / 2.10	8 / 0.56	14 / 0.61	10.5 / 0.269	0 / 0.00	146 / 2.40	29 / 0.60	17 / 0.48	0 / 0		0.06			247	20	139		800		DWR
Dec 13 1230	Est 1	57	9.6	93	729	8.0					0 / 0.00	259 / 4.25		39 / 1.10			0.10				36	233		5-		DWR
																									median 1460 minimum 60 maximum 7000+	

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											Chino Creek near Chino															
1956																										
Jan 10 1250	Est 0.1	59	11.0	108	885	8.3					0 / 0.00	351 / 5.75		30 / 0.85			0.08				27	332		-5		DWR
Feb 15 1400	Est 1	59	8.4	83	908	7.6					0 / 0.00	348 / 5.70		41 / 1.16			0.12				30	309		12		DWR
Mar 6 1245	Est 1	64	7.2	75	871	7.8					0 / 0.00	345 / 5.66		40 / 1.13			0.06				33	294		5		DWR
Apr 10 1330	Est 1	63	8.0	82	694	8.0					7 / 0.23	282 / 4.62		32 / 0.90			0.07				33	233		45		DWR
May 7 1100	Est 1	64	9.0	94	919	8.2	96 / 4.79	28 / 2.30	65 / 2.83	6.5 / 0.166	0 / 0.00	407 / 6.68	112 / 2.33	37 / 1.04	9.30 / 0.150	0.4 / 0.021	0.13	25	NH_4 3.8 ; PO_4 4.0 Sn 0.0; (a)	587[b]	28	354	20	-5		DWR
June 12 1150	No Flow	82	12.2	153	956	8.4					29 / 0.97	354 / 5.80		41 / 1.16			0.00				31	358		-5		DWR
July 16 1100	"	79	9.0	110	1088	8.3					0 / 0.00	410 / 6.72		42 / 1.18			0.22				28	410		-5		DWR
Aug 7 1230	"	82	10.6	134	737	8.2					0 / 0.00	361 / 5.92		31 / 0.87			0.08				30	226		100		DWR
Sept 12 1020	"	68	9.4	102	760	8.0	70 / 3.49	19 / 1.56	52 / 2.26	31.5 / 0.806	0 / 0.00	346 / 5.68	62 / 1.30	35 / 0.99	12 / 0.193	0.6 / 0.032	0.03	20	PO_4 1.8; (a)	526[c]	28	252	252	20		DWR
Oct 8 1540	Dry																									
Nov 8 1220	Est 0.01	67	12.5	134	867	8.9					0 / 0.00	410 / 6.72		38 / 1.07			0.18				31	297		15		DWR
Dec 11 1300	Est 0.04	50	10.6	94	862	8.0					0 / 0.00	364 / 5.97		49 / 1.38							30	339		20	median 235 minimum 2.3 maximum 24,000	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analysis made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBCPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1955							Lake Elsinore near Elsinore (North Shore)																			
Jan 17 1215	Dry																									
Feb 14 1215	Dry																									
Mar 14 1200	Dry																									
Apr 11 1300	Dry																									
May 16 1210	Dry																									
June 7 1150	Dry																									
July 18 1205	Dry																									
Aug 15 1215	Dry																									
Sept 9 1135	Dry																									
Oct 17 1230	Dry																									
Nov 14 1200	Dry																									
Dec 19 1200	Dry																									

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											Lake Elsinore near Elsinore (North Shore)															
1956																										
Jan 16 1145	Dry																									DWR
Feb 6 1205		55	9.6	91	15873	8.9					130 / 4.33	571 / 9.36		4060 / 114.49			4.2				99	50		-5		DWR
Mar 12 1200	Dry																									DWR
Apr 16 1205	Dry																									DWR
May 7 1135	Dry																									DWR
June 18 1145	Dry																									DWR
July 16 1200	Dry																									DWR
Aug 13 1150	Dry																									DWR
Sept 17 1130	Dry																									DWR
Oct 8 1010	Dry																									DWR
Nov 7 1230	Dry																									DWR
Dec 10 0910	Dry																									DWR
																									median 0.45 -	
																									minimum 0.45 -	
																									maximum 0.45 -	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Ana River near Arlington																										
1955																										
Jan 11 1425	105	54	11.6	108	1,031	8.1					14 / 0.47	211 / 3.46		82 / 2.31			0.18			770	35	328		15		DWR
Feb 8 1410	100	55	11.6	109	1,025	8.4					12 / 0.40	176 / 2.88		81 / 2.28			0.12			825	36	342		55		DWR
Mar 8 1400	197	57	11.2	108	1,057	8.4					0 / 0.00	178 / 2.92		84 / 2.37			0.16			835	38	329		5-		DWR
Apr 4 1320	123	57	12.6	121	1,064	8.4					19 / 0.63	161 / 2.64		86 / 2.43			0.16		R = 4.7	755	36	342		5-		DWR
May 9 1315	182	64	11.0	115	1,029	8.4	95 / 4.74	25 / 2.06	93 / 4.05	4.8 / 0.12	12 / 0.40	161 / 2.64	264 / 5.49	82 / 2.31	5.0 / 0.08	0.5 / 0.03	0.12	12	(a)	755 / 725[c]	37	340	188	5-		DWR
Jun 7 1235	110	68	10.0	109	1,040	8.4					12 / 0.40	178 / 2.92		88 / 2.48			0.20			835	37	339		5-		DWR
Jul 11 1330	21	75	13.4	157	871	8.4					17 / 0.57	271 / 4.44		100 / 2.82			0.25			1270	36	292		5-		DWR
Aug 9 1305	156	73	9.0	103	1,083	8.4						146 / 2.39		105 / 2.96			0.12			685	35	337		5-		DWR
Sep	Discontinued																									
																								median 23		
																								minimum 2.3		
																								maximum 62		

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a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
											Santa Ana River below Prado Dam															
1955																										
Jan 11 1015	221	52	12.0	108	952	8.1					7 / 0.23	243 / 3.98		77 / 2.17			0.26				34	309		200		DWR
Feb 8 1315	136	55	12.0	113	1,002	8.4					14 / 0.47	215 / 3.52		86 / 2.43			0.22				35	329		20		DWR
Mar 8 1245	212	59	11.6	114	1,033	8.4					14 / 0.47	183 / 3.00		84 / 2.37			0.20				36	327		5-		DWR
Apr 4 1235	121	59	11.4	112	1,042	8.4					14 / 0.47	207 / 3.39		89 / 2.51			0.14				35	342		12		DWR
May 9 1230	224	66	10.8	115	939	8.4	94 / 4.69	26 / 2.14	85 / 3.70	5.1 / 0.13	12 / 0.40	200 / 3.28	229 / 4.77	86 / 2.43	6.4 / 0.10	0.5 / 0.03	0.14	12	(a)	675[c]	35	342	158	14		DWR
Jun 7 1150	147	68	9.6	105	962	8.4					10 / 0.33	220 / 3.61		90 / 2.54			0.22				35	339		5-		DWR
Jul 11 1300	59	75	8.0	94	879	8.4					7 / 0.23	239 / 3.92		102 / 2.88			0.28				39	275		11		DWR
Aug 9 1245	188	75	8.8	103	1,095	8.4					10 / 0.33	149 / 2.44		109 / 3.07			0.58				34	339		5-		DWR
Sep 13 1205	35	75	9.4	110	914	8.4	97 / 4.84	21 / 1.73	84 / 3.65	5.1 / 0.131	0.0 / 0.0	288 / 4.72	105 / 2.19	103 / 2.91	14.9 / 0.240	0.7 / 0.037	0.46	30	PO_4 2.2; (a)	608[c]	35	329	93	6		DWR
Oct 11 0930	46	55	8.0	76	976	8.2					18 / 0.60	240 / 3.93		99 / 2.79			0.40				37	310		5-		DWR
Nov 7 1115	45	59	9.6	95	981	8.4					12 / 0.40	268 / 4.39		97 / 2.74			0.25				34	319		5-		DWR
Dec 13 1300	68	57	11.4	110	961	8.2					10 / 0.33	261 / 4.28		96 / 2.71			0.24				34	323		5-		DWR
																									median 23	
																									minimum 1.3	
																									maximum 240	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Santa Ana River below Prado Dam																
1956																										
Jan 10 1310	203	52	10.6	96	1130	8.3					0 / 0.00	198 / 3.25		97 / 2.74			0.14				38	349		-5		DWR
Feb 15 1440	87	59	9.2	91	1043	8.0					0 / 0.00	303 / 4.97		98 / 2.77			0.41				32	342		46		DWR
Mar 6 1310	74	63	9.6	99	961	8.4					0 / 0.00	317 / 5.20		95 / 2.68			0.28				31	344		6		DWR
Apr 10 1400	54	61	9.0	90	1063	8.3					0 / 0.00	318 / 5.21		106 / 2.99			0.19				32	347		7		DWR
May 15 1550	51	80	9.4	116	1027	8.4	102 / 5.09	24 / 1.97	80 / 3.48	10.0 / 0.256	19 / 0.64	288 / 4.72	108 / 2.24	105 / 2.96	7.5 / 0.121	0.6 / 0.032	0.26	30	PO_4 0.5; (a)	631[b]	32	357	89	25		DWR
June 12 1215	62	75	9.4	110	1035	8.3					0 / 0.00	317 / 5.20		105 / 2.96			0.05				32	349		-5		DWR
July 10 1200	45	75	9.6	112	1002	8.3					0 / 0.00	315 / 5.16		107 / 3.02			0.27				33	339		-5		DWR
Aug 7 1300	34	77	10.0	119	990	8.4	100 / 4.99	22 / 1.81	74 / 3.22	4.0 / 0.102	0 / 0.00	315 / 5.16	96 / 2.01	103 / 2.90	9.1 / 0.148	0.8 / 0.042	0.12	25		648	32	341		-5		DWR
Sept 12 1100	104	68	9.0	98	1130	8.2	95 / 4.74	31 / 2.55	100 / 4.35	4.6 / 0.118	12 / 0.40	224 / 3.68	238 / 4.96	108 / 3.05	4.2 / 0.068	0.8 / 0.042	0.08	15	PO_4 0.4; (a)	759[c]	37	365	161	-5		DWR
Oct 8 1600	188	72	9.2	104	1165	8.4	95 / 4.74	33 / 2.71	108 / 4.70	4.5 / 0.138	0 / 0.00	195 / 3.20	289 / 6.03	110 / 3.10	10.3 / 0.166	0.8 / 0.042	0.18	20		816	39	370		9		DWR
Nov 8 1250	46	67	9.0	96	1026	8.5	100 / 4.99	24 / 1.97	88 / 3.83	4.2 / 0.107	0 / 0.00	317 / 5.20	109 / 2.28	106 / 2.99	13.0 / 0.210	0.6 / 0.032	0.22	25		670[c]	35	349		-5		DWR
Dec 11 1330	44	54	10.4	96	925	8.1	95 / 4.74	25 / 2.06	82 / 3.57	4.9 / 0.125	0 / 0.00	312 / 5.12	104 / 2.17	103 / 2.90	14.0 / 0.226	0.8 / 0.042	0.24	30		615[c]	34	339		-5	median 62; minimum 2.3; maximum 7000	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Ana River near Mentone																										
1955																										
Jan 11 1600	39	39	13.0	99	233	8.0					4 / 0.132	134 / 2.20		4 / 0.113			0.02				26	88		5-		DWR
Feb 8 1630	Est 75	43	13.6	110	230	8.2					2 / 0.07	110 / 1.80		2 / 0.056			0.10				26	89		5-		DWR
Mar 8 1605	Est 33	48	12.4	107	227	8.4					5 / 0.17	105 / 1.72		4 / 0.113			0.02				26	81		5-		DWR
Apr 4 1530	Est 40	46	12.2	103	221	8.0					0 / 0.00	117 / 1.92		5 / 0.141			0.04				26	81		5-		DWR
May 9 1535	Est 58	52	12.0	108	185	8.4	23 / 1.15	4 / 0.33	12 / 0.52	1.8 / 0.05	5 / 0.16	100 / 1.64	11 / 0.22	3 / 0.08	0 / 0.0	0.5 / 0.03	0.02	20	(a)	115[c]	25	74	0	5-		DWR
Jun 7 1435	Est 31	61	10.0	100	228	8.2					5 / 0.17	112 / 1.84		5 / 0.141			0.04				16	89		5-		DWR
Jul 11 1700	31	59	9.8	99	230	8.4					2 / 0.07	117 / 1.92		6 / 0.169			0.10				25	87		5-		DWR
Aug 17 1350	48	64	9.0	94	204	8.4						110 / 1.80		16 / 0.45			0.0				18	86		12		DWR
Sep 13 1510	Est 46	63	9.6	99	227	8.4	33 / 1.65	1 / 0.08	12 / 0.52	1.8 / 0.046	0.0 / 0.0	117 / 1.92	8 / 0.16	5 / 0.14	2.0 / 0.032	0.2 / 0.011	0.04	12	PO_4 0.2; (a)	137[c]	23	87	0	14		DWR
Oct 10 1620	Est 42	54	9.4	87	233	8.2						117 / 1.92		6 / 0.169			0.14				25	86		5-		DWR
Nov 7 1400	Est 31	52	10.0	90	235	8.3					0 / 0.00	127 / 2.08		5 / 0.141			0.10				24	88		25		DWR
Dec 12 1600	Est 22	46	10.6	89	249	8.4					0 / 0.00	120 / 1.97		5 / 0.141			0				25	90		5-		DWR
																									median 4.5 minimum .60 maximum 700+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											Santa Ana River near Mentone															
1956																										
Jan 10 1530	Est 36	45	11.4	94	243	8.2					5 / 0.17	110 / 1.80		4 / 0.113			0.04				26	86		-5		DWR
Feb 15 1645	Est 36	43	11.2	97	231	8.0					0 / 0.00	112 / 1.84		5 / 0.141			0.14				27	81		-5		DWR
Mar 13 1730	Est 36	45	11.0	92	235	8.0					0 / 0.00	102 / 1.67		6 / 0.169			0.07				26	86		-5		DWR
Apr 10 1610	Est 29	50	9.6	85	251	8.0					2 / 0.07	117 / 1.92		6 / 0.17			0.12			209[b]	28	84		-5		DWR
May 8 1600	Est 30	50	10.4	92	231	8.2	24 / 1.20	7 / 0.58	15 / 0.65	1.8 / 0.046	0 / 0.00	117 / 1.92	18 / 0.38	5 / 0.14	0.70 / 0.011	0.6 / 0.032	0.02	20	PO_4 0.00	151	26	89	0	-5		DWR
June 12 composite	Est 34	59	10.4	101.5	247	8.3					0 / 0.00	132 / 2.16		5 / 0.14			0.00				23	97		-5		DWR
July 10 1445	Est 30	63	10.2	105	260	8.3					0 / 0.00	139 / 2.28		6 / 0.17			0.08				22	103		-5		DWR
Aug 14 1605	Est 38	61	10.0	100	260	8.2					0 / 0.00	142 / 2.33		7 / 0.20			0.06			253[b]	24	101		5		DWR
Sept 12 1610	Est 40	64	9.2	97	284	8.0	26 / 1.30	10 / 0.82	15 / 0.65	2.6 / 0.066	0 / 0.00	173 / 2.40	9 / 0.18	7 / 0.20	0.15 / 0.002	0.7 / 0.037	0.00	10	PO_4 0.3; (a)	175[c]	23	106	0	-5		DWR
Oct 8 1910	38	55	9.0	85	277	8.2					0 / 0.00	154 / 2.52		7 / 0.20			0.15				21	113		-5		DWR
Nov 8 1650	Est 38	54	9.0	83	288	8.7					0 / 0.00	139 / 2.28		16 / 0.45			0.12				24	109		5		DWR
Dec 11 1610	Est 32	43	13.0	104	241	8.2					5 / 0.167	120 / 1.97		6 / 0.169			0.06				28	89		-5	median 4.5 - minimum 0.6 maximum 240	DWR

