STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

BULLETIN NO. 65-58

QUALITY OF SURFACE WATERS IN CALIFORNIA 1958

EDMUND G. BROWN
Governor

HARVEY O. BANKS
Director of Water Resources

December, 1960

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STATE OF CALIFORNIA

Department of Water Resources

SACRAMENTO

December 30, 1960

Honorable Edmund G. Brown, Governor,
and Members of the Legislature of
the State of California

Water Pollution Control Boards

Gentlemen:

I have the honor to transmit herewith a report on the quality of surface waters in California. This is the fourth in a series of reports concerning this important matter, and covers the period January through December 1958.

This statewide Water Quality Monitoring Program, authorized by Section 229 of the Water Code, was initiated in April 1951, at the request of the State Water Pollution Control Board and has been conducted by the Department of Water Resources in cooperation with the State Department of Public Health, Bureau of Sanitary Engineering; the State Department of Fish and Game; the United States Geological Survey; and with various other agencies and individuals. Its objective is to secure and interpret data on prevailing quality of water in the major streams and lakes in California, to evaluate trends in water quality conditions, and to ascertain causes for changes in water quality. These data are utilized by the Department of Water Resources in conducting water resources development studies and implementing water development programs; by the regional water pollution control boards in establishing waste discharge requirements for the protection of surface waters in California; and by other water agencies throughout the State.

With few exceptions, a general improvement in the quality of water through the State was noted in the early months of 1958. This improvement in quality is attributed to the above normal precipitation which occurred in the winter of 1957-1958. As the winter rains subsided, an increase in concentration of dissolved minerals was noted in most of the State's surface waters. The variation was much more pronounced in the waters of Southern California than in the northern waters. For the most part, the waters in Northern California continued to be of excellent quality and suitable for most uses with only minor changes from previous years. Surface waters in Southern California during the same period, on the other hand, varied in quality from excellent to poor with the poorer quality waters found in the lakes of that area.

The results of the 1958 survey of radioactivity in surface waters disclosed few significant changes from levels found in 1957. While the activity found in snowpack samples were relatively high, the snowmelt runoff had no apparent effect on the activity in receiving streams.

Very truly yours,

Harvey O. Banks

HARVEY O. BANKS
Director

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Federal Agencies

Department of the Army

Corps of Engineers

Department of the Interior

Bureau of Reclamation

Geological Survey

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California Disaster Office, Radiological Service

Department of Fish and Game

Department of Public Health

Bureau of Sanitary Engineering

Division of Laboratories

State Water Pollution Control Board

Other Public Agencies

City of Long Beach, Department of Public Health

City of Los Angeles

Department of Water and Power

Department of Public Health

City of San Bernardino

City and County of San Francisco

Los Angeles County Flood Control District

Other Public Agencies (cont.)

Imperial Irrigation District

Metropolitan Water District of Southern California

Ventura County, Water Resources Division

Kern County Land Company

Kings River Water Association

The Department of Water Resources wishes to thank the following federal and state agencies who granted permission for inclusion in this report of unpublished water quality data collected under various programs:

United States Department of the Interior

Geological Survey

Bureau of Reclamation

Central Valley Regional Water Pollution Control Board (No. 5)

In addition, the United States Geological Survey performed a substantial portion of the analyses required by this program under a cooperative agreement with the Department of Water Resources. The bacteriological determinations were made by the California State Department of Public Health, Berkeley and Los Angeles. The radiological determinations were made by the California Disaster Office, Sacramento, under provisions of an agreement with the State Water Pollution Control Board.

INTRODUCTION

This is the fourth in a series of bulletins concerning surface water quality conditions in California. This bulletin presents data collected by the Department of Water Resources and all other federal, state and local agencies conducting routine water quality monitoring programs in California. In addition to basic data, this bulletin also contains detailed evaluations and interpretations of significant quality variations detected during 1958 and, where possible, an explanation of the causes of these variations.

To disseminate quality data as soon as practical, the department also publishes a monthly report containing water quality data and a preliminary evaluation of detected quality variations. These reports are distributed to pollution control, public health, and other interested agencies and individuals.

The continued rapid expansion in the utilization of water for domestic, agricultural, and industrial uses in California serves to emphasize the need for a continuing effective water quality monitoring program. The early detection and control of quality degradation is necessary if the fullest practicable beneficial utilization of the State's water resources is to be attained. Realizing the necessity for such detection and control, a continuing stream sampling program was initiated in April 1951 at the request of the State Water Pollution Control Board. Since that time, a surface water quality monitoring program has been conducted by the Department of Water Resources, in cooperation with various individuals and agencies. A similar program to monitor the mineral quality of ground water in important ground water basins throughout the State was initiated in 1953.

The stream sampling program reported herein comprised the collection of water samples and analyses from 233 stations on 133 streams and lakes throughout California in 1958. Data for previous periods are included in the following reports: California Department of Public Works, Division of Water Resources, Water Quality Investigations, Report No. 15, "Quality of Surface Waters in California, 1951-1954"; California Department of Water Resources, Division of Resources Planning, Bulletin No. 65, "Quality of Surface Waters in California, 1955-1956"; and California Department of Water Resources, Division of Resources Planning, Bulletin No. 65-57, "Quality of Surface Waters in California, 1957".

The activities of the surface water monitoring program are authorized by Section 229 of the Water Code, which 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."

The basic objectives of the surface water quality monitoring program are:

(a) to secure continuous and reliable water quality data, on a monthly basis, from a network of stations which will provide representative data of the quality of water in the major surface streams and lakes of the State;

(b) to evaluate and interpret chemical, physical, biological and radiological information collected during the course of this program to develop a comprehensive understanding of the factors which make up and alter the water quality at any station; and

(c) to detect changes in water quality and to notify the appropriate control agency, (regional water pollution control boards, state and local health departments, State Department of Fish and Game) when warranted.

Results of bacteriological and radiological determinations presented in this bulletin should be considered as only qualitative indicators and undue weight should not be given to quantitative values. The indicators contribute to long-term environmental studies.

Results of bacteriological examinations are expressed as the most probable number (MPN) of coliform bacteria per milliliter (ml) of sample. Frequent and lengthy sampling is necessary before a truly reliable appraisal can be made in view of the rapidity and frequency of change in the density of coliform organisms.

Results of radiological determinations are expressed in terms of activity, measured in micro-micro curies per liter ($\mu\mu c/l$). No well-defined limits have been established for maximum concentrations of unknown alpha and beta emitters in domestic water supplies. The International Commission on Radiological Protection has recommended provisional criteria for permissible concentrations of radioactivity in water. These criteria are given in Appendix A.

The discussion of water quality is presented in this bulletin by water pollution control regions which are numbered and named substantially in accordance with the major surface drainage basins with which they are coterminous (Plate 1). Within each basin, the discussion is presented by drainage basin. In each major basin and sub-basin, the main stream is discussed first, followed by a discussion in downstream order of its tributaries. For convenience, the Central Valley Region (No. 5), has been divided into four separate areas, 5a, 5b, 5c, and 5d. Area 5a embraces the Sacramento Valley, 5b the San Joaquin Valley, 5c the Sacramento-San Joaquin Delta, and 5d the Tulare Lake Basin.

The criteria utilized in this bulletin by the department in the evaluation of the qualities of water for domestic, agricultural and industrial uses are cited in Appendix A of this bulletin. These criteria delimit such terms as "soft water" and "acceptable drinking water", and point out the pertinence of such expressions as "micromhos", "parts per million" (ppm), and "micro-micro curies per liter" ($\mu\mu c/l$). These abbreviations are used throughout this bulletin. This appendix contains discussion of field and laboratory procedures and methods also used by the department in evaluating the quantities of water.

The descriptions and locations of the monitoring stations, as well as the physical, chemical, bacteriological, and radiological data for the water samples collected during 1958 are contained in Appendix B of this bulletin. The analytical data are presented in alphabetical order by region. Also presented in Appendix B are graphs showing the monthly variation of total dissolved solids for those stations which have been in the surface water monitoring program for a period of five years or longer (1954-1958).

SURFACE WATER QUALITY

Summary

With few exceptions, a general improvement in the quality of water throughout the State was noted in the early months of 1958. This improvement in quality is attributed to the above normal precipiation which occurred in the winter of 1957-1958. As the winter rains subsided, an increase in concentration of dissolved minerals was noted in most of the State's surface waters. The variation was much more pronounced in the waters of Southern California than in the northern waters. For the most part, the waters in Northern California continued to be of excellent quality and suitable for most uses with only insignificant changes from previous years. Surface waters in Southern California during the same period, on the other hand, varied in quality from excellent to poor with the poorer quality waters found in the lakes of that area.

North Coastal Region (No. 1)

During 1958, water samples were collected from 15 streams in the North Coastal Region (Plate 1) at 27 stations as indicated below:

Smith River (1)	Eel River (3)
Klamath River (5)	Eel River, Middle Fork (1)
Shasta River (1)	Eel River, South Fork (1)
Scott River (1)	Outlet Creek (1)
Salmon River (1)	Van Duzen River (1)
Trinity River (3)	Russian River (4)
Redwood Creek (1)	Russian River, East Fork (2)
Mad River (1)	

Of the 27 stations 12 new stations were added to the program during 1958. These station locations were selected to obtain information on the quality of water at sites where water resources developments are proposed. Since analyses of samples collected at these stations during 1958 are too few to fully evaluate the quality of the water, quality data obtained at these stations are not discussed in detail in this report. Two stations on the Russian River system, near Ukiah (Station 10b) and East Fork near Calpella (Station 8), were discontinued during 1958. A study of analyses of samples collected since 1951 revealed no significant differences in quality between the waters at these stations and stations upstream and downstream from them.

Surface water in the North Coastal Region was characteristically calcium-magnesium bicarbonate. Concentrations of mineral constituents vary with the specific area and the amount of flow in the individual stream. Precipitation was considerably higher during 1958 than the 50-year normal in this region, with consequent improvement in water quality. During 1958, the water continued to be of excellent mineral quality with very few significant changes or exceptions. Graphs showing the monthly variation in total dissolved solids at the fifteen stations in this region that have a period of record of five years or longer are presented in Appendix B on Plates B-1 through B-8 for the period 1954 through 1958. Although radioactivity levels were very low during 1958, a slight increase was noted throughout the region. Even though evaluation criteria have been recommended by the International Commission on Radiological Protection, this bulletin does not attempt to evaluate the specific safety conditions.

There were no significant changes in mineral concentrations noted in the Smith River near Crescent City (Station 3a) during 1958 as compared to the concentrations recorded since April 1951. Analyses showed the water to be characteristically magnesium-calcium bicarbonate, soft to slightly hard, and class 1 for irrigation use. Electrical conductivity ranged from 77.7 to 144 micromhos. Boron was 0.00 ppm for eight months, and reached 0.1 ppm in September, a period of low flow. Hardness reached a high value of 70 ppm during September, but remained in the "soft" range for seven months of the year. Although radioactivity levels continued to be low during 1958, the total activity increased from 8.7 μμc/l in May, to 47.1 μμc/l in September.

During 1958, samples were collected from the following eleven stations in the Klamath River system: Klamath River near Copco (Station 1), above Hamburg Reservoir Site (Station 1c), near Seiad Valley (Station 2b), at Somesbar (Station 2), and near Klamath (Station 3); Shasta River near Yreka (Station 1a); Scott River near Fort Jones (Station 1b); Salmon River at Somesbar (Station 2a); and Trinity River at Lewiston (Station 4a), near Burnt Ranch (Station 4b), and near Hoopa (Station 4).

Two new stations on the Klamath River, above Hamburg Reservoir Site (Station 1c) and near Seiad Valley (Station 2b), were added to the program in December 1958 to study quality characteristics of the water at sites of proposed water resources development projects. The Klamath River at Station 1, near Copco, was sodium bicarbonate in character. However, as this water moved downstream and was diluted by tributaries, the character changed to calcium bicarbonate. The water was of excellent quality and suitable for most uses with electrical conductivity values ranging from a minimum of 96.9 micromhos near Klamath (Station 3) to a maximum of 242 above Hamburg Reservoir Site (Station 1c). These values represent no significant changes from those reported in the Klamath River since April 1951. Boron concentrations were slightly higher during 1958, although the highest value reported was only 0.30 ppm at Somesbar (Station 2).

The following new stations were initiated in October 1958: Shasta River near Yreka (Station 1a), Scott River near Fort Jones (Station 1b), and Salmon River at Somesbar (Station 2a). The waters sampled at these stations were bicarbonate type with calcium and magnesium as major cations and were within drinking water standards for mineral content. Except for the 0.6 ppm boron reported in the Shasta River in December, these waters were class 1 for irrigation use.

Only insignificant differences in concentrations of mineral constituents existed between the Klamath River and the Trinity River, which is tributary to the Klamath River between Somesbar (Station 1) and Klamath (Station 3). During 1958, Trinity River water was magnesium bicarbonate in the upper reaches at Lewiston (Station 4a), changing to calcium-magnesium bicarbonate near Burnt Ranch (Station 4b), and to calcium bicarbonate near Hoopa (Station 4). It was class 1 irrigation water and met drinking water standards for mineral content. Conductivity ranged between 62.9 micromhos at Lewiston and 224 near Hoopa.

A slight increase in radioactivity was noted in the Klamath River Basin as a whole; however, the values were still low, with maximums of 23.2 μμc/l total activity reported near Copco (Station 1) in May and 18.51 μμc/l reported near Klamath (Station 3) in September.

In November 1958, sampling was initiated on Redwood Creek at Orick (Station 3b) and Mad River near Arcata (Station 6a). The waters of these streams were calcium bicarbonate in character, class 1 for irrigation and met drinking water standards for mineral content. Conductivity values of the November and December samples from Station 3b were 158 and 141 micromhos, respectively, while for the two samples from Station 6a, the values were 249 and 217 micromhos.

The following six stations in the Eel River Basin were sampled during 1958: near Dos Rios (Station 5d), near McCann (Station 5), at Scotia (Station 6); Outlet Creek near Longvale (Station 5b); Middle Fork Eel River at Dos Rios (Station 5c), and South Fork near Miranda (Station 7).

Three new stations, Eel River near Dos Rios (Station 5d), Middle Fork at Dos Rios (Station 5c), and Outlet Creek near Longvale (Station 5b), were added to the program in May 1958 to determine water quality conditions at sites of proposed water development projects. The water at these stations was generally calcium bicarbonate in character, soft to moderately hard, and met drinking water standards for mineral content. The water varied from class 1 to 3 for irrigation use because of boron which ranged from a minimum of 0.0 ppm at Station 5c to a maximum of 2.3 ppm at Station 5b. Conductivity ranged from a low of 90.7 micromhos to a high of 368 micromhos at Stations 5c and 5b, respectively.

Analyses of samples collected at the three downstream stations, Eel River near McCann (Station 5), at Scotia (Station 6) and South Fork near Miranda (Station 7), indicated a calcium bicarbonate water which was soft to moderately hard, met mineral requirements for drinking water and was class 1 for irrigation. Conductivity, which ranged from 79.4 to 299 micromhos, showed no significant change in 1958 at the three stations sampled as compared to previous years of record. Boron at the three stations ranged between 0.0 and 0.48 ppm. The improvement in quality between the upstream and downstream stations can be attributed to the inflow of better quality tributary waters. The maximum radioactivity detected in the Eel River was 11.7 μμc/l (total activity) in September near Miranda (Station 7). This value represents no significant change from previously reported levels with the exception of the 45.1 μμc/l reported in May 1957 near McCann (Station 5).

Sampling of Van Duzen River near Bridgeville (Station 5a) was initiated in April 1958. During 1958, this water was calcium bicarbonate in character, class 1 for irrigation, soft to moderately hard, and met drinking water standards for mineral content. Conductivity ranged from 89.4 micromhos in April to 256 micromhos in September.

Surface water in the Russian River Basin was sampled at the following six stations during 1958: East Fork at Potter Valley Powerhouse (Station 10a), and near Calpella (Station 8); Russian River near Ukiah (Station 10b), near Hopland (Station 8a), near Healdsburg (Station 9), and at Guerneville (Station 10). Two stations, on the main stem near Ukiah (Station 10b) and East Fork near Calpella (Station 8) were discontinued in October 1958.

The character of the water throughout the basin was calcium bicarbonate, slightly to moderately hard, and usually class 1 for irrigation use. There was a definite improvement noted in boron content during 1958 as compared to boron content recorded in previous years. The water in the entire basin was within the limits for class 1 irrigation water for at least eight months of the year, and at Potter Valley Powerhouse (Station 10a), it was class 1 for the entire year. However, during the last four months of 1958, boron concentrations put the water into class 2 for irrigation at the two downstream Stations 9 and 10, where maximum concentrations of 1.0 and 1.1 ppm, respectively, were reported. Since the boron concentrations of 1958 lie within the limits of previous years' observations they are therefore considered not indicative of any trend.

Electrical conductivity ranged from 109 to 313 micromhos during 1958. The water was in the slightly hard category in the upper portion of the basin while near Healdsburg (Station 9) and at Guerneville (Station 10) values were in the moderately hard range, the highest value recorded being 140 ppm at Station 10.

Radioactivity showed no significant deviation from 1957 levels, with the exception of the station near Hopland (Station 8a), where the total activity reached a maximum of 18.7 μμc/l in September; however, downstream near Healdsburg (Station 9), the count for the corresponding month was 9.6 μμc/l.

San Francisco Bay Region (No. 2)

Surface water samples were collected in this region from seven stations located on the following seven sources (Plate 1):

- Napa River (1)
- Sacramento River (1)
- Carqinez Straits (1)
- Alameda Creek (1)
- Arroyo del Valle (1)
- Coyote Creek (1)
- Los Gatos Creek (1)

A sampling station on Arroyo del Valle at the Veterans Hospital near Livermore was added to the program in July 1958.

The surface water in this region was generally of good to excellent mineral quality for irrigation and was bicarbonate in character. Analyses have shown it to be slightly to moderately hard throughout the region with the exception of Alameda Creek where hardness was generally in the very hard classification.

There was a general improvement in water quality throughout the region during 1958 due to above average precipitation. High mineral concentrations occurred during the later months of 1958 when flows were low. Graphical representations of the monthly variation in total dissolved solids at four stations in this region for the period 1954 to 1958 are presented on Plates B-9 and B-10 of Appendix B.

The radioactivity levels in 1958 were slightly higher in this region than those reported in 1957; the maximum level recorded was 12.57 $\mu\mu c/l$ total activity in Los Gatos Creek at Los Gatos (Station 74).

Water in the Napa River near St. Helena (Station 72) was consistently calcium magnesium bicarbonate in character, slightly to moderately hard and usually class 1 for irrigation use. Conductivity ranged between 132 and 425 micromhos, indicating no appreciable change since the station was established in 1951. Boron concentrations, which ranged between 0.08

and 1.1 ppm during 1958, were consistently lower than during 1957 but did not vary significantly from other years of record.

Analyses of samples collected from Sacramento River near Mallard Slough (Station 15c) and from Carquinez Straits at Martinez (Station 28a) during 1958 indicated a wide variation in the quality of water. The fluctuation in mineral quality was due mainly to tidal activity effecting the relationship between sea-water intrusion during flood tides and fresh water outflow during ebb tides. Fluctuations were also due to seasonal changes in the quantities of fresh water inflow to Suisun Bay. These fluctuations were exhibited by conductivities which ranged from 127 to 1,200 micromhos at Station 15c and from 233 to 19,300 micromhos at Station 28a.

The Alameda Creek Basin was sampled at the following stations: Alameda Creek near Niles (Station 73) and Arroyo del Valle at Veterans Hospital near Livermore (Station 71).

The surface water of Alameda Creek near Niles (Station 73) was calcium-sodium bicarbonate in character, and very hard. Conductivity, which ranged between 378 and 1,140 micromhos during 1958, indicated that the quality varied between class 1 and class 2 for irrigation water. Chloride, boron, and hardness concentrations were also high with maximum values of 125, 1.0, and 420 ppm, respectively. These values, although high, are significantly lower than maximum 1957 values. This water met mineral requirements for drinking water, but was limited for most industrial uses.

Sampling of Arroyo del Valle water at the Veterans Hospital near Livermore (Station 71) was initiated in July 1958 to obtain base level quality information and to monitor future changes in quality. This station is located at the site of the United States Geological Survey gaging station at the Veterans Hospital near Livermore. Analyses of samples collected during 1958 indicate a calcium bicarbonate water with high concentrations of most constituents. There was a constant increase of most constituents from July to December as indicated by the conductivity which increased from 850 micromhos in July to 1,410 micromhos in December. The water met the drinking water requirements for mineral content, but was very hard. Boron, which ranged between 0.8 and 1.8 ppm, caused this water to be class 2 for irrigation uses.

Coyote Creek was sampled near Madrone (Station 82), just below Anderson Reservoir. Surface water at this point was calcium bicarbonate in character, class 1 for irrigation and met drinking water standards for mineral content. A definite improvement in the quality of this water, attributable to above-normal precipitation, was noted during 1957 and 1958 as indicated by the conductivity which reached a recorded low of 227 micromhos in June 1958. The maximum conductivity for 1958 was reported as 393 micromhos in January. Boron concentrations, which ranged between 0.00 and 0.12 ppm, were generally lower during 1958 than during previous years of record. Hardness remained in the moderately hard category with values ranging from 170 ppm in January to 90 ppm in July 1958.

Los Gatos Creek, a tributary to Guadalupe River, was sampled below Lexington Reservoir at Los Gatos (Station 74) near the headwaters of the stream. The water sampled at this point during 1958 was calcium bicarbonate in character, generally turbid, moderately to very hard, met all mineral requirements for drinking water and was class 1 for irrigation use. Conductivity ranged between 230 and 487 micromhos and hardness between 96 and 216 ppm, which represents a considerable improvement over 1957 values, but no significant variation from values recorded in years prior to 1957.

Central Coastal Region (No. 3)

During 1958, waters of the following 11 streams in the Central Coastal Region were sampled at 15 stations (Plate 1) as indicated in the following tabulation:

Uvas Creek (1)	Nacimiento River (1)
San Lorenzo River (1)	San Antonio River (1)
Soquel Creek (1)	Carmel River (1)
Pajaro River (1)	Cuyama River (1)
San Benito River (1)	Santa Ynez River (3)
Salinas River (3)	

The sampling station on Santa Ynez River below Los Laureles Canyon (Station 45) was discontinued in favor of a new sampling station established in 1957 at Cachuma Reservoir (Station 44b). Seven other new stations were added to the program in Region 3 during 1958, which are mentioned below.

As in many areas of California, the rivers and streams in Region 3 had above-normal runoff during the early months of 1958, which diminished to little or no flow in the fall months. Waters of this region were bicarbonate with calcium and sodium as the major bases. The water, with few exceptions, was moderately hard, and contained appreciable dissolved solids as indicated by conductivities ranging from 183 to 1,770 micromhos.

The monthly variations in total dissolved solids for the period 1954-1958 for the eight stations in Region 3 can be obtained from the records presented on Plates B-11 through B-14 of Appendix B. The remaining seven stations in this region are not so presented because less than five years of record are available.

Uvas Creek was sampled immediately below Uvas Reservoir near Morgan Hill (Station 96). The water sampled at this point during 1958 was slightly to moderately hard, calcium bicarbonate in character, and had mineral concentrations meeting drinking water requirements. It was class 1 for irrigation use throughout the year, with conductivity ranging from a low of 183 micromhos in April, to a high of 397 micromhos in December. Hardness ranged from a low of 82 ppm in April to a high of 192 ppm in December. These values represent a slight decrease over values reported in previous years of record. The radioactivity exhibited a slight increase from 6.9 μμc/l in May to 13.6 μμc/l total activity in September 1958.

There was no appreciable change in quality of the water of the San Lorenzo River at Big Trees (Station 75). The water of this stream was calcium bicarbonate, slightly to moderately hard, and class 1 for irrigation uses. Hardness ranged from 98 to 135 ppm, and conductivity from 258 to 371 micromhos. These values represent practically no variation from the previous eight years of record.

The water of Soquel Creek at Soquel (Station 76) was generally of better quality during 1958 than during previous years of record. Conductivity values were consistently low, ranging between 404 and 769 micromhos, indicating class 1 for irrigation uses. Hardness was generally in the very hard category, making softening desirable for domestic use and often necessary for industrial use.

Surface water of the Pajaro River Basin was sampled at: Pajaro River near Chittenden (Station 77), and San Benito River near Bear Valley Fire Station (Station 77a).

During 1958, the water of the Pajaro River near Chittenden (Station 77) showed improvement in quality over previous years of record, although it remained in class 2 for irrigation purposes and was very hard throughout the year. This water was predominantly sodium bicarbonate in character, but also had high concentrations of calcium and magnesium. Conductivity reached a high of 1,770 micromhos in 1958 which was significantly lower than the maximum record value of 2,220 micromhos which was reported in November 1954. Boron ranged from 0.00 to 1.50 ppm in 1958. Chlorides, although usually below the upper limit for class 1 irrigation water and acceptable drinking water, reached a high of 245 ppm in January, representing a significant decrease from the record maximum of 374 ppm which occurred in November 1957. Sulfates also were high with a maximum value of 202 ppm, compared to the record high of 304 ppm reported in 1956. Although sodium, which ranged from 22 to 49 percent of the base constituents, was a major mineral constituent in this water, it did not exceed the upper limit for class 1 irrigation water. Radioactivity during 1958 exhibited an increase from 2.01 μμc/l of total activity in May to 22.01 μμc/l in September.

During the last six months of 1958, samples were collected from a new station, San Benito River near Bear Valley Fire Station (Station 77a). Conductivity at this station ranged between 1,520 and 1,670 micromhos, chlorides between 91 and 125 ppm, and sulfates between 313 and 365 ppm. Boron ranged between 0.6 and 1.7 ppm with the high value being reported for each of the last four months of the year. A study of the 1958 analyses indicated that the San Benito River was a significant contributor of the high mineral concentrations found in the Pajaro River at Station 77.

Samples were collected from Salinas River at Paso Robles (Station 43a), near Bradley (Station 43c) and near Spreckels (Station 43) during 1958. Station 43, near Spreckels was not sampled from May 1957 to April 1958 because of low flow conditions.

Salinas River at Paso Robles (Station 43a) had high flows in February and April. The river was dry in early January and was dry again in July, continuing so through December. The water at this station was calcium-magnesium bicarbonate in character, class 1 for irrigation, moderately to very hard, and met drinking water standards for mineral constituents.

Surface flow of the Salinas River near Bradley (Station 43c, activated in October 1958) is partially controlled by releases from Nacimiento Reservoir on Nacimiento River tributary to Salinas River above this station. Camp Roberts discharges treated sewage effluent to the Salinas River above this station. This effluent usually percolates into the river bed before reaching the mouth of the Nacimiento River. For the three months of record of 1958, the water at Station 43c was calcium-magnesium bicarbonate in character, class 1 for irrigation, moderately hard, and met drinking water standards for mineral constituents. During this period, the flow at the station consisted of Nacimiento Reservoir release water.

Analyses of water samples collected from Salinas River near Spreckels (Station 43) during 1958 showed the water to be calcium bicarbonate in character. It met mineral standards for drinking water, and ranged from moderately to very hard. Conductivity, which reached a high of 1,440 micromhos in June, occasionally put the water in class 2 for irrigation. Hardness, which ranged from 132 ppm in September to 500 ppm in June, often caused softening to be desirable prior to domestic use.

An increase in radioactivity was noted in the Salinas River during 1958 as indicated by values found near Spreckels (Station 43), where total activity was reported as 3.0 μμc/l in May and 37.3 μμc/l in September.

Nacimiento River, which is tributary to Salinas River near Camp Roberts, was sampled near San Miguel (Station 43b), approximately four miles upstream from its confluence with Salinas River. This station was also added to the sampling program in July 1958. Water released from Nacimiento Reservoir makes up the major part of the flow at this station. The water was calcium-magnesium bicarbonate in character, and slightly hard. It was class 1 for irrigation use, and met drinking water standards for mineral constituents. Conductivity, which ranged between 213 and 228 micromhos during 1958, indicated a water of excellent quality.

San Antonio River, tributary to Salinas River at Bradley, was sampled at Pleyto (Station 43d), 17.5 miles upstream from its confluence with Salinas River. The station was established in July 1958 to monitor the quality of the river and was located at the site of the United States Geological Survey gaging station. The water at Station 43d was found to be calcium bicarbonate in character, moderately hard, class 1 for irrigation, and met drinking water standards for mineral constituents. Conductivity ranged between 426 and 454 micromhos, indicating a water of good quality and suitable for most uses.

There was no significant change in mineral concentrations in water of the Carmel River near Carmel (Station 83) as compared with prior years of record, starting in 1952. Conductivity ranged from 196 to 622 micromhos during 1958. Hardness ranged from slightly to very hard with a low of 73 ppm and a high of 224 ppm. This water consistently has been calcium bicarbonate in character, class 1 for irrigation use, and meeting drinking water standards for mineral content.

Cuyama River near Garey (Station 44a), two miles upstream from its confluence with the Sisquoc River, was sampled to monitor surface water quality below Twitchell Dam. Sampling was initiated at this station in October 1958. Construction of Twitchell Dam, a few miles upstream from this station, was nearing completion at the close of 1958. The water at this station was magnesium-calcium sulfate in character. Hardness ranged from 614 to 654 ppm, causing the water to be classified as very hard. Sulfates and total dissolved solids, which were reported as 604 and 1,167 ppm, respectively, in October, exceeded the recommended limits for drinking water. Conductivity, which ranged from 1,464 to 1,572 micromhos, indicated prevailing class 2 water quality conditions.

Santa Ynez River discharges to the ocean at Surf, California, near Vandenberg Air Force Base. In 1958, the station at Solvang (Station 45a) was the only station at which water samples were taken throughout the year. In July 1958, the station below Los Laureles Canyon (Station 45) was removed from the water sampling program and sampling at Cachuma Reservoir (Station 44b) was initiated in April 1958.

Santa Ynez River had high runoff during the first half of 1958, and the reservoirs on the river system filled to capacity, and spilled. During this period, surface water in the vicinity of Los Laureles Canyon (Station 45) was calcium sulfate in character, extremely hard (323-598 ppm), and usually limited to class 2 for irrigation use because of boron, which ranged from 0.35 to 0.53 ppm, and conductivity, which ranged from 701 to 1,256 micromhos. Sulfates exceeded the recommended limit for drinking water in May 1958 when 349 ppm were reported.

Surface water flowing in the upper reaches of the Santa Ynez River was sampled during the second half of 1958 from Cachuma Reservoir (Station 44b). This water was of a complex calcium-magnesium sulfate-bicarbonate character, very hard (283-330 ppm) and within drinking water standards for mineral constituents. Although conductivity ranged from 685 to 757 micromhos, boron ranged from 0.18 to 0.82 ppm, thus determining this water to be occasionally class 2 for irrigation.

Water in the Santa Ynez River at Solvang (Station 45a) during 1958 was generally of a complex calcium-magnesium bicarbonate-sulfate character, occasionally changing to magnesium bicarbonate. This water usually was class 1 for irrigation. However, at times of low flow the electrical conductivity, which ranged from 489 to 1,219 micromhos, indicated class 2 conditions. The water was extremely hard, ranging from 327 to 564 ppm total hardness but met drinking water standards for mineral content.

Los Angeles Region (No. 4)

Samples were collected in the Los Angeles Region during 1958 at 15 stations on the following 12 watercourses (Plate 1):

Matilija Creek (1)	Rio Hondo (1)
Ventura River (1)	Mission Creek (1)
Santa Clara River (2)	San Gabriel River (2)
Piru Creek (1)	Los Angeles Aqueduct (1)
Sespe Creek (1)	Colorado River Aqueduct (1)
Santa Paula Creek (1)	
Los Angeles River (2)	

Los Angeles Region (No. 4) is a coastal drainage area extending over the greater part of Los Angeles and Ventura Counties. Large quantities of surface water are imported from the Colorado River and from Mono-Owens Valley, for direct industrial, domestic and agricultural use as well as for replenishment of ground water storage.

Water samples were collected at 13 stations located on the principal streams and their tributaries during 1958. Samples were also obtained at one station on the Colorado River Aqueduct of The Metropolitan Water District of Southern California and one station on the Los Angeles Aqueduct of the Los Angeles Department of Water and Power.

Surface waters in this region vary widely in quality and character, depending on location, volume of flow, and type of waste discharge entering the stream. The 1957-58 seasonal precipitation was 161 percent of the long-term mean in the Los Angeles Region. Much of the precipitation fell as heavy rains in early 1958. The high rates of rainfall early in the year were reflected in an increased runoff, which afforded a better surface water quality than was found since the wet season of 1951-52. A return of drought conditions late in the year resulted in low flows and in a consequent increase in mineral content of surface waters.

Curves representing the monthly variation in total dissolved solids for the period 1954-1958 at the nine stations in this region that have a period of record of five years or longer are presented in Appendix B on Plates B-15 to B-19.

Ventura River system was sampled at the following two stations: Ventura River near Ventura (Station 61) and Matilija Creek two miles above Matilija Dam (Station 45b).

Matilija Creek, two miles above Matilija Dam (Station 45b), has shown no appreciable change in character since sampling was initiated at this station in 1953. During 1958, the water was usually calcium-magnesium sulfate in character and very hard. It varied from class 1 to 2 water for irrigation use and contained sulfate concentrations which exceeded the recommended maximum value for drinking water. The conductivity ranged from 463 to 1,090 micromhos. Although dissolved oxygen ranged between 72 and 112 percent of saturation, hydrogen sulfide odor was usually detected at this station. As indicated by 15 analyses, boron ranged from 0.00 to 1.52 ppm. This was a marked improvement over values for the previous five years of record. The quality of water at this station showed improvement over that of 1957, due primarily to the above normal precipitation and runoff of the 1957-58 season.

Flows in the Ventura River near Ventura (Station 61) was continuous during 1958, in contrast with the dry period of no runoff occurring in 1957. The station near Ventura is located immediately below the confluence of Coyote Creek and Ventura River. Construction of Casitas Reservoir on Coyote Creek, which was nearing completion during 1958, had no appreciable effect on river flow, as no water was stored during the year. The water at this station was usually calcium sulfate-bicarbonate to bicarbonate-sulfate in character, very hard and either class 1 or 2 for irrigation use depending on flow. Boron content ranged from 0.11 to 0.52 ppm during 1958, while electrical conductivity ranged from 443 to 1,074 micromhos. The quality of water at this station showed improvement over that of 1957, due to greater than normal rainfall in the 1957-58 season. The mineral content of Ventura River water met drinking water standards in 1958. Surface waters at this station usually did not meet these standards during the previous five-year period because of high sulfate and total dissolved solids content.

Water of the Santa Clara River system was sampled at five stations during 1958. These stations were: Santa Clara River at the Los Angeles-Ventura County Line (Station 46), Santa Clara River near Santa Paula (Station 46a), Piru Creek near Piru (Station 46c), Sespe Creek near Fillmore (Station 46d), and Santa Paula Creek near Santa Paula (Station 46e).

Santa Clara River water showed slight improvement in quality in 1958 over that of previous years but continued high in sulfate content and hardness. The highest boron concentration on the Santa Clara River in 1958 was 1.54 ppm and occurred at Station 46. The water in the Santa Clara River near Santa Paula (Station 46a) was of slightly better quality than water at the Los Angeles-Ventura County Line (Station 46). This improvement was attributed to the effect of better quality tributary inflow from Piru and Sespe Creeks.

Analyses of samples taken from Piru Creek near Piru (Station 46c) in 1958 indicated waters of calcium-magnesium sulfate character, very hard, and generally of marginal quality. These waters ranged from class 1 to 3 for irrigation, depending on runoff and on storage conditions and releases from Lake Piru. (Lake Piru is the reservoir created by Santa Felicia Dam on Piru Creek.) Boron ranged from 0.37 to 2.30 ppm and total hardness from 340 to 1,071 ppm. The water generally did not meet drinking water standards for mineral content because of both total dissolved solids and sulfates, which were reported as high as 1,959 ppm and 1,120 ppm, respectively, in April 1958. Fluorides reached a maximum of 1.2 ppm in April. Although this fluoride concentration is below the United States Public Health Service "mandatory" limit for drinking water, it is above the maximum safe concentration set by the California State Board of Health for domestic use for areas having a mean annual temperature of 60°F or higher. Reservoir storage in Lake Piru affects the quality of water at Station 46c and continued monitoring at this station will be necessary to determine the effects of this storage.

The station Sespe Creek near Fillmore (Station 46d) monitors water of this important tributary to the Santa Clara River. During 1958, Sespe Creek was generally calcium sulfate in character. This water was class 1 or 2 for irrigation use, depending on the magnitude of flow. The 1957 report indicated class 3 irrigation water at times. In 1958, boron ranged from 0.14 to 1.8 ppm, and electrical conductivity ranged from 704 to 1,168 micromhos. The water was very hard, ranging from 292 to 507 ppm total hardness and the sulfate content, which ranged from 187 to 402 ppm, exceeded the recommended limit for drinking water. The fluoride content was also high at this station, reaching 1.1 ppm in September 1958. This concentration is in excess of the safe limit for domestic use, as set by the California State Board of Health, in areas having a mean annual temperature of 60°F or higher.

The station Santa Paula Creek near Santa Paula (Station 46e) is located about four miles upstream from the Santa Clara River. During 1958, Santa Paula Creek water was calcium sulfate-bicarbonate in character. The water was class 1 for irrigation use and met drinking water standards for mineral constituents. Conductivity ranged from 505 to 984 micromhos. Total hardness ranged from 219 to 402 ppm. A general improvement in quality of these waters was noted over that of previous years of record.

Los Angeles River Channel, which was sampled at Los Angeles at Figueroa Street (Station 47) and at Long Beach (Station 48), continued to serve the Los Angeles metropolitan area as a drainage channel for storm runoff and industrial waste water. The flow at Station 47, which was continuous through 1958, consisted mainly of surface drainage and industrial waste discharges from San Fernando Valley. Due to the nature of the contributing flows, the water quality at this station continued to be quite variable. During 1958, waters at Station 47 were sodium to calcium sulfate in character and generally class 2 water for irrigation use. Total dissolved solids in these waters ranged from 115 to 1,300 ppm. The waters were also very hard, ranging from 72 to 585 ppm total hardness; which was an improvement over the 1957 values. Boron ranged from 0.1 to 1.6 ppm. In contrast with these prevailing lower quality conditions, the water samples collected from the high rain runoff in February and April 1958 indicated water of excellent quality during those months.

Water in the channel at Long Beach (Station 48) showed no improvement in quality from previous years of record, except during periods of dilution due to rain runoff. Due to the many industrial waste discharges above this station the waters are not herein classified with respect to irrigation and drinking water standards. Oil brine wastes, which were discharged into the river just upstream from the sampling station, contributed to the high concentrations of salts in the river at this point. Arsenic concentrations of 0.5 and 1.0 ppm found in the May and September 1958 heavy metal analyses represented a significant decrease from the 2.5 ppm found in 1957, which was the highest value recorded since arsenic was first detected at this station in October 1952. Total dissolved solids ranged from 690 to 70,152 ppm during 1958.

Rio Hondo water was sampled at Whittier Narrows (Station 49). Except during periods of rain runoff, Rio Hondo flow consisted of effluent water from the Main San Gabriel ground water basin. Colorado River water is intermittently discharged to this river by means of a blowoff on the Colorado River Aqueduct, located near Rush Street. The water from Rio Hondo was used for recharge in the Montebello Forebay, below this station. During 1958, the water was sodium-calcium sulfate in character and class 1 for irrigation when Colorado River water constituted the major part of the flow. When the preponderance of flow was from natural sources, the water was calcium-sodium bicarbonate in character and occasionally class 2 for irrigation. The conductivity at this station ranged from a minimum of 291 micromhos in April to a maximum of 1,083 in May 1958.

Flow in Mission Creek at Whittier Narrows (Station 49a) consists of ground water accretions in Whittier Narrows between San Gabriel River and Rio Hondo. Mission Creek is tributary to Rio Hondo just below this station. In 1958, the waters of this creek were calcium bicarbonate in character and of good mineral quality. They were very hard with a range of 223 to 299 ppm total hardness. The water met drinking water standards for mineral content, and was class 1 for irrigation, ranging from 496 to 655 micromhos in specific conductance. Water quality at this station has shown only minor variations since 1951.

The San Gabriel River was sampled at two stations in 1958. These were at Azusa Powerhouse (Station 50d) and at Whittier Narrows (Station 50).

Water sampled at Azusa Powerhouse (Station 50d) was native San Gabriel River water. In 1958 the quality of water continued to be consistently good, calcium bicarbonate in character and moderately hard. The water was class 1 for irrigation use and met drinking water standards for mineral content. Conductivity of these waters ranged from 293 to 398 micromhos.

The station on the San Gabriel River at Whittier Narrows (Station 50) is so located to monitor the qualities not only of the natural effluent flows but also of the intermittent controlled releases from the Colorado River Aqueduct for use in the Montebello Forebay. However, during 1958 no water was released from Colorado River into this river. The quality of native San Gabriel River water at this station was similar to that of water in the upper reaches of the river, except that total dissolved solids content was slightly higher and the water was usually very hard. As indicated by conductivity, which ranged from 288 to 1,203 micromhos, these native waters varied between class 1 and class 2 for irrigation water during 1958. Sulfates at times exceeded the recommended maximum limit for drinking water with a high of 324 ppm. Total hardness was usually high, ranging between 131 and 366 ppm.

The Los Angeles Aqueduct was sampled at Upper San Fernando Reservoir near San Fernando (Station 70). The aqueduct originates in Owens Valley, approximately 240 miles due north of Los Angeles and has delivered about 70 percent of the water required by the City of Los Angeles in recent years. A water sample was collected by the Los Angeles Department of Water and Power each month, and analyzed in its laboratory. This water was excellent in quality, sodium bicarbonate in character, and soft. The quality has not changed appreciably since the initiation of the surface water sampling program in 1951. In 1958, boron ranged from 0.21 to 0.67 ppm causing the water to occasionally be class 2 for irrigation. The conductivity of these waters varied from 263 micromhos in August to 451 micromhos in May.

The Colorado River Aqueduct was sampled at the F. E. Weymouth Memorial Softening and Filtration Plant at La Verne, California (Station 69). A monthly composite sample of raw Colorado River water was collected at this station by The Metropolitan Water District of Southern California. The 1958 analyses were typical of raw Colorado River water, and showed a slight improvement over 1957 analyses. The water remained sodium-calcium sulfate in character. Hardness continued to be high, ranging between 302 and 366 ppm. The water was often class 2 for irrigation because of total dissolved solids, which ranged from 609 to 759 ppm. Sulfates exceeded the recommended maximum concentration for drinking water with a range of 267 to 328 ppm.

Central Valley Region (No. 5)

For convenience of discussion this region has been divided into four sub-basins; 5a, 5b, 5c, and 5d. The portion of the region north of the watershed boundary between the Sacramento and San Joaquin Rivers is designated 5a. The San Joaquin River Basin, with the exception of Tulare Lake Basin and the Delta area, is designated 5b, the Sacramento-San Joaquin Delta is designated 5c, and Tulare Lake Basin as 5d.

Water samples were collected from 126 stations located on 62 streams and on one lake (Plate 1) in Region 5. These water sources are listed according to their respective sub-basin in the following tabulation:

Sacramento River Valley (5a)

Sacramento River (10)
McCloud River (1)
Pit River (3)
Pit River, South Fork (1)
Burney Creek (1)
Clear Creek (1)
Cow Creek (1)
Cottonwood Creek (2)
Cottonwood Creek, South Fork (1)
Battle Creek (1)
Paynes Creek (1)
Antelope Creek (2)
Elder Creek (1)
Thomes Creek (1)
Mill Creek (1)
Deer Creek (1)
Stony Creek (2)
Big Chico Creek (1)
Butte Creek (1)
Colusa Trough (1)
Clear Lake (2)
Cache Creek (2)
Cache Creek, North Fork (1)
Putah Creek (1)
Feather River (3)
Indian Creek (1)
South Honcut Creek (1)
Yuba River (2)
Bear River (2)
Sacramento Slough (1)
American River (3)
American River, Middle Fork (1)
American River, South Fork (1)

San Joaquin River Valley (5b)

San Joaquin River (16)
Fresno River (1)
Chowchilla River (1)
Bear Creek (2)
Salt Slough (1)
Merced River (2)
Tuolumne River (3)
Stanislaus River (2)

Sacramento-San Joaquin Delta (5c)

San Joaquin River (6)
Stockton Ship Channel (1)
Grant Line Canal (1)
Old River (5)
Delta-Mendota Canal (2)
Italian Slough (1)
Indian Slough (1)
Rock Slough (1)
Contra Costa Canal (1)
Dutch Slough (1)
False River (1)
Calaveras River (2)
Little Potato Slough (1)
Mokelumne River (4)
Cosumnes River (2)
Delta Cross Channel (1)
Sacramento River (2)
Lindsey Slough (1)
Cache Slough (1)

Tulare Lake Basin (5d)

Kern River (3)
Tule River (1)
Kaweah River (1)
Kings River (3)

Thirty-two new stations were added to the surface water monitoring program in Region 5 during 1958. These stations were established to determine base level quality conditions at proposed water conservation project sites and to provide water quality monitoring on streams where coverage was deficient. Sampling was initiated in January 1958 at Fresno River near Daulton (Station 113) and Chowchilla River at Buchanan Dam Site (Station 114) and in September 1958 at the remaining 30 stations. Sampling at the following seven stations in Region 5 was discontinued in 1958: Sacramento River near Redding (Station 12a), Burney Creek near Burney (Station 17c), Deer Creek near Vina (Station 95), Clear Lake near Clearlake Oaks (Station 40), South Honcut Creek near Bangor (Station 90), and Bear Creek near Stevinson (Station 111). These stations were discontinued because downstream stations were found to be adequate to monitor each of the reaches in question.

In April 1958, eight stations were established in Region 5 to monitor the radioactivity of the Sierra snowpack. The stations are located in the upper watersheds of the Feather, Yuba, American, Mokelumne, Tuolumne, San Joaquin and Kings Rivers. Snow samples were collected by agencies and individuals cooperating with the California Cooperative Snow Survey of the Department of Water Resources and were analyzed by the Department of Public Health.

Water quality varies considerably in the Central Valley Region, depending on locality, amount of flow, and type of waste entering the streams. Waters draining from the Sierra Nevada and from the Cascade and Trinity Mountains are generally of excellent quality; while drainage onto the floor of the Central Valley from the Tehachapi Mountains in the south and from the coastal ranges along the west perimeter varies from poor to excellent quality.

The monthly variation in total dissolved solids at stations in Region 5 with a record of five years or longer are presented graphically on Plates B-20 through B-54 of Appendix B for the period 1954-1958.

Sacramento River Valley (5a)

Surface water samples were collected from the following ten stations on the Sacramento River (above effective sea-water intrusion) during 1958: at Delta (Station 11), at Keswick (Station 12), near Redding (Station 12a), at Bend (Station 12c), near Hamilton City (Station 13), at Butte City (Station 87a), at Colusa (Station 13b), at Knights Landing (Station 14), at Sacramento (Station 15), and at Snodgrass Slough (Station 97). Daily samples were collected at Bend, Butte City, Knights Landing, and Sacramento and the samples from each station for a period of days were composited on the basis of conductivity in order to provide a single sample for mineral analysis. Only monthly samples were collected at the other stations.

A study of data collected on the Sacramento River indicated the stations at Redding and Snodgrass Slough were not required to monitor quality changes in the river. Therefore, these stations were discontinued in October 1958.

The water of the Sacramento River is of excellent quality and suitable for domestic, agricultural, and most industrial uses. The conductivity ranged from a low of 55.7 micromhos at Delta (Station 11) above Shasta Lake, to a high of 285 micromhos at Knights Landing (Station 14). No significant degree of degradation has been detected since the inception of the sampling program in April 1951. During 1958, the water remained class 1 for irrigation and within the mineral standards for drinking water above the point where sea-water intrusion effects the quality.

Analyses of water samples taken from the Sacramento River at Delta (Station 11) during 1958 indicated a water of excellent quality with very low concentrations of all constituents. Conductivity ranged between 55.7 and 143 micromhos. Samples of water collected at Keswick Dam (Station 12) reflected no appreciable change in concentrations from those found at Station 11 upstream. This indicated that waters tributary to the Sacramento River between these stations also were of excellent quality. Two such tributary streams are the Pit and McCloud Rivers and are discussed later in this bulletin. Although no appreciable degradation was detected by the surface water monitoring program in the Keswick Dam area, past investigations have shown that Spring Creek, which is tributary to the Sacramento River upstream from Keswick Dam, at times contributes significant concentrations of heavy metals to the river. The degrading effects of this creek are discussed in the following two reports: "Report to State Water Pollution Control Board on Control of Pollution of Keswick Reservoir", June 14, 1957, by Leeds, Hill, and Jewett, Consulting Engineers, Los Angeles, California, and "Sacramento River, Keswick Reservoir and Vicinity, Fall 1955 and Spring 1956, Stream Survey Report for the State of California", by the Academy of Natural Sciences, Philadelphia, Pennsylvania.

Conductivity of water at Station 12a ranged in 1958 between 90.1 and 124 micromhos. A study of past analyses of water samples collected at Station 12a, Sacramento River near Redding, revealed no significant change in quality between this station and Station 12. Due to this similarity of analyses, sampling at Station 12a was discontinued in November 1958.

Analyses of daily samples collected from the Sacramento River at Bend (Station 12c) indicated only minor quality changes between Redding (Station 12a) and this station. Conductivity ranged from 91.4 to 179 micromhos during 1958 at Bend.

Mineral concentrations during 1958 were slightly higher near Hamilton City (Station 13) than upstream at Station 12, due to tributary streams and wastes entering the Sacramento River between the two stations. Conductivity at Station 13 ranged from 94.7 to 155 micromhos. This represented only a minor decrease from 1957 values, which ranged from 118 to 161 micromhos. The water at this point was classified as slightly hard only in March and April when it reached 62 and 58 ppm total hardness, respectively. These hardness concentrations were considerably lower than the high of 124 ppm reported in February 1957. During the remainder of 1958 the water was classified as soft.

Mineral concentrations in Sacramento River at Butte City (Station 87a) varied only slightly throughout 1958, ranging from 108 to 171 micromhos. Hardness ranged between soft and slightly hard (42 to 67 ppm).

Sampling of the Sacramento River at Colusa (Station 13b) was initiated in October 1958. This station was established to monitor the effects of water use in the reach between Butte City and Knights Landing. No significant difference was noted in the quality at this station as compared to Butte City (Station 87a). In 1958 the water at Station 13b was calcium-magnesium bicarbonate in character, with conductivity ranging between 113 and 136 micromhos.

Sacramento River is sampled at Knights Landing (Station 14) to monitor the effect of large quantities of irrigation drainage entering the Sacramento River from Colusa Trough and other large irrigation return drains. In 1958 the water in the Sacramento River at Knights Landing (Station 14) was found to be considerably higher in mineral content than at Butte City (Station 87a). The conductivity at Station 14 reached a high value of 285 micromhos as compared to a high of 155 micromhos at Station 87a. This incremental increase in dissolved solids was the largest found on the river in 1958.

Conductivity of the water in the Sacramento River at Sacramento (Station 15) ranged from 74.2 to 192 micromhos, reflecting the diluting effect of the Feather and American Rivers which are tributary between Knights Landing and Sacramento. The water at Station 15 was predominantly calcium-magnesium bicarbonate. Hardness varied from soft to moderately hard throughout 1958 with a range of 31 to 70 ppm total hardness.

The quality of the Sacramento River was virtually unchanged between Sacramento and Snodgrass Slough (Station 97) the next downstream station. Conductivity ranged between 86.7 and 175 micromhos at Station 97 during 1958. Although the flow at this station is affected by tidal action, there has been no incursion of salt water since this station was added to the program in 1952.

Radioactivity levels in water of the Sacramento River upstream from Snodgrass Slough during 1958 did not vary significantly from levels reported during past years. Total activity ranged between 15.9 μμc/l at Hamilton City in May to 2.6 μμc/l at Knights Landing in September.

The two sampling points on the Sacramento River located downstream from Snodgrass Slough, at Rio Vista (Station 16) and at Toland Landing (Station 15a), are considered to be in the Sacramento-San Joaquin Delta (5c) and will be discussed later in this report.

Analyses of samples of water collected from the McCloud River above Shasta Lake (Station 18) during 1958 showed this water to be calcium bicarbonate in character, of excellent quality with low concentrations of all constituents and suitable for most uses. At this station conductivity reached a high of only 92.2 micromhos; boron was found only during two months, with a value of 0.10 ppm; hardness reached a high of 38 ppm; and sodium reached a high of 27 percent. These values do not represent an appreciable change over previous years of record; although, the quality of the water was slightly better during 1958 than in 1957.

During 1958, samples of water were collected from Pit River Basin at the following stations: Pit River, South Fork near Likely (Station 18a); Pit River near Canby (Station 17a); Pit River near Bieber (Station 17e); Pit River near Montgomery Creek (Station 17); and Burney Creek near Burney (Station 17c). Two stations on the Pit River, one near Likely (Station 18a) and the other near Bieber (Station 17e), were added to the program in September 1958 to more completely monitor quality changes in this important tributary to the Sacramento River.

Station 17c, Burney Creek near Burney, was discontinued in October 1958. At this station electrical conductivity ranged between 39 and 120 micromhos during the period of record, and averaged about 75 micromhos. A study of the analyses revealed no appreciable change in concentrations since sampling began in April 1951. Any change in quality at Station 17c would be reflected in analyses of samples collected from Pit River near Montgomery Creek (Station 17).

Concentrations of mineral constituents were noted to be generally lower at Station 18a, South Fork Pit River near Likely, than at downstream stations. This water was calcium-magnesium bicarbonate in character, soft, and class 1 for irrigation during 1958. It met drinking water standards for mineral content and was suitable for most uses. Conductivity ranged from a minimum of 102 micromhos in November to a maximum of 140 micromhos in August.

In 1958 no appreciable difference in quality was noted in the Pit River between Canby (Station 17a) and Bieber (Station 17e). The waters at both stations were bicarbonate type with no prominent cation. They were slightly hard, class 1 for irrigation and met drinking water standards for mineral content. The concentrations of constituents at these stations were appreciably higher than at the downstream station near Montgomery Creek (Station 17). Conductivity ranged between 135 and 256 micromhos at Station 17a and between 253 and 266 micromhos at Station 17e as compared to 125 to 161 micromhos at Station 17. This dilution by better quality water from tributary streams was further reflected by the hardness concentrations, which ranged from 50 to 77 ppm at Station 17a and from 74 to 80 ppm at Station 17e as compared to 43 to 64 ppm at Station 17. These concentrations do not differ appreciably from values noted in prior years of record.

Water at the following stations, located on streams tributary to the Sacramento River between Redding and Bend, was sampled during 1958: Clear Creek near Igo (Station 12d); Cottonwood Creek below North Fork of Cottonwood Creek (Station 11a); Cottonwood Creek near Cottonwood (Station 12b); Cottonwood Creek, South Fork above Cottonwood Creek (Station 11b); Cow Creek near Millville (Station 88a); and Battle Creek near Cottonwood (Station 88b).

Clear Creek near Igo (Station 12d) and Cow Creek near Millville (Station 88a) were first sampled in April 1958. These stations were established to obtain quality information on tributary inflow to the proposed Iron Canyon Reservoir on the Sacramento River above Red Bluff. These waters were calcium bicarbonate in character, class 1 for irrigation and met drinking water standards for mineral content. Conductivity ranged between 64.5 and 193 micromhos, indicating low concentrations of dissolved solids.

Sampling was initiated on South Fork Cottonwood Creek above Cottonwood Creek (Station 11b) and Cottonwood Creek below North Fork Cottonwood Creek (Station 11a) in October 1958 to provide more complete information on water quality variations in Cottonwood Creek, an important tributary to the proposed Iron Canyon Reservoir. The waters were generally calcium bicarbonate in character and suitable for most uses. The conductivity at Station 11a ranged from 251 to 269 micromhos and from 336 to 408 micromhos at Station 11b. Although mineral concentrations were low at both stations, they were higher than at the downstream station on Cottonwood Creek near Cottonwood (Station 12b). The explanation for this quality change has not been ascertained. At Station 12b the water was calcium bicarbonate in character, class 1 for irrigation and met drinking water standards for mineral content. During 1958 conductivity at Station 12b ranged from 89.1 to 252 micromhos, hardness from 42 to 114, and sodium ratio from 13 to 17 percent. These values are not significantly different from values detected during previous years of record.

Battle Creek near Cottonwood (Station 88b) was added to the program in April 1958 to obtain quality information on this major tributary to Iron Canyon Reservoir. Water analyses showed this stream to be a bicarbonate type water with no major cation. Conductivity, which ranged between 75.7 and 149 micromhos, was indicative of excellent quality and low concentrations of dissolved constituents.

The following new stations were added to the program in October 1958 on streams tributary to the Sacramento River between Bend and Hamilton City: Paynes Creek near Red Bluff (Station 88g); Antelope Creek near Red Bluff (Station 88e); Antelope Creek near mouth (Station 88c); Elder Creek near Paskenta (Station 13e); and Thomes Creek at Paskenta (Station 13d). These stations were established to determine the base line quality of the respective streams. During the last three months of 1958 these waters were all good quality bicarbonate type waters with no predominant cation, although the concentrations of constituents varied from stream to stream.

They were class 1 for irrigation and met drinking standards for mineral content. Conductivity of these waters ranged from a minimum of 146 micromhos at Station 88e in November to a maximum of 658 micromhos at Station 13e in October.

Water samples collected from Mill Creek near Los Molinos (Station 88) during 1958 exhibited no appreciable change in quality from values reported for previous years. The conductivity of this water ranged between 78.1 and 192 micromhos during 1958. Boron reached a high of 0.50 ppm, and caused the water to be class 2 for irrigation during the last three months of 1958.

Deer Creek near Vina (Station 95) was discontinued in October 1958. A study of analyses of water samples collected at this point, since its inception in August 1952, indicated no significant variation in quality. Since any material degradation or impairment to this water would be reflected in analyses of Sacramento River at Hamilton City (Station 13), it was not considered necessary to continue monitoring this station.

Stony Creek, tributary to the Sacramento River between Hamilton City and Butte City, was sampled near Hamilton City (Station 13a) and at Black Butte Dam Site (Station 13c), during 1958. In 1958, conductivity at Station 13a ranged from 188 to 385 micromhos. Boron reached a high of 0.30 ppm during three months of 1958. Hardness ranged consistently in the moderately hard range with a high of 170 ppm. At Station 13c, conductivity ranged from 194 to 513 micromhos in December. Calcium bicarbonate was the dominant character of Stony Creek water at both Stations 13a and 13c, but sodium and magnesium were present in magnitudes of about 15 ppm each. The quality reported for Stony Creek during 1958 did not differ greatly from that of 1957.

Radioactivity showed an increase between the spring and fall 1958 measurements in Stony Creek near Hamilton City (Station 13a). Here, total activity was approximately 0.1 and 10.1 μμc/l in May and September, respectively.

Conductivity values of water from Big Chico Creek, tributary to the Sacramento River between Hamilton City and Butte City, near Chico (Station 85) ranged from 67.6 to 207 micromhos in 1958. This water was calcium bicarbonate in character, with hardness ranging between 28 and 78 ppm. Sodium was reported as 28 percent during September, which was the high for the year. These 1958 values represented no significant change in the quality of Big Chico Creek over those of 1957.

The water of Butte Creek near Chico (Station 84) was of better quality than either Stony or Big Chico Creeks as indicated by the conductivity which ranged between 54.0 and 114 micromhos during 1958. These observations represented no significant deviation from previously reported values.

Colusa Trough (Colusa Basin Drain) was sampled near Colusa (Station 87) during 1958. The water in Colusa Trough was chiefly from irrigation return flows of the Colusa Basin. The flows of Colusa Trough are divided (except during flood flows) at Knights Landing with a portion passing into the Sacramento River and the remainder diverted through Knights Landing Ridge Cut and thence into Yolo Bypass. There are many other sources of return flow above Station 14 on the Sacramento River, but Colusa Trough is one of the chief contributors of irrigation return water. Although Colusa Trough water was generally within the class 1 irrigation category, it was considerably poorer in quality than Sacramento River water. Conductivity ranged between a high of 1,180 and a low of 369 micromhos during 1958. Boron concentrations were not excessive, ranging between 0.06 and

0.36 ppm. Hardness values ranged from 99 to 270 ppm, generally in the moderately to very hard category. The sodium ratio ranged from 39 to 55 percent, representing no significant change from previously recorded values.

Cache and Putah Creeks originate in the eastern foothills of the Coast Range. While only the summer irrigation flows of Cache Creek are controlled at Clear Lake, all the flows in Putah Creek are rigidly controlled. In the dry season the lower reaches of both streams are practically dry. During periods of extremely high flow, they empty into Yolo Bypass.

The Clear Lake-Cache Creek system was sampled during 1958 at the following stations: Clear Lake at Lakeport (Station 41); Clear Lake near Clearlake Oaks (Station 40); Cache Creek, North Fork near Lower Lake (Station 79); Cache Creek near Lower Lake (Station 42); and Cache Creek near Capay (Station 80).

During 1958 water in Clear Lake, on the headwaters of Cache Creek, was sampled at Lakeport (Station 41) and near Clearlake Oaks (Station 40). This water was magnesium-calcium bicarbonate, and slightly to moderately hard. The water was generally class 2 for irrigation due to its high boron content which reached a high value of 1.1 ppm near Clearlake Oaks (Station 40) in 1958. Analyses of the water at Station 41 show boron content to be somewhat lower, but occasionally still in sufficient concentration to cause the water to be class 2. No other minerals reached undesirable concentrations in Clear Lake. Conductivity of this water ranged from 192 to 281 micromhos, with no appreciable difference between the two stations. Due to similarity of analyses at the two stations on Clear Lake, sampling near Clearlake Oaks (Station 40) was discontinued in November 1958.

The concentration of mineral constituents in Cache Creek increases significantly between the upstream station near Lower Lake (Station 42) and the downstream station near Capay (Station 80). This condition is attributed to the excessive mineral concentrations found in the North Fork Cache Creek near Lower Lake (Station 79), which drains an area containing numerous hot, sulphurous springs which are high in borates. This was exemplified by the boron concentrations found in waters of the North Fork Cache Creek during December 1958. At that time, boron was reported as 0.8 and 1.9 ppm near Lower Lake and near Capay, respectively, while in the North Fork it was reported as 5.0 ppm. This condition was most critical when low flow existed in Cache Creek and high flow existed in the North Fork Cache Creek.

During 1958 conductivity values of samples collected from Cache Creek near Capay (Station 80) ranged from 276 to 857 micromhos and hardness reached a high of 310 ppm. Magnesium concentrations reached a high of 58 ppm and was predominant over calcium and sodium throughout the year. Boron ranged from 0.30 to 1.90 ppm, causing the water to be class 2 for irrigation. Drinking water standards for mineral content were met throughout 1958. The highest radioactivity reported during 1958 was 14.2 μμc/l total activity in September in Cache Creek near Capay (Station 80). This represents no significant change from previous values.

Putah Creek, sampled near Winters (Station 81), is similar to Cache Creek in quality. Flows of Putah Creek near Winters are governed by Monticello Dam which was recently constructed on Putah Creek approximately ten miles upstream from Winters. Ground water formations in this area are similar to those in Cache Creek Basin; accordingly, the mineral characteristics of ground and surface water may be expected to be similar in both basins.

Conductivity values of surface water ranged from 277 to 868 micromhos in 1958. Although this water reached class 2 because boron reached 1.10 ppm in March, it was generally within class 1 limits during most of the year with a low of 0.03 ppm boron in January. During the entire year, this water met the requirements for domestic and most industrial uses. It was moderately to very hard throughout the year, with a high value of 312 ppm hardness.

The Feather and American Rivers and Sacramento Slough are tributary to the Sacramento River between Knights Landing (Station 14) and Sacramento (Station 15).

The Feather River system, tributary to the Sacramento River at Verona, is sampled at the following stations: Feather River near Oroville (Station 19); Feather River below Shanghai Bend (Station 20a); Feather River at Nicolaus (Station 20); Indian Creek near Crescent Mills (Station 17d); South Honcut Creek near Bangor (Station 90); Yuba River near Smartville (Station 21a); Yuba River at Marysville (Station 21); Bear River near Wheatland (Station 78); and Bear River near mouth (Station 20b). The waters of this whole system were of similar quality and exhibited little change during 1958 over the quality found in previous years.

Analyses of water samples collected from the Feather River during 1958 showed no appreciable variation in concentrations of mineral constituents between 1957 and 1958. The water was of exceptionally good quality and suitable for most uses. Conductivity ranged between 54.6 and 125 micromhos during 1958 and the concentration of mineral constituents was correspondingly low.

A water sample of melted snowpack on the Lower Lake Helen Snow Survey Course on the Feather River watershed, collected in May 1958, displayed a gross radioactivity of 510 μμc/l. No significant changes in radioactivity were noted in water samples collected from the Feather River during 1958. The maximum activity reported was below Shanghai Bend (Station 20a) where 13.2 μμc/l total activity was found in September.

Although the concentrations of most mineral constituents in Indian Creek water near Crescent Mills (Station 17d) were slightly higher than those found in the Feather River, the water was of excellent quality and suitable for most uses. Conductivity of water at this station ranged between 63.8 and 202 micromhos during the period April through December 1958.

Sampling of South Honcut Creek water, near Bangor (Station 90), was discontinued in November 1958. This stream often has been dry throughout long periods and only during storm periods does it have significant flows.

Analyses of water samples collected from Yuba River at Marysville (Station 21) and from Yuba River near Smartville (Station 21a) during 1958 showed the quality of water to be similar at both points, and reflected only minor deviations in quality from that found during previous years. Conductivity ranged between 43.1 and 178 micromhos during 1958 and the concentrations of mineral constituents were correspondingly low.

Radiological samples of the snowpack on the Castle Creek Snow Survey Course on the Yuba River watershed were collected daily for the period April 13 to December 31, 1958. Analyses of these samples by the State Department of Public Health showed a range in gross activity of 1 to 103 μμc/l. However, 15 samples had activity so low as to be undetectable above background activity. One sample of fresh snowfall collected April 23, 1958, had a gross activity of 10,000 μμc/l and a series of samples collected

May 1, 1958, had a range of 340 to 1,120 μμc/l. The maximum radioactivity found in water samples collected from Yuba River was 7.8 μμc/l total activity reported at Marysville (Station 21) in May.

Conductivity in the Bear River ranged from 71.9 to 330 micromhos in May and December, respectively. During the last seven months of 1958, flows were very low, due to heavy irrigation use during the summer and light precipitation during the fall. This condition resulted in greater hardness in the water of the Bear River, which reached a maximum of 148 ppm in December. Boron and sodium concentrations were very low and did not exceed values noted at other stations in the Feather River watershed. With the exception of hardness, Bear River water equaled the excellent quality of water found throughout the Feather River Basin.

Sacramento Slough carries irrigation return water from the area bounded on the west and east by the Sacramento and Feather Rivers, respectively, and extends from the vicinity of Chico on the north to the vicinity of Knights Landing on the south. During 1958 the waters of Sacramento Slough near Knights Landing (Station 14a) showed conductivity values ranging from 128 to 729 micromhos and hardness reaching a high of 212 ppm. The character of this water was predominantly sodium bicarbonate early in the year, but later in the year it became calcium bicarbonate.

Water samples of the American River at Sacramento (Station 22), American River at Fair Oaks (Station 22d), American River at Nimbus Dam (Station 22a), Middle Fork American River near Auburn (Station 22b), and South Fork American River near Lotus (Station 22c) continued to show excellent mineral quality during 1958. The water was very low in all mineral matter, was calcium bicarbonate in character, and was excellent for all uses. Conductivity ranged between 33.2 and 96.6 micromhos during

1958, indicating no appreciable change in the quality reported for previous years. Station 22d, at Fair Oaks, which had been operated by the United States Geological Survey, was discontinued in October 1958. Stations 22b and 22c, Middle Fork near Auburn and South Fork near Lotus, respectively, were added to the program in July 1958 to more completely monitor the upstream reaches of this major tributary to the Sacramento River.

San Joaquin Valley (5b)

The portion of the San Joaquin Valley north of the Kings River watershed divide, is drained by the San Joaquin River and its tributaries. This river is comprised of three distinctly different waters. Upstream from Mendota Pool, the river generally contains native San Joaquin water with infrequent Herndon Canal spillage of Kings River irrigation water. In the reach between the Mendota Pool and Vernalis the river contains a mixture of large quantities of irrigation return flows, of accretions from ground waters, and of tributary inflows from the Merced, Stanislaus, and Tuolumne Rivers. Downstream from Vernalis the river is a tidal oscillating channel and its water is consequently comprised of a complex mixture of perimeter inflows, including the Sacramento River, and of accretions and drainage from island irrigation.

The discussions of water quality at the stream sampling stations downstream from Vernalis are included later under the "Sacramento-San Joaquin Delta (5c)" heading.

The quality of water in the San Joaquin River changes greatly from Friant Dam to Vernalis, the point of entry into the Sacramento-San Joaquin Delta. In order to monitor these changes, samples were collected at the following 16 stations located between those points:

at Friant (Station 24), at Biola (Station 24a), at Whitehouse (Station 24b), near Mendota (Station 25), near Dos Palos (Station 25a), at head of Chamberlain Slough (Station 114a), above Salt Slough (Station 111b), at Fremont Ford Bridge (Station 25c), at Hills Ferry Bridge (Station 25b), above Merced River (Station 30a), at Crows Landing Bridge (Station 26b), at Patterson Water Company (Station 27a), near Grayson (Station 26), at West Stanislaus Irrigation District (Station 27b), at Maze Road Bridge (Station 26a), and near Vernalis (Station 27).

The farthest upstream sampling point on the San Joaquin River is located at Friant below Friant Dam (Station 24) where the water has shown no appreciable degradation since sampling began in April 1951. Analyses disclosed that this water was of exceptionally high quality with conductivity values ranging between 27.2 and 68.6 micromhos during 1958. The water was soft throughout the year with a range in hardness from 6 to 26 ppm.

Concentrations of all mineral constituents of San Joaquin River water increased significantly in the 50 miles between Friant Dam and Whitehouse (Station 24b), as reflected by the conductivity at Station 24b, which ranged between 32 and 128 micromhos during 1958.

Water at the station near Mendota (Station 25) had considerably higher mineral concentrations during 1958 than water at upstream stations. Conductivity values reached a high of 538 micromhos in August, although a low of 34.7 micromhos was reported in June when flows were large. Concentrations of boron in water at Station 25 ranged from 0.00 to 0.30 ppm and hardness from 11 to 146 ppm in June and April, respectively. These values are comparable with those recorded during 1957 when conductivity ranged from 73.9 to 752 micromhos, boron from 0.00 to 0.39 ppm, and hardness from 20 to 186 ppm. The character of the water was sodium bicarbonate early in the year and became sodium chloride during the last five months of 1958.

The character of San Joaquin River water near Grayson (Station 26) was generally sodium bicarbonate early in the year, and in August became sodium chloride. These waters were in the class 1 quality for irrigation for most of the year except for two months when conductivity values reached 1,310 micromhos in November and 1,330 micromhos in December. In June, 127 micromhos was reported which was low for the year. Boron did not exceed class 1 limits, except for a value of 0.51 ppm in March. Hardness ranged from 32 ppm to 294 ppm. These values did not represent any significant changes as compared to previous years. The increase in mineral constituents can be attributed to the numerous surface inflows of irrigation return water existing above this station and to large quantities of accretions from ground water. The dominance of sodium chloride concentrations were characteristic of irrigation return waters in this area.

Analyses of water samples taken from the San Joaquin River at Maze Road Bridge (Station 26a) during 1958 indicated a definite improvement in San Joaquin water quality after entry of Tuolumne River water. Conductivity values of water at this station reached a high of 891 micromhos during August, while the value recorded in August at Station 26 was 988 micromhos. Boron concentrations, which reached a maximum of 0.30 ppm, were also lower at Station 26a than at Station 26. The character of the water at Station 26a was sodium chloride during the major portion of the year, and slightly to moderately hard with the exception of August, when hardness reached 212 ppm. During May and June, minimum values for hardness of 45 and 36 ppm, respectively, were reported, which is somewhat lower than the 1957 minimum of 69 ppm.

During 1958 the concentrations of most mineral constituents in the San Joaquin River near Vernalis (Station 27) were significantly lower than at the next upstream station at Maze Road Bridge (Station 26a). This improvement in quality was reflected in a comparison of analyses of samples collected above and below Stanislaus River, at Maze Road Bridge (Station 26a) and near Vernalis (Station 27), respectively. As an example, the sample collected at Station 26a on August 14, 1958, had a conductance of 891 micromhos while a composite sample at Station 27 for August had a conductance of 737 micromhos. This was a decrease of 154 micromhos which can be attributed to the tributary flow of the Stanislaus River. Hardness also decreased from 212 to 180 ppm during August. This same condition was evident, to some degree, at the confluence of other tributaries with the San Joaquin River.

Radioactivity in the San Joaquin River between Friant (Station 24) and Vernalis (Station 27) during 1958 did not vary significantly from previous years of record. The total activity ranged between 4.3 μμc/l near Dos Palos (Station 25a) and 13.3 μμc/l near Grayson (Station 26).

Fresno River was sampled near Daulton (Station 113) during 1958. The water at this point was sodium-calcium bicarbonate in character, soft, and class 1 for irrigation purposes throughout the year. The higher values of mineral concentrations occurred during periods of low flow. Snowmelt from the Sierra Nevada produces higher than average flows during the early summer months causing a decrease in mineral concentrations. Electrical conductivity ranged between 72.5 and 221 micromhos. Radioactivity increased from 6.8 μμc/l in May to 14.9 μμc/l in September.

Water in the Chowchilla River at Buchanan Dam site (Station 114) was class 1 for irrigation purposes during 1958, but occasionally had high hardness content, ranging between 42 and 134 ppm. The water at this point was calcium-sodium bicarbonate in character. Electrical conductivity ranged between 127 and 538 micromhos. Percent sodium was well within class 1 limits with values ranging from 30 to 44. An increase in radioactivity was noted at this station during 1958 with total activity going from 4.4 μμc/l in May to 11.0 μμc/l in September.

Water samples were collected from Bear Creek near Stevinson (Station 111) and at Merced (Station 111a)during 1958. The water at Station 111 was class 1 for irrigation during 1958. Conductivity ranged between 98.2 and 576 micromhos, indicating no significant change from previous years. Station 111 was discontinued in November 1958, and Station 111a was established in December 1958. This station relocation was made because Station 111a would be more indicative of the natural quality of Bear Creek as it is located above the influence of accretions from ground waters.

Salt Slough was sampled at San Luis Ranch (Station 92a). Analyses of water samples collected at this station indicated no appreciable difference from 1957 analyses. Electrical conductivity ranged from 314 to 2,405 micromhos at this point during 1958. The character of this water was predominantly sodium chloride with sodium concentrations ranging from 36 to 313 ppm. Concentrations of other minerals were also high and the waters flowing from Salt Slough contributed significant quantities of dissolved minerals to the San Joaquin River. Because of the wide variations in quantity from season to season, this water ranges from class 1 through class 3 for irrigation uses.

Exchequer Dam on the Merced River forms McClure Reservoir, which stores water of excellent quality used for irrigation and hydroelectric power generation. At Station 32a, below Exchequer Dam, the water of the Merced River was calcium bicarbonate in character, soft, class 1 for irrigation and suitable for domestic and most industrial uses during 1958. Conductivity values ranged from 20.1 to 108 micromhos, and hardness between 8 and 45 ppm. Percent sodium was very low, ranging from 14 to 22 percent. The quality of this water was slightly better during 1958 than that reported during 1957 due to greater surface runoff and consequent dilution. Quality of the Merced River water downstream near Stevinson (Station 32) was substantially poorer, although it remained class 1 throughout the year. Conductivity at this lower point reached a high of 320 micromhos in November and a low of 39.2 in June. Hardness reached a high of 91 ppm in November. During the early months, the character of the water at this lower point was calcium bicarbonate, while during the later months it became sodium bicarbonate.

Samples of water were collected from Tuolumne River at the following three stations: below Don Pedro Dam (Station 31a), at Hickman-Waterford Bridge (Station 30), and at Tuolumne City (Station 31).

At the farthest upstream sampling point on Tuolumne River, below Don Pedro Dam (Station 31a), the water was calcium bicarbonate in character, soft, and class 1 for irrigation. Conductivity at this station ranged from 17.1 to 78.5 micromhos. This excellent quality water was used for irrigation in downstream areas, and some quality impairment was evident at the next downstream station at Hickman-Waterford Bridge (Station 30). At Station 30 the water was classified sodium bicarbonate and, later in the year, occasionally sodium chloride due to irrigation return flows.

The major portion of irrigation return flows along this stream finds its way to the Tuolumne River by way of accretions from ground water. At Station 30 the conductivity ranged from 41.2 to 521 micromhos. Quality was well within class 1 irrigation limits, however, and these limits were not exceeded during 1958. At Tuolumne City (Station 31), the water sampled during 1958 reflected the quality of the Tuolumne River water as it entered San Joaquin River. At this point conductivity ranged between 87.8 and 796 micromhos, sodium from 6.2 to 7.9 ppm and chlorides from 9.3 to 176 ppm. The maximum values of conductivity, sodium and chloride at Station 31 occurred during August and can probably be attributed to gas wells discharging saline waters to the river upstream from this point. These concentrations were not unusual since similar values have been reported in previous years.

A snow core sample collected from the watershed of the Tuolumne River on the Gin Flat Snow Course on May 26, 1958, had a gross activity of 399 μμc/l. The maximum activity in the water samples collected from the Tuolumne River in 1958 was reported as 11.2 μμc/l at below Don Pedro Dam (Station 31a).

Stanislaus River is the last tributary to the San Joaquin River system south of the Delta drainage area and was sampled below Tulloch Dam (Station 29a) and near the mouth (Station 29). The water at Station 29a was of excellent quality during 1958 and did not change significantly as compared to previous years. This water was calcium bicarbonate throughout the year, soft, and class 1 for irrigation. It met drinking water standards for mineral content and was suitable for most industrial uses. Conductivity at Station 29a ranged from 35.1 to 143 micromhos during 1958. As the water progressed downstream, very little change in mineral concentrations was noted. At Station 29 near the mouth the water was still of excellent quality, calcium bicarbonate in character, class 1 for irrigation, and suitable for domestic and most industrial purposes. Conductivity values ranged from 47.3 to 261 micromhos. Hardness was generally in the slightly hard category, reaching a high of 102 ppm in August.

Sacramento-San Joaquin Delta (5c)

To adequately monitor changes in water quality in the Delta area, 35 sampling stations have been established on 19 major watercourses. These watercourses with their number of stations listed in parenthesis are as follows:

San Joaquin River (6)
Stockton Ship Channel (1)
Grant Line Canal (1)
Old River (5)
Delta-Mendota Canal (2)
Italian Slough (1)
Indian Slough (1)
Rock Slough (1)
Contra Costa Canal (1)
Dutch Slough (1)
False River (1)
Calaveras River (2)
Little Potato Slough (1)
Mokelumne River (4)
Cosumnes River (2)
Delta Cross Channel (1)
Sacramento River (2)
Lindsey Slough (1)
Cache Slough (1)

The quality of water in the Delta area is influenced by the saline water from Suisun Bay and the Pacific Ocean and by the fresh water entering from the major streams of the Central Valley Region. The existence of a usuable supply of water in the Delta area is dependent upon the inflow of fresh water from the streams in the Sacramento and San Joaquin Valleys in quantities sufficient to retard the intrusion of ocean waters from Suisun Bay. Fresh water inflows are carried to the Delta by the Sacramento River, entering from the north; the Calaveras, Mokelumne, and Cosumnes Rivers, entering from the east; and the San Joaquin River, entering from the south.