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in ppm / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Ana River at Riverside (MWD Blowoff)																										
1955																										
Jan 11 1445	Est 40	61	9.0	91	948	8.1					18 / 0.60	231 / 4.61		93 / 2.62			0.16				30	337		22		DWR
Feb 8 1430	Est 40	66	9.8	104	952	8.4					0 / 0.00	315 / 5.16		90 / 2.54			0.14				31	337		5-		DWR
Mar 8 1435	Est 35	68	9.6	104	947	8.3					14 / 0.47	268 / 4.39		95 / 2.68			0.20				33	325		5-		DWR
Apr 4 1340	Est 30	66	10.2	109	1,000	8.3					0 / 0.00	325 / 5.33		98 / 2.77			0.18				31	344		5-		DWR
May 9 1345	Est 30	72	9.0	102	901	8.3	109 / 5.44	18 / 1.48	74 / 3.22	5.0 / 0.13	0 / 0.00	337 / 5.52	88 / 1.83	89 / 2.51	17 / 0.27	0.7 / 0.04	0.14	25	(a)	615[c]	31	346	70	5-		DWR
Jun 7 1300	Est 40	73	8.4	97	877	8.0					12 / 0.40	293 / 4.80		95 / 2.68			0.20				31	333		5-		DWR
Jul 11 1355	Est 35	75	8.8	103	886	8.3					0 / 0.00	320 / 5.25		97 / 2.74			0.18				37	279		5-		DWR
Aug 9 1330	Est 25	75	9.4	110	986	8.4						305 / 5.00		109 / 3.07			0.0				27	337		5-		DWR
Sep 13 1345	25	73	9.0	104	906	8.4	106 / 5.29	18 / 1.48	72 / 3.13	4.5 / 0.115	0.0 / 0.0	305 / 5.00	72 / 1.49	102 / 2.89	19.8 / 0.320	0.8 / 0.042	0.16	30	PO_4 0.08; (a)	611[c]	31	339	89	5-		DWR
Oct 11 1145	30	59	8.4	83	983	8.0						292 / 4.79		99 / 2.79			0.12				33	334		5-		DWR
Nov 7 1255	Est 25	66	9.4	100	962	8.0					0 / 0.00	305 / 5.00		95 / 2.68			0.22				29	330		5-		DWR
Dec 13 1530	Est 35	64	8.0	84	968	8.0					0 / 0.00	307 / 5.03		96 / 2.71			0.10				29	354		5-	median 62; minimum 2.3; maximum 1300	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Santa Ana River at Riverside (MWD Blowoff)																			
1956																										
Jan 10 1430	Est 35	63	9.0	92	961	8.0					0 / 0.00	310 / 5.08		93 / 2.62			0.10				30	340		-5		DWR
Feb 15 1515	30	57	8.8	85	1015	8.0					10 / 0.33	295 / 4.84		96 / 2.71			0.30				29	349		-5		DWR
Mar 6 1450	52	61	9.2	93	993	8.2					0 / 0.00	322 / 5.28		100 / 2.82			0.04				30	353		-5		DWR
Apr 10 1510	Est 35	63	9.2	94	967	8.0					0 / 0.00	309 / 5.06		99 / 2.79			0.08				32	321		-5		DWR
May 15 1300	Est 40	80	9.8	121	877	8.1	102 / 5.09	24 / 1.97	72 / 3.13	10.0 / 0.256	0 / 0.00	329 / 5.40	88 / 1.84	97 / 2.74	15.0 / 0.242	0.8 / 0.042	0.26	30	PO_4 0.2 ; (a)	604[b]	30	353	83	-5		DWR
June 12 1400	Est 30	79	8.6	105	912	8.2					0 / 0.00	285 / 4.67		102 / 2.88			0.25				33	309		-5		DWR
July 10 1440	Est 25	79	9.2	112	951	8.2					0 / 0.00	322 / 5.28		95 / 2.68			0.13				31	335		-5		DWR
Aug 7 1420	Est 25	75	9.4	110	964	8.2					0 / 0.00	322 / 5.28		96 / 2.71			0.05				31	345		-5		DWR
Sept 12 1345	87	75	8.4	98	963	7.8	95 / 4.74	24 / 1.97	72 / 3.13	3.9 / 0.10	0 / 0.00	327 / 5.36	81 / 1.68	94 / 2.65	14.5 / 0.234	0.8 / 0.043	0.05	25	PO_4 0.0 ; (a)	593[c]	32	336	68	-5		DWR
Oct 8 1710	Est 25	64	9.4	99	902	8.0					0 / 0.00	310 / 5.08		95 / 2.68			0.15				32	329		-5		DWR
Nov 8 1530	Est 60	69	8.5	94	914	8.3					0 / 0.00	278 / 4.56		94 / 2.65			0.09				33	311		-5		DWR
Dec 11 1445	28	61	11.4	115	966	7.9					0 / 0.00	290 / 4.75		94 / 2.65			0.10				30	339		-5	median 42 minimum 5.0 maximum 7000	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

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ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Santa Ana River at Norco																			
1955																				749						
Sep 13 1300	Est 50	86	7.0	92	934	8.4	96 / 4.79	16 / 1.32	90 / 3.92	7.2 / 0.184	0.0 / 0.0	283 / 4.64	91 / 1.90	110 / 3.11	20.8 / 0.336	0.8 / 0.042	0.54	30	PO_4 4.2; (a)	614[c]	38	306	74	5-		DWR
Oct 11 1100	27	57	6.8	66	1,012	8.1						281 / 4.61		108 / 3.05			0.46			745	42	306		5-		DWR
Nov 7 1200	Est 30	64	8.6	90	1,029	8.2					10 / 0.33	276 / 4.52		107 / 3.02			0.40			731	37	313		5-		DWR
Dec 13 1415	Est 50	63	7.4	76	1,018	8.2					0 / 0.00	288 / 4.72		104 / 2.93			0.24			764	36	326		5-		DWR
																									median 240	
																									minimum 23	
																									maximum 700	

R = 2.65

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

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REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Santa Ana River at Norco																										
1956																				610						
Jan 10 1400	Est 195	54	9.6	89	1175	8.1					0 / 0.00	178 / 2.92		102 / 2.88			0.10				39	361		-5		DWR
Feb 15 1500	Est 50	57	7.4	71	1088	7.9					0 / 0.00	307 / 5.03		114 / 3.21			0.42				35	338		-5		DWR
Mar 6 1400	33	64	9.2	96	1066	8.2					19 / 0.63	281 / 4.61		113 / 3.19			0.26				33	357		-5		DWR
Apr 10 1430	22	63	9.2	94	1078	8.3					19 / 0.63	285 / 4.67		116 / 3.27			0.02				34	355		-5		DWR
May 15 1440	Est 50	85	8.3	108	1046	8.4	106 / 5.29	24 / 1.97	70 / 3.05	10.5 / 0.269	22 / 0.72	271 / 4.44	102 / 2.12	116 / 3.27	8.0 / 0.129	0.7 / 0.037	0.38	25	PO_4 1.0; (a) 2.79	622[b]	29	363	105	-5		DWR
June 12 1245	28	86	8.0	104.5	1060	8.3					0 / 0.00	305 / 5.00		113 / 3.19			0.29				35	341		-5		DWR
July 10 1245	24	86	8.6	113	1056	8.3					12 / 0.40	332 / 4.52		115 / 3.24			0.38				36	341		-5		DWR
Aug 7 1330	22	86	8.4	110	1019	8.3					0 / 0.00	332 / 5.44		91 / 2.57			0.20			869[c]	34	343		-5		DWR
Sept 12 1145	92	75	8.0	94	1174	7.9	97 / 4.84	32 / 2.63	108 / 4.70	5.2 / 0.133	7 / 0.24	215 / 3.16	272 / 5.67	112 / 3.16	4.0 / 0.064	0.8 / 0.042	0.15	15	PO_4 0.75; (a) 4.04	819	38	374	204	-5		DWR
Oct 8 1620	172	72	9.4	106	1250	8.2					0 / 0.00	182 / 2.98		120 / 3.38			0.22				39	386		-5		DWR
Nov 8 1400	33	73	8.0	92	1055	8.6					12 / 0.40	305 / 5.00		115 / 3.24			0.30				36	345		-5		DWR
Dec 11 1400	38	57	10.8	104	1027	7.9					0 / 0.00	315 / 5.16		108 / 3.05			0.32				37	335		-5	median 42; minimum 2.3; maximum 2400	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

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d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

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Warm Creek at Colton																										
1955																										
Jan 11 1530	11	59	9.0	89	735	7.7					0 / 0.00	246 / 4.03		46 / 1.30			0.06			748	33	244		5-		DWR
Feb 8 1515	30	64	10.2	107	769	7.8					0 / 0.00	242 / 3.97		35 / 0.99			0.26			736	30	248		5-		DWR
Mar 8 1515	36	68	7.8	85	826	7.7					0 / 0.00	251 / 4.11		45 / 1.27			0.24			768	31	263		18		DWR
Apr 4 1430	17	64	8.6	90	926	7.5					0 / 0.00	273 / 4.47		60 / 1.69			0.38			830	46	201		20		DWR
May 9 1430	15	72	8.2	93	962	7.6	45 / 2.25	19 / 1.56	103 / 4.48	13.8 / 0.35	0 / 0.00	307 / 5.04	76 / 1.59	78 / 2.20	27 / 0.44	0.8 / 0.04	0.48	30	NH_4 17.6 (a)	796 555[c]	47	190	0	15		DWR
Jun 7 1400	18	77	7.0	84	877	7.2					0 / 0.00	259 / 4.25		68 / 1.92			0.80			787	54	157		27		DWR
Jul 11 0800	18.2		6.6		825	7.5					0 / 0.00	193 / 3.16		65 / 1.83			0.38			708	45					DWR
Aug 9 1515	7.4				885	7.4					0 / 0.00	242 / 3.97		89 / 2.51			1.08			736	53	170		8		DWR
Sep 14 0900	14.8		3.8		706	7.2*	52 / 2.59	10 / 0.82	80 / 3.48	11.8 / 0.302	0.0 / 0.0	163 / 2.68	52 / 1.09	71 / 2.00	76 / 1.22	1.2 / 0.063	0.02	30	PO_4 27.5; (a)	598 462[c]	48	171	37	8		DWR
Oct 13 0820	10.9	70	3.2	36	815	7.3*					0 / 0.00	212 / 3.47		72 / 2.03			0.42			675	54	156		8		DWR
Nov 11 0820	8.1	70	3.1	35	847	7.4*					0 / 0.00	210 / 3.44		72 / 2.03			0.42			638	52	163		5-		DWR
Dec 10 0810	4.1 est.	70	3.1	35	920	7.3*					0 / 0.00	229 / 3.75		76 / 2.14			0.30			676	49	161		5		DWR
																									median 2400	
																									minimum 23	
																									maximum 70,000	

* Lab

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1956							Harm Creek at Colton																			
Jan 8 **	2.95	61	3.3	33	766	7.5*	38 / 1.90	15 / 1.23	80 / 3.48	13.4 / 0.330	0 / 0.00	227 / 3.72	69 / 1.43	66 / 1.86	63 / 1.010	1.2 / 0.063	0.47			488	53	155		-5		DWR
Feb 6 **	7.5	57	3.0	29	806	7.4*	61 / 3.04	21 / 1.73	69 / 3.00	10.4 / 0.266	0 / 0.00	273 / 4.47	87 / 1.81	66 / 1.86	56 / 0.910	1.0 / 0.053	0.22			466	27	238		10		DWR
Mar 13 **	9.1	57			900	7.4*	63 / 3.14	11 / 0.90	74 / 3.22	11.4 / 0.292	0 / 0.00	261 / 4.28	63 / 1.32	83 / 2.34	39.7 / 0.640	1.0 / 0.053	0.02			553	44	202		20		DWR
Apr 11 **	7.10	68			946	7.1*	49 / 2.45	11 / 0.90	92 / 4.00	15.9 / 0.407	0 / 0.00	251 / 4.11	60 / 1.25	83 / 2.34	63 / 1.016	2.0 / 0.105	0.35			538	55	166		16		DWR
May 10 **	8.1	66			803	7.5*	48 / 2.40	13 / 1.07	72 / 3.13	14.7 / 0.376	0 / 0.00	268 / 4.40	51 / 1.06	71 / 2.00	10.3 / 0.166	1.0 / 0.053	0.35	25	NH_4 12.0; PO_4 23.0;	463[b]	41	173	0	160		DWR
June 8 **	21 est.	75			831	6.9*	51 / 2.54	11 / 0.90	87 / 3.78	13.2 / 0.338	0 / 0.00	210 / 3.44	58 / 1.21	77 / 2.17	50 / 0.807	1.4 / 0.074	0.37	30		503	52	175		-5		DWR
July 7 **	5.1	77			756	7.1*	47 / 2.35	13 / 1.07	82 / 3.57	13.2 / 0.336	0 / 0.00	217 / 3.56	57 / 1.19	62 / 1.75	46.3 / 0.747	1.2 / 0.063	0.11	35		484	49	170		-5		DWR
Aug 12 **	3.4	72	3.2	36	742	7.2*	46 / 2.30	15 / 1.23	68 / 2.96	12.0 / 0.307	0 / 0.00	185 / 3.04	58 / 1.21	38 / 1.07	94 / 1.516	0.8 / 0.042	0.20	30		485	46	176		-5		DWR
Sept 10 **	4.2				829	7.5*	43 / 2.15	17 / 1.40	89 / 3.87	11.1 / 0.284	0 / 0.00	278 / 4.56	59 / 1.22	82 / 2.31	12.0 / 0.19	0.8 / 0.042	0.26	30	NH_4 12.2; PO_4 34; Fe 0.1; (a)	503[c]	46	178	0	-5		DWR
Oct 9 **	20.7	72	2.7	31	927	7.4*	52 / 2.59	14 / 1.15	93 / 4.05	15.8 / 0.404	0 / 0.00	295 / 4.84	96 / 1.99	87 / 2.45	28.5 / 0.46	1.6 / 0.084	0.36	35	NH_4 18.0 (a)	514	52	186		-5		DWR
Nov 14 **	6.0	69	9.0	83	963	7.1*	48 / 2.40	15 / 1.23	108 / 4.70	12 / 0.307	0 / 0.00	261 / 4.28	68 / 1.42	97 / 2.74	42 / 0.677	1.2 / 0.063	0.33	30	NH_4 14.9; (a)	573[c]	57	180		-5		DWR
Dec 13 **	7	63	2.9	30	892	7.5*	39 / 1.95	19 / 1.56	103 / 4.47	21 / 0.54	0 / 0.00	322 / 5.28	61 / 1.27	94 / 2.65	18.8 / 0.304	2.0 / 0.105	0.26	35	NH_4 25; (a)	520[c]	45	176		20		DWR
																									median 2400	
																									minimum 230	
																									maximum 24,000	

** Composite
* Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 00/0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							Warm Creek at San Bernardino																			
1955																										
Jan 11 1545	Est 15	59	7.8	77	625	7.8					18 / 0.60	246 / 4.03		15 / 0.42			0.04				16	274		5-		DWR
Feb 8 1545	Est 15	64	9.0	94	625	8.0					7 / 0.23	227 / 3.72		14 / 0.39			0.04				18	263		5-		DWR
Mar 8 1540	Est 12	66	7.2	77	631	8.0					0 / 0.00	256 / 4.20		17 / 0.48			0.06				16	284		5-		DWR
Apr 4 1445	Est 10	64	8.0	83	610	8.0					12 / 0.40	220 / 3.61		16 / 0.45			0.06				18	261		5-		DWR
May 9 1500	Est 12	72	7.4	84	597	8.0	85 / 4.24	17 / 1.40	25 / 1.09	5.0 / 0.13	0 / 0.00	283 / 4.64	77 / 1.61	17 / 0.48	1.5 / 0.02	0.5 / 0.03	0.04	20	(a)	385[c]	16	282	50	20		DWR
Jun 7 1415	Est 10	75	7.8	92	630	8.0					10 / 0.33	254 / 4.16		18 / 0.51			0.12				16	277		5-		DWR
Jul 11 0800	No Record		7.4		602	8.0					10 / 0.33	256 / 4.20		17 / 0.48			0.06				15					DWR
Aug 9 0810	"				562	8.4					0 / 0.00	261 / 4.28		17 / 0.48			0.14				15	275		5-		DWR
Sep 14 0900	Est 1		7.5		561	7.8[x]	86 / 4.29	17 / 1.40	23 / 1.00	4.1 / 0.105	0.0 / 0.0	273 / 4.48	72 / 1.50	19 / 0.54	7.9 / 0.128	0.6 / 0.032	0.04	20	PO_4 0.11; (a)	379[c]	15	285	61	5-		DWR
Oct 13 0900	Est 1	64	8.2	86	592	8.0[x]					0 / 0.00	237 / 3.88		17 / 0.48			0.08				17	238		5-		DWR
Nov 11 0900	Est 1	57	8.6	83	603	8.0[x]					0 / 0.00	254 / 4.16		17 / 0.48			0.12				15	262		5-		DWR
Dec 10 0300	Est 1	59	7.8	77	641	7.6[x]					0 / 0.00	281 / 4.61		19 / 0.54			0.12				15	288		5-		DWR
																									median 180	
																									minimum 6.2	
																									maximum 2400	

x Lab

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated.