Delta water qualities are also influenced by the major diversions to the Delta Upland areas, including Delta-Mendota and Contra Costa diversions of the Central Valley Project.

During 1958, samples of water were collected at the following stations on the San Joaquin River in the Delta: at Mossdale Bridge (Station 102), at Brandt Bridge (Station 101a), at Garwood Bridge (Station 101), at San Andreas Landing (Station 112b), at Jersey Point (Station 28b), at Antioch (Station 28), and on the Stockton Ship Channel at Rindge Island (Station 100).

In 1958 mineral concentrations in the San Joaquin River at Mossdale Bridge (Station 102) and at Station 27 (Vernalis) were comparable, although they were generally slightly higher at Station 102. At Station 102 conductivity ranged between 143 and 793 micromhos. It met class 1 requirements for irrigation and recommended mineral concentrations for domestic water. Concentrations noted at Station 102 during 1958 were generally lower than during previous years of record. Hardness ranged from 39 to 188 ppm, and percent sodium ranged from 40 to 52 percent. At Garwood Bridge (Station 101) near Stockton the character of the water was sodium bicarbonate early in the year, and sodium chloride later on. Conductivity ranged from 109 to 659 micromhos and hardness from 31 to 162 ppm. Percent sodium was within class 1 limits with a range of 38 to 53 percent. The 1958 values at this station represented some improvement over 1957 when conductivity reached a high of 757 micromhos, while the minimum value was 298.

Stockton Ship Channel, which is a channelized portion of the San Joaquin River from Stockton downstream to Mandeville Island, was sampled near Rindge Pump on Rindge Island (Station 100). Here the water met class 1 requirements for irrigation throughout 1958. Conductivity ranged from 134 to 639 micromhos and hardness from 38 to 161 ppm. Percent sodium did not exceed class 1 limits, reaching a maximum of 57 percent. These values do not represent a significant change in quality from previous years of record.

Water which entered Suisun Bay from the San Joaquin River was sampled at Antioch (Station 28). This water was better in quality than water sampled anywhere on the San Joaquin River below the station near Dos Palos (Station 25a) and this condition points out the fact that the Central Valley Project controlled flows in the Sacramento River dominate the water quality picture in the Delta. It was characteristically sodium bicarbonate during the major portion of the year, but occasionally became sodium chloride. The concentrations of dissolved constituents were lower during 1958 than during previous years since 1951. Conductivity values ranged from 128 to 512 micromhos. These waters were slightly hard throughout most of the year and ranged from 34 to 90 ppm hardness. Radioactivity at this station was reported as 4.6 μμc/l total activity in May and 9.9 μμc/l in September.

Grant Line Canal at Tracy Road Bridge (Station 103a) was added to the water quality monitoring program in July 1958 to more completely monitor the quality of San Joaquin River water as it is distributed through the channels of the southern Delta. The conductivity ranged from 332 to 781 micromhos in December and July, respectively. The water was found to be class 1 for irrigation uses, slightly to moderately hard and within drinking water standards for mineral content.

During 1958, samples of water were collected from Old River at the following stations: near Tracy (Station 103), at Clifton Court Ferry (Station 104), at Orwood Bridge (Station 108), at Holland Tract (Station 108a), and at Mandeville Island (Station 112).

Water in Old River, which was sampled at South Tip of Fabian Tract near Tracy (Station 103), varied considerably in quality, and reflected the effects of all tributaries to the Sacramento-San Joaquin Delta. However, analyses of mineral characteristics of the major sources to the Delta collected during 1958 indicated a predominance of San Joaquin River water at this point. The conductivity of Old River water in 1958 ranged from 159 to 784 micromhos. During 1957, values were considerably higher, with a range of 341 to 1,040 micromhos, but the cause of this difference is not as yet determined. This water was characteristically sodium bicarbonate during early months and undergoes a gradual change, becoming sodium chloride later in the year. Hardness was generally in the moderately hard category with a range of 42 to 188 ppm, while percent sodium ranged between 38 and 51 percent.

The station on Old River at Clifton Court Ferry (Station 104) is north of and downstream about 2,000 feet from the intake canal of the Tracy Pumping Plant of the Central Valley Project. Analyses of samples taken at this station, compared with those from Old River near Tracy (Station 103), indicated that the water pumped into Delta-Mendota Canal during the periods of heavy pumping demand was predominantly the same water as was sampled at Station 104. This conditions is accounted for by the reversal of flow during those periods and the water stems from the Sacramento River. When the flows in San Joaquin River increased or the rate of pumping was decreased, there was evidence that water pumped into the canal was predominantly San Joaquin water. The water at Station 104 was predominantly sodium bicarbonate during the first nine months of 1958, indicating the presence of Sacramento River water. During the remaining three months the character changed to chloride which indicated a predominance of either one or all of the following sources: waters from San Joaquin River, accretions from ground water or sea-water intrusion. During this same latter period calcium and magnesium were also present in substantial quantities. Conductivity ranged from 149 to 603 micromhos which was consistent with ranges reported at other stations on Old River. This water was class 1 for irrigation throughout the year. Hardness ranged from 42 to 129 ppm. Percent sodium approached the maximum suggested value for class 1 irrigation use, with 52 percent reported during three months.

Water samples taken from Old River at Orwood Bridge (Station 108) near Middle River indicated that the quality was best during the summer months, and an increase of sodium and chloride content appeared during winter months. These concentrations did not exceed class 1 limits for irrigation uses. Hardness increased during the winter months with 174 ppm reported in January, while it decreased to 36 ppm in May. Conductivity ranged from 138 to 730 micromhos and the water was sodium bicarbonate during the first ten months of the year and sodium chloride during November and December.

Analyses of samples collected from Old River at Mandeville Island (Station 112) during 1958 showed the water at this point to be similar in quality to that found at Station 108, class 1 for irrigation, and suitable for domestic use. Conductivity ranged between 144 and 706 micromhos.

The maximum boron concentration of the year of 0.50 ppm was reported in January. Unlike water at Delta stations previously discussed, chlorides were predominant only during December, while bicarbonates dominated throughout the rest of the year. Mineral concentrations were generally low and hardness ranged between 42 and 198 ppm. Percent sodium was within class 1 limits during 1958, ranging between 32 and 48 percent which was lower than during 1957 when the range was 31 to 54 percent.

The quality of water in the Delta-Mendota Canal is dependent largely on the amount of water being pumped at the Tracy Pumping Plant, as discussed in previous paragraphs concerned with Stations 103 and 104. During 1958, water was not pumped for irrigation purposes during the first four months, nor during October and December. Conductivity near Tracy (Station 93) ranged between 257 and 924 micromhos for these six months, while the range for the other six months with pumping was 146 to 693 micromhos. At the lower end of the canal near Mendota (Station 92), conductivity ranged from 429 to 816 micromhos for the non-pumping months and from 61.5 to 660 micromhos with pumping. Boron concentrations in Delta-Mendota Canal water were low during the irrigation season with ranges of 0.0 to 0.3 ppm and 0.0 to 0.49 ppm reported at Tracy and Mendota, respectively. During non-pumping months boron ranged much higher, with maximums of 1.1 and 0.62 ppm reported at Tracy and Mendota, respectively. A comparison of the quality of the waters at each end of the canal, Station 93 with that at Station 92, cannot effectively be made since sampling during 1958 did not give consideration to the time of travel of the water in the canal. Minor quantities of radioactivity were reported at Station 92 in 1958. In May 10.3 µµc/l of total activity was reported and 12.1 µµc/l in September.

Italian Slough is a source of irrigation water for the Byron-Bethany Irrigation District. During 1958 the water near the mouth of Italian Slough (Station 106) was essentially the same in quality as that in Old River. Conductivity values ranging from 155 to 674 micromhos were reported in May and January, respectively. The character of this water varied between sodium bicarbonate and sodium chloride with both calcium and magnesium present in substantial quantities. It was class 1 for irrigation uses with boron ranging from 0.00 to 0.43 ppm. Hardness reached a high of 145 ppm in January and percent sodium reached a high of 54 in February. Since Station 106 is located at the mouth of Italian Slough, analyses of water samples collected during 1958 indicate that the presence of Old River water accounted for the good quality. The waters at the head of the slough contain significantly higher mineral concentrations due to accretions from ground water as is exemplified by samples collected at the head of the slough (one and one-half miles from mouth) by the City and County of San Francisco.

The character of the surface water in Indian Slough near Brentwood (Station 107) was predominantly sodium bicarbonate, but calcium and magnesium also were fairly abundant, and chlorides consistently were very nearly equal to bicarbonates. The quality of water at this station was the poorest found in the Delta area in 1958. Conductivity values, which ranged from 219 to 1,330 micromhos, were within class 1 irrigation limits during the six months of irrigation pumping (May through October). Sodium and chloride concentrations reached maximums of 152 and 188 ppm, respectively. Hardness ranged from 332 ppm in January to 53 ppm in May. Boron was 2.00 ppm or more during six non-pumping months of the year, and reached a value of 2.50 ppm in April. These boron concentrations put the waters into class 2 or 3 for irrigation use and represent an increase over 1957 values. High boron content is characteristic of Indian Slough water and probably results from effluent ground water, which is high in borates. Since the high concentrations occurred during the winter months when ground water was abundant and irrigation use at a minimum, it is probable that the boron came from this source. Sodium and chloride concentrations were also high during the winter months, and also are believed to be due to effluent ground water.

The Contra Costa Canal diverts water from Old River by way of Rock Slough to be used for irrigation in northeastern Contra Costa County. This water was sampled from Rock Slough near Knightsen (Station 109) and from the canal at the first pump lift (Station 109a). At Station 109 conductivity ranged from 161 to 1,120 micromhos in 1958, and boron from 0.00 to 0.80 ppm. This water was sodium bicarbonate and very hard during most of the year. Hardness ranged from 42 to 265 ppm. Conductivity ranged from 180 to 1,116 micromhos at Station 109a indicating very little variation in quality between the two sampling points. These values do not significantly differ from those of previous years of record.

Samples of water were collected from Dutch Slough at Farrar Park Bridge (Station 108b) during 1958. Conductivity at this station ranged between 129 and 262 micromhos. This represented a significant decrease over the 1957 range of 207 to 714 micromhos.

Water samples from False River at Webb Pump (Station 112a) were very similar in quality to those from Dutch Slough (Station 108b) during 1958, and likewise showed a significant decrease from 1957 in electrical conductivity. At Station 112a conductivity ranged between 117 and 248 micromhos, as compared with the 175 to 536 micromhos range reported during 1957.

Calaveras River, which enters the San Joaquin River just downstream from Stockton, was sampled at Jenny Lind (Station 16a), and near Stockton (Station 16b). The water sampled at Jenny Lind (Station 16a) was class 1 for irrigation uses throughout 1958, met drinking water requirements for mineral content, and was considerably better in quality than San Joaquin River water at the point of confluence. Conductivity ranged from a low in April of 107 to a high of 300 micromhos in November. The character of this water was calcium bicarbonate, and hardness ranged from 46 to 139 ppm. These values do not represent any significant change from those reported during 1957. Radioactivity in the Calaveras River in 1958 was reported as being 3.3 and 6.6 μμc/l of total activity in May and September, respectively, at Station 16a, and as being 7.4 μμc/l in September at Station 16b.

Analyses showed the water of Little Potato Slough at Terminous (Station 99) to be of very good quality throughout 1958. Conductivity reached a high of 317 micromhos in February and a low of 86.7 in June. The character of this water was calcium-magnesium bicarbonate, which was comparable with Sacramento River water. Hardness ranged from 30 to 107 ppm and percent sodium ranged between 23 and 30 percent. Comparison of samples collected since 1952 show these values were slightly lower than values reported in prior years.

Mokelumne River was sampled near Lancha Plana (Station 23a), at Woodbridge (Station 23), below Cosumnes River (Station 23b) and below Georgiana Slough (Station 23c). Water at these stations in 1958 was calcium bicarbonate, class 1 for irrigation purposes, and excellent for domestic and industrial use. A soft water was reported throughout the year, a quality characteristic of this stream. Analyses of samples collected at Station 23a and 23 indicated that sodium, chloride, and other dissolved solids were present in very low concentrations. The conductivity of samples collected from the Mokelumne River during 1958 ranged from a minimum of 27.2 micromhos at Stations 23a to a maximum of 249 micromhos at Station 23b. These values did not represent a significant change from previous years.

Radioactivity in the snowpack on the Mokelumne River watershed at the Lumber Yard Snow Survey sampling station was reported as 1,110 $\mu\mu c/l$ in May 1958. This activity was not in evidence in water samples collected near Lancha Plana in May and September 1958, when 5.3 and 5.0 $\mu\mu c/l$, respectively, were reported.

Analyses of water samples taken from the Cosumnes River at Michigan Bar (Station 94) and at McConnell (Station 94a) during 1958 showed this water to be calcium bicarbonate in character, soft, and class 1 for irrigation purposes. Conductivity values ranged from a low of 43.4 micromhos in May to 276 micromhos in September. Hardness ranged from 19 to 98 ppm, and percent sodium from 15 to 29 percent. No appreciable variation in quality has been noted at these stations during the period of record. Radioactivity in the Cosumnes River in September 1958 was reported as being 9.8 $\mu\mu c/l$ at Station 94a.

A large quantity of Sacramento River water during the summer irrigation season is diverted at Locke into the Delta Cross Channel (a facility of the Central Valley Project). Water sampling Station 98 is located at the headworks of this channel and virtually all samples are representative of Sacramento River water as it flows into the channel or passes downstream. Conductivity of water at this station during 1958 ranged from 93.7 to 184 micromhos. Boron was reported as 0.00 ppm during eight months and reached a maximum of 0.20 ppm in August. Hardness ranged from 36 to 68 ppm and sodium ratio from 18 to 29 percent. These values, although slightly better, do not represent any significant change over previous years and represent only a slight increase over values reported at Station 15 (Sacramento River at Sacramento). The water was slightly better in quality during the first eight or nine months of 1958 than during the same period of 1957, but low flows during the fall of 1958 resulted in mineral concentrations somewhat higher than those reported in 1957.

Although Sacramento River at Rio Vista (Station 16) is within the tidal zone, analyses of samples collected in 1958 indicated that sea-water incursion did not extend upstream to Rio Vista. The water at this point was calcium-magnesium bicarbonate, class 1 for irrigation uses, and was within mineral requirements for domestic and most industrial purposes. Conductivity ranged from 137 to 210 micromhos. Hardness did not exceed 77 ppm, reported in April. These values were very nearly the same as those reported during 1957. Radioactivity at this station was low in 1958 with 2.3 μμc/l of total activity reported in May and 11.1 μμc/l reported in September.

Conductivity of the Sacramento River at Toland Landing (Station 15a) ranged between 129 and 239 micromhos during 1958. These values are not significantly higher than values found at Rio Vista (Station 16). The conductivity values reported at Station 15a during 1958 represent a slight decrease over 1957 values.

Lindsey Slough was sampled near Rio Vista (Station 110). This tidal slough carries some irrigation return water but the tidal circulation of flow maintains the presence of Sacramento River water. This water was of good quality during 1958, class 1 for irrigation uses, and magnesium bicarbonate in character. Conductivity ranged from 153 to 315 micromhos and there was no indication of a change in quality of this water as compared to previous years.

The waters of Cache Slough, sampled below Lindsey Slough at Station 110a, was similar to the waters of Lindsey Slough both in type and in concentration of mineral constituents. This is to be expected because of the tidal circulation of Sacramento River water. The conductivity of this water ranged between 192 and 275 micromhos during 1958, representing a slight increase over 1957 values.

Tulare Lake Basin (5d)

Kern River was sampled near Kernville (Station 36b), below Isabella Dam (Station 36a), and near Bakersfield (Station 36), during 1958. At Bakersfield, Kern River is diverted into numerous irrigation canals. In 1958, water at the upstream Stations 36b and 36a was of excellent quality, class 1 for irrigation purposes, and suitable for domestic and most industrial uses. Comparison of analyses of the three stations on the Kern River indicated a gradual increase in mineral concentrations in a downstream direction. The water was calcium bicarbonate in character, and generally soft. Occasionally it reached the slightly hard category at Station 36 near Bakersfield, where a maximum value of 73 ppm hardness was reported in April 1958. Boron content as well as conductivity were well within class 1 irrigation limits with a high of 0.30 ppm and 241 micromhos, respectively, reported at Station 36 in 1958. Conductivity ranged from a minimum of 36.9 micromhos at Station 36b to a maximum of 241 micromhos at Station 36. These values indicated no significant change in the quality of the Kern River since the start of the water quality monitoring program in 1951. A decrease in radioactivity was noted in the Kern River during 1958. The total radioactivity at Station 36 was reported as being 13.6 μμc/l in May 1958 which decreased to 8.4 μμc/l in September.

Low flows are characteristic of the Tule River and the available waters are used extensively for irrigation purposes. Analyses of samples collected near Porterville (Station 91) showed the water to be calcium bicarbonate in character and slightly to moderately hard. Conductivity values ranged from 90.1 to 407 micromhos and hardness from 35 to 185 ppm. These values indicated a slight improvement in quality during 1958 as compared with records gathered since 1952.

Kaweah River water near Three Rivers (Station 35) was of excellent quality during 1958. Conductivity values which ranged from 32.5 to 146 micromhos were recorded during the summer months of 1958, when snowmelt caused the highest flows of the year. Sodium ratio reached its highest value of 26 percent in June, although the actual concentration of sodium was at its lowest value of the year with 1.7 ppm. The quality of water from this river has not changed appreciably since the station was added to the program in 1951.

Kings River was sampled at the following three stations during 1958: below North Fork (Station 33c), below Pine Flat Dam (Station 33b), and below Peoples Weir near Kingsburg (Station 34). The water at all three stations was calcium bicarbonate in character. At the two upstream stations, Stations 33b and 33c, conductivity values ranged from 16.8 micromhos in

July to 65.8 micromhos in April. Boron concentrations ranged from 0.00 to 0.15 ppm. Hardness did not exceed the limit for soft water at any time during 1958 at either Stations 33c or 33b. Below Peoples Weir (Station 34), conductivity values ranged from 28.9 to 215 micromhos, which represented a significant change in quality as compared to the upstream stations. Boron at Station 34 ranged from 0.00 to 0.12 ppm and hardness remained in the soft classification. The quality of the Kings River water has not changed appreciably since sampling began in 1951.

Radioactivity of the snowpack on the Kings River watershed in May 1958 was reported as 392 μμc/l at the Sand Meadow Snow Survey Course sampling station. The water samples collected from the Kings River in 1958 did not reflect this activity. The maximum total activity in the river samples was reported as 12.1 μμc/l in May and 24.4 μμc/l in September 1958 at Station 33c, below North Fork.

Lahontan Region (No. 6)

Water samples were collected in the Lahontan Region in 1958 at 12 stations (Plate 1) on the following 8 surface water sources:

Susan River (1)	Carson River, East Fork (1)
Lake Tahoe (3)	West Walker River (1)
Truckee River (2)	East Walker River (1)
Carson River, West Fork (1)	Mojave River (2)

Four stations were added to the monitoring program during 1958 in Region 6 to monitor quality changes in important interstate waters. These stations were established on the East and West Forks of the Carson River and on the East and West Walker Rivers.

In April 1958, two stations were established in Region 6 to monitor the radioactivity of the Sierra snowpack. These stations were located in the upper watersheds of the Owens River and Lake Tahoe. The samples were collected by agencies and individuals cooperating with the California Cooperative Snow Survey of the Department of Water Resources and were analyzed by the Department of Public Health.

Waters of very high quality are characteristic of the northern watershed areas of the Lahontan Region. Above normal precipitation fell throughout the region during 1958, but with the exception of the Mojave River there was no indication of a change in the quality of surface water. Historically, conductivity values have been found to range between 50 and 150 micromhos in the northern areas. The Mojave River values usually range between 200 and 400 micromhos, but during 1958, unusually high runoff resulted in a better quality of water throughout the year.

The graphical representation of the monthly variation in total dissolved solids for the seven stations in this region with a record of water quality of five years or longer are presented for the period 1954-1958 on Plates B-55 through B-58 in Appendix B.

Radioactivity levels in surface waters of the Lahontan Region were reported to be no higher than 10 μμc/l. There were no significant deviations noted between the May and September radiological samples taken from sampling points in this region.

No significant changes in mineral concentrations in Susan River at Susanville (Station 17b) were noted during 1958 as compared to previous years of record. Water at this point was calcium bicarbonate in character, met all mineral requirements for drinking water, and was class 1 for irrigation use. Hardness ranged from 24 to 78 ppm and conductivity between 56.6 and 168 micromhos.

Samples of water were collected at three locations on Lake Tahoe during 1958: at Tahoe Vista (Station 37), at Tahoe City (Station 38), and at Bijou (Station 39). Water taken from the lake during 1958 was calcium-sodium bicarbonate in character and, as in past years, was class 1 for irrigation uses and suitable for domestic and most industrial uses. There have been only minor variations in the concentration of constituents in this water since the start of the monitoring program in April 1951. In 1958 conductivity ranged from 87.1 to 105 micromhos, indicating low concentrations of constituents.

Lake Tahoe waters are used extensively for recreation, the area along the shore on the north, west, and south sides being used for swimming, and the remaining area used for boating and fishing. This extensive recreational use has had no appreciable effect on the mineral quality of the water. A radiological sample of the Lake Tahoe watershed snowpack was collected at the Upper Truckee River Snow Survey Course near Meyers in April 1958. An analysis of this sample showed a gross activity of 353 μμc/l.

As in the case of other snowpack samples, this activity was not evident in the May and September 1958 radiological samples of water collected at any of the three Lake Tahoe stations or at the two Truckee River stations, discussed in the next paragraph.

Truckee River, the waters of which are sampled near Truckee (Station 52) and near Farad (Station 53), originates at the outlet of Lake Tahoe at Tahoe City and flows into Nevada just downstream from Station 53. Although the water qualities of the Truckee River and Lake Tahoe are similar, there is a slight variation in the concentration of constituents. While the conductivity of Lake Tahoe water ranged between 87.1 and 105 micromhos during 1958, the conductivity of Truckee River ranged between 47.8 and 125 micromhos at Station 52 and between 48.2 and 97.6 micromhos at Station 53. The variation in conductivity between Lake Tahoe and the Truckee River is attributed to the effect of tributary streams.

In order to more completely monitor the quality of California's water resources in the Lahontan Region, the following four stations were added to the surface water monitoring program in August 1958: Carson River, West Fork at Woodfords (Station 115a); Carson River, East Fork near Markleeville (Station 115); West Walker River near Coleville (Station 116); East Walker River near Bridgeport (Station 116a). In 1958 these waters were calcium bicarbonate in character, class 1 for irrigation uses, soft to slightly hard, and met drinking water mineral content standards. Conductivity in these waters ranged from a minimum of 68.2 micromhos at Station 115a to a maximum of 185 at Station 116.

The Mojave River is sampled near Victorville (Station 67) and at The Forks (Station 67a). As in the previous year, the preponderance of flow in the Mojave River at The Forks came from Deep Creek.

Comparison of analyses of samples from the two Mojave River stations indicated that the water at The Forks continued to be of better quality than the water at Victorville. The water at both stations was bicarbonate in type, with calcium and sodium the predominant cations. The water near Victorville (Station 67) varied from soft to moderately hard, ranging from 58 to 140 ppm total hardness. The water at The Forks (Station 67a) was soft, except for one analysis in October which showed a total hardness of 108 ppm placing the sample in the moderately hard classification. The conductivity of Mojave River water ranged between 144 and 470 micromhos at Station 67 and between 104 and 356 micromhos at Station 67a. All the water sampled in the Mojave River during 1958 met drinking water standards for mineral content and was class 1 for irrigation uses. Analyses obtained since the initiation of the stream sampling program in 1951 show that the quality of the water has changed very little during the period of record.

Radioactivity samples of the snowpack on the Owens River watershed were collected on the Upper Minarettes Snow Survey Course No. 2 in May and June of 1958. The gross activity of the May sample was found to be 425 μμc/l and 595 μμc/l in the June sample. Surface waters from this watershed are sampled for mineral and bacteriological analyses at Station 70 on the Los Angeles Aqueduct at Upper San Fernando Reservoir near San Fernando in Region 4. Radiological samples were not collected at this station during 1958, and no comparison with samples obtained at the snow course can be made.

Colorado River Basin (No. 7)

Seven sources of water in the Colorado River Basin were sampled at the following 14 stations (Plate 1) during 1958:

- Alamo River (2)
- New River (2)
- Colorado River (5)
- Lake Havasu (1)
- All American Canal (1)
- Whitewater River (2)
- Salton Sea (1)

The Colorado River Basin Region of California is a typical desert area in Southern California. It consists of numerous contiguous closed watersheds, each having some individual water quality characteristics. The quality of surface waters varies widely due to high content of mineral solubles in the soils, high evaporation rates, and sparse precipitation. Occasional heavy rains often result in flash floods. These floods generally have high instantaneous discharge rates of short duration. Rain runoff, except for high turbidity, is generally of good quality until it reaches a playa or sink where by solution or evaporation the mineral content may become intolerable for practically all uses. Except for the Colorado River, natural surface streams in the basin are dry throughout most of the year.

All stations in this region were placed on a bimonthly sampling schedule effective January 1, 1958, with the exception of the Colorado River stations, which are sampled semiannually.

Graphs presenting the monthly variation in total dissolved solids for the period 1954-1958 are presented in Appendix B on Plates B-59 through B-61 for the six stations in this region which have a period of record of five years or longer.

The Alamo and New Rivers, which enter the United States from Mexico and flow into the Salton Sea, continued to carry irrigation return water, sewage wastes, and water spilled from the All American Canal and distribution canals of the Imperial Irrigation District. The New River continued to present a serious water quality problem because of industrial waste and raw sewage discharges from the City of Mexicali in Mexico. Bacterial counts remained high. Raw sewage discharges within the United States into the Alamo and New Rivers also continued to impair these waters. Brawley and Calexico discharged raw sewage to New River, and Calipatria discharged raw sewage to Alamo River. El Centro discharged raw sewage to New River until September 1958, when its sewage treatment plant was placed in operation.

The Alamo River was sampled at International Boundary (Station 59), and near Calipatria (Station 60). Alamo River water continued to vary in character from predominantly sodium chloride to sodium chloride-sulfate. In 1958 the quality of this surface water was not acceptable for domestic use and varied from class 2 to class 3 for irrigation uses. The electrical conductivity of water samples collected at Station 59 ranged from 1,326 to 6,565 micromhos, and at Station 60 from 3,155 to 3,846 micromhos. These values indicated an improvement in quality over that of 1957. Boron ranged from 0.20 to 2.32 ppm at Station 59, and from 0.44 to 1.64 ppm at Station 60. The waters at both stations were extremely hard, reaching 1,457 ppm total hardness at Station 59.

Water samples were collected from the New River at International Boundary (Station 57) and near Westmorland (Station 58). A comparison of the 1958 records with records of previous years revealed no significant changes in mineral quality at either point. The water at both stations remained sodium chloride in character, was not acceptable for domestic use, and was class 3 for irrigation purposes. An exception to this condition occurred during periods when All American Canal spilled. This spill temporarily improved the quality to class 2. The electrical conductivity of water samples taken during 1958 at Station 57 ranged from 4,424 to 6,470 micromhos; and, at Station 58, from 3,906 to 4,602 micromhos. Boron content of samples from Station 57 ranged from 0.82 to 1.80 ppm, while that of Station 58 varied from 0.82 to 1.00 ppm.

There are six water quality sampling stations located on the Colorado River, five of which were sampled only in May and September 1958. The station, Lake Havasu at the Colorado River Aqueduct intake (Station 56d), was sampled monthly by the Metropolitan Water District of Southern California. The five Colorado River stations which are sampled semiannually are as follows: near Topock, Arizona (Station 54); at Parker Dam (Station 55); near Blythe (Station 56c); at Yuma, Arizona (Station 56); and below Morelos Dam at the United States-Mexico Border (Station 56b).

Colorado River water was calcium-sodium sulfate in character. High flows at the beginning of 1958 accounted for better quality water along all reaches of the river. The water varied from class 1 to class 2 for irrigation use. The sulfate content usually exceeded the recommended limit for drinking water.

Analyses of water samples collected at the six Colorado River sampling stations in September 1957 and 1958, are presented in the following tabulation.

Quality of Colorado River Water
September 1957 and September 1958

Station	Location	Total dissolved solids, in ppm		Chloride ppm		Sulfate ppm		Total hardness ppm	
		1957	1958	1957	1958	1957	1958	1957	1958
54	Topock	802	590	102	65	317	256	375	305
56d	Lake Havasu	731	597	101	69	320	262	350	298
55	Parker Dam	816	606	104	69	320	247	375	303
56c	Blythe	809	625	108	71	323	263	373	318
56	Yuma	1,023	740	159	106	365	291	417	340
56b	Morelos Dam	1,029	731	149	106	383	299	461	333

The data in the foregoing tabulation reveal a significant increase in concentration of the mineral constituents in Colorado River water as it flows toward Mexico. The September 1958 total dissolved solids content averaged approximately 75 percent of that of September 1957, reflecting the effect of above normal runoff during 1958.

The All American Canal conveys water from the Colorado River at Imperial Dam to the Imperial and Coachella Valleys for irrigation use. Analyses of samples collected from the canal near Pilot Knob (Station 56a) indicate that the water at this point was usually poorer in mineral quality than the water near Blythe, but better than the mineral quality of Colorado River water at Yuma. High flows in the Colorado River accounted for the better quality water in the canal during 1958, but canal water remained class 2 for irrigation use because of its high electrical conductivity which was reported as 1,078 micromhos in May and 1,068 micromhos in September. The sulfate content usually exceeded the recommended maximum for drinking water.

Whitewater River was sampled during 1958 at Whitewater (Station 68), and at Mecca (Station 68b). Surface flow existed through most of the summer months at Station 68. When surface flow diminishes below a certain adjudicated amount, water is pumped from wells and discharged into the river channel upstream from Station 68 to supplement the natural flow. The entire flow of the river is then diverted and conveyed south to the vicinity of Palm Springs for use.

During 1958, surface water at Station 68 remained calcium bicarbonate in character. It was moderately to very hard, class 1 irrigation water and met drinking water standards for mineral content. Conductivity ranged between 354 and 640 micromhos. Comparison of 1958 analyses with those of prior years showed no significant change in mineral quality.

The station at Mecca, Station 68b, is located on the Whitewater River near its outlet to the Salton Sea. This station was added to the monitoring program in July 1957. Except during infrequent periods of heavy precipitation, surface flow did not exist upstream from the vicinity of Indio, and flow below this area consisted chiefly of irrigation return water and drainage wastes. A portion of the treated sewage from the City of Indio was discharged to the Whitewater River approximately six miles above this station. During 1958 the water at Station 68b ranged from class 2 to class 3 for irrigation use, and did not meet drinking water standards for mineral content. The water was sodium sulfate-chloride in character and extremely hard. The total dissolved solids content exceeded 2,000 ppm, while sulfate exceeded 800 ppm. Boron ranged from 0.64 to 1.07 ppm.

The Salton Sea is situated between Coachella and Imperial Valleys. It receives the surface runoff, canal spillage, waste, and drainage waters of these valleys. During 1958, water samples were collected at the Salton Sea State Park (Station 68a) and were found to contain about 34,300 ppm total dissolved solids. The water was sodium chloride in character and similar to ocean water, except that the calcium and sulfate content was greater and chloride content less than that of ocean water. No significant change in the mineral quality of the Salton Sea was discernible during 1958 as compared to 1957.

Santa Ana Region (No. 8)

Samples of water were collected at nine stations (Plate 1) in the Santa Ana Region during 1958 from the following lake and three streams:

Santa Ana River (5)	Chino Creek (1)
Warm Creek (2)	Lake Elsinore (1)

Runoff in the Santa Ana Region during 1958 was above normal, with most of the runoff occurring early in the year. In the later months, a condition of drought prevailed. Comparison of 1957 with 1958 analyses indicated a slight improvement in water quality during 1958 and was improved noticeably during periods of high flow.

The monthly variation in total dissolved solids for the period 1954-1958 are presented graphically in Appendix B on Plates B-62 through B-64 for the seven stations in this region with a period of record of five years or longer.

Santa Ana River was sampled at five stations in 1958: near Mentone (Station 51b), at Riverside (Station 51d), near Arlington (Station 51), at Norco (Station 51e) and near Prado Dam (Station 51a).

In February, Station 51 was substituted for Station 51d. This return to the older established station was made because Colorado River water discharges from the blowoff at Arlington have been discontinued and a long established United States Geological Survey stream gaging station is located at this site.

During 1958, there were no discharges of Colorado River water to the Santa Ana River or its tributaries in the monitored reach of the river. However, in prior years since October 1956 deliveries of Colorado River water were made to the Santa Ana River channel six miles downstream from Station 51a, near Prado Dam, or to Santiago Reservoir.

Water in the Santa Ana River near Mentone (Station 51b) was class 1 for irrigation uses, and met drinking water standards for mineral content during 1958. The water was slightly hard, generally calcium bicarbonate, with magnesium and sodium as secondary cations. The quality of the water was excellent, and showed little effect from recreational developments in the headwater drainage area above this station. Conductivity at this station ranged from 150 to 228 micromhos, representing no significant change from previous years of record.

The water near Arlington (Station 51) was calcium-sodium bicarbonate-chloride in character and met drinking water standards for mineral constituents. Conductivity, which ranged from 463 to 1,021 micromhos indicated variable class 1 to class 2 water for irrigation use. The water was very hard, ranging from 178 to 376 ppm total hardness. The Riverside sewage treatment plant, located one-half mile upstream from this station, discharged treated sewage effluent directly to the river for short periods at infrequent intervals. At other times the effluent was diverted to a ditch which conveyed it to a point three miles downstream from this station, where it was used for irrigation purposes.

Santa Ana River at Norco (Station 51e) showed improvement of water quality in 1958 over that of the previous three years. This improvement was due to above normal runoff from the watershed during the early months of the year. The water was class 1 for irrigation purposes except for temporary periods of class 2 when conductivities ranged from 873 to 1,134 micromhos. The water samples collected at this station in 1958 met drinking water standards for mineral constituents.

A slight increase in mineral concentration was found in Santa Ana River water near Prado Dam (Station 51a) during 1958. The character of the water was calcium-sodium bicarbonate to bicarbonate-chloride. The water was usually very hard and was class 1 for irrigation uses, except at times when electrical conductivity (378 to 1,140 micromhos) indicated class 2. The mineral content of this water met drinking water standards. Data during 1958 indicate that water quality near Prado Dam (Station 51a) was slightly better than at Norco (Station 51e) at times of high flow.

Warm Creek, tributary to Santa Ana River approximately 15 miles above Arlington, was sampled at San Bernardino (Station 50c), and at Colton (Station 50b). In dry periods, Warm Creek flows reaching Santa Ana River are chiefly effluent from the San Bernardino sewage treatment plant. There are also some irrigation return water flows above this station.

Warm Creek at San Bernardino (Station 50c), which is upstream from the San Bernardino sewage treatment plant, was sampled to monitor the quality of the natural flow of the creek. Virtually all the natural flow was diverted below the sampling point and above the sewage plant discharge into Meeks and Daley Canal for irrigation use. While the flow at Station 50c was below normal in 1958 for the year as a hole, relatively high flows occurred in the months of February, March, and May. The quality of natural flow has been much the same during the past eight years. The water generally has been calcium bicarbonate in character and varied from moderately hard to very hard. During 1958, Warm Creek continued to be class 1 irrigation water and met drinking water standards for mineral content. Conductivity ranged from a minimum of 377 micromhos in May to a maximum of 766 micromhos in March.

Samples of water were collected at Colton (Station 50b) to monitor the effect of San Bernardino sewage treatment plant effluent on surface waters in Warm Creek and Santa Ana River. The sewage effluent was formerly diverted into the Riverside Canal for irrigation use. However, in 1957 and 1958, it was allowed to flow to the Santa Ana River. There was no significant change in mineral quality at this station in 1958 from that of 1957. The character of the water was generally sodium-calcium bicarbonate-chloride, was class 1 irrigation water and met drinking water standards for mineral constituents. The water was moderately hard to very hard. In 1958, boron and conductivity ranged from 0.20 tp 0.54 ppm and 612 to 921 micromhos, respectively. There were no known waste discharges into Warm Creek other than the effluent from the San Bernardino sewage treatment plant.

Chino Creek near Chino (Station 86) was sampled to monitor the quality of stream flow which occurs intermittently, combined with the effluent wastes of Chino sewage treatment plant. The effluent is sometimes diverted for irrigation use above this station. After being used for irrigation, excess water returns to the creek channel just above the station. Analyses of water samples taken in 1958 indicate that total dissolved solids content (150 to 945 ppm) in Chino Creek increased slightly over that of 1957. The water remained calcium-sodium bicarbonate in character and was usually very hard. Chino Creek surface flow was generally class 1 for irrigation uses but electrical conductivity (243 to 1,366 micromhos) indicated class 2 at times.

Lake Elsinore is used for water sports when it contains sufficient depths for this purpose. When evaporation exceeds inflow it causes the lake to recede and high saline concentrations result in unusuable water for practically all purposes, offensive odors from organic decomposition result, and the lake bottom becomes a semisolid, black, slimy mud. The lake was dry during the first two months of 1958, but above normal rainfall in February, March, and April provided about six feet of water in the lake. Evaporation again reduced the depth of water in the lake to about two feet by the end of 1958. Analyses of samples taken near Elsinore (Station 89) early in March showed a total dissolved solids content of 24,500 ppm. Analysis of a sample of water taken in May showed a total dissolved solids content of 2,150 ppm. The lower levels after May prevented access to lake water and no further samples were collected during 1958.

San Diego Region (No. 9)

Samples of water were collected in the San Diego Region at eight stations (Plate 1) located on the following streams:

Santa Margarita River (1)	Forester Creek (1)
San Luis Rey River (1)	San Diego River (1)
Escondido Creek (1)	Spring Valley Creek (1)
San Dieguito River (1)	Tia Juana River (1)

Station 65b, Spring Valley Creek near La Pressa, was added to the monitoring program in March 1958 at the request of the San Diego Regional Water Pollution Control Board (No. 9) to monitor the effects of discharges from the new Spring Valley sewage treatment plant.

All stations in the San Diego Region were placed on a bimonthly sampling schedule at the beginning of 1958.

Above normal precipitation early in 1958 brought temporary relief in this region from the drought condition which prevailed in 1957. Stream flows were sustained for longer periods than usual. In some instances, stream channels which are usually dry in summer months had surface flows continuously during 1958.

Reservoir storage was increased as a result of the greater than normal rainfall and runoff. However, a large part of the water stored in surface reservoirs in this region is Colorado River water supplied by The Metropolitan Water District of Southern California.

Presented graphically on Plates B-65 and B-66 of Appendix B are the monthly variations in total dissolved solids for the period 1954-1958 for the four stations in this region which have a period of record of at least five years.

A slight improvement was noted in the Santa Margarita River near Fallbrook (Station 51c) during 1958 as compared to 1957 due to above normal runoff early in 1958. The river flow was continuous through 1958, but summer and autumn discharges were very small. The water was sodium-calcium bicarbonate-chloride in character and very hard. Conductivity at this station ranged from 827 to 1,273 micromhos.

Precipitation during the 1957-1958 water year was sufficient to maintain flow in the San Luis Rey River near Pala (Station 62) throughout 1958, but during periods of low flow, all of the water was diverted for use in the Pala Indian Reservation. Samples of water were collected at the diversion dam at Station 62 and analyses showed this water to be calcium sulfate-bicarbonate in character and very hard. It was class 1 irrigation water and met drinking water standards for mineral content. Electrical conductivity ranged from 531 to 818 micromhos during 1958, indicating a slight increase in the concentration of mineral constituents over past years of record.

During 1958 the major portion of the water in Escondido Creek at the sampling point near Harmony Grove (Station 63) was effluent water from the City of Escondido sewage treatment plant. The former discharges of cooling water and cutting wastes from quarry operations, noted in the 1957 Quality of Surface Water bulletin, have ceased as the result of action by the San Diego Regional Water Pollution Control Board (No. 9). The small earth dam, which was 200 yards downstream from the sampling point near Harmony Grove, was washed out by high flows in January 1958, and was not reconstructed. Ponding did not occur at this station as the pond area was covered with silt and quarry waste. Sewage effluent discharges were sufficient to maintain surface flow at the station throughout the year. Although this stream did not run dry in the years 1957 and 1958, it was dry in the summer months of the preceeding six years. Water at this station was sodium chloride-sulfate in character, very hard, class 2 water for irrigation, and exceeded drinking water standards for mineral constituents. Conductivity ranged from 338 to 2,070 micromhos and boron from 0.20 to 0.68 ppm. These values represent no significant change in quality from the previous seven years of record.

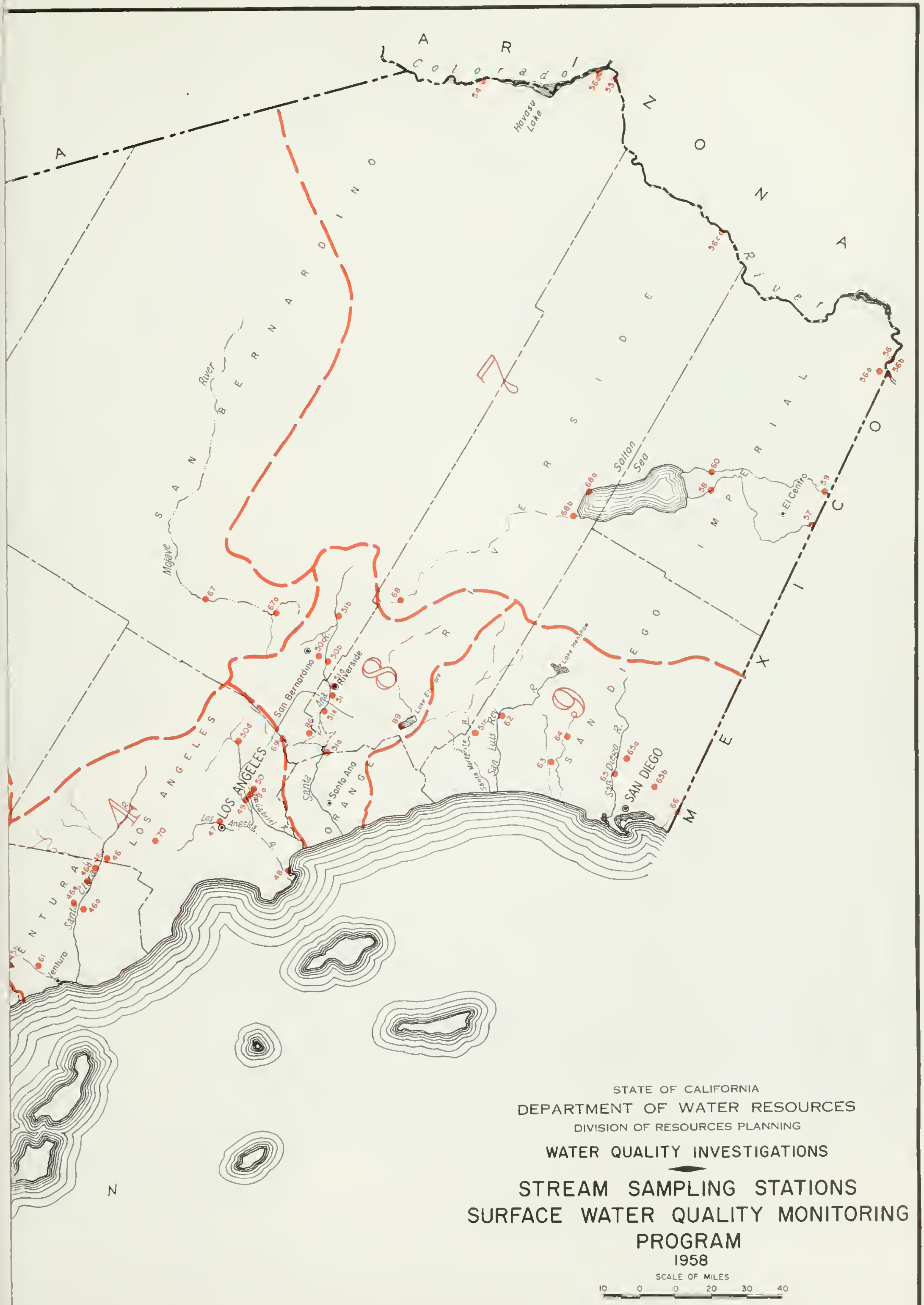
San Dieguito River was dry throughout 1958 with the exception of May, when one sample was taken below San Pasqual Valley (Station 64). The water collected was rain runoff and was quite high in dissolved minerals. It was sodium-magnesium chloride-bicarbonate in character and very hard. This sample was class 2 water for irrigation uses but met drinking water standards for mineral content. The conductivity of this sample was 1,235 micromhos.

Forester Creek was sampled at Mission Gorge Road (Station 65a). The City of El Cajon's secondary treatment plant discharged effluent water to the creek channel, which conveyed the water to San Diego River. Analyses of samples collected in 1958 indicated that the water was sodium chloride in character, very hard, and did not meet drinking water standards for mineral content. The water was in class 2 or class 3 for irrigation uses, depending on the chloride content which ranged from 251 to 450 ppm in 1958. Boron ranged from 0.40 to 0.76 ppm and conductivity from 1,703 to 2,381 micromhos. These values did not represent an appreciable change from previous years of record.

Flow in the San Diego River was moderate in early 1958 but flow ceased in July. Samples were collected throughout the year from the pond below Old Mission Dam (Station 65). The more or less continuous waste discharges upstream from the dam probably had a degrading effect on the quality of water during low flows at this station; however, during high flows the water was class 1 for irrigation purposes and met the mineral content for drinking water standards. During periods of low flows this water was sodium chloride in character and class 2 or 3 for irrigation use because of boron and conductivity which ranged between 0.10 to 0.65 ppm and 360 to 2,631 micromhos, respectively. Mineral concentrations exceeded drinking water standards. The 1958 conductivity values were significantly lower than the 1957 values which ranged from 2,137 to 4,098 micromhos.

Spring Valley Creek near La Pressa (Station 65b), was added to the water quality program in March 1958. The station was established at the request of San Diego Regional Water Pollution Control Board (No. 9) to monitor the effects of discharges of the new suburban Spring Valley sewage treatment plant, which was placed in operation in March 1958. The water at this station consisted of the effluent from the plant combined with drainage water from the La Pressa and Lemon Grove area. An analysis of a sample obtained on March 3, 1958, indicated a poor quality of water just prior to the initiation of the discharge from the new plant. It was sodium chloride in character, with a total dissolved solids content of 3,125 ppm and a total hardness of 981 ppm. Analyses of samples collected after the sewage plant was placed in operation show a slight increase in mineral constituents. The water of these later samples was class 3 for irrigation use because of conductivity which ranged between 4,695 and 5,058 micromhos and chlorides which ranged between 1,115 and 1,260 ppm. Boron ranged from 0.52 to 0.59 ppm, and nitrate ranged from 60 to 65 ppm.

One sample was obtained on April 28, 1958, from Tia Juana River at International Boundary (Station 66). This sample was of a short-lived flow of 100 second-feet. During the remainder of the year the river was dry at the station. The water of this single sample was sodium chloride in character, class 1 for irrigation uses, moderately hard, and met drinking water standards for mineral constituents. Conductivity was reported as 519 micromhos for the one sample.



STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

WATER QUALITY INVESTIGATIONS

STREAM SAMPLING STATIONS SURFACE WATER QUALITY MONITORING PROGRAM

1958

SCALE OF MILES

10 0 10 20 30 40

PLATE I


STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING
WATER QUALITY INVESTIGATIONS
STREAM SAMPLING STATIONS
SURFACE WATER QUALITY MONITORING PROGRAM
1958
SCALE OF MILES
OREGON
NEVADA
ARIZONA
MEXICO
PACIFIC OCEAN
SACRAMENTO
SAN FRANCISCO
LOS ANGELES
SAN DIEGO

Sta. No.	Station Name
	North Coastal Region No. 1
1	Klamath River near Copco
1a	Shasta River near Yreka
1b	Scott River near Fort Jones
1c	Klamath River above Hamburg Reservoir Site
2	Klamath River at Somesbar
2a	Salmon River at Somesbar
2b	Klamath River near Seiad Valley
3	Klamath River near Klamath
3a	Smith River near Crescent City
3b	Redwood Creek at Orick
4	Trinity River near Hoopa
4a	Trinity River at Lewiston
4b	Trinity River near Burnt Ranch
5	Eel River near McCann
5a	Van Duzen River near Bridgeville
5b	Outlet Creek near Longvale
5c	Eel River, Middle Fork at Dos Rios
5d	Eel River near Dos Rios
6	Eel River at Scotia
6a	Mad River near Arcata
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 Powerhouse
10b	Russian River near Ukiah
	San Francisco Bay Region No. 2
15e	Sacramento River near Mallard Slough
28a	Carquinez Straits at Martinez
71	Arroyo Del Valle at Vets. Hosp.
72	Napa River near Saint 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
43b	Nacimiento River near San Miguel
43c	Salinas River near Bradley
43d	San Antonio River at Pleyto
44a	Cuyama River near Garey
44b	Santa Ynez River at Cachuma Reservoir
45	Santa Ynez River below Los Laureles Canyon
45a	Santa Ynez River at Solvang
75	San Lorenzo River at Big Trees
76	Soquel Creek at Soquel
77	Pajaro River near Chittenden
77a	San Benito River near Bear Valley Fire House
83	Carmel River near Carmel
96	Uvas Creek near Morgan Hill
	Los Angeles Region No. 4
45b	Matilija Creek above Matilija Dam
46	Santa Clara River at L.A.-Ventura County Line
46a	Santa Clara River near Santa Paula
46c	Piru Creek near Piru
46d	Sespe Creek near Fillmore
46e	Santa Paula Creek near Santa Paula
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 River at Whittier Narrows
50d	San Gabriel River at Azusa Powerhouse
61	Ventura River near Ventura
69	Colorado River Aqueduct at La Verne
70	Los Angeles Aqueduct near San Fernando
	Central Valley Region No. 5
11	Sacramento River at Delta
11a	Cottonwood Creek below North Fork Cottonwood Creek
11b	Cottonwood Creke, South Fork above Cottonwood Creek
12	Sacramento River at Keswick
12a	Sacramento River near Redding
12b	Cottonwood Creek near Cottonwood
12c	Sacramento River at Bend (Red Bluff)
12d	Clear Creek near Igo
13	Sacramento River near Hamilton City
13a	Stony Creek near Hamilton City
13b	Sacramento-River at Colusa
13c	Stony Creek at Black Butte Dam Site
13d	Thomes Creek at Paskenta
13e	Elder Creek near Paskenta

Sta. No.	Station Name
14	Sacramento River at Knights Landing
14a	Sacramento Slough near Knights Landing
15	Sacramento River at Sacramento
15a	Sacramento River at Toland Landing
16	Sacramento River at Rio Vista
16a	Calaveras River at Jenny Lind
16b	Calaveras River near Stockton
17	Pit River near Montgomery Creek
17a	Pit River near Canby
17c	Burney Creek near Burney
17d	Indian Creek near Crescent Mills
17e	Pit River near Bieber
18	McCloud River above Shasta Lake
18a	Pit River, South Fork near Likely
19	Feather River near Oroville
20	Feather River at Nicolaus
20a	Feather River below Shanghai Bend
20b	Bear River near Mouth
21	Yuba River at Marysville
21a	Yuba River near Smartville
22	American River at Sacramento
22a	American River at Nimbus Dam
22b	American River, Middle Fork near Auburn
22c	American River, South Fork near Lotus
22d	American River at Fair Oaks
23	Mokelumne River at Woodbridge
23a	Mokelumne River near Lancha Plana
23b	Mokelumne River below Cosumnes River
23c	Mokelumne River below Georgiana Slough
24	San Joaquin River at Friant
24a	San Joaquin River at Biola
24b	San Joaquin River at Whitehouse
25	San Joaquin River near Mendota
25a	San Joaquin River near Dos Palos
25b	San Joaquin River at Hills Ferry Bridge
25c	San Joaquin River at Fremont Ford Bridge
26	San Joaquin River near Grayson
26a	San Joaquin River at Maze Road Bridge
26b	San Joaquin River at Crows Landing Bridge
27	San Joaquin River near Vernalis
27a	San Joaquin River at Patterson Water Company
27b	San Joaquin River at West Stanislaus Irrigation District
28	San Joaquin River at Antioch
28b	San Joaquin River at Jersey Point
29	Stanislaus River near Mouth
29a	Stanislaus River below Tulloch Dam
30	Tuolumne River at Hickman-Waterford Bridge
30a	San Joaquin River above Merced River
31	Tuolumne River at Tuolumne City
31a	Tuolumne River below Don Pedro Dam
32	Merced River near Stevinson
32a	Merced River below Exchequer Dam
33b	Kings River below Pine Flat Dam
33c	Kings River below North Fork
34	Kings River below Peoples Weir
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 Oaks
41	Clear Lake at Lakeport
42	Cache Creek near Lower Lake
78	Bear River near Wheatland
79	Cache Creek, North Fork near Lower Lake
80	Cache Creek near Capay
81	Putah Creek near Winters
84	Butte Creek near Chico
85	Big Chico Creek near Chico
87	Colusa Trough near Colusa
87a	Sacramento River at Butte City
88	Mill Creek near Los Molinos
88a	Cow Creek near Millville
88b	Battle Creek near Cottonwood
88c	Antelope Creek near Mouth
88e	Antelope Creek near Red Bluff
88g	Paynes Creek near Red Bluff
90	South Honcut Creek near Bangor
91	Tule River near Porterville
92	Delta-Mendota Canal near Mendota
92a	Salt Slough at San Luis Ranch
93	Delta-Mendota Canal near Tracy
94	Cosumnes River at Michigan Bar
94a	Cosumnes River at McConnell
95	Deer Creek near Vina

Sta. No.	Station Name
97	Sacramento River at Snodgrass 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
101a	San Joaquin River at Brandt Bridge
102	San Joaquin River at Mossdale Bridge
103	Old River near Tracy
103a	Grant Line Canal at Tracy Road Bridge
104	Old River at Clifton Court Ferry
106	Italian Slough near Mouth
107	Indian Slough near Brentwood
108	Old River at Orwood Bridge
108a	Old River at Holland Tract
108b	Dutch Slough at Farrar Park Bridge
109	Rock Slough near Knightsen
109a	Contra Costa Canal at First Pump Lift
110	Lindsey Slough near Rio Vista
110a	Cache Slough below Lindsey Slough
111	Bear Creek near Stevinson
111a	Bear Creek at Merced
111b	San Joaquin River above Salt Slough
112	Old River at Mandeville Island
112a	False River at Webb Pump
112b	San Joaquin River at San Andreas Landing
113	Fresno River near Daulton
114	Chowchilla River at Buchanan Dam Site
114a	San Joaquin River at Head of Chamberlain Slough
	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
52	Truckee River near Truckee
53	Truckee River near Farad
67	Mojave River near Victorville
67a	Mojave River at the Forks
115	Carson River East Fork near Markleeville
115a	Carson River West Fork at Woodfords
116	Walker River West near Coleville
116a	Walker River East near Bridgeport
	Colorado River Basin Region No. 7
54	Colorado River near Topock, Arizona
55	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 Colorado River Aqueduct 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
68a	Salton Sea at Salton Sea State Park
68b	Whitewater River at Mecca
	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
51e	Santa Ana River at Norco
86	Chino Creek near Chino
89	Lake Elsinore near Elsinore
	San Diego Region No. 9
51c	Santa Margarita River near Fallbrook
62	San Luis Rey River near Pala
63	Escondido Creek near Harmony Grove
64	San Dieguito River below San Pasqual Valley
65	San Diego River at Old Mission Dam
65a	Forester Creek at Mission Gorge Road
65b	Spring Valley Creek near La Pressa
66	Tia Juana River at International Boundary

A P P E N D I X   A

PROCEDURES AND CRITERIA

TABLE OF CONTENTS

Appendix A

TABLES

Field Methods and Procedures

Water samples are collected in May and September each year for standard mineral, and heavy metals analyses and radiological assay. Water samples are collected the other ten months for partial mineral analysis. Duplicate samples are collected monthly for bacterial examination and are kept in portable ice boxes until mailed to the laboratory in special containers. Every effort is made to get the samples to the laboratory as quickly as possible.

At the time the samples are collected for laboratory examination, field determinations are made for dissolved oxygen (modified Winkler method), water temperature and pH. Visual inspection is made of the stream or lake and the physical conditions are noted.

Where possible, the sampling stations have been selected at bridges to permit the collection of the sample from the center of the stream. When bridges are not available, the sample is collected from the bank of the stream. Where water depth permits, the mineral and dissolved oxygen samples are collected with an integrating sampler which obtains a representative sample of the vertical cross section of the stream. Bacterial samples are collected by inverting a sterilized bottle and dipping at least four inches below the surface.

Where possible, the sampling stations have been selected so as to be at or near stream gaging stations so that gage heights can also be recorded at the time the water samples are collected. Instantaneous stream discharges at the time of sample collection are then obtained. In cases where instantaneous discharges are not available, mean daily discharges are used.

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	121
Department of Public Health, Bureau of Sanitary Engineering	23
State Water Pollution Control Board	3
Department of Fish and Game	1
United States Bureau of Reclamation	18
United States Corps of Engineers	4
United States Geological Survey	6
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, Department of Public Health	1
City of Long Beach, Department of Public Health	1
Total	183

Laboratory Methods and Procedures

Methods of mineral and bacterial analysis, 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.

(2) California State Department of Water Resources. "Tentative Methods of Water Analysis," 1957.

Table A-1 indicates the constituents analyzed in connection with this program:

TABLE A-1

Types of Analyses

Constituent	Standard mineral	Partial mineral	Bacterial	Radiological
Specific conductance ($ECx10^6$ at 25°C)	X	X		
pH[a]	X	X		
Total dissolved solids (TDS)	X			
Percent sodium (%Na)	X	X		
Hardness	X	X		
Turbidity	X	X		
Coliform			X	
Temperature[b]	X	X		
Dissolved oxygen (D.O.)[b]	X	X		
Calcium (Ca)	X	X		
Magnesium (Mg)	X	X		
Sodium (Na)	X	X		
Potassium (K)	X			
Carbonate (CO_3)	X	X		
Bicarbonate (HCO_3)	X	X		
Sulfate (SO_4)	X			
Chloride (Cl)	X	X		
Nitrate (NO_4)	X			
Fluoride (F)	X			
Boron (B)	X	X		
Silica (Si)	X			
Phosphate (PO_4)	X			
Zinc (Zn)[c]	X			
Iron (Fe)[c]	X			
Copper (Cu)[c]	X			
Aluminum (Al)[c]	X			
Manganese (Mn)[c]	X			
Arsenic (As)[c]	X			
Hexavalent chromium (Cr^{+6})[c]	X			
Dissolved alpha				X
Solid alpha				X
Dissolved beta				X
Solid beta				X

a. pH determined both in the field and in the laboratory.
b. Field determination.
c. These constituents are normally designated as heavy metals.

The methods and procedures for sample preparation and determination of radioactivity in surface waters are as follows:

I. Sample Preparation

A. 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.

B. 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 No. 79-OL) to eliminate any extraneous electrostatic charge.

C. 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 hotplate adjusted so that the sample is taken to dryness at a temperature well below boiling.

D. 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.

II. Determination of Radioactivity

A. 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.

B. 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 1000 counts.

C. 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. Uranium 238 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.

III. Calculations

A. Results are expressed as micromicrocuries per liter (μμc/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.

B. Sample counts are corrected for background and geometric efficiency.

C. Standard statistical procedures are utilized to compute the 0.9 error. The final result is expressed (symbolically) as x + y μμc/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% of the time.

Water Quality Criteria

Criteria used by the Department of Water Resources in the evaluation of the 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

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, 1946, re-issued in March 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 A-2.

TABLE A-2

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 (Cr^{+6})	0.05
Arsenic (As)	0.05
Nonmandatory 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

Interim standards for certain mineral constituents have recently been adopted by the California State Board of Public Health. Based on these standards, temporary permits may be issued for drinking water supplies failing to meet the United States Public Health Service Drinking Water Standards, provided the mineral constituents in the following table are not exceeded.

UPPER LIMITS OF TOTAL SOLIDS AND SELECTED MINERALS IN DRINKING WATER AS DELIVERED TO THE CONSUMER

	Permit	Temporary Permit
Total solids	500 (1000)*	1500 ppm
Sulfates (SO_4)	250 (500)*	600 ppm
Chlorides (Cl)	250 (500)*	600 ppm
Magnesium (Mg)	125 (125)	150 ppm

* Numbers in parentheses are maximum permissible, to be used only where no other more suitable waters are available in sufficient quantity for use in the system.

The California State Board of Health recently has defined the maximum safe amounts of fluoride ion in drinking water in relation to mean annual temperature.

Mean annual temperature in °F	Mean monthly maximum fluoride ion concentration in ppm
50	1.5
60	1.0
70 - above	0.7

The relationship of infant methemoglobinemia (a reduction of oxygen content in the blood, constituting a form of asphyxia) to nitrates in the water supply has led to limitation of nitrates in drinking water. The California State Department of Public Health has recommended a tentative limit of 10 ppm nitrogen (44 ppm nitrates) for domestic waters. Water containing higher concentrations of nitrates may be considered to be of questionable quality 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 water users are concerned is the factor of hardness. Hardness is due principally to calcium and magnesium salts and is generally evidenced by inability to develop suds when using soap. The United States Geological Survey has suggested the following four classes of degree of hardness:

TABLE A-3

Hardness Classification of Waters
U. S. Geological Survey

Range of hardness in parts per million	Relative classification
0 - 55	Soft
56 - 100	Slightly hard
101 - 200	Moderately hard
Greater than 200	Very hard

According to the International Commission on Radiological Protection[1], and tentatively concurred with by the National Committee on Radiation Protection[2], if the Radium - 226 and Radium - 228 activity in water is substantially less than 10 μμc/l, the maximum permissible concentration of otherwise unidentified radionuclides in water for individuals in the population at large may be considered to be 100 μμc/l.

For the purposes of the environmental survey of surface water made for this report, it has been assumed that the total dissolved and solid alpha activity is derived from Ra^{226} and Ra^{228}.

During the 1958 reporting year, the highest alpha activity observed was 2.47 μμc/l. It is believed that the maximum permissible concentration

1 "Report on Decisions of the 1959 Meeting of the International Commission on Radiological Protection (ICRP)." Radiology, Vol. 74, No. 1, January 1960, pp. 116-119.

2 Somatic Radiation Dose for the General Population, Ad Hoc Committee of the National Committee on Radiation Protection and Measurements. Science, Vol. 131, No. 3399, February 19, 1960, pp. 482-486.

of 100 μμc/l, as recommended by the I.C.R.P., is applicable to all stations sampled in the Surface Water Monitoring Program during 1958.

Criteria for Irrigation Water

The following criteria for mineral quality of irrigation water have been developed at the University of California at Davis and at the United States Department of Agriculture Regional Salinity Laboratory at Riverside. Because of diverse climatological conditions and variations in crops and soils in California, only general limits of quality for irrigation waters can be suggested. The department uses the three broad classifications of irrigation waters lised in Table A-4.

TABLE A-4

QUALITATIVE CLASSIFICATION OF IRRIGATION WATERS

Chemical properties	Class 1	Class 2	Class 3
	Excellent to good	Good to injurious	Injurious to unsatisfactory
	(Suitable for most plants under any conditions of soil and climate)	(Possibly harmful for some crops under certain soil conditions)	(Harmful to most crops and unsatisfactory for all but the most tolerant)
Total dissolved solids			
In ppm	Less than 700	700 - 2,000	More than 2,000
In conductance, $ECx10^6$	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 percent 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 Water

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 washdown and metallurgical processing.

Because of the large number of industrial uses of water and widely varied quality requirements, it is practicable to suggest 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 A-5. The values shown in this table are those suggested in the Progress Report of the Committee on Quality of Tolerance of Water for Industrial Uses in the Journal of the New England Water Works Association, Volume 54, 1940.

Criteria for Fish and Aquatic Life

Water of suitable quality and quantity is a fundamental requirement for the existence of an abundant supply of fish and aquatic life. It is very important that water quality conditions be such as to maintain an abundant supply of food required by fish and other desirable forms of aquatic life. Streams utilized for the propagation of fish and aquatic life should be free of toxic or harmful concentrations of mineral and organic substances and excessive turbidity. Extensive field and laboratory studies conducted by the United States Fish and Wildlife Service show that, among other things, the water in streams supporting a mixed fauna of fresh water fish such as bluegill, bass, crappie and catfish should have the following properties:

TABLE A-5

WATER QUALITY TOLERANCE FOR INDUSTRIAL USES[a]

Allowable limits in parts per million

Use	Turbidity	Color	Hardness as $CaCO_3$	Iron[c] as Fe	Manganese as Mn	Total solids	Alkalinity as $CaCO_3$	Odor, taste	Hydrogen sulfide	Miscellaneous Requirements: Health	Miscellaneous Requirements: 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		25-75	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		0.2	0.2			Low		Potable[b]	SiO_2 less than 10 ppm.
Laundering			50	0.2	0.2						
Plastics, clear,											
Uncolored	2	2		0.02	0.02	200					
Paper and pulp:											
Groundwood	50	20	180	1.0	0.5						No grit, corrosiveness.
Draft 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.

(a) Dissolved oxygen not less than 5 ppm (at least 6 ppm for Salmonoids),

(b) pH range between 6.5 and 8.5,

(c) Ionizable salts, as indicated by conductivity, between 150 and 500 micromhos at 25° Centigrade, and in general not exceeding 1,000 micromhos,

(d) Ammonia not exceeding 1.5 ppm.

Mineral salts of high toxicity to fish are those of silver, mercury, copper, zinc, lead, cadmium, nickel, trivalent and hexavalent chromium, and others. Some pairs of toxicants, such as copper and zinc (also copper and cadmium, nickel and zinc) are far more toxic when combined than when they occur individually. Other toxic substances, when combined, neutralize each other through antagonism or chemical reaction (e.g., free cyanide combines with toxic heavy metal cations, such as nickel and copper ions, to form relatively harmless metallocyanide complexes).

The increasing use of household and industrial detergents, as well as the expansion in the manufacture and use of agriculture insecticides, poses serious hazards to fish and aquatic life. Preliminary studies, for example, indicate that one of the most common household detergents is lethal to relatively hardy fish at very low concentrations. This detergent was lethal to fish in fresh water at concentrations below 0.1 ppm and below 0.005 ppm in salt water. The increase in toxicity in salt water can probably be attributed to the fact that marine fishes must ingest water to maintain their osmotic balance.

Development and use of water resources, including the construction of dams for storage of water, frequently affects water temperatures which in turn affect fish and other aquatic life. Optimum water temperatures for cold water fish, such as trout and salmon, normally lie between

32° and 65° Fahrenheit. The cold water species are generally intolerant of temperatures above 75° Fahrenheit and will seek the lower temperature where possible. Warm water fish such as minnows, carp, catfish, perch, sunfish, and bass normally live in water having temperatures ranging from near 32° and 86° Fahrenheit. Acclimation enables certain warm water species to live in water having temperatures as high as 90° Fahrenheit, although they will migrate, where possible, to waters below 86° Fahrenheit.

A P P E N D I X B

BASIC DATA

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A P P E N D I X B

BASIC DATA

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TABLE B-1
SAMPLING STATION DATA
NORTH COASTAL REGION (NO. 1)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Eel River near Dos Rios	5d	21N/13W-31	Left bank, at Longvale-Dos Rios Road bridge, 8.0 miles northeast of Longvale and 7.5 miles south of Dos Rios	DWR	B-43	
Eel River near McCann	5	2S/3E-3	Bridge 0.1 mile northwest of McCann	DWR	B-44	B-319
Eel River at Scotia	6	1N/1E-7	Left bank below U.S. Highway 101 bridge between Scotia and Rio Dell	DWR	B-45	B-319
Eel River, Middle Fork at Dos Rios	5c	21N/13W-6	Right bank, at Longvale-Dos Rios Road bridge, 0.5 mile south of Dos Rios	DWR	B-46	
Eel River, South Fork near Miranda	7	3S/4E-30	Right bank below gage, 6 miles south of Miranda at Sylvandale Camp Grounds on U.S. Highway 101 and 0.9 mile south of Rocky Glen Creek	DWR	B-47	B-319
Klamath River near Copco	1	48N/5W-36	Right bank at gaging station one mile south of Copco Post Office, 0.5 mile downstream from Copco No. 2 plant of the California-Oregon Power Company and 500 feet downstream from Fall Creek	F&G	B-48	B-319
Klamath River above Hamburg Reservoir Site	1c	46N/10W-14	At State Highway 96 bridge #2-117 26.3 miles west of highway 99 and 96 junction	DWR	B-49	
Klamath River near Klamath	3	13N/2E-17	Right bank at gage located 5.7 miles upstream from town of Klamath	DWR	B-50	B-319
Klamath River near Seiad Valley	2b	46N/12W-4	Right bank at foot of gage 0.4 mile upstream from Bittenbinder Creek, 1.4 miles downstream from Grinder Creek, and 2.2 miles west of Seiad Valley	DWR	B-51	

TABLE B-1
SAMPLING STATION DATA
NORTH COASTAL REGION (NO. 1)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Klamath River at Somesbar	2	11N/6E-4	Left bank 100 feet downstream from gage, 1 mile west of Somesbar Post Office and 300 feet downstream from Salmon River	DWR	B-52	B-319
Mad River near Arcata	6a	6N/1E-15	Right bank below gage on upstream side of U.S. Highway 299 bridge 3.1 miles northeast of Arcata	DWR	B-53	
Outlet Creek near Longvale	5b	21N/13W-31	Right bank 7.5 miles northeast of Longvale on Longvale-Dos Rios Road	DWR	B-54	
Redwood Creek at Orick	3b	10N/1E-4	Downstream side of left pier of U.S. Highway 101 bridge in Orick	DWR	B-55	
Russian River at Guerneville	10	8N/10W-32	Right bank below highway bridge in Guerneville, 6.5 miles upstream from Austin Creek	DWR	B-56	B-319
Russian River near Healdsburg	9	9N/9W-22	Left bank below gage, 2 miles east of Healdsburg and 3.5 miles upstream from Dry Creek	DWR	B-57	B-319
Russian River near Hopland	8a	14N/12W-36	Right bank below gage at abandoned bridge 0.6 mile off U.S. Highway 101 on Largo Road and 3.8 miles north of Hopland	DWR	B-58	B-319
Russian River near Ukiah	10b	15N/12W-28	Left bank upstream from Talmadge Road bridge about 1 mile southeast of Ukiah	DWR	B-59	B-319
Russian River, East Fork near Calpella	8	16N/12W-13	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	DWR	B-60	B-319

TABLE B-1
SAMPLING STATION DATA
NORTH COASTAL REGION (NO. 1)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Russian River, East Fork at Potter Valley Powerhouse	10a	17N/11W-6	Tailrace of PG&E Powerhouse, 3 miles northeast of town of Potter Valley	DWR	B-61	B-319
Salmon River at Somesbar	2a	11N/6E-2	Right bank below gage 0.5 mile east of Somesbar and 1.5 miles upstream from mouth	DWR	B-62	
Scott River near Fort Jones	1b	44N/10W-28	Right bank at gage 1.8 miles upstream from Snow Creek and 10.5 miles downstream from Fort Jones	DWR	B-63	
Shasta River near Yreka	1a	46N/7W-24	Right bank at gage 0.5 mile upstream from mouth and 7.0 miles north of Yreka	DWR	B-64	
Smith River near Crescent City	3a	16N/1E-10	From left bank below gage, 8 miles east of Crescent City and 0.5 mile downstream from South Fork	DWR	B-65	B-320
Trinity River near Burnt Ranch	4b	5N/7E-19	Left bank 500 feet upstream from Cedar Flat Creek and 1,200 feet upstream from U.S. Highway 299 bridge	DWR	B-66	
Trinity River near Hoopa	4	8N/5E-31	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	DWR	B-67	B-320
Trinity River at Lewiston	4a	33N/8W-19	From left bank below gage at highway bridge at Lewiston, 0.8 mile downstream from Deadwood Creek	DWR	B-68	B-320

TABLE B-1
SAMPLING STATION DATA
NORTH COASTAL REGION (NO. 1)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Van Duzen River near Bridgeville	5a	1N/3E-17	Right bank on downstream side of State Highway 36 bridge #4-98, 0.3 mile downstream from Pip Creek and 4 miles west of Bridgeville	DWR	B-69	

TABLE B-2
SAMPLING STATION DATA
SAN FRANCISCO BAY REGION (NO. 2)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Alameda Creek near Niles	73	4S/1W-15	Right bank at concrete control near gage located 0.2 mile downstream from railroad bridge and 1.2 miles northeast of Niles	DWR	B-71	B-321
Arroyo Del Valle at V.A. Hospital	71	4S/2E-4	Right bank at gage 5 miles south of Livermore on Arroyo Road	DWR	B-72	B-321
Carquinez Straits at Martinez	28a	2N/3W-13	East end of Carquinez Strait, south shore. 1.0 mile west of Southern Pacific Co. railroad bridge, at Municipal Ferry Slip	USBR	B-73	
Coyote Creek near Madrone	82	9S/3E-9	Right bank at gage 0.2 mile downstream from county road bridge and 2.8 miles northeast of Madrone	DWR	B-74	B-321
Los Gatos Creek at Los Gatos	74	8S/1W-29	From left bank at foot of gage about 0.75 mile upstream from Los Gatos and 0.25 mile downstream from Lexington Dam	DWR	B-75	B-321
Napa River near St. Helena	72	8N/5W-33	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	DWR	B-76	B-321
Sacramento River near Mallard Slough	15c	2N/1E-5	Left bank at Pacific Gas and Electric Co. dock 1 mile upstream from mouth of Mallard Slough	USBR	B-77	

TABLE B-3
SAMPLING STATION DATA
CENTRAL COASTAL REGION (NO. 3)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Carmel River near Carmel	83	16S/1E-17	Right bank about 30 feet below Rancho San Carlos bridge about 3 miles east of Carmel	DWR	B-79	B-323
Cuyama River near Garey	44a	10N/33W-25	Left bank, 6 miles downstream from Twitchell Dam	DWR	B-80	
Nacimiento River near San Miguel	43b	25S/11E-4	Right bank at gage at Bee Rock Road bridge in Camp Roberts, 4 miles upstream from mouth	DWR	B-81	B-323
Pajaro River near Chittenden	77	12S/3E-12	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	DWR	B-82	B-323
Salinas River near Bradley	43c	23S/10E-15	Left bank 6 miles northwest of Bradley and 7 miles downstream from San Antonio River	DWR	B-83	B-323
Salinas River at Paso Robles	43a	26S/12E-28	From left bank just upstream from gage on State Highway 41 bridge at Paso Robles, 3.5 miles upstream from Huerhuero Creek	DWR-LA	B-84	B-323
Salinas River near Spreckels	43	15S/3E-8	Right bank, upstream side of Salinas-Monterey Road bridge, near gage 0.5 mile upstream from Toro Creek, 2 miles west of Spreckels, 4 miles south of Salinas	DWR	B-85	B-323
San Antonio River at Pleyto	43d	24S/9E-3	Left bank at gage on Pleyto Bridge 15 miles west of Bradley	DWR	B-86	B-323

TABLE B-3
SAMPLING STATION DATA
CENTRAL COASTAL REGION (NO. 3)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
San Benito River near Bear Valley Fire Station	77a	15S/7E-28	Left bank 0.9 mile downstream from Willow Creek and 3.0 miles north of Bear Valley Forest Fire Station	DWR	B-87	B-323
San Lorenzo River at Big Trees (near Felton)	75	10S/2W-26	At Sequoia Gardens Resort on right bank 1.7 miles south of Felton, west of State Highway 9. Gage 0.8 mile downstream from sampling point	DWR	B-88	B-323
Santa Ynez River at Cachuma Reservoir	44b	6N/30W	Reservoir at left abutment of dam	DWR	B-89	
Santa Ynez River below Los Laureles Canyon	45	5N/28W-6	Left bank at gage located 0.1 mile downstream from Los Laureles Canyon and 13 miles east of Santa Ynez	DWR-LA	B-90	B-323
Santa Ynez River at Solvang	45a	6N/31W-22	From right bank near gage at Mission Bridge 25 feet downstream from Alisal Creek and 0.9 mile south of Solvang	DWR-LA	B-91	B-323
Soquel Creek at Soquel	76	11S/1W-10	From left bank at foot of gage, 0.25 mile upstream from bridge on Old Santa Cruz Highway	DWR	B-92	B-323
Uvas Creek near Morgan Hill	96	10S/3E-18	At discharge pipe below Uvas Dam 0.6 mile downstream from Eastman Canyon and 4.8 miles southwest of Morgan Hill	DWR	B-93	B-324

TABLE B-4
SAMPLING STATION DATA
LOS ANGELES REGION (NO. 4)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Los Angeles River at Long Beach	48	4S/13W-26	Highway 101 (State Street) bridge, sampled from left bank just downstream from bridge	LBPH DWR-LA	B-95	B-325
Los Angeles River at Los Angeles	47	1S/13W-21	USGS and LACFCD gaging station at Figueroa Street bridge, 0.1 mile upstream from Arroyo Seco confluence	LAPH DWR-LA	B-97	B-325
Matilija Creek above Matilija Dam	45b	5N/23W-19	Left bank at gaging station 1.7 miles northwest of Matilija and 2 miles upstream from Matilija Dam	DWR-LA	B-99	B-325
Colorado River Aqueduct at La Verne	69	1S/9W-6	Raw water inflow to Metropolitan Water District treatment plant (monthly composite sample)	MWD	B-101	
Mission Creek at Whittier Narrows	49a	2S/11W-6	2 miles northeast of Montebello at LACFCD gaging station 200 yards upstream from San Gabriel Blvd. bridge. Sampled from right bank at gage	DWR-LA	B-102	B-325
Los Angeles Aqueduct near San Fernando	70	3N/15W-30	At inlet to upper San Fernando Reservoir	LADW&P	B-103	
Piru Creek near Piru	46c	4N/18W-20	Right bank just downstream from railroad bridge at Piru	DWR-LA	B-104	B-325
Rio Hondo at Whittier Narrows	49	2S/11W-6	Right bank, 125 yards upstream from San Gabriel Blvd. bridge. Sampled at LACFCD gaging station	DWR-LA	B-105	B-325
San Gabriel River at Azusa Powerhouse	50d	1N/10W-22	From power plant at tailrace of the Azusa power plant	DWR-LA	B-106	B-325

TABLE B-4
SAMPLING STATION DATA
LOS ANGELES REGION (NO. 4)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
San Gabriel River at Whittier Narrows	50	2S/11W-5	From right bank 200 feet beyond end of San Gabriel Blvd. extended (Syphon Road) upstream from Whittier Narrows Dam	DWR-LA	B-107	B-325
Santa Clara River at Los Angeles-Ventura County Line	46	4N/17W-19	0.5 mile west of Los Angeles-Ventura County Line and 0.5 mile upstream from Ventura County gage, sampled from left bank at Newhall Ranch Road crossing	DWR-LA	B-108	B-325
Santa Clara River near Santa Paula	46a	3N/21W-12	Station located 1.5 miles upstream from Santa Paula bridge (Willard Bridge) and 100 feet north of South Mountain Road. Sampled from left bank	DWR-LA	B-110	B-325
Santa Paula Creek near Santa Paula	46e	4N/21W-27	From right bank at gage near Santa Paula	DWR-LA	B-111	B-325
Sespe Creek near Fillmore	46d	4N/20W-12	From left bank during low flow and from right bank at gage during high flow	DWR-LA	B-112	B-325
Ventura River near Ventura	61	3N/23W-8	Station located at gage in Foster Memorial Park on right bank, 5 miles north of Ventura, 300 feet downstream from Highway 150 bridge	DWR-LA	B-113	B-326