TABLE 17
ANALYSES OF SURFACE WATER

REGION 8

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1956							Warm Creek at San Bernardino																			
Jan 8 **	1.5	57	8.0	77	642	8.1*	73 / 3.64	23 / 1.89	26 / 1.13	4.3 / 0.110	0 / 0.00	271 / 4.44	75 / 1.56	20 / 0.56	10.9 / 0.176	0.4 / 0.021	0.03			381	17	279		-5		DWR
Feb 6 **	No Record				712	7.9*	87 / 4.34	21 / 1.73	29 / 1.26	4.0 / 0.102	0 / 0.00	283 / 4.64	99 / 2.07	22 / 0.62	4.6 / 0.074		0.20			450	17	304		-5		DWR
Mar 13 **	"	54			680	7.8*	78 / 3.89	24 / 1.97	29 / 1.26	3.7 / 0.095	0 / 0.00	285 / 4.67	93 / 1.94	24 / 0.67	6.9 / 0.112	0.5 / 0.026	0.02			430	17	294		-5		DWR
Apr 11 **	"	63			678	7.6*	87 / 4.34	19 / 1.56	27 / 1.17	4.0 / 0.102	0 / 0.00	278 / 4.56	91 / 1.90	22 / 0.62	4.0 / 0.064	0.6 / 0.032	0.03			441	17	294		-5		DWR
May 10 **	Est. 5.0	63			542	7.6*	63 / 3.14	21 / 1.73	21 / 0.91	4.5 / 0.115	0 / 0.00	222 / 3.64	72 / 1.51	21 / 0.59	3.6 / 0.059	0.6 / 0.032	0.18	15	PO_4 0.1	333[b]	16	244		62		DWR
June 8 **	Est. 1	66			654	7.8*	90 / 4.49	18 / 1.48	26 / 1.13	3.9 / 0.10	0 / 0.00	285 / 4.67	84 / 1.70	20 / 0.56	3.3 / 0.053	0.6 / 0.032	0.02	20		404	16	300		-5		DWR
July 7 **	Est. 3.5	66			617	7.9*	101 / 5.04	6 / 0.49	25 / 1.09	3.1 / 0.079	0 / 0.00	276 / 4.52	77 / 1.60	19 / 0.54	8.4 / 0.136	0.6 / 0.031	0.08	25		416	15	279		-5		DWR
Aug 12 **	No Record				629	7.9*	65 / 3.24	32 / 2.63	22 / 0.96	3.6 / 0.092	0 / 0.00	288 / 4.72	71 / 1.47	19 / 0.54	4.0 / 0.064	0.6 / 0.032	0.00	20		366	14	295		-5		DWR
Sept	Dry																									
Oct	Dry																									
Nov	Dry																									
Dec	No Report																									

** Composite
* Lab pH

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents.

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated.

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
											Escondido Creek near Harmony Grove															
1955																										
Jan 17 1500	Est 1	50	9.6	85	1,111	7.8					0 / 0.00	176 / 2.88		171 / 4.82			0.46				60	198		60		DWR
Feb 14 1500	Est 1	55	15.6	147	1,770	8.0					0 / 0.00	264 / 4.33		310 / 8.74			0.52				61	364		5-		DWR
Mar 14 1450	Est 1	64	5.6	59	1,748	7.4					0 / 0.00	271 / 4.44		286 / 8.07			0.56				64	317		35		DWR
Apr 11 1530	Est 1	64	6.8	71	2,128	8.0					0 / 0.00	285 / 4.67		346 / 9.76			0.64				64	368		70		DWR
May 16 1505	Est 1	62	11.2	114	1,800	7.2	82 / 4.09	37 / 3.04	288 / 12.53	15.0 / 0.38	0 / 0.00	288 / 4.72	280 / 5.83	330 / 9.31	15.9 / 0.26	1.2 / 0.06	0.60	30	(a) Zn 0.25	1,266[c]	62	356	120	5-		DWR
Jun 13 1430	Est 0.02	64	8.4	88	2,100	7.6					0 / 0.00	342 / 5.61		355 / 10.01			0.78				63	385		25		DWR
Jul 18 1455	Dry																									
Aug 15 1530	Dry																									
Sep 19 1430	Dry																									
Oct 17 1600	Dry																									
Nov 14 1500	Dry																									
Dec 19 1445	Est 1	52	5.0	45	1,890	7.3	81 / 4.40	42 / 3.45	278 / 12.09	15.4 / 0.394	0 / 0.00	205 / 3.36	226 / 6.80	317 / 8.94	52.1 / 0.84	0.8 / 0.042	0.42				61	392		5-	median 23 minimum 2.3 maximum 700	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE [18]
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
											Escondido Creek near Harmony Grove															
1956																										
Jan 16 1600	Est 1	55	9.4	88	2000	7.6					0 / 0.00	224 / 3.67		304 / 8.57			0.34				60	365		-5		DWR
Feb 6 1510	Est 1	54	5.8	54	2053	7.4					0 / 0.00	220 / 3.61		318 / 8.97			0.35				57	407		-5		DWR
Mar 13 1530	Est 1	59	7.6	75	2049	7.4					0 / 0.00	259 / 4.25		300 / 8.46			0.58				60	395		-5		DWR
Apr 16 1450	Est 1	59	4.8	47	1968	7.3					0 / 0.00	261 / 4.28		300 / 8.46			0.62				58	389		-5		DWR
May 7 1335	Est 0.5	70	10.4	116	2169	7.8	89 / 4.44	44 / 3.62	300 / 13.05	15.2 / 0.389	0 / 0.00	298 / 4.88	332 / 6.91	353 / 9.95	8.3 / 0.134	1.0 / 0.053	1.02	20	PO_4 21.2; (a) Sn 0.0	1333 [b]	61	403	159	-5		DWR
June 18 1405	Est .25	66	4.6	49	2232	7.4					0 / 0.00	307 / 5.03		368 / 10.38			0.76				63	412		-5		DWR
July 16 1420	Ponded	79	5.6	68	2342	8.5					0 / 0.00	115 / 1.88		395 / 11.14			0.72				62	436		20		DWR
Aug 13 1450	"	77	1.0	11.9	3012	8.5					0 / 0.00	102 / 1.67		450 / 12.69			0.26				44	881		3500		DWR
Sept 17 1400	Dry																									DWR
Oct 8 1445	Ponded	68	7.5	82	2331	7.8					0 / 0.00	312 / 5.11		193 / 5.44			0.84				60	436		-5		DWR
Nov 7 1540	Est 0.25	57	8.8	85	2257	7.6					0 / 0.00	268 / 4.39		350 / 9.87			0.82				59	452		-5		DWR
Dec 10 1200	Ponded	56	6.0	57	2298	8.0					0 / 0.00	276 / 4.52		356 / 10.04			0.44				61	442		15	median 23 minimum .45 — maximum 700	DWR

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ NC ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											San Diego River at Old Mission Dam															
1955																										
Jan 17 1730	Est 6	50	10.0	88	1,527	8.0					0 / 0.00	195 / 3.20		352 / 9.93			0.36				49	400		110		DWR
Feb 14 1740	Ponded	57	15.0	144	2,439	8.0					0 / 0.00	264 / 4.33		525 / 14.80			0.42				51	604		5-		DWR
Mar 14 1715	Ponded	66	14.6	156	2,066	8.4					17 / 0.561	207 / 3.39		428 / 12.07			0.34				52	484		5-		DWR
Apr 11 1800	Ponded	64	16.4	171	2,381	7.9					0 / 0.00	293 / 4.80		532 / 15.00			0.30				50	582		8		DWR
May 10 1750	Ponded	70	12.4	138	2,193	7.3	132 / 6.59	64 / 5.26	272 / 11.83	3.6 / 0.09	0 / 0.00	325 / 5.32	178 / 3.71	536 / 15.12	1.5 / 0.02	0.8 / 0.04	0.34	35	(a)	1,654[c]	50	562	326	5-		DWR
Jun 13 1720	Ponded	70	9.4	105	2,580	7.4					0 / 0.00	368 / 6.03		570 / 16.07			0.42				51	617		5-		DWR
Jul 18 1700	Ponded	79	12.6	154	2,375	8.0					0 / 0.00	356 / 5.84		607 / 17.12			0.30				53	578		5-		DWR
Aug 15 1815	Ponded	82	16.2	203	2,538	8.1						249 / 4.08		656 / 18.50			0.32				50	631		5-		DWR
Sep 19 1715	Ponded	73	12.8	147	2,915	7.8	152 / 7.58	80 / 6.58	352 / 15.31	5.2 / 0.133	0.0 / 0.0	322 / 5.28	158 / 3.29	720 / 20.30	0.0 / 0.0	0.4 / 0.021	0.36	35	(a) PO_4 0.0	2,014[c]	52	708	444	5-		DWR
Oct 17 1830	Ponded	66	11.6	124	3,067	7.3						510 / 8.36		375 / 10.58			0.30				52	737		5-		DWR
Nov 14 1700	Ponded	57	7.0	68	3,076	7.7					0 / 0.00	349 / 5.72		735 / 20.73			0.40				50	730		5-		DWR
Dec 19 1700	Ponded	54	11.6	107	2,985	7.4					0 / 0.00	683 / 11.20		360 / 10.15			0.26				52	682		5-		DWR
																									median 6.2 minimum .45- maximum 240	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							equivalents per million																			
							San Diego River at Old Mission Dam																			
1956																										
Jan 16 1830	ponded	54	8.8	81	2941	7.3					0 / 0.00	403 / 6.61		712 / 20.08			0.27				51	676		-5		DWR
Feb 6 1745	ponded	54	10.2	94	2427	7.2					0 / 0.00	239 / 3.92		538 / 15.17			0.37				48	573		-5		DWR
Mar 12 1740	ponded	59	11.4	112	2874	7.8					0 / 0.00	271 / 4.44		650 / 18.32			0.38				50	689		-5		DWR
Apr 16 1730	ponded	61	8.4	84	1941	7.6					0 / 0.00	217 / 3.56		396 / 11.17			0.27				50	439		14		DWR
May 7 1616	ponded	72	10.4	118	2950	8.0	156 / 7.78	93 / 7.64	320 / 13.92	5.5 / 0.141	0 / 0.00	310 / 5.08	249 / 5.19	705 / 19.88	0.8 / 0.013	0.8 / 0.042	0.40	15	PO_4 0.2 ; (a) Sn^4 0.0	1700[b]	47	771	517	-5		DWR
June 18 1725	ponded	75	9.4	110	3185	7.6					0 / 0.00	405 / 6.64		775 / 21.86			0.48				52	780		-5		DWR
July 16 1740	ponded	82	13.2	167	3448	8.0					0 / 0.00	436 / 7.15		828 / 23.35			0.47				51	804		-5		DWR
Aug 13 1730	ponded	81	16.2	201	3401	8.0					0 / 0.00	405 / 6.64		890 / 25.10			0.36				52	798		-5		DWR
Sept 17 1630	ponded	77	15.6	185	3650	8.0	150 / 7.49	105 / 8.63	450 / 19.58	5.7 / 0.146	0 / 0.00	398 / 6.52	129 / 2.68	960 / 27.07	2.4 / 0.040	0.8 / 0.042	0.48	30	PO_4 0.08; (a)	2689[c]	55	806	480	-5		DWR
Oct 9	Not Sampled																									
Nov 7 1840	ponded	59	9.0	89	3816	7.6					0 / 0.00	405 / 6.64		990 / 27.92			0.49				53	865		-5		DWR
Dec 10 1400	ponded	50	6.[illegible]	57	3443	7.8					12 / 0.40	327 / 5.36		975 / 27.50			0.22				53	852		10	median 6.2 minimum 0.6 maximum 62	DWR

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE [illegible]
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million							equivalents per million						Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
1955										San Dieguito River Below San Pasqual Valley																
Jan 17 1540	Dry																									
Feb 14 1530	Dry																									
Mar 14 1515	Dry																									
Apr 11 1600	Dry																									
May 16 1650	Dry																									
June 13 1535	Dry																									
July 18 1530	Dry																									
Aug 15 1600	Dry																									
Sept 19 1505	Dry																									
Oct 17 1630	Dry																									
Nov 14 1510	Dry																									
Dec 19 1505	Dry																									

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o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										San Dieguito River Below San Pasqual Valley																
1956																										
Jan 16 1630	Dry																									DWR
Feb 6 1745	Dry																									DWR
Mar 12 1600	Dry																									DWR
Apr 16 1535	Dry																									DWR
May 7 1400	Dry																									DWR
June 18 1430	Dry																									DWR
July 16 1455	Dry																									DWR
Aug 13 1525	Dry																									DWR
Sept 17 1415	Dry																									DWR
Oct 8 1530	Dry																									DWR
Nov 7 1630	Dry																									DWR
Dec	No report																									DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
											San Luis Rey River near Pala															
1955																										
Jan 17 1400	Est 3.2	55	9.4	88	606	7.6					0 / 0.00	183 / 3.00		39 / 1.10			0.0				30	219		5-		DWR
Feb 14 1420	Est 2	61	10.4	105	592	7.8					0 / 0.00	163 / 2.67		37 / 1.04			0.10				29	221		5-		DWR
Mar 14 1400	Est 3	63	9.8	101	678	8.1					0 / 0.00	163 / 2.67		42 / 1.18			0.02				12	242		5-		DWR
Apr 11 1430	Est 2	64	8.4	88	666	8.1					0 / 0.00	173 / 2.84		43 / 1.21			0.06				29	234		5-		DWR
May 16 1410	Est 2.5	62	10.4	106	638	7.5	66 / 3.29	20 / 1.64	43 / 1.87	4.8 / 0.12	0 / 0.00	176 / 2.88	128 / 2.66	42 / 1.18	2.0 / 0.03	0.4 / 0.02	0.04	35	(a)	432[c]	27	246	102	5-		DWR
Jun 13 1340	Est 1	59	8.0	79	680	7.6					0 / 0.00	176 / 2.88		43 / 1.21			0.02				28	240		5-		DWR
Jul 18 1400	0.1	63	7.4	76	651	7.8					14 / 0.47	139 / 2.28		49 / 1.38			0.03				28	222		5-		DWR
Aug 15 1450	0.1	68	7.6	83	661	8.0						161 / 2.64		56 / 1.58			0.0				24	224		5-		DWR
Sep 19 1330	Est 0.3	64	8.0	84	576	7.7	59 / 2.94	19 / 1.56	41 / 1.78	4.8 / 0.123	0.0 / 0.0	163 / 2.68	116 / 2.42	42 / 1.19	0.0 / 0.0	0.3 / 0.016	0.06	35	PO_4 0.14; (a)	409[c]	28	225	91	5-		DWR
Oct 17 1500	Est 0.3	61	7.8	78	649	7.8						163 / 2.67		43 / 1.21			0.12				32	222		5-		DWR
Nov 14 1400	Est 0.03	57	7.0	68	672	7.4					0 / 0.00	176 / 2.88		45 / 1.27			0.06				29	229		5-		DWR
Dec 19 1400	Est 0.05	57	7.2	69	645	7.4					0 / 0.00	163 / 2.67		85 / 2.40			0				28	233		5-		DWR
																									median 6.2 minimum .45- maximum 700+	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept. of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
												San Luis Rey River near Pala														
1956																										
Jan 16 1505	Est 0.04	57	7.0	68	657	7.5					0 / 0.00	168 / 2.75		45 / 1.27			0.02				28	223		-5		DWR
Feb 6 1430	Est 2	59	8.4	83	693	7.6					0 / 0.00	160 / 2.62		45 / 1.27			0.12				27	237		-5		DWR
Mar 12 1445	Est 1	61	10.2	103	689	8.2					0 / 0.00	161 / 2.64		46 / 1.30			0.02				28	237		-5		DWR
Apr 16 1400	0.04	61	9.8	98	697	7.7					0 / 0.00	163 / 2.67		47 / 1.33			0.0				27	242		-5		DWR
May 7 1245	Est 1.0	63	9.0	93	671	8.0	60 / 2.99	26 / 2.13	40 / 1.74	4.2 / 0.108	0 / 0.00	163 / 2.68	143 / 2.97	44 / 1.24	0.85 / 0.014	0.3 / 0.016	0.01	30	PO_4 0.0; (a) Sn 0.0	430[b]	25	256	122	-5		DWR
June 18 1330	No Flow	63	7.6	78.5	681	7.4					0 / 0.00	173 / 2.84		45 / 1.27			0.13				27	244		-5		DWR
July 16 1350	"	68	8.4	91.5	687	7.6					0 / 0.00	171 / 2.80		45 / 1.27			0.02				27	246		-5		DWR
Aug 13 1345	"	68	9.0	98	679	8.0					0 / 0.00	176 / 2.88		44 / 1.24			0.00				26	244		-5		DWR
Sept 17 1315	"	68	7.6	83	664	7.6	63 / 3.14	21 / 1.73	41 / 1.78	4.4 / 0.113	0 / 0.00	176 / 2.88	135 / 2.82	44 / 1.24	0.25 / 0.004	0.6 / 0.032	0.00	20	PO_4 0.08; (a)	444[c]	26	244	100	-5		DWR
Oct 8 1245	"	66	8.0	86	655	7.4					0 / 0.00	173 / 2.84		43 / 1.21			0.05				27	246		-5		DWR
Nov 7 1500	"	63	7.0	72	685	7.4					0 / 0.00	173 / 2.84		43 / 1.21			0.14				28	244		-5		DWR
Dec 10 1110	"	55	6.5	61	671	8.5					0 / 0.00	183 / 3.00		43 / 1.21			0.04				26	246		-5	median 6.2 minimum .46 maximum 700+	DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as 0.00 except as shown.

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TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
										Santa Margarita River near Fallbrook																
1955																										
Jan 17 1300	14	46	14.0	122	1,183	8.2					14 / 0.47	284 / 4.66		146 / 4.12			0.16				50	293		5-		DWR
Feb 14 1310	Est 25	54	12.8	112	1,163	8.3					12 / 0.40	276 / 4.52		142 / 4.00			0.16				48	306		5-		DWR
Mar 14 1245	Est 10	61	11.4	115	1,196	8.4					19 / 0.63	266 / 4.36		150 / 4.23			0.22				49	294		5-		DWR
Apr 11 1330	0.4	66	9.6	103	1,170	8.4					19 / 0.63	281 / 4.61		147 / 4.15			0.24				49	290		5-		DWR
May 16 1300	1.5	64	11.0	115	1,182	8.0	87 / 4.34	21 / 1.73	138 / 6.00	3.6 / 0.09	10 / 0.32	325 / 5.32	113 / 2.36	155 / 4.37	1.0 / 0.02	0.5 / 0.03	0.12	30	(a)	720[c]	49	304	22	5-		DWR
Jun 13 1230	0.4	66	7.0	75	1,220	7.9					0 / 0.00	383 / 6.28		158 / 4.46			0.24				49	321		5-		DWR
Jul 18 1300	0.3	73	7.6	88	1,155	7.8					0 / 0.00	390 / 6.39		172 / 4.85			0.29				54	283		5-		DWR
Aug 15 1345	0.6	75	8.0	93	1,067	8.2					17 / 0.57	305 / 5.00		161 / 4.54			0.26				46	282		6		DWR
Sep 19 1215	0.2	72	10.4	118	1,264	8.1	86 / 4.29	29 / 2.38	176 / 7.66	4.1 / 0.105	0.0 / 0.0	403 / 6.60	92 / 1.91	193 / 5.44	3.0 / 0.048	0.4 / 0.021	0.28	30	PO_4 0.05; (a)	813[c]	53	334	4	5-		DWR
Oct 17 1350	Est 0.5	61	8.6	86	985	8.0						381 / 6.23		158 / 4.46			0.22				49	310		5-		DWR
Nov 14 1300	4.0	55	8.2	77	1,300	8.0					0 / 0.00	364 / 5.97		174 / 4.90			0.32				51	297		5-		DWR
Dec 19 1300	Est 5.0	50	10.6	93	1,212	8.3					0 / 0.00	307 / 5.03		156 / 4.40			0.12				46	326		5-		DWR
																									median 23 minimum 2.3 maximum 240	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analyzed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif Dept of Public Health, Division of Laboratories

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TABLE [18]
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Santa Margarita River near Fallbrook																			
1956																										
Jan 16 1400	0.9	54	9.4	87	1205	8.2					0 / 0.00	315 / 5.16		154 / 4.34			0.12				48	307		-5		DWR
Feb 6 1340	Est 10	50	10.4	92	1267	8.0					0 / 0.00	305 / 5.00		165 / 4.65			0.30				48	317		-5		DWR
Mar 12 1330	Est 2	55	9.6	90	1171	8.2					10 / 0.33	285 / 4.67		106 / 2.99			0.22				47	300		-5		DWR
Apr 16 1315	11	55	9.8	92	1449	8.2					0 / 0.00	295 / 4.84		220 / 6.20			0.32				58	281		-5		DWR
May 7 1200	0.5	63	9.2	95	1172	8.2	69 / 3.44	36 / 2.96	123 / 5.35	3.4 / 0.087	0 / 0.00	337 / 5.52	109 / 2.28	151 / 4.26	1.50 / 0.024	0.5 / 0.026	0.24	30	PO_4 0.2; (a)	692 [b]	45	320	44	-5		DWR
June 18 1240	No Flow	70	8.2	91	1318						0 / 0.00	390 / 6.39		174 / 4.91			0.38				50	335		-5		DWR
July 16 1250	"	77	9.2	110	1379						0 / 0.00	405 / 6.64		179 / 5.05			0.30				50	347		-5		DWR
Aug 13 1245	"	79	19.0	231	1326	7.9					0 / 0.00	371 / 6.08		183 / 5.16			0.18				51	313		-5		DWR
Sept 17 1205	"	64	7.6	80	1577	7.4	113 / 5.64	35 / 2.88	178 / 7.74	4.5 / 0.115	0 / 0.00	442 / 7.24	171 / 3.57	207 / 5.84	0.30 / 0.005	0.6 / 0.032	0.29	30	PO_4 0.24; (a)	977 [c]	47	426	64	-5		DWR
Oct 8 1115	"	68	6.5	71	1400	7.4					0 / 0.00	393 / 6.44		189 / 5.33			0.29				51	331		-5		DWR
Nov 7 1330	"	57	8.4	81	1328	7.7					0 / 0.00	422 / 6.92		170 / 4.79			0.18				50	347		-5		DWR
Dec 10 1000	Est 30gpm	47	9.0	76	1342	9.4					0 / 0.00	400 / 6.56		175 / 4.94			0.24				48	341		-5	median 2.3; minimum 0.6; maximum 62	DWR

[a] Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

[b] Determined by addition of analysed constituents.

[c] Gravimetric determination.