TABLE B-5
SAMPLING STATION DATA

CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By [a]	Analysis on Page	
					Mineral	Radioassay
American River at Fair Oaks	22d	9N/6E-13	At Old Fair Oaks Bridge, gage located on right bank just upstream from old Highway Bridge	USGS	B-115	
American River at Nimbus Dam	22a	9N/7E-16	Left bank 0.4 mile downstream from Nimbus Dam	DWR	B-117	
American River at Sacramento	22	8N/5E-3	At "H" Street Bridge, Waterstage recorder located on left bank on upstream side of bridge	DWR	B-118	B-327
American River, Middle Fork near Auburn	22b	12N/9E-6	Left bank 0.5 mile upstream from lime quarry, 1.9 miles upstream from mouth, 3.5 miles northeast of Auburn, at gage	DWR	B-119	B-327
American River, South Fork near Lotus	22c	11N/9E-11	Right bank across from gage 0.4 mile downstream from Greenwood Creek, 2.4 miles northwest of Lotus	DWR	B-120	B-327
Antelope Creek near Mouth	88c	26N/2W-17	Downstream side of Highway 99E bridge #8-12, 0.2 mile northwest of Lassen View Union School, 1 mile upstream from mouth, flow estimated	DWR	B-121	
Antelope Creek near Red Bluff	88e	27N/2W-7	Right bank, 6.5 miles east of Red Bluff, 3.0 miles east of Highway 99E, 9.7 miles upstream from mouth, flow estimated	DWR	B-122	
Battle Creek near Cottonwood	88b	29N/2W-6	Right bank across from gage 6.3 miles upstream from mouth, 7.6 miles east of Cottonwood, 0.5 mile upstream from Coleman Fish Hatchery	DWR	B-123	

TABLE B-5
SAMPLING STATION DATA

CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Bear Creek at Merced	111a	7S/13E-24	At Highway 99 bridge near the north city limit of Merced, flow estimated	DWR	Dry	Dry
Bear Creek near Stevinson	111	7S/10E-36	Right bank 4.5 miles southeast of Stevinson at washed out wooden bridge	DWR	B-124	
Bear River near Mouth	20b	13N/4E-20	Left bank, at Feather River Boulevard bridge 0.25 mile north of Rio Oso, flow estimated	DWR	B-125	
Bear River near Wheatland	78	13N/5E-3	Left bank, 30 feet downstream from gage located on downstream side of bridge on U.S. Highway 99E 1 mile southeast of Wheatland	DWR	B-126	B-327
Big Chico Creek near Chico	85	22N/2E-9	Right bank at gage located approximately 3 miles upstream from golf course clubhouse in Bidwell Park and 6 miles northeast of Chico	DWR	B-127	
Burney Creek near Burney	17c	35N/3E-18	Timber Bridge on Jack Rabbit Flat Road, about 1.0 mile west of Burney on Highway 299, then about 0.2 mile south of Highway 299 on Jack Rabbit Flat Road	DWR	B-128	B-327
Butte Creek near Chico	84	22N/2E-36	Right bank at foot of gage 0.8 mile downstream from Little Butte Creek and 7.5 miles east of Chico	DWR	B-129	
Cache Creek near Capay	80	10N/2W-8	Right bank at gage located 3 miles northwest of Capay and 2 miles upstream from Clear Lake Water Co. Diversion Dam	DWR	B-130	B-327

TABLE B-5
SAMPLING STATION DATA

CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Cache Creek near Lower Lake	42	12N/6W-6	Left bank at foot of gage about 500 feet downstream from dam and about 2.5 miles southeast of State Highway 53	DWR	B-131	B-327
Cache Creek, North Fork near Lower Lake	79	14N/6W-31	Bridge on State Highway 20 between Williams and Clear Lake. Gage located on right bank 2.7 miles northwest of bridge	DWR	B-132	B-327
Cache Slough below Lindsey Slough	110a	5N/3E-31	At Liberty Island Ferry just downstream from confluence of Cache Slough and Lindsey Slough	USBR	B-133	
Calaveras River at Jenny Lind	16a	3N/10E-27	From right bank about 150 feet downstream from gage located 70 feet below bridge on Milton Road, 0.2 mile south of Jenny Lind	DWR	B-134	B-327
Calaveras River near Stockton	16b	2N/7E-20	At West Lane bridge in north side of Stockton	DWR	B-135	B-327
Chowchilla River at Buchanan Dam Site	114	8S/18E-22	Right bank at gage 1.9 miles upstream from Raynor Creek, 4.3 miles west of Raymond Creek	DWR	B-136	B-327
Clear Creek near Igo	12d	31N/6W-27	Left bank at highway bridge on Redding-Igo road, 1.0 mile northeast of Igo, 8 miles southwest of Redding, and 11.1 miles upstream from mouth	DWR	B-137	
Clear Lake near Clearlake Oaks	40	14N/8W-27	At Gordy's Fish Harbor Motel at Glen Haven 3.6 miles northwest of Clearlake Oaks	DWR	B-138	B-327

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Clear Lake at Lakeport	41	14N/10W-24	End of pier at foot of 3rd Street at end of park. Staff gage located on piling at end of pier	DWR	B-139	B-328
Colusa Trough near Colusa	87	16N/2W-34	At Colusa-Williams highway bridge 3 miles west of Colusa. Waterstage recorder on upstream side of bridge	DWR	B-140	
Contra Costa Canal at First Pump Lift	109a	2N/2E-25	At pumping plant No. 1, 0.7 mile east of Oakley and 2.6 miles northeast of Knightsen	USBR	B-141	
Cosumnes River at McConnell	94a	6N/6E-20	Left bank at Highway 99 bridge 20 miles south of Sacramento, 7 miles north of Galt	DWR	B-142	B-328
Cosumnes River at Michigan Bar	94	8N/8E-36	At Michigan Bar road bridge at Michigan Bar	DWR	B-143	
Cottonwood Creek near Cottonwood	12b	29N/3W-7	Right bank at gage 2 miles east of Cottonwood, 2.4 miles upstream from mouth	DWR	B-144	B-328
Cottonwood Creek below North Fork Cottonwood Creek	11a	29N/6W-2	Left bank 13.5 miles west of Cottonwood on Gas Point road, flow estimated at time of sampling	DWR	B-145	
Cottonwood Creek, South Fork above Cottonwood Creek	11b	29N/4W-17	Right bank 3.4 miles west of U.S. Highway 99 at Evergreen road bridge, flow estimated at time of sampling	DWR	B-146	
Cow Creek near Millville	88a	31N/3W-32	Right bank at gage 4.2 miles southwest of Millville, 4.3 miles downstream from Little Cow Creek	DWR	B-147	

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By a	Analysis on Page	
					Mineral	Radioassay
Deer Creek near Vina	95	24N/2W-14	Left bank at gage 0.1 mile downstream from Highway 99E bridge,1.0 mile north of Vina	DWR	B-148	
Delta Cross Channel at Walnut Grove	98	5N/4E-35	0.5 mile northeast of Walnut Grove at gate structure near gage	DWR	B-149	
Delta-Mendota Canal near Mendota	92	13S/15E-19	Right bank 1 mile upstream from canal gates and 2 miles north of Mendota on Bass Avenue	DWR	B-150	B-328
Delta-Mendota Canal near Tracy	93	1S/4E-30	Left bank downstream from Byron-Bethany Road cross-over, approximately 1 mile upstream from Tracy pumping plant, approximately 10 miles northwest of Tracy	DWR	B-151	
Dutch Slough at Farrar Park Bridge	108b	2N/3E-22	From Farrar Park Bridge on Bethel Island Road	USBR	B-155	
Elder Creek near Paskenta	13e	25N/6W-14	Left bank at gage 2.5 miles downstream from south fork, 11 miles north of Paskenta	DWR	B-156	
False River at Webb Pump	112a	3N/3E-36	At Junction with Fisherman's Cut	USBR	B-157	
Feather River at Nicolaus	20	12N/3E-12	Right bank near gage on Drescher Road bridge 2.9 miles downstream from Bear River	DWR	B-158	B-328
Feather River near Oroville	19	19N/4E-2	Left bank at gage located 75 feet upstream from Highway 40 Alternate bridge 4 miles northeast of Oroville	DWR	B-161	B-328
Feather River below Shanghai Bend	20a	14N/3E-11	Right bank at gage 4.5 miles south of Yuba City on Garden Highway	DWR	B-162	B-328

TABLE B-5

SAMPLING STATION DATA

CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Fresno River near Daulton	113	10S/19E-3	Left bank at gage, 0.5 mile downstream from Willow Creek and 5.3 miles south-east of Daulton	DWR	B-163	B-328
Grant Line Canal at Tracy Road Bridge	103a	1S/5E-30	Center of canal from Tracy Road bridge 5 miles north of Tracy	DWR	B-164	
Indian Creek near Crescent Mills	17d	26N/9E-25	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	DWR	B-165	B-328
Indian Slough near Brentwood	107	1N/3E-22	At 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	DWR	B-166	
Italian Slough near Mouth	106	1S/3E-13	Right bank at pump house on Clifton Court Road, 1.9 miles east of Byron-Bethany road	DWR	B-167	
Kaweah River near Three Rivers	35	17S/28E-33	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 east of Cobbles Lodge	DWR	B-168	B-328
Kern River near Bakersfield	36	29S/28E-2	From diversion weir located at mouth of Lower Canyon 5 miles northeast of Bakersfield	DWR	B-169	B-328
Kern River below Isabella Dam	36a	26S/33E-19	Right bank, 500 feet downstream from outfall tunnel	C of E	B-170	B-328

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By a	Analysis on Page	
					Mineral	Radioassay
Kern River near Kernville	36b	23S/32E-14	At gage 3 miles upstream from Salmon Creek and 15 miles north of Kernville	C of E	B-171	B-329
Kings River below North Fork	33c	12S/26E-21	From bridge at midstream 0.8 mile downstream from North Fork	C of E	B-172	B-329
Kings River below Peoples Weir (near Kingsburg)	34	17S/22E-1	At gage on left bank about 0.25 mile downstream from diversion weir, 2 miles south of Kingsburg and 12 miles northeast of Hanford	DWR	B-173	B-329
Kings River below Pine Flat Dam	33b	13S/24E-2	Left bank, 3000 feet downstream from the dam	C of E	B-174	B-329
Lindsey Slough near Rio Vista	110	5N/2E-25	From boat landing near gage located at Montezuma Ranch, headquarters of California Packing Corporation, 6 miles north of Rio Vista	DWR	B-175	
Little Potato Slough at Terminous	99	3N/4E-13	From boat dock on east bank approximately 250 feet north of State Highway 12 bridge	DWR	B-176	
McCloud River above Shasta Lake	18	36N/3W-28	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	DWR	B-177	B-329
Merced River below Exchequer Dam	32a	4S/15E-14	Right bank at foot of gage located at Exchequer, 0.5 mile downstream from Lake McClure and 5 miles northeast of Merced Falls	DWR	B-178	B-329

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By a	Analysis on Page	
					Mineral	Radioassay
Merced River near Stevinson	32	6S/9E-36	From right bank approximately 100 feet upstream from gage located 6 miles northwest of Stevinson	DWR	B-179	B-329
Mill Creek near Los Molinos	88	25N/2W-9	Right bank below Highway 99E bridge, 1.5 miles north of Los Molinos. Gage located downstream from bridge	DWR	B-180	
Mokelumne River below Cosumnes River	23b	5N/5E-29	From bridge, approximately 2.5 miles north of Thornton on Thornton-Franklin Road	USBR	B-181	
Mokelumne River below Georgiana Slough	23c	3N/4E-7	From Highway 12 bridge approximately 5 miles west of Terminous	USBR	B-182	
Mokelumne River near Lancha Plana	23a	4N/10E-4	Left bank near gage, located 1 mile east of Lancha Plana, 3 miles downstream from Pardee Dam and 5 miles upstream from Camanche Creek	DWR	B-183	B-329
Mokelumne River at Woodbridge	23	4N/6E-34	Left bank at foot of gage located 0.4 mile downstream from dam and canal intake of Woodbridge Irrigation District	DWR	B-184	B-329
Old River at Clifton Court Ferry	104	1S/4E-20	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	DWR	B-187	
Old River at Holland Tract	108a	2N/4E-19	Approximately 1 mile north of confluence of Old River and Rock Slough	USBR	B-188	
Old River at Mandeville Island	112	2N/4E-6	East bank 5 miles northwest of gage located on northeast corner of Bacon Island	DWR	B-190	

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By [a]	Analysis on Page	
					Mineral	Radioassay
Old River at Orwood Bridge	108	1N/4E-17	Boat dock on right bank at Atchison-Topeka & Santa Fe Railroad bridge about 6 miles northeast of Byron	DWR	B-191	
Old River near Tracy	103	2S/5E-6	Left bank at trash rack of Naglee-Burk Irrigation District pump intake at end of Lammers Road and about 5 miles north-west of Tracy	DWR	B-192	
Paynes Creek near Red Bluff	88g	28N/2W-3	Right bank 100 yards upstream from Long Road bridge at Dales Station, approximately 14 miles east of Red Bluff	DWR	B-193	
Pit River near Bieber	17e	37N/7E-34	Right bank at gage 1.5 miles upstream from Spring Gulch, 8 miles south of Bieber	DWR	B-194	
Pit River near Canby	17a	41N/9E-10	About 500 feet downstream from bridge on U.S. Highway 299 located about 4.5 miles southwest of Canby gage located on right bank 0.5 mile upstream from bridge	DWR	B-195	B-329
Pit River near Montgomery Creek	17	35N/1W-32	Right bank about 125 feet upstream from gage, located 1 mile upstream from Cow Canyon Creek and 3.5 miles west of town of Montgomery Creek	DWR	B-196	B-329
Pit River, South Fork near Likely	18a	39N/13E-11	Left bank at gage 1.3 miles downstream West Valley Creek, 3.5 miles east of Likely	DWR	B-197	B-329
Putah Creek near Winters	81	8N/2W-28	Left bank 50 feet below gage located 8.2 miles west of Winters on State Highway 128	DWR	B-198	B-330

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Rock Slough near Knightsen	109	2N/3E-34	Tule Lane Bridge at head of slough 300 feet south of gates of Contra Costa Canal intake and two miles northeast of Knightsen	DWR	B-199	
Sacramento River at Bend	12c	28N/3W-20	Left bank 300 feet below Bend Road bridge 7 miles northeast of Red Bluff	USGS WPCB #5 Coop.	B-200	
Sacramento River at Butte City	87a	19N/1W-32	On left bank 0.5 mile south of Butte City	USGS WPCB #5 Coop.	B-203	
Sacramento River at Colusa	13b	19N/1W-32	River Road bridge at Colusa	DWR	B-206	
Sacramento River at Delta	11	36N/5W-35	Right bank 50 feet upstream from gage, located 0.2 mile downstream from Dog Creek and 0.6 mile southeast of Delta	DWR	B-207	B-330
Sacramento River near Hamilton City	13	22N/1W-20	From boat dock on left bank 500 feet upstream from Gianella Bridge on Highway 32, 1.5 miles northeast of Hamilton City	DWR	B-208	B-330
Sacramento River at Keswick	12	32N/5W-28	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	DWR	B-209	B-330
Sacramento River at Knights Landing	14	11N/2E-14	From State Highway #24 bridge, Gage 0.3 mile downstream from bridge. Composite of two samples	DWR	B-210	B-330

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Sacramento River near Redding	12a	31N/4W-18	From right bank about 500 feet downstream from gage located below Anderson-Cottonwood Diversion Dam	BSE	B-212	B-330
Sacramento River at Rio Vista	16	4N/3E-31	Right bank at U.S. Army facility 1 mile downstream from Rio Vista bridge	DWR	B-213	B-330
Sacramento River at Sacramento	15	9N/4E-35	From U.S. Highway 40 bridge (Tower Bridge), gage located on left bank 0.3 mile upstream from bridge, composite of three samples	DWR	B-214	B-330
Sacramento River at Snodgrass Slough	97	6N/4E-27	At gage on left bank, 2 miles north of Courtland	DWR	B-218	
Sacramento River at Toland Landing	15a	3N/2E-21	Approximately 6 miles downstream from Rio Vista, opposite from Emmanton	USBR	B-219	
Sacramento Slough near Knights Landing	14a	11N/3E-20	From pond near discharge pipes below gage located on levee near Reclamation District 1500 pumping plant	DWR	B-220	B-330
Salt Slough at San Luis Ranch	92a	9S/11E-7	At gage on left bank on downstream side of bridge at San Luis Ranch, 7 miles north of Los Banos	DWR	B-221	
San Joaquin River at Antioch	28	2N/2E-18	From pier at Old Antioch waterworks on Fulton Shipyard Road	DWR	B-223	B-330

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By a	Analysis on Page	
					Mineral	Radioassay
San Joaquin River near Biola	24a	13S/17E-2	On right bank 1.9 miles downstream from Skaggs Bridge, 4.2 miles northwest of Biola	USGS	B-224	
San Joaquin River at Brandt Bridge	101a	1S/6E-9	From bridge approximately 5 miles upstream from Garwood Bridge on State Highway No. 4	USBR	B-226	
San Joaquin River at Crows Landing Bridge	26b	6S/9E-7	From bridge 3.5 miles northeast of Crows Landing on Crows Landing Road	USBR	B-227	
San Joaquin River near Dos Palos	25a	11S/13E-12	From bridge at head of Temple Slough 6.3 miles east of Dos Palos gage located 0.7 mile downstream	DWR	B-228	B-330
San Joaquin River at Fremont Ford Bridge	25c	7S/9E-24	On left bank 150 feet downstream from Fremont Ford Bridge, 2.1 miles downstream from Salt Slough, 4.5 miles west of Stevinson, and 6.7 miles upstream from Merced River	USGS	B-229	
San Joaquin River at Friant	24	11S/21E-7	From left bank 100 feet downstream from gage located 0.5 mile west of Friant and 2 miles downstream from Friant Dam	DWR	B-232	B-330
San Joaquin River at Garwood Bridge	101	1N/6E-16	From boat dock on left bank, 500 feet upstream from Highway 4 bridge	DWR	B-233	
San Joaquin River near Grayson	26	4S/7E-24	From Laird Slough Bridge, gage located on bridge near left bank	DWR	B-234	B-331
San Joaquin River at Head of Chamberlain Slough	114a	9S/13E-31	4 miles downstream from Highway 152 bridge and 4 miles north of Santa Rita Park	USBR	B-235	

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
San Joaquin River at Hills Ferry Bridge	25b	7S/9E-3	At Hills Ferry Bridge, 3.9 miles northeast of Newman	DWR	B-236	B-331
San Joaquin River at Jersey Point	28b	2N/3E-6	Left bank, one mile below mouth of False River	USBR	B-237	
San Joaquin River at Maze Road Bridge	26a	3S/7E-29	From boat dock on left bank, 300 feet upstream from Maze Road Bridge (State Hwy 132), at El Solyo Ranch pump intake, gage on left bank approximately 0.5 mile upstream from bridge	DWR	B-238	B-331
San Joaquin River near Mendota	25	13S/15E-7	From left bank at foot of gage, 2.5 miles downstream from Mendota Pool and 4 miles north of Mendota on Bass Road	DWR	B-239	B-331
San Joaquin River above Merced River	30a	7S/9E-3	Just upstream from confluence of San Joaquin and Merced Rivers	USBR	B-240	
San Joaquin River at Mossdale Bridge	102	2S/6E-4	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	DWR	B-241	
San Joaquin River at Patterson Water Company	27a	5S/8E-15	At Patterson-Turlock highway bridge	USBR	B-242	
San Joaquin River above Salt Slough	111b	7S/10E-26	Approximately 5 miles upstream from confluence of San Joaquin River and Salt Slough	USBR	B-243	
San Joaquin River at San Andreas Landing	112b	3N/3E-13	Right bank, 1 mile below mouth of Mokelumne River	USBR	B-244	

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
San Joaquin River near Vernalis	27	3S/6E-13	From Durham Ferry Highway bridge located 3.4 miles northeast of Vernalis, gage located on left bank on upstream side of bridge	DWR	B-245	B-331
San Joaquin River at West Stanislaus Irrigation Dist.	27b	4S/7E-10	At head of West Stanislaus Irrigation District intake canal	USBR	B-248	
San Joaquin River at Whitehouse	24b	13S/15E-25	Below head of Gravelly Ford Canal approximately 13.6 miles upstream from Mendota Dam	USBR	B-249	
South Honcut Creek near Bangor	90	18N/5E-35	Right bank at foot of gage located 100 feet upstream from Brown's Valley-Bangor Road bridge and 2.5 miles southeast of Bangor	DWR	B-251	
Stanislaus River near mouth	29	3S/7E-17	From right bank at foot of gage, 1 mile above the mouth	DWR	B-252	B-331
Stanislaus River below Tulloch Dam	29a	1S/12E-1	Left bank 0.5 mile below Tulloch Dam	DWR	B-253	B-331
Stockton Ship Channel on Rindge Island	100	2N/5E-27	Right bank of ship channel at southeast corner of Rindge Tract near junction of Fourteen Mile Slough	DWR	B-254	
Stony Creek at Black Butte Dam Site	13c	23N/4W-29	Right bank at gage 50 feet downstream from Orland Diversion Dam, 8 miles northwest of Orland	DWR	B-255	B-331
Stony Creek near Hamilton City	13a	22N/2W-36	From right bank at gage located 2.5 miles southwest of Hamilton City and 8 miles east of Orland	DWR	B-256	B-331

TABLE B-5
SAMPLING STATION DATA
CENTRAL VALLEY REGION (NO. 5)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By [a]	Analysis on Page	
					Mineral	Radioassay
Thomes Creek at Paskenta	13d	23N/6W-4	Left bank at gage 0.25 mile upstream from Digger Creek, and 0.3 mile upstream from highway bridge at Paskenta	DWR	B-257	
Tule River near Porterville	91	21S/28E-25	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	DWR	B-258	B-331
Tuolumne River below Don Pedro Dam	31a	3S/14E-3	Left bank 0.25 mile downstream from dam	DWR	B-259	B-331
Tuolumne River at Hickman-Waterford Bridge	30	3S/11E-34	From Hickman-Waterford Bridge, about 1 mile north of Hickman	DWR	B-260	B-331
Tuolumne River at Tuolumne City	31	4S/8E-7	From highway bridge on Shiloh Road, 8 miles southeast of Modesto	DWR	B-261	B-332
Yuba River at Marysville	21	15N/4E-18	At Simpson Lane Bridge at Marysville, on left bank	DWR	B-262	B-332
Yuba River near Smartville	21a	16N/6E-30	From right bank, 0.5 mile downstream from Highway 20 bridge about 5 miles below Narrows Dam and about 4 miles below confluence of Deer Creek	DWR	B-263	B-332

TABLE B-6
SAMPLING STATION DATA
LAHONTAN REGION (NO. 6)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By [a]	Analysis on Page	
					Mineral	Radioassay
Carson, River East Fork near Markleeville	115	10N/20E-27	Left bank at State Highway 4 and 89 bridge 2.3 miles southeast of Markleeville	DWR	B-265	B-333
Carson River, West Fork at Woodfords	115a	11N/19E-34	Left bank at gage 0.3 mile downstream from State Highway 88 and 89 bridge, 0.8 mile west of Woodfords	DWR	B-266	B-333
Lake Tahoe at Bijou	39	13N/18E-13	From Connolly's Resort Pier at Bijou	DWR	B-267	B-333
Lake Tahoe at Tahoe City	38	15N/17E-7	Upstream from control gates of Truckee River and upstream from State Highway 89	DWR	B-268	B-333
Lake Tahoe at Tahoe Vista	37	16N/17E-14	From pier 0.1 mile west of Tahoe Vista and 8 miles northeast of Tahoe City	DWR	B-269	B-333
Mojave River at The Forks	67a	3N/3W-18	From right bank, 100 feet downstream from confluence of Deep Creek and West Fork of Mojave River	DWR-LA	B-270	B-333
Mojave River near Victorville	67	6N/4W-29	Left bank at gage, 3 miles northwest of Victorville and 500 feet upstream from U. S. Hwy. 66 bridge across Lower Narrows	DWR-LA	B-271	B-333
Susan River at Susanville	17b	30N/12E-31	From left bank at foot of gage, 0.5 mile west of Susanville and 1.1 mile upstream from Piute Creek	DWR	B-273	B-333
Truckee River near Farad	53	18N/17E-12	From left bank at foot of gage 2 miles from California-Nevada State Line on U.S. Highway 40	DWR	B-274	B-333

TABLE B-6
SAMPLING STATION DATA
LAHONTAN REGION (NO. 6)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By [a]	Analysis on Page	
					Mineral	Radioassay
Truckee River near Truckee	52	17N/16E-28	From left bank at gage, 1.4 miles upstream from Donner Creek and 2.5 miles southwest of Truckee	DWR	B-275	B-333
Walker River, East near Bridgeport	116a	6N/25E-34	Right bank at gage 1,500 feet downstream from Bridgeport Reservoir, 5 miles north of Bridgeport	DWR	B-276	B-333
Walker River, West near Coleville	116	6N/23E-9	At Highway 395 bridge 10.3 miles southeast of the Walker snowgate, 200 feet downstream from gage	DWR	B-277	B-333

TABLE B-7
SAMPLING STATION DATA
COLORADO RIVER BASIN REGION (NO. 7)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Alamo River near Calipatria	60	11S/13E-15	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	DWR-LA	B-279	B-335
Alamo River at International Boundary	59	17S/16E-18	Between All American Canal and International Boundary, upstream from canal seepage pipes. Imperial Irrigation District Station AR-1	DWR-LA	B-280	B-335
All American Canal near Pilot Knob	56a	16S/21E-24	Left bank just upstream from Hwy. 80 bridge, over canal, 5 miles west of Yuma bridge. Imperial Irrigation District Station 1035 (lower slope)	DWR-LA	B-281	B-335
Colorado River near Blythe	56c	7S/23E-2	At boat dock approximately 0.5 mile downstream from U.S. Highway 60-70 bridge. Sampled from California side	DWR-LA	B-282	B-335
Colorado River below Morelos Dam	56b	8S/24W-28	From left bank 0.25 mile downstream from Morelos Dam, Arizona side. The dam is approximately 1.0 mile downstream from California-Arizona-Mexico Boundary Junction	DWR-LA	B-283	B-335
Colorado River at Parker Dam	55	2N/27E-16	Shore at right bank on California side, 1 mile upstream from gage, 3 miles downstream from Parker Dam, 11 miles northeast of Parker, Arizona. Sampled from River Lodge Boat Dock	DWR-LA USPHS	B-284	B-335

TABLE B-7
SAMPLING STATION DATA
COLORADO RIVER BASIN REGION (NO. 7)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Colorado River near Topock, Arizona	54	7N/24E-7	At USGS auxiliary gage; right bank California side; on high pressure gas line bridge furthest downstream from highway 66 bridge	DWR-LA	B-286	B-335
Colorado River at Yuma, Arizona	56	16S/22E-36	Left bank at Old Highway 80 bridge 0.4 mile upstream from gage	DWR-LA USPHS	B-287	B-335
Lake Havasu at Colorado River Aqueduct Intake	56d	3N/27E-28	Right bank at aqueduct intake, 1.5 miles upstream from Parker Dam	MWD USPHS	B-289	
New River at International Boundary	57	17S/14E-14	Right bank at road bridge, 150 yards north of International Boundary. Imperial Irrigation District Station NR-1	DWR-LA	B-293	B-335
New River near Westmorland	58	12S/13E-30	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	DWR-LA	B-294	B-335
Salton Sea at Salton Sea State Park	68a	7S/10E-3	From northeast shore at boat launching ramp of Salton Sea State Park	DWR-LA	B-295	B-335
Whitewater River at Mecca	68b	7S/9E-31	Sampled from center of river as flow comes out of road culvert at Lincoln Street crossing	DWR-LA	B-296	B-335
Whitewater River at Whitewater	68	3S/3E-2	8 foot Cipoletti Weir 1.6 mile upstream from Whitewater. Two gages, one on river and one on weir	DWR-LA	B-297	B-336

TABLE B-8
SAMPLING STATION DATA
SANTA ANA REGION (NO. 8)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Chino Creek near Chino	86	2S/8W-36	Right bank 20 feet upstream from Pine Avenue bridge approximately 5 miles southeast of Chino	DWR-LA	B-299	B-337
Lake Elsinore near Elinsore	89	6S/5W-1	North shore of lake at staff gage, approximately 0.5 mile south of junction of Riverside Drive and State Highway 71	DWR-LA	B-301	B-337
Santa Ana River near Arlington	51	2S/6W-25	Right bank at Pedley Road bridge 1.8 miles downstream from Union Pacific Railroad bridge, 3.3 miles northwest of Arlington	DWR-LA	B-302	B-337
Santa Ana River near Mentone	51b	1S/2W-4	Southern California Edison Company Santa Ana River No. 3 power plant tail-race, 3.5 miles northeast of Mentone near mouth of canyon	DWR-LA	B-303	B-337
Santa Ana River at Norco	51e	2S/7W-36	At summer gage just downstream from Hammer Avenue bridge on left bank 5 miles north of Corona	DWR-LA	B-304	B-337
Santa Ana River near Prado Dam	51a	3S/7W-29	From left bank at gage; 2,500 feet downstream from Prado Dam; 4 miles west of Corona and 1 mile southwest of Prado	DWR-LA	B-305	B-337
Santa Ana River at Riverside	51d	2S/5W-30	From left bank, 200 yards upstream from Colorado River Aqueduct crossing, and 0.5 mile upstream from Riverside sewage treatment plant	DWR-LA	B-307	

TABLE B-8
SAMPLING STATION DATA
SANTA ANA REGION (NO. 8)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Warm Creek at Colton	50b	1S/4W-21	From right bank near gage at "F" Street bridge, 0.25 mile north of U.S. Hwy. 99 and 0.4 mile east of Mt. Vernon 1.2 miles east of Colton, 0.3 mile below San Bernardino sewage disposal plant	DWR-LA	B-308	B-337
Warm Creek at San Bernardino	50c	1S/4W-15	From right bank beneath "E" Street bridge, 0.5 mile upstream from San Bernardino sewage disposal plant	DWR-LA	B-309	

TABLE B-9

SAMPLING STATION DATA

SAN DIEGO REGION (NO. 9)

Sampling Station	Sta. No.	Location	Sampling Point	Sampled By[a]	Analysis on Page	
					Mineral	Radioassay
Escondido Creek near Harmony Grove	63	12S/2W-30	Sampled from Harmony Grove Road crossing at culvert, 4 miles south of Escondido	DWR-LA	B-311	B-339
Forester Creek at Mission Gorge Road	65a	15S/1W-28	From center of stream just upstream from Mission Gorge Road	DWR-LA	B-312	B-339
San Diego River at Old Mission Dam	65	15S/2W-25	From left bank just below Old Mission Dam 3 miles west of Santee	DWR-LA	B-313	B-339
San Dieguito River below San Pasquel Valley	64	13S/2E-1	From right bank, 75 yards upstream from gage, 2.5 miles upstream from highway 395 bridge, 4.5 miles southeast of Escondido and 5 miles west of San Pasquel	DWR-LA	B-314	B-339
San Luis Rey River near Pala	62	9S/2W-36	From right bank below Pala Diversion Dam and summer gage 1.8 miles east of Pala	DWR-LA	B-315	B-339
Santa Margarita River near Fallbrook	51c	9S/4W-12	Left bank 2 miles north of Fallbrook and 0.5 mile downstream from Fallbrook Public Utility District gage	DWR-LA	B-316	B-339
Spring Valley Creek near La Pressa	65b	17S/1W-17	Downstream from the Spring Valley sewage treatment plant near La Pressa	DWR-LA	B-317	B-339
Tia Juana River at International Boundary	66	19S/2W-1	From right bank at California Water and Telephone Company gage 2.5 miles upstream from Nestor Bridge	DWR-LA	B-318	

a. Dept. of the Interior, Bureau of Reclamation (USBR); Dept. of the Interior, Geological Survey (USGS): Dept. of the Army, Corps of Engineers (C of E): State Dept. of Public Health, Bureau of Sanitary Engineering (BSE): State Dept. of Fish and Game (F&G); State Dept. of Water Resources (DWR); State Dept. of Water Resources, Los Angeles Office (DWR-LA); Central Valley Regional Water Pollution Control Board (No. 5) (WPCB#5): City of Long Beach, Dept. of Public Health (LBPH); City of Los Angeles, Dept. of Public Health (LAPH): City of Los Angeles, Dept. of Water and Power (LADW&P); The Metropolitan Water District of Southern California (MWD); and U.S. Public Health Service (USPHS).

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											EEL RIVER NEAR DOS RIOS (STA. 5d)															USGS
4/16 0900	2,700 est	54	10.1	93	121	7.4*	12 / 0.60	5.8 / 0.48	4.8 / 0.21	1.4 / 0.04	0 / 0.00	68 / 1.11	6.7 / 0.14	2.2 / 0.06	0.6 / 0.01	0.2 / 0.01	0.01 / ----	13 / --		80[b]	16	54	0	--		
5/19 1130	371	70	8.4	93	146	8.2*	17 / 0.85	5.5 / 0.45	4.8 / 0.21	1.1 / 0.03	0 / 0.00	82 / 1.34	6.7 / 0.14	1.2 / 0.03	0.6 / 0.01	0.1 / 0.01	0.2 / ----	13 / --	Al 0.06 Cu 0.02 Zn 0.03 a	90[b]	14	65	0	--		
6/24 1215	45	77	7.2	86	215	8.2*	26 / 1.30	8.0 / 0.66	7.1 / 0.31	1.2 / 0.03	0 / 0.00	117 / 1.92	13 / 0.27	3.7 / 0.10	0.3 / 0.00	0.0 / 0.00	0.4 / ----	12 / --		130[b]	13	98	2	--		
7/23 1130	21.5	84	7.2	92	245	7.1	32 / 1.60	7.8 / 0.64	6.6 / 0.29	1.1 / 0.03	0 / 0.00	121 / 1.98	20 / 0.42	3.5 / 0.10	0.2 / 0.00	0.1 / 0.00	0.12 / ----	13 / --		143[b]	11	112	13	--		
8/25 1130	8.6	83	7.4	94	241	7.5	26 / 1.30	8.5 / 0.70	9.5 / 0.41	1.6 / 0.04	0 / 0.00	117 / 1.92	17 / 0.35	5.9 / 0.17	1.2 / 0.02	0.2 / 0.01	0.22 / ----	6.9 / --		134[b]	17	100	4	--		
9/11 1330	9.4	79	---	---	233	7.5	22 / 1.10	10 / 0.84	9.6 / 0.42	1.0 / 0.03	0 / 0.00	120 / 1.97	7.7 / 0.16	6.2 / 0.17	0.5 / 0.01	0.1 / 0.01	0.2 / ----	9.0 / --		125[b]	18	97	0	--		
10/22 1245	14.5	58	9.0	88	249	7.5	29 / 1.45	9.1 / 0.75	9.2 / 0.40	1.1 / 0.03	0 / 0.00	129 / 2.11	16 / 0.33	6.9 / 0.19	0.1 / 0.00	0.1 / 0.01	0.3 / ----	8.0 / --		144[b]	15	110	4	--		
11/12 1240	20	59	---	---	265	8.0*	31 / 1.55	8.9 / 0.73	7.8 / 0.34	1.2 / 0.03	0 / 0.00	130 / 2.13	14 / 0.29	6.4 / 0.18	0.7 / 0.01	0.2 / 0.01	0.61 / ----	6.0 / --	Al 0.06 a	141[b]	13	114	7	--		
12/21 1145	45	51	10.5	94	304	7.6	35 / 1.75	12 / 0.97	7.8 / 0.34	0.7 / 0.02	0 / 0.00	137 / 2.25	27 / 0.56	12 / 0.34	0.0 / 0.00	0.0 / 0.00	0.2 / ----	7.4 / --		169[b]	11	136	24	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

N RTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH f	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			
1958	Not Rated										EEL RIVER NEAR McCANN (STA. 5)															USGS
1/7 1300		44	6.6	54	161	7.5	---	---	5.2/0.23	---	0/0.00	86/1.41	---	2.0/0.06	---	---	0.12/---	--		---	14	70	0	30		
2/4 1030		49	12.0	105	119	7.2	---	---	3.6/0.16	---	0/0.00	68/1.11	---	2.0/0.06	---	---	0.03/---	--		---	13	54	0	160	Maximum 7000+ Minimum 0.62 Median 13.1	
3/11 1150		49	12.4	108	164	7.5	---	---	4.4/0.19	---	0/0.00	90/1.48	---	2.8/0.08	---	---	0.15/---	--		---	11	74	0	65		
4/3 1015		47	11.6	98	110	8.2	---	---	4.4/0.19	---	0/0.00	62/1.02	---	2.2/0.06	---	---	0.00/---	--		---	16	49	0	275		
5/8 1035		59	9.9	97	126	8.1	16/0.80	4.6/0.38	3.1/0.13	1.0/0.03	0/0.00	67/1.10	7.7/0.16	1.5/0.04	0.0/0.00	0.0/0.00	0.00/---	13/--	Fe 0.05 Al 0.09 PO_4 0.55 a	80[b]	10	59	4	25		
6/5 1000		65	9.0	95	159	8.2	---	---	4.0/0.17	---	0/0.00	83/1.36	---	2.0/0.06	---	---	0.0/---	--		---	11	72	4	8		
7/10 1120		75	9.0	105	226	7.9	---	---	5.4/0.23	---	0/0.00	120/1.97	---	4.4/0.12	---	---	0.1/---	--		---	10	103	5	1		
8/7 1005		71	8.6	97	262	8.5	---	---	6.3/0.27	---	0/0.00	134/2.20	---	6.0/0.17	---	---	0.1/---	--		---	10	118	8	4		
9/11 1010		65	8.0	85	280	8.6	39/1.95	7.4/0.61	6.9/0.30	1.4/0.04	0/0.00	136/2.23	22/0.46	6.5/0.18	0.2/0.00	0.0/0.00	0.3/---	9.8/--	PO_4 0.00 a	161[b]	10	128	16	3		
10/10 1340		69	10.8	119	299	8.1	---	---	7.6/0.33	---	0/0.00	161/2.64	---	7.7/0.22	---	---	0.1/---	--		---	11	140	8	0.8		
11/10 1910		57	9.3	89	292	8.4	---	---	7.8/0.34	---	0/0.00	136/2.23	---	11/0.31	---	---	0.1/---	--		---	11	132	20	5		
12/3 1430		53	11.6	106	251	7.6	---	---	6.8/0.30	---	0/0.00	116/1.90	---	8.0/0.23	---	---	0.0/---	--		---	12	114	19	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958										EEL RIVER AT S[C]OTIA (STA. 6)																USGS
1/6 1530	9,530	44	6.2	50	162	6.5	---	---	7.1/0.31	---	0/0.00	82/1.34	---	3.5/0.10	---	---	0.01/---	--		---	19	66	0	44	Maximum 7000.+ Minimum 2.3 Median 365.	
2/4 1320	68,900	50	11.8	104	117	7.4	---	---	4.0/0.17	---	0/0.00	62/1.02	---	2.5/0.07	---	---	0.48/---	--		---	14	54	3	200		
3/11 1330	7,880	55	11.6	109	181	7.5	---	---	5.1/0.22	---	0/0.00	98/1.61	---	4.0/0.11	---	---	0.01/---	--		---	12	82	2	40		
4/3 0915	103,000	47	11.0	93	98.0	7.6	---	---	3.8/0.17	---	0/0.00	50/0.82	---	2.8/0.08	---	---	0.00/---	--		---	17	43	2	325		
5/8 0930	4,060	58	10.0	97	145	7.9	19/0.95	4.5/0.37	3.9/0.17	1.2/0.03	0/0.00	78/1.28	8.6/0.18	2.5/0.07	0.1/0.00	0.0/0.00	0.00/---	15/--	a Fe 0.06/0.01 Cu Al 0.11/0.25 PO_4	93[b]	11	66	2	30		
6/5 0900	2,060	63	10.0	103	182	8.1	---	---	5.1/0.22	---	0/0.00	97/1.59	---	3.0/0.08	---	---	0.0/---	--		---	12	82	2	10		
7/10 0935	500	67	10.0	108	249	7.9	---	---	7.0/0.30	---	0/0.00	135/2.21	---	5.0/0.14	---	---	0.1/---	--		---	11	116	6	1		
8/7 0855	213	65	8.2	87	289	8.6	---	---	8.1/0.35	---	0/0.00	156/2.56	---	7.0/0.20	---	---	0.1/---	--		---	12	134	6	3		
9/11 0900	141	66	9.0	96	306	8.6	38/1.90	12/0.98	7.9/0.34	1.3/0.03	0/0.00	164/2.69	16/0.33	8.0/0.23	0.8/0.01	0.0/0.00	0.2/---	8.8/--	Zn 0.01 PO_4 0.00 a	174[b]	10	144	10	3		
10/10 1230	126	68	11.2	122	315	8.5	---	---	9.0/0.39	---	0/0.00	166/2.72	---	9.2/0.26	---	---	0.1/---	--		---	12	144	8	0.8		
11/11 0745	270	52	8.5	77	312	8.2	---	---	8.8/0.38	---	0/0.00	160/2.62	---	9.5/0.27	---	---	0.1/---	--		---	12	142	11	6		
12/3 1330	322	57	11.9	114	268	8.1*	---	---	7.7/0.33	---	0/0.00	136/2.23	---	7.5/0.21	---	---	0.1/---	--		---	12	126	14	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported [w]e[r]e as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							EEL RIVER, MIDDLE FORK AT DOS RIOS (STA. 5c)																			USGS
4/16 1000	5,290	47	10.5	89	116	7.8	14 / 0.70	4.6 / 0.38	4.1 / 0.18	1.4 / 0.04	0 / 0.00	65 / 1.07	7.7 / 0.16	0.5 / 0.01	0.5 / 0.01	0.2 / 0.01	0.00 / ---	11 / ---		76[b]	14	54	1	--		
5/19 1230	2,255	53	9.5	87	90.7	7.9*	12 / 0.60	2.4 / 0.20	2.2 / 0.10	0.9 / 0.02	0 / 0.00	46 / 0.75	6.7 / 0.14	0.8 / 0.02	0.0 / 0.00	0.1 / 0.01	0.1 / ---	8.3 / ---	Al 0.10[a]	56[b]	11	40	2	--		
6/24 1300	467	74	7.2	83	158	7.9	21 / 1.05	5.0 / 0.41	4.8 / 0.21	0.8 / 0.02	0 / 0.00	83 / 1.36	11 / 0.23	3.0 / 0.08	0.3 / 0.00	0.0 / 0.00	0.1 / ---	9.0 / ---		96[b]	12	73	5	--		
7/23 1200	129	78	6.5	78	226	7.2	28 / 1.40	6.1 / 0.50	8.2 / 0.36	1.2 / 0.03	0 / 0.00	116 / 1.90	16 / 0.33	3.5 / 0.10	0.1 / 0.00	0.1 / 0.01	0.24 / ---	3.9 / ---		124[b]	16	95	0	--		
8/25 1300	39	80	6.4	79	295	7.7	34 / 1.70	11 / 0.90	10 / 0.44	1.3 / 0.03	0 / 0.00	129 / 2.11	34 / 0.71	9.8 / 0.28	1.0 / 0.02	0.2 / 0.01	0.10 / ---	8.4 / ---		173[b]	14	130	24	--		
9/11 1400	28	80	---	---	235	7.7	26 / 1.30	8.5 / 0.70	9.8 / 0.43	1.4 / 0.04	0 / 0.00	121 / 1.98	17 / 0.35	6.3 / 0.18	0.1 / 0.00	0.1 / 0.01	0.3 / ---	9.1 / ---		139[b]	17	100	1	--		
10/22 1300	29	60	10.2	102	343	7.7	39 / 1.95	12 / 0.97	13 / 0.57	1.1 / 0.03	0 / 0.00	139 / 2.28	34 / 0.71	19 / 0.54	0.0 / 0.00	0.1 / 0.01	0.2 / ---	9.4 / ---		196[b]	16	146	32	--		
11/12 1320	65	60	---	---	288	8.0*	32 / 1.60	10 / 0.86	9.5 / 0.41	1.4 / 0.04	0 / 0.00	139 / 2.28	12 / 0.25	11 / 0.31	0.7 / 0.01	0.1 / 0.01	0.68 / ---	6.6 / ---	Al 0.05[a]	152[b]	14	123	9	--		
12/21 1240	100 est.	48	9.7	83	273	7.6	31 / 1.55	11 / 0.89	7.6 / 0.33	0.7 / 0.02	0 / 0.00	135 / 2.21	18 / 0.37	9.0 / 0.25	0.0 / 0.00	0.0 / 0.00	0.6 / ---	6.9 / ---		151[b]	12	122	11	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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							Mineral constituents in parts per million / equivalents per million																			
1958											EEL RIVER, SOUTH FORK NEAR MIRANDA (STA. 7)															USGS
1/6 1335	2,090	38	5.2	39	130	6.5	---	---	5.7 / 0.25	---	0 / 0.00	70 / 1.15	---	4.8 / 0.14	---	---	0.00 / ---	--		---	19	54	0	28	Maximum 620. Minimum 0.23 Median 2.3	
2/4 0900	11,600	49	11.2	98	101	7.2	---	---	4.7 / 0.20	---	0 / 0.00	54 / 0.89	---	3.0 / 0.08	---	---	0.00 / ---	--		---	20	40	0	175		
3/11 1030	1,630	49	11.8	103	132	7.2	---	---	5.7 / 0.25	---	0 / 0.00	74 / 1.21	---	4.5 / 0.13	---	---	0.02 / ---	--		---	18	56	0	10		
4/3 1150	22,700	48	11.1	96	79.4	8.2	---	---	4.6 / 0.20	---	0 / 0.00	40 / 0.66	---	3.8 / 0.11	---	---	0.00 / ---	--		---	21	36	3	300		
5/8 1128	550	65	9.0	95	159	7.7	17 / 0.85	6.4 / 0.53	6.2 / 0.27	1.4 / 0.04	0 / 0.00	87 / 1.43	4.8 / 0.10	5.0 / 0.14	0.0 / 0.00	0.0 / 0.00	0.00 / ---	19 / --	Fe 0.02 Cu 0.02 / Al 0.08 PO4 0.20 [a]	103[b]	16	69	0	10		
6/5 1100	300	69	10.0	110	177	8.2	---	---	7.2 / 0.31	---	0 / 0.00	95 / 1.56	---	4.5 / 0.13	---	---	0.1 / ---	--		---	17	73	0	4		
7/10 1205	123	74	9.0	104	215	7.2	---	---	8.3 / 0.36	---	0 / 0.00	119 / 1.95	---	7.2 / 0.20	---	---	0.1 / ---	--		---	16	92	0	2		
8/7 1105	68	71	8.6	97	224	8.6	---	---	8.9 / 0.39	---	0 / 0.00	122 / 2.00	---	7.0 / 0.20	---	---	0.1 / ---	--		---	17	96	0	4		
9/11 1120	44	66	8.0	85	232	8.8	24 / 1.20	10 / 0.86	7.9 / 0.34	1.4 / 0.04	0 / 0.00	122 / 2.00	5.8 / 0.12	9.0 / 0.25	0.4 / 0.01	0.1 / 0.01	0.3 / ---	5.2 / --	Al 0.01 / PO4 0.00 [a]	124[b]	14	103	3	5		
10/10 1520	34	71	14.8	166	255	8.6	---	---	8.8 / 0.38	---	0 / 0.00	136 / 2.23	---	9.3 / 0.26	---	---	0.1 / ---	--		---	14	114	2	0.4		
11/10 1730	108	57	9.6	92	267	8.6	---	---	8.6 / 0.37	---	0 / 0.00	140 / 2.29	---	9.8 / 0.28	---	---	0.1 / ---	--		---	14	118	3	6		
12/3 1530	93	55	12.2	114	222	8.0	---	---	7.7 / 0.33	---	0 / 0.00	116 / 1.90	---	8.5 / 0.24	---	---	0.0 / ---	--		---	14	98	3	2		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-10
ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958											KLAMATH RIVER NEAR COPCO (STA. 1)															USGS
1/7 1500	3,250	36	9.8	71	169	6.8*	---	---	16 / 0.70	---	0 / 0.00	78 / 1.28	---	4.0 / 0.11	---	---	0.09 / ---	---		---	41	50	0	10		
2/11 1100	3,700	42	9.6	76	209	7.4*	---	---	18 / 0.78	---	0 / 0.00	88 / 1.44	---	4.0 / 0.11	---	---	0.10 / ---	---		---	36	68	0	20	Maximum 7000.+ Minimum 23 Median 7000.	
3/11 1100	4,500	43	10.4	83	158	7.3*	---	---	13 / 0.56	---	0 / 0.00	68 / 1.11	---	3.0 / 0.08	---	---	0.12 / ---	---		---	36	50	0	10		
4/16 1100	5,600	56	8.5	81	188	7.3*	---	---	16 / 0.70	---	0 / 0.00	80 / 1.31	---	2.5 / 0.07	--	---	0.08 / ---	---		---	39	54	0	16		
5/16 1300	3,100	61	9.2	92	175	7.6*	9.6 / 0.48	6.6 / 0.54	14 / 0.61	2.5 / 0.06	0 / 0.00	76 / 1.25	14 / 0.29	4.0 / 0.11	1.3 / 0.02	0.3 / 0.02	0.04 / ---	21 / ---	PO_4 0.30 Cu 0.01[a] Fe 0.11 Al 0.29	110[b]	36	51	0	2		
6/12 1000	4,100	61	8.8	89	121	7.7*	---	---	9.6 / 0.42	---	0 / 0.00	65 / 1.07	---	1.0 / 0.03	---	---	0.0 / ---	---		---	34	40	0	0.4		
7/14 1500	3,280	74	8.8	102	159	7.4*	---	---	13 / 0.57	---	0 / 0.00	77 / 1.26	---	2.3 / 0.06	---	---	0.1 / ---	---		---	36	50	0	3		
8/19 1500	2,850	74	9.0	105	187	7.1*	---	---	16 / 0.70	---	0 / 0.00	88 / 1.44	---	3.5 / 0.10	--	---	0.1 / ---	---		---	37	59	0	5		
9/16 1400	2,900	63	8.2	85	171	7.4*	12 / 0.60	5.4 / 0.44	14 / 0.61	2.6 / 0.07	0 / 0.00	83 / 1.36	9.6 / 0.20	4.0 / 0.11	2.9 / 0.05	0.1 / 0.01	0.2 / ---	24 / ---	PO_4 0.30 Zn 0.01[a] Fe 0.13	116[b]	35	52	0	16		
10/17 1000	2,950	53	8.6	79	142	7.4*	---	---	10 / 0.44	---	0 / 0.00	75 / 1.23	---	3.1 / 0.09	---	---	0.1 / ---	---		---	31	50	0	11		
11/13 1000	3,360	52	8.4-	76	172	7.0*	12 / 0.60	5.6 / 0.46	14 / 0.61	2.3 / 0.06	0 / 0.00	78 / 1.28	15 / 0.31	4.5 / 0.13	2.6 / 0.04	0.2 / 0.01	0.0 / ---	31 / ---		125[b]	35	53	0	---		
12/7 1400	3,330	45	8.2	68	211	7.2*	---	---	19 / 0.83	---	0 / 0.00	89 / 1.46	---	5.5 / 0.16	---	---	0.1 / ---	---		---	40	62	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Not Rated						KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (STA. 1c)																			USGS
12/2 1240		44	12.3	100	242	7.3	14 / 0.70	8.8 / 0.72	22 / 0.96	2.8 / 0.07	0 / 0.00	103 / 1.69	23 / 0.48	6.7 / 0.19	4.2 / 0.07	0.2 / 0.01	0.1 / ---	33 / ---		166 [b]	39	71	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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	Per-cent sod-ium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
								Mineral constituents in parts per million / equivalents per million																			
1958												KLAMATH RIVER NEAR KLAMATH (STA. 3)															USGS
1/9	1025	23,800	46	---	---	142	7.7	---	---	6.6/0.29	---	0/0.00	78/1.28	---	3.0/0.08	---	---	0.05/---	---		---	20	59	0	20		
2/5	1200	69,500	49	12.6	110	130	7.2	---	---	3.8/0.17	---	0/0.00	74/1.21	---	2.5/0.07	---	---	0.05/---	---		---	13	56	0	80	Maximum 230. Minimum 0.13 Median 6.2	
3/13	1045	33,700	46	13.0	109	146	7.2	---	---	5.6/0.24	---	0/0.00	80/1.31	---	2.8/0.08	---	---	0.10/---	---		---	16	62	0	30		
4/1	1020	48,200	47	14.0	118	124	7.2	---	---	4.1/0.18	---	0/0.00	72/1.18	---	3.0/0.08	---	---	0.00/---	---		---	14	57	0	10		
5/6	1100	36,100	58	10.0	98	103	7.5	11/0.55	4.5/0.37	3.1/0.13	1.1/0.03	0/0.00	58/0.95	2.3/0.05	2.5/0.07	0.2/0.00	0.0/0.00	0.00/---	15/---	PO_4 0.35 Zn 0.01[a] Fe 0.08 Cu 0.01 Al 0.15	69[b]	12	46	0	50		
6/3	1000	31,800	56	10.8	102	96.9	7.6	---	---	3.2/0.14	---	0/0.00	51/0.84	---	0.7/0.02	---	---	0.0/---	---		---	15	41	0	20		
7/8	1050	10,300	70	10.0	111	135	8.2	---	---	5.0/0.22	---	0/0.00	75/1.23	---	3.6/0.10	---	---	0.1/---	---		---	16	58	0	1		
8/5	1110	4,970	74	8.8	104	173	7.4	---	---	8.4/0.37	---	0/0.00	90/1.48	---	4.5/0.13	---	---	0.0/---	---		---	21	70	0	3		
9/9	1045	3,680	69	8.0	88	196	7.4	16/0.80	9.7/0.80	9.3/0.40	1.6/0.04	0/0.00	100/1.64	9.6/0.20	5.5/0.16	0.8/0.01	0.0/0.00	0.2/---	15/---	PO_4 0.00 Zn 0.01[a]	117[b]	20	80	0	5		
10/8	1000	4,960	--	10.0	---	193	7.9	---	---	9.1/0.40	---	0/0.00	103/1.69	---	6.0/0.17	---	---	0.0/---	---		---	20	78	0	3		
11/11	1230	6,320	55	10.2	95	169	8.2	---	---	8.2/0.36	---	0/0.00	88/1.44	---	4.5/0.13	---	---	0.1/---	---		---	21	68	0	10		
12/3	0900	7,300	48	11.3	97	203	7.5	---	---	13/0.57	---	0/0.00	96/1.57	---	5.8/0.16	---	---	0.0/---	---		---	27	76	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH_f	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]
							Mineral constituents in parts per million / equivalents per million																			
							KLAMATH RIVER NEAR SEIAD VALLEY (STA. 2b)																			
1958																										USGS
12/2 1325	4,020	45	12.3	102	239	7.3	14 / 0.70	10 / 0.82	20 / 0.87	2.7 / 0.07	0 / 0.00	103 / 1.69	25 / 0.52	7.5 / 0.21	2.2 / 0.04	0.2 / 0.01	0.1 / ---	33 / ---		166[b]	35	76	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH[f]	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			
1958												KLAMATH RIVER AT SOMESBAR (STA. 2)															USGS
1/8	1345	12,000	44	7.2	59	158	7.5	---	---	9.3 / 0.40	---	0 / 0.00	84 / 1.38	---	3.0 / 0.08	---	---	0.10 / ---	---		---	24	64	0	10	Maximum 1300. Minimum 0.23 Median 6.2	
2/6	1400	23,300	48	12.8	110	155	7.3	---	---	5.5 / 0.24	---	0 / 0.00	90 / 1.48	---	2.8 / 0.08	---	---	0.08 / ---	---		---	14	72	0	20		
3/12	1310	19,100	46	14.0	117	154	7.6	---	---	7.6 / 0.33	---	0 / 0.00	82 / 1.34	---	2.5 / 0.07	---	---	0.01 / ---	---		---	21	64	0	40		
4/2	1205	20,600	47	12.0	102	147	7.9	---	---	6.0 / 0.26	---	0 / 0.00	82 / 1.34	---	3.0 / 0.08	---	---	0.00 / ---	---		---	18	60	0	40		
5/7	1245	19,100	59	10.6	104	101	8.0	10 / 0.50	4.4 / 0.36	3.3 / 0.14	1.2 / 0.03	0 / 0.00	56 / 0.92	3.5 / 0.07	1.0 / 0.03	0.7 / 0.01	0.0 / 0.00	0.00 / ---	14 / ---	PO_4 0.10 Fe 0.05 Al 0.08 [a]	66[b]	14	43	0	20		
6/4	1200	15,400	62	9.2	94	113	8.1	---	---	5.2 / 0.23	---	0 / 0.00	63 / 1.03	---	0.8 / 0.02	---	---	0.0 / ---	---		---	20	45	0	10		
7/9	1315	12,200	75	8.4	98	157	7.6	---	---	8.6 / 0.37	---	0 / 0.00	84 / 1.38	---	4.4 / 0.12	---	---	0.0 / ---	---		---	23	60	0	1		
8/6	1200	5,600	78	8.6	104	206	8.5	---	---	14 / 0.61	---	0 / 0.00	104 / 1.70	---	5.0 / 0.14	---	---	0.1 / ---	---		---	29	74	0	3		
9/10	1215	4,400	70	8.2	91	206	8.6	18 / 0.90	6.6 / 0.54	14 / 0.61	2.3 / 0.06	0 / 0.00	105 / 1.72	5.8 / 0.12	7.5 / 0.21	1.0 / 0.02	0.1 / 0.01	0.3 / ---	20 / ---	PO_4 0.10 Fe 0.01 Zn 0.01 Al 0.01 [a]	128[b]	29	72	0	5		
10/7	1500	5,400	68	11.4	124	178	8.4	---	---	10 / 0.44	---	0 / 0.00	96 / 1.57	---	4.5 / 0.13	---	---	0.0 / ---	---		---	24	69	0	2		
11/12	1110	8,350	51	11.3	100	182	8.3	---	---	12 / 0.52	---	0 / 0.00	94 / 1.54	---	5.5 / 0.16	---	---	0.1 / ---	---		---	28	66	0	5		
12/2	0950	9,550	45	12.3	102	216	7.4	---	---	17 / 0.74	---	0 / 0.00	100 / 1.64	---	5.8 / 0.16	---	---	0.0 / ---	---		---	33	74	0	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										USGS
											MAD RIVER NEAR ARCATA (STA. 6a)															
11/11 1640	830	57	9.9	95	249	8.0	36 / 1.80	6.3 / 0.52	5.9 / 0.26	1.1 / 0.03	0 / 0.00	123 / 2.02	18 / 0.37	5.7 / 0.16	0.3 / 0.00	0.0 / 0.00	0.1 / ---	9.4 / --		144[b]	10	116	15	--	62. / 23.	
12/2 1430	770	57	11.6	105	217	7.7	33 / 1.65	6.2 / 0.51	5.2 / 0.23	0.7 / 0.02	0 / 0.00	112 / 1.84	19 / 0.40	6.5 / 0.18	0.0 / 0.00	0.0 / 0.00	0.1 / ---	14 / --		140[b]	10	108	16	--	23. / 230.	

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

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ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											OUTLET CREEK NEAR LONGVALE (STA. 5b)															USGS
5/19 1330	44	71	8.6	95	194	8.3*	21 1.05	7.4 0.61	10 0.44	1.3 0.03	2 0.07	102 1.67	7.7 0.16	7.2 0.20	0.3 0.00	0.0 0.00	0.6 ---	16 ---	Cu 0.01[a] Total Alkalinity 106	124[b]	21	83	0	--		
6/24 1300	18	77	8.0	95	234	8.0	26 1.30	8.3 0.68	21 0.91	1.7 0.04	2 0.07	145 2.38	7.7 0.16	9.7 0.27	0.3 0.00	0.0 0.00	0.9 ---	9.3 ---	Total Alkalinity 149	158[b]	31	99	0	--		
7/23 1200	4.5	81	7.1	88	269	7.6	28 1.40	10 0.84	12 0.52	1.7 0.04	0 0.00	138 2.26	6.7 0.14	12 0.34	0.6 0.01	0.0 0.00	1.1 ---	6.6 ---		147[b]	18	112	0	--		
8/25 1045	1.4	74	6.0	69	289	7.7	27 1.35	11 0.93	14 0.61	2.9 0.07	0 0.00	139 2.28	6.6 0.14	17 0.48	1.5 0.02	0.1 0.01	1.0 ---	11 ---		160[b]	21	114	0	--		
9/11 1300	1.6	76	---	---	244	7.6	30 1.50	6.6 0.54	10 0.44	1.2 0.03	0 0.00	123 2.02	14 0.29	7.8 0.22	0.4 0.01	0.1 0.01	0.5 ---	9.0 ---		141[b]	18	102	1	--		
10/22 1230	2.5	67	9.3	100	341	7.7	34 1.70	13 1.06	16 0.70	1.4 0.04	0 0.00	162 2.66	7.7 0.16	26 0.73	0.3 0.00	0.1 0.01	2.3 ---	8.3 ---		189[b]	20	138	5	--		
11/12 1200	8.0	61	---	---	368	8.1*	60 2.99	0.1 0.01	16 0.70	1.6 0.04	0 0.00	171 2.80	4.8 0.10	26 0.73	1.0 0.02	0.0 0.00	2.1 ---	8.6 ---	Al 0.09[a]	204[b]	19	150	10	--		
12/21 1120	100	48	10.4	89	310	7.4	30 1.50	13 1.06	15 0.65	1.1 0.03	0 0.00	153 2.51	13 0.27	19 0.54	0.4 0.01	0.3 0.02	0.1 ---	13 ---		180[b]	20	128	3	--		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											REDWOOD CREEK AT ORICK (STA. 3b)															USGS
11/11 1050	194	53	10.1	92	158	7.9	22 / 1.10	3.2 / 0.26	4.7 / 0.20	0.7 / 0.02	0 / 0.00	63 / 1.03	16 / 0.33	6.3 / 0.18	0.4 / 0.01	0.0 / 0.00	0.0 / ---	7.7 / ---		92[b]	13	68	16	--	230. / 230	
12/3 1110	143	53	10.2	93	141	7.2	21 / 1.05	1.6 / 0.13	4.3 / 0.19	0.6 / 0.02	0 / 0.00	57 / 0.93	15 / 0.31	6.0 / 0.17	0.0 / 0.00	0.0 / 0.00	0.0 / ---	10 / ---		86[b]	14	59	12	--	620. / 2400.	

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
											RUSSIAN RIVER AT GUERNEVILLE (STA. 10)															
1/13 1430	9,500	50	10.8	95	141	7.5	---	---	5.8 / 0.25	---	0 / 0.00	76 / 1.25	---	4.8 / 0.14	---	---	0.04 / ---	--		---	17	60	0	200		
2/3 0850	22,500	50	10.6	94	129	7.2	---	---	5.0 / 0.22	---	0 / 0.00	68 / 1.11	---	3.5 / 0.10	---	---	0.18 / ---	--		---	16	56	0	335	Maximum 7000. Minimum 0.045 Median 6.2	
3/10 0820	4,010	50	11.6	102	239	7.2	---	---	8.2 / 0.36	---	0 / 0.00	138 / 2.26	---	5.5 / 0.16	---	---	0.08 / ---	--		---	14	114	1	30		
4/4 1325	29,500	56	10.0	95	139	7.6	---	---	5.9 / 0.26	---	0 / 0.00	74 / 1.31	---	4.5 / 0.13	---	---	0.10 / ---	--		---	18	58	0	300		
5/9 1430	940	65	9.6	102	293	8.4	28 / 1.40	17 / 1.38	9.8 / 0.43	1.7 / 0.04	0 / 0.00	166 / 2.72	13 / 0.27	6.8 / 0.19	0.5 / 0.01	0.0 / 0.00	0.16 / ---	19 / --	Al 0.09 Cu 0.01 PO_4 0.30 a	178[b]	13	139	3	15		
6/6 1415	535	70	9.2	102	280	8.0	---	---	9.4 / 0.41	---	0 / 0.00	153 / 2.51	---	6.0 / 0.17	---	---	0.3 / ---	--		---	14	130	5	6		
7/11 1450	216	77	9.6	114	292	7.8	---	---	9.1 / 0.40	---	0 / 0.00	168 / 2.75	---	6.2 / 0.17	---	---	0.5 / ---	--		---	13	135	0	9		
8/8 1440	168	78	8.0	97	293	8.3	---	---	9.0 / 0.39	---	0 / 0.00	165 / 2.70	---	6.5 / 0.18	---	---	0.5 / ---	--		---	13	136	1	7		
9/12 1400	177	70	8.8	98	288	8.5	28 / 1.40	16 / 1.34	8.3 / 0.36	1.4 / 0.04	0 / 0.00	164 / 2.69	12 / 0.25	5.0 / 0.14	0.5 / 0.01	0.0 / 0.00	0.6 / ---	13 / --	PO_4 0.00 a	166[b]	11	137	3	15		
10/7 1030	256	70	10.0	111	266	7.6	---	---	8.8 / 0.38	---	0 / 0.00	149 / 2.44	---	7.3 / 0.21	---	---	0.6 / ---	--		---	14	121	0	6		
11/10 0950	335	62	9.0	92	262	8.2	---	---	10 / 0.44	---	0 / 0.00	104 / 1.70	---	8.5 / 0.24	---	---	0.8 / ---	--		---	15	122	37	9		
12/5 1100	180	52	10.6	96	313	7.6	---	---	12 / 0.52	---	0 / 0.00	174 / 2.85	---	12 / 0.34	---	---	1.1 / ---	--		---	16	140	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											RUSSIAN RIVER NEAR HEALDSBURG (STA. 9)															USGS
1/13 1600	6,360	50	12.0	106	148	7.6	---	---	5.4 / 0.23	---	0 / 0.00	80 / 1.31	---	1.5 / 0.04	---	---	0.15 / ---	--		---	15	65	0	200	Maximum 7000.+ Minimum 0.62 Median 13.	
2/3 0950	13,000	45	11.2	93	132	7.2	---	---	4.6 / 0.20	---	0 / 0.00	72 / 1.18	---	3.0 / 0.08	---	---	0.08 / ---	--		---	14	59	0	335		
3/10 1000	1,920	53	11.0	101	245	8.3	---	---	7.5 / 0.33	---	0 / 0.00	138 / 2.26	---	4.5 / 0.13	---	---	0.19 / ---	--		---	13	112	0	45		
4/4 1225	16,100	52	10.8	98	137	8.1	---	---	5.0 / 0.22	---	0 / 0.00	80 / 1.31	---	3.0 / 0.08	---	---	0.08 / ---	--		---	15	62	0	600		
5/9 1335	734	65	9.2	97	273	8.5	28 / 1.40	14 / 1.18	8.6 / 0.37	1.7 / 0.04	0 / 0.00	154 / 2.52	12 / 0.25	5.0 / 0.14	0.3 / 0.00	0.0 / 0.00	0.17 / ----	19 / --	Al 0.08 Cu 0.01[a] PO_4 0.15	165[b]	12	129	3	5		
6/6 1320	450	69	9.0	99	260	8.0	---	---	8.3 / 0.36	---	0 / 0.00	148 / 2.43	---	3.8 / 0.11	---	---	0.30 / ---	--		---	13	121	0	6		
7/11 1325	210	75	7.0	82	281	7.5	---	---	8.6 / 0.37	---	0 / 0.00	162 / 2.66	---	6.2 / 0.17	---	---	0.4 / ---	--		---	13	128	0	2		
8/8 1320	175	75	9.0	105	276	8.3	---	---	8.5 / 0.37	---	0 / 0.00	156 / 2.56	---	5.5 / 0.16	---	---	0.5 / ---	--		---	13	126	0	4		
9/12 1310	170	69	8.8	97	262	8.2	26 / 1.30	14 / 1.14	7.4 / 0.32	1.2 / 0.03	0 / 0.00	148 / 2.43	7.7 / 0.16	7.0 / 0.20	0.5 / 0.01	0.0 / 0.00	0.8 / ---	13 / --	Zn 0.01 PO_4 0.00[a]	151[b]	11	122	1	11		
10/7 1130	257	66	9.8	104	245	8.1*	---	---	8.2 / 0.36	---	0 / 0.00	---	---	6.0 / 0.17	---	---	0.6 / ---	--		---	13	116	0	1		
11/10 1100	332	58	9.5	92	242	8.3	---	---	8.0 / 0.35	---	0 / 0.00	136 / 2.23	---	6.8 / 0.19	---	---	0.7 / ---	--		---	14	104	0	5		
12/5 0940	164	52	9.8	94	284	7.5	---	---	9.7 / 0.42	---	0 / 0.00	162 / 2.66	---	9.5 / 0.27	---	---	1.0 / ---	--		---	13	136	3	2		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
										RUSSIAN RIVER NEAR HOPLAND (STA. 8a)																
1/15 1630	1,470	50	11.4	100	168	7.6	---	---	6.7 / 0.29	---	0 / 0.00	92 / 1.51	---	5.0 / 0.14	---	---	0.04 / ---	--		---	17	73	0	40	Maximum 7000.+ Minimum 2.3 Median 62.	
2/3 1130	6,000	46	10.6	89	123	7.3	---	---	5.0 / 0.22	---	0 / 0.00	64 / 1.05	---	3.0 / 0.08	---	---	0.00 / ---	--		---	17	52	0	165		
3/10 1120	990	53	11.2	103	202	7.6	---	---	6.6 / 0.29	---	0 / 0.00	110 / 1.80	---	5.0 / 0.14	---	---	0.08 / ---	--		---	14	89	0	40		
4/4 1105	6,700	51	10.4	93	120	7.4	---	---	5.1 / 0.22	---	0 / 0.00	70 / 1.15	---	3.5 / 0.10	---	---	0.08 / ---	---		---	16	56	0	325		
5/9 1130	332	65	9.8	104	207	8.4	22 / 1.10	9.5 / 0.78	7.6 / 0.33	1.7 / 0.04	0 / 0.00	111 / 1.82	11 / 0.23	4.8 / 0.14	0.5 / 0.01	0.0 / 0.00	0.12 / ---	17 / --	a Fe 0.02 Al 0.06 Cu 0.01 PO_4 0.10	129[b]	15	94	3	20		
6/6 1120	270	65	9.0	95	187	7.9	---	---	6.4 / 0.28	---	0 / 0.00	102 / 1.67	---	2.4 / 0.07	---	---	0.20 / ---	--		---	14	85	1	6		
7/11 1140	175	75	8.0	93	196	7.7	---	---	6.8 / 0.30	---	0 / 0.00	109 / 1.79	---	5.6 / 0.16	---	---	0.2 / ---	--		---	15	85	0	2		
8/8 1140	184	74	9.8	114	191	8.3	---	---	7.4 / 0.32	---	0 / 0.00	100 / 1.64	---	6.5 / 0.18	---	---	0.7 / ---	--		---	17	80	0	3		
9/12 1130	228	66	9.0	96	167	8.0	19 / 0.95	7.2 / 0.59	4.6 / 0.20	0.9 / 0.02	0 / 0.00	92 / 1.51	5.8 / 0.12	3.5 / 0.10	0.5 / 0.01	0.0 / 0.00	0.3 / ---	10 / --	a Zn 0.01 PO_4 0.00	97[b]	11	77	2	15		
10/7 1420	278	70	9.8	109	191	7.4	---	---	6.7 / 0.29	---	0 / 0.00	107 / 1.75	---	4.8 / 0.14	---	---	0.3 / ---	--		---	15	84	0	5		
11/10 1220	270	57	10.1	97	197	8.2	---	---	6.0 / 0.26	---	0 / 0.00	110 / 1.80	---	4.8 / 0.14	---	---	0.5 / ---	--		---	13	88	0	5		
12/5 0820	149	49	9.4	82	228	7.3	---	---	7.8 / 0.34	---	0 / 0.00	128 / 2.10	---	6.5 / 0.18	---	---	0.5 / ---	--		---	14	102	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958																										USGS
									RUSSIAN RIVER NEAR UKIAH (STA. 10b)																	
1/15 1600	360*	50	12.0	105	189	7.5	---	---	6.8 / 0.30	---	0 / 0.00	104 / 1.70	---	5.0 / 0.14	---	---	0.04 / ---	--		---	16	80	0	12	Maximum 2400. Minimum 0.23 Median 62.	
2/3 1145	1070	50	11.4	100	133	7.2	---	---	5.1 / 0.22	---	0 / 0.00	72 / 1.18	---	2.5 / 0.07	---	---	0.01 / ---	--		---	15	61	2	110		
3/10 1150	160*	52	12.0	109	204	8.0	---	---	6.8 / 0.30	---	0 / 0.00	116 / 1.90	---	5.2 / 0.15	---	---	0.12 / ---	--		---	14	90	0	30		
4/4 1025	2100	50	11.0	97	207	8.3	---	---	6.0 / 0.26	---	0 / 0.00	118 / 1.93	---	3.5 / 0.10	---	---	0.03 / ---	--		---	12	92	0	80		
5/9 1015	47	61	9.4	95	249	8.2	29 / 1.45	10 / 0.85	8.0 / 0.35	1.1 / 0.03	0 / 0.00	138 / 2.26	12 / 0.25	6.2 / 0.17	0.5 / 0.01	0.1 / 0.01	0.16 / ---	15 / --	Fe 0.02 Al 0.03 Pb 0.01 Zn 0.01 PO_4 0.15 a	150[b]	13	115	2	20		
6/6 1030	20	62	9.4	96	205	8.1	---	---	7.2 / 0.31	---	0 / 0.00	115 / 1.88	---	3.5 / 0.10	---	---	0.1 / ---	--		---	14	92	0	6		
7/11 1020	4.6	70	9.0	100	188	7.5	---	---	8.8 / 0.38	---	0 / 0.00	94 / 1.54	---	9.7 / 0.27	---	---	0.2 / ---	--		---	20	75	0	2		
8/8 1020	1.4	72	8.0	91	177	8.2	---	---	7.8 / 0.34	---	0 / 0.00	90 / 1.48	---	8.2 / 0.23	---	---	0.2 / ---	--		---	19	72	0	3		
9/12 1100	0.3	65	9.0	85	155	8.0	18 / 0.90	6.6 / 0.54	4.6 / 0.20	1.2 / 0.03	0 / 0.00	86 / 1.41	7.7 / 0.16	3.8 / 0.11	0.0 / 0.00	0.1 / 0.01	0.2 / ---	14 / --	PO_4 0.05 a	98[b]	12	72	1	8		
10/7 1525	1.9	72	9.2	104	182	7.6	---	---	6.0 / 0.26	---	0 / 0.00	102 / 1.67	---	5.0 / 0.14	---	---	0.2 / ---	--		---	14	80	0	80		
11/			DISCONTINUED																							
	* Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							RUSSIAN RIVER, EAST FORK NEAR CALPELLA (STA. 8)																			USGS
1/15 1200	600	46	12.6	105	172	7.5	---	---	5.8/0.25	---	0/0.00	94/1.54	---	3.0/0.08	---	---	0.16/---	--		---	14	76	0	29		
2/3 1345	1,950	48	11.4	98	128	7.4	---	---	4.4/0.19	---	0/0.00	72/1.18	---	2.5/0.07	---	---	0.10/---	--		---	15	55	0	200	Maximum 7000.+ Minimum 13. Median 180.	
3/10 1410	475	50	13.0	115	168	7.8	---	---	5.1/0.22	---	0/0.00	94/1.54	---	3.5/0.10	---	---	0.08/---	--		---	13	75	0	80		
4/4 0950	1,740	48	11.4	98	136	8.0	---	---	4.8/0.21	---	0/0.00	72/1.18	---	2.8/0.08	---	---	0.02/---	--		---	15	58	0	325		
5/9 0935	304	58	9.8	95	160	8.1	18/0.90	6.6/0.54	5.0/0.22	1.3/0.03	0/0.00	88/1.44	9.6/0.20	2.7/0.08	0.1/0.00	0.0/0.00	0.04/---	16/--	Fe 0.06 Al 0.13 a Cu 0.02 PO_4 0.10	102[b]	13	72	0	30		
6/6 0950	250	60	10.0	100	152	8.2	---	---	5.0/0.22	---	0/0.00	84/1.38	---	1.3/0.04	---	---	0.1/---	--		---	14	66	0	6		
7/11 0945	156	65	9.4	100	157	7.4	---	---	4.8/0.21	---	0/0.00	88/1.44	---	2.9/0.08	---	---	0.2/---	--		---	13	68	0	2		
8/8 0945	180	68	6.0	65	156	8.3	---	---	4.7/0.20	---	0/0.00	84/1.38	---	3.0/0.08	---	---	0.2/---	--		---	13	68	0	3		
9/12 0950	295	62	9.0	92	153	7.5	18/0.90	5.8/0.48	4.8/0.21	0.8/0.02	0/0.00	84/1.38	5.8/0.12	3.0/0.08	0.4/0.01	0.0/0.00	0.4/---	12/--	PO_4 0.00 a	92[b]	13	69	0	31		
10/7 1610	280	70	9.2	102	177	7.6	---	---	5.4/0.23	---	0/0.00	97/1.59	---	4.5/0.13	---	---	0.2/---	--		---	13	77	0	2		
11/	DISCONTINUED																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										USGS
							RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE (STA. 10a)																			
1/15 1130	292	45	12.2	101	123	7.6	---	---	4.8 / 0.21	---	0 / 0.00	67 / 1.10	---	2.0 / 0.06	---	---	0.04 / ---	--		---	16	54	0	20	Maximum 62. Minimum 0.6 Median 13.	
2/3 1300	296	47	11.8	100	109	7.4	---	---	3.9 / 0.17	---	0 / 0.00	58 / 0.95	---	2.0 / 0.06	---	---	0.10 / ---	--		---	14	53	5	55		
3/10 1330	298	49	12.4	108	111	7.7	---	---	3.4 / 0.15	---	0 / 0.00	62 / 1.02	---	2.2 / 0.06	---	---	0.02 / ---	--		---	14	48	0	30		
4/4 0920	293	47	12.0	102	105	8.1	---	---	3.2 / 0.14	---	0 / 0.00	58 / 0.95	---	2.5 / 0.07	---	---	0.05 / ---	--		---	13	46	0	105		
5/9 0900	254	56	9.2	87	130	7.8	14 / 0.70	5.1 / 0.42	4.7 / 0.20	1.1 / 0.03	0 / 0.00	72 / 1.18	3.8 / 0.08	3.4 / 0.10	0.2 / 0.00	0.0 / 0.00	0.17 / ---	13 / --	Fe 0.08 Al 0.13 Zn 0.01 PO_4 0.50 a	80[b]	15	56	0	30		
6/6 0915	231	58	9.4	91	131	8.3	---	---	4.1 / 0.18	---	0 / 0.00	71 / 1.16	---	1.5 / 0.04	---	---	0.1 / ---	--		---	13	58	0	10		
7/11 0910	171	65	9.2	97	130	7.5	---	---	3.6 / 0.16	---	0 / 0.00	73 / 1.20	---	3.4 / 0.10	---	---	0.1 / ---	--		---	12	58	0	2		
8/8 0910	193	67	8.6	94	133	8.5	---	---	3.8 / 0.17	---	0 / 0.00	73 / 1.20	---	2.5 / 0.07	---	---	0.0 / ---	--		---	13	58	0	3		
9/12 0915	301	60	8.4	84	144	8.6	18 / 0.90	5.6 / 0.46	3.9 / 0.17	0.9 / 0.02	0 / 0.00	83 / 1.36	3.8 / 0.08	2.8 / 0.08	0.5 / 0.01	0.1 / 0.01	0.1 / ---	14 / --	Cu 0.02 PO_4 0.05 a	91[b]	11	68	0	1		
10/7 1700	302	70	9.6	107	171	7.6	---	---	5.1 / 0.22	---	0 / 0.00	95 / 1.56	---	4.6 / 0.13	---	---	0.2 / ---	--		---	12	77	0	1		
11/10 1430	305	58	9.4	91	182	8.0	---	---	5.0 / 0.22	---	0 / 0.00	102 / 1.67	---	4.5 / 0.13	---	---	0.3 / ---	--		---	12	84	0	8		
12/4 1000	88	50	10.3	90	207	7.5	---	---	6.2 / 0.27	---	0 / 0.00	118 / 1.93	---	5.5 / 0.16	---	---	0.4 / ---	--		---	12	96	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958											SALMON RIVER AT SOMESBAR (STA. 2a)															USGS
11/12 1200	310	50	11.5	101	123	8.6	16 / 0.80	3.6 / 0.30	3.3 / 0.14	0.7 / 0.02	0 / 0.00	69 / 1.13	3.8 / 0.08	4.0 / 0.11	0.1 / 0.00	0.0 / 0.00	0.0 / ---	16 / --		82[b]	11	55	0	--	0.62 0.23	
12/2 1040	400	44	12.4	101	107	7.5	14 / 0.70	4.4 / 0.36	2.5 / 0.11	0.4 / 0.01	0 / 0.00	58 / 0.95	7.7 / 0.16	3.2 / 0.09	0.0 / 0.00	0.0 / 0.00	0.0 / ---	15 / --		76[b]	9	53	5	--	50. 23.	