[d] Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

[e] Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LAOWP), City of Los Angeles Dept. of Pub Health (LAOPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
Tia Juana River at International Boundary																										
1955																										
Jan 17 1630	Est 2	57	11.2	108	2,410	8.4					0 0.00	326 5.34		528 14.89			0.28				55	514		100		DWR
Feb 14 1645	Est 1.5	62	16.0	163	2,817	8.4					0 0.00	268 4.39		675 19.03			0.18				62	534		28		DWR
Mar 14 1615	Est 1	73	21.0	244	2,841	8.4					0 0.00	188 3.08		700 19.74			0.36				63	478		45		DWR
Apr 11 1710	Dry																									
May 16 1705	Dry																									
Jun 13 1625	Dry																									
Jul 18 1630	Dry																									
Aug 15 1705	Dry																									
Sep 19 1625	Dry																									
Oct 17 1720	Dry																									
Nov 14 1630	Dry																									
Dec 19 1600	Dry																									
																									median 425	
																									minimum 45	
																									maximum 7000	

o Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{0.00}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub Health (LADPH), Long Beach Dept of Pub Health (LBOPH) or State Division of Water Resources (DWR), as indicated

TABLE 18
ANALYSES OF SURFACE WATER

REGION 9

Date and time sampled	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total Dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
														equivalents per million												
							Tia Juana River at International Boundary																			
1956																										
Jan 16 1745	Dry																									DWR
Feb 6 1650	Dry																									DWR
Mar 12 1700	Dry																									DWR
Apr 16 1615	ponded	61	3.8	38		7.3	SAMPLE BROKEN																			DWR
May 7 1510	Dry																									DWR
June 18 1605	Dry																									DWR
July 16 1625	Dry																									DWR
Aug 13 1630	Dry																									DWR
Sept 17 1330	Dry																									DWR
Oct 9 0900	Dry																									DWR
Nov 7 1735	Dry																									DWR
Dec 10 1500	Dry																									DWR
																									median 2300	
																									minimum 2300	
																									maximum 2300	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and chromium (Cr), reported here as $\frac{00}{000}$ except as shown.

b Determined by addition of analysed constituents

c Gravimetric determination.

d Annual median and range, respectively Calculated from analyses of duplicate monthly samples made by Calif. Dept of Public Health, Division of Laboratories.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), Pacific Chemical Consultant (PCC), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept of Pub Health (LADPH), Long Beach Dept of Pub Health (LBDPH) or State Division of Water Resources (DWR), as indicated

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
1	Klamath River	Copco	9-55	0	5.9 ± 5.4	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
2	Klamath River	Somesbar	9-55	0	8.7 ± 5.1	0	0
			5-56	7.7 ± 6.2	0	0	0
			9-56	0	22.5 ± 4.6	0	0
3	Klamath River	Klamath	9-55	0	6.9 ± 6.4	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
3a	Smith River	Crescent City	9-55	0	9.3 ± 5.1	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
4	Trinity River	Hoopa	9-55	0	0	0	0
			5-56	0	0	0	0.49 ± 0.39
			9-56	7.9 ± 4.7	0	0	0.39 ± 0.33
4a	Trinity River	Lewiston	5-55	0	0	0	0
			5-56	84.2 ± 7.8	0	0	0
5	Eel River	McCann	9-55	7.0 ± 5.4	0	0	0
			5-56	0	0	0	0.59 ± 0.39
			9-56	0	0	0	0
6	Eel River	Scotia	9-55	0	0	0	0
			5-56	6.5 ± 5.2	13.74 ± 7.8	0	0.62 ± 0.48
			9-56	8.5 ± 5.0	0	0	0
7	South Fork Eel River	Miranda	9-55	0	0	0	0
			5-56	19.5 ± 5.8	0	0	0
			9-56	0	6.5 ± 6.4	0	0.79 ± 0.76

TABLE 17

RADIOASSAY OF SURFACE WATERS

NORTH COAST REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
8	East Fork Russian River	Calpella	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	5.9 ± 5.5	0	0.68 ± 0.53	1.86 ± 0.54
			9-56	0	0	0	0
8a	Russian River	Hopland	5-55	0	0	0	0
			9-55	6.0 ± 5.5	0	0	0
			5-56	0	0	0	0
			9-56	0	7.0 ± 6.2	0	0.50 ± 0.44
9	Russian River	Healdsburg	5-55	0	0	0	0
			9-55	5.6 ± 5.4	0	0	0
			9-56	0	0	0	0
10	Russian River	Guerneville	5-55	0	0	0	0
			9-55	6.1 ± 5.0	0	0	0
			5-56	0	0	0	1.24 ± 0.59
			9-56	7.0 ± 4.8	9.4 ± 5.9	0.81 ± 0.58	0.91 ± 0.60
10a	East Fork Russian River	Potter Valley Power House	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0.59 ± 0.51	0
			9-56	0	6.6 ± 5.9	0	0
10b	Russian River	Ukiah	5-55	0	0	0	0
			9-55	8.1 ± 5.0	9.9 ± 5.3	0	0
			5-56	0	13.71 ± 7.9	0	0
			9-56	0	0	0	0

RADIOASSAY OF SURFACE WATERS

SAN FRANCISCO BAY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
72	Napa River	St. Helena	5-55	0	0	0	0
			5-56	17.4 ± 0.10	0	0	0
			9-56	0	0	0	0
73	Alameda Creek	Niles	5-55	6.1 ± 6.0	0	0	0
			5-56	6.4 ± 5.1	9.98 ± 7.0	0	0
			9-56	0	0	0	0
74	Los Gatos Creek	Los Gatos	5-55	0	0	0	0
			9-55	0	6.9 ± 5.4	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
82	Coyote Creek	Madrone	5-55	0	6.9 ± 6.2	0	0
			9-55	0	0	0	0
			5-56	0	8.49 ± 7.1	0	0
			9-56	0	0	0	0

CENTRAL COASTAL REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
43a	Salinas River	Paso Robles	5-56	7.9 ± 5.9	0	0	0
45	Santa Ynez River	Los Laureles Canyon	5-56	0	7.74 ± 7.3	0	0
45a	Santa Ynez River	Solvang	5-55	0	0	0	0
			5-56	0	0	0	0
75	San Lorenzo River	Big Trees	5-55	0	0	0.5 ± 0.5	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0.70 ± 0.61	0
76	Soquel Creek	Soquel	5-55	6.9 ± 6.3	0	0	0
			9-55	0	0	0	0
			5-56	14.1 ± 5.4	0	0	0
			9-56	0	0	0	0
77	Pajaro River	Chittenden	5-55	0	0	0	0.4 ± 0.4
			9-55	0	0	0	0
			5-56	0	0	0.86 ± 0.43	0
			9-56	0	0	0	0
83	Carmel River	Carmel	5-55	6.1 ± 6.0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	7.0 ± 4.8	0	0	0

TABLE 22

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION

Sta. No	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
45b	Matilija Creek	Matilija Dam	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
46	Santa Clara River	Los Angeles Ventura County Line	5-55	6.1 ± 6.0	0	0	0
			9-55	0	0	0	0
			5-56	6.3 ± 4.8	0	0	0
			9-56	5.0 ± 4.7	6.2 ± 5.5	0	0.40 ± 0.28
46a	Santa Clara River	Santa Paula	5-55	0	0	18.4 ± 6.4	1.9 ± 0.6
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0.60 ± 0.52
46b	Santa Clara River	Blue Cut	5-55	8.7 ± 6.0	17.7 ± 6.4	0.5 ± 0.4	0.7 ± 0.5
			9-55	0	0	0	0
			5-56	6.6 ± 5.0	0	0	0.97 ± 0.69
			9-56	0	0	0	0
47	Los Angeles River	Los Angeles	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	20.4 ± 6.0	0	0	0
48	Los Angeles River	Long Beach	5-55	9.7 ± 6.0	8.4 ± 6.3	0	0
			9-55	0	0	0	3.47 ± 0.93
			5-56	11.7 ± 5.7	0	0	0
			9-56	10.7 ± 6.0	0	0	0
49	Rio Hondo	Whittier Narrows	5-55	10.1 ± 6.0	9.0 ± 6.4	0.4 ± 0.4	0
			9-55	8.3 ± 5.5	0	0.41 ± 0.35	0
			5-56	6.4 ± 5.7	0	0	0
			9-56	10.4 ± 4.9	0	0.31 ± 0.29	1.04 ± 0.55

TABLE 22

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
49a	Mission Creek	Whittier Narrows	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0.41 ± 0.38	0.61 ± 0.58
50	San Gabriel River	Whittier Narrows	5-55	10.1 ± 6.0	0	0	0
			5-56	8.8 ± 5.8	0	0	0.96 ± 0.52
50a	San Gabriel River	Azusa	9-55	12.5 ± 5.2	0	0	0
61	Ventura River	Ventura	5-55	8.7 ± 5.9	0	0	0
			5-56	13.0 ± 5.8	0	0	0
			9-56	0	0	0	0

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
11	Sacramento River	Delta	5-55	0	0	0	0
			5-56	19.6 ± 5.5	5.6 ± 4.5	0	0
12	Sacramento River	Keswick	5-55	0	0	0	0
			5-56	13.8 ± 6.4	24.9 ± 6.9	1.33 ± 0.73	0.92 ± 0.78
12a	Sacramento River	Redding	5-55	0	0	0.5 ± 0.4	1.0 ± 0.6
			5-56	0	9.68 ± 5.8	0	0
12b	Cottonwood Creek	Cottonwood	5-55	0	0	0	0
			9-55	0	0	0	0.26 ± 0.16
			5-56	0	0	0	0
			9-56	0	10.7 ± 8.0	0	0
13	Sacramento River	Hamilton City	5-55	0	0	0	0.7 ± 0.4
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	5.3 ± 5.2	0	0	0
13a	Stony Creek	Hamilton City	5-55	0	0	0	0
			5-56	0	9.62 ± 6.3	0	0
14	Sacramento River	Knights Landing	5-55	0	0	0	0.5 ± 0.5
			9-55	0	0	0	0
			5-56	0	0	0	0.67 ± 0.52
			9-56	0	0	0	0
14a	Sacramento Slough	Knights Landing	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
15	Sacramento River	Sacramento	5-55	0	0	0	0
			9-55	6.5 ± 5	0	0	0
			5-56		7.55 ± 0.55	0	0
			9-56	0	0	0	0

TABLE 33

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
16	Sacramento River	Rio Vista	5-55	0	8.8 ± 7.4	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0.66 ± 0.44
			9-56	0	0	0	0.79 ± 0.65
16a	Calaveras River	Jenny Lind	5-55	0	0	0	0
			5-56	0	6.9 ± 5.7	0	0
			9-56	0	11.5 ± 8.1	0	0.49 ± 0.36
17	Pit River	Montgomery Creek	5-55	0	0	0	0.5 ± 0.3
			5-56	0	0	0	0
17a	Pit River	Canby	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0.97 ± 0.69
			9-56	0	0	0	0
17c	Burney Creek	Burney	5-55	0	0	0	0.4 ± 0.4
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
17d	Indian Creek	Crescent Mills	5-55	0	0	0	0
			9-55	0	28.6 ± 6.3	0	0
			5-56	0	6.35 ± 5.3	0	0.53 ± 0.38
			9-56	6.2 ± 4.6	0	0	0
18	McCloud River	Shasta Lake	5-55	0	0	0	0
19	Feather River	Oroville	5-55	0	0	0	0
			9-55	0	5.7 ± 5.6	0	0
			5-56	0	5.67 ± 5.1	0	0
			9-56	5.6 ± 4.6	0	0.60 ± 0.47	0

TABLE 23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
20	Feather River	Nicolaus	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	9.9 ± 9.6	0	0	0
			9-56	0	0	0	0
21	Yuba River	Marysville	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0.71 ± 0.61
			9-56	5.2 ± 4.9	0	0	0
21a	Yuba River	Smartville	5-55	0	10.8 ± 7.2	0	0.8 ± 0.4
			9-55	0	0	0	0
			5-56	0	8.2 ± 7.6	0	0
			9-56	0	0	0	0
22	American River	Sacramento	5-55	0	0	0	0
			9-55	0	6.0 ± 5.2	0	0
			5-56	0	0	0	0
			9-56	7.0 ± 5.0	0	0	0.69 ± 0.48
23	Mokelumne River	Woodbridge	5-55	0	0	0	0.7 ± 0.4
			9-55	25.5 ± 5.5	11.4 ± 4.8	0	0.23 ± 0.22
			5-56	0	0	0	0
			9-56	0	10.6 ± 7.8	0	0.69 ± 0.59
23a	Mokelumne River	Lancha Plana	5-55	0	0	0	0
			9-55	0	5.4 ± 4.7	0	0
			5-56	8.4 ± 6.7	0	0	0
			9-56	0	0	0	0
24	San Joaquin River	Friant	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	6.3 ± 5.7	0	0
			9-56	0	7.8 ± 7.2	0	0