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											SCOTT RIVER NEAR FORT JONES (STA. 1b)															USGS
6/9 1615	785**	57	---	---	118	7.7*	11 / 0.55	6.9 / 0.57	2.2 / 0.10	0.7 / 0.02	0.0 / 0.00	72 / 1.18	0.6 / 0.01	0.4 / 0.01	1.9 / 0.03	0.1 / 0.01	0.0 / ---	14 / ---		73[b]	8	56	0	--		
9/9 0925	90**	61	9.2	93	301	8.1*	33 / 1.65	16 / 1.35	4.6 / 0.20	1.0 / 0.02	0.0 / 0.00	179 / 2.93	4.8 / 0.10	3.3 / 0.09	3.2 / 0.05	0.0 / 0.00	0.04 / ----	20 / ---		174[b]	6	150	3	--		
12/2 1515	53**	50	10.7	94	227	7.8*	24 / 1.20	14 / 1.16	4.2 / 0.18	0.4 / 0.01	0.0 / 0.00	139 / 2.28	8.6 / 0.18	4.5 / 0.13	0.9 / 0.01	0.0 / 0.00	0.0 / ---	22 / ---		147[b]	7	118	4	--	62. 23.	

**Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported [illegible] as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											SHASTA RIVER NEAR YREKA (STA. 1a)															USGS
12/2 1125	168	47	12.0	102	510	8.1	28 / 1.40	31 / 2.56	42 / 1.83	2.6 / 0.07	0 / 0.00	298 / 4.88	13 / 0.27	26 / 0.73	0.9 / 0.01	0.2 / 0.01	0.6 / ---	59 / ---		350[b]	31	198	0	--		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
							SMITH RIVER NEAR CRESCENT CITY (STA. 3a)																			
1/9 1345	3,000	49	6.8	59	91.0	7.5	----	----	2.9/0.13	---	0/0.00	52/0.85	---	3.0/0.08	---	---	0.04/---	--		---	13	44	1	4	Maximum 23. Minimum 0.06 Median 0.62	
2/5 1400	7,500	49	12.8	111	77.7	7.3	----	----	1.6/0.07	---	0/0.00	42/0.69	---	3.0/0.08	---	---	0.05/---	--		---	8	38	4	10		
3/13 1240	2,850	47	12.4	105	84.2	7.6	----	----	2.2/0.10	---	0/0.00	46/0.75	---	4.2/0.12	---	---	0.00/---	--		---	11	40	2	4		
4/1 1210	12,600	49	12.2	106	74.6	7.8	----	----	1.6/0.07	---	0/0.00	40/0.66	---	3.5/0.10	---	---	0.00/---	--		---	9	37	4	55		
5/6 1345	2,300	57	10.8	104	88.5	8.0	6.0/0.30	7.3/0.60	1.4/0.06	0.6/0.02	0/0.00	49/0.80	4.8/0.10	2.3/0.06	0.0/0.00	0.0/0.00	0.00/---	14/--	PO_4 0.00; Al 0.04 a	60[b]	6	45	5	3		
6/3 1130	1,150	58	10.6	103	96.0	7.9	----	----	2.2/0.10	---	0/0.00	51/0.84	---	1.5/0.04	---	---	0.0/---	--		---	10	48	6	2		
7/8 1330	880	69	11.1	122	119	7.6	----	----	2.1/0.09	---	0/0.00	69/1.13	---	4.8/0.14	---	---	0.0/---	--		---	7	56	0	1		
8/5 1240	695	74	10.0	116	132	8.3	----	----	2.3/0.10	---	0/0.00	77/1.26	---	4.2/0.12	---	---	0.0/---	--		---	7	64	1	3		
9/9 1245	705	66	9.2	98	139	8.6	8.0/0.40	12/1.00	2.4/0.10	0.3/0.01	0/0.00	79/1.29	3.8/0.08	4.5/0.13	0.2/0.00	0.0/0.00	0.1/---	11/---	PO_4 0.00 a	81[b]	7	70	5	2		
10/8 0930	217	54	10.4	96	144	8.0	----	----	2.9/0.13	---	0/0.00	81/1.33	---	5.4/0.15	---	---	0.0/---	--		---	9	69	3	0.8		
11/11 1400	1,988	50	11.4	100	110	8.2	----	----	1.6/0.07	---	0/0.00	64/1.05	---	4.5/0.13	---	---	0.1/---	--		---	6	56	4	5		
12/3 0740	1,030	52	11.4	103	107	7.3	----	----	2.0/0.09	---	0/0.00	60/0.98	---	3.2/0.09	---	---	0.0/---	--		---	8	54	5	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							TRINITY RIVER NEAR BURNT RANCH (STA. 4b)																			USGS
4/17 1530	10,900	51	9.6	86	105	7.7	10 / 0.50	5.8 / 0.48	2.7 / 0.12	0.9 / 0.02	0 / 0.00	59 / 0.97	3.8 / 0.08	0.5 / 0.01	0.8 / 0.01	0.3 / 0.02	0.00 / ---	17 / ---		71[b]	11	49	1	--		
5/20 1900	13,500	52	9.6	87	64.6	7.9*	5.6 / 0.28	3.9 / 0.32	1.3 / 0.06	0.5 / 0.01	0 / 0.00	36 / 0.59	2.9 / 0.06	0.8 / 0.02	0.5 / 0.01	0.0 / 0.00	0.0 / ---	12 / ---	Fe 0.07 Al 0.16[a]	46[b]	9	30	0	--		
6/26 0830	5,100	64	8.3	87	74.3	7.4	6.8 / 0.34	4.4 / 0.36	1.8 / 0.08	0.4 / 0.01	0 / 0.00	41 / 0.67	1.0 / 0.02	2.4 / 0.07	0.1 / 0.00	0.0 / 0.00	0.0 / ---	11 / ---		48[b]	10	35	1	--		
7/25 0845	2,410	72	7.9	90	102	7.2	10 / 0.50	5.1 / 0.42	2.9 / 0.13	0.6 / 0.02	0 / 0.00	56 / 0.92	3.1 / 0.06	2.1 / 0.07	0.1 / 0.00	0.0 / 0.00	0.03 / ---	12 / ---		64[b]	12	46	0	--		
8/26 1130	570	76	6.8	80	172	7.8	16 / 0.80	8.3 / 0.68	7.6 / 0.33	0.8 / 0.02	0 / 0.00	89 / 1.46	4.6 / 0.10	9.8 / 0.28	0.9 / 0.01	0.1 / 0.01	0.0 / ---	14 / ---		105[b]	18	74	1	--		
9/10 0930	272	68	---	---	193	7.7	18 / 0.90	9.2 / 0.76	6.0 / 0.26	0.8 / 0.02	0 / 0.00	98 / 1.61	7.2 / 0.15	6.0 / 0.17	0.5 / 0.01	0.1 / 0.01	0.15 / ---	13 / ---		109[b]	13	83	3	--		
10/23 1430	386	56	7.6	72	191	8.1	17 / 0.85	9.5 / 0.78	6.5 / 0.28	0.8 / 0.02	0 / 0.00	94 / 1.54	6.7 / 0.14	9.6 / 0.27	0.2 / 0.00	0.1 / 0.01	0.0 / ---	14 / ---		110[b]	15	82	5	--		
11/12 1630	390	51	11.0	98	190	8.0*	18 / 0.90	9.5 / 0.78	6.2 / 0.27	0.7 / 0.02	0 / 0.00	98 / 1.61	7.1 / 0.15	10 / 0.28	0.0 / 0.00	0.0 / 0.00	0.0 / ---	13 / ---	Al 0.06[a]	112[b]	14	84	0	--		
12/1 1520	495	45	12.1	100	174	7.5	17 / 0.85	8.9 / 0.73	5.8 / 0.25	0.3 / 0.01	0 / 0.00	85 / 1.39	9.6 / 0.20	9.0 / 0.25	0.0 / 0.00	0.0 / 0.00	0.0 / ---	14 / ---		107[b]	14	79	9	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											TRINITY RIVER NEAR HOOPA (STA. 4)															USGS
1/8 1102	7,800	44	6.7	55	156	7.7	---	---	3.8 / 0.17	---	0 / 0.00	86 / 1.41	---	2.5 / 0.07	---	---	0.05 / ---	---		---	10	73	2	13	Maximum 1300. Minimum 0.23 Median 3.65	
2/6 1110	40,000	49	12.8	111	129	7.3	---	---	2.8 / 0.12	---	0 / 0.00	74 / 1.21	---	1.5 / 0.04	---	---	0.05 / ---	---		---	9	62	1	180		
3/12 1145	12,700	48	13.0	112	143	7.4	---	---	2.9 / 0.13	---	0 / 0.00	84 / 1.38	---	2.8 / 0.08	---	---	0.07 / ---	---		---	8	70	1	30		
4/2 1040	22,000	49	12.0	104	128	7.6	---	---	2.4 / 0.10	---	0 / 0.00	76 / 1.25	---	2.5 / 0.07	---	---	0.00 / ---	---		---	7	62	0	140		
5/7 1045	15,200	55	10.6	99	97.1	8.0	10 / 0.50	4.9 / 0.40	1.9 / 0.08	0.8 / 0.02	0 / 0.00	54 / 0.89	2.9 / 0.06	1.2 / 0.03	0.1 / 0.00	0.0 / 0.00	0.00 / ---	17 / ---	PO_4 0.10 Fe 0.10[a] Al 0.16	66[b]	8	45	1	30		
6/4 1015	11,000	55	11.0	103	89.5	8.0	---	---	2.0 / 0.09	---	0 / 0.00	48 / 0.79	---	0.5 / 0.01	---	---	0.0 / ---	---		---	9	45	6	60		
7/9 1050	3,640	68	10.1	110	110	6.2	---	---	2.5 / 0.11	---	0 / 0.00	62 / 1.02	---	3.5 / 0.10	---	---	0.0 / ---	---		---	10	51	0	3		
8/6 1015	1,520	73	9.4	96	156	8.2	---	---	3.8 / 0.17	---	0 / 0.00	85 / 1.39	---	5.5 / 0.16	---	---	0.0 / ---	---		---	11	72	2	3		
9/10 1010	740	69	8.0	88	203	8.1	22 / 1.10	9.7 / 0.80	4.8 / 0.21	0.8 / 0.02	0 / 0.00	106 / 1.74	8.6 / 0.18	7.0 / 0.20	0.2 / 0.00	0.0 / 0.00	0.2 / ---	11 / ---	PO_4 0.00[a]	116[b]	10	95	8	1		
10/7 1300	520	69	9.2	101	224	7.9	---	---	6.0 / 0.26	---	0 / 0.00	115 / 1.88	---	9.0 / 0.25	---	---	0.0 / ---	---		---	12	100	6	0.5		
11/12 0920	390	53	10.4	95	216	8.4	---	---	5.9 / 0.26	---	0 / 0.00	112 / 1.84	---	9.5 / 0.27	---	---	0.0 / ---	---		---	12	98	6	5		
12/2 0750	954	47	11.7	99	194	7.5	---	---	5.2 / 0.23	---	0 / 0.00	104 / 1.70	---	8.0 / 0.23	---	---	0.0 / ---	---		---	11	90	5	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10
ANALYSES OF SURFACE WATER
NORTH COASTAL REGION (1)

TRINITY RIVER AT LEWISTON (STA. 4a)

Mineral constituents are given as parts per million / equivalents per million.

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										USGS
1/16 1030	2,740	42	---	---	106	7.3	---	---	3.8/0.17	---	0/0.00	66/1.08	---	3.0/0.08	---	---	0.14/---	--		---	16	49	0	5		
2/10 1000	7,230	48	11.3	97	78.2	7.2	---	---	2.2/0.10	---	0/0.00	48/0.79	---	1.5/0.04	---	---	0.03/---	--		---	12	38	0	20	Maximum 620. Minimum 0.06 Median 23.	
3/4 0915	4,200	44	12.7	103	88.6	7.2	---	---	2.8/0.12	---	0/0.00	49/0.80	---	2.6/0.07	---	---	0.07/---	--		---	13	39	0	25		
4/14 1100	6,070	48	12.0	103	87.8	7.3	---	---	2.8/0.12	---	0/0.00	50/0.82	---	2.0/0.06	---	---	0.17/---	--		---	13	38	0	65		
5/13 0920	7,840	46	12.3	102	64.7	7.2	4.2/0.21	4.7/0.39	1.3/0.06	0.7/0.02	0/0.00	37/0.61	1.9/0.04	0.5/0.01	0.1/0.00	0.0/0.00	0.00/---	17/--	Fe 0.07 Al 0.12 PO_4 0.05 [a]	48[b]	9	30	0	30		
6/10 0915	4,850	52	12.9	116	62.9	7.3	---	---	2.0/0.09	---	0/0.00	35/0.57	---	0.5/0.01	---	---	0.0/---	--		---	14	27	0	8		
7/2 1500	1,420	62	9.0	92	74.0	7.3	---	---	1.8/0.08	---	0/0.00	41/0.67	---	2.5/0.07	---	---	0.0/---	--		---	11	32	0	1		
8/7 1030	394	74	8.1	94	111	7.6	---	---	3.3/0.14	---	0/0.00	60/0.98	---	4.5/0.13	---	---	0.0/---	--		---	12	50	1	4		
9/4 1300	405	70	8.8	98	140	7.3	9.2/0.46	9.7/0.80	5.4/0.23	1.6/0.04	0/0.00	77/1.26	6.7/0.14	5.2/0.15	0.2/0.00	0.1/0.01	0.0/---	18/--	Fe 0.04 PO_4 0.00 [a]	94[b]	15	63	0	4		
10/6 1420	852	68	9.1	99	157	7.6	---	---	5.6/0.24	---	0/0.00	85/1.39	---	8.2/0.23	---	---	0.0/---	--		---	15	67	0	1		
11/5 1400	825	58	10.0	97	162	7.7	---	---	6.4/0.28	---	0/0.00	84/1.38	---	8.8/0.25	---	---	0.0/---	--		---	17	68	0	5		
12/1 1320	1,240	44	12.2	99	151	7.4	---	---	6.5/0.28	---	0/0.00	80/1.31	---	7.5/0.21	---	---	0.0/---	--		---	18	66	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-10

ANALYSES OF SURFACE WATER

NORTH COASTAL REGION (1)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	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			
1958																										
											VAN DUZEN RIVER NEAR BRIDGEVILLE (STA. 5a)															
4/16 1810	1640	51	9.7	87	89.4	8.0	8.8 / 0.44	4.9 / 0.40	2.7 / 0.12	1.0 / 0.03	0 / 0.00	50 / 0.82	7.7 / 0.16	0.5 / 0.01	0.6 / 0.01	0.2 / 0.01	0.00 / ---	11 / --		62[b]	12	42	1	---		USGS
5/20 1100	300	65	8.7	92	123	8.1*	16 / 0.80	3.9 / 0.32	3.6 / 0.16	0.8 / 0.02	0 / 0.00	69 / 1.13	5.8 / 0.12	1.5 / 0.04	0.4 / 0.01	0.0 / 0.00	0.1 / ---	13 / --		79[b]	12	56	0	---		USGS
6/25 1050	96	69	8.3	91	174	7.7	22 / 1.10	6.6 / 0.54	4.1 / 0.18	0.8 / 0.02	0 / 0.00	95 / 1.56	13 / 0.27	2.4 / 0.07	0.2 / 0.00	0.0 / 0.00	0.0 / ---	12 / --		108[b]	10	82	4	---		USGS
7/24 1000	39	69	7.6	84	208	7.2	30 / 1.50	5.6 / 0.46	5.4 / 0.23	1.0 / 0.02	0 / 0.00	112 / 1.84	11 / 0.23	3.3 / 0.04	0.1 / 0.00	0.1 / 0.01	0.13 / ---	10 / --		122[b]	10	98	6	---		DWR
8/26 1120	14	80	8.4	104	240	7.7	30 / 1.50	7.5 / 0.62	7.6 / 0.33	1.2 / 0.03	0 / 0.00	123 / 2.02	16 / 0.33	3.9 / 0.11	0.9 / 0.01	0.2 / 0.01	0.14 / ---	7.5 / --		135[b]	13	106	5	---		DWR
9/9 0830	6.4	64	---	---	256	7.6	32 / 1.60	7.8 / 0.64	7.5 / 0.33	1.7 / 0.04	0 / 0.00	131 / 2.15	13 / 0.27	4.9 / 0.14	1.0 / 0.02	0.1 / 0.01	0.09 / ---	8.5 / --		141[b]	13	112	5	---		DWR
10/23 0930	16	51	10.0	90	247	7.4	33 / 1.65	6.9 / 0.57	7.5 / 0.33	0.8 / 0.02	0 / 0.00	128 / 2.10	16 / 0.33	4.9 / 0.14	0.0 / 0.00	0.1 / 0.01	0.0 / ---	9.8 / ---		142[b]	13	111	6	---		USGS
11/13 1000	64	52	---	---	222	7.3	29 / 1.45	5.7 / 0.47	5.6 / 0.24	1.1 / 0.03	0 / 0.00	108 / 1.77	17 / 0.35	2.3 / 0.06	0.6 / 0.01	0.0 / 0.00	0.18 / ---	7.9 / --	Fe 0.01 a	122[b]	11	96	8	---		DWR
12/22 0945	239	44	10.2	83	161	7.2	20 / 1.00	5.1 / 0.42	5.9 / 0.26	1.3 / 0.03	0 / 0.00	70 / 1.15	19 / 0.40	4.5 / 0.13	0.6 / 0.01	0.2 / 0.01	0.1 / ---	10 / --		101[b]	15	71	14	---		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											ALAMEDA CREEK NEAR NILES (STA. 73)															USGS
1/23 0935	2.2	44	12.4	101	1,140	8.3	---	---	86 / 3.74	---	14 / 0.47	352 / 5.77	---	125 / 3.52	---	---	0.70 / ---	--	Total Alkalinity 380	---	31	420	108	3	Maximum 700. Minimum 0.23 Median 13.	
2/13 1050	762	52	10.9	99	378	8.0	---	---	24 / 1.04	---	0 / 0.00	160 / 2.62	---	20 / 0.56	---	---	0.21 / ---	--		---	27	142	11	120		
3/12 1340	41	54	11.2	104	734	8.3	---	---	49 / 2.13	---	0 / 0.00	284 / 4.65	---	49 / 1.38	---	---	0.53 / ---	--		---	27	283	50	4		
4/16 0900	532	59	10.1	99	479	8.1	---	---	26 / 1.13	---	0 / 0.00	205 / 3.36	---	24 / 0.68	---	---	0.22 / ---	--		---	23	184	16	40		
5/16 1050	34	68	9.4	102	828	8.5	72 / 3.59	36 / 2.99	58 / 2.52	3.7 / 0.09	5 / 0.17	316 / 5.18	106 / 2.21	52 / 1.47	4.1 / 0.07	0.2 / 0.01	0.62 / ---	17 / --	Al 0.02 PO_4 0.30 Zn 0.01 Total Alkalinity 326 a	511[b]	27	329	62	1		
6/18 0730	7.8	70	6.9	78	892	8.1	---	---	77 / 3.35	---	0 / 0.00	255 / 4.18	---	68 / 1.92	---	---	1.0 / ---	--		---	35	316	107	4		
7/15 1520	5.6	68	9.1	99	858	7.9	---	---	68 / 2.96	---	0 / 0.00	292 / 4.79	---	67 / 1.89	---	---	0.9 / ---	--		---	35	277	36	0.4		
8/14 1020	2.4	72	7.3	83	872	7.9	---	---	69 / 3.00	---	0 / 0.00	310 / 5.08	---	64 / 1.80	---	---	0.7 / ---	--		---	32	318	64	4		
9/8 1150	0.7	74	8.4	97	943	8.0	66 / 3.29	40 / 3.31	79 / 3.44	6.4 / 0.16	0 / 0.00	319 / 5.23	150 / 3.12	61 / 1.72	0.7 / 0.01	0.4 / 0.02	1.0 / ---	18 / --	PO_4 0.00 a	580[b]	34	335	73	2		
10/22 1300	0.3	64	10.4	108	913	7.7	---	---	78 / 3.39	---	0 / 0.00	312 / 5.11	---	50 / 1.41	---	---	1.0 / ---	--		---	34	328	72	5		
11/17 1340	0.9	48	11.9	102	920	7.8	---	---	70 / 3.04	---	0 / 0.00	330 / 5.41	---	44 / 1.24	---	---	0.8 / ---	--		---	30	356	85	4		
12/10 1100	0.8	51	11.7	104	962	7.7	---	---	62 / 2.70	---	0 / 0.00	351 / 5.75	---	46 / 1.30	---	---	0.7 / ---	--		---	26	380	92	3		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ARROYO DEL VALLE AT VETERANS ADMINISTRATION HOSPITAL (STA. 71)																			USGS
7/24 1500	0.4	84	8.7	112	850	7.7	65 / 3.24	41 / 3.34	59 / 2.57	3.9 / 0.10	0 / 0.00	309 / 5.06	106 / 2.21	62 / 1.75	0.0 / 0.00	0.1 / 0.01	0.8 / ---	14 / ---		504[b]	28	329	76	--		
8/4 1100	1.6	77	10.0	119	904	7.7	74 / 3.69	43 / 3.57	64 / 2.78	3.3 / 0.08	0 / 0.00	345 / 5.65	109 / 2.27	66 / 1.86	1.2 / 0.02	0.0 / 0.00	0.9 / ---	23 / ---		554[b]	27	363	80	--		
9/8 1115	0.6	72	7.5	85	1,070	7.8	83 / 4.14	48 / 3.86	76 / 3.31	8.0 / 0.20	0 / 0.00	381 / 6.24	134 / 2.79	92 / 2.59	0.0 / 0.00	0.3 / 0.02	1.2 / ---	27 / ---	PO_4 0.00 [a]	656[b]	29	400	88	--		
10/22 1340	0	64	4.1	41	1,310	7.3	90 / 4.49	62 / 5.11	111 / 4.83	3.9 / 0.10	0 / 0.00	426 / 6.98	154 / 3.21	146 / 4.12	0.4 / 0.01	0.2 / 0.01	1.8 / ---	29 / ---		808[b]	33	480	131	--		
12/10 1200	0.1	53	7.8	71	1,410	7.6	115 / 5.74	58 / 4.78	114 / 4.96	3.0 / 0.08	0 / 0.00	459 / 7.52	169 / 3.52	156 / 4.40	0.2 / 0.00	0.2 / 0.01	1.8 / ---	27 / ---		870[b]	32	526	150	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
											CARQUINEZ STRAITS AT MARTINEZ (STA. 28a)															
1958	Tidal																									USBR
1/3 1323		50	---	---	15,177		---	---	---	---	---	---	---	---	---	---	---	--		9,860	--	---	---	--		
1/27 1025		50	---	---	7,822		---	---	---	---	---	---	---	---	---	---	---	--		4,688	--	---	---	--		
2/24 1145		58	---	---	233		---	---	---	---	---	---	---	---	---	---	---	--		140	--	---	---	--		
4/1 1015		54	---	---	270		---	---	---	---	---	---	---	---	---	---	---	--		208	--	---	---	--		
4/28 1200		64	---	---	1,994		---	---	---	---	---	---	---	---	---	---	---	--		1,156	--	---	---	--		
5/26 1055		68	---	---	646		---	---	---	---	---	---	---	---	---	---	---	--		404	--	---	---	--		
7/2 0940		--	---	---	4,189		---	---	---	---	---	---	---	---	---	---	---	--		2,612	--	---	---	--		
7/29 1105		67	---	---	6,525		---	---	---	---	---	---	---	---	---	---	---	--		5,412	--	---	---	--		
8/26 1030		76	---	---	11,471		---	---	---	---	---	---	---	---	---	---	---	--		8,160	--	---	---	--		
9/30 1025		69	---	---	11,329		---	---	---	---	---	---	---	---	---	---	---	--		7,128	--	---	---	--		
10/29 1000		--	---	---	10,695		---	---	---	---	---	---	---	---	---	---	---	--		6,948	--	---	---	--		
11/24 1225		56	---	---	19,342		---	---	---	---	---	---	---	---	---	---	---	--		12,912	--	---	---	--		
12/10 1100		54	---	---	16,120		---	---	---	---	---	---	---	---	---	---	---	--		10,472	--	---	---	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

COYOTE CREEK NEAR MADRONE (STA. 82)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
1/24 1005	18	51	10.8	97	393	8.0	---	---	17 / 0.74	---	0 / 0.00	186 / 3.05	---	12 / 0.34	---	---	0.01 / ---	--		---	18	170	17	12	Maximum 7000.+ Minimum 0.045- Median 6.2	
2/13 1220	7.2	56	13.2	125	369	8.3	---	---	17 / 0.74	---	16 / 0.53	142 / 2.33	---	12 / 0.34	---	---	0.12 / ---	--	Total Alkalinity 174	---	18	166	23	10		
3/12 1500	11	57	14.8	142	389	8.5	---	---	15 / 0.65	---	18 / 0.60	143 / 2.34	---	14 / 0.39	---	---	0.04 / ---	--	Total Alkalinity 180	---	16	167	19	20		
4/17 1100	206	61	9.8	98	306	8.1	---	---	14 / 0.61	---	0 / 0.00	143 / 2.34	---	9.7 / 0.27	---	---	0.00 / ---	--		---	19	132	15	20		
5/15 0915	43	67	8.1	86	317	8.2	24 / 1.20	17 / 1.36	13 / 0.57	2.2 / 0.06	0 / 0.00	148 / 2.43	20 / 0.42	10 / 0.28	1.5 / 0.02	0.1 / 0.01	0.07 / ---	16 / --	Fe 0.05 PO_4 0.10 Cu 0.01 Al 0.15 [a]	177[b]	18	128	7	4		
6/18 0840	52	55	10.5	99	227	7.9	---	---	12 / 0.52	---	0 / 0.00	105 / 1.72	---	5.5 / 0.16	---	---	0.0 / ---	--		---	21	100	14	45		
7/14 1230	83	60	11.9	118	230	7.9	---	---	10 / 0.44	---	0 / 0.00	106 / 1.74	---	6.1 / 0.17	---	---	0.1 / ---	--		---	20	90	3	40		
8/14 0840	7.5	56	9.7	92	266	7.7	---	---	11 / 0.48	---	0 / 0.00	110 / 1.80	---	8.0 / 0.23	---	---	0.0 / ---	--		---	17	114	24	10		
9/8 1300	66	58	11.4	110	242	8.0	24 / 1.20	10 / 0.82	11 / 0.48	2.1 / 0.05	0 / 0.00	112 / 1.84	20 / 0.42	7.3 / 0.21	1.2 / 0.02	0.0 / 0.00	0.0 / ---	15 / --	Fe [illegible].07 Zn 0.03 PO_4 0.15 [a]	146[b]	19	101	9	35		
10/21 1030	68	55	10.7	100	249	7.1	---	---	10 / 0.44	---	0 / 0.00	118 / 1.93	---	6.5 / 0.18	---	---	0.1 / ---	--		---	17	108	11	10		
11/17 1555	40	53	11.7	107	253	7.3	---	---	10 / 0.44	---	0 / 0.00	119 / 1.95	---	7.3 / 0.21	---	---	0.1 / ---	--		---	17	104	6	3		
12/10 0850	43	53	10.4	95	258	7.5	---	---	10 / 0.44	---	0 / 0.00	124 / 2.03	---	7.7 / 0.22	---	---	0.1 / ---	--		---	17	108	6	6		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported :re as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										USGS
LOS GATOS CREEK AT LOS GATOS (STA. 74)																										
1/23 1100	9.8	48	11.3	97	487	7.9	---	---	19 / 0.83	---	0 / 0.00	286 / 4.69	---	12 / 0.34	---	---	0.03 / ---	--		---	16	216	0	18	Maximum 230. Minimum 0.06 Median 13.	
2/14 1145	5.2	54	10.8	100	367	7.9	---	---	12 / 0.52	---	0 / 0.00	152 / 2.49	---	9.0 / 0.25	---	---	0.07 / ---	--		---	13	167	42	70		
3/13 1600	9.5	53	10.2	93	315	7.8	---	---	11 / 0.48	---	0 / 0.00	133 / 2.18	---	8.0 / 0.23	---	---	0.08 / ---	--		---	15	139	30	35		
4/16 1050	198	60	9.7	97	242	7.9	---	---	8.8 / 0.38	---	0 / 0.00	108 / 1.77	---	7.6 / 0.21	---	---	0.04 / ---	--		---	15	108	20	60		
5/16 0905	34	54	10.1	94	236	7.9	24 / 1.20	9.0 / 0.74	9.0 / 0.39	1.7 / 0.04	0 / 0.00	102 / 1.67	23 / 0.48	6.0 / 0.17	0.9 / 0.01	0.1 / 0.01	0.12 / ---	33 / --	Cu 0.02 Zn 0.09 [a]; PO_4 0.10	157[b]	16	97	13	50		
6/18 1540	6	54	10.2	94	230	7.5	---	---	11 / 0.48	---	0 / 0.00	98 / 1.61	---	5.2 / 0.15	---	---	0.0 / ---	--		---	20	96	16	55		
7/15 1350	42	57	11.1	106	240	7.3	---	---	8.3 / 0.36	---	0 / 0.00	106 / 1.74	---	5.8 / 0.16	---	---	0.0 / ---	--		---	16	97	10	25		
8/12 1145	44	56	10.7	101	250	7.3	---	---	9.0 / 0.39	---	0 / 0.00	112 / 1.84	---	7.0 / 0.20	---	---	0.0 / ---	--		---	15	110	18	4		
9/10 1000	49	58	10.0	97	278	7.6	32 / 1.60	10 / 0.86	9.2 / 0.40	3.4 / 0.09	0 / 0.00	130 / 2.13	29 / 0.60	8.0 / 0.28	0.9 / 0.01	0.2 / 0.01	0.0 / ---	22 / --	Fe 0.02 Cu 0.01 [a]; PO_4 0.10	179[b]	14	123	16	3		
10/22 1110	52	68	8.7	95	343	7.5	---	---	12 / 0.52	---	0 / 0.00	156 / 2.56	---	9.0 / 0.25	---	---	0.2 / ---	--		---	15	152	24	20		
11/19 0930	35	58	10.0	97	358	7.5	---	---	12 / 0.52	---	0 / 0.00	164 / 2.69	---	9.0 / 0.25	---	---	0.0 / ---	--		---	14	164	30	30		
12/9 0830	48	54	10.7	99	374	7.3	---	---	12 / 0.52	---	0 / 0.00	169 / 2.77	---	9.0 / 0.25	---	---	0.1 / ---	--		---	13	169	30	30		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11
ANALYSES OF SURFACE WATER
SAN FRANCISCO BAY REGION (2)

NAPA RIVER NEAR ST. HELENA (STA. 72)

Mineral constituents are given in parts per million over equivalents per million (ppm/epm).

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										USGS
1/22 1430	55	49	10.5	92	204	7.3	---	---	14/0.61	---	0/0.00	82/1.34	---	13/0.37	---	---	0.09/---	--		---	31	67	0	25	Maximum 7000.+ Minimum 0.045- Median 230.	
2/21 1145	588	58	9.8	95	132	7.2	---	---	7.6/0.33	---	0/0.00	61/1.00	---	5.3/0.15	---	---	0.14/---	--		---	26	47	0	17		
3/12 1025	81	53	10.1	93	207	7.2	---	---	12/0.52	---	0/0.00	95/1.56	---	8.5/0.24	---	---	0.24/---	--		---	25	77	0	7		
4/14 1630	150	66	9.0	96	178	7.3	---	---	10/0.44	---	0/0.00	85/1.39	---	7.6/0.21	---	---	0.08/---	--		---	24	68	0	4		
5/14 1600	31	71	9.4	103	245	7.3	20/1.00	9.2/0.76	15/0.65	2.8/0.07	0/0.00	110/1.80	10/0.21	12/0.34	3.0/0.05	0.2/0.01	0.35/---	41/--	Zn 0.01; PO_4 0.40 [a]	168[b]	26	88	0	1		
6/17 1405	8.7	75	9.6	112	297	7.5	---	---	19/0.83	---	0/0.00	132/2.16	---	17/0.48	---	---	0.5/---	--		---	28	108	0	5		
7/11 0730	4.9	72	8.1	92	326	7.3	---	---	18/0.78	---	0/0.00	161/2.64	---	12/0.34	---	---	0.3/---	--		---	24	124	0	1		
8/12 0730	3.4	69	7.8	91	345	7.3	---	---	17/0.74	---	0/0.00	174/2.85	---	12/0.34	---	---	0.2/---	--		---	21	140	0	2		
9/10 1400	0.4	72	9.3	105	359	8.0	31/1.55	18/1.51	18/0.78	3.7/0.09	0/0.00	191/3.13	23/0.48	12/0.34	1.5/0.02	0.2/0.01	0.4/---	34/--	PO_4 0.20 [a]	236[b]	20	153	0	0		
10/20 1545	1.6	63	8.3	86	377	7.1	---	---	18/0.78	---	0/0.00	205/3.36	---	13/0.37	---	---	0.5/---	--		---	19	162	0	5		
11/14 1115	0.1	57	7.9	76	401	7.2	---	---	25/1.09	---	0/0.00	172/2.82	---	34/0.96	---	---	0.7/---	--		---	26	158	17	15		
12/8 1210	2.1	53	9.5	87	425	7.1	---	---	32/1.39	---	0/0.00	168/2.75	---	45/1.27	---	---	1.1/---	--		---	33	141	3	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-11

ANALYSES OF SURFACE WATER

SAN FRANCISCO BAY REGION (2)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										SACRAMENTO RIVER NEAR MALLARD SLOUGH (STA. 15c)															USBR
1/3 1245		50	---	---	623		---	---	73 / ---	---	---	---	---	193 / ---	---	---	---	---		364	51	---	---	---		
1/27 1200		49	---	---	346		---	---	23 / ---	---	---	---	---	36 / ---	---	---	---	---		276	29	---	---	---		
2/24 1150		58	---	---	226		---	---	14 / ---	---	---	---	---	26 / ---	---	---	---	---		160	27	---	---	---		
4/1 1120		54	---	---	209		---	---	11 / ---	---	---	---	---	15 / ---	---	---	---	---		112	23	---	---	---		
4/28 1305		64	---	---	212		---	---	13 / ---	---	---	---	---	18 / ---	---	---	---	---		---	28	---	---	---		
5/27 1125		66	---	---	127		---	---	9.2 / ---	---	---	---	---	43 / ---	---	---	---	---		---	31	---	---	---		
7/2 1050		---	---	---	181		---	---	14 / ---	---	---	---	---	23 / ---	---	---	---	---		136	33	---	---	---		
7/29 1030		71	---	---	665		---	---	89 / ---	---	---	---	---	200 / ---	---	---	---	---		424	58	---	---	---		
8/26 1125		76	---	---	1,200		---	---	154 / ---	---	---	---	---	280 / ---	---	---	---	---		636	56	---	---	---		
9/30 1120		72	---	---	589		---	---	65 / ---	---	---	---	---	100 / ---	---	---	---	---		364	48	---	---	---		
10/29 1050		---	---	---	462		---	---	40 / ---	---	---	---	---	82 / ---	---	---	---	---		272	37	---	---	---		
11/24 1115		55	---	---	806		---	---	105 / ---	---	---	---	---	201 / ---	---	---	---	---		520	57	---	---	---		
12/10 1210		54	---	---	1,118		---	---	167 / ---	---	---	---	---	292 / ---	---	---	---	---		744	51	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

ANALYSES OF SURFACE WATER

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958										CARMEL RIVER NEAR CARMEL (STA. 83)																USGS
1/23 1545	Est. 12	55	11.0	103	479	8.1	---	---	30 / 1.30	---	0 / 0.00	144 / 2.36	---	34 / 0.96	---	---	0.00 / ---	--		---	28	168	50	3	Maximum 230. Minimum 0.23 Median 2.3	
2/13 1650	Est. 117	56	10.1	96	196	7.3	---	---	11 / 0.48	---	0 / 0.00	80 / 1.31	---	10 / 0.28	---	---	0.01 / ---	--		---	25	73	7	8		
3/13 0900	Est. 144	50	10.5	92	251	7.5	---	---	13 / 0.57	---	0 / 0.00	99 / 1.62	---	14 / 0.39	---	---	0.00 / ---	--		---	24	91	10	4		
4/17 0830	Est. 250	58	9.9	96	249	7.5	---	---	14 / 0.61	---	0 / 0.00	96 / 1.57	---	16 / 0.45	---	---	0.01 / ---	--		---	24	94	16	10		
5/15 1400	---	70	8.7	97	327	7.9	29 / 1.45	10 / 0.85	18 / 0.78	3.1 / 0.08	0 / 0.00	116 / 1.90	36 / 0.75	20 / 0.56	0.6 / 0.01	0.0 / 0.00	0.04 / ---	27 / --	Fe 0.02 Al 0.07 Cu 0.02 PO_4 0.10 a	201[b]	25	115	20	2		
6/18 1140	Est. 60	73	8.9	102	413	7.9	---	---	25 / 1.09	---	0 / 0.00	135 / 2.21	---	28 / 0.79	---	---	0.0 / ---	--		---	27	150	39	2		
7/15 0945	Est. 12	68	10.7	116	480	7.9	---	---	30 / 1.30	---	0 / 0.00	147 / 2.41	---	36 / 1.02	---	---	0.0 / ---	--		---	28	170	49	0.5		
8/12 1545	Est. 1.6	78	10.0	120	545	8.1	---	---	38 / 1.65	---	0 / 0.00	148 / 2.43	---	45 / 1.27	---	---	0.1 / ---	--		---	30	188	67	3		
9/9 1420	Est. 20	76	9.0	106	599	8.0	57 / 2.84	18 / 1.44	39 / 1.70	4.0 / 0.10	0 / 0.00	161 / 2.64	98 / 2.04	47 / 1.33	0.4 / 0.01	0.3 / 0.02	0.0 / ---	24 / --	Al 0.05 Zn 0.04 PO_4 0.10 a	367[b]	28	214	82	1		
10/22 0800	Est. 2.5	56	8.2	78	622	7.2	---	---	45 / 1.96	---	0 / 0.00	167 / 2.74	---	50 / 1.41	---	---	0.1 / ---	--		---	30	224	87	5		
11/18 1350	Est. 32	58	11.3	110	605	7.8	---	---	43 / 1.87	---	0 / 0.00	159 / 2.61	---	47 / 1.33	---	---	0.0 / ---	--		---	30	216	86	0.6		
12/9 1320	Est. 4	60	11.3	113	612	7.6	---	---	45 / 1.96	---	0 / 0.00	159 / 2.61	---	53 / 1.49	---	---	0.0 / ---	--		---	30	219	89	0.6		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), 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 B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
CUYAMA RIVER NEAR GAREY (STA.44a)																										
1958																										
10/17 1000	est. 2	72	9.8	111	1,572	8.2	126 / 6.28	83 / 6.80	120 / 5.22	3.7 / 0.09	0 / 0.00	224 / 3.68	604 / 12.58	77 / 2.17	0.0 / 0.00	0.6 / 0.03	0.42 / ----	15 / ---		1,167[c]	26	654	470	5-	Maximum 6.2	DWR
11/13 1335	est. 2	65	7.0	74	1,468	8.2	---	---	---	---	0 / 0.00	251 / 4.12	---	77 / 2.17	---	---	0.28 / ----	---		---	30	641	435	5-	Minimum 0.45 Median 1.5	DWR
12/11 1415	est. 2	66	14.2	152	1,464	8.4	---	---	---	---	0 / 0.00	251 / 4.12	---	78 / 2.20	---	---	0.43 / ----	---		---	29	614	435	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							NACIMIENTO RIVER NEAR SAN MIGUEL (STA. 43b)																			
7/24 0830	[illegible]	58	10.0	97	228	7.7	25 / 1.25	9.6 / 0.79	7.5 / 0.33	1.4 / 0.04	0 / 0.00	104 / 1.70	22 / 0.46	5.2 / 0.15	0.4 / 0.01	0.2 / 0.01	0.0 / ---	19 / --		141[b]	14	102	17	--		USGS
8/13 1120	676	60	10.8	108	213	7.3	20 / 1.00	10 / 0.84	6.6 / 0.29	1.4 / 0.04	0 / 0.00	98 / 1.61	21 / 0.44	4.0 / 0.11	1.0 / 0.02	0.3 / 0.02	0.1 / ---	16 / --		128[b]	13	92	12	--		USGS
9/9 0945	396	58	9.8	95	215	7.8	24 / 1.20	8.5 / 0.70	6.2 / 0.27	2.5 / 0.06	0 / 0.00	100 / 1.64	12 / 0.25	12 / 0.34	0.4 / 0.01	0.2 / 0.01	0.1 / ---	19 / --	Fe 0.02 PO_4 0.05; Al 0.06 Cu 0.01 [a]	125[b]	13	95	13	1		USGS
10/18 1230	312	58	13.0	125	218	8.4	23 / 1.15	9.6 / 0.79	6.4 / 0.28	0.7 / 0.02	0 / 0.00	101 / 1.66	22 / 0.45	5 / 0.14	0.3 / 0.01	0.1 / 0.01	0.0 / ---	15 / --		117[c]	13	97	14	5-		DWR
11/13 1530	97	59	7.5	71	218	8.4	---	---	---	---	7.2 / 0.24	90 / 1.48	---	6 / 0.17	---	---	0.07 / ---	—	Total Alkalinity 104	---	15	99	13	5-	0.6 / 0.6	DWR
12/11 1625	105	58	10.8	102	224	8.4	---	---	---	---	0 / 0.00	102 / 1.68	---	9 / 0.25	---	---	0.05	—		---	15	98	14	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							PAJARO RIVER NEAR CHITTENDEN (STA. 77)																			USGS
1/23 1410	2.1	49	14.2	123	1,770	8.1	---	---	227 / 9.87	---	0 / 0.00	562 / 9.21	---	245 / 6.91	---	---	1.5 / ---	---		---	49	510	49	10	Maximum 7000.+ Minimum 0.23 Median 23.	
2/13 1510	201	57	9.2	88	437	7.7	---	---	34 / 1.48	---	0 / 0.00	136 / 2.23	---	28 / 0.79	---	---	0.27 / ---	---		---	34	141	29	90		
3/13 0740	118	54	9.2	85	587	8.0	---	---	38 / 1.65	---	0 / 0.00	224 / 3.67	---	34 / 0.96	---	---	0.26 / ---	--		---	27	220	36	40		
4/16 1400	1,000	71	8.0	90	677	8.1	---	---	43 / 1.87	---	0 / 0.00	258 / 4.23	---	29 / 0.82	---	---	0.26 / ---	--		---	26	262	51	170		
5/15 1130	40	72	8.9	101	991	8.3	74 / 3.69	49 / 3.99	67 / 2.91	3.6 / 0.09	0 / 0.00	310 / 5.08	173 / 3.60	65 / 1.83	6.1 / 0.10	0.3 / 0.02	0.42 / ----	21 / --	Fe 0.01 Al 0.08 [a] PO_4 0.30	612[b]	27	385	130	30		
6/18 1000	15	66	8.2	87	1,280	8.1	---	---	97 / 4.22	---	6 / 0.20	411 / 6.74	---	90 / 2.54	---	---	0.8 / ---	--	Total Alkalinity 423	---	29	520	173	6		
7/14 1450	9.9	74	9.1	106	1,450	8.3	---	---	134 / 5.83	---	0 / 0.00	462 / 7.57	---	130 / 3.67	---	---	0.8 / ---	--		---	36	518	139	1		
8/13 1510	5.8	77	8.1	96	1,500	8.1	---	---	139 / 6.05	---	0 / 0.00	494 / 8.10	---	60 / 1.69	---	---	0.9 / ---	--		---	36	540	135	3		
9/8 1450	5.3	64	7.0	73	1,510	8.2	89 / 4.44	71 / 5.84	155 / 6.74	6.4 / 0.16	0 / 0.00	538 / 8.82	202 / 4.21	138 / 3.89	0.4 / 0.01	0.3 / 0.02	0.9 / ---	24 / --	Al 0.24 Zn 0.03 [a] PO_4 0.40	952[b]	39	514	73	4		
10/21 1230	9.1	63	8.9	92	1,410	8.0	---	---	143 / 6.22	---	8 / 0.27	504 / 8.26	---	126 / 3.55	---	---	0.0 / ---	--	Total Alkalinity 520	---	40	472	46	5		
11/18 0930	9.9	46	10.8	90	1,190	8.0	---	---	83 / 3.61	---	0 / 0.00	416 / 6.82	---	81 / 2.28	---	---	0.5 / ---	--		---	27	495	154	3		
12/9 1715	14	54	8.8	82	1,200	7.7	---	---	70 / 3.04	---	0 / 0.00	374 / 6.13	---	74 / 2.09	---	---	0.4 / ---	--		---	22	525	218	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

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ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SALINAS RIVER NEAR BRADLEY (STA. 43c)																			
7/24 1020	630	69	9.2	101	294	8.0	26 / 1.30	11 / 0.92	18 / 0.78	1.6 / 0.04	0 / 0.00	127 / 2.08	35 / 0.73	9.4 / 0.27	0.7 / 0.01	0.2 / 0.01	0.0 / ---	16 / --		181[b]	26	111	7	--		USGS
8/13 0940	690	60	10.2	102	243	7.9	24 / 1.20	11 / 0.88	9.7 / 0.42	1.4 / 0.04	0 / 0.00	110 / 1.80	28 / 0.58	6.0 / 0.17	1.1 / 0.02	0.5 / 0.03	0.1 / ---	18 / --		154[b]	17	104	14	--		USGS
9/9 0915	413	60	9.3	92	270	8.0	28 / 1.40	9.7 / 0.80	14 / 0.61	2.5 / 0.06	0 / 0.00	119 / 1.95	29 / 0.60	9.0 / 0.25	0.4 / 0.01	0.1 / 0.01	0.0 / ---	19 / --	Fe 0.02 Al 0.04 PO_4 0.15 a	171[b]	21	110	12	2		USGS
10/18 0745	220	55	10.4	97	312	8.0	29 / 1.45	11 / 0.87	19 / 0.83	1.2 / 0.03	0 / 0.00	127 / 2.08	35 / 0.73	10 / 0.28	0.25 / 0.00	0.1 / 0.01	0.14 / ----	20 / --		164[c]	26	116	12	5-		DWR
11/13 1630	125	58	9.5	91	321	8.0	----	---	---	---	0 / 0.00	139 / 2.28	---	12 / 0.34	---	---	0.12 / ---	--		---	27	120	6	5-		DWR
12/11 1725	114	56	7.8	74	315	8.1	---	---	---	---	0 / 0.00	137 / 2.24	---	11 / 0.31	---	---	0.06 / ---	--		---	24	122	10	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Mean Daily										SALINAS RIVER AT PASO ROBLES (STA. 43a)															
1/6	DRY																									
2/4 1330	1,930	56	9.2	87	277	8.0	---	---	---	---	0/0.00	115/1.87	---	23/0.64	---	---	0.12/----	---		---	18	120	26	1200	Maximum 7000 Minimum 2.3 Median 180	DWR
2/6 1830	716	54	---	--	421	7.4*	45/2.25	17/1.40	20/0.88	0.4/0.01	0/0.00	180/2.95	49/1.03	18/0.50	5.6/0.09	0.1/0.01	0.04/----	17/---		270[c]	19	183	35	---		DWR
3/5 0600	224	48	11.0	94	597	8.0	---	---	---	---	0/0.00	242/3.96	---	26/0.72	---	---	0.11/----	---		---	16	267	69	5		DWR
4/8 0730	3,340	52	7.8	70	358	7.6	---	---	---	---	0/0.00	139/2.29	---	14/0.40	---	---	0.09/----	---		---	16	155	41	310		DWR
5/6 1400	118	77	9.6	115	729	7.5	78/3.89	28/2.30	40/1.74	2.0/0.05	0/0.00	270/4.42	107/2.23	38/1.07	2.0/0.03	0.4/0.02	0.14/----	20/---	PO_4 0.30[a]	480[c]	22	320	99	5-		DWR
6/6 0700	14	61	9.0	90	846	7.6	---	---	---	---	0/0.00	309/5.07	---	49/1.38	---	---	0.11/----	---		---	21	383	128	5-		DWR
7/10	DRY																									
8/20	DRY																									
9/10	DRY																									
10/18	DRY																									
11/13 1500	DRY																									
12/11 1550	DRY																									

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b Determined by addition of analyzed constituents.
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Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SALINAS RIVER NEAR SPRECKELS (STA. 43)															USGS
1/	Not sampled																									
2/	Not sampled																								Maximum 7000.+ Minimum 0.23 Median 230.	
3/	Not sampled																									
4/16 1530	3260	68	8.9	97	407	7.9	---	---	22 0.96	---	0 0.00	140 2.29	---	18 0.51	---	---	0.01 ---	--		---	24	156	41	400		
5/15 1300	203*	74	8.9	103	669	8.3	64 3.19	25 2.05	41 1.78	3.7 0.09	0 0.00	232 3.80	105 2.19	38 1.07	0.9 0.01	0.2 0.01	0.19 ---	29 --	Zn 0.03 PO_4 0.45 a	421[b]	25	262	72	20		
6/18 1100	4	79	9.8	119	1,440	7.7	---	---	112 4.87	---	0 0.00	533 8.74	---	116 3.27	---	---	0.3 ---	--		---	33	500	63	5		
7/15 0830	147	64	10.0	104	403	7.9	---	---	22 0.96	---	0 0.00	158 2.59	---	19 0.54	---	---	0.0 ---	--		---	24	152	22	25		
8/13 0715	161	66	9.5	101	360	8.1	---	---	19 0.83	---	0 0.00	142 2.33	---	15 0.42	---	---	0.1 ---	--		---	23	142	26	20		
9/9 1330	308	74	8.3	96	320	8.2	32 1.60	13 1.04	16 0.70	3.0 0.08	0 0.00	134 2.20	40 0.83	14 0.39	0.6 0.01	0.2 0.01	0.1 ---	22 --	Fe 0.02 Al 0.05 PO_4 0.20 a	207[b]	20	132	22	20		
10/21 1600	100 est.	59	8.7	86	1,070	7.0	---	---	125 5.44	---	0 0.00	182 2.98	---	134 3.78	---	---	0.4 ---	--		---	53	238	89	5		
11/18 1300	28	59	11.4	112	1,190	7.5	---	---	78 3.39	---	0 0.00	578 9.47	---	90 2.54	---	---	0.2 ---	--		---	27	470	0	4		
12/9 1400	24	61	10.2	102	909	7.4	---	---	59 2.57	---	0 0.00	402 6.59	---	61 1.72	---	---	0.2 ---	--		---	26	358	28	1		
	*Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *.

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN ANTONIO RIVER AT PLEYTO (STA. 43d)																			
7/24 0930	4.4	78	10.1	122	429	7.9	50 / 2.50	15 / 1.20	19 / 0.83	2.2 / 0.06	0 / 0.00	176 / 2.88	60 / 1.25	15 / 0.42	0.0 / 0.00	0.2 / 0.01	0.0 / ---	30 / --		278[b]	18	185	41	--		USGS
8/13 1030	0.8	79	11.5	140	426	8.1	39 / 1.95	17 / 1.37	22 / 0.96	2.3 / 0.06	0 / 0.00	175 / 2.87	52 / 1.08	16 / 0.45	0.3 / 0.00	0.3 / 0.02	0.1 / ---	33 / --		268[b]	22	166	22	--		USGS
9/9 1040	0.8	80	10.2	125	454	8.4	50 / 2.50	15 / 1.22	26 / 1.13	3.2 / 0.08	6 / 0.20	172 / 2.82	62 / 1.29	20 / 0.56	0.3 / 0.00	0.3 / 0.02	0.0 / ---	36 / --	PO_4 0.20 Total Alkalinity 184 a	304[b]	23	186	35	1		USGS
10/18 1000	0.2	65	13.2	138	454	8.4	51 / 2.54	14 / 1.16	25 / 1.09	1.4 / 0.03	0 / 0.00	185 / 3.04	63 / 1.31	20 / 0.56	0.0 / 0.00	0.2 / 0.01	0.0 / ---	30 / --		278[c]	23	185	33	5-		DWR
11/13 1700	0.5	60	7.0	69	439	7.8	---	---	---	---	0 / 0.00	187 / 3.06	---	18 / 0.51	---	---	0.03 / ---	--		---	23	185	32	5-		DWR
12/11 1805	0.2	54	6.6	60	454	8.0	---	---	---	---	0 / 0.00	188 / 3.08	---	22 / 0.62	---	---	0.05 / ---	--		---	21	191	37	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-12
ANALYSES OF SURFACE WATER
CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958										SAN BENITO RIVER NEAR BEAR VALLEY FIRE STATION (STA. 77a)																USGS
7/24 1225	----	86	9.4	123	1,520	8.3	36 / 1.80	100 / 8.20	161 / 7.00	4.0 / 0.10	27 / 0.90	445 / 7.29	313 / 6.52	91 / 2.57	0.2 / 0.00	0.3 / 0.02	0.6 / ---	11 / --	Total Alkalinity 500	963[b]	41	500	90	—		
8/13 1330	----	84	10.0	128	1,600	8.3	32 / 1.60	102 / 8.40	193 / 8.40	5.2 / 0.13	22 / 0.73	444 / 7.28	326 / 6.79	118 / 3.33	0.3 / 0.00	0.2 / 0.01	1.6 / ---	12 / --	Total Alkalinity 489	1,030[b]	45	500	99	2		
9/9 0715	Est. 15	64	8.4	88	1,670	8.4	39 / 1.95	106 / 8.75	195 / 8.48	4.2 / 0.11	0 / 0.00	523 / 8.57	336 / 7.00	110 / 3.10	0.0 / 0.00	0.3 / 0.02	1.7 / ---	14 / --	Al 0.20 Zn 0.02[a] PO_4 0.05	1,060[b]	44	535	106	1		
10/21 1415	Est. 2.5	75	9.6	112	1,670	8.3	43 / 2.15	107 / 8.81	191 / 8.31	3.4 / 0.09	16 / 0.53	478 / 7.83	365 / 7.60	122 / 3.44	0.2 / 0.00	0.4 / 0.02	1.7 / ---	16 / --	Total Alkalinity 510	1,100[b]	43	548	130	—		
11/18 1050	Est. 8	49	12.6	109	1,640	8.0	46 / 2.30	110 / 9.06	186 / 8.09	3.2 / 0.08	22 / 0.73	486 / 7.97	349 / 7.27	125 / 3.52	0.0 / 0.00	0.3 / 0.02	1.7 / ---	13 / --	Total Alkalinity 531	1,100[b]	41	568	233	--		
12/9 1600	Est. 12	57	10.8	104	1,660	8.2*	27 / 1.35	107 / 8.81	180 / 7.83	3.2 / 0.08	0 / 0.00	476 / 7.80	328 / 6.83	120 / 3.38	0.0 / 0.00	0.3 / 0.02	1.7 / ---	15 / --		1,020[b]	43	508	118	--		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
										SAN LORENZO RIVER AT BIG TREES (STA. 75)																
1/23 1210	49	45	12.6	104	371	7.9	---	---	23/1.00	---	0/0.00	136/2.23	---	21/0.59	---	---	0.00/---	--		---	27	135	23	4	Maximum 7000.+ Minimum 2.3 Median 23.	
2/14 1015	640	53	10.8	99	258	7.3	---	---	13/0.57	---	0/0.00	86/1.41	---	12/0.34	---	---	0.04/---	--		---	23	98	27	70		
3/13 1135	234	49	10.7	93	299	7.5	---	---	15/0.65	---	0/0.00	107/1.75	---	14/0.39	---	---	0.00/---	--		---	22	114	26	12		
4/16 1155	403	57	10.3	99	289	7.5	---	---	13/0.57	---	0/0.00	105/1.72	---	13/0.37	---	---	0.01/---	--		---	20	115	29	15		
5/16 0755	125	57	9.8	94	325	7.9	39/1.95	6.9/0.57	18/0.78	2.1/0.05	0/0.00	124/2.03	41/0.85	16/0.45	0.0/0.00	0.1/0.01	0.08/---	27/--	Fe 0.04 Cu 0.05 Zn 0.01 PO_4 0.30 a	211[b]	23	126	24	1		
6/18 1430	71	70	9.1	101	325	7.9	---	---	17/0.74	---	0/0.00	126/2.07	---	16/0.45	---	---	0.0/---	--		---	23	124	21	5		
7/15 1230	49	66	10.5	112	339	7.9	---	---	19/0.83	---	0/0.00	135/2.21	---	18/0.51	---	---	0.0/---	--		---	25	126	15	1		
8/12 1320	32	71	10.9	122	332	7.9	---	---	19/0.83	---	0/0.00	132/2.16	---	20/0.56	---	---	0.1/---	--		---	24	130	22	3		
9/10 0845	28	63	10.0	103	330	8.0	38/1.90	6.9/0.57	19/0.83	2.3/0.06	0/0.00	133/2.18	28/0.58	21/0.59	0.3/0.00	0.2/0.01	0.0/---	28/--	Fe 0.02 Al 0.07 a PO_4 0.55 Zn 0.04	210[b]	25	124	15	2		
10/22 1020	23	54	12.1	112	332	7.8	---	---	20/0.87	---	0/0.00	133/2.18	---	20/0.56	---	---	0.0/---	--		---	26	124	15	5		
11/18 1630	25	46	12.3	103	343	7.4	---	---	21/0.91	---	0/0.00	134/2.20	---	22/0.62	---	---	0.0/----	--		---	25	134	24	3		
12/9 0930	23	45	11.9	98	352	7.3	---	---	21/0.91	---	0/0.00	137/2.25	---	22/0.62	---	---	0.1/---	--		---	26	132	20	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA YNEZ RIVER AT CACHUMA RESERVOIR (STA.44b)															
4/3 1400	Lake	56	--	--	685	7.3*	60/3.02	32/2.63	36/1.54	3.5/0.08	0/0.00	179/2.94	182/3.79	18/0.51	0.0/0.00	0.24/0.01	0.82/----	6.6/---		467[c]	22	283	136	--	Maximum 2.3	TTL
4/21 1815	Lake	61	--	--	735	8.0*	78/3.90	30/2.50	36/1.56	3.1/0.08	0/0.00	214/3.50	190/3.96	23/0.65	0.0/0.00	0.20/0.01	0.18/----	14/---		497[c]	19	320	145	--	Minimum 0.45 Median 1.0	TTL
10/16 1445	Lake	72	11.4	129	757	8.4	69/3.44	37/3.06	38/1.65	2.8/0.07	0/0.00	185/3.04	235/4.89	16/0.45	0.0/0.00	0.30/0.02	0.42/----	5/---		464[c]	20	325	173	5-		DWR
11/13 1150	Lake	62	4.0	41	725	7.7	---	---	---	---	0/0.00	195/3.20	---	15/0.42	---	---	0.53/----	---		- - -	19	326	166	5-		DWR
12/11 1250	Lake	59	5.4	53	739	7.7	---	---	---	---	0/0.00	203/3.32	---	16/0.45	---	---	0.42/----	---		- - -	19	330	174	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SANTA YNEZ RIVER BELOW LOS LAURLES CANYON (STA.45)																			
1/9 0930	0.2*	57	9.1	88	1,256	7.4	---	---	---	---	0 / 0.00	346 / 5.66	---	29 / 0.81	----	---	0.35 / ----	---		---	16	598	315	5-		DWR
2/11 0945	226*	54	10.2	94	701	8.0	---	---	---	---	0 / 0.00	196 / 3.22	---	14 / 0.39	---	---	0.42 / ----	---		---	18	323	162	5-	Maximum 23. Minimum 0.013 Median 5.6	DWR
3/10 0900	98*	52	11.6	105	881	8.2	---	---	---	---	0 / 0.00	249 / 4.08	---	18 / 0.51	---	---	0.53 / ----	---		---	17	404	200	5-		DWR
4/17 0900	616*	57	10.4	100	964	8.1	---	---	---	---	0 / 0.00	258 / 4.23	---	12 / 0.33	---	---	0.36 / ----	---		---	15	470	258	5-		DWR
5/8 1000	144*	61	10.2	103	1,048	8.0	132 / 6.59	40 / 3.29	50 / 2.18	2.0 / 0.05	0 / 0.00	262 / 4.30	349 / 7.28	20 / 0.56	0.0 / 0.00	0.5 / 0.03	0.52 / ----	10	PO_4 0.00[a]	795[c]	18	497	282	5-		DWR
6/6 1000	37*	72	9.0	101	1,072	8.0	---	---	---	---	0 / 0.00	259 / 4.25	---	21 / 0.60	---	---	0.52 / ----	---		---	17	522	310	5-		DWR
7/10	0.25	75	5.8	68	1,109	7.8	---	---	---	---	0 / 0.00	278 / 4.56	---	26 / 0.73	---	---	0.40 / ----	---		---	17	527	299	5-		DWR
8/20																										
9/10	NO REPORT																									
10/	STATION DISCONTINUED																									
	*Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
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f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA YNEZ RIVER AT SOLVANG (STA. 45a)															
1/9 0800	6.2	50	10.6	94	1,219	7.8	---	---	---	---	0/0.00	406/6.65	---	48/1.23	---	---	0.29/----	---		---	18	564	231	5-	Maximum 240. Minimum 0.6 Median 13.	DWR
2/11 0800	est.25	56	9.2	87	1,075	7.8	---	---	---	---	0/0.00	366/6.00	---	41/1.13	---	---	0.29/----	---		---	18	501	201	5-		DWR
3/10 0800	34	50	11.2	99	1,045	8.0	---	---	---	---	0/0.00	346/5.64	---	41/1.15	---	---	0.34/----	---		---	19	477	195	5-		DWR
4/17 0800	780	59	9.8	96	732	8.0	---	---	---	---	0/0.00	222/3.61	---	17/0.48	---	---	0.27/----	---		298[c]	19	327	146	100		DWR
5/8 0800	290	61	10.4	105	489	8.1	84/4.19	37/3.04	36/1.57	2.6/0.07	0/0.00	244/4.00	195/4.06	21/0.59	0.5/0.01	0.4/0.02	0.32/----	10/---	Sn 0.00 PO_4 0.08[a]	565[c]	18	371	171	5-		DWR
6/6 0900	60	63	9.0	92	877	7.8	---	---	---	---	0/0.00	282/4.62	---	24/0.68	---	---	0.23/----	---		---	18	413	272	5-		DWR
7/10 0900	8.3	68	6.0	66	1,068	7.6	---	---	---	---	0/0.00	368/6.00	---	40/1.12	---	---	0.33/----	---		---	20	492	192	5-		DWR
8/20 0815	1.4	68	5.6	61	1,074	7.8	---	---	54/2.35	---	0/0.00	372/6.10	---	40/1.13	---	---	0.35/----	---		---	19	495	190	5-		DWR
9/10	NO REPORT																									
10/16 1545	0.7	70	9.8	109	1,102	8.2	---	---	---	---	0/0.00	374/6.14	---	56/1.56	---	---	0.42/----	---			19	516	209	5-		DWR
11/13 1230	3.8	62	4.2	43	1,046	7.9	---	---	---	---	0/0.00	393/6.44	---	43/1.21	---	---	0.40/----	---			20	517	195	5-		DWR
12/11 1305	4.6	62	9.6	99	1,071	8.1	---	---	---	---	0/0.00	395/6.48	---	46/1.30	---	---	0.34/----	---			19	520	196	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
1958											SOQUEL CREEK AT SOQUEL (STA. 76)															USGS
1/23 1310	10	49	12.0	105	747	8.1	---	---	46 / 2.00	---	0 / 0.00	240 / 3.93	---	54 / 1.52	---	---	0.00 / ---	--		---	26	285	88	2	Maximum 620. Minimum 2.3 Median 23.	
2/14 0925	175	52	10.7	97	404	7.8	---	---	20 / 0.87	---	0 / 0.00	130 / 2.13	---	15 / 0.42	---	---	0.01 / ---	--		---	21	164	57	55		
3/13 1040	70	48	10.8	93	512	7.9	---	---	24 / 1.04	---	0 / 0.00	167 / 2.74	---	20 / 0.56	---	---	0.02 / ---	--		---	20	204	67	12		
4/16 1250	105	62	9.7	98	474	7.9	---	---	22 / 0.96	---	0 / 0.00	158 / 2.59	---	16 / 0.45	---	---	0.02 / ---	--		---	20	187	58	20		
5/16 0600	26	59	9.2	90	575	8.0	63 / 3.14	19 / 1.58	30 / 1.30	3.6 / 0.09	0 / 0.00	202 / 3.31	91 / 1.89	28 / 0.79	0.3 / 0.00	0.2 / 0.01	0.11 / ---	30 / --	Fe 0.01 Cu 0.01 Zn 0.01 PO4 0.25 a	365[b]	21	236	70	1		
6/18 1340	14	74	11.8	136	616	8.3	---	---	36 / 1.57	---	14 / 0.47	192 / 3.15	---	37 / 1.04	---	---	0.0 / ---	--	Total Alkalinity 220	---	24	249	69	3		
7/15 1140	8.3	68	11.3	113	661	8.1	---	---	39 / 1.70	---	0 / 0.00	226 / 3.70	---	49 / 1.38	---	---	0.0 / ---	--		---	26	246	61	0.8		
8/12 1400	5.2	78	10.0	120	691	8.1	---	---	43 / 1.87	---	0 / 0.00	234 / 3.84	---	54 / 1.52	---	---	0.0 / ---	--		---	26	264	72	4		
9/10 0715	5.4	66	8.3	89	719	7.7	75 / 3.74	22 / 1.82	44 / 1.91	5.1 / 0.13	0 / 0.00	245 / 4.02	85 / 1.77	59 / 1.66	0.0 / 0.00	0.2 / 0.01	0.1 / ---	36 / --	Fe 0.01 Al 0.09 Zn 0.04 PO4 0.60 a	447[b]	25	278	77	1		
10/22 0945	4.1	57	10.4	100	735	7.7	---	---	47 / 2.04	---	0 / 0.00	251 / 4.11	---	64 / 1.80	---	---	0.1 / ---	--		---	26	288	82	5		
11/18 1540	4.7	51	12.2	109	756	7.6	---	---	50 / 2.18	---	0 / 0.00	249 / 4.08	---	70 / 1.97	---	---	0.0 / ---	--		---	27	289	85	3		
12/9 1020	5.2	49	12.2	106	769	7.7	---	---	51 / 2.22	---	0 / 0.00	256 / 4.20	---	74 / 2.09	---	---	0.1 / ---	--		---	27	298	88	0.8		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-12

ANALYSES OF SURFACE WATER

CENTRAL COASTAL REGION (3)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											UVAS CREEK NEAR MORGAN HILL (Sta. 96)															USGS
1/24 0930	---	48	10.8	93	373	7.7	---	---	13 / 0.57	---	0 / 0.00	190 / 3.11	---	9.0 / 0.25	---	---	0.08 / ---	---		---	14	172	16	4	Maximum 7000.+ Minimum 0.045- Median 0.10	
2/13 1330	---	56	10.6	101	202	7.5	---	---	7.1 / 0.31	---	0 / 0.00	102 / 1.67	---	6.5 / 0.18	---	---	0.17 / ---	---		---	15	90	6	20		
3/12 1600	---	54	9.3	86	280	7.7	---	---	9.0 / 0.39	---	0 / 0.00	145 / 2.38	---	6.0 / 0.17	---	---	0.0 / ---	---		---	13	128	9	9		
4/17 1020	---	53	10.8	99	183	7.7	---	---	5.6 / 0.24	---	0 / 0.00	95 / 1.56	---	5.3 / 0.15	---	---	0.00 / ---	---		---	13	82	4	20		
5/15 1020	---	54	10.3	98	209	8.1	20 / 1.00	10 / 0.86	7.2 / 0.31	1.8 / 0.05	0 / 0.00	109 / 1.79	13 / 0.27	4.6 / 0.13	0.6 / 0.01	0.0 / 0.00	0.04 / ---	21 / ---	Fe 0.01 Al 0.08[a] Zn 0.01 PO4 0.00	132[b]	14	93	4	10		
6/18 0920	15 est.	57	9.9	95	265	7.7	---	---	7.3 / 0.32	---	0 / 0.00	144 / 2.36	---	5.2 / 0.15	---	---	0.0 / ---	---		---	11	125	7	1		
7/14 1330	---	65	9.6	101	311	7.5	---	---	8.8 / 0.38	---	0 / 0.00	171 / 2.80	---	7.0 / 0.20	---	---	0.0 / ---	---		---	12	145	5	7		
8/14 0750	---	68	8.5	84	311	7.7	---	---	9.0 / 0.39	---	0 / 0.00	172 / 2.82	---	7.0 / 0.20	---	---	0.2 / ---	---		---	12	146	5	5		
9/8 1345	---	64	8.4	87	320	7.9	35 / 1.75	17 / 1.37	7.6 / 0.33	2.2 / 0.06	0 / 0.00	176 / 2.88	18 / 0.37	7.0 / 0.20	0.3 / 0.00	0.1 / 0.01	0.1 / ---	18 / ---	Fe 0.01 PO4 0.05[a]	192[b]	9	156	12	3		
10/21 1115	8 est.	66	8.9	95	352	7.8	---	---	9.2 / 0.40	---	0 / 0.00	194 / 3.18	---	8.0 / 0.23	---	---	0.0 / ---	---		---	11	169	10	25		
11/18 0840	10 est.	50	10.3	91	375	7.5	---	---	10 / 0.44	---	0 / 0.00	208 / 3.41	---	14 / 0.39	---	---	0.0 / ---	---		---	11	177	6	15		
12/10 0930	12 est.	51	11.4	102	397	7.5	---	---	10 / 0.44	---	0 / 0.00	216 / 3.54	---	8.0 / 0.23	---	---	0.2 / ---	---		---	10	192	15	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
								Mineral constituents in parts per million / equivalents per million																			
1958								LOS ANGELES RIVER AT LONG BEACH (STA. 48)																			
1/8	1000	est. 20	63	0.6	6.	---	7.3*	340 / ---	65 / ---	3860 / ---	---	0.0 / ---	359 / ---	188 / ---	6360 / ---	0.0 / ---	---	---	---	Phenols 0.40 Cr^{+6} 0.00	11310[c]	--	---	---	--	Maximum 6200 Minimum 2.1 Median 225	LBDPH
2/5	1020	1280	59	7.3	77	---	7.5*	110 / ---	20 / ---	520 / ---	---	0.0 / ---	131 / ---	57 / ---	856 / ---	1.0 / ---	---	---	---	Phenols 0.06 Cr^{+6} 0.00	1683[c]	--	---	---	--		LBDPH
2/19	1500	15,000 est.	55	---	--	1,370	7.2*	28 / 1.40	12 / 0.99	188 / 8.18	6.6 / 0.17	0 / 0.00	78 / 1.28	9 / 0.19	370 / 10.43	1.5 / 0.02	0.2 / 0.01	0.64 / ----	10 / ---	NH_4 2.30	690[c]	75	120	56	--		DWR
3/5	1015	30	59	7.3	72	---	8.6*	230 / ---	64 / ---	1900 / ---	---	43 / ---	141 / ---	317 / ---	3116 / ---	0.5 / ---	---	---	---	Phenols 0.4 Cr^{+6} 6.00	5615[c]	--	---	---	--		LBDPH
3/21	1230	584	--	---	--	4,854	7.3*	75 / 3.74	30 / 2.47	900 / 39.15	11 / 0.27	0 / 0.00	190 / 2.63	29 / 0.60	1475 / 41.60	5.8 / 0.09	0.1 / 0.00	3.10 / ----	10 / ---	NH_4 6.30	2909[c]	85	312	179	300		DWR
4/4	1400	est.2000	62	---	--	2,884	7.7*	60 / 3.02	24 / 2.03	474 / 20.60	14 / 0.36	0.0 / 0.00	167 / 2.73	33 / 0.69	811 / 22.85	0.59 / 0.01	0.34 / 0.02	1.10 / ----	19 / ---		1992[c]	79	252	115	--		TTL
5/7	1030	-----	77	3.8	45	---	7.7*	310 / ---	40 / ---	3800 / ---	---	0 / ---	427 / ---	111 / ---	7132 / ---	4.0 / ---	----	---	---	Phenols 0.00 Cr^{+6} 0.00	16211[c]	--	---	---	--		LBDPH
5/8	1000	31	78	4.5	55	17,857	8.1	280 / 13.97	146 / 12.00	4175 / 181.61	35 / 0.896	0 / 0.00	688 / 11.28	18 / 0.38	7020 / 197.96	2.4 / 0.04	0.8 / 0.04	15.6 / ----	40 / ---	Sn 0.00 PO_4 1.20[a] As 0.50	12930[c]	86	1307	743	5-		DWR
6/4	1000	20	79	1.6	19	---	7.8*	560 / ---	100 / ---	5600 / ---	---	0 / ---	419 / ---	106 / ---	10666 / ---	0 / ---	---	---	---	Phenols 0.05 Cr^{+6} 0.00	70152[c]	--	---	---	--		LBDPH
7/2	1000	18	75	1.4	16	---	7.8*	300 / ---	57 / ---	2840 / ---	---	0 / ---	366 / ---	167 / ---	4992 / ---	0 / ---	---	---	---	Phenols 0.00 Cr^{+6} 0.00	10000[c]	--	---	---	--		LBDPH
8/6	1120	21	79	2.4	29	---	8.3*	170 / ---	60 / ---	2140 / ---	---	0 / ---	290 / ---	204 / ---	3730 / ---	---	---	---	---	Phenols 0.00 Cr^{+6} 0.00	5800[c]	--	---	---	--		LBDPH
9/3	0950	-----	79	1.1	14	---	7.8*	360 / ---	75 / ---	3160 / ---	---	0 / ---	347 / ---	158 / ---	4960	0.5 / ---	---	---	---	Phenols 2.50 Cr^{+6} 0.00	9860[c]	--	---	---	--		LBDPH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported zeros as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							LOS ANGELES RIVER AT LONG BEACH (STA.48) Cont.																			
9/10 1150	29	85	2.0	26	11,490	8.2	193 / 9.63	100 / 8.63	2320 / 100.9	27 / 0.69	0 / 0.00	437 / 7.16	189 / 3.94	3960 / 111.7	0.5 / 0.01	3.2 / 0.17	8.8 / ----	20 / ---	Sn 0.00 NH_4 14.0[a] PO_4 5.30 As 1.00	7367	84	892	534	10		DWR
10/1 1000	0.7	77	0	0	---	7.9*	540 / ---	76 / ---	3000 / ---	---	0.0 / ---	314 / ---	311 / ---	5462 / ---	100 / ---	---	---	---	Phenols 0.00 Cr^{+6} 0.00	10027	--	---	---	--		LBDPH
11/5 0945	20	72	1.5	17	---	7.6*	300 / ---	65 / ---	2140 / ---	---	0 / ---	333 / ---	139 / ---	3833 / ---	5.0 / ---	---	---	---	Phenols 0.00 Cr^{+6} 0.00	5579	--	---	---	--		LBDPH
12/3 1015	16	64	1.6	17	---	7.8*	120 / ---	77 / ---	1640 / ---	---	0 / ---	339 / ---	177 / ---	3591 / ---	5 / ---	---	---	---	Phenols 0.20	6279[c]	--	---	---	--		LBDPH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

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ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											LOS ANGELES RIVER AT LOS ANGELES (STA.47)															
1/8 1030	3.5	58	20.8	201	---	8.7*	116 ---	73 ---	196 ---	---	75 ---	110 ---	379 ---	171 ---	---	---	1.6 ---	---	Phenols 0.00 Cr+6 0.00	1035[c]	42	585	373	--	Maximum 70,000+ Minimum 6.2 Median 240+	LADPH
2/10 1110	5.8	62	9.12	94	---	8.1*	144 ---	51 ---	153 ---	---	30 ---	200 ---	315 ---	145 ---	5.0	---	1.6 ---	---	Phenols 0.00 Cr+6 0.00	925[c]	37	569	---	--		LADPH
2/19 1345	6120	54	---	--	206	7.3*	17 0.85	7 0.58	14 0.61	3 0.08	0 0.00	72 1.18	25 0.52	10 0.28	2.0 0.03	0.2 0.01	0.14 ----	10 ---	PO_4 0.50	115[c]	29	72	13	3000	---	DWR
3/5 1140	12	68	11.6	126	---	8.0*	96 ---	44 ---	49 ---	---	75 ---	85 ---	191 ---	45 ---	19 ---	---	----	---	Phenols 0.08 Cr+6 0.00	520[c]	20	418	---	--	---	LADPH
4/2 1030	306	57	10.32	99	---	7.6*	96 4.80	34 2.75	50 1.18	---	0 0.00	133 2.19	265 5.51	35 0.98	8 0.63	---	0.6	---	Cr+6 0.00 Phenols 0.00	535[c]	22	---	---	--	---	LADPH
5/5 1030	---	68	17.6	--	---	8.3*	130 ---	89 ---	214 ---	---	30 ---	220 ---	379 ---	260 ---	0.5 ---	---	0.45 ---	---	Phenols 0.00 Cr+6 0.00	986[c]	--	---	---	--	---	LADPH
5/8 1120	2.5	70	25.1	279	1,751	8.4*	89 4.44	45 3.70	231 10.05	4.2 0.11	0 0.00	337 3.88	315 6.56	278 7.84	4.0 0.06	0.6 0.03	0.84 ----	20 ---	Sn 0.00 PO_4 0.46[a]	1150[c]	55	408	214	5-		DWR
6/4 1110	1.7	76	13.4	168	---	8.4*	114 ---	78 ---	239 ---	---	30 ---	200 ---	385 ---	190 ---	---	---	0.9 ---	---	Phenols 0.00 Cr+6 0.00	1275	--	---	---	--		LADPH
7/2 1045	2.8	80	10.72	132	---	8.6*	110 ---	70 ---	232 ---	---	90 ---	120 ---	399 ---	255 ---	3 ---	---	1.2 ---	---	Cr+6 0	1150	--	---	---	--		LADPH
8/6 1130	2.5	81	19.62	242	---	8.0*	98 ---	92 ---	222 ---	---	70 ---	176 ---	397 ---	259 ---	0 ---	---	0.1 ---	---	Phenols 0.00 Cr+6 0.00	1225	--	---	---	--		LADPH
9/3 1100	---	70	12.08	---	---	8.1*	112 ---	87 ---	230 ---	---	50 ---	225 ---	298 ---	340 ---	0 ---	---	0.3 ---	---	Phenols 0.00 Cr+6 0.00	1270	--	---	---	--		LADPH
9/10 1020	1.6	82	17.6	225	1,795	8.4	83 4.14	48 3.94	234 10.18	5.9 0.15	0 0.00	222 3.64	343 7.14	280 7.90	0 0.00	0.5 0.03	0.94 ----	30 ---	Sn 0.00 PO_4 0.00[a]	1177	55	404	222	5		DWR
10/1 1120	3.0	80	21.04	250	---	8.7*	100 ---	64 ---	253 ---	---	90 ---	100 ---	348 ---	261 ---	0 ---	---	1.1 --	---	Phenols 0.00	1200	--	---	---	--		LADPH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
							LOS ANGELES RIVER AT LOS ANGELES (STA.47) Cont.																			
1958																										
11/5 1245	1.3	72	23.68	268	---	9.2*	80 ---	55 ---	299 ---	---	80 ---	105 ---	370 ---	310 ---	---	---	1.4 ---	---	Phenols 0.00 Cr^{+6} 0.00	1300	--	---	---	0		LADPH
12/3 1430	1.8	73	15.76	180	---	8.8*	94 ---	87 ---	216 ---	---	80 ---	115 ---	381 ---	244 ---	6 ---	---	1.2 ---	---	Phenols 0.00 Cr^{+6} 0.00	1165	--	---	---	--		LADPH

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							MATILIJA CREEK ABOVE MATILIJA DAM (STA.45b)																			
1/9 1130	9.7	57	9.0	88	1,090	7.8	---	---	---	---	0 / 0.00	280 / 4.59	---	46 / 1.30	---	---	1.28 / ---	---		---	25	448	219	5-	Maximum 700. Minimum 0.45- Median 2.3	DWR
1/26 1040	71	51	---	---	739	8.1*	---	---	---	---	0 / 0.00	186 / 3.05	---	21 / 0.59	---	---	0.80 / ---	---		---	---	325	173	--		TTL
2/3 1200	754	--	---	---	463	7.6*	---	---	---	---	0 / 0.00	141 / 2.31	---	10 / 0.28	---	---	0.34 / ---	---		---	---	204	88	--		DWR
2/11 1100	86	60	10.3	104	822	8.0	---	---	---	---	0 / 0.00	244 / 4.00	---	14 / 0.40	---	---	0.36 / ---	---		---	15	391	191	33		DWR
3/10 1100	57	54	10.2	94	861	8.0	---	---	---	---	0 / 0.00	239 / 3.92	---	13 / 0.37	---	---	0.43 / ---	---		---	14	415	219	5-		DWR
4/8 1030	786	55	---	---	627	8.2*	---	---	---	---	0 / 0.00	195 / 3.20	---	20 / 0.56	---	---	0.0 / ---	---		---	---	325	165	--		TTL
4/17 1100	255	61	10.4	104	778	8.2	---	---	---	---	0 / 0.00	206 / 3.38	---	7 / 0.20	---	---	0.17 / ---	---		---	12	393	224	5-		DWR
5/8 1200	80	61	7.2	72	794	8.2	98 / 4.89	37 / 3.04	32 / 1.39	1.8 / 0.05	0 / 0.00	177 / 2.90	296 / 6.17	13 / 0.37	0.0 / 0.00	0.5 / 0.03	0.24 / ---	15 / --	PO_4 0.00[a]	580[c]	15	389	244	5-		DWR
6/6 1200	33	68	9.0	98	805	8.0	---	---	---	---	0 / 0.00	201 / 3.30	---	11 / 0.30	---	---	0.19 / ---	---		---	14	402	237	5-		DWR
7/16 1000	21	68	8.2	89	919	---	---	---	---	---	0 / 0.00	229 / 3.76	---	26 / 0.73	---	---	0.71 / ---	---		---	20	415	227	5-		DWR
8/20 1100	9.7	72	8.4	94	920	8.0	---	---	50 / 2.18	---	0 / 0.00	226 / 3.70	---	32 / 0.90	---	---	0.85 / ---	---		---	21	402	117	5-		DWR
9/10 0900	9.4	--	---	---	967	7.9*	118 / 5.89	33 / 2.67	53 / 2.31	2.2 / 0.06	0 / 0.00	234 / 3.84	288 / 6.01	32 / 0.90	0.0 / 0.00	0.4 / 0.02	1.0 / ---	8 / --	PO_4 0.00[a]	680[c]	21	428	236	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	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]
							Mineral constituents in parts per million / equivalents per million																			
1958										MATILIJA CREEK ABOVE MATILIJA DAM (STA.45b) Cont.																
10/6 1325	6.7	70	9.6	108	962	8.0	---	---	57 / 2.48	---	0 / 0.00	210 / 3.44	---	38 / 1.07	---	---	1.52 / ----	---		---	24	402	230	5-		DWR
11/10 1415	6.7	62	11.0	112	953	8.1	---	---	---	---	0 / 0.00	237 / 3.88	---	40 / 1.13	---	---	1.16 / ----	---		---	24	414	220	5-		DWR
12/8 1435	33	58	10.4	100	966	8.2	---	---	---	---	0 / 0.00	240 / 3.94	---	38 / 1.07	---	---	1.15 / ----	---		---	23	417	220	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
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ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							COLORADO RIVER AQUEDUCT AT LAVERNE (STA.69)																			MWD
1/58 Comp.	---	55	--	--	1,195	8.3*	93 / 4.64	33 / 2.67	111 / 4.83	5 / 0.13	1 / 0.03	151 / 2.48	328 / 6.82	103 / 2.90	1.1 / 0.02	0.3 / 0.02	---	8.7 / ---	Free CO_2 0.00	759[c]	39	366	240	1.6	No report	
2/58 Comp.	---	56	--	--	1,170	8.5*	93 / 4.64	32 / 2.63	108 / 4.70	5 / 0.13	2 / 0.07	153 / 2.51	325 / 6.76	101 / 2.85	1.2 / 0.02	0.4 / 0.02	---	8.3 / ---	Free CO_2 0.00	752[c]	39	364	235	1.3		
3/58 Comp.	---	57	--	--	1,130	8.5*	90 / 4.49	31 / 2.55	104 / 4.52	5 / 0.13	1 / 0.03	123 / 2.51	311 / 6.47	97 / 2.74	1.5 / 0.02	0.4 / 0.02	---	8.4 / ---	Free CO_2 1.00	726[c]	39	352	225	1.7		
4/58 Comp.	---	58	--	--	1,100	8.4*	89 / 4.44	30 / 2.47	102 / 4.44	5 / 0.13	1 / 0.03	151 / 2.48	305 / 6.34	92 / 2.59	1.0 / 0.02	0.3 / 0.02	---	8.6 / ---	Free CO_2 1.00	709[c]	39	346	220	1.7		
5/58 Comp.	---	63	--	--	1,080	8.3*	83 / 4.14	30 / 2.42	97 / 4.22	5 / 0.13	0 / 0.00	140 / 2.30	302 / 6.28	87 / 2.45	1.2 / 0.02	0.3 / 0.02	---	8.9 / ---	Free CO_2 1.00	684[c]	39	329	214	--		
6/58 Comp.	---	70	--	--	1,035	8.4*	79 / 3.94	28 / 2.26	94 / 4.09	5 / 0.13	2 / 0.07	122 / 2.00	286 / 5.95	83 / 2.34	0.7 / 0.01	0.3 / 0.02	0.11 / ----	9.2 / ---	NH_4 0.00 NO_2 0.01 CO_2 0.00	648[c]	39	310	206	--		
7/58 Comp.	---	75	--	--	1,000	8.4*	77 / 3.84	28 / 2.26	91 / 3.96	4 / 0.10	1 / 0.03	124 / 2.03	279 / 5.30	80 / 2.26	1.3 / 0.02	0.3 / 0.02	---	9.7 / ---	Free CO_2 1.00	633[c]	39	305	201	--		
8/58 Comp.	---	78	--	--	985	8.4*	79 / 3.94	26 / 2.14	88 / 3.83	4 / 0.10	4 / 0.13	123 / 2.02	276 / 5.74	77 / 2.17	0.8 / 0.01	0.3 / 0.02	---	9.9 / ---	Free CO_2 0.00	627[c]	38	304	197	1.0		
9/58 Comp.	---	75	--	--	976	8.3*	79 / 3.94	26 / 2.14	86 / 3.74	4 / 0.10	2 / 0.07	129 / 2.12	269 / 5.60	75 / 2.12	0.9 / 0.01	0.4 / 0.02	---	9.6 / ---	Free CO_2 0.00	616[c]	38	304	194	2.0		
10/58 Comp.	---	72	--	--	965	8.3*	78 / 3.89	26 / 2.14	82 / 3.57	5 / 0.13	1 / 0.03	132 / 2.16	270 / 5.62	70 / 1.97	0.6 / 0.01	0.4 / 0.02	---	9.5 / ---	Free CO_2 1.00	609[c]	37	302	192	2.7		
11/58 Comp.	---	64	--	--	974	8.3*	80 / 3.99	26 / 2.14	84 / 3.65	5 / 0.13	1 / 0.03	139 / 2.28	267 / 5.55	72 / 2.03	1.0 / 0.02	0.3 / 0.02	---	10 / ---	Free CO_2 0.00	616[c]	37	307	191	3.6		
12/58 Comp.	---	59	--	--	970	8.4*	81 / 4.04	26 / 2.14	86 / 3.74	5 / 0.13	1 / 0.03	142 / 2.33	268 / 5.57	72 / 2.03	1.4 / 0.02	0.3 / 0.02	0.07 / ---	10 / ---	NH_4 0.00 NO_2 0.01 CO_2 1.00	622[c]	37	309	191	2.8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

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LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
											MISSION CREEK AT WHITTIER NARROWS (STA.49a)															
1958																										DWR
1/7 1045	1.6	54	8.6	79	496	7.8	---	---	---	---	0 / 0.00	213 / 3.49	---	15 / 0.43	---	---	0.00 / ----	---		---	14	223	48	5-	Maximum 7000 Minimum 6 Median 53	
2/11 0920	3.1	58	6.6	64	603	7.6	---	---	---	---	0 / 0.00	235 / 3.85	---	21 / 0.60	---	---	0.00 / ----	---		---	16	267	74	5-		
3/4 0850	3.6	56	9.0	85	608	7.5	---	---	---	---	0 / 0.00	239 / 3.92	---	22 / 0.63	---	---	0.14 / ----	---		---	15	277	81	5-		
4/8 1035	est. 7	61	8.0	80	637	7.6	---	---	---	---	0 / 0.00	234 / 3.84	---	23 / 0.62	---	---	0.15 / ----	---		---	16	286	94	5-		
5/6 1005	5.2	63	6.4	66	648	7.6	83 / 4.14	20 / 1.64	28 / 1.22	3.0 / 0.08	0 / 0.00	246 / 4.04	105 / 2.19	26 / 0.73	6.5 / 0.11	0.6 / 0.03	0.12 / ----	20 / ---	Sn 0.00 PO_4 0.10[a]	430[c]	17	292	90	5-		
6/10 0955	4.3	63	5.8	60	655	7.4	---	---	---	---	0 / 0.00	244 / 4.00	---	23 / 0.64	---	---	0.06 / ----	---		---	16	299	99	5-		
7/2 1925	5.4	66	7.4	78	550	7.6	---	---	---	---	0 / 0.00	206 / 3.38	---	17 / 0.48	---	---	0.06 / ----	---		---	15	242	73	5-		
8/5 0905	5.3	64	6.0	63	536	7.7	---	---	21 / 0.91	---	0 / 0.00	220 / 3.60	---	19 / 0.54	---	---	0.09 / ----	---		---	16	237	57	5-		
9/2 0715	5.6	68	7.0	77	518	7.5	59 / 2.94	20 / 1.62	21 / 0.91	1.6 / 0.04	0 / 0.00	204 / 3.34	79 / 1.64	20 / 0.91	3.8 / 0.06	0.5 / 0.03	0.00 / ----	20 / ---	Sn 0.00 PO_4 0.00[a]	341[c]	17	228	61	5-		
10/7 1020	5.8	66	7.2	77	537	7.7	---	---	---	---	0 / 0.00	217 / 3.56	---	16 / 0.45	---	---	0.00 / ----	---		---	14	249	71	5-		
11/11 1050	5.9	61	9.4	95	570	7.8	---	---	---	---	0 / 0.00	238 / 3.90	---	17 / 0.48	---	---	0.00 / ----	---		---	15	267	73	5-		
12/9 0915	7.3	57	7.4	71	598	7.7	---	---	---	---	0 / 0.00	245 / 4.02	---	17 / 0.48	---	---	0.00 / ----	---		---	13	286	85	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH f	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			
							LOS ANGELES AQUEDUCT NEAR SAN FERNANDO (STA. 70)																			LADWP
1958																										
1/21 1000	387	46	10.6	89	315	9.2	24	5.8	31	4.1	8	99	23	16	0.0	0.6	0.45	18	Fe 0.04	---	---	84	---	--	Maximum 2.2 Minimum 0.02 Median 0.16	
2/18 1000	385	48	11.0	95	320	8.4	23	5.8	34	4.2	3	116	17	18	0.0	0.6	---	19	Fe 0.01	---	---	82	---	4		
3/18 1000	385	48	10.5	91	346	8.3*	24	5.8	33	4.1	----	106	25	18	0.0	0.6	0.67	20	Fe 0.08	---	---	84	---	6		
4/22 1000	362	57	9.3	87	360	8.5	25	6.0	39	3.8	3	128	27	18	0.0	0.7	0.57	19	Fe 0.04	---	---	87	---	8		
5/20 1000	444	64	8.6	90	451	8.5	26	6.8	45	4.5	5	129	31	25	0.0	0.6	0.52	24	Fe 0.80[a]	---	---	94	---	7		
6/17 1100	453	66	8.2	88	363	8.6	23	6.1	44	4.6	4	114	32	22	0.0	0.6	0.46	23		---	---	83	---	4		
7/22 1000	444	72	7.4	84	288	8.4	20	4.5	30	3.8	2	84	30	21	0.0	0.5	0.35	19	Fe 0.20	---	---	69	---	6		
8/19 1000	453	73	7.6	87	263	8.2	19	4.9	27	3.0	1	80	21	11	0.2	0.4	0.21	17	Fe 0.04	---	---	68	---	5		
9/16 1000	437	72	7.2	81	273	8.4	20	4.6	25	3.6	2	87	19	12	0.2	0.4	---	---		---	---	69	---	3		
10/21 1000	450	68	7.9	86	311	8.1	22	4.3	32	3.3	2	99	19	14	0.1	0.4	0.41	22	Fe 0.02	---	---	74	---	4		
11/18 1000	450	55	9.6	90	347	8.2	24	6.8	34	3.7	1	109	21	21	0.0	0.5	0.50	21	Fe 0.02	---	---	83	---	1		
12/16 1000	438	52	10.4	94	306	7.5	24	5.9	35	3.9	0	119	20	21	0.0	0.6	0.41	20		---	---	84	---	0		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
								Mineral constituents in parts per million / equivalents per million																			
1958												PIRU CREEK NEAR PIRU (STA.46c)															DWR
1/6	1100	est. 1	49	11.4	98	2,824	8.3	---	---	---	---	0 0.00	417 6.81	---	97 2.70	---	---	2.30 ----	---		---	37	1031	690	5-	Maximum 700 Minimum 6 Median 43	
2/10	1115	est. 3	58	10.4	100	2,638	8.4	---	---	---	---	0 0.00	416 6.81	---	81 2.21	---	---	1.96 ----	---		---	34	1045	704	5-		
3/3	1000	est.40	52	10.5	95	929	8.1	---	---	---	---	0 0.00	183 3.00	---	21 0.60	---	---	0.90 ----	---		---	23	383	233	2-		
4/7	1045	est.30	54	8.4	77	2,174	7.9	267 13.32	99 8.14	125 5.44	6.9 0.18	0 0.00	172 2.82	1120 23.40	28 0.79	4.7 0.08	1.2 0.06	0.72 ----	10 ---		1959[c]	20	1071	800	**		
5/5	1105	est.30	61	10.8	109	943	8.4	98 4.89	39 3.21	54 2.35	3.2 0.08	0 0.00	179 2.94	343 7.15	19 0.54	0.5 0.01	0.8 0.04	0.66 ----	10 ---	Sn 0.00 PO_4 0.08[a]	725[c]	22	406	259	5-		
6/9	0950	est.35	55	9.4	88	848	8.3	---	---	---	---	0 0.00	171 2.80	---	13 0.35	---	---	0.37 ----	---		---	20	378	238	5-		
7/1	1010	est.75	57	9.0	86	734	8.1	---	---	---	---	0 0.00	163 2.67	---	13 0.37	---	---	0.44 ----	---		---	20	340	206	30		
8/4	1045	est.100	64	8.6	90	796	8.2	---	---	38 1.65	---	0 0.00	176 2.88	---	14 0.39	---	---	0.64 ----	---		---	19	355	167	5-		
9/1	0815	est.20	70	8.5	95	978	8.1	99 4.94	40 3.32	58 2.52	4.5 0.12	0 0.00	205 3.36	338 7.04	20 0.56	0.2 0.00	0.7 0.04	0.92	10	Sn 0.00 PO_4 0.07[a]	720[c]	23	413	245	5-		
10/6	1030	est.15	70	8.8	99	1,017	8.2	---	---	---	---	0 0.00	227 3.72	---	18 0.51	---	---	1.02 ----	---		---	21	454	268	5-		
11/10	1050	est. 5	61	12.4	125	1,252	8.4	---	---	---	---	14 0.48	259 4.24	---	25 0.71	---	---	0.93 ----	---		---	29	552	316	5-		
12/8	1100	est. 5	52	12.8	108	1,232	8.4	---	---	---	---	0 0.00	268 4.40	---	28 0.79	---	---	1.06 ----	---		---	28	525	305	5-		

**Turbidity of this sample reported as greater than 10,000 ppm.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											RIO HONDO AT WHITTIER NARROWS (STA.49)															DWR
1/7 1015	est.3.8	65	14.0	147	770	8.4	---	---	---	---	23 / 0.77	192 / 3.15	---	63 / 1.78	---	---	0.08 / ----	---		---	34	250	54	5-	Maximum 700 Minimum 2.9 Median 23.	
2/11 0845	398	52	9.2	83	688	8.3	60 / 2.99	25 / 2.06	50 / 2.18	4.6 / 0.12	0 / 0.00	173 / 2.84	145 / 3.02	45 / 1.27	1.4 / 0.02	0.4 / 0.02	0.09 / ----	10 / ---		425[c]	30	252	110	75		
3/4 0930	575	54	11.7	108	879	8.1	---	---	---	---	0 / 0.00	165 / 2.70	---	66 / 1.84	---	---	0.20 / ----	---		---	34	286	151	20		
4/8 0950	434	59	9.6	95	291	8.2	38 / 1.90	9.4 / 0.77	9 / 0.39	3.0 / 0.08	0 / 0.00	136 / 2.23	25 / 0.52	7 / 0.20	6.3 / 0.10	0.3 / 0.02	0.04 / ---	15 / --		200[c]	12	133	21	350		
5/6 0930	222	63	8.4	86	1,083	8.3	87 / 4.34	29 / 2.38	105 / 4.57	4.6 / 0.12	0 / 0.00	160 / 2.62	296 / 6.17	96 / 2.71	2.0 / 0.03	0.5 / 0.03	0.16 / ----	10 / ---	Sn 0.00 PO_4 0.06[a]	735[c]	40	337	206	5-		
6/10 0930	161	68	8.4	92	1,026	8.4	---	---	---	---	0 / 0.00	138 / 2.26	---	86 / 2.42	---	---	0.06 / ----	---		---	39	325	213	5-		
7/2 2150	9.7	68	5.2	57	814	8.2	69 / 3.44	19 / 1.54	61 / 2.65	8.5 / 0.22	0 / 0.00	210 / 3.44	140 / 2.91	52 / 1.47	5.1 / 0.08	0.8 / 0.04	0.20 / ----	25 / ---		483[c]	35	249	77	5-		
8/5 0840	220	75	7.2	85	985	8.4	---	---	85 / 3.70	---	0 / 0.00	138 / 2.24	---	78 / 2.20	---	---	0.12 / ----	---		---	38	301	189	5-		
9/2 0645	121	73	7.0	81	1,000	7.7	77 / 3.84	28 / 2.26	91 / 3.96	4.1 / 0.10	0 / 0.00	154 / 2.52	271 / 5.65	78 / 2.20	1.5 / 0.02	0.3 / 0.02	0.04 / ----	10 / ---	Sn 0.00 PO_4 0.07[a]	681[c]	39	305	179	5-		
10/7 0945	44	74	8.8	102	947	8.3	---	---	---	---	0 / 0.00	146 / 2.40	---	71 / 2.00	---	---	0.20 / ----	---		---	39	299	179	5-		
11/11 1015	104	64	11.8	125	894	8.4	---	---	---	---	0 / 0.00	142 / 2.32	247 / 5.14	68 / 1.92	---	---	0.07 / ----	---		---	38	288	172	5-		
12/9 0850	106	56	8.8	83	936	8.3	---	---	---	---	0 / 0.00	153 / 2.50	260 / 5.41	73 / 2.06	---	---	0.0 / ----	---		---	38	299	174	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE 8-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN GABRIEL RIVER AT AZUSA POWER HOUSE (STA. 50d)																			DWR
1/7 1330	est. 82	47	14.4	121	350	8.0	45 / 2.25	12 / 0.99	8 / 0.35	3.7 / 0.10	0 / 0.00	182 / 2.98	23 / 0.48	8 / 0.23	2.5 / 0.04	0.3 / 0.02	0.00 / ----	15 / ---		238[c]	10	162	13	5-	Maximum 2.3 Minimum 0.45- Median 0.46-	
2/11 1030	est. 83	50	9.4	83	351	8.0	---	---	---	---	0 / 0.00	184 / 3.02	---	7 / 0.20	---	---	0.09 / ----	---		---	11	166	15	5-		
3/4 1615	est. 90	55	11.5	108	313	7.9	---	---	---	---	9.3 / 0.31	148 / 2.44	---	6 / 0.18	---	---	0.23 / ----	---		---	9	146	8	5-		
4/8 1310	est. 90	50	10.4	92	306	8.2	---	---	---	---	0 / 0.00	158 / 2.60	---	4 / 0.11	---	---	0.05 / ----	---		---	10	142	12	5-		
5/6 1115	est. 90	59	10.0	99	293	8.4	40 / 2.00	11 / 0.90	7 / 0.30	3.0 / 0.08	0 / 0.00	157 / 2.58	18 / 0.38	7 / 0.20	2.5 / 0.04	0.4 / 0.02	0.04 / ----	10 / ---	Sn 0.00 PO_4 0.02[a]	190[c]	9	145	16	5-		
6/10 1105	est. 90	66	8.6	92	300	8.4	---	---	---	---	0 / 0.00	160 / 2.62	---	6 / 0.17	---	---	0.00 / ----	---		---	9	151	20	5-		
7/2 2020	est. 80	68	7.6	83	333	8.3	---	---	---	---	0 / 0.00	185 / 3.03	---	4 / 0.11	---	---	0.04 / ----	---		---	9	156	4	5-		
8/5 1010	est. 90	72	7.6	86	343	8.2	---	---	8.2 / 0.36	---	0 / 0.00	183 / 3.00	---	6 / 0.17	---	---	0.00 / ----	---		---	10	163	71	5-		
9/2 0830	est. 85	69	8.0	89	368	8.1	34 / 1.70	16 / 1.32	9 / 0.39	2.9 / 0.07	0 / 0.00	173 / 2.84	22 / 0.46	10 / 0.28	0.2 / 0.00	0.3 / 0.02	0.00 / ----	20 / ---	Sn 0.00 PO_4 0.00[a]	210[c]	11	151	27	5-		
10/7 1145	est. 85	65	9.0	94	350	8.2	---	---	---	---	12 / 0.40	168 / 2.76	---	6 / 0.17	---	---	0.00 / ----	---		---	11	170	12	5-		
11/12 0950	est. 85	58	10.4	100	375	8.2	---	---	---	---	0 / 0.00	218 / 3.58	---	5 / 0.14	---	---	0.03 / ----	---		---	11	185	6	5-		
12/9 1015	est. 40	50	9.6	85	398	7.8	---	---	---	---	0 / 0.00	224 / 3.68	---	5 / 0.14	---	---	0.00 / ----	---		---	10	193	9	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN GABRIEL RIVER AT WHITTIER NARROWS (STA. 50)																			DWR
1/7 1130	est. 150	60	9.4	94	1,203	8.3	87 / 4.34	35 / 2.88	107 / 4.65	5 / 0.13	0 / 0.00	154 / 2.53	324 / 6.75	105 / 2.96	1.5 / 0.02	0.4 / 0.02	0.00 / ----	10 / ---		835[c]	39	362	235	12	Maximum 700+ Minimum 0.45- Median 34-	
2/11 0950	est. 50	52	8.6	78	1,183	8.4	92 / 4.59	33 / 2.71	109 / 4.74	5.8 / 0.15	0 / 0.00	163 / 2.67	322 / 6.70	103 / 2.90	3.0 / 0.05	0.4 / 0.02	0.00 / ----	5 / ---		785[c]	39	366	232	5-		
3/4 0905	est. 300	56	10.2	96	1,155	8.3	---	---	---	---	0 / 0.00	156 / 2.56	---	98 / 2.76	---	---	0.14 / ----	---		---	38	353	225	18		
4/8 1115	est. 500	59	9.6	95	288	8.3	41 / 2.05	6.8 / 0.55	7.5 / 0.33	3.5 / 0.09	0 / 0.00	141 / 2.31	24 / 0.50	6 / 0.17	4.1 / 0.07	0.1 / 0.00	0.05 / ----	10 / ---		187[c]	11	131	16	500		
5/6 1030	est. 200	63	8.0	82	302	8.4	39 / 1.95	12 / 0.99	8 / 0.35	3.2 / 0.08	0 / 0.00	155 / 2.54	22 / 0.45	9 / 0.25	2.5 / 0.04	0.3 / 0.02	0.04 / ----	10 / ---	Sn 0.00 PO_4 0.06[a]	190[c]	10	145	18	5-		
6/10 1020	est. 200	65	9.0	94	321	8.4	---	---	---	---	0 / 0.00	165 / 2.70	---	5 / 0.14	---	---	0.00 / ----	---		---	10	155	20	5-		
7/2 2110	est. 1	64	6.4	67	835	8.0	78 / 3.89	23 / 1.91	60 / 2.61	6.8 / 0.17	0 / 0.00	212 / 3.48	190 / 3.95	51 / 1.44	1.9 / 0.03	0.4 / 0.02	0.07 / ----	10 / ---		516[c]	31	290	116	5-		
8/5 0930	est. 1/50	70	8.4	94	878	8.1	---	---	63 / 2.74	---	0 / 0.00	205 / 3.36	---	60 / 1.69	---	---	0.09 / ----	---		---	31	307	139	5-		
9/2 0730	est. 150	72	8.0	93	1,007	7.9	78 / 3.89	29 / 2.39	91 / 3.96	4.0 / 0.10	0 / 0.00	146 / 2.40	278 / 5.80	83 / 2.34	1.3 / 0.02	0.3 / 0.02	0.00 / ----	10 / ---	Sn 0.00 PO_4 0.00[a]	686[c]	38	314	194	5-		
10/7 1045	est. 100	76	8.2	96	951	8.4	---	---	---	---	0 / 0.00	137 / 2.24	---	72 / 2.03	---	---	0.00 / ----	---		---	37	303	191	5-		
11/11 1140	est. 100	66	11.0	118	927	8.4	---	---	---	---	0 / 0.00	143 / 2.34	256 / 5.33	69 / 1.95	---	---	0.06 / ----	---		---	37	298	182	5-		
12/9 0945	est. 1	54	7.8	72	899	7.9	---	---	---	---	0 / 0.00	212 / 3.48	---	61 / 1.72	---	---	0.00 / ----	---		---	32	330	156	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE (STA.46)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
								Mineral constituents in parts per million / equivalents per million																			
1958																											
1/6	1015	2.24	52	10.4	94	3,225	8.2	---	---	---	---	0 / 0.00	392 / 6.41	---	178 / 5.00	---	---	1.21 / ----	---		---	37	1197	876	5-	Maximum 70,000+ Minimum 0.6 Median 23.	DWR
2/4	1215	1907	--	---	---	668	7.2*	---	---	---	---	0 / 0.00	187 / 3.06	---	20 / 0.56	---	---	---	---		---	--	273	120	**		DWR
2/10	1030	11.7	60	10.6	107	2,400	8.1	---	---	---	---	0 / 0.00	382 / 6.22	---	105 / 2.91	---	---	0.79	---		---	31	980	669	25		DWR
2/17	1000	10	--	---	---	2,400	8.1*	212 / 10.60	98 / 8.10	201 / 8.75	3.9 / 0.10	0 / 0.00	372 / 6.10	908 / 18.88	98 / 2.76	0.8 / 0.01	0.6 / 0.03	0.30 / ----	18 / ---		1680[c]	32	935	630	--		TTL
3/3	0945	16	54	11.0	102	2,068	8.0	---	---	---	---	0 / 0.00	344 / 5.61	---	83 / 2.30	---	---	0.75 / ----	---		---	29	873	592	35		DWR
4/7	1000	1680	50	9.8	86	845	8.1	85 / 4.24	34 / 2.79	47 / 2.04	4.4 / 0.11	0 / 0.00	167 / 2.74	286 / 5.95	21 / 0.59	1.3 / 0.02	0.4 / 0.02	0.21 / ----	20 / ---		634[c]	23	350	213	3000		DWR
4/8	1145	646	60	---	---	925	7.5*	---	---	---	---	0 / 0.00	214 / 3.50	---	33 / 0.93	---	---	0.60 / ----	---		---	--	395	220	--		TTL
5/5	1020	41	77	6.6	79	1,567	8.3	169 / 8.43	60 / 4.93	120 / 5.22	5.5 / 0.14	0 / 0.00	315 / 5.16	530 / 11.05	66 / 1.86	3.5 / 0.06	0.9 / 0.05	0.56 / ----	20 / ---	Sn 0.00 PO_4 0.12[a]	1235[c]	28	672	412	5-		DWR
6/9	0905	3.07	68	7.8	85	2,514	8.1	---	---	---	---	0 / 0.00	354 / 5.80	---	124 / 3.51	---	---	0.69 / ----	---		---	35	998	708	5-		DWR
7/1	0930	2.6	77	7.4	88	2,681	8.0	---	---	---	---	0 / 0.00	340 / 5.57	---	144 / 4.06	---	---	0.84 / ----	---		---	36	1015	736	5-		DWR
8/4	1000	0.83	82	6.0	76	2,962	8.1	---	---	304 / 13.22	---	0 / 0.00	285 / 4.68	---	180 / 5.08	---	---	1.22 / ----	---		---	39	1047	813	5-		DWR
8/14	1030	2.5	--	---	---	3,110	7.6*	220 / 10.98	137 / 11.32	355 / 15.60	9.6 / 0.25	0 / 0.00	320 / 5.25	1332 / 27.73	182 / 5.13	0.0 / 0.00	0.60 / 0.03	1.00 / ----	19 / ---		2348[c]	41	1115	852	--		TTL

**Turbidity of this sample reported as greater than 10,000 ppm.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported ... are as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *.

TABLE B-12

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958									SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE (STA.46) Cont.																	
9/1 0730	0.86	65	8.2	86	3,237	7.7	245 / 12.22	135 / 11.10	357 / 15.53	7.3 / 0.19	0 / 0.00	356 / 5.84	1358 / 28.30	189 / 5.33	0.5 / 0.01	0.9 / 0.05	1.42 / ---	20 / ---	Sn 0.00 PO_4 0.00[a]	2732[c]	40	1166	874	5-		DWR
10/6 0950	0.72	74	7.8	91	3,416	8.0	---	---	375 / 16.31	---	0 / 0.00	342 / 5.60	---	215 / 6.06	---	---	1.54	---		---	40	1219	939	5-		DWR
11/10 1000	1.6	62	11.2	115	3,028	8.2	---	---	---	---	0 / 0.00	346 / 5.68	---	192 / 5.41	---	---	1.14 / ---	---		---	42	1153	869	5-		DWR
12/8 0955	1.3	58	9.8	96	3,160	8.1	---	---	---	---	0 / 0.00	334 / 5.48	---	195 / 5.50	---	---	1.12 / ---	---		---	41	1178	904	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13
ANALYSES OF SURFACE WATER
LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA CLARA RIVER NEAR SANTA PAULA (STA 46a)															DWR
1/6 1230	est. 30	58	10.0	96	2,217	8.3	---	---	---	---	0/0.00	330/5.41	---	90/2.52	---	---	1.08/----	---		---	26	958	687	5-	Maximum 7000 Minimum 2.3 Median 6.2	
2/10 1300	est.250	56	8.4	79	933	8.1	108/5.39	33/2.71	51/2.22	2.9/0.07	0/0.00	223/3.65	281/5.86	28/0.79	0.4/0.01	0.6/0.03	0.42/----	10/---		655[c]	22	402	219	110		
3/3 1145	est. 30	57	11.0	106	1,140	8.1	---	---	---	---	17/0.55	218/3.56	---	36/1.00	---	---	0.58/----	---		---	23	492	286	28		
4/7 1400	1,500 est.	59	8.0	79	1,745	8.0	182/9.08	62/5.10	138/6.00	6.1/0.16	0/0.00	253/4.16	691/14.39	66/1.86	5.4/0.09	0.7/0.04	0.65/----	20/---		1432[c]	30	709	501	3700		
5/5 1330	est.300	75	8.6	100	951	8.3	108/5.39	37/3.04	54/2.35	3.0/0.08	0/0.00	203/3.32	315/6.56	27/0.76	1.5/0.02	0.8/0.04	0.56/----	15/---	Sn 0.00 PO_4 0.04[a]	705[c]	22	423	257	5-		
6/9 1130	est. 75	72	9.0	102	1,171	8.2	---	---	---	---	0/0.00	229/3.75	---	40/1.13	---	---	0.47/----	---		---	25	499	311	5-		
7/1 1145	est. 75	75	7.6	89	1,174	8.1	---	---	---	---	0/0.00	227/3.72	---	40/1.10	---	---	0.62/----	---		---	25	501	315	1200		
8/4 1220	est. 75	66	8.4	88	2,342	8.0	228/11.38	98/8.06	192/8.35	8.0/0.20	0/0.00	317/5.20	952/19.83	105/2.96	8.8/0.14	0.7/0.04	1.16/----	30/---		1946[c]	30	972	712	5-		
9/1 0945	est. 20	66	10.0	104	2,304	7.7	232/11.58	97/7.93	197/8.57	7.2/0.18	0/0.00	342/5.60	957/19.94	102/2.88	10/0.16	0.7/0.04	1.32/----	30/---	Sn 0.00 PO_4 0.00[a]	1933[c]	30	978	698	5-		
10/6 1210	est. 20	66	9.6	102	2,298	7.8	---	---	---	---	0/0.00	349/5.72	---	100/2.82	---	---	1.36/----	---		---	30	968	682	5-		
11/10 1300	est. 20	61	10.0	100	2,098	8.0	---	---	---	---	0/0.00	339/5.56	---	95/2.68	---	---	0.96/----	---		---	31	949	641	5-		
12/8 1320	est. 20	59	11.6	115	2,174	8.2	---	---	---	---	0/0.00	312/5.12	---	97/2.74	---	---	0.71/----	---		---	31	977	721	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	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 (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1958																										DWR
											SANTA PAULA CREEK NEAR SANTA PAULA (STA.46e)															
1/6 1300	8.5	54	9.6	89	984	8.4	---	---	---	---	0 / 0.00	270 / 4.41	---	47 / 1.33	---	---	0.15 / ----	---		---	23	402	181	50	Maximum 700 Minimum 0.6 Median 4.5	
2/10 1330	50	56	8.4	79	625	8.2	76 / 3.79	24 / 1.97	30 / 1.31	1.4 / 0.04	0 / 0.00	189 / 3.10	157 / 3.28	18 / 0.51	0.7 / 0.01	0.2 / 0.01	0.12 / ----	10 / ---		372[c]	19	288	133	8		
3/3 1230	est.150	53	10.5	97	652	8.1	---	---	---	---	9.3 / 0.31	160 / 2.61	---	17 / 0.48	---	---	0.08 / ----	---		---	18	286	140	5-		
4/7 1445	540	55	10.6	100	505	8.3	58 / 2.89	18 / 1.48	19 / 0.83	1.3 / 0.03	0 / 0.00	131 / 2.16	139 / 2.90	9 / 0.25	2.2 / 0.04	0.3 / 0.02	0.00 / ----	10 / ---		357[c]	16	219	111	1300		
5/5 1415	44	68	8.0	87	669	8.3	82 / 4.09	23 / 1.89	29 / 1.26	1.3 / 0.03	0 / 0.00	167 / 2.74	185 / 3.86	17 / 0.48	0.5 / 0.01	0.4 / 0.02	0.14 / ----	10 / ---	Sn 0.00 PO_4 0.02[a]	470[c]	17	302	165	5-		
6/9 1225	17	70	10.0	111	720	8.4	---	---	---	---	0 / 0.00	183 / 3.00	---	19 / 0.53	---	---	0.06 / ----	---		---	20	314	164	5-		
7/1 1205	16	70	11.2	126	695	8.4	---	---	---	---	0 / 0.00	142 / 2.33	---	25 / 0.70	---	---	0.14 / ----	---		---	24	268	151	5-		
8/4 1355	6.8	75	6.0	70	864	8.1	---	---	49 / 2.13	---	0 / 0.00	249 / 4.08	---	33 / 0.93	---	---	0.21 / ----	---		---	23	363	159	5-		
9/1 1015	5.6	62	11.0	114	877	8.1	89 / 4.44	31 / 2.52	56 / 2.44	2.1 / 0.05	0 / 0.00	237 / 3.88	225 / 4.69	37 / 1.04	0.1 / 0.00	0.4 / 0.02	0.21	20	Sn 0.00 PO_4 0.00[a]	602[c]	26	348	154	5-		
10/6 1235	3.7	71	10.4	118	853	8.1	---	---	---	---	0 / 0.00	217 / 3.56	---	154 / 4.34	---	---	0.30 / ----	---		---	28	333	155	5-		
11/10 1325	4.4	62	12.0	122	878	8.3	---	---	---	---	0 / 0.00	227 / 3.72	---	38 / 1.07	---	---	0.26 / ----	---		---	31	336	150	5-		
12/8 1350	4.7	56	12.0	114	868	8.4	---	---	---	---	0 / 0.00	227 / 3.72	---	39 / 1.10	---	---	0.20 / ----	---		---	27	364	178	5-		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SESPE CREEK AT FILLMORE (STA.46d)															DWR
1/6 1150	29	50	10.4	92	1,092	8.4	---	---	---	---	14 / 0.47	237 / 3.87	---	53 / 1.49	---	---	1.40 / ---	---		---	27	419	202	5-	Maximum 240 Minimum 0.45- Median 6.2	
2/10 1210	240	52	9.8	88	704	8.4	86 / 4.29	26 / 2.14	32 / 1.39	2.1 / 0.05	17 / 0.55	169 / 2.78	187 / 3.90	18 / 0.51	0.2 / 0.00	0.6 / 0.03	0.38 / ---	15 / ---		463[c]	13	322	155	75		
3/3 1100	240	50	12.5	106	951	8.3	---	---	---	---	0 / 0.00	229 / 3.74	---	23 / 0.65	---	---	0.32 / ---	---		---	19	430	243	8		
4/7 1250	2,390	54	10.4	96	975	8.3	148 / 7.39	34 / 2.79	24 / 1.04	3.6 / 0.09	0 / 0.00	172 / 2.82	384 / 8.01	7 / 0.20	2.9 / 0.05	0.7 / 0.04	0.14 / ---	10 / ---		755[c]	9	507	366	2500		
5/5 1220	205	64	9.6	101	866	8.3	98 / 4.89	38 / 3.12	42 / 1.83	2.2 / 0.06	0 / 0.00	189 / 3.10	291 / 6.06	19 / 0.54	0 / 0.00	0.8 / 0.04	0.38 / ---	10 / ---	Sn 0.00 PO_4 0.02[a]	640[c]	18	404	249	5-		
6/9 1045	64	64	8.6	90	797	8.4	---	---	---	---	0 / 0.00	172 / 2.82	---	25 / 0.71	---	---	0.37 / ---	---		---	24	335	194	5-		
7/1 1100	32	68	11.6	128	800	8.4	---	---	---	---	0 / 0.00	135 / 2.21	---	33 / 0.93	---	---	0.75 / ---	---		---	28	292	181	5-		
8/4 1130	10	75	8.8	102	909	8.4	---	---	67 / 2.91	---	0 / 0.00	171 / 2.80	---	46 / 1.30	---	---	1.35 / ---	---		---	31	329	143	5-		
9/1 0900	2	70	9.7	104	1,168	7.8	131 / 6.54	33 / 2.74	80 / 3.48	4.0 / 0.10	0 / 0.00	193 / 3.16	402 / 8.37	54 / 1.52	0.0 / 0.00	1.1 / 0.06	1.36 / ---	15 / ---	Sn 0.00 PO_4 0.00[a]	856[c]	27	464	306	5-		
10/6 1125	1.4	70	13.4	150	1,155	8.1	---	---	---	---	0 / 0.00	173 / 2.84	---	57 / 1.61	---	---	1.52 / ---	---		---	30	441	299	5-		
11/10 1155	1.7	60	12.2	122	955	8.4	---	---	---	---	0 / 0.00	193 / 3.16	---	67 / 1.89	---	---	1.66 / ---	---		---	37	332	174	5-		
12/8 1215	72	52	12.6	114	1,026	8.4	---	---	---	---	0 / 0.00	205 / 3.36	---	60 / 1.69	---	---	1.80 / ---	---		---	35	339	171	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-13

ANALYSES OF SURFACE WATER

LOS ANGELES REGION (4)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							Mineral constituents in parts per million / equivalents per million																			
1958											VENTURA RIVER AT VENTURA (STA.61)															DWR
1/6 1425	2.9	50	10.8	95	1,074	7.6	---	---	---	---	0/0.00	301/4.93	---	67/1.89	---	---	0.31/----	---		---	22	450	203	5-	Maximum 700 Minimum 6 Median 6.2	
2/10 1430	120	58	10.0	96	753	8.0	88/4.39	28/2.30	37/1.61	2.6/0.07	0/0.00	220/3.61	181/3.77	28/0.79	1.4/0.02	0.4/0.02	0.38/----	10/---		477[c]	19	333	152	90		
3/3 1430	202	59	10.5	103	803	8.2	---	---	---	---	12/0.40	212/3.48	---	27/0.76	---	---	0.35/----	---		---	19	361	167	150		
4/7 1600	3,210	54	11.0	101	433	8.2	53/2.64	14/1.15	14/0.61	2.2/0.06	9.3/0.31	122/2.00	90/1.88	9/0.25	2/0.03	0.1/0.00	0.11/----	15/---		314[c]	14	189	123	800		
5/5 1530	215	73	7.8	90	838	8.3	102/5.09	34/2.79	36/1.57	2.2/0.06	0/0.00	232/3.80	229/4.77	25/0.71	3.5/0.06	0.5/0.03	0.25/----	10/---	Sn 0.00 PO_4 0.01[a]	605[c]	17	396	206	180		
6/9 1335	109	68	10.0	105	842	8.3	---	---	---	---	0/0.00	223/3.63	---	33/0.92	---	---	0.22/----	---		---	22	363	182	5-		
7/1 1300	19	70	11.2	136	867	8.1	---	---	---	---	0/0.00	217/3.56	---	37/1.04	---	---	0.37/----	---		---	24	354	176	5-		
8/4 1345	24	73	10.0	116	924	8.2	---	---	53/2.31	---	0/0.00	246/4.04	---	40/1.13	---	---	0.43/----	---		---	37	196	73	5-		
9/1 1130	20	73	13.0	152	934	8.1	111/5.54	28/2.32	53/2.31	1.4/0.03	0/0.00	254/4.16	241/5.02	43/1.21	2.0/0.03	0.5/0.03	0.52/----	20/---	Sn 0.00 PO_4 0.00[a]	664[c]	23	393	185	5-		
10/6 1420	4.9	71	10.0	112	935	7.9	---	---	---	---	0/0.00	248/4.06	---	39/1.10	---	---	0.43/----	---		---	37	204	1	5-		
11/10 1500	6.7	63	12.2	126	981	7.9	---	---	---	---	0/0.00	290/4.76	---	46/1.30	---	---	0.42/----	---		---	24	439	201	5-		
12/8 1515	2.9	57	10.0	96	1,002	7.8	---	---	---	---	0/0.00	281/4.60	---	50/1.41	---	---	0.51/----	---		---	23	434	204	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily								AMERICAN RIVER AT FAIR OAKS (STA. 22d)																	USGS
1/1-9	1,320	--	--	--	76.0	7.1*	8.0 0.40	2.9 0.24	2.5 0.11	---	0 0.00	30 0.49	---	---	---	---	---	---		53[c]	15	32	7	--		
1/10-26	2,180	--	--	--	72.7	6.7*	7.6 0.38	3.2 0.26	2.5 0.11	---	0 0.00	30 0.49	---	---	---	---	---	---		55[c]	15	32	7	--		
1/27-28	2,230	--	--	--	79.0	6.8*	8.4 0.42	2.4 0.20	2.5 0.11	---	0 0.00	31 0.51	---	---	---	---	---	---		67[c]	15	31	6	--		
1/29-31	2,910	--	--	--	82.0	6.6*	8.8 0.44	2.4 0.20	2.6 0.11	---	0 0.00	31 0.51	---	---	---	---	---	---		58[c]	15	32	7	--		
2/1-18	6,130	--	--	--	72.3	7.1*	7.2 0.36	2.7 0.22	2.6 0.11	---	0 0.00	31 0.51	---	---	---	---	---	---		57[c]	16	29	4	--		
2/19-21	16,300	--	--	--	73.1	6.9*	7.6 0.38	2.2 0.18	2.8 0.12	---	0 0.00	32 0.52	---	---	---	---	---	---		54[c]	18	28	2	--		
2/22-24	6,780	--	--	--	68.8	7.1*	6.8 0.34	2.3 0.19	2.6 0.11	---	0 0.00	30 0.49	---	---	---	---	---	---		65[c]	17	26	1	--		
2/25-28, 3/1-3	14,260	--	--	--	67.5	6.8*	6.4 0.32	2.3 0.19	2.6 0.11	---	0 0.00	31 0.51	---	---	---	---	---	---		64[c]	18	25	0	--		
3/4-23	5,550	--	--	--	64.7	7.1	6.5 0.32	1.9 0.16	2.2 0.10	---	0 0.00	28 0.46	---	---	---	---	---	---		61[c]	17	24	1	--		
3/24-31	14,690	--	--	--	68.0	7.7*	6.6 0.33	2.2 0.18	2.4 0.10	---	0 0.00	32 0.52	---	---	---	---	---	---		61[c]	16	25	0	--		
4/1-10	26,760	--	--	--	68.6	7.1*	6.2 0.31	2.6 0.21	2.7 0.12	---	0 0.00	31 0.51	---	---	---	---	---	---		64[c]	19	26	1	--		
4/11-18	11,260	--	--	--	70.8	7.3*	6.3 0.31	2.7 0.22	2.7 0.12	---	0 0.00	33 0.54	---	---	---	---	---	---		68[c]	18	27	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						AMERICAN RIVER AT FAIR OAKS (STA. 22d cont.)																			USGS
4/19-30	7,750	--	---	---	64.4	7.2*	6.4 / 0.32	1.8 / 0.15	2.2 / 0.10	---	0 / 0.00	30 / 0.49	---	---	---	---	---	---		59[c]	18	24	0	---		
5/1-13	7,690	--	---	---	54.8	7.2*	5.7 / 0.28	1.1 / 0.09	2.0 / 0.09	---	0 / 0.00	26 / 0.43	---	---	---	---	---	---		55[c]	20	18	0	---		
5/14-23	10,960	--	---	---	47.4	7.0*	4.8 / 0.24	1.0 / 0.08	2.1 / 0.09	---	0 / 0.00	22 / 0.36	---	---	---	---	---	---		49[c]	22	16	0	---		
5/24-31	16,610	--	---	---	41.9	6.9*	4.6 / 0.23	0.2 / 0.02	1.7 / 0.07	---	0 / 0.00	20 / 0.33	---	---	---	---	---	---		46[c]	22	12	0	---		
6/1-3	13,830	--	---	---	47.8	6.3*	4.4 / 0.22	1.7 / 0.14	2.0 / 0.09	0.4 / 0.01	0 / 0.00	17 / 0.28	---	---	---	---	---	---		31[c]	20	18	4	---		
6/4-30	7,620	--	---	---	39.2	6.6*	3.2 / 0.16	1.5 / 0.12	2.0 / 0.09	0.4 / 0.01	0 / 0.00	18 / 0.30	---	---	---	---	---	---		31[c]	24	14	0	---		
7/1-31	3,560	--	---	---	44.6	6.6*	4.4 / 0.22	1.3 / 0.11	2.1 / 0.09	0.4 / 0.01	0 / 0.00	18 / 0.30	---	---	---	---	---	---		45[c]	21	16	1	---		
8/1	3,770	--	---	---	63.2	8.0*	4.0 / 0.20	2.1 / 0.17	4.6 / 0.20	0.6 / 0.02	0 / 0.00	34 / 0.56	---	---	---	---	---	---		76[c]	34	18	0	---		
8/2-31	3,760	--	---	---	39.4	6.7*	4.8 / 0.24	0.5 / 0.04	2.1 / 0.09	0.6 / 0.02	0 / 0.00	16 / 0.26	---	---	---	---	---	---		35[c]	23	14	1	---		
9/1-16	3,160	--	---	---	39.8	6.5*	2.8 / 0.14	1.9 / 0.16	1.7 / 0.07	0.6 / 0.02	0 / 0.00	18 / 0.30	---	---	---	---	---	---		28[c]	18	15	0	---		
9/17-18	3,100	--	---	---	57.4	6.7*	4.4 / 0.22	2.1 / 0.17	3.6 / 0.16	0.6 / 0.02	0 / 0.00	28 / 0.46	---	---	---	---	---	---		56[c]	28	20	0	---		
9/19-30	3,100	--	---	---	40.7	6.5*	4.4 / 0.22	1.2 / 0.10	1.7 / 0.07	0.6 / 0.02	0 / 0.00	18 / 0.30	---	---	---	---	---	---		25[c]	17	16	1	---		
	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											AMERICAN RIVER AT NIMBUS DAM (STA. 22a)															USGS
11/14 0915	1,560	63	9.0	93	84.1	7.2	9.2 / 0.46	2.9 / 0.24	2.7 / 0.12	0.4 / 0.01	0 / 0.00	32 / 0.52	3.8 / 0.08	7.5 / 0.21	0.4 / 0.01	0.0 / 0.00	0.1 / ---	12 / ---		55[b]	14	35	9	---		
12/5 1215	2,160	59	9.2	90	96.6	7.3	10 / 0.50	3.5 / 0.29	3.1 / 0.13	0.5 / 0.01	0 / 0.00	38 / 0.62	1.9 / 0.04	10 / 0.28	0.5 / 0.01	0.0 / 0.00	0.0 / ---	12 / ---		60[b]	14	39	8	---		

Mineral constituents in parts per million / equivalents per million

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											AMERICAN RIVER AT SACRAMENTO (STA.22)															USGS
1/17 1600	2,140	48	11.6	99	66.6	7.1	---	---	2.3/.10	---	0/0.00	30/0.49	---	2.6/0.07	---	---	0.00/---	---		---	16	26	2	1	Maximum 7000.+ Minimum 5. Median 230.	
2/14 0830	7,770	49	11.1	97	69.5	7.2	---	---	2.5/0.11	---	0/0.00	32/0.52	---	2.0/0.06	---	---	0.00/---	---		---	15	32	6	9		
3/7 0830	7,150	49	11.2	97	58.0	7.1	---	---	1.8/0.08	---	0/0.00	29/0.48	---	2.8/0.08	---	---	0.00/---	---		---	14	24	0	20		
4/4 1105	26,400	51	12.3	110	65.8	7.1	---	---	1.9/0.08	---	0/0.00	32/0.52	---	3.5/0.10	---	---	0.00/---	---		---	12	28	2	8		
5/20 1230	11,000	56	11.6	110	41.4	7.3	4.8/0.24	0.7/0.06	1.9/0.08	0.9/0.02	0/0.00	22/0.36	0.0/0.00	1.0/0.03	0.3/0.00	0.0/0.00	0.00/---	13/--	PO_4 0.05/Fe 0.04 Cu 0.01/Al 0.01 a	34[b]	20	15	0	2		
6/19 1210	9,660	57	10.8	104	33.7	7.3	---	---	2.3/0.10	---	0/0.00	18/0.30	---	1.3/0.04	---	---	0.0/---	---		---	33	10	0	2		
7/16 1455	3,450	64	11.0	115	33.2	7.1	---	---	1.3/0.06	---	0/0.00	16/0.26	---	1.8/0.05	---	---	0.1/---	---		---	20	12	0	3		
8/4 1530	3,540	66	10.1	108	34.1	7.1	---	---	1.3/0.06	---	0/0.00	17/0.28	---	2.5/0.07	---	---	0.0/---	---		---	18	14	0	3		
9/5 1320	2,940	66	10.0	106	35.4	6.9	3.7/0.18	1.0/0.08	1.4/0.06	0.5/0.01	0/0.00	16/0.26	0.0/0.00	1.5/0.04	0.4/0.01	0.0/0.00	0.0/---	10/--	PO_4 0.00/Fe 0.01 Zn 0.01 a	27[b]	18	13	0	4		
10/2 1530	1,700	68	8.3	90	42.4	7.2	---	---	1.8/0.08	---	0/0.00	19/0.31	---	1.8/0.05	---	---	0.0/---	---		---	19	17	1	10		
11/14 1030	1,490	62	9.0	92	57.1	7.4*	---	---	2.3/0.10	---	0/0.00	28/0.46	---	2.5/0.07	---	---	0.0/---	---		---	17	24	1	5		
12/5 1055	1,930	56	9.6	91	56.3	7.4	---	---	2.1/0.09	---	0/0.00	28/0.46	---	3.0/0.08	---	---	0.1/---	---		---	16	24	1	8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

C NTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							AMERICAN RIVER, MIDDLE FORK NEAR AUBURN (STA. 22b)																			USGS
7/25 1430	487	80	8.9	110	43.4	7.3	4.8/0.24	1.0/0.08	1.8/0.08	0.8/0.02	0/0.00	20/0.33	1.0/0.02	3.2/0.09	0.0/0.00	0.0/0.00	0.0/---	11/--		34[b]	19	16	0	--		
8/7 0910	253	75	8.1	94	61.7	7.3	6.4/0.32	1.5/0.12	3.2/0.14	0.9/0.02	0/0.00	26/0.43	2.9/0.06	4.0/0.11	0.4/0.01	0.2/0.01	0.1/---	13/--		46[b]	23	22	1	--		
9/5 1030	114	74	8.0	92	73.7	7.3	8.6/0.43	1.7/0.14	2.8/0.12	0.8/0.02	0/0.00	30/0.49	4.8/0.10	4.0/0.11	0.2/0.00	0.0/0.00	0.0/---	14/--	PO_4 0.00 Zn 0.02 a	52[b]	17	28	3	0.2		
10/6 1105	93	68	9.1	99	81.8	7.5	8.8/0.44	2.7/0.22	3.0/0.13	0.6/0.02	0/0.00	30/0.49	9.6/0.20	5.0/0.14	0.0/0.00	0.0/0.00	0.0/---	13/--		58[b]	16	33	8	--		
11/5 1000	98	57	10.3	99	82.4	7.5	9.6/0.48	2.9/0.24	3.0/0.13	0.6/0.02	0/0.00	37/0.61	5.8/0.12	5.2/0.15	0.0/0.00	0.0/0.00	0.0/---	13/--		58[b]	15	36	6	--		
12/8 0830	108	46	11.7	98	80.8	7.2	8.8/0.44	2.7/0.22	3.1/0.13	0.5/0.01	0/0.00	35/0.57	1.9/0.04	5.8/0.16	0.2/0.00	0.0/0.00	0.0/---	12/--		52[b]	16	33	4	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							AMERICAN RIVER, SOUTH FORK NEAR LOTUS (STA. 22c)																			USGS
7/25 1615	744	78	8.0	96	34.7	7.3	3.6 / 0.18	0.7 / 0.06	2.2 / 0.10	0.8 / 0.02	0 / 0.00	17 / 0.28	0.0 / 0.00	3.2 / 0.09	0.0 / 0.00	0.0 / 0.00	0.0 / ---	11 / --		30[b]	28	12	0	--		
8/7 1045	358	74	8.2	95	39.7	7.3	3.2 / 0.16	1.3 / 0.11	2.7 / 0.12	0.9 / 0.02	0 / 0.00	19 / 0.31	1.0 / 0.02	2.5 / 0.07	0.4 / 0.01	0.1 / 0.01	0.0 / ---	13 / --		34[b]	29	14	0	--		
9/5 0855	290	68	8.9	97	43.2	7.1	4.1 / 0.20	1.1 / 0.09	2.6 / 0.11	1.9 / 0.05	0 / 0.00	18 / 0.30	1.0 / 0.02	4.0 / 0.11	0.5 / 0.01	0.0 / 0.00	0.0 / ---	11 / --	PO_4 0.00, Zn 0.02, Fe 0.01 a	35[b]	24	15	0	1		
10/6 1000	249	64	9.4	98	41.5	7.0	4.8 / 0.24	1.0 / 0.08	2.1 / 0.09	0.4 / 0.01	0 / 0.00	18 / 0.30	1.9 / 0.04	3.0 / 0.08	0.0 / 0.00	0.0 / 0.00	0.0 / ---	11 / --		33[b]	21	16	1	--		
11/5 0840	225	51	10.5	94	42.5	7.0	5.2 / 0.26	0.2 / 0.02	2.6 / 0.11	1.1 / 0.03	0 / 0.00	20 / 0.33	1.9 / 0.04	2.0 / 0.06	0.0 / 0.00	0.0 / 0.00	0.0 / ---	11 / --		34[b]	26	14	0	--		
12/8 0930	193	42	12.2	97	52.4	7.0	4.6 / 0.23	1.6 / 0.13	3.2 / 0.14	0.4 / 0.01	0 / 0.00	23 / 0.38	1.0 / 0.02	5.0 / 0.14	0.1 / 0.00	0.0 / 0.00	0.0 / ---	11 / --		38[b]	27	18	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ANTELOPE CREEK NEAR MOUTH (STA. 88c)																			USGS
10/3 0730	---	62	8.0	82	204	7.1	13 / 0.65	8.1 / 0.67	15 / 0.65	3.9 / 0.10	0 / 0.00	78 / 1.28	13 / 0.27	18 / 0.51	0.1 / 0.00	0.0 / 0.00	0.4 / ---	41 / --		150[b]	31	66	2	---		
11/7 0950	---	56	8.4	80	205	7.3	14 / 0.70	9.2 / 0.76	13 / 0.57	2.3 / 0.06	0 / 0.00	98 / 1.61	5.8 / 0.12	13 / 0.37	0.4 / 0.01	0.0 / 0.00	0.2 / ---	40 / --		146[b]	27	73	0	---		
12/4 1500	8 est.	52	10.6	96	198	7.3	13 / 0.65	9.6 / 0.79	13 / 0.57	1.7 / 0.04	0 / 0.00	94 / 1.54	7.7 / 0.16	13 / 0.37	0.0 / 0.00	0.0 / 0.00	0.3 / ---	39 / --		143[b]	28	72	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958							ANTELOPE CREEK NEAR RED BLUFF (STA.88e)																			USGS
10/3 0835	47*	64	9.1	95	148	7.6	11 / 0.55	6.4 / 0.53	9.3 / 0.40	1.1 / 0.03	0 / 0.00	78 / 1.28	0.0 / 0.00	8.5 / 0.24	0.0 / 0.00	0.0 / 0.00	0.1 / ---	41 / --		115[b]	26	54	0	---		
11/11 0900	57*	50	10.8	95	146	7.3	11 / 0.55	6.9 / 0.57	8.4 / 0.37	1.1 / 0.03	0 / 0.00	76 / 1.25	3.8 / 0.08	6.8 / 0.19	0.4 / 0.01	0.0 / 0.00	0.0 / ---	37 / --		112[b]	24	56	0	---		
12/4 1530	51*	49	11.9	104	151	7.5	10 / 0.50	9.5 / 0.78	9.0 / 0.39	1.1 / 0.03	0 / 0.00	78 / 1.28	7.7 / 0.16	9.0 / 0.25	0.5 / 0.01	0.0 / 0.00	0.1 / ---	37 / --		122[b]	23	64	0	---		

Mineral constituents in parts per million / equivalents per million.

*Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958							BATTLE CREEK NEAR COTTONWOOD (STA. 88b)																			
4/28 1630	666	59	9.2	91	102	7.0	7.8 0.39	4.5 0.37	6.2 0.27	2.0 0.05	0 0.00	62 1.02	0.0 0.00	2.5 0.07	0.1 0.00	0.0 0.00	0.16 ---	31 ---		85[b]	25	38	0	---		USGS
5/21 1100	998	58	8.8	86	75.7	7.8*	6.0 0.30	3.6 0.30	4.1 0.18	1.3 0.03	0 0.00	42 0.69	2.9 0.06	2.2 0.06	0.2 0.00	0.0 0.00	0.0 ---	30 ---	PO_4 0.00 Fe 0.02 a	71[b]	22	30	0	---		USGS
6/26 1330	570	66	8.0	85	100	7.9	7.8 0.39	5.0 0.41	4.6 0.20	1.5 0.04	0 0.00	59 0.97	2.5 0.05	2.0 0.06	0.2 0.00	0.0 0.00	0.0 ---	41 ---		94[b]	19	40	0	---		USGS
7/25 1500	388	72	8.5	97	121	7.2	8.6 0.43	5.5 0.45	6.4 0.28	2.0 0.05	0 0.00	70 1.15	1.0 0.02	1.0 0.03	0.5 0.01	0.1 0.01	0.02 ---	41 ---		100[b]	23	44	0	---		DWR
8/27 0900	196	62	8.2	83	142	7.5	12 0.60	5.6 0.46	7.6 0.33	2.3 0.06	0 0.00	82 1.34	0.6 0.01	1.8 0.05	0.7 0.01	0.0 0.00	0.03 ---	45 ---		116[b]	23	53	0	---		DWR
9/19 1300	199	63	10.0	103	149	7.9	9.5 0.47	7.4 0.61	9.0 0.39	2.4 0.06	0 0.00	84 1.38	3.8 0.08	1.9 0.05	0.7 0.01	0.2 0.01	0.20 ---	40 ---		116[b]	25	54	0	---		DWR
10/24 1230	279	55	6.3	59	148	7.4	9.4 0.47	7.2 0.59	8.0 0.35	2.4 0.06	0 0.00	80 1.31	3.0 0.06	2.0 0.06	0.8 0.01	0.0 0.00	0.07 ---	44 ---		116[b]	24	53	0	---		DWR
11/14 1300	475	58	---	---	146	7.6*	8.4 0.42	7.5 0.62	7.6 0.33	2.4 0.06	0 0.00	82 1.34	1.6 0.03	1.4 0.04	0.5 0.01	0.0 0.00	0.07 ---	44 ---	Fe 0.01 Al 0.04 a	113[b]	23	52	0	---		DWR
12/23 1100	285	47	10.3	87	139	7.2	9.6 0.48	7.3 0.60	8.2 0.36	2.3 0.06	0 0.00	84 1.38	3.8 0.08	2.5 0.07	0.4 0.01	0.2 0.01	0.1 ---	49 ---		124[b]	24	54	0	---		USGS

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b Determined by addition of analyzed constituents.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Not Rated																									USGS
											BEAR CREEK NEAR STEVINSON (STA. 111)															
1/29 0915		55	8.2	77	194	7.3	---	---	20/0.87	---	0/0.00	90/1.48	---	7.2/0.20	---	---	0.12/---	---		---	46	52	0	70		
2/19 1535		57	9.3	89	305	7.9	---	---	38/1.65	---	0/0.00	142/2.33	---	15/0.42	---	---	0.24/---	---		---	53	74	0	110		
3/3 1140		55	9.4	88	269	7.5	---	---	27/1.17	---	0/0.00	136/2.23	---	12/0.34	---	---	0.04/---	---		---	40	85	0	55		
4/10 0845		64	5.4	57	208	7.3	---	---	21/0.91	---	0/0.00	108/1.77	---	8.0/0.23	---	---	0.03/---	---		---	44	58	0	15		
5/5 1025		71	5.6	63	140	7.1	12/0.60	2.9/0.24	11/0.48	2.3/0.06	0/0.00	59/0.97	7.7/0.16	6.7/0.19	0.6/0.01	0.1/0.01	0.10/---	14/---	Fe 0.11 Al 0.22[a] PO_4 0.55	86[b]	35	42	0	40		
6/9 1100		70	7.7	85	98.2	7.3	---	---	9.5/0.41	---	0/0.00	48/0.79	---	4.7/0.13	---	---	0.0/---	---		---	36	36	0	29		
7/9 1210		84	7.8	100	265	7.5	---	---	26/1.13	---	0/0.00	102/1.67	---	24/0.68	---	---	0.1/---	---		---	43	72	0	33		
8/5 0930		80	6.4	79	576	7.8	---	---	65/2.83	---	0/0.00	150/2.46	---	82/2.31	---	---	0.3/---	---		---	50	142	19	20		
9/2 1020		76	6.4	75	420	7.6	22/1.10	9.5/0.78	55/2.39	3.8/0.10	0/0.00	176/2.88	15/0.31	36/1.02	2.7/0.04	0.2/0.01	0.1/---	35/--	Fe 0.03 PO_4 0.45[a] Al 0.01	266[b]	55	94	0	75		
10/6 1230		58	8.5	83	343	7.5	---	---	38/1.65	---	0/0.00	139/2.28	---	26/0.73	---	---	0.0/---	---		---	51	89	0	25		
11/10 1120		64	9.1	95	534	8.4	---	---	72/3.13	---	0/0.00	218/3.57	---	52/1.47	---	---	0.1/---	---		---	56	120	0	20		
12/ Discontinued																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							BEAR RIVER NEAR MOUTH (STA. 20b)																			USGS
11/3 0930	---	56	7.3	68	271	7.6	28 / 1.40	13 / 1.08	7.6 / 0.33	1.1 / 0.03	0 / 0.00	117 / 1.92	31 / 0.65	9.5 / 0.27	0.4 / 0.01	0.0 / 0.00	0.0 / ---	18 / --		167[b]	12	124	28	—		
12/11 1000	20 est.	48	11.5	99	330	7.3	35 / 1.75	15 / 1.21	10 / 0.44	1.1 / 0.03	0 / 0.00	118 / 1.93	50 / 1.04	15 / 0.42	0.3 / 0.00	0.2 / 0.01	0.0 / ---	17 / --		202[b]	13	148	51	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											BEAR RIVER NEAR WHEATLAND (STA. 78)															USGS
1/15 0955	520	43	12.2	98	104	7.3	---	---	3.2 / 0.14	---	0 / 0.00	48 / 0.79	---	4.0 / 0.11	---	---	0.00 / ---	---		---	14	44	0	28	Maximum 7000. Minimum 0.62 Median 23.	
2/18 0940	1130	51	11.5	103	75.7	7.2	---	---	2.6 / 0.11	---	0 / 0.00	31 / 0.51	---	2.0 / 0.06	---	---	0.03 / ---	---		---	15	31	6	60		
3/11 1005	805	47	11.9	101	80.1	7.3	---	---	3.1 / 0.13	---	0 / 0.00	38 / 0.62	---	2.0 / 0.06	---	---	0.00 / ---	---		---	16	34	3	19		
4/15 0945	1230	55	10.9	102	82.3	7.3	---	---	2.3 / 0.10	---	0 / 0.00	34 / 0.56	---	2.5 / 0.07	---	---	0.01 / ---	---		---	12	36	8	80		
5/12 1030	465	63	9.6	99	71.9	7.3	6.0 / 0.30	3.2 / 0.26	2.2 / 0.10	0.8 / 0.02	0 / 0.00	31 / 0.51	5.8 / 0.12	2.5 / 0.07	0.6 / 0.01	0.0 / 0.00	0.00 / ---	14 / --	Fe 0.05 PO$_4$ 0.05; Al 0.04 Cu 0.01[a]	50[b]	15	28	3	2		
6/16 1035	83	76	8.3	98	124	7.5	---	---	3.2 / 0.14	---	0 / 0.00	57 / 0.93	---	3.2 / 0.09	---	---	0.0 / ---	---		---	12	50	3	6		
7/14 0830	8.2	74	7.6	88	260	7.5	---	---	5.5 / 0.24	---	0 / 0.00	124 / 2.03	---	5.4 / 0.15	---	---	0.0 / ---	---		---	9	117	15	0.8		
8/11 0815	8.6	76	6.4	75	296	7.3	---	---	6.5 / 0.28	---	0 / 0.00	138 / 2.26	---	9.0 / 0.25	---	---	0.1 / ---	---		---	9	138	25	3		
9/8 0840	11	76	7.3	86	305	7.4	32 / 1.60	16 / 1.28	7.4 / 0.32	1.2 / 0.03	0 / 0.00	149 / 2.44	28 / 0.58	8.5 / 0.24	0.1 / 0.00	0.0 / 0.00	0.1 / ---	23 / --	Al 0.03 Zn 0.02[a]; PO$_4$ 0.00	189[b]	10	144	22	1		
10/16 1545	15	71	9.3	104	295	7.2	---	---	7.2 / 0.31	---	0 / 0.00	134 / 2.20	---	10 / 0.28	---	---	0.0 / ---	---		---	10	138	28	5		
11/3 1015	30	61	10.1	101	268	7.4	---	---	7.7 / 0.33	---	0 / 0.00	114 / 1.87	---	10 / 0.28	---	---	0.0 / ---	---		---	12	126	33	3		
12/1 0805	30	47	10.9	92	317	7.4	---	---	8.7 / 0.38	---	0 / 0.00	111 / 1.82	---	13 / 0.37	---	---	0.0 / ---	---		---	12	140	49	2		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											BIG CHICO CREEK NEAR CHICO (STA. 85)															USGS
1/15 1630	248	47	11.8	100	97.6	7.3	---	---	5.4 / 0.23	---	0 / 0.00	54 / 0.89	---	4.0 / 0.11	---	---	0.00 / --	---		---	22	41	0	5		
2/19 0825	1,720	52	11.4	103	67.6	7.3	---	---	2.6 / 0.11	---	0 / 0.00	38 / 0.62	---	1.2 / 0.03	---	---	0.07 / --	---		---	16	28	0	20		
3/12 0835	630	45	12.1	100	109	7.5	---	---	5.8 / 0.25	---	0 / 0.00	60 / 0.98	---	3.5 / 0.10	---	---	0.00 / --	---		---	23	43	0	2		
4/15 1545	394	55	10.9	102	83.5	7.5	---	---	3.4 / 0.15	---	0 / 0.00	46 / 0.75	---	3.5 / 0.10	---	---	0.00 / --	---		---	18	35	0	3		
5/13 0720	123	52	10.8	98	119	7.7	11 / 0.55	4.9 / 0.40	7.0 / 0.30	1.4 / 0.04	0 / 0.00	70 / 1.15	1.9 / 0.04	3.0 / 0.08	0.1 / 0.00	0.0 / 0.00	0.07 / --	35	Zn 0.01 PO_4 0.00 a	98[b]	23	48	0	1		
6/17 0850	61	68	8.9	97	156	7.9	---	---	8.6 / 0.37	---	0 / 0.00	82 / 1.34	---	7.2 / 0.20	---	---	0.0 / --	---		---	23	61	0	1		
7/15 0750	40	71	7.7	87	182	7.5	---	---	11 / 0.48	---	0 / 0.00	97 / 1.59	---	9.3 / 0.26	---	---	0.0 / --	---		---	26	67	0	0.7		
8/12 0730	34	73	8.2	94	193	7.5	---	---	12 / 0.52	---	0 / 0.00	104 / 1.70	---	10 / 0.28	---	---	0.2 / --	---		---	27	72	0	4		
9/9 0700	31	69	8.1	89	196	7.6	16 / 0.80	7.9 / 0.65	13 / 0.57	1.4 / 0.04	0 / 0.00	105 / 1.72	3.8 / 0.08	9.9 / 0.28	0.2 / 0.00	0.0 / 0.00	0.1 / --	38	Zn 0.04 PO_4 0.00 a	142[b]	28	73	0	0.8		
10/13 1300	33	62	10.0	102	205	8.0	---	---	13 / 0.57	---	0 / 0.00	106 / 1.74	---	11 / 0.31	---	---	0.3 / --	---		---	27	76	0	5		
11/10 1300	48	57	10.5	101	200	7.7	---	---	12 / 0.52	---	0 / 0.00	107 / 1.75	---	10 / 0.28	---	---	0.1 / --	---		---	26	75	0	1		
12/11 1700	36	49	11.5	100	207	7.8	---	---	13 / 0.57	---	0 / 0.00	108 / 1.77	---	12 / 0.34	---	---	0.3 / --	---		---	27	78	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										
BURNEY CREEK NEAR BURNEY (STA. 17c)																										USGS
1/	Not sampled																								Maximum 7000.+ Minimum 0.06 Median 23.	
2/	Not sampled																									
3/	Not sampled																									
4/16 1430	127 est.	53	10.0	91	51.4	7.3	---	---	2.2 / 0.10	---	0 / 0.00	31 / 0.51	---	1.0 / 0.03	---	---	0.00 / ---	---		---	18	23	0	2		
5/14 0845	160 est.	47	10.4	88	46.1	7.1	4.4 / 0.22	1.7 / 0.14	2.4 / 0.10	0.8 / 0.02	0 / 0.00	27 / 0.44	0.0 / 0.00	1.9 / 0.05	0.2 / 0.00	0.0 / 0.00	0.01 / ---	17 / ---	PO_4 0.00 Fe 0.01[a]	41[b]	21	18	0	0.9		
6/18 1000	76	53	8.8	86	64.3	7.3	---	---	2.7 / 0.12	---	0 / 0.00	39 / 0.64	---	0.6 / 0.02	---	---	0.0 / ---	---		---	18	27	0	5		
7/16 0840	24	58	8.6	84	92.9	7.3	---	---	3.8 / 0.17	---	0 / 0.00	56 / 0.92	---	1.2 / 0.03	---	---	0.1 / ---	---		---	18	38	0	0.5		
8/13 0800	20	56	8.5	82	105	7.3	---	---	4.2 / 0.18	---	0 / 0.00	68 / 1.11	---	1.2 / 0.03	---	---	0.0 / ---	---		---	16	46	0	0.4		
9/10 0840	13	53	9.0	82	107	7.3	9.2 / 0.46	5.6 / 0.46	3.9 / 0.17	2.1 / 0.05	0 / 0.00	67 / 1.10	1.9 / 0.04	0.5 / 0.01	0.8 / 0.01	0.1 / 0.01	0.0 / ---	31 / ---	PO_4 0.00 Fe 0.10[a] Cu 0.01	88[b]	15	46	0	1		
10/15 0940	18	46	10.3	86	107	7.1	---	---	4.1 / 0.18	---	0 / 0.00	66 / 1.08	---	1.8 / 0.05	---	---	0.1 / ---	---		---	16	46	0	20		
11/	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											BUTTE CREEK NEAR CHICO (STA. 84)															USGS
1/15 1500	486	47	11.8	100	90.0	7.3	---	---	2.9 / 0.13	---	0 / 0.00	52 / 0.85	---	2.0 / 0.06	---	---	0.00 / ---	---		---	14	40	0	3		
2/18 1620	2,020	50	11.3	99	62.5	7.3	---	---	1.9 / 0.08	---	0 / 0.00	34 / 0.56	---	1.0 / 0.03	---	---	0.01 / ---	---		---	12	28	0	25		
3/11 1540	630	48	11.6	100	71.4	7.3	---	---	2.8 / 0.12	---	0 / 0.00	44 / 0.72	---	1.0 / 0.03	---	---	0.02 / ---	---		---	16	31	0	5		
4/15 1500	1,120	58	10.6	103	62.9	7.3	---	---	2.0 / 0.09	---	0 / 0.00	35 / 0.57	---	1.0 / 0.03	---	---	0.08 / ---	---		---	14	28	0	7		
5/12 1505	962	51	11.0	98	54.0	7.3	6.4 / 0.32	2.2 / 0.18	2.5 / 0.11	1.0 / 0.03	0 / 0.00	32 / 0.52	4.8 / 0.10	0.5 / 0.01	0.2 / 0.00	0.2 / 0.01	0.06 / ---	19 / --	Fe 0.03, Al 0.03, Cu 0.02, Zn 0.03, PO_4 0.00 / a	53[b]	17	25	0	6		
6/17 0800	456	61	9.5	96	68.9	7.3	---	---	2.3 / 0.10	---	0 / 0.00	37 / 0.61	---	1.0 / 0.03	---	---	0.0 / ---	---		---	15	28	0	3		
7/14 1430	245	71	8.8	99	88.5	7.7	---	---	3.2 / 0.14	---	0 / 0.00	50 / 0.82	---	1.6 / 0.05	---	---	0.0 / ---	---		---	16	38	0	0.8		
8/11 1525	175	74	8.4	97	104	7.7	---	---	3.7 / 0.16	---	0 / 0.00	60 / 0.98	---	2.2 / 0.06	---	---	0.2 / ---	---		---	15	44	0	3		
9/8 1510	167	69	9.1	100	102	7.7	11 / 0.55	4.0 / 0.33	3.5 / 0.15	1.2 / 0.03	0 / 0.00	62 / 1.02	1.0 / 0.02	2.0 / 0.06	0.0 / 0.00	0.0 / 0.00	0.0 / ---	23 / --	PO_4 0.00, Zn 0.03 a	77[b]	14	44	0	2		
10/13 1130	159	57	11.2	107	107	7.8	---	---	3.6 / 0.16	---	0 / 0.00	61 / 1.00	---	2.0 / 0.06	---	---	0.2 / ---	---		---	14	50	0	5		
11/10 1200	236	53	10.8	99	110	7.4	---	---	3.5 / 0.15	---	0 / 0.00	67 / 1.10	---	2.2 / 0.06	---	---	0.0 / ---	---		---	13	49	0	2		
12/12 0810	133	46	12.7	106	114	7.1	---	---	3.8 / 0.17	---	0 / 0.00	68 / 1.11	---	2.0 / 0.06	---	---	0.0 / ---	---		---	13	58	2	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported ' ɜre as 0.0/0.00 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											CACHE CREEK NEAR CAPAY (STA. 80)															USGS
1/21 1315	285	46	11.5	96	494	8.1	---	---	36/1.57	---	0/0.00	218/3.57	---	42/1.18	---	---	1.4/---	---		---	31	175	0	7	Maximum 2400. Minimum 0.62 Median 23.	
2/17 1115	6,680	55	10.5	98	276	8.2	---	---	24/1.04	---	0/0.00	169/2.77	---	9.5/0.27	---	---	0.58/---	---		---	30	120	0	210		
3/11 1145	4,690	52	10.4	94	321	8.3	---	---	12/0.52	---	0/0.00	169/2.77	---	12/0.34	---	---	0.88/---	---		---	16	136	0	134		
4/14 1335	5,390	60	10.0	100	328	8.1	---	---	15/0.65	---	0/0.00	168/2.75	---	12/0.34	---	---	0.61/---	---		---	19	135	0	40		
5/14 0855	342	64	9.3	97	722	8.3	16/0.80	58/4.80	46/2.00	2.7/0.07	0/0.00	320/5.24	56/1.17	48/1.35	1.5/0.02	0.1/0.01	1.6/---	20/--	Fe 0.02 PO_4 0.10 Al 0.14 Cu 0.01[a]	408[b]	26	280	18	4		
6/16 1410	335	83	8.2	104	516	8.3	---	---	33/1.44	---	8/0.27	220/3.61	---	34/0.96	---	---	1.5/---	---	Total Alkalinity 236	---	26	204	10	5		
7/11 1500	402	88	8.6	115	365	8.1	---	---	21/0.91	---	0/0.00	179/2.93	---	20/0.56	---	---	1.0/---	---		---	25	138	0	3		
8/11 1000	360	76	8.4	99	331	8.1	---	---	18/0.78	---	0/0.00	168/2.75	---	18/0.51	---	---	1.6/---	---		---	23	130	0	4		
9/11 1215	175	72	8.6	98	379	8.3	28/1.40	19/1.59	23/1.00	2.4/0.06	0/0.00	186/3.05	13/0.27	24/0.68	0.5/0.01	0.0/0.00	1.0/---	13/---	Al 0.04 Zn 0.02 PO_4 0.05 a	216[b]	25	149	0	10		
10/20 0945	60	58	9.2	90	591	7.5	---	---	47/2.04	---	10/0.33	228/3.74	---	59/1.66	---	---	0.3/---	---	Total Alkalinity 248	---	33	208	5	5		
11/14 1410	54	58	10.3	100	718	7.9	---	---	57/2.48	---	6/0.20	267/4.38	---	83/2.34	---	---	1.6/---	---	Total Alkalinity 279	---	33	252	23	1		
12/8 0945	18	52	10.1	91	857	7.9	---	---	68/2.96	---	0/0.00	296/4.85	---	123/3.47	---	---	1.9/---	---		---	32	310	67	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as 0.0/0.00 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1958											CACHE CREEK NEAR LOWER LAKE (STA. 42)															USGS
1/22 0950	1.9	44	11.2	91	258	7.7	---	---	12 / 0.52	---	0 / 0.00	122 / 2.00	---	6.5 / 0.18	---	---	0.21 / ---	---		---	20	104	4	22	Maximum 7000. Minimum 0.17 Median 96.	
2/21 0945	3800	52	9.2	83	269	7.5	---	---	10 / 0.44	---	0 / 0.00	147 / 2.41	---	6.5 / 0.18	---	---	0.88 / ---	---		---	16	117	0	6		
3/11 1455	3680	54	10.8	100	255	8.0	---	---	9.8 / 0.43	---	0 / 0.00	139 / 2.28	---	6.5 / 0.18	---	---	0.77 / ---	---		---	16	114	0	10		
4/15 0945	3780	58	10.3	100	231	7.5	---	---	8.3 / 0.36	---	0 / 0.00	128 / 2.10	---	6.5 / 0.18	---	---	0.64 / ---	---		---	16	98	0	15		
5/14 1400	33	68	8.7	95	269	8.1	22 / 1.10	13 / 1.06	12 / 0.52	2.9 / 0.07	0 / 0.00	138 / 2.26	12 / 0.25	7.0 / 0.20	1.2 / 0.02	0.1 / 0.01	0.58 / ---	21 / --	Fe 0.01 Zn 0.02[a] PO4 0.35	160[b]	19	108	0	4		
6/17 0820	285	75	7.8	91	229	7.8	---	---	9.1 / 0.40	---	0 / 0.00	129 / 2.11	---	5.2 / 0.15	---	---	0.6 / ---	---		---	17	101	0	8		
7/11 0930	404	84	8.2	105	228	7.5	---	---	8.4 / 0.37	---	0 / 0.00	131 / 2.15	---	4.7 / 0.13	---	---	0.5 / ---	---		---	16	96	0	5		
8/11 1215	389	80	8.1	100	229	7.6	---	---	8.8 / 0.38	---	0 / 0.00	130 / 2.13	---	6.0 / 0.17	---	---	0.5 / ---	---		---	16	98	0	10		
9/11 0910	154	73	7.7	88	243	7.6	17 / 0.85	16 / 1.29	8.4 / 0.37	3.0 / 0.08	0 / 0.00	134 / 2.20	5.8 / 0.12	5.8 / 0.16	2.5 / 0.04	0.1 / 0.01	0.7 / ---	9.8 / --	Fe 0.02 PO4 0.15[a] Al 0.03	135[b]	14	107	0	2		
10/20 1415	5.5	65	7.3	77	262	7.5	---	---	9.3 / 0.40	---	0 / 0.00	142 / 2.33	---	6.2 / 0.17	---	---	0.8 / ---	---		---	15	114	0	10		
11/14 0915	1.8	56	8.0	76	263	7.3	---	---	10 / 0.44	---	0 / 0.00	147 / 2.41	---	5.7 / 0.16	---	---	0.7 / ---	---		---	16	119	0	5		
12/4 1400	2.0	50	9.9	87	273	7.5	---	---	10 / 0.44	---	0 / 0.00	152 / 2.49	---	6.5 / 0.18	---	---	0.8 / ---	---		---	16	118	0	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958										CACHE CREEK, NORTH FORK NEAR LOWER LAKE (STA. 79)																USGS
1/22 1050	196	44	11.6	95	317	8.1	---	---	16/0.70	1.1/0.03	0/0.00	170/2.79	---	12/0.34	---	---	1.0/---	---		---	21	131	0	7	Maximum 2400. Minimum 0.06 Median 4.25	
2/20 1530	2980	58	9.9	96	183	7.9	---	---	7.2/0.31	---	0/0.00	104/1.70	---	4.0/0.11	---	---	0.16/---	---		---	16	79	0	220		
3/11 1400	1070	54	10.3	96	326	8.3	---	---	12/0.52	---	0/0.00	188/3.08	---	9.0/0.25	---	---	0.50/---	---		---	15	150	0	22		
4/15 1025	560	57	10.1	97	281	7.9	---	---	10/0.44	---	0/0.00	162/2.66	---	8.2/0.23	---	---	0.34/---	---		---	15	126	0	30		
5/14 1100	146	68	8.9	97	414	8.3	30/1.50	29/2.36	15/0.65	1.5/0.04	0/0.00	232/3.80	12/0.25	16/0.45	0.5/0.01	0.0/0.00	0.79/---	22/--	Zn 0.01 PO_4 0.05 a	241[b]	14	193	3	1		
6/17 0930	62	75	9.3	109	459	8.1	---	---	23/1.00	---	8/0.27	225/3.69	---	25/0.70	---	---	1.8/---	---	Total Alkalinity 241	---	20	202	4	5		
7/11 1315	21	90	9.7	131	477	8.3	---	---	26/1.13	---	11/0.37	215/3.52	---	37/1.04	---	---	2.3/---	---	Total Alkalinity 237	---	23	184	0	1		
8/11 1150	7.6	84	9.7	124	502	8.3	---	---	30/1.31	---	4/0.13	218/3.57	---	46/1.30	---	---	1.3/---	---	Total Alkalinity 226	---	25	196	11	2		
9/11 1040	4.8	73	10.4	120	507	8.3	33/1.65	27/2.23	31/1.35	2.1/0.05	0/0.00	216/3.54	12/0.25	52/1.47	0.0/0.00	0.0/0.00	3.3/---	23/--	Al 0.04 Zn 0.03 a PO_4 0.05	289[b]	26	194	17	0.5		
10/20 1115	3.6	63	12.3	123	546	8.3	---	---	39/1.70	---	12/0.40	194/3.18	---	64/1.80	---	---	1.8/---	---	Total Alkalinity 218	---	30	202	23	5		
11/13 1440	4.3	59	12.9	127	589	8.1	---	---	42/1.83	---	13/0.43	193/3.16	---	78/2.20	---	---	4.6/---	---	Total Alkalinity 219	---	30	214	34	0.8		
12/4 1210	8.5	55	14.4	135	785	8.1	---	---	54/2.35	---	9/0.30	264/4.33	---	117/3.30	---	---	5.0/---	---	Total Alkalinity 282	---	28	298	67	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO.5)