TABLE 23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
25	San Joaquin River	Mendota	5-55	0 *	14.5 ± 7.6	0	0
			9-55	0	0	0.33 ± 0.32	0
			5-56	0	0	0	0
			9-56	0	0	0	0.39 ± 0.32
26	San Joaquin River	Grayson	5-55	15.5 ± 6.3	20.1 ± 7.6	0.5 ± 0.4	0.7 ± 0.5
			9-55	0	7.0 ± 5.4	1.12 ± 0.72	0
			5-56	0	0	0	0
			9-56	11.0 ± 4.9	13.3 ± 6.7	1.55 ± 0.62	0
26a	San Joaquin River	Maze Road Bridge	5-55	12.7 ± 6.0	20.6 ± 7.4	0	1.2 ± 0.5
			9-55	0	10.7 ± 5.4	0	0
			5-56	8.5 ± 8.1	0	0	0
			9-56	0	0	0	0
27	San Joaquin River	Vernalis	5-55	7.4 ± 6.2	0	0	0
			9-55	0	6.2 ± 5.3	0	0.45 ± 0.39
			5-56	0	0	0	0
			9-56	0	11.9 ± 7.7	0	0
28	San Joaquin River	Antioch	5-55	17.0 ± 6.3	0	0	0
			9-55	8.7 ± 5.4	6.3 ± 5.1	0	0.39 ± 0.38
			5-56	0	0	0	0
			9-56	0	0	0	0
29	Stanislaus River	Mouth	5-55	0	0	0	0
			9-55	7.7 ± 5.2	5.6 ± 5.3	0	0.62 ± 0.35
			5-56	0	7.6 ± 7.1	0	0
			9-56	6.2 + 4.9	0	0	0

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
29a	Stanislaus River	Knights Ferry	9-56	0	0	0	0
30	Tuolumne River	Hickman-Waterford Bridge	5-55	0	0	0	0.7 ± 0.5
			9-55	0	0	0	0.75 ± 0.42
			5-56	0	0	0	0
			9-56	0	0	0	0.59 ± 0.53
31	Tuolumne River	Tuolumne City	5-55	9.8 ± 6.3	0	0.7 ± 0.4	0
			9-55	0	6.1 ± 5.1	0	0
			5-56	24.3 ± 8.2	0	0	1.10 ± 0.65
			9-56	0	0	0	0
31b	Tuolumne River	LaGrange	5-55	10.5 ± 6.3	0	0	0.8 ± 0.4
			9-55	0	0	0	0
			5-56	0	0	0	0.95 ± 0.51
			9-56	0	0	0	0.96 ± 0.61
32	Merced River	Stevinson	5-55	8.5 ± 5.7	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	21.1 ± 8.7	0.64 ± 0.59	0
32a	Merced River	Exchequer Dam	5-55	0	0	0	0
			9-55	0	8.1 ± 5.4	0	1.61 ± 0.72
			5-56	13.3 ± 7.3	0	0.54 ± 0.48	0
			9-56	0	0	0	0
33	Kings River	Above North Fork	5-55	0	0	0	0
33a	Kings River	Piedra	5-55	0	0	0	0.5 ± 0.4
33b	Kings River	Pine Flat Dam	9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
33c	Kings River	Below North Fork	9-55	0	0	0	0
			5-56	11.5 ± 7.1	0	0	0
			9-56	0	0	0	0

TABLE 23

RADIOASSAY OF SURFACE WATERS
CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
34	Kings River	Kingsburg	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	18.9 ± 6.7	9.9 ± 7.9	0	0
35	Kaweah River	Three Rivers	5-55	0	0	0	1.2 ± 0.5
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	21.7 ± 6.5	0	0.91 ± 0.59
36	Kern River	Bakersfield	5-55	0	0	0	0.7 ± 0.5
			9-55	0	6.7 ± 5.3	0	0
			5-56	0	0	0	0
			9-56	0	0	0	0
36a	Kern River	Isabella Dam	9-55	0	0	0	0
			5-56	12.2 ± 8.3	0	0	0
36b	Kern River	Kernville	5-56	21.7 ± 8.0	9.5 ± 9.3	0	0.65 ± 0.58
40	Clear Lake	Clearlake Oaks	5-55	0	0	0	0
			9-55	0	6.3 ± 5.3	0	0
			5-56	19.6 ± 7.6	0	0	0
			9-56	0	0	0	0
41	Clear Lake	Lakeport	5-55	0	0	0	0
			9-55	0	0	0	0.43 ± 0.42
			5-56	11.3 ± 7.6	0	0	0
			9-56	0	0	0	0
42	Cache Creek	Lower Lake	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	23.8 ± 5.5	0	0	0

TABLE 23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
78	Bear River	Wheatland	5-55	0	0	0	0
			9-55	0	8.1 ± 5.4	0	0.43 ± 0.42
			5-56	0	0	0	0
			9-56	0	0	0	0
79	North Fork Cache Creek	Lower Lake	5-55	0	0	0	0
			9-55	0	0	0	0.73 ± 0.51
			5-56	7.4 ± 5.0	0	0.54 ± 0.40	0
			9-56	0	0	0	0
80	Cache Creek	Capay	5-55	0	0	0	0
			9-55	0	7.3 ± 5.5	0	0
			5-56	0	0	0	0
			9-56	0	0	0.61 ± 0.41	0.69 ± 0.55
81	Putah Creek	Winters	5-55	0	0	0	0.5 ± 0.4
			9-55	0	0	0	0
			5-56	22.0 ± 6.0	0	0.43 ± 0.35	0
			9-56	0	0	0	0
87	Colusa Trough	Colusa	5-56	0	0	0.57 ± 0.47	0
92	Delta-Mendota Canal	Mendota	5-55	10.1 ± 6.2	8.1 ± 7.0	0	0
			9-55	6.2 ± 5.2	0	0.32 ± 0.31	0
			5-56	0	0	0	0
			9-56	0	0	0	0
93	Delta-Mendota Canal	Tracy	9-55	0	7.7 ± 4.8	0	0.80 ± 0.28
97	Sacramento River	Snodgrass Slough	9-55	0	0	0	0
98	Delta-Cross Channel	Walnut Grove	9-55	0	7.0 ± 4.8	0	0.32 ± 0.26

TABLE 23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
99	Little Potato Slough	Terminous	9-55	0	0	0	0
100	Stockton Ship Channel	Rindge Island	9-55	0	6.2 ± 5.3	0	0
101	San Joaquin River	Garwood Bridge	9-55	0	0	0	0
102	San Joaquin River	Mossdale Bridge	9-55	0	0	0	0
103	Old River	Tracy	9-55	6.9 ± 4.8	7.7 ± 4.8	1.84 ± 0.70	0
104	Old River	Clifton Court Ferry	5-55 9-55	0 0	0 0	0 0	0 0
106	Italian Slough	Mouth	9-55	4.7 ± 4.6	0	0	0
107	Indian Slough	Brentwood	9-55	6.0 ± 5.3	0	0	0
108	Old River	Orwood Bridge	9-55	0	5.5 ± 4.8	0	0
109	Rock Slough	Knightsen	9-55	0	0	0	0
110	Lindsey Slough	Rio Vista	9-55	0	0	0	0
111	Bear Creek	Stevinson	9-55	0	16.1 ± 5.6	0.74 ± 0.40	0
112	Old River	Mandeville Island	9-55	0	0	0	0

TABLE 24

RADIOASSAY OF SURFACE WATERS

LAHONTAN REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
17b	Susan River	Susanville	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	13.7 ± 10.0	0	0	0
			9-56	0	25.5 ± 9.0	0	0
37	Lake Tahoe	Tahoe Vista	5-55	25.7 ± 6.3	0	0	0
			9-55	0	13.0 ± 5.1	0	0
			5-56	0	0	0	0.90 ± 0.58
			9-56	0	0	0	0
38	Lake Tahoe	Tahoe City	5-55	0	0	0	0
			9-55	0	6.5 ± 5.1	0	0
			5-56	14.4 ± 10.0	0	0	0.67 ± 0.50
			9-56	0	0	0	0
39	Lake Tahoe	Bijou	5-55	10.2 ± 5.8	0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	7.9 ± 7.6	0	0	0
52	Truckee River	Truckee	5-55	0	0	0	0.7 ± 0.5
			9-55	0	8.0 ± 5.1	0	0
			5-56	0	0	0	0.40 ± 0.35
			9-56	0	0	0	0
53	Truckee River	Farad	5-55	0	0	0	0
			9-55	0	5.9 ± 5.5	0	0
			5-56	0	0	0	0.63 ± 0.41
			9-56	0	0	0	0
67	Mojave River	Victorville	5-55	0	6.5 ± 6.0	0	0
			9-55	0	0	0	0
			5-56	0	0	0	0
			9-56	0	16.3 ± 5.3	0	0

TABLE 25

RADIOASSAY OF SURFACE WATERS

COLORADO RIVER BASIN REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
54	Colorado River	Topock, Arizona	5-55	7.6 ± 6.1	0	0.5 ± 0.5	0.5 ± 0.4
			9-55	6.8 ± 5.3	8.0 ± 5.3	0	0
			5-56	9.0 ± 6.1	0	0	0
			9-56	13.1 ± 4.8	0	0	0
55	Colorado River	Parker Dam	5-55	9.7 ± 6.1	0	0.5 ± 0.4	0
			9-55	9.2 ± 5.5	0	1.29 ± 0.57	0.82 ± 0.57
			5-56	0	8.6 ± 7.8	0	0
			9-56	6.0 ± 4.7	0	0	0
56	Colorado River	Yuma, Arizona	5-55	10.5 ± 6.1	0	0.5 ± 0.4	0
			9-55	9.3 ± 5.5	13.1 ± 5.3	0	0
			5-56	6.1 ± 5.4	0	0	0
			9-56	7.0 ± 4.7	12.6 ± 7.8	0	0
56a	All American Canal	Pilot Knob	5-55	0	0	0.5 ± 0.4	0
			9-55	5.7 ± 5.5	7.0 ± 5.3	0	0
			5-56	0	0	0	0
			9-56	7.1 ± 5.3	0	0.51 ± 0.44	0.50 ± 0.44
56b	Colorado River	Morales Dam	5-55	15.5 ± 5.9	0	0.9 ± 0.5	0
			9-55	11.0 ± 5.5	12.4 ± 5.4	0	0.57 ± 0.51
			5-56	15.5 ± 5.1	0	0	0
			9-56	0	17.3 ± 6.2	0	0
56c	Colorado River	Blythe	5-55	11.9 ± 6.0	6.5 ± 6.3	0	0
			9-55	8.8 ± 5.5	6.7 ± 5.4	0	0
			5-56	6.9 ± 5.0	0	0	0
			9-56	0	0	0	0
57	New River	Calexico (International Boundary)	5-55	0	0	0	0.4 ± 0.4
			9-55	8.7 ± 5.4	0	0.24 ± 0.22	0
			5-56	0	0	0	0
			9-56	0	0	0	0

TABLE 25

RADIOASSAY OF SURFACE WATERS

COLORADO RIVER BASIN REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
58	New River	Westmorland	5-55	0	0	0	0
			9-55	0	30.3 ± 5.8	0	0
			5-56	0	0	0	0
			9-56	7.2 ± 4.5	0	0	1.40 ± 0.78
59	Alamo River	Calexico (International Boundary)	5-55	0	0	0	0
			9-55	0	5.5 ± 5.2	0	0
			5-56	10.9 ± 4.9	8.5 ± 6.7	0	0
			9-56	0	0	0	0
60	Alamo River	Calipatria	5-55	15.9 ± 6.0	0	0	0
			9-55	8.7 ± 5.2	13.7 ± 5.5	0	0.74 ± 0.59
			5-56	9.4 ± 5.2	13.21 ± 5.5	0	0
			9-56	9.2 ± 5.7	0	0	0
68	Whitewater River	Whitewater	5-55	15.9 ± 6.0	0	0.6 ± 0.5	0
			9-55	10.7 ± 5.8	0	1.08 ± 0.59	0
			5-56	17.2 ± 5.5	0	0.78 ± 0.69	0
			9-56	13.2 ± 4.1	0	1.87 ± 0.71	0