Date and time sampled PST	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 dis- solved solids in ppm	Per- cent sod- ium	Hardness as $CaCO_3$		Tur- bid- ity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magne- sium (Mg)	Sodium (Na)	Potas- sium (K)	Carbon- ate (CO_3)	Bicar- bonate (HCO_3)	Sul- fate (SO_4)	Chlo- ride (Cl)	Ni- trate (NO_3)	Fluo- ride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N C ppm			
1958	Tidal									CACHE	SLOUGH	BELOW	LINDSEY	SLOUGH	(STA.110a)											USBR
2/25 1145		58	---	---	192		---	---	10 ---	---	---	---	---	11 ---	----	---	---	---		184	24	---	---	---		
4/28 1400		64	---	---	219		---	---	11 ---	---	---	---	---	18 ---	----	----	---	---		152	22	---	---	---		
7/30 1200		73	---	---	223		---	---	21 ---	---	---	---	---	14 ---	----	----	---	---		176	41	---	---	---		
10/30 1030		64	---	---	275		---	---	27 ---	---	---	---	---	45 ---	----	----	---	---		172	43	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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			
1958											CALAVERAS RIVER AT JENNY LIND (STA. 16a)															USGS
1/24 1200	66	49	11.8	103	226	7.9	---	---	8.1 0.35	---	0 0.00	108 1.77	---	8.0 0.23	---	---	0.00 ---	---		---	16	95	6	9	Maximum 7000. Minimum 0.62 Median 2.3	
2/10 1120	670	52	10.5	95	154	7.7	---	---	5.4 0.23	---	c 0.00	77 1.26	---	3.8 0.11	---	---	0.03 ---	---		---	14	68	5	10		
3/4 1100	80	52	10.8	98	176	7.7	---	---	6.0 0.26	---	0 0.00	90 1.48	---	4.8 0.14	---	---	0.07 ---	---		---	14	80	6	10		
4/3 1150	12,100	52	11.1	100	107	7.3	---	---	2.7 0.12	---	0 0.00	56 0.92	---	2.0 0.06	---	---	0.02 ---	---		---	12	46	0	80		
5/8 1050	210	66	9.2	98	147	7.7	14 0.70	6.6 0.54	4.3 0.19	1.6 0.04	0 0.00	76 1.25	5.8 0.12	3.0 0.08	0.5 0.01	0.0 0.00	0.00 ---	22 ---	PO_4 0.05 Al 0.04[a] Fe 0.03	95[b]	13	62	0	2		
6/13 0800	226	59	9.8	97	141	7.7	---	---	4.4 0.19	---	0 0.00	76 1.25	---	3.0 0.08	---	---	0.0 ---	---		---	13	61	0	5		
7/7 1005	198	64	9.4	98	159	7.5	---	---	4.8 0.21	---	0 0.00	84 1.38	---	2.9 0.08	---	---	0.1 ---	---		---	14	65	0	3		
8/4 1000	208	74	7.9	91	198	7.5	---	---	6.4 0.28	---	0 0.00	108 1.77	---	5.3 0.15	---	---	0.0 ---	---		---	14	89	0	8		
9/4 1200	169	75	8.2	95	200	7.5	23 1.15	8.1 0.67	5.3 0.23	3.2 0.08	0 0.00	108 1.77	7.7 0.16	5.0 0.14	1.1 0.02	0.1 0.01	0.0 ---	18 ---	PO_4 0.05 Al 0.09[a] Fe 0.04 Cu 0.01	125[b]	11	91	2	2		
10/8 0845	2.6	67	6.5	70	279	7.3	---	---	7.7 0.33	---	0 0.00	154 2.52	---	8.2 0.23	---	---	0.1 ---	---		---	11	130	4	5		
11/7 1330	9.5	61	8.6	86	300	7.9	---	---	9.4 0.41	---	0 0.00	162 2.66	---	12 0.34	---	---	0.0 ---	---		---	13	139	6	5		
12/8 1110	21	49	11.8	103	278	7.3	---	---	8.4 0.37	---	0 0.00	140 2.29	---	12 0.34	---	---	0.0 ---	---		---	13	128	13	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											CALAVERAS RIVER NEAR STOCKTON (STA. 16b)															USGS
7/24 1840	50	78	9.4	114	179	8.1	20 / 1.00	6.9 / 0.57	5.5 / 0.24	1.6 / 0.04	0 / 0.00	96 / 1.57	9.6 / 0.20	4.8 / 0.14	0.2 / 0.00	0.0 / 0.00	0.0 / ---	20 / ---		116[b]	13	78	0	---		
8/8 0840	52	76	8.5	100	197	7.7	22 / 1.10	8.3 / 0.68	5.9 / 0.26	1.9 / 0.05	0 / 0.00	107 / 1.75	9.6 / 0.20	4.0 / 0.11	0.4 / 0.01	0.0 / 0.00	0.0 / ---	19 / ---		124[b]	12	89	1	---		
9/5 0910	51	73	7.0	80	203	7.6	22 / 1.10	8.8 / 0.72	5.6 / 0.24	3.0 / 0.08	0 / 0.00	107 / 1.75	12 / 0.25	5.0 / 0.14	0.6 / 0.01	0.1 / 0.01	0.0 / ---	16 / ---	PO_4 0.00 Al 0.09[a] Fe 0.01 Cu 0.01	126[b]	11	91	3	1		
10/	Dry																									
11/	Dry																									
12/	Dry																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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			
1958										CHOWCHILLA RIVER AT BUCHANAN DAM SITE (STA. 114)																USGS
1/20 1530	13	55	10.5	98	323	8.1	25/1.25	5.7/0.47	30/1.30	2.6/0.07	0.0/0.00	86/1.41	4.8/0.10	53/1.49	0.5/0.01	0.10/0.01	0.10/---	29/---		193[b]	42	86	15	---		
2/19 1255	238	57	9.8	94	156	7.3	---	---	13/0.57	---	0/0.00	58/0.95	---	16/0.45	---	---	0.21/---	---		---	38	46	0	90	Maximum 7,000+ Minimum 0.23 Median 6.2	
3/5 1200	120	55	10.9	102	152	7.7	---	---	11/0.48	---	0/0.00	68/1.11	---	12/0.34	---	---	0.00/---	---		---	32	51	0	5		
4/9 1600	890	63	9.7	100	127	7.5	---	---	8.3/0.36	---	0/0.00	65/1.07	---	6.0/0.17	---	---	0.08/---	---		---	30	43	0	10		
5/7 1050	148	70	9.0	100	137	8.0	13/0.65	2.9/0.24	11/0.48	2.1/0.05	0/0.00	67/1.10	3.5/0.07	8.2/0.23	0.2/0.00	0.0/0.00	0.00/---	32/---	Fe 0.02 Al 0.08 Zn 0.01 PO_4 0.10 a	106[b]	34	44	0	1		
6/5 1115	57	79	8.0	97	159	7.7	---	---	13/0.57	---	0/0.00	75/1.23	---	13/0.37	---	---	0.0/---	---		---	34	56	0	4		
7/9 0945	10	82	8.8	111	225	7.9	18/0.90	3.9/0.32	19/0.83	2.6/0.07	0/0.00	82/1.34	1.9/0.04	28/0.79	0.1/0.00	0.0/0.00	0.0/---	31/---		144[b]	39	61	0	---		
8/7 0905	1.1	78	9.8	118	403	8.1	32/1.60	7.3/0.60	34/1.48	3.1/0.08	0/0.00	102/1.67	3.8/0.08	72/2.03	0.4/0.01	0.1/0.01	0.0/----	21/---		224[b]	39	110	26	1		
9/4 1000	0.1	70	7.7	86	517	7.9	39/1.95	11/0.89	44/1.91	3.9/0.10	0/0.00	115/1.88	9.6/0.20	103/2.90	0.8/0.01	0.1/0.01	0.0/---	41/---	Al 0.06 a PO_4 0.10	309[b]	39	42	48	0.5		
10/	NO SAMPLE - DRY																		•							
11/12 1115	3.3	61	11.2	112	538	8.4	40/2.00	8.3/0.68	50/2.18	2.8/0.07	0/0.00	100/1.64	5.8/0.12	112/3.16	0.3/0.00	0.0/0.00	0.0/---	24/---		292[b]	44	134	52	---		
12/3 1045	6.8	49	11.6	101	475	8.2	38/1.90	9.5/0.78	44/1.91	2.3/0.06	0/0.00	103/1.69	12/0.25	94/2.65	0.9/0.01	0.0/0.00	0.1/---	26/---		278[b]	41	134	50	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
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TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958							CLEAR CREEK NEAR IGO (STA. 12 d)																			
4/28 1100	782	53	10.3	95	64.5	8.3	6.4 / 0.32	1.8 / 0.15	3.4 / 0.15	0.9 / 0.02	0 / 0.00	30 / 0.49	1.9 / 0.04	3.2 / 0.09	0.0 / 0.00	0.0 / 0.00	0.13 / ---	16 / ---		49[b]	23	24	0	---		USGS
5/2 0830	225	59	9.3	91	71.7	9.3	7.2 / 0.36	1.9 / 0.16	4.0 / 0.17	0.6 / 0.02	0 / 0.00	29 / 0.48	6.3 / 0.13	4.9 / 0.14	0.1 / 0.00	0.0 / 0.00	0.0 / ---	16 / ---	Fe 0.05; PO_4 0.00; Zn 0.01 [a]	55[b]	24	26	2	1		USGS
6/26 1100	75	71	7.5	84	100	7.5	9.8 / 0.49	2.6 / 0.21	6.0 / 0.26	0.7 / 0.02	0 / 0.00	41 / 0.67	7.7 / 0.16	5.8 / 0.16	0.0 / 0.00	0.0 / 0.00	0.0 / ---	22 / ---		75[b]	27	35	1	---		USGS
7/25 1300	60	80	7.4	91	132	7.2	11 / 0.55	3.0 / 0.25	7.2 / 0.31	0.8 / 0.02	0 / 0.00	46 / 0.75	6.6 / 0.14	8.8 / 0.25	0.4 / 0.01	0.1 / 0.00	0.01 / ---	18 / ---		79[b]	27	40	2	---		DWR
8/27 0700	200	72	6.5	74	172	7.3	14 / 0.70	3.6 / 0.30	13 / 0.56	1.2 / 0.03	0 / 0.00	52 / 0.85	11 / 0.23	17 / 0.48	1.1 / 0.02	0.1 / 0.00	0.00 / ---	13 / ---		99[b]	34	50	7	---		DWR
9/19 1100	est. 25	69	9.1	100	180	7.7	15 / 0.75	3.5 / 0.29	13 / 0.56	1.2 / 0.03	0 / 0.00	53 / 0.87	9.7 / 0.20	19 / 0.54	0.6 / 0.01	0.2 / 0.01	0.09 / ---	16 / ---		104[b]	34	52	9	---		DWR
10/24 0900	100	56	10.0	95	193	7.4	15 / 0.75	3.8 / 0.31	13 / 0.56	0.8 / 0.02	0 / 0.00	51 / 0.84	11 / 0.23	20 / 0.56	0.5 / 0.01	0.0 / 0.00	0.02 / ---	15 / ---		104[b]	34	53	11	---		DWR
11/14 0930	100	54	---	---	191	---	18 / 0.90	3.2 / 0.26	12 / 0.52	1.0 / 0.02	0 / 0.00	56 / 0.92	9.4 / 0.20	19 / 0.54	0.8 / 0.01	0.0 / 0.00	0.02 / ---	15 / ---	Fe 0.05; Al 0.03; PO_4 0.00; Zn 0.03 [a]	106[b]	30	58	12	---		DWR
12/23 0900	57	45	11.0	91	170	7.2	14 / 0.70	5.1 / 0.42	12 / 0.52	1.1 / 0.03	0 / 0.00	54 / 0.89	15 / 0.31	18 / 0.51	0.4 / 0.01	0.2 / 0.01	0.0 / ---	20 / ---		113[b]	31	56	12	---		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											CLEAR LAKE NEAR CLEARLAKE OAKS (STA. 40)															USGS
1/22 1140	---	49	9.9	86	281	7.7	---	---	12 / 0.52	---	0 / 0.00	156 / 2.56	---	7.0 / 0.20	---	---	1.1 / ---	---		---	17	123	0	10	Maximum 23. Minimum 0.046 Median 4.25	
2/20 1630	---	54	10.3	96	234	7.9	---	---	8.8 / 0.38	---	0 / 0.00	129 / 2.11	---	5.5 / 0.16	---	---	0.59 / ---	---		---	16	103	0	25		
3/11 1600	---	54	10.0	93	215	7.9	---	---	7.8 / 0.34	---	0 / 0.00	117 / 1.92	---	5.0 / 0.14	---	---	0.49 / ---	---		---	15	98	2	20		
4/15 1115	---	59	10.7	105	199	7.9	---	---	7.1 / 0.31	---	0 / 0.00	112 / 1.84	---	5.0 / 0.14	---	---	0.30 / ---	---		---	15	88	0	30		
5/14 1145	---	69	9.1	100	197	8.3	16 / 0.80	11 / 0.88	7.5 / 0.33	1.7 / 0.04	0 / 0.00	108 / 1.77	9.6 / 0.20	4.0 / 0.11	0.3 / 0.00	0.2 / 0.01	0.54 / ---	13 / --	Fe 0.07 Cu 0.01 Al 0.11 PO_4 0.05 [a]	117[b]	16	84	0	4		
6/17 1025	---	77	9.3	110	198	8.3	---	---	7.3 / 0.32	---	0 / 0.00	113 / 1.85	---	3.2 / 0.09	---	---	0.5 / ---	---		---	16	87	0	4		
7/11 1240	---	84	12.2	156	203	8.3	---	---	8.0 / 0.35	---	7 / 0.23	103 / 1.69	---	4.2 / 0.12	---	---	0.3 / ---	---	Total Alkalinity 117	---	17	87	0	0.6		
8/11 1345	---	80	8.8	104	217	8.1	---	---	8.0 / 0.35	---	0 / 0.00	120 / 1.97	---	5.5 / 0.16	---	---	0.3 / ---	---		---	16	90	0	4		
9/11 0815	---	73	8.0	92	225	8.4	20 / 1.00	12 / 1.02	7.6 / 0.33	2.5 / 0.06	0 / 0.00	127 / 2.08	11 / 0.23	4.9 / 0.14	2.0 / 0.03	0.1 / 0.01	0.6 / ---	13 / --	Fe 0.02 PO_4 0.20 Al 0.08 Cu 0.03 [a]	137[b]	14	101	0	6		
10/	DISCONTINUED																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											CLEAR LAKE AT LAKEPORT (STA. 41)															USGS
1/22 1230	---	49	10.1	88	249	7.7	---	---	9.6 / 0.42	---	0 / 0.00	142 / 2.33	---	6.0 / 0.17	---	---	0.43 / ---	---		---	16	110	0	12	Maximum 7000. Minimum 0.06 Median 2.3	
2/21 0815	---	53	9.7	89	208	7.5	---	---	7.5 / 0.33	---	0 / 0.00	114 / 1.87	---	4.3 / 0.12	---	---	0.49 / ---	---		---	15	90	0	30		
3/11 1705	---	54	10.0	93	199	7.9	---	---	7.3 / 0.32	---	0 / 0.00	110 / 1.80	---	4.5 / 0.13	---	---	0.33 / ---	---		---	15	90	0	30		
4/15 1210	---	67	11.6	124	187	8.3	---	---	6.4 / 0.28	---	0 / 0.00	106 / 1.74	---	4.2 / 0.12	---	---	0.26 / ---	---		---	14	82	0	30		
5/14 1245	---	70	9.8	109	192	8.3	17 / 0.85	10 / 0.85	7.3 / 0.32	1.9 / 0.05	0 / 0.00	108 / 1.77	5.8 / 0.12	3.5 / 0.10	0.4 / 0.01	0.1 / 0.01	0.46 / ---	14 / --	Fe 0.04 Cu 0.01 PO_4 0.15 Zn 0.02[a]	113[b]	15	85	0	6		
6/17 1125	---	74	8.1	94	201	7.9	---	---	7.4 / 0.32	---	0 / 0.00	111 / 1.82	---	3.8 / 0.11	---	---	0.5 / ---	---		---	15	90	0	9		
7/11 1045	---	84	11.3	145	205	8.3	---	---	7.7 / 0.33	---	4 / 0.13	110 / 1.80	---	4.2 / 0.12	---	---	0.3 / ---	---	Total Alkalinity 118	---	16	86	0	0.6		
8/11 1520	---	80	8.1	100	217	8.3	---	---	8.3 / 0.36	---	0 / 0.00	120 / 1.97	---	5.0 / 0.14	---	---	0.2 / ---	---		---	16	96	0	9		
9/11 0720	---	72	6.0	68	220	8.2	23 / 1.15	10 / 0.83	7.6 / 0.33	2.8 / 0.07	0 / 0.00	126 / 2.07	8.6 / 0.18	5.2 / 0.15	2.0 / 0.03	0.1 / 0.01	0.5 / ---	14 / --	Fe 0.05 Al 0.04 PO_4 0.35 Cu 0.01[a]	136[b]	14	99	0	20		
10/20 1245	---	69	10.1	111	228	8.6	---	---	7.8 / 0.34	---	0 / 0.00	128 / 2.10	---	4.5 / 0.13	---	---	0.5 / ---	---		---	14	102	0	10		
11/13 1555	---	58	7.8	76	230	7.5	---	---	8.0 / 0.35	---	0 / 0.00	130 / 2.13	---	4.8 / 0.14	---	---	0.6 / ---	---		---	14	105	0	20		
12/4 1530	---	56	7.6	72	236	7.4	---	---	8.0 / 0.35	---	0 / 0.00	131 / 2.15	---	5.2 / 0.15	---	---	0.5 / ---	---		---	14	104	0	17		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

COLUSA TROUGH NEAR COLUSA (STA. 87)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
1/21 1130	316	49	10.3	90	1,180	8.1	---	---	153 / 6.66	---	0 / 0.00	317 / 5.20	---	98 / 2.76	---	---	0.36 / ---	---		---	55	270	10	104		
2/20 1415	4,000	58	7.1	69	438	7.3	---	---	49 / 2.13	---	0 / 0.00	118 / 1.93	---	32 / 0.90	---	---	0.26 / ---	---		---	52	99	2	280		
3/13 0935	784	51	9.5	85	884	8.1	---	---	99 / 4.31	---	0 / 0.00	284 / 4.65	---	64 / 1.80	---	---	0.26 / ---	---		---	47	241	8	84		
4/14 1145	1,420	65	7.8	82	878	8.1	---	---	90 / 3.92	---	0 / 0.00	299 / 4.90	---	58 / 1.64	---	---	0.20 / ---	---		---	43	264	19	30		
5/12 0930	980	60	8.9	89	409	7.6*	24 / 1.20	15 / 1.26	40 / 1.74	3.1 / 0.08	0 / 0.00	159 / 2.61	49 / 1.02	20 / 0.56	1.3 / 0.02	0.3 / 0.02	0.06 / ---	19 / ---	Al 0.17 / Zn 0.02; PO_4 0.30 / a	250[b]	41	123	0	--		
6/10 1100	1,270	67	7.3	80	369	7.3	20 / 1.00	13 / 1.10	37 / 1.61	1.8 / 0.05	0 / 0.00	151 / 2.47	35 / 0.73	18 / 0.51	0.7 / 0.01	0.5 / 0.03	0.27 / ---	18 / --		218[b]	43	105	0	--		
7/7 0820	828	76	8.4	99	388	8.1*	24 / 1.20	15 / 1.24	36 / 1.57	1.4 / 0.04	0 / 0.00	176 / 2.88	36 / 0.75	16 / 0.45	0.0 / 0.00	0.3 / 0.02	0.2 / ---	23 / --		239[b]	39	122	0	--		
8/4 0900	896	77	4.9	46	389	7.9*	23 / 1.15	15 / 1.24	36 / 1.57	1.5 / 0.04	0 / 0.00	179 / 2.93	32 / 0.67	16 / 0.45	1.0 / 0.02	0.5 / 0.03	0.2 / ---	22 / --		235[b]	39	120	0	31		
9/1 0645	1,100	73	6.2	70	388	7.6*	23 / 1.15	16 / 1.29	37 / 1.61	1.6 / 0.04	0 / 0.00	178 / 2.92	31 / 0.65	18 / 0.51	0.6 / 0.01	0.2 / 0.01	0.3 / ---	19 / --	Fe 0.03 / Al 0.02; PO_4 0.25 / Zn 0.01 a	235[b]	39	122	0	23		
10/6 0830	289	67	5.5	59	403	8.1*	24 / 1.20	16 / 1.32	40 / 1.74	2.4 / 0.06	0 / 0.00	160 / 2.62	48 / 1.00	20 / 0.56	1.2 / 0.02	0.2 / 0.01	0.2 / ---	24 / --		255[b]	40	126	0	--		
11/3 0855	499	59	8.9	88	423	7.6*	23 / 1.15	15 / 1.25	45 / 1.96	2.1 / 0.05	0 / 0.00	180 / 2.95	46 / 0.96	18 / 0.51	1.1 / 0.02	0.1 / 0.01	0.1 / ---	19 / --		258[b]	44	120	0	--		
12/1 0925	351	48	10.0	86	474	7.5*	25 / 1.25	18 / 1.51	44 / 1.91	2.5 / 0.06	0 / 0.00	180 / 2.95	54 / 1.12	24 / 0.68	1.5 / 0.02	0.2 / 0.01	0.2 / ---	19 / --		277[b]	40	138	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm [c]	Per-cent sod-ium	Hardness as $CaCO_3$		Tur-bid-ity 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			
1958								CONTRA COSTA CANAL AT 1ST PUMP LIFT (STA. 109a)																			USBR
1/2	1150	41	55	---	---	719	8.1*	29	26	70	2.3	0.0	81	121	98	4.3	---	---	---		470	45	---	---	---		
1/31	1400	36	56	---	---	882	7.5*	51	25	92	2.0	0.0	110	147	136	0.6	---	---	---		648	46	---	---	---		
2/25	1450	27	58	---	---	1,116	7.7*	51	32	132	2.3	0.0	132	209	143	0.0	---	0.92	---		760	52	---	---	---		
4/2	1225	34	54	---	---	676	7.9*	33	21	60	3.1	0.0	101	129	66	0.0	---	---	---		450	43	---	---	---		
4/28	1535	89	62	---	---	554	7.1*	24	16	55	2.7	0.0	99	71	72	0.6	---	---	---		336	48	---	---	---		
5/27	1300	66	72	---	---	215	6.9*	16	5.2	20	1.6	0.0	49	33	26	0.0	---	0.37	---		200	41	---	---	---		
7/2	1330	101	--	---	---	180	6.8*	9.2	5.5	16	0.0	0.0	35	17	24	0.0	---	---	---		116	43	---	---	---		
7/30	1125	99	76	---	---	211	7.7*	16	8.1	18	0.0	0.0	55	18	33	0.0	---	---	---		152	35	---	---	---		
8/28	1110	114	76	---	---	227	7.5*	14	8.7	18	2.0	0.0	64	19	21	0.0	---	---	---		188	35	---	---	---		
9/30	1300	100	74	---	---	282	7.2*	17	8.9	23	2.0	0.0	73	21	26	1.9	---	---	---		156	38	---	---	---		
10/27	1505	65	66	---	---	391	7.9*	22	11	35	2.0	0.0	94	37	57	0.6	---	---	---		240	42	---	---	---		
11/24	1000	57	52	---	---	509	7.6*	22	14	49	2.0	0.0	84	50	67	1.2	---	0.48	---		364	48	---	---	---		
12/10	1410	64	52	---	---	455	8.3* / 8.4	23	16	42	2.0	0.0	76	50	69	1.2	---	---	---		336	42	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents in parts per million / equivalents per million (shown as ppm / epm)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958																										
							COSUMNES RIVER AT MCCONNELL (STA. 94a)																			USGS
7/24 1930	85	86	7.8	102	87.5	7.5	8.0 / 0.40	3.4 / 0.28	3.8 / 0.17	1.3 / 0.03	0 / 0.00	45 / 0.74	1.0 / 0.02	3.4 / 0.10	0.2 / 0.00	0.0 / 0.00	0.0 / ---	20 / ---		63[b]	19	34	0	---		
8/8 1015	13	74	9.5	110	105	7.6	8.8 / 0.44	4.4 / 0.36	4.8 / 0.21	1.8 / 0.05	0 / 0.00	60 / 0.98	0.0 / 0.00	3.0 / 0.08	0.3 / 0.00	0.0 / 0.00	0.0 / ---	24 / ---		77[b]	20	40	0	1		
9/5 1040	1.5	76	9.4	110	276	8.1	22 / 1.10	12 / 0.86	19 / 0.83	3.3 / 0.08	0 / 0.00	155 / 2.54	2.9 / 0.06	6.0 / 0.17	1.2 / 0.02	0.1 / 0.01	0.1 / ---	55 / ---	Fe 0.03 Al 0.02 PO_4 0.15 [a]	198[b]	29	98	0	12		
10/16 0915	4.7	66	9.2	98	121	8.0	12 / 0.60	5.8 / 0.48	5.0 / 0.22	1.4 / 0.04	0 / 0.00	70 / 1.15	5.8 / 0.12	3.0 / 0.08	0.0 / 0.00	0.0 / 0.00	0.0 / ---	19 / ---		86[b]	16	54	0	---		
11/13 1130	33	52	11.1	100	111	7.7	10 / 0.50	4.6 / 0.38	4.6 / 0.20	0.9 / 0.02	0 / 0.00	58 / 0.95	1.9 / 0.04	3.5 / 0.10	0.2 / 0.00	0.0 / 0.00	0.0 / ---	17 / ---		72[b]	18	44	0	---		
12/4 1145	28	47	11.7	99	99.3	7.7	9.6 / 0.48	3.9 / 0.32	3.8 / 0.17	0.8 / 0.02	0 / 0.00	47 / 0.77	6.7 / 0.14	3.0 / 0.08	0.0 / 0.00	0.0 / 0.00	0.0 / ---	16 / ---		67[b]	17	40	1	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											COSUMNES RIVER AT MICHIGAN BAR (STA. 94)															USGS
1/24 1500	286	47	12.0	102	125	7.3	---	---	4.5/0.20	---	0/0.00	58/0.95	---	2.8/0.08	---	---	0.05/---	---		---	15	55	7	4		
2/10 0905	1500	49	11.1	97	94.4	7.5	---	---	3.7/0.16	---	0/0.00	48/0.79	---	2.8/0.08	---	---	0.01/---	---		---	17	40	1	10		
3/3 0910	1200	46	12.2	101	80.7	7.3	---	---	3.2/0.14	---	0/0.00	40/0.66	---	2.5/0.07	---	---	0.04/---	---		---	17	35	2	10		
4/3 0930	22,700	49	12.1	105	55.3	7.1	---	---	2.0/0.09	---	0/0.00	26/0.43	---	1.5/0.04	---	---	0.00/---	---		---	16	24	3	300		
5/8 0920	1,880	56	10.5	100	43.4	7.3	6.4/0.32	1.0/0.08	2.4/0.10	1.1/0.03	0/0.00	22/0.36	6.7/0.14	0.8/0.02	0.2/0.00	0.1/0.01	0.01/---	18/---	PO_4 0.00 Fe 0.02 Zn 0.06 Al 0.02[a]	48[b]	19	20	2	5		
6/13 1025	776	59	10.0	98	50.9	7.3	---	---	2.2/0.10	---	0/0.00	26/0.43	---	1.0/0.03	---	---	0.0/---	---		---	21	19	0	4		
7/7 0755	174	77	8.0	92	58.7	7.3	---	---	2.7/0.12	---	0/0.00	31/0.51	---	2.5/0.07	---	---	0.0/---	---		---	22	21	0	1		
8/4 0745	61	80	7.2	89	73.9	7.3	---	---	4.0/0.17	---	0/0.00	38/0.62	---	3.0/0.08	---	---	0.0/---	---		---	22	30	0	10		
9/4 1415	26	78	8.1	97	85.6	7.5	8.8/0.44	3.4/0.30	3.6/0.16	1.2/0.03	0/0.00	48/0.79	4.8/0.10	2.5/0.07	0.0/0.00	0.0/0.00	0.1/---	21/---	PO_4 0.05 Zn 0.01 Fe 0.02[a]	69[b]	17	37	0	2		
10/6 0800	22	67	8.4	91	86.9	7.4	---	---	3.7/0.16	---	0/0.00	43/0.70	---	3.5/0.10	---	---	0.0/---	---		---	19	34	0	0.4		
11/17 0950	64	46	11.8	98	81.4	7.5*	---	---	3.5/0.15	---	0/0.00	40/0.66	---	3.2/0.09	---	---	0.0/---	---		---	19	31	0	1		
12/8 1110	44	47	11.9	101	84.0	7.3	---	---	3.6/0.16	---	0/0.00	42/0.69	---	3.2/0.09	---	---	0.0/---	---		---	18	36	2	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
											COTTONWOOD CREEK NEAR COTTONWOOD (STA. 12b)															
1/16 1320	1,640	47	11.2	95	224	7.7	---	---	8.5 / 0.37	1.2 / 0.03	0 / 0.00	117 / 1.92	---	4.0 / 0.11	---	---	0.14 / ---	---		---	16	98	2	46	Maximum 2400. Minimum 2.3 Median 36.5	
2/19 1230	36,800	53	10.4	95	89.1	7.3	---	---	2.9 / 0.13	---	0 / 0.00	50 / 0.82	---	0.8 / 0.02	---	---	0.00 / ---	---		---	13	42	0	200		
3/12 1240	1,980	49	10.8	94	252	7.7	---	---	8.1 / 0.35	---	0 / 0.00	130 / 2.13	---	5.3 / 0.15	---	---	0.00 / --	---		---	13	114	7	20		
4/16 1120	3,040	58	9.9	96	221	7.9	---	---	6.8 / 0.30	---	0 / 0.00	119 / 1.95	---	2.5 / 0.07	---	---	0.05 / ---	---		---	13	97	0	35		
5/13 1340	2,900	63	9.2	95	200	7.5	20 / 1.00	9.2 / 0.76	7.2 / 0.31	1.2 / 0.03	0 / 0.00	104 / 1.70	12 / 0.25	4.8 / 0.14	0.4 / 0.01	0.0 / 0.00	0.04 / ---	19 / ---	Fe 0.03 Al 0.01 PO_4 0.05[a] Zn 0.06	125[b]	15	88	3	15		
6/17 1555	460	84	7.3	93	227	7.8	---	---	7.7 / 0.33	---	0 / 0.00	120 / 1.97	---	6.0 / 0.17	---	---	0.0 / ---	---		---	14	101	3	10		
7/15 1520	210	80	7.5	93	225	7.3	---	---	8.9 / 0.39	---	0 / 0.00	126 / 2.07	---	6.2 / 0.17	---	---	0.1 / ---	---		---	17	95	0	0.8		
8/12 1345	110	80	8.5	104	214	7.3	---	---	8.8 / 0.38	---	0 / 0.00	123 / 2.02	---	7.0 / 0.20	---	---	0.0 / ---	---		---	16	98	0	3		
9/9 1230	110	72	8.7	99	184	7.3	22 / 1.10	6.6 / 0.54	7.8 / 0.34	2.4 / 0.06	0 / 0.00	103 / 1.69	4.8 / 0.10	6.0 / 0.17	1.0 / 0.02	0.0 / 0.00	0.0 / ---	28 / ---	Fe 0.03 Cu 0.01 PO_4 0.05 [a]	130[b]	17	82	0	19		
10/14 1520	121	66	9.2	98	172	7.3	---	---	6.9 / 0.30	---	0 / 0.00	95 / 1.56	---	6.6 / 0.19	---	---	0.0 / ---	---		---	17	73	0	1		
11/11 1340	106	58	9.4	92	217	7.3	---	---	7.9 / 0.34	---	0 / 0.00	112 / 1.84	---	10 / 0.28	---	---	0.0 / ---	---		---	16	92	0	30		
12/4 1105	95	53	12.2	112	246	7.3	---	---	8.6 / 0.37	---	0 / 0.00	122 / 2.00	---	14 / 0.39	---	---	0.0 / ---	---		---	15	108	8	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							COTTONWOOD CREEK BELOW NORTH FORK COTTONWOOD CREEK (STA. 11a)																			USGS
10/2 1000	25 est.	70	8.4	94	269	7.7	26 / 1.30	12 / 1.02	9.1 / 0.40	1.1 / 0.03	0 / 0.00	122 / 2.00	13 / 0.27	13 / 0.37	0.4 / 0.01	0.0 / 0.00	0.1 / ---	20 / --		155[b]	15	116	16	---		
11/11 1610	--	56	10.0	95	252	7.7	23 / 1.15	13 / 1.05	9.0 / 0.39	1.1 / 0.03	0 / 0.00	129 / 2.11	9.6 / 0.20	14 / 0.39	0.0 / 0.00	0.0 / 0.00	0.0 / ---	19 / --		153[b]	15	110	4	---		
12/4 0930	--	49	11.1	97	251	7.6	22 / 1.10	14 / 1.16	8.6 / 0.37	0.7 / 0.02	0 / 0.00	134 / 2.20	9.6 / 0.20	10 / 0.28	0.0 / 0.00	0.0 / 0.00	0.1 / ---	20 / --		151[b]	14	113	3	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported ere as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
							COTTONWOOD CREEK, SOUTH FORK ABOVE COTTONWOOD CREEK (STA. 11b)																			
1958																										USGS
11/11 1435	---	60	10.3	103	336	7.3	36 / 1.80	12 / 0.96	12 / 0.52	0.9 / 0.02	0 / 0.00	122 / 2.00	19 / 0.40	36 / 1.02	0.0 / 0.00	0.0 / 0.00	0.0 / ---	12 / --		188[b]	16	138	38	---		
12/4 1020	32 est.	50	11.2	99	408	7.5	43 / 2.15	15 / 1.21	17 / 0.74	0.7 / 0.02	0 / 0.00	140 / 2.29	23 / 0.48	49 / 1.38	0.0 / 0.00	0.0 / 0.00	0.1 / ---	17 / --		234[b]	18	168	53	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							COW CREEK NEAR MILLEVILLE (STA. 88a)																			
4/28 1530	715	60	9.4	94	95.5	7.7*	9.4 / 0.47	3.5 / 0.29	4.4 / 0.19	1.2 / 0.03	0 / 0.00	50 / 0.82	1.9 / 0.04	3.2 / 0.09	0.1 / 0.00	0.0 / 0.00	0.30 / ---	26 / ---		75[b]	19	38	0	--		USGS
5/21 1000	655	64	8.5	88	80.9	7.6*	8.0 / 0.40	3.0 / 0.25	3.5 / 0.15	0.6 / 0.02	0 / 0.00	42 / 0.69	0.6 / 0.01	3.5 / 0.10	0.2 / 0.00	0.0 / 0.00	0.0 / ---	24 / ---	Fe 0.02; PO_4 0.00 a	64[b]	18	33	0	--		USGS
6/26 1230	224	79	6.2	76	116	7.3	12 / 0.60	4.4 / 0.36	5.1 / 0.22	0.9 / 0.02	0 / 0.00	64 / 1.05	3.8 / 0.08	3.7 / 0.10	0.2 / 0.00	0.0 / 0.00	0.0 / ---	31 / ---		93[b]	18	48	0	--		USGS
7/25 1430	151	82	7.6	96	142	7.0	14 / 0.70	4.9 / 0.40	5.9 / 0.26	1.6 / 0.04	0 / 0.00	78 / 1.28	0.6 / 0.01	3.6 / 0.10	0.7 / 0.01	0.0 / 0.00	0.0 / ---	30 / ---		99[b]	18	55	0	--		DWR
8/27 0830	61	76	6.5	77	159	7.3	15 / 0.75	6.2 / 0.51	7.2 / 0.31	1.5 / 0.04	0 / 0.00	90 / 1.48	1.0 / 0.02	3.7 / 0.10	0.6 / 0.01	0.1 / 0.01	0.1 / ---	34 / ---		113[b]	19	63	0	--		DWR
9/19 1200	67	76	8.8	104	163	7.7	15 / 0.75	5.7 / 0.47	8.8 / 0.38	1.5 / 0.04	0 / 0.00	87 / 1.42	4.1 / 0.08	4.4 / 0.12	0.8 / 0.01	0.2 / 0.01	0.1 / ---	25 / ---		109[b]	23	61	0	--		DWR
10/24 1130	114	58	9.7	94	155	7.4	14 / 0.70	5.8 / 0.48	7.8 / 0.34	1.1 / 0.03	0 / 0.00	79 / 1.29	4.6 / 0.10	5.6 / 0.16	0.3 / 0.00	0.0 / 0.00	0.08 / ---	29 / ---		107[b]	22	59	0	--		DWR
11/14 1100	249	55	---	---	148	7.6*	13 / 0.65	5.0 / 0.41	6.2 / 0.27	1.4 / 0.04	0 / 0.00	76 / 1.24	2.0 / 0.04	3.6 / 0.10	0.4 / 0.01	0.1 / 0.01	0.16 / ---	28 / ---		97[b]	20	53	0	--		DWR
12/23 1000	144	44	10.2	83	141	7.2	13 / 0.65	7.7 / 0.63	6.7 / 0.29	0.8 / 0.02	0 / 0.00	74 / 1.21	7.7 / 0.16	6.8 / 0.18	0.2 / 0.00	0.2 / 0.01	0.0 / ---	30 / ---		109[b]	18	64	3	--		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Not Rated										DEER CREEK NEAR VINA (STA. 95)															USGS
1/16 1150		47	11.8	100	116	7.5	---	---	7.0 / 0.30	---	0 / 0.00	66 / 1.08	---	2.5 / 0.07	---	---	0.14 / ---	---		---	24	48	0	5		
2/19 0945		50	11.1	98	70.6	7.3	---	---	2.8 / 0.12	---	0 / 0.00	39 / 0.64	---	0.5 / 0.01	---	---	0.10 / ---	---		---	17	29	0	7		
3/12 1500		47	11.7	99	98.4	7.5	---	---	5.3 / 0.23	---	0 / 0.00	57 / 0.93	---	1.5 / 0.04	---	---	0.10 / ---	---		---	22	40	0	5		
4/16 1020		55	10.7	101	104	7.5	---	---	7.2 / 0.31	---	0 / 0.00	44 / 0.72	---	6.8 / 0.19	---	---	0.00 / ---	---		---	30	36	0	3		
5/13 1125		55	10.5	98	60.3	7.3	6.2 / 0.31	2.3 / 0.19	3.3 / 0.14	1.1 / 0.03	0 / 0.00	36 / 0.59	2.9 / 0.06	0.4 / 0.01	0.2 / 0.00	0.1 / 0.01	0.04 / ---	24 / ---	Fe 0.01 PO_4 0.00 Zn 0.01 a	59[b]	21	25	0	4		
6/17 1345		75	8.3	97	88.5	7.9	---	---	4.6 / 0.20	---	0 / 0.00	50 / 0.82	---	1.5 / 0.04	---	---	0.0 / ---	---		---	23	33	0	1		
7/15 1330		80	7.5	92	144	7.3	---	---	8.1 / 0.35	---	0 / 0.00	85 / 1.39	---	4.9 / 0.14	---	---	0.0 / ---	---		---	24	56	0	0.4		
8/12 1150		80	7.0	81	175	7.3	---	---	9.8 / 0.43	---	0 / 0.00	102 / 1.67	---	5.5 / 0.16	---	---	0.3 / ---	---		---	22	74	0	4		
9/9 1040		74	4.9	56	210	7.1	16 / 0.80	12 / 0.96	9.7 / 0.42	2.8 / 0.07	0 / 0.00	120 / 1.97	6.7 / 0.14	6.0 / 0.17	0.0 / 0.00	0.0 / 0.00	0.2 / ---	38	Fe 0.03 PO_4 0.10 a	150[b]	19	88	0	1		
10/14 1230		69	9.8	108	172	7.1	---	---	9.6 / 0.42	---	0 / 0.00	100 / 1.64	---	6.1 / 0.17	---	---	0.1 / ---	---		---	24	67	0	0.6		
11/	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										DELTA CROSS CHANNEL NEAR WALNUT GROVE (STA. 98)															USGS
1/17 1000		46	11.0	92	134	7.3	---	---	8.1/0.35	---	0/0.00	66/1.08	---	6.0/0.17	---	---	0.00/---	---		---	26	49	0	54	Maximum 7000.+ Minimum 23. Median 425.	
2/13 0925		51	10.1	90	112	7.3	---	---	5.3/0.23	---	0/0.00	54/0.89	---	4.2/0.12	---	---	0.15/---	---		---	19	49	5	40		
3/7 1200		51	10.4	93	120	7.3	---	---	5.5/0.24	---	0/0.00	62/1.02	---	4.0/0.11	---	---	0.03/---	---		---	20	49	0	40		
4/2 0945		51	10.4	93	93.7	7.2	---	---	4.0/0.17	---	0/0.00	42/0.69	---	4.0/0.11	---	---	0.00/---	---		---	18	39	5	40		
5/19 1445		63	9.6	99	95.5	7.3	8.0/0.40	4.0/0.33	5.9/0.26	1.4/0.04	0/0.00	42/0.69	8.6/0.18	4.5/0.13	0.5/0.01	0.0/0.00	0.00/---	17/---	Fe 0.01 Al 0.01 Cu 0.01 Zn 0.01 PO_4 0.00 a	71[b]	25	36	2	20		
6/11 0915		63	8.8	91	123	7.3	---	---	7.3/0.32	---	0/0.00	57/0.93	---	7.0/0.20	---	---	0.0/---	---		---	25	48	1	10		
7/9 0800		73	8.3	95	154	7.3	---	---	10/0.44	---	0/0.00	70/1.15	---	8.8/0.25	---	---	0.0/---	---		---	29	53	0	15		
8/6 1110		74	7.6	83	159	7.3	---	---	11/0.48	---	0/0.00	74/1.21	---	10/0.28	---	---	0.2/---	---		---	27	64	3	10		
9/2 0925		71	7.1	79	184	7.3	14/0.70	8.0/0.66	11/0.48	1.0/0.03	0/0.00	81/1.33	11/0.23	12/0.34	0.2/0.00	0.1/0.01	0.1/---	20/---	Fe 0.02 PO_4 0.20/a Zn 0.01	117[b]	26	68	2	2		
10/10 0935		66	7.8	83	131	7.5	---	---	6.8/0.30	---	0/0.00	66/1.08	---	7.2/0.20	---	---	0.0/---	---		---	23	50	0	6		
11/3 0835		60	8.9	89	133	7.3	---	---	6.9/0.30	---	0/0.00	68/1.11	---	6.3/0.18	---	---	0.0/---	---		---	23	50	0	8		
12/10 1200		52	10.3	93	141	7.3	---	---	8.2/0.36	---	0/0.00	70/1.15	---	5.8/0.16	---	---	0.0/---	---		---	24	56	0	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							DELTA-MENDOTA CANAL NEAR MENDOTA (STA. 92)																			USGS
1/27 1230	---	51	12.2	109	611	8.3	---	---	67 / 2.91	---	0 / 0.00	94 / 1.54	---	86 / 2.43	---	---	0.20 / ---	---		---	52	132	55	11	Maximum 7000.+ Minimum .23. Median 56.	
2/17 1340	---	61	11.6	116	712	8.3	---	---	82 / 3.57	---	0 / 0.00	99 / 1.62	---	89 / 2.51	---	---	0.56 / ---	---		---	55	149	68	45		
3/3 1600	---	59	10.9	107	816	8.5	---	---	102 / 4.44	---	0 / 0.00	102 / 1.67	---	96 / 2.71	---	---	0.62 / ---	---		---	56	174	90	20		
4/7 1400	---	57	10.3	99	754	7.9	---	---	76 / 3.31	---	0 / 0.00	100 / 1.64	---	55 / 1.55	---	---	0.13 / ---	---		---	46	197	115	30		
5/5 1325	---	78	12.7	152	660	8.5	42 / 2.10	17 / 1.36	66 / 2.87	3.4 / 0.09	0 / 0.00	99 / 1.62	154 / 3.21	51 / 1.44	1.7 / 0.03	0.1 / 0.01	0.49 / ---	12 / --	Fe 0.01, Al 0.10, PO_4 0.25 a	397 b	45	173	92	9		
6/9 1420	---	73	7.9	90	61.5	7.3	---	---	4.2 / 0.18	---	0 / 0.00	28 / 0.46	---	1.8 / 0.05	---	---	0.0 / ---	---		---	30	21	0	40		
7/7 1400	---	79	7.5	91	207	7.3	---	---	20 / 0.87	---	0 / 0.00	53 / 0.87	---	25 / 0.70	---	---	0.0 / ---	---		---	46	51	8	120		
8/5 1330	---	81	8.1	100	258	7.6	---	---	25 / 1.09	---	0 / 0.00	70 / 1.15	---	36 / 1.02	---	---	0.2 / ---	---		---	42	75	18	40		
9/2 1445	---	81	9.6	119	584	8.2	31 / 1.55	15 / 1.25	64 / 2.78	3.0 / 0.08	0 / 0.00	125 / 2.05	48 / 1.00	90 / 2.54	0.7 / 0.01	0.1 / 0.01	0.3 / ---	12 / --	Fe 0.04, Al 0.02, PO_4 0.30 a	326 b	49	140	38	34		
10/6 1615	---	62	8.6	87	502	7.4	---	---	55 / 2.39	---	0 / 0.00	114 / 1.87	---	74 / 2.09	---	---	0.2 / ---	---		---	51	115	22	15		
11/10 1635	---	63	9.8	100	429	8.1	---	---	50 / 2.18	---	0 / 0.00	78 / 1.28	---	62 / 1.75	---	---	0.2 / ---	---		---	54	92	28	15		
12/1 1610	---	56	9.5	90	456	7.9	---	---	51 / 2.22	---	0 / 0.00	78 / 1.28	---	68 / 1.92	---	---	0.2 / ---	---		---	51	108	44	12		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), 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 B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
											DELTA-MENDOTA CANAL NEAR TRACY (STA. 93)															
1/23 1320	----	51	10.0	89	1,819	7.5	---	---	95/4.13	3.6/0.09	0/0.00	136/2.23	---	138/3.89	---	---	0.63/---	---		---	55	166	55	13	Maximum 7,000+ Minimum 2.3 Median 620	
2/11 1100	----	55	6.9	65	567	7.3	---	---	65/2.83	---	0/0.00	108/1.77	---	85/2.40	---	---	0.48/---	---		---	54	121	32	30		
3/5 0915	----	55	8.6	80	615	7.3	---	---	70/3.05	---	0/0.00	106/1.74	---	90/2.54	---	---	0.48/---	---		---	54	132	45	40		
4/11 1300	----	60	8.3	83	453	7.5	---	---	55/2.39	---	0/0.00	102/1.67	---	64/1.80	---	---	0.37/---	---		---	56	92	8	55		
5/9 1030	----	67	7.9	85	193	7.3	12/0.60	4.9/0.40	18/0.78	2.3/0.06	0/0.00	52/0.85	15/0.31	23/0.65	0.9/0.01	0.2/0.01	0.13/---	17/---	PO$_4$ 0.20, Zn 0.01,[a] Fe 0.02, Al 0.06	119[b]	42	50	7	35		
6/11 1450	----	74	8.8	102	179	7.5	---	---	18/0.78	---	0/0.00	49/0.80	---	23/0.65	----	---	0.0/---	---		---	45	48	8	40		
7/8 1000	----	76	7.5	88	326	7.3	---	---	31/1.35	---	0/0.00	75/1.23	---	46/1.30	---	---	0.0/---	---		---	47	77	15	20		
8/5 1030	----	80	6.2	76	259	7.3	---	---	25/1.09	---	0/0.00	72/1.18	---	38/1.07	---	---	0.3/---	---		---	43	72	13	35		
9/3 1100	----	78	7.8	93	493	7.7	29/1.45	13/1.03	51/2.22	1.7/0.04	0/0.00	113/1.85	35/0.73	74/2.09	0.6/0.01	0.1/0.01	0.2/---	12/---	PO$_4$ 0.30, Fe 0.03,[a] Al 0.02	273[b]	47	124	31	17		
10/8 1025	----	69	7.2	79	508	7.7	---	---	55/2.39	---	0/0.00	116/1.90	---	77/2.17	---	---	0.1/---	---		---	50	119	24	10		
11/14 0810	----	59	9.1	89	430	7.6*	---	---	48/2.09	---	0/0.00	78/1.28	---	66/1.86	---	---	0.1/---	---		---	52	95	31	9		
12/9 1330	----	56	10.4	99	428	7.3	---	---	49/2.13		0/0.00	78/1.28	---	67/1.89	---	---	0.3/---	---		---	54	92	28	25		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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[a]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily										DELTA-MENDOTA CANAL NEAR TRACY (STA. 93)															USGS
1/10-24	161	---	---	---	742	7.5*	34 / 1.70	18 / 1.46	86 / 3.74	3.6 / 0.09	0 / 0.00	127 / 2.08	53 / 1.10	128 / 3.61	3.2 / 0.05	0.0 / 0.00	0.60 / ---	25 / --	Fe 0.02	414[b]	54	158	54	---		
1/28	0	---	---	---	924	8.0*	38 / 1.90	17 / 1.40	123 / 5.35	3.0 / 0.08	0 / 0.00	156 / 2.56	76 / 1.58	162 / 4.57	2.7 / 0.04	0.3 / 0.02	1.1 / ---	26 / --	Fe 0.01	526[b]	61	165	37	---		
2/2-9	64	---	---	---	640	7.3*	30 / 1.50	15 / 1.26	76 / 3.31	4.2 / 0.11	0 / 0.00	119 / 1.95	65 / 1.35	98 / 2.76	2.4 / 0.04	0.0 / 0.00	0.53 / ---	22 / --	Fe 0.06	372[b]	54	138	40	---		
2/16-20	115	---	---	---	641	7.3*	28 / 1.40	16 / 1.32	75 / 3.26	4.0 / 0.10	0 / 0.00	119 / 1.95	65 / 1.35	100 / 2.82	2.5 / 0.04	0.0 / 0.00	0.65 / ---	23 / --	Fe 0.05	373[b]	54	136	38	---		
3/3	145	---	---	---	708	7.2*	30 / 1.50	16 / 1.30	81 / 3.52	1.0 / 0.03	0 / 0.00	118 / 1.93	65 / 1.35	108 / 3.05	3.6 / 0.06	---	0.90 / ---	26 / ---		390[b]	55	140	43	---		
3/6-15	713	---	---	---	455	7.2*	23 / 1.15	11 / 0.93	48 / 2.09	2.5 / 0.06	0 / 0.00	94 / 1.54	48 / 1.00	61 / 1.72	2.5 / 0.04	0.2 / 0.01	0.20 / ---	23 / ---	Fe 0.01	265[b]	49	104	27	---		
4/29-30	874	---	---	---	257	7.7*	15 / 0.75	6.7 / 0.55	24 / 1.04	2.2 / 0.06	0 / 0.00	68 / 1.11	17 / 0.35	30 / 0.85	1.4 / 0.02	0.1 / 0.01	0.1 / ---	18 / ---		148[b]	43	65	9	---		
5/1-8	505	---	---	---	248	7.2*	15 / 0.75	5.7 / 0.47	23 / 1.00	2.2 / 0.06	0 / 0.00	66 / 1.08	16 / 0.33	30 / 0.85	1.0 / 0.02	0.1 / 0.01	0.1 / ---	16 / ---	Fe 0.10	142[b]	44	61	7	---		
5/9-19	522	---	----	---	203	7.2*	14 / 0.70	4.4 / 0.36	18 / 0.78	1.9 / 0.05	0 / 0.00	55 / 0.90	14 / 0.29	24 / 0.68	1.2 / 0.02	0.1 / 0.01	0.1 / ---	19 / ---	Fe 0.08	124[b]	41	53	8	---		
5/20-31	556	---	---	---	150	7.2*	10 / 0.50	4.4 / 0.36	13 / 0.57	1.8 / 0.05	0 / 0.00	44 / 0.72	12 / 0.25	17 / 0.48	1.4 / 0.02	0.2 / 0.01	0.2 / ---	19 / ---	Fe 0.12	101[b]	39	43	7	---		
6/1-10	499	---	---	---	162	7.1*	10 / 0.50	5.4 / 0.44	14 / 0.61	1.7 / 0.04	0 / 0.00	44 / 0.72	14 / 0.29	19 / 0.54	0.5 / 0.01	0.1 / 0.01	0.1 / ---	16 / ---	Fe 0.53	103[b]	38	47	11	---		
6/13-21	878	---	---	---	234	7.2*	12 / 0.60	7.3 / 0.60	23 / 1.00	2.1 / 0.05	0 / 0.00	61 / 1.00	21 / 0.44	30 / 0.85	1.0 / 0.02	0.1 / 0.01	0.1 / ---	18 / ---	Fe 0.08	145[b]	44	60	10	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
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CENTRAL VALLEY REGION (5)

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							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						DELTA-MENDOTA CANAL NEAR TRACY (STA. 93 Cont.)																			USGS
6/22-30	746	---	---	---	146	7.3*	8.8 / 0.44	4.6 / 0.38	13 / 0.57	1.4 / 0.04	0 / 0.00	38 / 0.62	12 / 0.25	19 / 0.54	0.7 / 0.01	0.2 / 0.01	0.2 / ---	14 / ---	Fe 0.07	93[b]	40	41	10	---		
7/1-21	2,688	---	---	---	272	7.1*	16 / 0.80	7.1 / 0.58	27 / 1.17	2.2 / 0.06	0 / 0.00	61 / 1.00	25 / 0.52	38 / 1.07	1.5 / 0.02	0.2 / 0.01	0.1 / ---	17 / ---	Fe 0.04	164[b]	45	69	19	---		
7/22-25	3,176	---	---	---	531	7.3*	28 / 1.40	13 / 1.10	56 / 2.44	3.0 / 0.08	0 / 0.00	106 / 1.74	43 / 0.90	83 / 2.34	1.8 / 0.03	0.2 / 0.01	0.3 / ---	19 / ---	Fe 0.04	299[b]	49	125	38	---		
7/26-31	3,107	---	---	---	286	7.0*	15 / 0.75	9.4 / 0.77	27 / 1.17	2.3 / 0.06	0 / 0.00	68 / 1.11	25 / 0.52	38 / 1.07	0.7 / 0.01	0.3 / 0.02	0.3 / ---	18 / ---	Fe 0.06	169[b]	43	76	20	---		
8/1-18	3,320	---	---	---	383	6.7*	23 / 1.15	8.4 / 0.69	40 / 1.74	2.1 / 0.05	0 / 0.00	89 / 1.46	29 / 0.60	54 / 1.52	0.0 / 0.00	0.1 / 0.01	0.3 / ---	18 / ---	Fe 0.01	219[b]	48	92	19	---		
8/19-24	2,780	---	---	---	631	7.1*	34 / 1.70	15 / 1.26	68 / 2.96	3.6 / 0.09	0 / 0.00	131 / 2.15	50 / 1.04	98 / 2.76	0.8 / 0.01	0.2 / 0.01	0.3 / ---	19 / ---	Fe 0.01	354[b]	49	148	41	---		
8/25-31 9/1-2	2,920	---	---	---	338	7.1*	28 / 1.40	4.9 / 0.40	35 / 1.52	2.2 / 0.06	0 / 0.00	92 / 1.51	24 / 0.50	44 / 1.24	0.0 / 0.00	0.0 / 0.00	0.2 / ---	10 / ---	Fe 0.00	193[b]	45	90	15	---		
9/3-7	1,780	---	---	---	693	7.2*	29 / 1.45	22 / 1.83	76 / 3.31	4.2 / 0.11	0 / 0.00	144 / 2.36	61 / 1.27	108 / 3.05	0.6 / 0.01	0.1 / 0.01	0.4 / ---	17 / ---	Fe 0.01	389[b]	49	164	46	---		
9/8-30	1,720	---	---	---	501	7.2*	27 / 1.35	14 / 1.13	54 / 2.35	3.2 / 0.08	0 / 0.00	117 / 1.92	42 / 0.87	73 / 2.06	0.2 / 0.00	0.1 / 0.01	0.2 / ---	19 / ---	Fe 0.00	291[b]	48	124	28	---		
10/1-8	1,640	---	---	---	539	7.1*	31 / 1.55	12 / 1.01	53 / 2.31	3.1 / 0.08	0 / 0.00	116 / 1.90	38 / 0.79	84 / 2.37	3.4 / 0.05	0.1 / 0.01	0.2 / ---	31 / ---	Fe 0.00	313[b]	47	128	33	---		
10/9-31	865	---	---	---	550	7.7*	30 / 1.50	14 / 1.14	60 / 2.61	3.0 / 0.08	0 / 0.00	127 / 2.08	44 / 0.92	86 / 2.43	4.0 / 0.06	0.0 / 0.00	0.2 / ---	25 / ---	Fe 0.00	329[b]	49	132	28	---		
11/1-15	863	---	---	---	422	7.1*	22 / 1.10	14 / 1.14	45 / 1.96	2.2 / 0.06	0 / 0.00	79 / 1.29	43 / 0.90	67 / 1.89	2.8 / 0.05	0.0 / 0.00	0.2 / ---	18 / ---	Fe 0.00	253[b]	46	112	47	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						DELTA-MENDOTA CANAL NEAR TRACY (STA. 93 Cont.)																			USGS
11/16-30	863	---	---	---	398	7.3*	22 / 1.10	9.0 / 0.74	41 / 1.78	1.7 / 0.04	0 / 0.00	76 / 1.25	33 / 0.69	61 / 1.72	2.2 / 0.04	0.1 / 0.01	0.2 / ---	18 / ---	Fe 0.00	225[b]	49	92	30	---		
12/1-8	944	---	---	---	389	7.3*	20 / 1.00	10 / 0.84	38 / 1.65	1.9 / 0.05	0 / 0.00	71 / 1.16	31 / 0.65	60 / 1.69	2.3 / 0.04	0.1 / 0.01	0.2 / ---	19 / ---	Fe 0.00	218[b]	47	92	34	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Pubt. of Pub. Health (LADPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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	N C ppm			
1958	Tidal						DUTCH SLOUGH AT FARRAR PARK BRIDGE (STA. 108b)																			USBR
5/27 1535		70	---	---	129		---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
6/3 0935		68	---	---	166		---	---	---	---	---	---	---	---	---	---	---	---		116	---	---	---	---		
7/29 1335		72	---	---	186		---	---	---	---	---	---	---	---	---	---	---	---		160	---	---	---	---		
8/28 1115		76	---	---	216		---	---	---	---	---	---	---	---	---	---	---	---		180	---	---	---	---		
10/1 1145		---	---	---	243		---	---	---	---	---	---	---	---	---	---	---	---		•160	---	---	---	---		
10/27 1100		68	---	---	262		---	---	---	---	---	---	---	---	---	---	---	---		192	---	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
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TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ELDER CREEK NEAR PASKENTA (STA. 13e)																			USGS
10/2 1510	3.6	79	8.6	105	658	8.2	35/1.75	33/2.69	51/2.22	1.1/0.03	0/0.00	206/3.38	12/0.25	108/3.05	0.5/0.01	0.0/0.00	0.1/---	16/---		358[b]	33	222	53	--		
11/11 1035	7.2	49	10.8	94	653	8.0	38/1.90	34/2.82	48/2.09	0.8/0.02	5/0.17	239/3.75	12/0.25	90/2.54	0.0/0.00	0.1/0.01	0.0/---	15/---		356[b]	31	236	40	--		
12/5 0830	8.1	41	12.5	98	607	7.7	41/2.05	30/2.43	43/1.87	0.7/0.02	0/0.00	232/3.80	12/0.25	81/2.28	0.3/0.00	0.1/0.01	0.1/---	15/---		333[b]	29	224	34	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
1958	Tidal										FALSE RIVER AT WEBB PUMP (STA. 112a)															USBR
5/27 1440		70	—	—	117		—	—	—	—	—	—	—	—	—	—	—	—		84	—	—	—	—		
6/30 1135		67	—	—	152		—	—	—	—	—	—	—	—	—	—	—	—		88	—	—	—	—		
7/28 1035		—	—	—	178		—	—	—	—	—	—	—	—	—	—	—	—		132	—	—	—	—		
8/28 0940		74	—	—	184		—	—	—	—	—	—	—	—	—	—	—	—		120	—	—	—	—		
10/1 1045		—	—	—	198		—	—	—	—	—	—	—	—	—	—	—	—		124	—	—	—	—		
10/27 1150		68	—	—	248		—	—	—	—	—	—	—	—	—	—	—	—		180	—	—	—	—		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY 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	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											FEATHER RIVER AT NICOLAUS (STA. 20)														Maximum 7,000	
1/15 0900	5,000*	43	11.7	94	99.1	7.3	---	--- / 0.76	3.8 / 0.17	---	0 / 0.00	49 / 0.80	---	3.0 / 0.08	---	---	0.00 / ---	---		---	18	38	0	20	Minimum 2.3 Median 162	USGS
2/18 0845	49,400*	54	10.4	97	76.1	7.1	---	--- / 0.66	2.7 / 0.12	---	0 / 0.00	36 / 0.59	---	2.0 / 0.06	---	---	0.00 / ---	---		---	15	33	3	55		
3/11 0915	15,000	47	11.2	95	88.6	7.3	---	--- / 0.76	3.2 / 0.14	---	0 / 0.00	43 / 0.70	---	2.2 / 0.06	---	---	0.00 / ---	---		---	16	38	3	15		
4/15 0845	29,300	57	10.3	99	83.3	7.3	---	--- / 0.70	3.1 / 0.13	---	0 / 0.00	42 / 0.69	---	1.5 / 0.04	---	---	0.00 / ---	---		---	16	35	1	42		
5/12 0945	29,100	55	10.5	99	56.7	7.1	5.6 / 0.28	1.9 / 0.16	2.2 / 0.10	0.8 / 0.02	0 / 0.00	29 / 0.48	1.9 / 0.04	1.0 / 0.03	0.2 / 0.00	0.1 / 0.01	0.00 / ---	14 / ---	Fe 0.07 PO4 0.05 Al 0.10 Cu 0.01 a	---	18	22	0	24		
6/16 0905	16,400	64	9.2	96	63.0	7.3	---	--- / 0.58	2.6 / 0.11	---	0 / 0.00	35 / 0.37	---	1.0 / 0.03	---	---	0.00 / ---	---		---	16	29	0	10		
7/14 0735	1,990	72	8.3	94	106	7.3	---	--- / 0.84	3.8 / 0.17	---	0 / 0.00	60 / 0.98	---	2.4 / 0.07	---	---	0.1 / ---	---		---	17	42	0	15		
8/11 0720	1,480	75	7.5	87	125	7.3	---	--- / 1.12	4.8 / 0.21	---	0 / 0.00	70 / 1.15	---	4.0 / 0.11	---	---	0.0 / ---	---		---	16	56	0	3		
9/8 0745	2,250	63	7.6	75	114	7.3	12 / 0.60	4.9 / 0.40	4.2 / 0.18	2.2 / 0.06	0 / 0.00	64 / 1.05	5.8 / 0.12	2.5 / 0.07	1.0 / 0.02	0.1 / 0.01	0.0 / ---	16 / ---	Fe 0.02 Al 0.02 a	---	15	50	0	2		
10/13 0835	2,190	64	8.8	92	124	7.3	---	--- / 1.06	4.4 / 0.19	---	0 / 0.00	68 / 1.11	---	3.0 / 0.08	---	---	0.1 / ---			---	15	53	0	5		
11/3 0840	2,130	57	9.9	95	122	7.3	---	--- / 1.02	4.5 / 0.20	---	0 / 0.00	68 / 1.11	---	2.8 / 0.08	---	---	0.0 / ---	---		---	16	51	0	6		
12/11 0905	3,[illegible]	48	11.3	97	117	7.5	---	--- / 1.04	4.5 / 0.20	---	0 / 0.00	66 / 1.08	---	3.0 / 0.08	---	---	0.1 / ---	---		---	16	52	0	20		
	*Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							FEATHER RIVER AT NICOLAUS (STA. 20)																			USGS
2/1-12	27,330**	---	---	---	87.2	7.2*	7.8 / 0.39	3.5 / 0.29	3.2 / 0.14	---	0 / 0.00	37 / 0.61	---	---	---	---	---	---		71[c]	17	34	4	---		
2/13-24	42,660**	---	---	---	84.0	7.1*	7.8 / 0.39	3.3 / 0.27	3.6 / 0.16	---	0 / 0.00	36 / 0.59	---	---	---	---	---	---		71[c]	20	33	3	---		
2/25-28	71,250**	---	---	---	88.2	7.0*	8.6 / 0.43	3.2 / 0.26	3.6 / 0.16	---	0 / 0.00	38 / 0.62	---	---	---	---	---	---		76[c]	19	34	3	---		
3/1-5	28,200**	---	---	---	85.3	7.2*	8.0 / 0.40	3.6 / 0.30	3.6 / 0.16	---	0 / 0.00	38 / 0.62	---	---	---	---	---	---		76[c]	19	35	4	---		
3/6-21	15,000**	---	---	---	92.3	7.2*	9.2 / 0.46	3.6 / 0.30	3.3 / 0.14	---	0 / 0.00	43 / 0.70	---	---	---	---	---	---		72[c]	16	38	3	---		
3/22-31	34,800**	---	---	---	79.8	7.0*	7.6 / 0.38	3.2 / 0.26	3.1 / 0.13	---	0 / 0.00	35 / 0.57	---	---	---	---	---	---		70[c]	17	32	3	---		
4/1-8	47,880**	---	---	---	75.5	6.8*	7.0 / 0.35	3.3 / 0.27	3.8 / 0.17	---	0 / 0.00	32 / 0.52	---	---	---	---	---	---		63[c]	22	31	5	---		
4/9-15	27,860**	---	---	---	99.1	6.8*	9.6 / 0.48	3.6 / 0.30	3.7 / 0.16	---	0 / 0.00	42 / 0.69	---	---	---	---	---	---		75[c]	17	39	5	---		
4/16-30	30,290**	---	---	---	83.7	7.2*	7.6 / 0.38	4.9 / 0.40	3.2 / 0.14	---	0 / 0.00	42 / 0.69	---	---	---	---	---	---		68[c]	15	39	5	---		
5/1-9	25,880**	---	---	---	74.6	6.8*	7.6 / 0.38	3.3 / 0.27	2.7 / 0.12	1.1 / 0.03	0 / 0.00	38 / 0.62	4.8 / 0.10	2.5 / 0.07	0.6 / 0.01	0.0 / 0.00	0.0 / ---	19 / ---	Fe 0.02	61[b]	15	33	2	---		
5/10-18	27,140**	---	---	---	66.2	6.7*	6.8 / 0.34	3.4 / 0.28	2.4 / 0.10	---	0 / 0.00	34 / 0.56	---	---	---	---	---	---		51[c]	14	31	3	---		
5/19-31	26,680**	---	---	---	60.9	6.7*	6.4 / 0.32	2.9 / 0.24	2.2 / 0.10	---	0 / 0.00	30 / 0.49	---	---	---	---	---	---		53[c]	15	28	3			

**Average Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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f Field pH except when noted with *

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							FEATHER RIVER AT NICOLAUS (STA. 20) (Cont.)																			USGS
6/1-30	14,075**	--	--	--	75.7	6.6*	7.6 / 0.38	2.6 / 0.21	2.6 / 0.11	---	0 / 0.00	34 / 0.56	---	---	---	---	---	--		63	--	30	2	--		
7/1-11	3,585**	--	--	--	98.5	7.5*	9.6 / 0.48	4.1 / 0.34	3.7 / 0.16	---	0 / 0.00	51 / 0.84	---	---	---	---	---	--		70	--	41	0	--		
7/12-15	2,030**	--	--	--	133	7.0*	14 / 0.70	6.0 / 0.49	4.1 / 0.18	---	0 / 0.00	76 / 1.25	---	---	---	---	---	--		89	--	59	0	--		
7/16-31	1,865**	--	--	--	132	7.0*	13 / 0.65	5.7 / 0.47	4.6 / 0.20	---	0 / 0.00	72 / 1.18	---	---	---	---	---	--		88	--	56	0	--		
8/1-31	1,340**	--	--	--	140	7.3*	14 / 0.70	5.8 / 0.48	5.1 / 0.22	---	0 / 0.00	75 / 1.23	---	---	---	---	---	--		90	--	59	0	--		
9/1-30	2,288**	--	--	--	126	7.1*	13 / 0.65	5.2 / 0.43	4.6 / 0.20	---	0 / 0.00	69 / 1.13	---	---	---	---	---	--		87	--	54	0	--		
	**Average Mean Daily																									

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.

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.

f Field pH except when noted with *

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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			
1958											FEATHER RIVER NEAR OROVILLE (STA. 19)															
1/15 1340	4,650	43	12.5	100	99.2	7.3	---	---	4.0 / 0.17	---	0 / 0.00	52 / 0.85	---	2.5 / 0.07	---	---	0.00 / ----	---		---	18	40	0	10	Maximum 2400. Minimum 0.06 Median 620.	USGS
2/18 1500	19,200	47	12.4	105	66.7	7.1	---	---	3.5 / 0.15	---	0 / 0.00	34 / 0.56	---	1.2 / 0.03	---	---	0.07 / ----	---		---	21	28	0	20		
3/11 1435	7,890	45	12.3	102	81.6	7.3	---	---	3.2 / 0.14	---	0 / 0.00	44 / 0.72	---	2.1 / 0.06	---	---	0.00 / ----	---		---	17	33	0	7		
4/15 1400	21,300	52	11.7	106	77.2	7.5	---	---	2.9 / 0.13	---	0 / 0.00	43 / 0.70	---	0.5 / 0.01	---	---	0.03 / ----	---		---	17	31	0	35		
5/12 1400	19,700	51	11.6	104	54.6	7.3	5.6 / 0.28	1.9 / 0.16	2.2 / 0.10	0.8 / 0.02	0 / 0.00	30 / 0.49	1.9 / 0.04	1.0 / 0.03	0.2 / 0.00	0.2 / 0.01	0.03 / ----	14 / ---	PO_4 0.05 Cu 0.01[a] Fe 0.07 Al 0.10	43[b]	18	22	0	12		
6/16 1445	11,100	62	9.9	101	64.9	7.5	---	---	2.6 / 0.11	---	0 / 0.00	36 / 0.59	---	0.8 / 0.02	---	---	0.0 / ----	---		---	19	24	0	2		
7/14 1310	3,530	70	9.2	102	89.2	7.3	---	---	3.4 / 0.15	---	0 / 0.00	48 / 0.79	---	1.9 / 0.05	---	---	0.1 / ----	---		---	17	36	0	1		
8/11 1345	3,540	71	8.8	99	101	7.7	---	---	4.4 / 0.19	---	0 / 0.00	60 / 0.98	---	2.9 / 0.08	---	---	0.0 / ----	---		---	17	44	0	0.4		
9/8 1340	2,450	69	9.1	100	103	7.5	10 / 0.50	4.4 / 0.36	3.8 / 0.17	2.2 / 0.06	0 / 0.00	61 / 1.00	2.9 / 0.06	1.5 / 0.04	0.8 / 0.01	0.0 / 0.00	0.0 / ----	16 / ---	PO_4 0.00 Fe 0.02[a]	72[b]	16	43	0	1		
10/16 1100	2,260	60	10.1	101	111	7.2	---	---	4.4 / 0.19	---	0 / 0.00	66 / 1.08	---	2.0 / 0.06	---	---	0.0 / ----	---		---	17	47	0	10		
11/3 1610	2,520	56	10.6	100	112	7.5	---	---	4.3 / 0.19	---	0 / 0.00	65 / 1.07	---	2.5 / 0.07	---	---	0.0 / ----	---		---	17	48	0	6		
12/12 0955	2,790	45	12.5	103	117	7.3	---	---	4.6 / 0.20	---	0 / 0.00	68 / 1.11	---	2.5 / 0.07	---	---	0.0 / ----	---		---	15	56	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											FEATHER RIVER BELOW SHANGHAI BEND (STA. 20a)															USGS
7/22 1230	2,210	78	9.0	108	107	7.3	11 / 0.55	4.0 / 0.33	4.2 / 0.18	1.1 / 0.03	0 / 0.00	61 / 1.00	0.0 / 0.00	3.6 / 0.10	0.0 / 0.00	0.0 / 0.00	0.0 / ---	16 / --		70[b]	17	44	0	--		
8/11 0950	1,380*	77	7.7	91	120	7.3	12 / 0.60	4.6 / 0.38	5.0 / 0.22	1.2 / 0.03	0 / 0.00	66 / 1.08	4.8 / 0.10	3.0 / 0.08	0.5 / 0.01	0.1 / 0.01	0.0 / ---	17 / --		81[b]	18	49	0	--		
9/9 1015	2,440	74	7.9	91	114	7.3	11 / 0.55	5.5 / 0.45	4.3 / 0.19	2.3 / 0.06	0 / 0.00	65 / 1.07	4.8 / 0.10	2.0 / 0.06	0.2 / 0.01	0.1 / 0.01	0.0 / ---	16 / --	PO_4 0.00 Fe 0.02 a	79[b]	15	50	0	2		
10/13 0915	1,860	66	8.7	93	120	7.3	12 / 0.60	4.6 / 0.38	4.7 / 0.20	1.2 / 0.03	0 / 0.00	65 / 1.07	3.8 / 0.08	2.5 / 0.07	0.0 / 0.00	0.0 / 0.00	0.0 / ---	16 / --		77[b]	17	49	0	--		
11/3 1200	2,060	58	10.0	96	120	7.3	12 / 0.60	5.1 / 0.42	4.8 / 0.21	2.6 / 0.07	0 / 0.00	68 / 1.11	5.8 / 0.12	2.8 / 0.08	0.5 / 0.01	0.0 / 0.00	0.0 / ---	16 / --		83[b]	16	51	0	--		
12/19 1300	2,940	48	11.9	102	122	7.1	12 / 0.60	6.8 / 0.56	4.6 / 0.20	1.2 / 0.03	0 / 0.00	70 / 1.15	5.8 / 0.12	3.0 / 0.08	0.4 / 0.00	0.1 / 0.01	0.0	14		82[b]	14	58	1	--		

*Estimated Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958												FRESNO RIVER NEAR DAULTON (STA. 113)														USGS
1/20 1330	16	57	10.5	101	221	7.5	15 / 0.75	3.5 / 0.29	24 / 1.04	2.2 / 0.06	0.0 / 0.00	64 / 1.05	5.8 / 0.12	32 / 0.90	0.5 / 0.01	0.0 / 0.00	0.04 / ---	27 / --		142[b]	49	52	0	---		
2/19 1130	150	54	10.3	96	142	7.5	---	---	12 / 0.52	---	0.0 / 0.00	61 / 1.00	---	11 / 0.31	---	---	0.12 / ---	---		---	39	41	0	15	Maximum 7000.+ Minimum 0.23 Median 0.62	
3/5 1000	148	49	11.2	97	142	7.3	---	---	12 / 0.52	---	0.0 / 0.00	65 / 1.07	---	11 / 0.31	---	---	0.07 / ---	---		---	38	42	0	15		
4/9 1230	1,110	58	10.2	99	106	7.3	---	---	7.2 / 0.31	---	0.0 / 0.00	57 / 0.93	---	4.4 / 0.12	---	---	0.00 / ---	---		---	31	35	0	15		
5/7 0840	193	65	9.2	97	108	7.5	9.6 / 0.48	2.4 / 0.20	8.5 / 0.37	2.0 / 0.05	0.0 / 0.00	55 / 0.90	0.0 / 0.00	7.4 / 0.21	0.0 / 0.00	0.0 / 0.00	0.01 / ---	26 / ---	Fe 0.07 Al 0.10 a; PO_4 0.10	83[b]	34	34	0	13		
6/5 1300	141	73	8.3	95	73.4	7.3	---	---	6.6 / 0.29	---	0.0 / 0.00	39 / 0.64	---	5.0 / 0.14	---	---	0.0 / ---	---		---	38	24	0	19		
7/9 0825	82	78	8.7	105	72.5	7.3	5.8 / 0.29	0.9 / 0.07	6.4 / 0.28	1.4 / 0.04	0.0 / 0.00	28 / 0.46	0.0 / 0.00	8.4 / 0.24	0.5 / 0.01	0.0 / 0.00	0.0 / ---	18 / ---		55[b]	41	18	0	---		
8/7 0755	33	76	8.4	99	108	7.3	8.4 / 0.42	1.2 / 0.10	10 / 0.44	1.9 / 0.05	0.0 / 0.00	38 / 0.62	1.9 / 0.04	12 / 0.34	0.2 / 0.00	0.1 / 0.01	0.0 / ---	35 / ---		90[b]	44	26	0	4		
9/4 0845	6.1	68	7.3	80	168	7.5	13 / 0.65	2.1 / 0.17	16 / 0.70	2.3 / 0.06	0.0 / 0.00	50 / 0.82	3.8 / 0.08	25 / 0.70	0.2 / 0.00	0.1 / 0.01	0.0 / ---	23 / --	Al 0.02; PO_4 0.05 a	110[b]	44	41	0	1		
10/10 0700	10	60	7.4	73	199	7.7*	---	---	21 / 0.91	---	0.0 / 0.00	52 / 0.85	---	34 / 0.96	---	---	0.0 / ---	---		---	48	42	0	2		
11/12 1030	19	58	10.0	97	200	7.8	14 / 0.70	2.7 / 0.22	21 / 0.91	1.6 / 0.04	0.0 / 0.00	50 / 0.82	5.8 / 0.12	34 / 0.96	0.2 / 0.00	0.0 / 0.00	0.0 / ---	23 / ---		127[b]	49	46	5	---		
12/3 0930	17	46	11.7	98	183	7.6	---	---	19 / 0.83	---	0.0 / 0.00	50 / 0.82	---	30 / 0.85	---	---	0.0 / ---	---		---	49	44	3	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal									GRANT LINE CANAL AT TRACY ROAD BRIDGE (STA. 103a)																USGS
7/24 1615		80	10.4	128	647	8.1	35 / 1.75	15 / 1.23	67 / 2.91	3.1 / 0.08	0 / 0.00	136 / 2.23	44 / 0.92	104 / 2.93	2.3 / 0.04	0.0 / 0.00	0.2 / ---	19 / --	Fe 0.02	357[b]	49	149	37	---		
8/5 0755		79	4.9	59	781	7.5	41 / 2.05	19 / 1.59	89 / 3.87	4.0 / 0.10	0 / 0.00	154 / 2.52	56 / 1.17	134 / 3.78	1.9 / 0.03	0.4 / 0.02	0.1 / ---	24 / --		445[b]	51	182	56	12		
9/3 1300		78	8.4	101	750	7.8	20 / 1.00	30 / 2.46	84 / 3.65	4.0 / 0.10	0 / 0.00	157 / 2.57	55 / 1.15	132 / 3.72	1.0 / 0.02	0.2 / 0.01	0.2 / ---	19 / --	PO_4 0.45 Al 0.07a	422[b]	51	173	44	75		
10/9 0845		67	9.7	104	513	7.9	29 / 1.45	12 / 0.99	57 / 2.48	2.7 / 0.07	0 / 0.00	116 / 1.90	38 / 0.79	79 / 2.23	1.3 / 0.02	0.2 / 0.01	0.0 / ---	23 / --		299[b]	50	122	27	---		
11/14 0920		58	9.2	90	341	7.4*	18 / 0.90	7.5 / 0.62	39 / 1.70	1.4 / 0.04	0 / 0.00	67 / 1.10	27 / 0.56	54 / 1.52	2.1 / 0.03	0.1 / 0.01	0.1 / ---	16 / --		198[b]	52	76	21	---		
12/9 1150		53	10.0	91	332	7.2*	19 / 0.95	7.9 / 0.65	40 / 1.74	1.6 / 0.04	0 / 0.00	70 / 1.15	33 / 0.69	55 / 1.55	1.1 / 0.02	0.0 / 0.00	0.1 / ---	19 / --		211[b]	51	80	23	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE 8-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										
							INDIAN CREEK NEAR CRESCENT MILLS (STA. 17d)																			USGS
1/	Not sampled																									
2/	Not sampled																								Maximum 2400. Minimum 2.3 Median 23.	
3/	Not sampled																									
4/17 0850	4,340	49	9.8	85	63.8	7.2	---	---	3.2 / 0.14	---	0 / 0.00	36 / 0.59	---	1.0 / 0.03	---	---	0.01 / ---	---		---	19	29	0	80		
5/15 0900	2,460	50	9.5	84	68.0	7.1	7.2 / 0.36	2.2 / 0.18	3.2 / 0.14	1.2 / 0.03	0 / 0.00	38 / 0.62	1.0 / 0.02	1.8 / 0.05	0.3 / 0.00	0.0 / 0.00	0.01 / ---	20 / ---	PO_4 0.10 Fe 0.14[a] Al 0.14	56[b]	20	27	0	45		
6/19 1030	722	59	8.6	85	95.2	7.2	---	---	4.6 / 0.20	---	0 / 0.00	53 / 0.87	---	0.7 / 0.02	---	---	0.0 / ---	---		---	21	38	0	10		
7/17 0905	98	62	7.7	78	156	7.1	---	---	7.1 / 0.31	---	0 / 0.00	91 / 1.49	---	1.6 / 0.05	---	---	0.1 / ---	---		---	20	62	0	1		
8/14 0810	46	66	6.9	73	192	7.1	---	---	9.6 / 0.42	---	0 / 0.00	91 / 1.49	---	4.8 / 0.14	---	---	0.0 / ---	---		---	21	81	6	9		
9/11 0930	44	61	7.6	76	202	7.1	21 / 1.05	6.9 / 0.57	11 / 0.48	2.9 / 0.07	0 / 0.00	112 / 1.84	7.7 / 0.16	4.5 / 0.13	1.1 / 0.02	0.2 / 0.01	0.1 / ---	27 / ---	PO_4 0.10 Fe 0.07[a] Cu 0.01	137[b]	22	81	0	2		
10/16 0845	56	52	8.7	78	183	6.9	---	---	8.8 / 0.38	---	0 / 0.00	100 / 1.64	---	4.5 / 0.13	---	---	0.1 / ---	---		---	20	75	0	5		
11/13 1020	106	42	10.5	83	161	7.2	---	---	7.4 / 0.32	---	0 / 0.00	93 / 1.52	---	4.5 / 0.13	---	---	0.0 / ---	---		---	19	70	0	5		
12/18 1310	99	41	12.3	96	165	7.0	---	---	7.6 / 0.33	---	0 / 0.00	92 / 1.51	---	4.5 / 0.13	---	---	0.3 / ---	---		---	19	70	0	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents are given as parts per million / equivalents per million.

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958	Tidal																									USGS
											INDIAN SLOUGH NEAR BRENTWOOD (STA. 107)															
1/23 1115		50	9.7	86	1,330	7.8	---	---	146 / 6.35	3.4 / 0.09	0 / 0.00	290 / 4.75	---	188 / 5.30	---	---	2.2 / ---	---		---	48	332	95	5		
2/11 1320		58	6.4	62	1,200	7.7	---	---	135 / 5.87	---	0 / 0.00	274 / 4.49	---	180 / 5.08	---	---	2.2 / ---	---		---	49	302	77	20		
3/5 1050		58	7.5	74	1,220	7.7	---	---	152 / 6.61	---	0 / 0.00	268 / 4.39	---	188 / 5.30	---	---	2.2 / ---	---		---	52	300	80	30		
4/11 1130		69	8.1	89	1,250	8.1	---	---	141 / 6.13	---	0 / 0.00	320 / 5.24	---	175 / 4.94	---	---	2.5 / ---	---		---	49	325	63	40		
5/19 0925		73	7.5	86	219	7.3	12 / 0.60	5.7 / 0.47	22 / 0.96	1.8 / 0.05	0 / 0.00	58 / 0.95	17 / 0.35	27 / 0.76	1.0 / 0.02	0.1 / 0.01	0.17 / ---	17	Fe 0.03 PO_4 0.20 Al 0.11 Zn 0.01[a]	133[b]	46	53	5	35		
6/11 1405		74	8.1	94	233	7.3	---	---	23 / 1.00	---	0 / 0.00	60 / 0.98	---	28 / 0.79	---	---	0.1 / ---	---		---	48	54	5	65		
7/8 1140		79	7.5	91	296	7.3	---	---	30 / 1.30	---	0 / 0.00	68 / 1.11	---	40 / 1.13	---	---	0.4 / ---	---		---	44	72	16	32		
8/5 1230		81	6.4	79	240	7.3	---	---	23 / 1.00	---	0 / 0.00	68 / 1.11	---	29 / 0.82	---	---	0.3 / ---	---		---	43	67	11	30		
9/3 0915		75	5.4	63	323	7.2	16 / 0.80	12 / 0.96	30 / 1.30	1.9 / 0.05	0 / 0.00	94 / 1.54	29 / 0.60	37 / 1.04	1.4 / 0.02	0.2 / 0.01	0.3 / ---	7.8	Fe 0.14 Al 0.13 PO_4 0.25[a]	182[b]	42	88	11	160		
10/9 1210		71	8.1	91	596	7.6	---	---	63 / 2.74	---	0 / 0.00	142 / 2.33	---	82 / 2.31	---	---	0.8 / ---	---		---	49	141	25	15		
11/3 1510		70	9.2	102	1,150	8.0	---	---	127 / 5.52	---	0 / 0.00	287 / 4.70	---	158 / 4.46	---	---	2.0 / ---	---		---	46	318	83	2		
12/9 1440		58	14.2	138	1,070	8.0	---	---	118 / 5.13	---	0 / 0.00	262 / 4.29	---	143 / 4.03	---	---	2.1 / ---	---		---	47	284	69	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										ITALIAN SLOUGH NEAR MOUTH (STA. 106)															USGS
1/23 1200		48	8.7	75	674	7.3	---	---	74 / 3.22	3.1 / 0.08	0 / 0.00	108 / 1.77	---	105 / 2.96	---	---	0.43 / ---	---		---	50	145	57	19	Maximum 7000.+ Minimum 21. Median 620.	
2/11 1155		56	7.3	69	581	7.3	---	---	65 / 2.83	---	0 / 0.00	95 / 1.56	---	93 / 2.62	---	---	0.39 / ---	---		---	54	120	42	30		
3/5 1005		54	8.7	81	497	7.3	---	---	56 / 2.44	---	0 / 0.00	90 / 1.48	---	80 / 2.26	---	---	0.37 / ---	---		---	51	118	44	30		
4/11 1200		62	7.0	71	288	7.3	---	---	26 / 1.13	---	0 / 0.00	76 / 1.25	---	34 / 0.96	---	---	0.06 / ---	---		---	43	76	14	30		
5/9 1125		71	8.1	91	155	7.1	10 / 0.50	4.5 / 0.37	13 / 0.57	1.7 / 0.04	0 / 0.00	48 / 0.79	13 / 0.27	16 / 0.45	0.8 / 0.01	0.1 / 0.01	0.00 / ---	16 / ---	Fe 0.02 / Zn 0.01; Al 0.08 / PO_4 0.25[a]	99[b]	39	43	4	20		
6/12 0735		68	6.8	74	210	7.1	---	---	21 / 0.91	---	0 / 0.00	49 / 0.80	---	30 / 0.85	---	---	0.1 / ---	---		---	46	54	14	55		
7/8 1055		80	8.3	102	330	7.3	---	---	29 / 1.26	---	0 / 0.00	74 / 1.21	---	46 / 1.30	---	---	0.0 / ---	---		---	44	79	18	9		
8/5 1125		84	7.3	94	239	7.3	---	---	22 / 0.96	---	0 / 0.00	66 / 1.08	---	28 / 0.79	---	---	0.2 / ---	---		---	41	67	13	10		
9/3 1000		77	7.4	88	252	7.3	14 / 0.70	10 / 0.82	21 / 0.91	1.6 / 0.04	0 / 0.00	79 / 1.29	20 / 0.42	26 / 0.73	0.7 / 0.01	0.2 / 0.01	0.0 / ---	3.2 / ---	Fe 0.08 / Al 0.12; PO_4 0.20 / a	137[b]	37	76	11	80		
10/9 1115		70	7.3	81	377	7.4	---	---	37 / 1.61	---	0 / 0.00	98 / 1.61	---	51 / 1.44	---	---	0.1 / ---	---		---	45	96	16	15		
11/14 0740		59	8.4	83	360	7.8*	---	---	41 / 1.78	---	0 / 0.00	71 / 1.16	---	58 / 1.64	---	---	0.1 / ---	---		---	46	87	29	25		
12/9 1400		53	9.2	84	385	7.1	---	---	42 / 1.83	---	0 / 0.00	66 / 1.08	---	59 / 1.66	---	---	0.2 / ---	---		---	50	90	36	50		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958												KAWEAH RIVER NEAR THREE RIVERS (STA. 35)														USGS
1/28 0950	365	47	11.9	100	99.9	7.3	---	---	5.4 0.23	---	0 0.00	48 0.79	---	3.4 0.10	---	---	0.07 ----	---		---	24	37	0	2	Maximum 2400. Minimum 0.23 Median 6.2	
2/18 1220	316	52	10.8	97	93.4	7.7	---	---	4.8 0.21	---	0 0.00	47 0.77	---	2.8 0.08	---	---	0.04 ----	---		---	24	34	0	1		
3/4 1430	375	52	11.1	100	99.2	7.7	---	---	5.1 0.22	---	0 0.00	48 0.79	---	3.2 0.09	---	---	0.00 ----	---		---	20	43	7	4		
4/8 1150	1,240	52	11.0	99	116	7.5	---	---	5.5 0.24	---	0 0.00	64 1.05	---	2.5 0.07	---	---	0.00 ----	---		---	21	45	0	8		
5/6 1445	2,630	57	10.0	97	39.9	7.3	5.2 0.26	0.2 0.02	1.8 0.08	1.0 0.03	0 0.00	20 0.33	0.0 0.00	1.8 0.05	0.0 0.00	0.0 0.00	0.01 ----	9.5 ---	Fe 0.01 Zn 0.01[a] Al 0.08 PO_4 0.00 Pb 0.01	30[b]	21	14	0	3		
6/10 1115	2,260	57	10.2	98	32.5	7.1	---	---	1.7 0.07	---	0 0.00	16 0.26	---	0.4 0.01	---	---	0.0 ----	---		---	26	10	0	5		
7/8 1415	1,200	72	9.1	103	33.4	7.1	---	---	1.5 0.07	---	0 0.00	17 0.28	---	0.3 0.01	---	---	0.0 ----	---		---	18	16	2	4		
8/6 0900	271	72	9.1	103	64.5	7.5	---	---	2.9 0.13	---	0 0.00	32 0.52	---	3.0 0.08	---	---	0.0 ----	---		---	18	26	0	2		
9/3 0900	105	71	9.4	105	91.6	7.4	12 0.60	1.5 0.12	4.1 0.18	2.7 0.07	0 0.00	45 0.74	4.8 0.10	3.9 0.11	0.1 0.00	0.1 0.01	0.0 ----	15 ---	Fe 0.01 PO_4 0.00[a] Al 0.07	66[b]	19	36	0	0.1		
10/7 1115	460	62	8.5	86	121	7.3	---	---	5.4 0.23	---	0 0.00	60 0.98	---	5.5 0.16	---	---	0.0 ----	---		---	19	44	0	5		
11/11 0920	72	54	10.8	100	146	7.9	---	---	7.2 0.31	---	0 0.00	76 1.25	---	8.2 0.23	---	---	0.0 ----	---		---	20	61	0	2		
12/2 1000	70	45	11.3	93	141	7.9	---	---	6.5 0.28	---	0 0.00	72 1.18	---	5.8 0.16	---	---	0.0 ----	---		---	21	54	0	3		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											KERN RIVER NEAR BAKERSFIELD (STA. 36)															USGS
1/28 1330	537	51	11.3	101	166	7.5	---	---	15 / 0.65	---	0 / 0.00	66 / 1.08	---	8.6 / 0.24	---	---	0.18 / ---	---		---	37	55	1	30	Maximum 7000+ Minimum 0.62 Median 23.	
2/18 1515	453	53	10.9	99	174	7.9	---	---	16 / 0.70	---	0 / 0.00	78 / 1.28	---	7.0 / 0.20	---	---	0.16 / ----	---		---	42	49	0	6		
3/4 1040	621	52	11.1	100	204	7.9	---	---	18 / 0.78	---	0 / 0.00	94 / 1.54	---	10 / 0.28	---	---	0.06 / ----	---		---	38	63	0	10		
4/8 1510	928	57	10.5	101	220	7.9	---	---	16 / 0.70	---	0 / 0.00	100 / 1.64	---	8.0 / 0.23	---	---	0.10 / ----	---		---	32	73	0	20		
5/6 0620	2,324	59	9.1	90	141	7.5	14 / 0.70	2.2 / 0.18	12 / 0.52	2.1 / 0.05	0 / 0.00	66 / 1.08	7.7 / 0.16	5.8 / 0.16	0.1 / 0.00	0.2 / 0.01	0.09 / ----	14 / ---	Fe 0.02 Al 0.08 PO4 0.05[a] Zn 0.01	91[b]	36	44	0	12		
6/10 1450	2,567	64	9.3	97	81.6	7.5	---	---	6.5 / 0.28	---	0 / 0.00	36 / 0.59	---	2.3 / 0.06	---	---	0.0 / ----	---		---	35	26	0	5		
7/8 1040	3,333	68	9.4	103	74.9	7.3	---	---	6.0 / 0.26	---	0 / 0.00	33 / 0.54	---	2.2 / 0.06	---	---	0.0 / ----	---		---	33	26	0	2		
8/6 1230	2,868	73	8.9	102	86.5	7.5	---	---	7.0 / 0.30	---	0 / 0.00	40 / 0.66	---	3.5 / 0.10	---	---	0.0 / ----	---		---	37	26	0	3		
9/3 1215	1,356	75	8.2	95	108	7.9	11 / 0.55	1.8 / 0.15	8.1 / 0.35	2.5 / 0.06	0 / 0.00	52 / 0.85	6.7 / 0.14	4.8 / 0.14	0.8 / 0.01	0.1 / 0.01	0.1 / ----	11 / ---	Fe 0.03 Al 0.11 PO4 0.15[a] Cu 0.02	73[b]	32	35	0	3		
10/8 1450	775	78	9.7	117	241	7.9	---	---	28 / 1.22	---	0 / 0.00	100 / 1.64	---	20 / 0.56	---	---	0.3 / ----	---		---	51	58	0	5		
11/11 1415	460	61	9.5	95	161	7.8	---	---	14 / 0.61	---	0 / 0.00	71 / 1.16	---	7.0 / 0.20	---	---	0.2 / ----	---		---	38	50	0	4		
12/2 1420	331	53	11.1	102	177	7.9	---	---	16 / 0.70	---	0 / 0.00	76 / 1.25	---	10 / 0.28	---	---	0.2 / ----	---		---	41	50	0	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											KERN RIVER BELOW ISABELLA DAM (STA. 36a)															USGS
1/15 1230	7	47	10.1	86	164	6.9*	---	---	15 0.65	---	0 0.00	78 1.28	---	6.0 0.17	---	---	0.22 ----	---		---	41	47	0	4	Maximum 7000+ Minimum 0.045- Median 1.85	
2/14 1135	2	49	10.2	89	172	7.4*	---	---	15 0.65	---	0 0.00	84 1.38	---	7.2 0.20	---	---	0.06 ----	---		---	38	53	0	4		
3/19 1200	1.2	56	9.6	91	189	7.6*	---	---	16 0.70	---	0 0.00	88 1.44	---	8.5 0.24	---	---	0.08 ----	---		---	37	60	0	10		
4/14 1620	663	53	9.1	83	151	7.8*	---	---	12 0.52	---	0 0.00	74 1.21	---	5.5 0.16	---	---	0.09 ----	---		---	34	50	0	10		
5/16 0950	1,170	54	9.8	91	96.5	7.2*	7.6 0.38	1.5 0.12	8.9 0.39	1.6 0.04	0 0.00	42 0.69	6.7 0.14	3.5 0.10	0.8 0.01	0.2 0.01	0.06 ---	16 ---	Fe 0.08 PO_4 0.10[a] Al 0.04 Cu 0.01	68[b]	42	25	0	2		
6/23 0950	2,785	60	9.4	94	72.2	7.6*	---	---	6.2 0.27	---	0 0.00	34 0.56	---	2.0 0.06	---	---	0.0 ----	---		---	39	21	0	4		
7/13 1050	3,000	63	8.8	91	70.1	7.4*	---	---	5.5 0.24	---	0 0.00	33 0.54	---	1.8 0.05	---	---	0.0 ----	---		---	33	24	0	2		
8/12 0930	1,360	--	8.2	—	84.4	6.9*	---	---	6.7 0.29	---	0 0.00	36 0.59	---	3.5 0.10	---	---	0.0 ----	---		---	34	28	0	3		
9/16 1120	340	--	8.1	--	97.6	7.1*	10 0.50	1.7 0.14	6.0 0.26	1.6 0.04	0 0.00	44 0.72	3.8 0.08	3.2 0.09	2.1 0.03	0.1 0.01	0.0 ---	9.6 ---	Fe 0.20 PO_4 0.25[a] Al 0.02	60[b]	28	32	0	1		
10/15 1000	355	68	8.3	90	123	7.1*	---	---	9.1 0.40	---	0 0.00	56 0.92	---	4.5 0.13	---	---	0.2 ----	---		---	34	38	0	5		
11/12 1045	4	59	9.0	88	140	7.3*	---	---	11 0.48	---	0 0.00	66 1.08	---	6.0 0.17	---	---	0.1 ----	---		---	35	44	0	1		
12/16 1130	270	52	10.0	90	141	7.1*	---	---	11 0.48	---	0 0.00	73 1.20	---	6.8 0.19	---	---	0.1 ----	---		---	36	43	0	8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

KERN RIVER NEAR KERNVILLE (STA. 36b)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958																										USGS
1/15 1145	213	39	11.9	90	158	7.1*	---	---	16 / 0.70	---	0 / 0.00	70 / 1.15	---	6.0 / 0.17	---	---	0.15 / ---	---		---	45	43	0	4	Maximum 2400. Minimum 0.06 Median 2.4+	
2/14 1045	417	42	11.4	90	142	7.4*	---	---	13 / 0.57	---	0 / 0.00	69 / 1.13	---	6.0 / 0.17	---	---	0.10 / ---	---		---	40	43	0	4		
3/19 0945	1,050	43	11.3	91	113	7.5*	---	---	9.6 / 0.42	---	0 / 0.00	62 / 1.02	---	3.5 / 0.10	---	---	0.09 / ---	---		---	37	36	0	4		
4/14 1500	1,664	52	10.0	90	100	7.7*	---	---	8.6 / 0.37	---	0 / 0.00	54 / 0.89	---	3.2 / 0.09	---	---	0.00 / ---	---		---	35	35	0	3		
5/16 0900	3,688	52	10.0	90	51.5	7.2*	4.8 / 0.24	1.0 / 0.08	4.1 / 0.18	1.0 / 0.03	0 / 0.00	23 / 0.38	3.8 / 0.08	1.0 / 0.03	0.3 / 0.00	0.3 / 0.02	0.08 / ---	14 / --	Fe 0.07 Al 0.12 PO_4 0.00 a	41[b]	34	16	0	4		
6/27 0915	3,800	58	9.6	94	36.9	7.4*	---	---	2.7 / 0.12	---	0 / 0.00	18 / 0.30	---	2.1 / 0.06	---	---	0.0 / ---	---		---	35	11	0	2		
7/13 1000	2,020**	62	9.0	92	42.0	7.4*	---	---	3.0 / 0.13	---	0 / 0.00	20 / 0.33	---	0.5 / 0.01	---	---	0.0 / ---	---		---	29	16	0	2		
8/12 0845	824	65	8.7	92	67.2	7.5*	---	---	5.8 / 0.25	---	0 / 0.00	30 / 0.49	---	3.0 / 0.08	---	---	0.0 / ---	---		---	38	20	0	3		
9/16 1025	320	62	9.0	92	110	7.5*	10 / 0.50	2.2 / 0.18	9.1 / 0.40	1.1 / 0.03	0 / 0.00	50 / 0.82	5.8 / 0.12	5.0 / 0.14	0.0 / 0.00	0.2 / 0.01	0.0 / ---	18 / --	PO_4 0.00 a	76[b]	36	34	0	0.3		
10/15 0935	240	57	9.4	90	130	7.3*	---	---	11 / 0.48	---	0 / 0.00	58 / 0.95	---	6.5 / 0.18	---	---	0.1 / ---	---		---	40	36	0	4		
11/12 0930	230	47	10.7	91	137	7.4*	---	---	12 / 0.52	---	0 / 0.00	62 / 1.02	---	6.8 / 0.19	---	---	0.0 / ---	---		---	38	42	0	2		
12/16 1100	240	43	11.3	91	144	7.4*	---	---	12 / 0.52	---	0 / 0.00	67 / 1.10	---	6.0 / 0.17	---	---	0.1 / ---	---		---	39	41	0	2		
	**Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							KINGS RIVER BELOW NORTH FORK (STA. 33c)																			USGS
1/14 1430	355	50	--	--	58.5	6.6*	---	---	4.0 / 0.17	---	0 / 0.00	27 / 0.44	---	3.0 / 0.08	---	---	0.04 / ----	---		---	30	20	0	2	Maximum 7000. Minimum 0.045- Median 23.	
2/11 1300	609	44	10.5	85	60.1	7.3*	---	---	3.6 / 0.16	---	0 / 0.00	26 / 0.43	---	2.0 / 0.06	---	---	0.01 / ----	---		---	28	21	0	4		
3/7 1320	1,000	44	11.6	94	65.5	6.9*	---	---	3.5 / 0.15	---	0 / 0.00	33 / 0.54	---	2.0 / 0.06	---	---	0.00 / ----	---		---	24	24	0	2		
4/15 1345	3,070	60	10.7	107	65.8	7.3*	---	---	4.8 / 0.21	---	0 / 0.00	27 / 0.44	---	2.5 / 0.07	---	---	0.00 / ----	---		---	34	20	0	3		
5/13 1230	5,686	58	—	—	32.1	6.9*	3.6 / 0.18	0.5 / 0.04	2.2 / 0.10	1.0 / 0.03	0 / 0.00	16 / 0.26	1.9 / 0.04	1.0 / 0.03	0.3 / 0.00	0.2 / 0.01	0.15 / ----	12 / ---	Fe 0.02 Al 0.06[a] Cu 0.01 PO_4 0.00	31[b]	29	11	0	4		
6/58	Not sampled																									
7/11 1230	6,500	62	9.6	98	16.8	6.8*	---	---	1.3 / 0.06	---	0 / 0.00	7 / 0.11	---	0.5 / 0.01	---	---	0.0 / ---	---		---	33	6	0	2		
8/12 1200	1,600	--	8.0	--	26.8	6.6*	---	---	1.3 / 0.06	---	0 / 0.00	12 / 0.20	---	1.1 / 0.03	---	---	0.0 / ----	---		---	25	9	0	0.6		
9/9 1300	656	64	8.3	87	39.9	6.9*	4.8 / 0.24	0.5 / 0.04	3.2 / 0.14	1.2 / 0.03	0 / 0.00	16 / 0.26	6.7 / 0.14	2.1 / 0.06	0.2 / 0.00	0.0 / 0.00	0.0 / ----	8.4 / ---	PO_4 0.00[a]	35[b]	31	14	1	0.8		
10/10 1230	291	65	8.5	90	55.0	6.6*	---	---	3.0 / 0.13	---	0 / 0.00	22 / 0.36	---	3.0 / 0.08	---	---	0.0 / ----	---		---	28	17	0	5		
11/14 1300	200	52	9.8	88	60.4	7.2*	6.8 / 0.34	0.6 / 0.05	3.6 / 0.16	0.8 / 0.02	0 / 0.00	25 / 0.41	2.9 / 0.06	3.8 / 0.11	0.2 / 0.00	0.0 / 0.00	0.0 / ---	11 / ---		42[b]	28	20	0	—		
12/5 1300	195	50	10.8	96	61.8	6.9*	---	---	3.7 / 0.16	---	0 / 0.00	26 / 0.43	---	4.0 / 0.11	---	---	0.0 / ----	---		---	28	21	0	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported ::e as 0.0 / 0.00 except as shown.
b Determined by addition of analyzed constituents.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											KINGS RIVER BELOW PEOPLES WEIR (STA. 34)															USGS
1/28 0825	415	54	10.3	95	108	7.1	---	---	6.1 / 0.27	---	0 / 0.00	52 / 0.85	---	4.6 / 0.13	---	---	0.06 / ----	---		---	26	39	0	15	Maximum 7000+ Minimum 2.3 Median 96.	
2/18 1110	237	59	9.4	93	103	7.3	---	---	6.8 / 0.30	---	0 / 0.00	50 / 0.82	---	4.5 / 0.13	---	---	0.05 / ----	---		---	31	34	0	3		
3/4 0800	209	55	9.9	93	215	7.5	---	---	13 / 0.57	---	0 / 0.00	110 / 1.80	---	8.0 / 0.23	---	---	0.12 / ----	---		---	26	81	0	8		
4/8 1040	504	59	9.7	95	198	7.3	---	---	10 / 0.44	---	0 / 0.00	105 / 1.72	---	5.0 / 0.14	---	---	0.00 / ----	---		---	22	80	0	9		
5/6 1600	4,970	56	10.1	96	60.9	7.1	6.8 / 0.34	1.5 / 0.12	3.7 / 0.16	1.5 / 0.04	0 / 0.00	28 / 0.46	3.8 / 0.08	3.1 / 0.09	0.1 / 0.00	0.1 / 0.01	0.04 / ----	12 / ---	Fe 0.05 Al 0.12 Pb 0.01 Zn 0.01[a] PO_4 0.05	47[b]	24	23	0	6		
6/10 1000	5,604	61	9.5	96	39.4	6.9	---	---	2.6 / 0.11	---	0 / 0.00	20 / 0.33	---	0.8 / 0.02	---	---	0.0 / ----	---		---	28	14	0	5		
7/8 0800	2,465	68	9.7	106	28.9	7.0	---	---	1.6 / 0.07	---	0 / 0.00	14 / 0.23	---	0.7 / 0.02	---	---	0.0 / ----	---		---	26	10	0	2		
8/6 0740	2,087	59	9.7	96	40.5	7.0	---	---	2.3 / 0.10	---	0 / 0.00	18 / 0.30	---	1.5 / 0.04	---	---	0.0 / ----	---		---	26	14	0	5		
9/3 0725	1,060	64	9.0	93	57.6	6.7	6.0 / 0.30	1.5 / 0.12	3.3 / 0.14	1.9 / 0.05	0 / 0.00	24 / 0.39	5.8 / 0.12	2.4 / 0.07	0.5 / 0.01	0.0 / 0.00	0.0 / ----	11 / ---	Fe 0.04 Al 0.07 Cu 0.02 Pb 0.02[a] PO_4 0.15	44[b]	23	21	1	2		
10/7 0850	200	68	7.0	76	132	7.4	---	---	7.8 / 0.34	---	0 / 0.00	66 / 1.08	---	5.0 / 0.14	---	---	0.0 / ----	---		---	27	46	0	5		
11/11 0750	60	58	8.1	79	175	7.2	---	---	11 / 0.48	---	0 / 0.00	87 / 1.43	---	3.5 / 0.10	---	---	0.1 / ----	---		---	26	68	0	2		
12/2 0810	148	51	9.7	87	198	7.6	---	---	13 / 0.57	---	0 / 0.00	99 / 1.62	---	7.2 / 0.20	---	---	0.0 / ----	---		---	28	72	0	3		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											KINGS RIVER BELOW PINE FLAT DAM (STA.33b)															USGS
1/14 1600	195	52	11.7	106	44.1	6.9*	---	---	2.4 / 0.10	---	0 / 0.00	22 / 0.36	---	0.0 / 0.00	---	---	0.03 / ----	---		---	24	16	0	5	Maximum 2400. Minimum 0.046 Median 6.2	
2/11 1600	67	46	10.2	85	60.0	7.1*	---	---	2.9 / 0.13	---	0 / 0.00	26 / 0.43	---	1.8 / 0.05	---	---	0.00 / ----	---		---	21	24	3	4		
3/7 1510	556	45	11.1	92	55.8	7.3*	---	---	2.8 / 0.12	---	0 / 0.00	29 / 0.48	---	0.0 / 0.00	---	---	0.00 / ----	---		---	21	22	0	2		
4/15 1525	1,800	58	10.1	98	58.3	7.0*	---	---	3.2 / 0.14	---	0 / 0.00	25 / 0.41	---	2.5 / 0.07	---	---	0.00 / ----	---		---	27	19	0	3		
5/13 1415	6,959	56	11.0	104	54.5	7.1*	6.0 / 0.30	0.7 / 0.06	3.2 / 0.14	1.3 / 0.03	0 / 0.00	23 / 0.38	5.8 / 0.12	0.5 / 0.01	0.5 / 0.01	0.2 / 0.01	0.01 / ----	14 / --	Fe 0.05 Al 0.10[a] Cu 0.01 PO_4 0.00	43[b]	26	18	0	4		
6/13 1330	7,200	58	11.5	112	32.5	7.3*	---	---	1.8 / 0.08	---	0 / 0.00	15 / 0.25	---	2.0 / 0.06	---	---	0.0 / ----	---		---	27	11	0	1		
7/11 1450	7,200	63	9.7	100	18.8	7.3*	---	---	1.4 / 0.06	---	0 / 0.00	8 / 0.13	---	1.0 / 0.03	---	---	0.0 / ----	---		---	25	9	2	---		
8/12 1600	5,858	54	9.6	89	28.1	6.9*	---	---	1.5 / 0.07	---	0 / 0.00	14 / 0.23	---	0.9 / 0.03	---	---	0.0 / ----	---		---	24	11	0	1		
9/9 1500	2,114	60	10.4	104	21.7	6.6*	2.8 / 0.14	0.1 / 0.01	2.6 / 0.11	0.7 / 0.02	0 / 0.00	10 / 0.16	3.8 / 0.08	1.3 / 0.04	0.0 / 0.00	0.0 / 0.00	0.0 / ----	7.3 / --	PO_4 0.00[a]	24[b]	39	8	0	0.8		
10/10 1430	94	62	10.2	104	24.2	6.5*	---	---	1.2 / 0.05	---	0 / 0.00	10 / 0.16	---	0.8 / 0.02	---	---	0.1 / ----	---		---	24	8	0	5		
11/14 1500	175	58	9.5	92	28.9	6.2*	2.6 / 0.13	0.4 / 0.03	1.5 / 0.07	0.4 / 0.01	0 / 0.00	3 / 0.05	0.0 / 0.00	7.2 / 0.20	0.3 / 0.00	0.0 / 0.00	0.0 / ----	7.2 / --		21[b]	29	8	6	---		
12/5 1500	100	58	10.2	100	23.1	6.9*	---	---	1.2 / 0.05	---	0 / 0.00	12 / 0.20	---	0.8 / 0.02	---	---	0.1 / ----	---		---	22	9	0	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 0.00 except as shown.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in ports per million / equivalents per million																			
1958	Tidal																									USGS
							LINDSEY SLOUGH NEAR RIO VISTA (STA. 110)																			
1/17 1140		47	10.6	90	315	7.5	---	---	27 / 1.17	1.9 / 0.05	0 / 0.00	109 / 1.79	---	21 / 0.59	---	---	0.32 / ---	---		---	39	90	0	30		
2/13 1105		54	8.3	77	255	7.3	---	---	28 / 1.22	---	0 / 0.00	101 / 1.66	---	20 / 0.56	---	---	0.38 / ---	---		---	45	76	0	40	Maximum 7000.+ Minimum 6.2 Median 230.	
3/6 1045		53	9.0	82	214	7.3	---	---	19 / 0.83	---	0 / 0.00	80 / 1.31	---	12 / 0.34	---	---	0.25 / ---	---		---	40	63	0	30		
4/2 1100		55	7.9	74	179	7.1	---	---	20 / 0.87	---	0 / 0.00	56 / 0.92	---	16 / 0.45	---	---	0.13 / ---	---		---	51	42	0	150		
5/19 1340		69	8.4	92	231	7.7	14 / 0.70	9.7 / 0.80	18 / 0.78	1.7 / 0.04	0 / 0.00	93 / 1.52	21 / 0.44	13 / 0.37	1.0 / 0.02	0.1 / 0.01	0.10 / ---	17 / ---	Al 0.11 Zn 0.01[a] PO_4 0.15	142[b]	34	75	0	95		
6/11 1015		68	8.3	91	245	7.5	---	---	21 / 0.91	---	0 / 0.00	98 / 1.61	---	14 / 0.39	---	---	0.1 / ---	---		---	37	76	0	82		
7/9 1130		74	8.3	96	197	7.3	---	---	15 / 0.65	---	0 / 0.00	84 / 1.38	---	12 / 0.34	---	---	0.1 / ---	---		---	32	68	0	32		
8/6 0920		75	7.4	86	212	7.3	---	---	17 / 0.74	---	0 / 0.00	92 / 1.51	---	13 / 0.37	---	---	0.2 / ---	---		---	34	70	0	30		
9/2 1300		75	7.7	90	225	7.5	13 / 0.65	10 / 0.85	17 / 0.74	1.6 / 0.04	0 / 0.00	98 / 1.61	18 / 0.37	12 / 0.34	1.2 / 0.02	0.2 / 0.01	0.1 / ---	20 / ---	Fe 0.13 PO_4 0.30[a] Al 0.10	141[b]	32	75	0	150		
10/9 1500		70	7.2	80	164	7.6	---	---	9.7 / 0.42	---	0 / 0.00	77 / 1.26	---	8.7 / 0.25	---	---	0.0 / ---	---		---	25	60	0	40		
11/3 1050		64	8.3	87	156	7.2	---	---	9.0 / 0.39	---	0 / 0.00	76 / 1.25	---	8.0 / 0.23	---	---	0.0 / ---	---		---	22	66	4	50		
12/10 1050		51	9.9	89	153	7.3	---	---	9.0 / 0.39	---	0 / 0.00	75 / 1.23	---	7.5 / 0.21	---	---	0.1 / ---	---		---	24	60	0	50		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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							Mineral constituents in parts per million / equivalents per million																			
							LITTLE POTATO SLOUGH AT TERMINOUS (STA. 99)																			
1968	Tidal																									USGS
1/17 1420		47	10.4	88	216	7.1	---	---	14 / 0.61	1.5 / 0.04	0 / 0.00	60 / 0.98	---	28 / 0.79	---	---	0.09 / ---	---		---	30	68	19	22	Maximum 7000.+ Minimum 6.2 Median 620.	
2/13 1400		53	9.2	84	317	7.1	---	---	20 / 0.87	---	0 / 0.00	74 / 1.21	---	40 / 1.13	---	---	0.18 / ---	---		---	29	107	46	80		
3/4 1245		51	10.0	89	183	7.1	---	---	9.6 / 0.42	---	0 / 0.00	50 / 0.82	---	18 / 0.51	---	---	0.06 / ---	---		---	25	64	23	100		
4/3 1530		53	9.2	84	128	7.1	---	---	6.2 / 0.27	---	0 / 0.00	24 / 0.39	---	11 / 0.31	---	---	0.00 / ---	---		---	23	46	26	150		
5/20 0830		66	8.6	92	129	7.3	10 / 0.50	4.4 / 0.36	8.9 / 0.39	1.6 / 0.04	0 / 0.00	45 / 0.74	5.8 / 0.12	15 / 0.42	0.6 / 0.01	0.0 / 0.00	0.04 / ---	17 / ---	Fe 0.03 Al 0.07 Cu 0.01 Zn 0.01 PO_4 0.05 a	85[b]	30	43	6	25		
6/12 1315		68	8.7	95	86.7	7.1	---	---	5.2 / 0.23	---	0 / 0.00	30 / 0.49	---	8.0 / 0.23	---	---	0.0 / ---	---		---	28	30	5	35		
7/9 0915		74	7.9	92	120	7.1	---	---	7.8 / 0.34	---	0 / 0.00	44 / 0.72	---	12 / 0.34	---	---	0.0 / ---	---		---	30	39	3	10		
8/6 1025		77	7.5	99	183	7.3	---	---	12 / 0.52	---	0 / 0.00	76 / 1.25	---	14 / 0.39	---	---	0.3 / ---	---		---	30	62	0	---		
9/2 1025		74	6.0	69	195	7.3	13 / 0.65	9.4 / 0.77	14 / 0.61	1.4 / 0.04	0 / 0.00	76 / 1.25	11 / 0.23	19 / 0.54	1.0 / 0.02	0.3 / 0.02	0.1 / ---	17 / ---	Fe 0.04 Al 0.21 PO_4 0.25 a	123[b]	29	71	9	55		
10/8 1145		68	7.5	82	129	7.0	---	---	7.0 / 0.30	---	0 / 0.00	56 / 0.92	---	10 / 0.28	---	---	0.0 / ---	---		---	25	46	0	9		
11/14 1450		58	8.6	83	155	7.5*	---	---	8.5 / 0.37	---	0 / 0.00	64 / 1.05	---	13 / 0.37	---	---	0.0 / ---	---		---	26	54	2	9		
12/8 1450		51	9.6	86	144	7.3	---	---	7.9 / 0.34	---	0 / 0.00	68 / 1.11	---	6.2 / 0.17	---	---	0.0 / ---	---		---	23	58	2	25		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											MCCLOUD RIVER ABOVE SHASTA LAKE (STA. 18)															USGS
1/	Not sampled																									
2/	Not sampled																								Maximum 7000+ Minimum 2.3 Median 42.5	
3/	Not sampled																									
4/	Not sampled																									
5/14 1030	2,960	50	12.6	111	80.1	7.6	8.8 / 0.44	2.3 / 0.19	3.5 / 0.15	1.0 / 0.03	0 / 0.00	46 / 0.75	0.0 / 0.00	0.8 / 0.02	0.1 / 0.00	0.0 / 0.00	0.0 / ---	26 / ---	PO_4 0.05 Al 0.13 Fe 0.01[a]	66[b]	19	31	0	5		
6/11 1230	2,280	53	13.5	123	84.0	7.5	---	---	5.2 / 0.23	---	0 / 0.00	46 / 0.75	---	0.2 / 0.01	---	---	0.0 / ---	---		---	27	31	0	5		
7/9 1430	1,760	58	10.6	103	87.7	7.6	---	---	4.3 / 0.19	---	0 / 0.00	50 / 0.82	---	2.1 / 0.06	---	---	0.1 / ---	---		---	23	32	0	10		
8/6 1400	1,550	52	11.2	101	88.9	7.5	---	---	4.8 / 0.21	---	0 / 0.00	51 / 0.84	---	2.8 / 0.08	---	---	0.0 / ---	---		---	23	36	0	20		
9/9 1200	1,440	52	11.9	107	90.3	7.5	8.0 / 0.40	3.6 / 0.30	4.4 / 0.19	2.5 / 0.06	0 / 0.00	50 / 0.82	1.9 / 0.04	1.5 / 0.04	0.8 / 0.01	0.2 / 0.01	0.0 / ---	36 / ---	PO_4 0.05 Fe 0.07 Al 0.09[a]	84[b]	20	35	0	15		
10/1 1445	1,350	52	10.6	96	91.7	7.5	---	---	4.9 / 0.21	---	0 / 0.00	50 / 0.82	---	2.0 / 0.06	---	---	0.0 / ---	---		---	23	35	0	20		
11/6 1200	1,270	50	11.0	97	92.2	7.3	---	---	4.6 / 0.20	---	0 / 0.00	52 / 0.85	---	2.8 / 0.08	---	---	0.0 / ---	---		---	22	35	0	5		
12/3 1245	1,240	48	11.8	101	92.1	7.3	---	---	4.7 / 0.20	---	0 / 0.00	52 / 0.85	---	2.0 / 0.06	---	---	0.1 / ---	---		---	21	38	0	8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											MERCED RIVER BELOW EXCHEQUER DAM (STA. 32a)															USGS
1/29 1230	77	50	9.9	87	108	7.2	---	---	4.0/0.17	---	0/0.00	52/0.85	---	3.7/0.10	---	---	0.04/---	---		---	16	45	2	10	Maximum 7000+ Minimum 0.2 Median 230.	
2/20 0910	41	51	10.9	97	108	7.3	---	---	4.4/0.19	---	0/0.00	52/0.85	---	3.0/0.08	---	---	0.03/---	---		---	18	44	1	10		
3/5 1425	750	50	9.5	84	98.0	7.2	---	---	3.2/0.14	---	0/0.00	44/0.72	---	3.8/0.11	---	---	0.06/---	---		---	15	41	5	20		
4/10 1115	2,940	51	11.6	104	76.7 *	7.3	---	---	2.8/0.12	---	0/0.00	36/0.59	---	2.0/0.06	---	---	0.00/---	---		---	16	32	2	20		
5/7 1455	6,060	56	10.8	102	80.1	7.4	8.4/0.42	3.0/0.25	3.1/0.13	1.2/0.03	0/0.00	38/0.62	5.8/0.12	2.8/0.08	0.2/0.00	0.1/0.01	0.02/---	14/--	Fe 0.03 Al 0.09; Zn 0.01 PO4 0.00; a	58[b]	16	33	2	5		
6/13 0705	1,800	54	10.3	95	21.5	6.8	---	---	1.2/0.05	---	0/0.00	12/0.20	---	0.5/0.01	---	---	0.0/---	---		---	22	9	0	5		
7/9 1450	2,490	66	9.9	106	21.7	7.0	---	---	1.1/0.05	---	0/0.00	12/0.20	---	0.0/0.00	---	---	0.0/---	---		---	19	11	1	4		
8/7 1150	1,640	58	9.9	97	20.1	6.8	---	---	0.9/0.04	---	0/0.00	10/0.16	---	1.5/0.04	---	---	0.0/---	---		---	20	8	0	5		
9/4 1220	1,370	62	8.9	90	21.1	6.7	2.8/0.14	0.6/0.05	1.0/0.04	1.7/0.04	0/0.00	12/0.20	1.9/0.04	1.1/0.03	0.3/0.00	0.0/0.00	0.0/---	7.0/--	Fe 0.01 Al 0.07; Cu 0.02 PO4 0.00; a	22[b]	15	10	0	3		
10/10 1000	1,040	66	8.9	95	54.2	7.2	---	---	2.0/0.09	---	0/0.00	26/0.43	---	1.5/0.04	---	---	0.0/---	---		---	17	22	1	5		
11/12 1530	44	66	8.9	95	63.1	7.6	---	---	2.3/0.10	---	0/0.00	30/0.49	---	2.0/0.06	---	---	0.0/---	---		---	14	31	6	10		
12/3 1500	101	61	10.0	100	65.7	8.0	---	---	2.0/0.09	---	0/0.00	31/0.51	---	2.5/0.07	---	---	0.0/---	---		---	14	28	3	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											MERCED RIVER NEAR STEVINSON (STA. 32)															USGS
1/29 1000	482	55	8.9	83	120	7.1	---	---	8.9/0.39	---	0/0.00	54/0.89	---	3.6/0.10	---	---	0.11/---	---		---	34	38	0	15	Maximum 7000. Minimum 0.62 Median 230.	
2/19 1440	287	59	9.2	90	209	7.5	---	---	19/0.83	---	0/0.00	98/1.61	---	9.3/0.26	---	---	0.06/---	---		---	39	64	0	10		
3/3 1230	726	58	9.9	96	141	7.3	---	---	8.2/0.36	---	0/0.00	69/1.13	---	5.0/0.14	---	---	0.00/---	---		---	24	56	0	20		
4/10 0930	2,590	57	9.3	89	107	7.1	---	---	6.3/0.27	---	0/0.00	55/0.90	---	3.4/0.10	---	---	0.00/---	---		---	25	40	0	30		
5/5 0930	3,330	60	9.7	97	81.1	7.2	8.3/0.41	2.8/0.23	4.7/0.20	1.2/0.03	0/0.00	39/0.64	5.8/0.12	3.2/0.09	0.0/0.00	0.0/0.00	0.07/---	13/---	Fe 0.05 Al 0.10 Zn 0.01 PO_4 2.0 a	58[b]	23	32	0	17		
6/9 1010	3,590	62	9.0	92	39.2	6.9	---	---	2.4/0.10	---	0/0.00	18/0.30	---	0.5/0.01	---	---	0.0/---	---		---	26	14	0	10		
7/9 1245	998	80	8.3	102	75.2	7.1	---	---	6.2/0.27	---	0/0.00	33/0.54	---	3.5/0.10	---	---	0.0/---	---		---	38	22	0	2		
8/5 1020	238	76	10.1	119	277	7.8	---	---	28/1.22	---	0/0.00	118/1.93	---	22/0.62	---	---	0.0/---	---		---	45	74	0	5		
9/2 1120	255	77	8.6	102	222	7.4	16/0.80	5.4/0.44	23/1.00	3.1/0.08	0/0.00	95/1.56	11/0.23	16/0.45	2.0/0.03	0.1/0.01	0.1/---	26/---	Fe 0.01 Al 0.07 Cu 0.02 PO_4 0.20 a	150[b]	43	62	0	5		
10/6 1310	292	60	8.4	84	211	7.4	---	---	21/0.91	---	0/0.00	94/1.54	---	14/0.39	---	---	0.0/---	---		---	44	58	0	5		
11/10 1010	145	62	8.2	84	320	7.6	---	---	37/1.61	---	0/0.00	138/2.26	---	22/0.62	---	---	0.0/---	---		---	47	91	0	2		
12/1 1030	156	53	9.6	88	306	7.6	---	---	32/1.39	---	0/0.00	137/2.25	---	19/0.54	---	---	0.1/---	---		---	44	88	0	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											MILL CREEK NEAR LOS MOLINOS (STA. 88)															USGS
1/16 1215	353	47	11.7	99	138	7.5	---	---	10 / 0.44	---	0 / 0.00	58 / 0.95	---	10 / 0.28	---	---	0.33 / ---	---		---	33	44	0	5		
2/19 1020	2170	50	11.4	100	78.4	7.3	---	---	4.7 / 0.20	---	0 / 0.00	37 / 0.61	---	2.8 / 0.08	---	---	0.15 / ---	---		---	26	29	0	15		
3/12 1435	332	47	11.7	99	129	7.3	---	---	10 / 0.44	---	0 / 0.00	50 / 0.82	---	10 / 0.28	---	---	0.21 / ---	---		---	35	40	0	2		
4/16 0955	543	54	10.5	97	78.1	7.5	---	---	4.1 / 0.18	---	0 / 0.00	44 / 0.72	---	2.5 / 0.07	---	---	0.00 / ---	---		---	22	31	0	3		
5/13 1155	622	53	10.8	99	78.2	7.3	6.8 / 0.34	1.8 / 0.15	5.8 / 0.25	1.6 / 0.04	0 / 0.00	29 / 0.48	8.6 / 0.18	4.0 / 0.11	0.1 / 0.00	0.0 / 0.00	0.12 / ---	26 / ---	Fe 0.01 Zn 0.01 PO_4 0.00[a]	69[b]	32	24	0	6		
6/17 1425	496	64	9.2	96	81.3	7.3	---	---	5.6 / 0.24	---	0 / 0.00	25 / 0.41	---	4.0 / 0.11	---	---	0.0 / ---	---		---	33	25	5	55		
7/15 1350	156	72	8.3	94	121	7.3	---	---	8.3 / 0.36	---	0 / 0.00	39 / 0.64	---	8.4 / 0.24	---	---	0.1 / ---	---		---	34	35	3	2		
8/12 1250	37	77	9.0	107	143	7.7	---	---	11 / 0.48	---	0 / 0.00	50 / 0.82	---	12 / 0.34	---	---	0.2 / ---	---		---	34	46	5	3		
9/9 1105	27	70	8.8	87	164	7.5	13 / 0.65	4.0 / 0.33	11 / 0.48	2.5 / 0.06	0 / 0.00	57 / 0.93	7.7 / 0.16	15 / 0.42	0.5 / 0.01	0.0 / 0.00	0.3 / ---	36 / ---	Fe 0.04 Zn 0.01 PO_4 0.10 As 0.03[a]	118[b]	32	49	2	2		
10/14 1250	9.9	63	10.3	106	178	7.5	---	---	14 / 0.61	---	0 / 0.00	64 / 1.05	---	17 / 0.48	---	---	0.5 / ---	---		---	36	53	1	0.5		
11/7 0920	83	55	10.8	101	185	7.2	---	---	15 / 0.65	---	0 / 0.00	63 / 1.03	---	18 / 0.51	---	---	0.5 / ---	---		---	38	52	0	1		
12/4 1415	105	52	11.6	105	192	7.3	---	---	15 / 0.65	---	0 / 0.00	62 / 1.02	---	19 / 0.54	---	---	0.5 / ---	---		---	38	54	3	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
1958	Tidal										MOKELUMNE RIVER BELOW COSUMNES RIVER (STA. 23b)															USBR
7/3 1310		--	---	---	63	---	---	---	2.5 ----	---	---	---	---	7.8 ----	---	---	---	--		56	17	---	---	--		
7/30 1315		76	---	---	82	---	---	---	4.6 ----	---	---	---	---	8.5 ----	---	---	---	--		60	24	---	---	--		
8/27 1045		--	---	---	63	---	---	---	3.9 ----	---	---	---	---	6.4 ----	---	---	---	--		--	27	---	---	--		
9/29 1200		--	---	---	49	---	---	---	2.3 ----	---	---	---	---	2.1 ----	---	---	---	--		--	20	---	---	--		
10/27 1200		64	---	---	87	---	---	---	8.3 ----	---	---	---	---	17 ----	---	---	---	--		80	41	---	---	--		
11/24 1155		52	---	---	55	---	---	---	2.3 ----	---	---	---	---	7.8 ----	---	---	---	--		--	35	---	---	--		
12/9 1310		--	---	---	249	---	---	---	3.0 ----	---	---	---	---	7.8 ----	---	---	---	--		144	52	---	---	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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s Angeles Dept of Pub Health (LADPH),

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
											MOKELUMNE RIVER BELOW GEORGIANA SLOUGH (STA. 23c)															
1958	Tidal																									USBR
7/3 1400		---	---	---	73	---	---	---	3.9 / ---	---	---	---	---	25 / ---	---	---	---	---		---	23	---	---	---		
7/30 1345		76	---	---	167	---	---	---	12 / ---	---	---	---	---	13 / ---	---	---	---	---		144	31	---	---	---		
8/27 1115		76	---	---	173	---	---	---	11 / ---	---	---	---	---	11 / ---	---	---	---	---		132	28	---	---	---		
9/29 1050		68	---	---	139	---	---	---	7.6 / ---	---	---	---	---	5.7 / ---	---	---	---	---		108	24	---	---	---		
10/27 1300		65	---	---	134	---	---	---	7.1 / ---	---	---	---	---	7.8 / ---	---	---	---	---		120	23	---	---	---		
11/24 1100		52	---	---	129	---	---	---	6.9 / ---	---	---	---	---	8.5 / ---	---	---	---	---		128	23	---	---	---		
12/9 1355		---	---	---	156	---	---	---	7.8 / ---	---	---	---	---	8.5 / ---	---	---	---	---		148	22	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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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, or United States Public Health Service.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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	Per-cent sod-ium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Tur-bid-ity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958										MOKELUMNE RIVER NEAR LANCHA PLANA (STA. 23a)																USGS
1/24 1320	677	50	11.5	101	44.7	6.9	----	----	2.2 / 0.10	---	0 / 0.00	14 / 0.23	---	3.2 / 0.09	---	---	0.01 / ---	---		---	26	14	3	2	Maximum 62.	
2/10 1025	682	47	11.3	96	54.6	6.8	---	---	2.7 / 0.12	---	0 / 0.00	18 / 0.30	---	3.8 / 0.11	---	---	0.00 / ---	---	Cu 0.04 Zn 0.26	---	21	22	7	10	Minimum 0.045-	
3/4 0955	1,950	48	11.9	102	51.9	7.1	---	---	2.6 / 0.11	---	0 / 0.00	22 / 0.36	---	4.0 / 0.11	---	---	0.02 / ---	---		---	20	22	4	20	Median 1.8	
4/3 1050	4,010	50	11.5	102	60.6	7.0	---	---	2.4 / 0.10	---	0 / 0.00	25 / 0.41	---	3.3 / 0.09	---	---	0.00 / ---	---		---	19	22	2	20		
5/8/ 0955	1,880	52	11.6	105	52.5	7.3	4.8 / 0.24	1.5 / 0.12	2.5 / 0.11	1.1 / 0.03	0 / 0.00	23 / 0.38	1.0 / 0.02	3.0 / 0.08	0.5 / 0.01	0.0 / 0.01	0.00 / ---	15 / ---	Fe 0.07 PO_4 0.05 Al 0.10[a] Cu 0.01	40[b]	22	18	0	2		
6/13 0900	2,250	57	10.7	103	29.6	7.1	---	---	1.9 / 0.08	---	0 / 0.00	14 / 0.23	---	0.3 / 0.01	---	---	0.0 / ---	---		---	27	11	0	2		
7/7 0905	932	62	9.8	100	31.2	7.1	---	---	1.6 / 0.07	---	0 / 0.00	15 / 0.25	---	2.2 / 0.06	---	---	0.1 / ---	---		---	25	10	0	0.6		
8/4 0905	706	60	9.7	97	28.6	7.0	---	---	1.5 / 0.07	---	0 / 0.00	13 / 0.21	---	2.9 / 0.08	---	---	0.0 / ---	---		---	21	9	0	1		
9/4 1245	696	62	9.6	97	27.2	7.0	3.1 / 0.15	0.6 / 0.05	1.3 / 0.06	0.5 / 0.01	0 / 0.00	12 / 0.20	1.0 / 0.02	1.4 / 0.04	0.2 / 0.00	0.0 / 0.00	0.0 / ---	8.6 / ---	PO_4 0.00[a] Zn 0.01	23[b]	22	10	0	0.8		
10/8 0950	684	61	9.4	94	38.4	6.6	---	---	1.6 / 0.07	---	0 / 0.00	19 / 0.31	---	1.5 / 0.04	---	---	0.0 / ---	---		---	19	15	0	5		
11/7 1200	668	60	9.7	97	31.2	6.8	---	---	1.7 / 0.07	---	0 / 0.00	15 / 0.25	---	0.8 / 0.02	---	---	0.0 / ---	---		---	24	11	0	5		
12/8 1240	113	55	10.6	99	35.0	7.1	---	---	1.9 / 0.08	---	0 / 0.00	14 / 0.23	---	2.5 / 0.07	---	---	0.2 / ---	---		---	22	14	3	7		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pHf	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											MOKELUMNE RIVER AT WOODBRIDGE (STA. 23)														Maximum 7,000.+ Minimum 0.62 Median 230.	USGS
1/30 1350	761	50	11.5	103	54.5	7.0	---	---	2.6 / 0.11	---	0 / 0.00	16 / 0.26	---	3.1 / 0.09	---	---	0.01 / ----	---		---	24	18	5	4		
2/13 1435	848	51	10.5	94	69.6	7.1	---	---	3.5 / 0.15	---	0 / 0.00	22 / 0.36	---	2.2 / 0.06	---	---	0.00 / ----	---		---	23	25	7	40		
3/3 1130	1,490	51	11.1	99	54.3	7.1	---	---	2.9 / 0.13	---	0 / 0.00	23 / 0.38	---	3.5 / 0.10	---	---	0.04 / ----	---		---	25	20	1	20		
4/11 1235	3,300	51	11.0	98	61.3	7.1	---	---	2.5 / 0.11	---	0 / 0.00	27 / 0.44	---	2.8 / 0.08	---	---	0.00 / ----	---		---	20	21	0	30		
5/8 1515	1,580	58	10.2	99	55.0	7.1	4.8 / 0.24	2.7 / 0.22	2.7 / 0.12	1.1 / 0.03	0 / 0.00	24 / 0.39	4.8 / 0.10	4.0 / 0.11	0.3 / 0.00	0.3 / 0.02	0.03 / ----	13 / ---	PO_4 0.15 Cu 0.02 Fe 0.08 Al 0.08 a	46[b]	21	23	3	3		
6/6 1305	3,080	61	10.0	101	33.4	6.9	---	---	2.3 / 0.10	---	0 / 0.00	16 / 0.26	---	1.7 / 0.05	---	---	0.1 / ---	---		---	36	9	0	9		
7/7 1030	768	68	9.8	107	33.5	7.0	---	---	1.6 / 0.07	---	0 / 0.00	14 / 0.23	---	2.2 / 0.06	---	---	0.1 / ---	---		---	24	11	0	2		
8/8 0920	285	68	9.1	91	33.7	7.3	---	---	1.8 / 0.08	---	0 / 0.00	15 / 0.25	---	2.8 / 0.08	---	---	0.0 / ---	---		---	25	12	0	2		
9/5 0950	354	66	8.1	86	30.2	7.0	3.6 / 0.18	0.5 / 0.23	1.4 / 0.06	0.4 / 0.01	0 / 0.00	14 / 0.23	1.0 / 0.02	1.6 / 0.05	0.1 / 0.00	0.0 / 0.00	0.0 / ---	9.0 / ---	Zn 0.01 Al 0.04 a	25[b]	21	11	0	1		
10/16 1045	465	74	9.7	112	36.4	7.3	---	---	2.0 / 0.09	---	0 / 0.00	18 / 0.30	---	2.0 / 0.06	---	---	0.0 / ---	---		---	26	13	0	5		
11/13 1035	277	57	9.8	94	39.8	7.0	---	---	2.2 / 0.10	---	0 / 0.00	19 / 0.31	---	2.0 / 0.06	---	---	0.0 / ---	---		---	26	14	0	5		
12/4 1100	110	52	10.5	95	41.0	7.4	---	---	1.9 / 0.08	---	0 / 0.00	20 / 0.33	---	2.0 / 0.06	---	---	0.0 / ---	---		---	19	17	1	8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
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Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily										MOKELUMNE RIVER AT WOODBRIDGE (STA. 23)															USGS
2/1-5	557	---	---	---	82.3	7.2*	6.8 / 0.34	2.3 / 0.19	4.2 / 0.18	---	0 / 0.00	19 / 0.31	---	---	---	---	---	---		63[c]	25	26	11	---		
2/6-10	475	---	---	---	60.4	6.8*	5.4 / 0.27	1.5 / 0.12	3.2 / 0.14	---	0 / 0.00	18 / 0.30	---	---	---	---	---	---		42[c]	26	19	4	---		
3/1-10	2,130	---	---	---	57.4	6.8*	5.4 / 0.27	1.1 / 0.09	2.9 / 0.13	---	0 / 0.00	20 / 0.33	---	---	---	---	---	---		40[c]	26	18	2	---		
3/11-20	1,460	---	---	---	59.2	7.2*	5.4 / 0.27	1.5 / 0.12	3.1 / 0.13	---	0 / 0.00	22 / 0.36	---	---	---	---	---	---		44[c]	25	20	2	---		
3/21-31	2,510	---	---	---	62.5	6.7*	6.4 / 0.32	1.1 / 0.09	2.8 / 0.12	---	0 / 0.00	23 / 0.38	---	---	---	---	---	---		50[c]	23	21	2	---		
4/1-16	3,010	---	---	---	66.1	6.8*	6.8 / 0.34	1.7 / 0.14	2.9 / 0.13	---	0 / 0.00	25 / 0.41	---	---	---	---	---	---		73[c]	21	24	4	---		
4/17-30	2,490	---	---	---	65.0	6.7*	6.4 / 0.32	1.7 / 0.14	3.4 / 0.15	---	0 / 0.00	25 / 0.41	----	---	---	---	---	---		70[c]	25	23	3	---		
5/1-18	2,490	---	---	---	61.4	7.2*	5.6 / 0.28	1.7 / 0.14	2.7 / 0.12	1.2 / 0.03	0 / 0.00	26 / 0.43	3.8 / 0.08	3.2 / 0.09	0.4 / 0.01	0.2 / 0.01	0.0 / ---	15 / ---		53[c]	21	21	0	---		
5/19-24	2,030	---	---	---	50.9	7.5*	5.2 / 0.26	1.2 / 0.10	2.3 / 0.10	---	0 / 0.00	22 / 0.36	---	---	---	---	---	---		51[c]	22	18	0	---		
5/25-31	4,110	---	---	---	40.7	6.8*	3.6 / 0.18	1.1 / 0.09	2.2 / 0.10	---	0 / 0.00	17 / 0.28	---	---	---	---	---	---		49[c]	27	14	0	---		
6/1-30	2,740	---	---	---	38.5	6.5*	3.2 / 0.16	1.2 / 0.10	2.3 / 0.10	0.6 / 0.02	0 / 0.00	16 / 0.26	---	---	---	---	---	---		25[c]	26	13	0	---		
7/1-30	508	---	---	---	41.0	6.5*	3.6 / 0.18	1.3 / 0.11	2.1 / 0.09	0.5 / 0.01	0 / 0.00	16 / 0.26	---	---	---	---	---	---		32[c]	23	14	1	---		

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							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						MOKELUMNE RIVER AT WOODBRIDGE (STA. 23 Cont.)																			USGS
8/1-15	3,850	---	---	---	37.3	6.6*	3.4 / 0.17	0.9 / 0.07	2.2 / 1.10	---	0 / 0.00	15 / 0.25	---	---	---	---	---	---		30[c]	29	12	0	---		
8/16-31	271	---	---	---	34.9	6.6*	3.2 / 0.16	1.0 / 0.08	2.0 / 0.09	---	0 / 0.00	14 / 0.23	---	---	---	---	---	---		22[c]	27	12	1	---		
9/1-15	5,850	---	---	---	34.3	7.2*	3.2 / 0.16	1.0 / 0.08	1.9 / 0.08	---	0 / 0.00	15 / 0.25	---	---	---	---	---	---		36[c]	25	12	0	---		
9/16-30	6,160	---	---	---	39.0	6.6*	4.0 / 0.20	0.9 / 0.07	1.9 / 0.08	---	0 / 0.00	17 / 0.28	---	---	---	---	---	---		36[c]	23	14	0	---		