TABLE 26

RADIOASSAY OF SURFACE WATERS

SANTA ANA REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
50b	Warm Creek	Colton	5-55	13.4 ± 6.0	0	0	0.7 ± 0.5
			5-56	9.4 ± 5.0	9.1 ± 5.9	0	1.74 ± 0.73
50c	Warm Creek	San Bernardino	5-55	0	9.0 ± 6.0	0	0
			5-56	12.3 ± 5.0	0	0	2.46 ± 1.06
51	Santa Ana River	Arlington (Pedley Bridge)	5-55	12.3 ± 5.9	0	0.6 ± 0.4	0
51a	Santa Ana River	Prado	5-55	11.5 ± 5.9	7.2 ± 6.3	0	0.5 ± 0.4
			9-55	9.8 ± 5.2	7.7 ± 5.1	0.64 ± 0.45	0
			5-56	10.5 ± 4.9	9.9 ± 6.1	0	0
			9-56	7.7 ± 5.3	12.3 ± 7.6	0	0
51b	Santa Ana River	Mentone	5-55	10.5 ± 6.0	0	1.2 ± 0.6	0.8 ± 0.6
			9-55	10.4 ± 5.4	0	0	0
			5-56	3.8 ± 2.6	26.82 ± 8.4	0	1.23 ± 0.60
			9-56	19.5 ± 5.0	0	1.54 ± 0.77	0
51d	Santa Ana River	Riverside	5-55	0	16.2 ± 6.0	0	0
			9-55	10.2 ± 5.4	0	0	0.73 ± 0.58
			5-56	12.8 ± 5.1	0	0.82 ± 0.69	0
			9-56	11.7 ± 5.4	0	0	0
51e	Santa Ana River	Norco	9-55	15.0 ± 5.4	7.7 ± 5.3	2.15 ± 0.71	0
			5-56	11.0 ± 5.1	12.8 ± 7.6	0	0
			9-56	8.2 ± 5.3	0	0.83 ± 0.59	0
86	Chino Creek	Chino	5-55	18.4 ± 6.2	0	0	0
			5-56	0	10.5 ± 6.8	0	0
			9-56	23.0 ± 5.6	0	0	0.51 ± 0.44

TABLE 27

RADIOASSAY OF SURFACE WATERS

SAN DIEGO REGION

Sta. No.	Stream	Near	Date	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
51c	Santa Margarita River	Fallbrook	5-55	0	0	0	0
			9-55	0	0	0.60 ± 0.40	0.81 ± 0.57
			5-56	0	0	0	0
			9-56	5.7 ± 5.3	0	0	0
62	San Luis Rey River	Pala	5-55	0	0	0	0
			9-55	0	0	0	0
			5-56	0	6.9 ± 6.4	0	0
			9-56	0	0	0	0
63	Escondido River	Harmony Grove	5-55	11.2 ± 6.2	7.1 ± 6.4	0	0
			5-56	0	0	0	0
65	San Diego River	Old Mission Dam	5-55	0	0	0	0
			9-55	0	15.9 ± 5.4	0.81 ± 0.56	0
			5-56	0	0	0	0
			9-56	11.1 ± 5.6	0	0	0

APPENDIX B

Procedures and Interpretation of Results for Water Pollution Radioassay

APPENDIX B

PROCEDURES AND INTERPRETATION OF RESULTS
FOR WATER POLLUTION RADIOASSAY
(Revised September 11, 1957)

I. ANALYTICAL PROCEDURES

A. Sample Preparation

1. Samples are collected in one-half gallon jugs during the routine stream sampling program.

2. On receipt in the laboratory, each sample is well mixed, and two - 250 ml aliquots taken. Each is acidified with a few drops of glacial acetic acid, and two drops of colloidal graphite suspension (aquadag) added.

3. The aliquot is filtered under suction through a membrane ("Millipore") filter, which retains suspended particulate matter of approximately 0.2 microns diameter and larger. Filters are treated with an antistatic preparation (Merix Anti-Static #79-OL) to eliminate any extraneous electrostatic charge.

4. The filtrate is placed in a 250 ml volumetric flask, inverted and the mouth placed in a 1 3/4" x 1/4" aluminum culture dish in a "chicken-feeder" type arrangement. The flask is supported by a ring stand; the dish rests on a hot plate adjusted so that the sample is taken to dryness at a temperature well below boiling.

5. At this point there are duplicate samples of both suspended solids and dissolved material from each original water sample ready for determination of radioactive content.

B. Counting Techniques

1. Two determinations are made on each sample, one for gross beta one for gross alpha radioactivity. This represents a total of eight determinations for each original sample.

2. Beta activity is determined with an internal gas flow counter operating in the proportional region, using argon-methane mixture as a flow gas. Background determinations are made before the first sample count each day, and then after each two sample counts throughout the day. Determinations of counter efficiency are made with a reference standard (thallium - 204) at least twice daily. Each determination of sample and background count rate is made for a total of 4096 counts. Since samples are run in duplicate, the total time for each sample count and background determination is 64 minutes.

3. Alpha activity is determined with a scintillation counter utilizing an activated zinc sulfide phosphor. Sample, background and efficiency measurements are made in the same manner as are the beta measurements. Polonium -210 is used as an alpha reference standard. Each determination of sample and background count rate is made for a pre-set time of 32 minutes.

C. Calculations

1. Results are expressed as micromicrocuries per liter (uuc/l). One micromicrocurie is equivalent to 2.22 disintegrations per minute. Four values are reported for each sample: (a) beta activity in the solids retained on the filter; (b) beta activity in the filtrate (dissolved material); (c) alpha activity in the solids; and (d) alpha activity in the filtrate.

2. Sample counts are corrected for background and geometric efficiency.

3. Standard statistical procedures are utilized to compute the 0.9 error. The final result is expressed (symbolically) as $x \pm y$ uuc/l. This means that in a series of determinations on the same sample, the value of x should fall between $x - y$ and $x + y$, 90 per cent of the time.

4. In cases where zero or negative values are included between the limits of $x + y$ and $x - y$ the result is reported symbolically as -0- .

II. LIMITATIONS OF METHODS EMPLOYED

A. Sample Preparation

A perfect sample for determination of radioactive content would be infinitely thin, and would contain all of the constituents of the original material except the water.

In practice, those criteria are virtually impossible to attain. Essentially infinitely thin samples can be prepared only from water with low solid and dissolved salt contents. Some solid and dissolved materials are absorbed on the walls of vessels used in sample collection and preparation. Volitilization and losses from spattering during volume reduction cannot be completely avoided.

Thus, obviously, radioassay results are dependent upon sample preparation techniques.

B. Nature of the Radioactive Disintegration Process and the Measurement thereof.

At least three basic phenomena make the exact determinations of low levels of radioactivity extremely difficult. These are:

1. The random nature of the radioactive disintegration process limiting the accuracy of any determination because of statistical fluctuations inherent in the counting data.

2. The low ratio of sample count to background count. Any detector of radioactivity always measures (in the absence of an active sample) at a certain - and not always constant - level, which is termed the background radiation level. This is caused by cosmic radiation, traces of naturally occuring radioactive materials, and sometimes by "noise" characteristic of the electronic equipment used. In making determinations on samples in which the counting rate is only slightly higher than the background counting rate, inherent errors are relatively large.

3. Self-absorption. Unless samples are essentially infinitely thin, alpha and low-energy beta radiation arising from the lower layers of the samples may not penetrate the upper layers, and therefore remain undetected.

   Corrections can be made for self-absorption when dealing with known radioisotopes. In cases where the contaminant is not identifiable, these corrections cannot, as a rule, be made.

C. Calculations

There are three values which can be lead to errors in the reported results. These are:

1. Geometric efficiency. This factor is determined using artificial standards. These are not prepared in the same manner as samples. Also it is possible that the energy of radiations emanating from the two standards may be significantly different from the unknown. Both of these considerations make the factors used rather artificial, and somewhat in error. It is not possible to determine the magnitude of this error, although it is probably not large in most cases.

2. Errors in sample count. Reasons for this were discussed in sections A and B above.

3. Errors in confidence limits. Statistical computations made are based on the Gaussian approximation of the Poisson distribution law. At low count rates this approximation is subject to error.

   The calculated confidence limits are based solely on statistical fluctuations caused by the random nature of the radioactive disintegration process. It is assumed that counts produced by background radiation and by electronic noise are also random.

   All of the foregoing would tend to indicate that absolute determination of low levels of radioactivity is impossible. This is true, but by taking every possible measure to reduce sources of error, it is possible to obtain a relatively accurate measure of these low levels. As activity levels increase from near background, the precision of measurement increases correspondingly.

III. LIMITS OF DETECTABILITY

A. Minimum Detectable Levels

1. Beta Activity: Equipment and techniques used are such that the minimum reliably detectable beta activity amounts to 7-8 uuc/l.

2. Alpha Activity: Due principally to lower levels of alpha background radiation, alpha activity of the order of 1 uuc/l can be reliably detected.

3. There is one situation in which it is not possible to report such small amounts of activity. Some stream samples contain particulates of an amount and size distribution that causes the filter to clog. In such cases, it is not possible to filter a full 250 ml sample. Consequently, in applying the volume factor (see Sample Calculations) to subsequent calculations, a large error is introduced.

B. Minimum Detectable Changes in Levels of Radioactivity

Knowing minimum detectable quantities of radioactivity, it is then pertinent to inquire as to the minimum increases above these which can be reliably measured. It is not possible to assign fixed values here, but it amounts to about 2 uuc/l for beta, and 0.3 uuc/l for alpha contamination.

IV. INTERPRETATION OF RESULTS

The various factors which limit the accuracy of measurement should be kept in mind in making interpretations of results. These factors are of considerable consequence for determinations which are only slightly above the background level, which is generally the case here.

The maximum concentration of radioactive contaminants of unknown nature in drinking water has been set at 100 uuc/l. In this study, levels this high are generally not expected. The purpose is to establish a baseline or background level, and to provide a continuing check to determine if and when increases occur as a result of rapidly expanding peacetime uses of radioactive materials.

V. SAMPLE CALCULATIONS

R_s = Average count rate of duplicate samples = 55 counts/minute

R_b = Average count rate of background determinations = 50 counts/minute

Net count = $R_s - R_b$ = 55 - 50 = 5 counts/minute

t = time of sample count = count = time of background count = 64 minutes

$$\text{Activity} = \frac{5 \text{ c/m} \times 4 \text{ (volume factor to put on a liter basis)}}{0.5 \text{ (geometric efficiency factor)} \times 2.22 \text{ d/m/uuc}} = 18.0 \text{ uuc/l}$$

$$0.9 \text{ confidence level} = 1.645\sqrt{\frac{R_s}{t} + \frac{R_b}{t}}$$

$$= 1.645\sqrt{\frac{55}{64} + \frac{50}{64}}$$

$$= 2.1 \text{ counts/minute}$$

$$\frac{2.1 \times 4}{.5 \times 2.22} = 7.6 \text{ uuc/l}$$

Thus the activity of this sample is 18.0 ± 7.6 uuc/l

This means that in a series of determinations on this sample, 90 per cent of the time the value would fall between 10.4 and 25.6 uuc/l.

This basic formula is used for alpha and beta determinations. For alpha, ts and tb are constant. For beta, ts and tb are constant. For beta, ts and tb are variable and are functions of R_s and R_b respectively.