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							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal						OLD RIVER AT CLIFTON COURT FERRY (STA. 104)																			USGS
1/23 1245		49	10.0	87	603	7.5	---	---	62/2.70	3.0/0.08	0/0.00	115/1.88	---	36/1.02	---	---	0.33/---	---		---	52	129	35	13		
2/11 1115		55	8.0	75	371	7.3	---	---	47/2.04	---	0/0.00	94/1.54	---	57/1.61	---	---	0.27/---	---		---	52	96	19	40	Maximum 7000.+ Minimum 6.2 Median 1300.	
3/5 0935		54	9.3	86	393	7.3	---	---	41/1.78	---	0/0.00	92/1.51	---	49/1.38	---	---	0.21/---	---		---	49	94	19	50		
4/11 1240		60	7.0	70	248	7.2	---	---	23/1.00	---	0/0.00	74/1.21	---	24/0.68	---	---	0.00/---	---		---	43	66	5	30		
5/9 1050		66	7.9	84	149	7.1	10/0.50	4.1/0.34	12/0.52	1.7/0.04	0/0.00	48/0.79	10/0.21	14/0.39	1.1/0.02	0.1/0.01	0.01/---	14	Fe 0.04 Al 0.10 PO_4 0.20 Zn 0.01 a	91[b]	37	42	3	20		
6/12 0700		70	7.4	82	163	7.1	---	---	15/0.65	---	0/0.00	48/0.79	---	19/0.54	---	---	0.0/---	---		---	43	43	4	45		
7/8 1015		76	8.5	100	281	7.3	---	---	28/1.22	---	0/0.00	68/1.11	---	39/1.10	---	---	0.0/---	---		---	48	66	10	10		
8/5 1055		78	6.4	77	235	7.3	---	---	22/0.96	---	0/0.00	66/1.08	---	28/0.79	---	---	0.2/---	---		---	43	64	10	20		
9/3 1030		77	6.9	82	240	7.3	14/0.70	10/0.82	21/0.91	1.5/0.04	0/0.00	81/1.33	21/0.44	24/0.68	0.6/0.01	0.3/0.02	0.1/---	3.9	Fe 0.08 PO_4 0.20 Al 0.07 a	136[b]	37	76	10	80		
10/9 1045		69	8.8	97	536	8.0	---	---	57/2.48	---	0/0.00	120/1.97	---	83/2.34	---	---	0.1/---	---		---	50	123	25	15		
11/14 0710		58	9.1	89	376	7.6*	---	---	43/1.87	---	0/0.00	73/1.20	---	60/1.69	---	---	0.1/---	---		---	52	85	25	7		
12/9 1350		53	10.0	91	306	7.2	---	---	40/1.74	---	0/0.00	68/1.11	---	54/1.52	---	---	0.2/---	---		---	51	82	26	30		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										OLD RIVER AT HOLLAND TRACT (STA. 108a)															USBR
1/2 1040		54	---	---	573	---	---	---	51 ---	---	---	---	---	77 ---	---	---	---	---		384	39	---	---	--		
1/28 1515		50	---	---	746	---	---	---	69 ---	---	---	---	---	111 ---	---	---	---	---		560	40	---	---	--		
2/26 1300		58	---	---	692	---	---	---	74 ---	---	---	---	---	93 ---	---	---	---	---		452	46	---	---	--		
4/2 1200		56	---	---	426	---	---	---	36 ---	---	---	---	---	43 ---	---	---	---	---		324	37	---	---	--		
4/30 1005		64	---	---	269	---	---	---	21 ---	---	---	---	---	37 ---	---	---	---	---		172	34	---	---	--		
5/28 1200		70	---	---	117	---	---	---	8.5 ---	---	---	---	---	17 ---	---	---	---	---		116	31	---	---	--		
7/2 1410		--	---	---	160	---	---	---	14 ---	---	---	---	---	23 ---	---	---	---	---		96	38	---	---	--		
7/29 1250		--	---	---	195	---	---	---	15 ---	---	---	---	---	18 ---	---	---	---	---		112	33	---	---	--		
8/28 1045		78	---	---	204	---	---	---	---	---	---	---	---	---	---	---	---	---		156	--	---	---	--		
9/29 1230		74	---	---	238	---	---	---	19 ---	---	---	---	---	21 ---	---	---	---	---		136	35	---	---	--		
10/27 1305		66	---	---	350	---	---	---	32 ---	---	---	---	---	48 ---	---	---	---	---		244	40	---	---	--		
11/24 1010		54	---	---	358	---	---	---	35 ---	---	---	---	---	58 ---	---	---	---	---		236	42	---	---	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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	N C ppm			
											OLD RIVER AT HOLLAND TRACT (STA. 108a cont.)															
1958	Tidal																									USBR
12/9 1340		53	---	---	343	---	---	---	31 / ---	---	---	---	---	50 / ---	---	---	---	---		260	39	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										OLD RIVER AT MANDEVILLE ISLAND (STA. 112)															USGS
1/23 1600		50	10.0	88	706	7.2	---	---	60 / 2.61	---	0 / 0.00	84 / 1.38	---	98 / 2.76	---	---	0.50 / ---	---		---	40	198	129	10		
2/10 1300		54	8.6	80	515	7.3	---	---	45 / 1.96	---	0 / 0.00	85 / 1.39	---	70 / 1.97	---	---	0.18 / ---	---		---	42	136	66	30	Maximum 7000.+ Minimum 6.2 Median 230.	
3/3 1400		56	8.6	82	541	7.3	---	---	44 / 1.91	---	0 / 0.00	79 / 1.29	---	67 / 1.89	---	---	0.24 / ---	---		---	39	150	85	20		
4/11 1545		60	7.5	75	291	7.2	---	---	25 / 1.09	---	0 / 0.00	70 / 1.15	---	29 / 0.82	---	---	0.18 / ---	---		---	41	80	22	20		
5/8 1235		70	6.7	75	219	7.3	14 / 0.70	5.8 / 0.48	20 / 0.87	2.1 / 0.05	0 / 0.00	63 / 1.03	19 / 0.40	25 / 0.70	1.1 / 0.02	0.1 / 0.01	0.05 / ---	17 / ---	Fe 0.03 Al 0.13 Zn 0.02 PO_4 0.20 a	135[b]	41	59	7	25		
6/12 0910		70	6.8	76	144	7.1	---	---	12 / 0.52	---	0 / 0.00	44 / 0.72	---	16 / 0.45	---	---	0.0 / ---	---		---	38	42	6	49		
7/7 1155		76	7.6	90	150	7.3	---	---	14 / 0.61	---	0 / 0.00	42 / 0.69	---	19 / 0.54	---	---	0.0 / ---	---		---	42	42	8	29		
8/4 1420		77	7.8	93	188	7.3	---	---	16 / 0.70	---	0 / 0.00	68 / 1.11	---	18 / 0.51	---	---	0.2 / ---	---		---	36	62	6	13		
9/4 0730		73	7.4	84	196	7.3	13 / 0.65	7.4 / 0.61	14 / 0.61	1.6 / 0.04	0 / 0.00	76 / 1.25	12 / 0.25	16 / 0.45	0.8 / 0.01	0.1 / 0.01	0.0 / ---	11 / ---	Fe 0.05 PO_4 0.10 Zn 0.01 a	113[b]	32	63	0	35		
10/8 1445		70	8.0	89	220	7.1	---	---	18 / 0.78	---	0 / 0.00	79 / 1.29	---	21 / 0.59	---	---	0.0 / ---	---		---	32	67	2	15		
11/14 1110		59	9.1	89	347	7.4*	---	---	36 / 1.57	---	0 / 0.00	85 / 1.39	---	48 / 1.35	---	---	0.2 / ---	---		---	45	94	24	10		
12/9 0840		52	8.7	79	343	7.1	---	---	37 / 1.61	---	0 / 0.00	72 / 1.18	---	50 / 1.41	---	---	0.1 / ---	---		---	48	88	29	30		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal																									
							OLD RIVER AT ORWOOD BRIDGE (STA. 108)																			USGS
1/23 1035		48	9.4	81	730	7.1	---	---	71 3.09	3.2 0.08	0 0.00	102 1.67	---	112 3.16	---	---	0.39 ---	---		---	47	174	91	9		
2/11 1405		55	7.4	69	543	7.1	---	---	56 2.44	---	0 0.00	92 1.51	---	74 2.09	---	---	0.35 ---	---		---	48	130	55	30	Maximum 7000.+ Minimum 2.3 Median 230.	
3/5 1145		55	9.3	87	434	7.3	---	---	45 1.96	---	0 0.00	91 1.49	---	57 1.61	---	---	0.29 ---	---		---	48	105	30	40		
4/11 1100		60	7.0	70	255	7.2	---	---	24 1.04	---	0 0.00	72 1.18	---	26 0.73	---	---	0.10 ---	---		---	43	70	11	40		
5/19 1000		69	7.3	80	138	7.1	9.0 0.45	3.3 0.27	12 0.52	1.5 0.04	0 0.00	42 0.69	7.7 0.16	15 0.42	1.1 0.02	0.1 0.01	0.00 ---	15 ---	Fe 0.02 Al 0.05[a] PO_4 0.20	86[b]	41	36	2	25		
6/11 1330		69	7.3	80	168	7.1	---	---	15 0.65	---	0 0.00	46 0.75	---	20 0.56	---	---	0.0 ---	---		---	41	46	8	35		
7/8 1225		78	6.9	83	190	7.1	---	---	18 0.78	---	0 0.00	47 0.77	---	25 0.70	---	---	0.1 ---	---		---	42	53	14	32		
8/5 1315		79	6.6	81	210	7.3	---	---	17 0.74	---	0 0.00	68 1.11	---	23 0.65	---	---	0.2 ---	---		---	36	64	8	13		
9/3 0840		76	6.8	80	224	7.3	14 0.70	8.5 0.70	18 0.78	1.5 0.04	0 0.00	76 1.25	16 0.33	21 0.59	0.9 0.01	0.2 0.01	0.0 ---	6.4 ---	Fe 0.08 PO_4 0.25[a] Al 0.22	124[b]	35	70	8	80		
10/9 1300		71	7.1	80	298	7.4	---	---	28 1.22	---	0 0.00	93 1.52	---	35 0.99	---	---	0.1 ---	---		---	42	83	7	15		
11/3 1420		64	8.6	90	385	7.2	---	---	44 1.91	---	0 0.00	80 1.31	---	61 1.72	---	---	0.1 ---	---		---	52	89	23	10		
12/9 1530		53	9.4	86	354	7.2	---	---	40 1.74	---	0 0.00	64 1.05	---	54 1.52	---	---	0.2 ---	---		---	50	86	34	55		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										OLD RIVER NEAR TRACY (STA. 103)															USGS
1/23 1510		50	8.5	75	594	7.5	---	---	66 / 2.87	---	0 / 0.00	130 / 2.13	---	95 / 2.68	---	---	0.42 / ---	---		---	50	145	38	10		
2/11 1015		55	7.7	72	395	7.3	---	---	42 / 1.83	---	0 / 0.00	97 / 1.59	---	51 / 1.44	---	---	0.22 / ---	---		---	50	90	10	30	Maximum 7000. Minimum 23. Median 230.	
3/4 1540		55	9.1	86	416	7.3	---	---	43 / 1.87	---	0 / 0.00	96 / 1.57	---	54 / 1.52	---	---	0.31 / ---	---		---	48	100	21	30		
4/11 1445		62	7.1	72	251	7.2	---	---	22 / 0.91	---	0 / 0.00	76 / 1.25	---	25 / 0.70	---	---	0.00 / ---	---		---	41	68	6	40		
5/9 0950		66	7.8	83	159	7.1	10 / 0.50	4.7 / 0.39	13 / 0.57	1.7 / 0.04	0 / 0.00	48 / 0.79	13 / 0.27	17 / 0.48	0.9 / 0.01	0.1 / 0.01	0.00 / ---	15	Fe 0.04 Al 0.10 PO_4 0.25 a	99[b]	38	44	5	15		
6/12 0820		68	7.5	82	160	7.2	---	---	14 / 0.61	---	0 / 0.00	48 / 0.79	---	19 / 0.54	---	---	0.00 / ---	---		---	42	42	3	45		
7/8 0925		76	7.2	85	306	7.3	---	---	30 / 1.30	---	0 / 0.00	68 / 1.11	---	44 / 1.24	---	---	0.00 / ---	---		---	47	73	17	15		
8/5 0945		80	5.9	72	784	7.5	---	---	84 / 3.65	---	0 / 0.00	160 / 2.62	---	130 / 3.67	---	---	0.4 / ---	---		---	49	188	57	10		
9/3 1215		78	8.8	106	780	7.9	27 / 1.35	29 / 2.37	85 / 3.70	4.0 / 0.10	0 / 0.00	166 / 2.72	56 / 1.17	132 / 3.72	0.5 / 0.01	0.2 / 0.01	0.1 / ---	13	Fe 0.02 PO_4 0.45 Al 0.07 a	429[b]	49	186	50	40		
10/9 0920		69	6.3	68	625	7.6	---	---	63 / 2.74	---	0 / 0.00	129 / 2.11	---	98 / 2.76	---	---	0.1 / ---	---		---	49	149	43	15		
11/14 0850		58	7.3	71	424	7.3*	---	---	45 / 1.96	---	0 / 0.00	84 / 1.38	---	63 / 1.78	---	---	0.1 / ---	---		---	51	96	27	8		
12/9 1245		53	8.8	81	367	7.2	---	---	40 / 1.74	---	0 / 0.00	74 / 1.21	---	56 / 1.58	---	---	0.1 / ---	---		---	49	92	31	50		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							PAYNES CREEK NEAR RED BLUFF (Sta. 88g)																			USGS
10/2 1245	0.9	74	8.6	100	222	7.9	14 / 0.70	11 / 0.94	16 / 0.70	1.6 / 0.04	0 / 0.00	112 / 1.84	3.8 / 0.08	16 / 0.45	0.0 / 0.00	0.0 / 0.00	0.4 / ---	48 / ---		166[b]	29	82	0	---		
11/11 1230	3.2	54	10.2	94	219	7.3	13 / 0.65	12 / 0.99	15 / 0.65	1.7 / 0.04	0 / 0.00	110 / 1.80	4.8 / 0.10	16 / 0.45	0.0 / 0.00	0.0 / 0.00	0.4 / ---	50 / ---		167[b]	28	82	0	---		
12/4 1530	2.5	49	11.9	104	151	7.5	10 / 0.50	9.5 / 0.78	9.0 / 0.39	1.1 / 0.03	0 / 0.00	78 / 1.28	7.7 / 0.16	9.0 / 0.25	0.5 / 0.01	0.0 / 0.00	0.1 / ---	37 / ---		122[b]	23	64	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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							Mineral constituents in parts per million / equivalents per million																			
1958							PIT RIVER NEAR BIEBER (STA. 17e)																			USGS
10/15 1135	123	56	9.4	89	253	7.9	19 / 0.95	7.4 / 0.61	22 / 0.96	5.1 / 0.13	0 / 0.00	136 / 2.23	7.7 / 0.16	6.0 / 0.17	0.7 / 0.01	0.3 / 0.02	0.2 / ---	32 / ---		167[b]	36	78	0	---		
11/12 1105	138	42	11.2	89	266	7.8	19 / 0.95	7.9 / 0.65	26 / 1.13	4.8 / 0.12	0 / 0.00	141 / 2.31	12 / 0.25	6.8 / 0.19	0.5 / 0.01	0.2 / 0.01	0.1 / ---	29 / ---		175[b]	40	80	0	---		
12/1 1550	190	37	12.2	90	253	7.3	18 / 0.90	7.1 / 0.58	26 / 1.13	4.4 / 0.11	0 / 0.00	134 / 2.20	9.6 / 0.20	7.6 / 0.21	0.8 / 0.01	0.2 / 0.01	0.2 / ---	35 / ---		175[b]	42	74	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
												PIT RIVER NEAR CANBY (STA. 17a)														
1/	Not sampled -- snowbound																									
2/	Not sampled -- snowbound																								Maximum 7000+ Minimum 23. Median 425.	
3/	Not sampled -- snowbound																									
4/16 1625	700	59	8.8	87	135	7.7	---	---	8.4 / 0.37	---	0 / 0.00	78 / 1.28	---	2.0 / 0.06	---	---	0.08 / ---	---		---	27	50	0	54		
5/14 1125	998	59	7.8	77	179	7.7	15 / 0.75	6.1 / 0.50	14 / 0.61	3.9 / 0.10	0 / 0.00	97 / 1.59	7.7 / 0.16	4.2 / 0.12	1.1 / 0.02	0.0 / 0.00	0.12 / ---	29 / ---	PO_4 0.50 Fe 0.23 Al 0.03 [a]	129[b]	31	63	0	40		
6/18 1250	340	76	7.3	86	205	7.9	---	---	17 / 0.74	---	0 / 0.00	116 / 1.90	---	2.5 / 0.07	---	---	0.0 / ---	---		---	36	66	0	17		
7/16 1100	63	74	7.8	90	199	7.7	---	---	17 / 0.74	---	0 / 0.00	116 / 1.90	---	3.2 / 0.09	---	---	0.1 / ---	---		---	37	64	0	30		
8/13 1005	200	71	6.9	77	225	7.7	---	---	18 / 0.78	---	0 / 0.00	127 / 2.08	---	4.6 / 0.13	---	---	0.1 / ---	---		---	34	77	0	35		
9/10 1055	130	64	7.2	75	238	7.5	16 / 0.80	9.0 / 0.74	21 / 0.91	5.9 / 0.15	0 / 0.00	132 / 2.16	11 / 0.23	4.5 / 0.13	0.9 / 0.02	0.0 / 0.00	0.1 / ---	34 / ---	PO_4 0.50 Cu 0.06 Fe 0.26 Al 0.59 [a]	168[b]	35	77	0	30		
10/15 1315	134	56	8.4	80	238	7.7	---	---	21 / 0.91	---	0 / 0.00	130 / 2.13	---	5.0 / 0.14	---	---	0.2 / ---	---		---	38	75	0	40		
11/13 1300	114	43	10.3	83	256	7.6	---	---	26 / 1.13	---	0 / 0.00	136 / 2.23	---	7.5 / 0.21	---	---	0.3 / ---	---		---	43	76	0	40		
12/	Not sampled -- snowbound																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											PIT RIVER NEAR MONTGOMERY CREEK (STA. 17)															USGS
1/	Not sampled -- snowbound																									
2/	Not sampled -- snowbound																								Maximum 230. Minimum 0.23 Median 2.3	
3/	Not sampled -- snowbound																									
4/	Not sampled -- snowbound																									
5/14 0730	6,340	56	11.1	105	125	7.5	10 / 0.50	4.4 / 0.36	7.7 / 0.33	1.8 / 0.05	0 / 0.00	72 / 1.18	1.9 / 0.04	2.6 / 0.07	0.3 / 0.00	0.0 / 0.00	0.1 / ---	30 / ---	PO_4 0.15 Fe 0.03[a] Al 0.10	94[b]	27	43	0	3		
6/11 1520	4,400	62	12.8	130	141	7.5	---	---	11 / 0.48	---	0 / 0.00	82 / 1.34	---	2.0 / 0.06	---	---	0.0 / ---	---		---	34	46	0	5		
7/9 1200	4,170	70	9.5	106	151	7.6	---	---	11 / 0.48	---	0 / 0.00	88 / 1.44	---	3.4 / 0.10	---	---	0.1 / ---	---		---	33	48	0	0.8		
8/6 1100	2,700	69	8.7	96	154	7.6	---	---	11 / 0.48	---	0 / 0.00	91 / 1.49	---	5.5 / 0.16	---	---	0.1 / ---	---		---	30	56	0	1		
9/9 1000	3,580	64	10.0	104	154	7.5	11 / 0.55	6.0 / 0.49	13 / 0.57	3.2 / 0.08	0 / 0.00	87 / 1.43	4.8 / 0.10	4.0 / 0.11	0.7 / 0.01	0.1 / 0.01	0.0 / ---	17 / ---	PO_4 0.10 Al 0.05[a] Fe 0.02	103[b]	34	52	0	1		
10/7 1000	1,990	60	10.0	100	136	7.6	---	---	11 / 0.48	---	0 / 0.00	88 / 1.44	---	5.0 / 0.14	---	---	0.1 / ---	---		---	30	55	0	5		
11/6 0955	2,790	54	10.5	98	161	7.3	---	---	11 / 0.48	---	0 / 0.00	92 / 1.51	---	5.8 / 0.16	---	---	0.3 / ---	---		---	29	59	0	6		
12/3 1550	1,330	49	11.8	103	161	7.3	---	---	11 / 0.48	---	0 / 0.00	90 / 1.48	---	5.2 / 0.15	---	---	0.1 / ---	---		---	27	64	0	2		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										
							PIT RIVER, SOUTH FORK NEAR LIKELY (STA. 18a)																			USGS
8/13 1235	176	60	8.2	87	140	7.7	12 / 0.60	3.6 / 0.30	9.0 / 0.39	3.8 / 0.10	0 / 0.00	83 / 1.36	0.0 / 0.00	1.0 / 0.03	0.9 / 0.01	0.3 / 0.02	0.1 / ---	33 / ---		105[b]	28	45	0	---		
9/10 1230	68	67	8.0	86	138	7.9	11 / 0.55	6.2 / 0.51	7.5 / 0.33	4.5 / 0.12	0 / 0.00	81 / 1.33	8.6 / 0.18	0.5 / 0.01	1.1 / 0.02	0.1 / 0.01	0.0 / ---	36 / ---	PO_4 0.25 Cu 0.03[a] Fe 0.29 Al 0.26	116[b]	22	53	0	5		
10/15 1450	30	58	8.8	86	107	7.9	9.6 / 0.48	3.9 / 0.32	4.9 / 0.21	2.3 / 0.06	0 / 0.00	63 / 1.03	0.0 / 0.00	1.0 / 0.03	0.1 / 0.00	0.0 / 0.00	0.0 / ---	35 / ---		88[b]	20	40	0	---		
11/12 1430	34	42	11.0	87	102	7.3	10 / 0.50	4.6 / 0.38	4.8 / 0.21	2.6 / 0.07	0 / 0.00	65 / 1.07	1.9 / 0.04	1.2 / 0.03	0.5 / 0.01	0.0 / 0.00	0.0 / ---	39 / ---		96[b]	18	44	0	---		
12/	Not sampled																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											PUTAH CREEK NEAR WINTERS (STA. 81)															USGS
1/21 1430	53	51	14.8	129	327	8.3	---	---	9.9 / 0.43	---	0 / 0.00	189 / 3.10	---	7.5 / 0.21	---	---	0.03 / ---	---		---	12	156	1	7	Maximum 7000.+ Minimum 2.1 Median 23.	
2/17 0900	35	54	9.9	92	509	7.9	---	---	30 / 1.30	---	0 / 0.00	218 / 3.57	---	30 / 0.85	---	---	0.54 / ---	---		---	24	202	23	10		
3/11 0930	9.6	53	9.6	88	868	7.7	---	---	70 / 3.04	---	0 / 0.00	314 / 5.15	---	32 / 0.90	---	---	1.1 / ---	---		---	33	312	55	16		
4/14 1500	38	64	11.5	120	626	8.1	---	---	40 / 1.74	---	0 / 0.00	254 / 4.16	---	28 / 0.79	---	---	0.71 / ---	---		---	27	241	33	5		
5/9 1230	15	67	10.7	115	603	8.1	44 / 2.20	29 / 2.40	42 / 1.83	2.2 / 0.06	0 / 0.00	232 / 3.80	79 / 1.64	33 / 0.93	0.0 / 0.00	0.1 / 0.01	0.77 / ---	15 / --	Al 0.11 PO_4 0.00 / - a; Pb 0.01	359[b]	28	230	40	2		
6/16 1540	27	67	12.9	139	332	8.4	---	---	13 / 0.57	---	5 / 0.17	158 / 2.59	---	9.0 / 0.25	---	---	0.2 / ---	---	Total Alkalinity 168	---	16	149	11	6		
7/16 0855	54	58	10.6	103	303	7.7	---	---	10 / 0.44	---	0 / 0.00	163 / 2.67	---	6.2 / 0.17	---	---	0.1 / ---	---		---	14	135	1	2		
8/4 1330	27	64	11.8	119	297	8.1	---	---	9.6 / 0.42	---	4 / 0.13	154 / 2.52	---	7.0 / 0.20	---	---	0.1 / ---	---	Total Alkalinity 162	---	14	134	1	4		
9/11 1330	40	58	12.8	124	285	8.3	18 / 0.90	22 / 1.80	8.8 / 0.38	1.9 / 0.05	0 / 0.00	156 / 2.56	18 / 0.37	6.4 / 0.18	0.6 / 0.01	0.0 / 0.00	0.1 / ---	17 / --	Al 0.07 PO_4 0.05 / a; Zn 0.03	170[b]	12	135	7	2		
10/3 1530	19	50	12.1	106	285	7.9	---	---	8.5 / 0.37	---	2 / 0.07	154 / 2.52	---	7.0 / 0.20	---	---	0.2 / ---	---	Total Alkalinity 158	---	12	142	12	5		
11/14 1250	10	55	11.0	103	291	7.9	---	---	9.0 / 0.39	---	0 / 0.00	160 / 2.62	---	6.5 / 0.18	---	---	0.2 / ---	---		---	13	136	5	1		
12/8 1045	46	53	10.6	97	277	7.3	---	---	7.5 / 0.33	---	0 / 0.00	153 / 2.51	---	5.2 / 0.15	---	---	0.1 / ---	---		---	11	130	5	1		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal																									
											ROCK SLOUGH NEAR KNIGHTSEN (STA. 109)															USGS
1/23 0930		46	9.0	75	968	7.1	---	---	99 / 4.31	4.0 / 0.10	0 / 0.00	115 / 1.88	---	140 / 3.95	---	---	0.80 / ---	---		---	47	242	148	13		
2/11 1455		55	7.3	68	955	7.3	---	---	104 / 4.52	---	0 / 0.00	146 / 2.39	---	150 / 4.23	---	---	0.70 / ---	---		---	50	222	102	15	Maximum 7000.+ Minimum 2.3 Median 62.	
3/5 1230		57	8.0	77	1120	7.3	---	---	131 / 5.70	---	0 / 0.00	143 / 2.34	---	165 / 4.65	---	---	0.11 / ---	---		---	52	265	148	20		
4/11 1010		62	7.1	72	578	7.3	---	---	60 / 2.61	---	0 / 0.00	122 / 2.00	---	65 / 1.83	---	---	0.58 / ---	---		---	48	140	40	50		
5/19 1055		73	6.1	70	227	7.3	14 / 0.70	6.3 / 0.52	21 / 0.91	1.9 / 0.05	0 / 0.00	65 / 1.07	19 / 0.40	25 / 0.70	1.4 / 0.02	0.1 / 0.01	0.09 / ---	16 / ---	Fe 0.01 Al 0.09 Zn 0.01 PO_4 0.20[a]	137[b]	42	61	8	10		
6/11 1245		72	5.5	62	161	7.0	---	---	15 / 0.65	---	0 / 0.00	45 / 0.74	---	20 / 0.56	---	---	0.0 / ---	---		---	44	42	5	10		
7/8 1310		81	5.9	73	184	7.1	---	---	18 / 0.78	---	0 / 0.00	48 / 0.79	---	24 / 0.68	---	---	0.1 / ---	---		---	44	48	9	22		
8/5 1420		80	6.9	85	203	7.3	---	---	18 / 0.78	---	0 / 0.00	66 / 1.08	---	22 / 0.62	---	---	0.3 / ---	---		---	39	61	7	13		
9/2 1440		78	6.3	76	216	7.3	13 / 0.65	8.6 / 0.71	18 / 0.78	1.6 / 0.04	0 / 0.00	78 / 1.28	17 / 0.35	18 / 0.51	0.7 / 0.01	0.2 / 0.01	0.0 / ---	8.4 / ---	Fe 0.10 Al 0.14 PO_4 0.20[a]	124[b]	36	68	4	80		
10/9 1345		71	6.1	68	267	7.4	---	---	23 / 1.00	---	0 / 0.00	88 / 1.44	---	29 / 0.82	---	---	0.1 / ---	---		---	39	78	6	10		
11/3 1330		64	8.0	84	477	7.3	---	---	52 / 2.26	---	0 / 0.00	114 / 1.87	---	70 / 1.97	---	---	0.3 / ---	---		---	49	115	22	15		
12/10 0900		51	8.0	71	402	7.2	---	---	44 / 1.91	---	0 / 0.00	76 / 1.25	---	61 / 1.72	---	---	0.2 / ---	---		---	49	96	38	30		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER
CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents[a]	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1958	Average Mean Daily																									USGS
											SACRAMENTO RIVER AT BEND (STA. 12c)															
1/1-9	14,320	--	---	---	139	7.4*	12 / 0.60	5.0 / 0.41	7.7 / 0.33	1.7 / 0.04	0 / 0.00	72 / 1.18	5.8 / 0.12	3.7 / 0.10	0.7 / 0.01	0.0 / 0.00	0.06 / ----	28 / --	Fe 0.04	100[b]	24	50	0	--		
1/23 1100	13,000	--	---	---	135	7.6*	13 / 0.65	5.6 / 0.46	7.1 / 0.31	1.4 / 0.04	0 / 0.00	72 / 1.18	8.1 / 0.17	3.5 / 0.10	0.0 / 0.00	0.0 / 0.00	0.01 / ----	27 / --	Fe 0.12	101[b]	21	56	0	--		
1/10-25	18,020	--	---	---	131	7.1*	11 / 0.55	5.4 / 0.44	7.0 / 0.30	1.6 / 0.04	0 / 0.00	68 / 1.11	6.7 / 0.14	3.2 / 0.09	0.7 / 0.01	0.0 / 0.00	0.09 / ----	27 / --	Fe 0.05	96[b]	23	50	0	--		
1/26	48,900	--	---	---	100	7.0*	9.2 / 0.46	3.6 / 0.30	5.1 / 0.22	----	0 / 0.00	48 / 0.79	---	---	---	---	----	--		93[c]	22	38	0	--		
1/27-31	40,060	--	---	---	118	7.1*	11 / 0.55	4.1 / 0.34	5.7 / 0.25	1.4 / 0.04	0 / 0.00	60 / 0.98	6.7 / 0.14	2.9 / 0.08	0.7 / 0.01	0.0 / 0.00	0.16 / ----	23 / --	Fe 0.03	86[b]	21	44	0	--		
2/1-11	61,190	--	---	---	122	7.3*	9.6 / 0.48	5.4 / 0.44	6.0 / 0.26	1.3 / 0.03	0 / 0.00	57 / 0.93	3.8 / 0.08	5.5 / 0.16	0.4 / 0.01	0.1 / 0.01	0.0 / ----	23 / --	Fe 0.10 Cu 0.00 Zn 0.20	83[b]	21	46	0	--		
2/12	85,800	--	---	---	96.6	7.0*	9.2 / 0.46	2.9 / 0.24	3.9 / 0.17	----	0 / 0.00	40 / 0.66	---	---	---	---	---	---		81[c]	20	35	2	--		
2/13-18	76,950	--	---	---	114	7.3*	11 / 0.55	3.8 / 0.31	5.4 / 0.23	1.3 / 0.03	0 / 0.00	55 / 0.90	6.7 / 0.14	3.5 / 0.10	0.6 / 0.01	0.0 / 0.00	0.1 / ----	22 / --	Fe 0.08 Zn 0.14 Cu 0.00	81[b]	21	43	0	--		
2/19	25,000	--	---	---	91.4	7.0*	8.8 / 0.44	3.4 / 0.28	3.8 / 0.17	----	0 / 0.00	39 / 0.64	---	---	---	---	---	--		81[c]	19	36	4	--		
2/20-28, 3/1-4	66,450	--	---	---	111	7.4*	10 / 0.50	4.3 / 0.35	5.2 / 0.23	1.3 / 0.03	0 / 0.00	55 / 0.90	7.3 / 0.15	3.0 / 0.08	0.3 / 0.00	0.0 / 0.00	0.0 / ----	21 / --	Fe 0.09 Zn 0.05 Cu 0.00	79[b]	21	43	0	--		
3/5-19	15,150	--	---	---	130	7.5*	12 / 0.60	5.1 / 0.42	5.8 / 0.25	1.3 / 0.03	0 / 0.00	65 / 1.07	5.8 / 0.12	3.7 / 0.10	0.5 / 0.01	0.0 / 0.00	0.0 / ----	23 / --	Fe 0.13 Zn 0.15 Cu 0.00	89[b]	19	51	0	--		
3/20-31	28,920	--	---	---	106	7.2*	10 / 0.50	3.9 / 0.32	4.6 / 0.20	1.1 / 0.03	0 / 0.00	51 / 0.84	4.8 / 0.10	2.7 / 0.08	0.4 / 0.01	0.0 / 0.00	0.0 / ----	20 / --	Fe 0.15 Zn 0.08 Cu 0.00	73[b]	19	41	0	--		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily																									USGS
							SACRAMENTO RIVER AT BEND (STA. 12c cont.)																			
4/1-9	65,920	--	---	---	104	7.0*	9.2 / 0.46	5.8 / 0.48	5.0 / 0.22	1.3 / 0.03	0 / 0.00	50 / 0.82	12 / 0.25	3.5 / 0.10	0.4 / 0.01	0.1 / 0.01	0.0 / ----	23 / --	Fe 0.10	85[b]	18	47	6	--		
4/10-20	70,880	--	---	---	124	6.9*	11 / 0.55	6.0 / 0.49	5.5 / 0.24	1.3 / 0.03	0 / 0.00	59 / 0.97	12 / 0.25	3.5 / 0.10	0.4 / 0.01	0.0 / 0.00	0.1 / ----	23 / --	Fe 0.07 Zn 0.15 Pb 0.00	92[b]	18	52	4	--		
4/21-30	15,050	--	---	---	120	7.0*	12 / 0.60	4.9 / 0.40	5.6 / 0.24	1.3 / 0.03	0 / 0.00	59 / 0.97	12 / 0.25	3.0 / 0.08	0.4 / 0.01	0.1 / 0.01	0.1 / ----	24 / --	Fe 0.06 Zn 0.07 Pb 0.00	92[b]	19	50	2	--		
5/1-10	12,920	--	---	---	118	7.1*	10 / 0.50	6.6 / 0.54	6.1 / 0.27	1.4 / 0.04	0 / 0.00	59 / 0.97	12 / 0.25	4.0 / 0.11	0.3 / 0.00	0.0 / 0.00	0.1 / ----	23 / --	Fe 0.05 Zn 0.06 Pb 0.00	93[b]	20	52	4	--		
5/11-20	17,360	--	---	---	107	6.8*	8.8 / 0.44	6.3 / 0.52	5.0 / 0.22	1.4 / 0.04	0 / 0.00	53 / 0.87	12 / 0.25	3.5 / 0.10	0.5 / 0.01	0.1 / 0.01	0.1 / ----	22 / --	Fe 0.04 Zn 0.11 Pb 0.00	86[b]	18	48	5	--		
5/21-31	15,280	--	---	---	106	7.0*	9.2 / 0.46	6.1 / 0.50	4.7 / 0.20	1.3 / 0.03	0 / 0.00	54 / 0.89	12 / 0.25	3.0 / 0.08	0.2 / 0.00	0.1 / 0.01	0.1 / ----	22 / --	Fe 0.04 Zn 0.02 Pb 0.00	86[b]	17	48	4	--		
6/1-12	13,100	--	---	---	112	7.1*	10 / 0.50	4.6 / 0.38	5.6 / 0.24	1.3 / 0.03	0 / 0.00	56 / 0.92	7.7 / 0.16	3.0 / 0.08	0.4 / 0.01	0.1 / 0.01	0.1 / ----	26 / --	Fe 0.00 Zn 0.21 Cu 0.02	87[b]	21	44	0	--		
6/13	13,000	--	---	---	140	6.9*	12 / 0.60	5.4 / 0.44	6.5 / 0.28	1.4 / 0.04	0 / 0.00	59 / 0.97	----	----	----	---	---	---	Cu 0.12 Zn 0.03	122[c]	21	52	4	--		
6/14-30	10,350	--	---	---	112	6.9*	10 / 0.50	4.1 / 0.34	5.5 / 0.24	1.1 / 0.03	0 / 0.00	57 / 0.93	5.8 / 0.12	2.2 / 0.06	0.4 / 0.01	0.1 / 0.01	0.1 / ----	26 / --	Fe 0.00 Zn 0.20 Cu 0.02	83[b]	22	42	0	--		
7/1-14	10,430	--	---	---	111	7.0*	10 / 0.50	4.6 / 0.38	5.7 / 0.25	1.1 / 0.03	0 / 0.00	59 / 0.97	6.7 / 0.14	2.8 / 0.08	0.3 / 0.00	0.1 / 0.01	0.1 / ----	28 / --	Fe 0.00 Zn 0.23 Cu 0.03	88[b]	22	44	0	--		
7/15-31	10,910	--	---	---	106	7.0*	10 / 0.50	4.4 / 0.36	4.9 / 0.21	1.1 / 0.03	0 / 0.00	55 / 0.90	6.7 / 0.14	1.0 / 0.03	0.7 / 0.01	0.1 / 0.01	0.1 / ----	27 / --	Fe 0.00 Zn 0.10 Cu 0.03	83[b]	19	43	0	--		
8/1-15	11,810	--	---	---	104	7.6*	10 / 0.50	3.9 / 0.32	5.3 / 0.23	0.7 / 0.02	0 / 0.00	55 / 0.90	2.9 / 0.06	3.8 / 0.11	0.5 / 0.01	0.0 / 0.00	0.0 / ----	23 / --	Fe 0.02 Zn 0.07 Cu 0.00	77[b]	21	41	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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[a]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily									SACRAMENTO RIVER AT BEND (STA. 12c cont.)																USGS
8/16-31	11,800	--	---	---	104	7.3*	9.6 / 0.48	4.4 / 0.36	4.7 / 0.20	0.9 / 0.02	0 / 0.00	57 / 0.93	2.9 / 0.06	3.6 / 0.10	0.3 / 0.00	0.0 / 0.00	0.0 / ----	25 / --	Fe 0.00 Zn 0.05 Cu 0.01	79[b]	19	42	0	--		
9/1-14	11,290	--	---	---	103	7.5*	9.6 / 0.48	4.1 / 0.34	4.6 / 0.20	0.6 / 0.02	0 / 0.00	55 / 0.90	2.3 / 0.05	3.9 / 0.11	0.5 / 0.01	0.0 / 0.00	0.0 / ----	23 / --	Fe 0.00 Zn 0.07 Cu 0.01	76[b]	19	41	0	--		
9/15-28	9,320	---	---	---	111	7.4*	9.6 / 0.48	4.7 / 0.39	5.1 / 0.22	0.6 / 0.02	0 / 0.00	58 / 0.95	1.9 / 0.04	4.8 / 0.14	0.6 / 0.01	0.0 / 0.00	0.0 / ----	28 / --	Fe 0.01 Zn 0.11 Cu 0.02	84[b]	20	43	0	--		
10/17-31	8,830	--	---	---	108	7.5*	10 / 0.50	4.1 / 0.34	5.2 / 0.23	1.1 / 0.03	0 / 0.00	59 / 0.97	1.9 / 0.04	2.3 / 0.06	0.1 / 0.00	0.1 / 0.01	0.0 / ----	28 / ---	Zn 0.16 Al 0.01	82[b]	21	42	0	--		
11/1-15	8,170	--	---	---	109	6.9*	10 / 0.50	5.1 / 0.42	5.4 / 0.23	0.9 / 0.02	0 / 0.00	59 / 0.97	5.8 / 0.12	2.2 / 0.06	0.2 / 0.00	0.1 / 0.01	0.0 / ----	28 / --	Fe 0.00	87[b]	20	46	0	--		
11/16-30	8,080	--	---	---	122	7.0*	11 / 0.55	5.5 / 0.45	6.5 / 0.28	1.2 / 0.03	0 / 0.00	66 / 1.08	5.8 / 0.12	3.0 / 0.08	0.0 / 0.00	0.1 / 0.01	0.0 / ----	31 / --	Fe 0.00	97[b]	21	50	0	--		
12/1-13	7,740	--	---	---	132	7.2*	12 / 0.60	4.6 / 0.38	7.5 / 0.33	1.6 / 0.04	0 / 0.00	70 / 1.15	5.0 / 0.10	3.5 / 0.10	0.1 / 0.00	0.1 / 0.00	0.1 / ----	35 / --	Fe 0.02 Zn 0.17 Cu 0.02	104[b]	24	49	0	--		
12/14-22	6,870	--	---	---	135	7.2*	12 / 0.60	6.6 / 0.54	8.4 / 0.37	1.7 / 0.04	0 / 0.00	72 / 1.18	10 / 0.21	3.8 / 0.11	0.01 / 0.00	0.2 / 0.01	0.0 / ----	39 / --	Fe 0.01 Zn 0.13 Cu 0.04	117[b]	24	57	0	--		
12/23-27	5,920	--	---	---	129	6.9*	11 / 0.55	5.0 / 0.41	7.9 / 0.34	3.0 / 0.08	0 / 0.00	60 / 0.98	10 / 0.21	5.2 / 0.15	1.2 / 0.02	0.2 / 0.01	0.1 / ----	36 / --	Fe 0.03 Zn 0.09 Cu 0.04	110[b]	25	48	0	--		
12/28	5,600	--	---	---	179	7.3*	15 / 0.75	6.9 / 0.57	11 / 0.48	2.2 / 0.06	0 / 0.00	84 / 1.38	11 / 0.23	8.0 / 0.23	1.3 / 0.02	---	0.0 / ----	45 / --	Zn 0.29	141[b]	26	66	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						SACRAMENTO RIVER AT BUTTE CITY (STA. 87a)																			USGS
1/15-24	18,310	---	---	---	156	7.3*	13 / 0.65	6.4 / 0.53	7.8 / 0.34	1.7 / 0.04	0 / 0.00	76 / 1.25	9.6 / 0.20	5.0 / 0.14	0.9 / 0.01	0.1 / 0.01	0.00 / ---	28 / --	Fe 0.06	110[b]	22	59	0	---		
1/26-27	58,600	---	---	---	108	7.5*	9.6 / 0.48	4.4 / 0.36	5.2 / 0.23	---	0 / 0.00	54 / 0.89	---	---	---	---	---	---		104[c]	21	42	0	---		
1/28-30	44,130	---	---	---	146	7.2*	14 / 0.70	6.1 / 0.50	7.8 / 0.34	2.1 / 0.05	0 / 0.00	66 / 1.08	16 / 0.33	7.0 / 0.20	0.4 / 0.01	---	0.00 / ---	26 / --	Fe 0.14	112[b]	21	60	6	---		
2/1-3	65,030	---	---	---	141	7.3*	13 / 0.65	5.0 / 0.41	6.2 / 0.27	1.7 / 0.04	0 / 0.00	64 / 1.05	3.8 / 0.08	8.4 / 0.24	0.4 / 0.01	---	0.0 / ---	17 / --	Fe 0.03	88[b]	20	53	1	---		
2/4	91,400	---	---	---	122	7.2*	10 / 0.50	5.1 / 0.42	6.2 / 0.27	---	0 / 0.00	61 / 1.00	---	---	---	---	---	---		81[c]	23	46	0	---		
2/5-6	115,000	---	---	---	128	7.5*	12 / 0.60	4.7 / 0.39	6.1 / 0.27	1.4 / 0.04	0 / 0.00	60 / 0.98	3.8 / 0.08	7.4 / 0.21	0.2 / 0.01	---	0.0 / ---	14 / --	Fe 0.05	80[b]	21	49	0	---		
2/7-16	98,750	---	---	---	132	7.1*	13 / 0.65	4.6 / 0.38	6.8 / 0.30	1.6 / 0.04	0 / 0.00	62 / 1.02	7.7 / 0.16	6.8 / 0.19	0.9 / 0.01	0.0 / 0.00	0.0 / ---	21 / --	Fe 0.04	93[b]	22	51	0	---		
2/19-28	123,030	---	---	---	128	7.2*	13 / 0.65	4.6 / 0.38	5.6 / 0.24	1.6 / 0.04	0 / 0.00	63 / 1.03	8.6 / 0.18	4.5 / 0.13	1.2 / 0.02	0.0 / 0.00	0.0 / ---	19 / --	Fe 0.07	89[b]	18	51	0	---		
3/3-6	49,780	---	---	---	145	7.3*	13 / 0.65	6.2 / 0.51	7.2 / 0.31	1.8 / 0.05	0 / 0.00	73 / 1.20	9.6 / 0.20	4.0 / 0.11	1.5 / 0.02	0.0 / 0.00	0.0 / ---	22 / --	Fe 0.04	106[b]	20	58	0	---		
3/7-20	20,990	---	---	---	171	7.2*	16 / 0.80	6.6 / 0.54	7.8 / 0.34	1.6 / 0.04	0 / 0.00	86 / 1.41	9.6 / 0.20	5.3 / 0.15	1.5 / 0.02	0.0 / 0.00	0.0 / ---	24 / --	Fe 0.02	114[b]	20	67	0	---		
3/22	65,100	---	---	---	118	7.2*	11 / 0.55	4.7 / 0.39	5.8 / 0.25	---	0 / 0.00	60 / 0.98	---	---	---	---	---	---		74[c]	21	47	0	---		
3/24-29	40,750	---	---	---	138	7.3*	12 / 0.60	6.2 / 0.51	7.1 / 0.31	1.5 / 0.04	0 / 0.00	69 / 1.13	9.6 / 0.20	4.3 / 0.12	0.8 / 0.01	0.0 / 0.00	0.0 / ---	23 / --	Fe 0.05	99[b]	21	55	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents in parts per million / equivalents per million (shown as ppm/epm)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
1958	Average Mean Daily																									USGS
							SACRAMENTO RIVER AT BUTTE CITY (STA. 87a cont.)																			
4/7-10	79,480	---	---	---	128	7.4*	12/0.60	5.4/0.44	5.6/0.24	1.3/0.03	0/0.00	62/1.02	6.7/0.14	3.7/0.10	0.9/0.01	0.1/0.01	0.1/---	22/---	Fe 0.04	89[b]	18	52	0	---		
4/11-27	22,550	---	---	---	154	7.3*	15/0.75	6.2/0.51	6.6/0.29	1.3/0.03	0/0.00	75/1.23	9.2/0.19	4.5/0.13	1.2/0.02	0.1/0.01	0.0/---	25/---	Fe 0.03	106[b]	18	63	1	---		
4/28-30	18,030	---	---	---	150	7.2*	14/0.70	6.3/0.52	7.0/0.30	1.6/0.04	0/0.00	74/1.21	9.0/0.19	4.0/0.11	1.3/0.02	0.1/0.01	0.1/---	26/---	Fe 0.03	105[b]	19	61	0	---		
5/1-10	16,270	---	---	---	138	7.6*	13/0.65	5.5/0.45	6.4/0.28	1.6/0.04	0/0.00	68/1.11	7.7/0.16	3.6/0.10	1.1/0.02	0.1/0.01	0.1/---	25/---	Fe 0.02	97[b]	20	55	0	---		
5/11-29	18,510	---	---	---	116	7.2*	11/0.55	4.6/0.38	5.6/0.24	1.3/0.03	0/0.00	59/0.97	5.4/0.11	3.0/0.08	0.7/0.01	0.1/0.01	0.1/---	24/---	Fe 0.02	85[b]	20	47	0	---		
5/30-31	13,600	---	---	---	132	7.4*	13/0.65	5.0/0.41	6.4/0.28	1.3/0.03	0/0.00	67/1.10	6.7/0.14	2.4/0.07	0.5/0.01	---	0.1/---	25/---		93[b]	20	53	0	---		
6/2-10	12,830	---	---	---	125	7.2*	9.2/0.46	7.1/0.58	5.8/0.25	1.2/0.03	0/0.00	64/1.05	5.8/0.12	4.5/0.13	0.8/0.01	0.0/0.00	0.0/---	27/---	Fe 0.07	93[b]	19	52	0	---		
6/11-19	11,940	---	---	---	125	7.1*	12/0.60	4.9/0.40	5.4/0.23	1.2/0.03	0/0.00	64/1.05	3.8/0.08	4.5/0.13	0.7/0.01	0.0/0.00	0.0/---	28/---	Fe 0.07	93[b]	18	50	0	---		
6/20-30	8,690	---	---	---	133	6.8*	9.2/0.46	7.5/0.62	6.4/0.28	1.6/0.04	0/0.00	66/1.08	9.6/0.20	5.0/0.14	0.8/0.01	0.0/0.00	0.1/---	27/---	Fe 0.07	100[b]	20	54	0	---		
7/2-15	8,120	---	---	---	126	6.9*	9.6/0.48	6.8/0.56	5.6/0.24	1.2/0.03	0/0.00	64/1.05	5.8/0.12	4.5/0.13	0.6/0.01	0.0/0.00	0.2/---	26/---	Fe 0.04	92[b]	18	52	0	---		
7/16-31	9,060	---	---	---	121	6.7*	10/0.50	5.6/0.46	5.4/0.23	0.9/0.02	0/0.00	62/1.02	3.8/0.08	4.0/0.11	1.0/0.02	0.0/0.00	0.1/---	27/---	Fe 0.01	89[b]	19	48	0	---		
8/1-15	9,560	---	---	---	119	7.0*	11/0.55	4.4/0.36	5.3/0.23	0.8/0.02	0/0.00	60/0.98	4.8/0.10	3.3/0.09	1.4/0.02	0.0/0.00	0.0/---	25/---	Fe 0.01	86[b]	20	46	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily																									USGS
							SACRAMENTO RIVER AT BUTTE CITY (STA. 87a cont.)																			
8/16-30	9,720	---	---	---	117	7.1*	9.9/0.49	4.9/0.40	5.6/0.24	0.8/0.02	0/0.00	61/1.00	4.2/0.09	2.7/0.08	0.6/0.01	0.0/0.00	0.1/---	25/--	Fe 0.01	84[b]	21	45	0	---		
9/1-15	9,700	---	---	---	121	7.3*	11/0.55	4.5/0.37	6.1/0.27	1.2/0.03	0/0.00	62/1.02	4.8/0.10	3.8/0.11	1.5/0.02	0.0/0.00	0.1/---	25/—	Fe 0.00	89[t]	22	46	0	---		
9/17-30	8,370	---	---	---	120	7.3*	10/0.50	5.6/0.46	5.4/0.23	1.1/0.03	0/0.00	66/1.08	2.3/0.05	4.4/0.12	0.6/0.01	0.0/0.00	0.0/---	26/--	Fe 0.00	88[b]	19	48	0	---		
10/1-15	7,790	---	---	---	120	7.0*	11/0.55	5.5/0.45	5.6/0.24	1.2/0.03	0/0.00	59/0.97	7.7/0.16	4.0/0.11	2.2/0.04	0.1/0.01	0.0/—	24/—	Fe 0.04 Zn 0.05 Al 0.02 a	90[b]	19	50	2	---		
10/16-29	8,370	---	---	---	122	7.1*	12/0.60	3.9/0.32	6.3/0.27	1.4/0.04	0/0.00	60/0.98	5.8/0.12	4.0/0.11	1.5/0.02	0.0/0.00	0.0/—	26/—	Fe 0.10 Zn 0.05 a	91[b]	22	46	0	---		
11/1-14	7,800	---	---	---	125	7.3*	11/0.55	5.0/0.41	5.8/0.25	1.4/0.04	0/0.00	60/0.98	6.7/0.14	5.0/0.14	1.3/0.02	0.0/0.00	0.0/—	27/—	Fe 0.10	93[b]	20	48	0	---		
11/17-25	7,790	---	---	---	133	6.7*	12/0.60	4.4/0.36	7.0/0.30	1.5/0.04	0/0.00	65/1.07	4.8/0.10	4.0/0.11	1.1/0.02	0.0/0.00	0.0/---	28/—	Fe 0.09	95[b]	23	48	0	---		
12/1-10	7,620	---	---	---	145	7.4*	12/0.60	6.3/0.52	7.8/0.34	1.6/0.04	0/0.00	76/1.25	1.9/0.04	6.0/0.17	1.3/0.02	0.1/0.01	0.0/---	30/—	Fe 0.01	104[b]	23	56	0	---		
12/11-29	6,740	---	---	---	145	7.9*	12/0.60	7.3/0.60	8.3/0.36	1.4/0.04	0/0.00	80/1.31	4.8/0.10	6.0/0.17	1.3/0.02	0.1/0.01	0.0/---	32/—	Fe 0.01	112[b]	22	60	0	---		
12/30, 1/2-5/59	5,810	---	---	---	160	7.7*	13/0.65	7.7/0.63	8.8/0.38	1.3/0.03	0/0.00	82/1.34	6.7/0.14	6.5/0.18	1.1/0.02	0.1/0.01	0.0/---	32/—	Fe 0.00	117[b]	22	64	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SACRAMENTO RIVER AT COLUSA (STA. 13B)															USGS
10/3 1315	7,720	64	9.3	97	113	7.6	9.6 / 0.48	5.4 / 0.44	5.1 / 0.22	0.9 / 0.02	0 / 0.00	62 / 1.02	2.9 / 0.06	3.0 / 0.08	0.2 / 0.00	0.0 / 0.00	0.0 / ---	23 / ---		81[b]	19	46	0	---		
11/3 1010	8,140	57	9.1	87	116	7.1*	10 / 0.50	5.1 / 0.42	5.1 / 0.22	0.9 / 0.02	0 / 0.00	62 / 1.02	2.9 / 0.06	4.0 / 0.11	0.0 / 0.00	0.0 / 0.00	0.0 / ---	24 / ---		83[b]	19	46	0	---		
12/1 1045	7,820	52	10.2	92	136	7.6*	12 / 0.60	6.3 / 0.52	7.4 / 0.32	1.3 / 0.03	0 / 0.00	72 / 1.18	8.6 / 0.18	4.5 / 0.13	0.4 / 0.01	0.0 / 0.00	0.0 / ---	34 / ---		110[b]	22	56	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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f Field pH except when noted with *

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SACRAMENTO RIVER AT DELTA (STA.11)															USGS
1/16 1245	1,610	46	---	---	93.3	7.4	---	---	3.6 / 0.16	---	0 / 0.00	50 / 0.82	---	3.0 / 0.08	---	---	0.09 / ---	---		---	17	40	0	5	Maximum 2400. Minimum 0.23 Median 62.	
2/12 1320	10,600	50	11.5	101	55.7	7.2	---	---	1.6 / 0.07	---	0 / 0.00	32 / 0.52	---	1.5 / 0.04	---	---	0.02 / ---	---		---	10	30	4	20		
3/5 0925	2,540	47	12.8	108	74.9	7.2	---	---	2.8 / 0.12	---	0 / 0.00	40 / 0.66	---	3.1 / 0.09	---	---	0.00 / ---	---		---	16	32	0	7		
4/14 1320	4,620	50	10.8	95	72.1	7.3	---	---	2.7 / 0.12	---	0 / 0.00	40 / 0.66	---	1.5 / 0.04	---	---	0.12 / ---	---		---	16	32	0	40		
5/12 1100	4,100	48	12.1	104	64.6	7.1	3.4 / 0.17	5.4 / 0.44	1.4 / 0.06	0.5 / 0.01	0 / 0.00	35 / 0.57	1.0 / 0.02	2.5 / 0.07	0.3 / 0.00	0 / 0.00	0.02 / ---	15 / ---	Fe 0.03 Al 0.07[a] Zn 0.01 PO_4 0.00	47[b]	9	31	2	25		
6/16 1000	1,780	58	10.2	99	69.5	7.4	---	---	2.3 / 0.10	---	0 / 0.00	38 / 0.62	---	1.0 / 0.03	---	---	0.0 / ---				14	31	0	2		
7/7 0915	688	66	9.7	104	104	7.5	---	---	5.4 / 0.23	---	0 / 0.00	59 / 0.97	---	5.2 / 0.15	---	---	0.1 / ---	---		---	21	42	0	1		
8/4 0840	418	68	9.0	93	124	7.5	---	---	7.3 / 0.32	---	0 / 0.00	68 / 1.11	---	6.2 / 0.17	---	---	0.1 / ---	---		---	24	50	0	3		
9/5 1045	286	62	9.4	96	132	7.5	8.8 / 0.44	6.3 / 0.52	9.4 / 0.41	2.2 / 0.06	0 / 0.00	66 / 1.08	2.9 / 0.06	8.6 / 0.24	0.4 / 0.01	0.0 / 0.00	0.1 / ---	32 / ---	PO_4 0.05 Cu 0.01[a] Fe 0.04	104[b]	29	48	0	1		
10/7 1200	264	---	6.2	---	141	7.6	---	---	9.2 / 0.40	---	0 / 0.00	74 / 1.21	---	7.2 / 0.20	---	---	0.1 / ---	---		---	29	50	0	0.5		
11/6 1345	264	54	10.6	98	135	7.3	---	---	9.0 / 0.39	---	0 / 0.00	70 / 1.15	---	8.0 / 0.23	---	---	0.1 / ---	---		---	28	50	0	30		
12/3 1025	257	48	12.1	104	143	7.3	---	---	9.0 / 0.39	---	0 / 0.00	72 / 1.18	---	8.2 / 0.23	---	---	0.1 / ---	---		---	28	50	0	15		

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b Determined by addition of analyzed constituents.
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TABLE B-14

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SACRAMENTO RIVER NEAR HAMILTON CITY (STA. 13)																			USGS
1/16 0905	22,000	48	11.0	94	136	7.3	---	---	7.3/0.32	---	0/0.00	70/1.15	---	4.0/0.11	---	---	0.05/---	---		---	23	55	0	15		
2/20 1145	138,000	53	10.4	95	94.7	7.3	---	---	4.9/0.21	---	0/0.00	50/0.82	---	0.8/0.02	---	---	0.08/---	---		---	20	41	0	310	Maximum 7000. Minimum 6.2 Median 230.	
3/12 0920	19,100	51	10.5	94	155	7.3	---	---	6.4/0.28	---	0/0.00	77/1.26	---	4.3/0.12	---	---	0.00/---	---		---	18	62	0	25		
4/16 0745	24,600	56	10.0	95	135	7.3	---	---	5.7/0.25	---	0/0.00	72/1.18	---	9.0/0.25	---	---	0.07/---	---		---	18	58	0	38		
5/13 0845	21,200	53	10.3	94	108	7.3	10/0.50	4.1/0.34	5.1/0.22	1.2/0.03	0/0.00	56/0.92	1.0/0.02	4.2/0.12	0.7/0.01	0.0/0.00	0.08/---	20/--	Fe 0.13 Al 0.14 Zn 0.01 PO_4 0.10 a	74[b]	20	42	0	25		
6/17 1040	11,000	63	9.2	95	113	7.5	---	---	5.3/0.23	---	0/0.00	58/0.95	---	2.0/0.06	---	---	0.0/---	---		---	19	50	2	6		
7/15 0925	8,660	63	9.4	97	107	7.3	---	---	5.3/0.23	---	0/0.00	58/0.95	---	2.1/0.06	---	---	0.1/---	---		---	22	40	0	5		
8/12 0855	9,390	60	9.5	94	104	7.3	---	---	5.0/0.22	---	0/0.00	55/0.90	---	3.5/0.10	---	---	0.0/---	---		---	20	42	0	4		
9/9 0805	10,000	60	9.5	95	99.8	7.3	6.8/0.34	5.6/0.46	4.9/0.21	2.1/0.05	0/0.00	54/0.89	2.9/0.06	2.7/0.08	0.1/0.00	0.2/0.01	0.0/---	24/--	Fe 0.07 PO_4 0.00 Al 0.07 a	76[b]	20	40	0	28		
10/13 1400	7,780	61	9.8	99	107	7.3	---	---	4.8/0.21	---	0/0.00	58/0.95	---	3.5/0.10	---	---	0.0/---	---		---	19	42	0	3		
11/10 1350	7,500	57	10.0	96	111	7.3	---	---	5.2/0.23	---	0/0.00	62/1.02	---	3.5/0.10	---	---	0.1/---	---		---	21	44	0	8		
12/11 1520	7,140	55	11.1	104	134	7.5	---	---	7.2/0.31	---	0/0.00	73/1.20	---	5.0/0.14	---	---	0.0/---	---		---	22	56	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
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Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958																										USGS
											SACRAMENTO RIVER AT KESWICK (STA. 12)															
1/16 1400	10,300	50	--	---	124	7.1	---	---	7.3/0.32	---	0/0.00	66/1.08	---	3.0/0.08	---	---	0.12/---	---		---	26	46	0	10	Maximum 2400. Minimum 0.06 Median 0.62	
2/11 1230	42,000	52	12.5	113	118	7.2	---	---	6.5/0.28	---	0/0.00	58/0.95	---	2.5/0.07	---	---	0.04/---	---		---	25	42	0	20		
3/4 1100	22,700	52	12.6	114	102	7.2	---	---	5.5/0.24	---	0/0.00	52/0.85	---	2.2/0.06	---	---	0.00/---	---		---	24	38	0	15		
4/15 0900	9390*	50	12.0	106	101	6.9	---	---	5.2/0.23	---	0/0.00	50/0.82	---	2.8/0.08	---	---	0.02/---	---		---	23	39	0	30		
5/13 1110	14,300	50	11.2	99	96.4	7.2	9.4/0.47	3.4/0.28	4.8/0.21	1.1/0.03	0/0.00	48/0.79	3.8/0.08	3.0/0.08	0.6/0.01	0.0/0.00	0.01/---	20/---	Fe 0.11 Zn 0.05 Al 0.17 PO_4 0.05 a	70[b]	21	37	0	15		
6/10 0630	8,550	50	13.4	118	94.0	7.2	---	---	4.9/0.21	---	0/0.00	47/0.77	---	1.0/0.03	---	---	0.0/---	---		---	22	38	0	10		
7/10 1000	10,300	50	11.4	100	93.4	7.2	---	---	4.3/0.19	---	0/0.00	47/0.77	---	2.1/0.06	---	---	0.0/---	---		---	21	36	0	7		
8/7 0730	11,900	50	10.1	89	93.1	7.1	---	---	4.3/0.19	---	0/0.00	48/0.79	---	2.5/0.07	---	---	0.0/---	---		---	20	38	0	3		
9/4 1515	11,300	52	10.3	98	96.5	7.1	12/0.60	1.9/0.16	4.3/0.19	1.6/0.04	0/0.00	52/0.85	2.9/0.06	2.2/0.06	0.3/0.01	0.2/0.01	0.0/---	22/---	Fe 0.07 Zn 0.02[a] Al 0.04 PO_4 0.05	74[b]	19	38	0	15		
10/6 1630	8,510	58	9.1	88	94.2	7.1	---	---	4.1/0.18	---	0/0.00	47/0.77	---	2.9/0.08	---	---	0.0/---	---		---	19	38	0	1		
11/5 1530	7,610	54	9.1	84	97.5	7.1	---	---	4.3/0.19	---	0/0.00	50/0.82	---	3.0/0.08	---	---	0.0/---	---		---	20	39	0	10		
12/3 0845	7,620	54	9.6	89	117	7.1	---	---	6.1/0.27	---	0/0.00	68/1.11	---	3.2/0.09	---	---	0.0/---	---		---	21	50	0	15		
	*	Mean	Daily																							

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Per-cent sod-ium	Hardness as $CaCO_3$		Tur-bid-ity 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			
1958							SACRAMENTO RIVER AT KNIGHTS LANDING (STA. 14)																		Maximum 7,000. Minimum 6.2 Median 620.	USGS
1/17 1110	22,700	48	10.9	93	143	7.3	---	---	7.7 / 0.33	---	0 / 0.00	71 / 1.16	---	3.5 / 0.10	---	---	0.15 / ---	---		---	22	55	0	27		
2/17 1345	27,900	54	10.7	99	130	7.3	---	---	6.6 / 0.29	---	0 / 0.00	74 / 1.05	---	3.7 / 0.10	---	---	0.05 / ---	---		---	21	53	1	160		
3/13 1135	20,300	52	10.4	94	196	7.5	---	---	9.8 / 0.43	---	0 / 0.00	91 / 1.49	---	7.5 / 0.21	---	---	0.02 / ---	---		---	22	74	0	55		
4/14 0930	24,100	58	9.9	96	142	7.5	---	---	6.2 / 0.27	---	0 / 0.00	74 / 1.21	---	4.8 / 0.14	---	---	0.00 / ---	---		---	18	62	1	40		
5/9 1030	12,800	66	8.8	94	158	7.5	13 / 0.65	6.2 / 0.51	9.0 / 0.39	1.4 / 0.04	0 / 0.00	76 / 1.25	6.7 / 0.14	7.0 / 0.20	0.6 / 0.01	0.2 / 0.01	0.03 / ---	24 / --	Fe 0.16 PO4 0.25 a; Al 0.19; Cu 0.01	105[b]	25	58	0	4		
6/16 1040	10,900	71	8.1	92	156	7.5	---	---	11 / 0.48	---	0 / 0.00	74 / 1.21	---	5.5 / 0.16	---	---	0.1 / ---	---		---	32	52	0	50		
7/16 1130	7,500	77	8.2	98	172	7.3	---	---	12 / 0.52	---	0 / 0.00	83 / 1.36	---	6.0 / 0.17	---	---	0.1 / ---	---		---	31	58	0	35		
8/4 1115	8,660	81	8.2	108	221	7.5	---	---	18 / 0.78	---	0 / 0.00	103 / 1.69	---	9.5 / 0.27	---	---	0.1 / ---	---		---	34	77	0	45		
9/12 1100	12,100	69	8.0	88	206	7.8	16 / 0.80	7.8 / 0.64	16 / 0.70	2.3 / 0.06	0 / 0.00	92 / 1.51	24 / 0.50	9.0 / 0.25	0.2 / 0.00	0.2 / 0.01	0.0 / ---	21 / --	Fe 0.07 Al 0.09 a; PO4 0.10	142[b]	32	72	0	170		
10/6 1200	8,300	65	4.0	41	254	7.9*	---	---	23 / 1.00	---	0 / 0.00	110 / 1.80	---	16 / 0.45	---	---	0.1 / ---	---		---	37	85	0	40		
11/3 1300	8,760	60	8.3	83	283	7.6*	---	---	26 / 1.13	---	0 / 0.00	116 / 1.90	---	14 / 0.39	---	---	0.1 / ---	---		---	40	86	0	10		
12/1 1315	8,630	52	10.3	93	197	8.0*	---	---	14 / 0.61	---	0 / 0.00	94 / 1.54	---	8.8 / 0.25	---	---	0.1 / ---	---		---	30	70	0	60		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents in parts per million / equivalents per million

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958	Average Mean Daily						SACRAMENTO RIVER AT KNIGHTS LANDING (STA. 14)																			USGS
2/1-26	27,060	--	---	---	141	7.1*	12 / 0.60	5.5 / 0.45	7.2 / 0.31	1.6 / 0.04	0 / 0.00	68 / 1.11	5.8 / 0.12	4.5 / 0.13	1.2 / 0.02	0.0 / 0.00	0.00 / ----	22 / --	Fe 0.07	93[b]	22	53	0			
2/27-28, 3/1-4	27,470	--	---	---	154	7.1*	15 / 0.75	5.1 / 0.42	8.1 / 0.35	1.6 / 0.04	0 / 0.00	73 / 1.20	6.7 / 0.14	5.3 / 0.15	1.1 / 0.02	0.0 / 0.00	0.02 / ----	22 / --	Fe 0.08	101[b]	22	59	0	--		
3/5-14	22,350	--	---	---	187	7.6*	17 / 0.85	7.5 / 0.62	9.2 / 0.40	1.5 / 0.04	0 / 0.00	89 / 1.46	7.7 / 0.16	7.3 / 0.21	0.9 / 0.01	0.0 / 0.00	0.1 / ----	26 / --	Fe 0.05	121[b]	21	73	0	--		
3/15-31	21,840	--	---	---	144	7.5*	13 / 0.65	5.7 / 0.47	7.3 / 0.32	1.4 / 0.04	0 / 0.00	67 / 1.10	8.6 / 0.18	5.5 / 0.16	0.9 / 0.01	0.0 / 0.00	0.0 / ----	22 / --	Fe 0.09	97[b]	22	56	1	--		
4/1-30	23,170	--	---	---	174	7.1*	15 / 0.75	7.2 / 0.59	7.8 / 0.34	0.9 / 0.02	0 / 0.00	81 / 1.33	11 / 0.23	6.5 / 0.18	0.6 / 0.01	0.1 / 0.01	0.1 / ----	26 / ---	Fe 0.01	115[b]	20	67	1	--		
5/1-6	13,700	--	---	---	167	7.4*	14 / 0.70	6.6 / 0.54	8.4 / 0.37	1.3 / 0.03	0 / 0.00	78 / 1.28	11 / 0.23	5.8 / 0.16	0.1 / 0.00	0.1 / 0.01	0.1 / ----	23 / --	Zn 0.03 Al 0.05	108[b]	23	62	0	--		
5/7-14	14,860	--	---	---	148	7.7*	13 / 0.65	5.0 / 0.41	7.8 / 0.34	0.7 / 0.02	0 / 0.00	67 / 1.10	6.7 / 0.14	5.9 / 0.17	0.4 / 0.01	0.1 / 0.01	0.1 / ----	22 / --	Fe 0.01 Al 0.04 Zn 0.05 a	95[b]	24	53	0	--		
12/1-31, 1/1-4/59	7,800	---	----	----	184	7.1*	14 / 0.70	8.5 / 0.70	12 / 0.52	1.3 / 0.03	0 / 0.00	86 / 1.41	13 / 0.27	9.0 / [illegible]	1.1 / 0.02	0.1 / 0.01	0.0 / ---	31 / ---	Fe 0.00	132[c]	27	70	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SACRAMENTO RIVER NEAR REDDING (STA. 12a)															USGS
1/16 1500	10,400	51	---	---	124	7.1	---	---	7.3/0.32	---	0/0.00	66/1.08	---	3.0/0.08	---	---	0.09/---	---		---	26	46	0	10	Maximum 7000+ Minimum 23. Median 230.	
2/11 1345	42,000	52	12.2	110	116	7.2	---	---	6.4/0.28	---	0/0.00	58/0.95	---	3.0/0.08	---	---	0.02/---	---		---	24	44	0	15		
3/4 1400	23,000	56	12.4	117	102	7.2	---	---	5.0/0.22	---	0/0.00	52/0.85	---	2.2/0.06	---	---	0.07/---	---		---	22	40	0	15		
4/15 0950	10,200	50	11.2	99	97.7	7.1	---	---	4.8/0.21	---	0/0.00	47/0.77	---	2.5/0.07	---	---	0.14/---	---		---	21	39	1	40		
5/13 1200	12,900	52	12.1	110	96.0	7.3	9.6/0.48	3.4/0.28	5.1/0.22	1.1/0.03	0/0.00	49/0.80	3.8/0.08	3.5/0.10	0.4/0.01	0.0/0.00	0.06/---	20/--	Fe 0.14 Al 0.14[a] Zn 0.04 PO_4 0.05	71[b]	22	38	0	5		
6/10 0710	8,320	50	11.8	104	95.0	7.2	---	---	4.9/0.21	---	0/0.00	46/0.75	---	1.0/0.03	---	---	0.0/---	---		---	19	44	6	8		
7/10 1000	8,800	52	12.0	108	92.4	7.3	---	---	4.3/0.19	---	0/0.00	48/0.79	---	3.0/0.08	---	---	0.1/---	---		---	20	37	0	3		
8/7 0815	10,300	52	10.5	95	92.5	7.2	---	---	4.2/0.18	---	0/0.00	48/0.79	---	2.5/0.07	---	---	0.0/---	---		---	19	38	0	3		
9/4 1500	10.100	53	11.4	102	90.1	7.1	9.6/0.48	3.4/0.28	3.2/0.14	1.9/0.05	0/0.00	48/0.79	3.8/0.08	2.8/0.08	0.1/0.00	0.2/0.01	0.0/---	21/--	Fe 0.10 Al 0.07[a] Zn 0.03 PO_4 0.00	70[b]	15	38	0	10		
10/6 1730	7460	58	10.5	102	93.1	7.2	---	---	4.0/0.17	---	0/0.00	48/0.79	---	3.0/0.08	---	---	0.0/---	---		---	18	37	0	2		
11/5 1610	6700	58	11.4	110	95.4	7.2	---	---	4.3/0.19	---	0/0.00	50/0.82	---	3.0/0.08	---	---	0.1/---	---		---	20	37	0	10		
12/	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

SACRAMENTO RIVER AT RIO VISTA (STA. 16)

Mineral constituents in parts per million / equivalents per million

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958	Tidal																									USGS
1/17 1045		46	11.1	93	165	7.3	---	---	11 / 0.48	1.5 / 0.04	0 / 0.00	71 / 1.16	---	8.0 / 0.23	---	---	0.19 / ---	---		---	29	56	0	42		
2/13 1020		53	9.8	90	170	7.5	---	---	9.8 / 0.43	---	0 / 0.00	80 / 1.31	---	6.5 / 0.18	---	---	0.12 / ---	---		---	25	65	0	170	Maximum 7000+ Minimum 6.2 Median 230.	
3/6 0950		52	10.5	95	171	7.5	---	---	9.7 / 0.42	---	0 / 0.00	82 / 1.34	---	7.0 / 0.20	---	---	0.09 / ---	---		---	24	68	1	100		
4/2 1140		51	10.3	92	210	7.6	---	---	12 / 0.52	---	0 / 0.00	94 / 1.54	---	11 / 0.31	---	---	0.11 / ---	---		---	25	77	0	275		
5/19 1300		65	9.0	95	144	7.3	8.8 / 0.44	6.3 / 0.52	9.1 / 0.40	1.4 / 0.04	0 / 0.00	61 / 1.00	7.7 / 0.16	8.0 / 0.23	0.8 / 0.01	0.1 / 0.01	0.00 / ---	18 / ---	PO_4 0.10. Al 0.09[a] Fe 0.18. Cu 0.01	90[b]	29	48	0	14		
6/11 1055		66	9.1	97	156	7.3	---	---	11 / 0.48	---	0 / 0.00	70 / 1.15	---	8.0 / 0.23	---	---	0.0 / ---	---		---	31	53	0	16		
7/9 1010		78	8.5	102	156	7.3	---	---	10 / 0.44	---	0 / 0.00	69 / 1.13	---	8.3 / 0.23	---	---	0.1 / ---	---		---	31	50	0	20		
8/6 0825		74	8.3	96	175	7.3	---	---	13 / 0.57	---	0 / 0.00	78 / 1.28	---	11 / 0.31	---	---	0.0 / ---	---		---	31	63	0	10		
9/2 1200		73	7.2	83	193	7.3	15 / 0.75	7.9 / 0.65	13 / 0.57	2.2 / 0.06	0 / 0.00	91 / 1.49	13 / 0.27	10 / 0.28	0.4 / 0.01	0.1 / 0.01	0.0 / ---	26 / ---	PO_4 0.10 Cu 0.02[a] Fe 0.10	133[b]	28	70	0	176		
10/10 0835		67	7.6	79	137	7.5	---	---	7.8 / 0.34	---	0 / 0.00	66 / 1.08	---	7.0 / 0.20	---	---	0.1 / ---	---		---	25	52	0	20		
11/3 0955		62	8.2	83	141	7.2	---	---	7.6 / 0.33	---	0 / 0.00	72 / 1.18	---	6.8 / 0.19	---	---	0.0 / ---	---		---	23	54	0	10		
12/10 1000		52	9.7	88	143	7.2	---	---	8.2 / 0.36	---	0 / 0.00	74 / 1.21	---	6.5 / 0.18	---	---	0.1 / ---	---		---	23	60	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958																										
SACRAMENTO RIVER AT SACRAMENTO (STA. 15)																										USGS
1/30 1520	59,000	50	10.6	93	121	7.3	---	---	6.1 / 0.27	---	0 / 0.00	60 / 0.89	---	4.8 / 0.14	---	---	0.03 / ---	---		---	20	52	8	75	Maximum 7,000+ Minimum 2.3 Median 620	
2/21 1120	81,400	52	10.7	97	74.2	7.1	---	---	2.9 / 0.13	---	0 / 0.00	31 / 0.51	---	2.0 / 0.06	---	---	0.05 / ---	---		---	17	32	7	30		
3/7 0925	62,800	49	10.7	93	114	7.3	---	---	5.0 / 0.22	---	0 / 0.00	57 / 0.93	---	3.8 / 0.11	---	---	0.00 / ---	---		---	20	46	0	65		
4/4 0940	87,100	49	10.8	94	69.5	7.1	---	---	2.2 / 0.10	---	0 / 0.00	32 / 0.56	---	2.0 / 0.06	---	---	0.09 / ---	---		---	15	29	3	30		
5/7 1300	47,400	60	9.9	99	103	7.3	8.8 / 0.44	3.6 / 0.33	5.8 / 0.25	1.0 / 0.03	0 / 0.00	51 / 0.84	2.9 / 0.06	5.0 / 0.14	0.6 / 0.01	0.0 / 0.00	0.00 / ---	18 / ---	PO4 0.10, Al 0.07[a] Fe 0.10, Cu 0.01	71[b]	24	37	0	10		
6/13 1230	34,400	62	8.9	91	107	7.3	---	---	7.3 / 0.32	---	0 / 0.00	45 / 0.74	---	6.0 / 0.17	---	---	0.0 / ---	---		---	30	38	1	16		
7/58	Not sampled																									
8/58	Not sampled																									
9/5 1140	15,400	68	9.1	99	176	7.6	14 / 0.70	7.5 / 0.62	12 / 0.52	2.2 / 0.06	0 / 0.00	86 / 1.41	7.7 / 0.16	9.5 / 0.27	0.2 / 0.00	0.1 / 0.01	0.0 / ---	22 / ---	PO4 0.10, Fe 0.05[a]	117[b]	27	66	0	70		
10/3 1330	12,700	68	8.7	95	140	7.4	---	---	7.9 / 0.34	---	0 / 0.00	70 / 1.15	---	6.8 / 0.19	---	---	0.1 / ---	---		---	25	52	0	10		
11/14 1030	13,800	56	8.7	92	127	7.9	---	---	6.4 / 0.28	---	0 / 0.00	68 / 1.11	---	4.8 / 0.14	---	---	0.0 / ---	---		---	22	50	0	6		
12/5 0935	13,300	52	10.0	90	137	7.7	---	---	7.5 / 0.33	---	0 / 0.00	68 / 1.11	---	6.5 / 0.18	---	---	0.0 / ---	---		---	23	54	0	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily																									USGS
							SACRAMENTO RIVER AT SACRAMENTO (STA. 15)																			
3/1-6	71,850	--	---	---	101	7.2*	9.1 / 0.45	4.0 / 0.33	4.4 / 0.19	1.3 / 0.03	0 / 0.00	52 / 0.85	2.9 / 0.06	3.2 / 0.09	1.0 / 0.02	0.0 / 0.00	0.0 / ----	17 / --	Fe 0.10	69[b]	19	39	0	--		
3/7-21	49,900	--	---	---	148	7.5*	13 / 0.65	6.0 / 0.49	7.1 / 0.31	1.3 / 0.03	0 / 0.00	71 / 1.16	7.7 / 0.16	6.7 / 0.19	0.8 / 0.01	0.0 / 0.00	0.0 / ----	21 / --	Fe 0.05	99[b]	21	57	0	--		
3/22-31	69,330	--	---	---	116	7.2*	9.6 / 0.48	4.5 / 0.37	5.2 / 0.23	1.1 / 0.03	0 / 0.00	54 / 0.89	2.9 / 0.06	4.7 / 0.13	0.6 / 0.01	0.0 / 0.00	0.0 / ----	17 / --	Fe 0.08	73[b]	21	43	0	--		
4/1-10	85,530	--	---	---	88.9	7.2*	7.6 / 0.38	3.6 / 0.30	4.1 / 0.18	1.1 / 0.03	0 / 0.00	40 / 0.66	5.8 / 0.12	3.9 / 0.11	1.0 / 0.02	0.0 / 0.00	0.0 / ----	15 / --	Fe 0.07	62[b]	20	34	1	--		
4/11-20	69,050	--	---	---	116	7.4*	11 / 0.55	4.4 / 0.36	5.5 / 0.24	1.0 / 0.03	0 / 0.00	59 / 0.97	2.9 / 0.06	5.8 / 0.16	0.7 / 0.01	0.0 / 0.00	0.1 / ----	20 / --	Fe 0.05	80[b]	20	45	0	--		
4/21-30	59,510	--	---	---	118	7.3*	11 / 0.55	4.5 / 0.37	5.4 / 0.23	1.0 / 0.03	0 / 0.00	59 / 0.97	3.8 / 0.08	5.8 / 0.16	0.6 / 0.01	0.0 / 0.00	0.1 / ----	20 / --	Fe 0.04	81[b]	19	46	0	--		
5/1-12	47,350	--	---	---	109	7.1*	10 / 0.50	3.8 / 0.31	6.4 / 0.28	1.1 / 0.03	0 / 0.00	52 / 0.85	4.8 / 0.10	6.1 / 0.17	0.6 / 0.01	0.0 / 0.00	0.0 / ----	19 / --	Fe 0.02	78[b]	25	41	0	--		
5/13-19	62,067	--	---	---	91.1	7.1*	8.0 / 0.40	3.4 / 0.28	4.6 / 0.20	0.8 / 0.02	0 / 0.00	41 / 0.67	2.9 / 0.06	5.8 / 0.16	0.6 / 0.01	0.0 / 0.00	0.1 / ----	18 / --	Fe 0.03	64[b]	22	34	0	--		
5/21-31	60,133	--	---	---	85.5	7.3*	7.4 / 0.37	3.2 / 0.26	4.5 / 0.20	0.8 / 0.02	0 / 0.00	39 / 0.64	4.4 / 0.09	5.5 / 0.16	0.6 / 0.01	0.0 / 0.00	0.1 / ----	16 / --	Fe 0.02	62[b]	24	31	0	--		
6/1-8	45,800	--	---	---	113	7.0*	9.5 / 0.47	4.3 / 0.35	6.8 / 0.30	1.1 / 0.03	0 / 0.00	51 / 0.84	5.2 / 0.11	6.3 / 0.18	0.5 / 0.01	0.1 / 0.01	0.1 / ----	18 / --	Fe 0.00	77[b]	26	41	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily																									USGS
											SACRAMENTO RIVER AT SACRAMENTO (STA. 15 cont.)															
6/9-13	35,080	--	---	---	129	7.3*	10 / 0.50	4.9 / 0.40	8.1 / 0.35	1.1 / 0.03	0 / 0.00	58 / 0.95	6.7 / 0.14	7.2 / 0.20	0.5 / 0.01	0.1 / 0.01	0.0 / ----	20 / --	Fe 0.01	88[b]	27	45	0	--		
6/14-23	36,770	--	---	---	113	7.0*	9.2 / 0.46	4.3 / 0.35	6.8 / 0.30	1.3 / 0.03	0 / 0.00	52 / 0.85	4.8 / 0.10	5.3 / 0.15	0.4 / 0.01	0.1 / 0.01	0.1 / ----	18 / --	Fe 0.01	76[b]	26	40	0	--		
6/24-30	22,171	--	---	---	134	7.8*	11 / 0.55	5.1 / 0.42	8.6 / 0.37	1.3 / 0.03	0 / 0.00	60 / 0.98	6.7 / 0.14	6.4 / 0.18	0.5 / 0.01	0.1 / 0.01	0.1 / ----	20 / --	Fe 0.00	90[b]	27	49	0	--		
7/1-10	15,650	--	---	---	161	7.3*	14 / 0.70	5.6 / 0.46	10 / 0.44	1.3 / 0.03	0 / 0.00	71 / 1.16	9.6 / 0.20	9.0 / 0.25	0.4 / 0.01	0.1 / 0.01	0.1 / ----	22 / --	Fe 0.00	107[b]	27	58	0	--		
7/11-20	13,930	--	---	---	165	7.3*	13 / 0.65	6.4 / 0.53	11 / 0.48	1.3 / 0.03	0 / 0.00	74 / 1.21	12 / 0.25	9.0 / 0.25	0.5 / 0.01	0.1 / 0.01	0.1 / ----	22 / --	Fe 0.00	111[b]	28	59	0	--		
7/21-30	13,690	--	---	---	170	7.3*	13 / 0.65	6.7 / 0.55	12 / 0.52	1.3 / 0.03	0 / 0.00	78 / 1.28	8.6 / 0.18	9.0 / 0.25	0.2 / 0.00	0.1 / 0.01	0.1 / ----	24 / --	Fe 0.00	113[b]	30	60	0	--		
8/1-10	14,810	--	---	---	167	6.6*	9.6 / 0.48	8.5 / 0.70	11 / 0.48	0.9 / 0.02	0 / 0.00	76 / 1.25	7.7 / 0.16	9.5 / 0.27	0.4 / 0.01	0.0 / 0.00	0.2 / ----	23 / --	Fe 0.03	108[b]	2[illegible]	59	0	--		
8/11-20	13,820	--	---	---	169	6.7*	10 / 0.50	9.0 / 0.74	11 / 0.48	0.9 / 0.02	0 / 0.00	74 / 1.21	11 / 0.23	10 / 0.28	0.6 / 0.00	0.0 / 0.00	0.3 / ----	23 / --	Fe 0.01	112[b]	28	62	1	--		
8/21-31	14,891	--	---	---	173	6.8*	12 / 0.60	8.3 / 0.68	11 / 0.48	0.9 / 0.02	0 / 0.00	79 / 1.29	9.6 / 0.20	10 / 0.28	0.4 / 0.01	0.0 / 0.00	0.2 / ----	11 / --	Fe 0.01	102[b]	27	64	0	--		
9/1-14	16,557	--	---	---	192	6.9*	13 / 0.65	9.1 / 0.75	13 / 0.57	0.9 / 0.02	0 / 0.00	85 / 1.39	11 / 0.23	12 / 0.34	0.4 / 0.01	0.0 / 0.00	0.1 / ----	11 / --	Fe 0.01	113[b]	29	70	0	--		
9/15-21	16,114	--	---	---	155	6.9*	12 / 0.60	7.3 / 0.60	9.6 / 0.42	0.9 / 0.02	0 / 0.00	72 / 1.18	9.6 / 0.20	8.0 / 0.23	0.7 / 0.01	0.0 / 0.00	0.2 / ----	10 / --	Fe 0.01	93[b]	26	60	1	--		
9/22-30	14,833	--	---	---	133	6.9*	10 / 0.50	5.8 / 0.48	7.0 / 0.30	0.9 / 0.02	0 / 0.00	66 / 1.08	3.8 / 0.08	6.5 / 0.18	0.4 / 0.01	0.0 / 0.00	0.1 / ----	23 / ---	Fe 0.01	91[b]	23	49	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily																									USGS
SACRAMENTO RIVER AT SACRAMENTO (STA. 15 cont.)																										
10/1-10	12,860	---	---	---	140	7.6*	11 / 0.55	5.6 / 0.46	8.0 / 0.35	0.8 / 0.02	0 / 0.00	70 / 1.15	3.5 / 0.07	6.0 / 0.17	0.4 / 0.01	0.1 / 0.01	0.0 / ---	25 / --	Fe 0.02 a	94[b]	25	51	0	--		
10/11-20	13,100	---	---	---	140	7.6*	11 / 0.55	6.0 / 0.49	8.3 / 0.36	1.1 / 0.03	0 / 0.00	70 / 1.15	6.1 / 0.13	5.7 / 0.16	0.4 / 0.01	0.1 / 0.01	0.0 / ---	23 / --	Fe 0.01 Zn 0.01 Al 0.04 a	96[b]	25	52	0	--		
10/21-31	13,172	---	---	---	138	7.9*	12 / 0.60	5.4 / 0.44	7.9 / 0.34	1.2 / 0.03	0 / 0.00	71 / 1.16	5.4 / 0.11	6.0 / 0.17	0.3 / 0.00	0.1 / 0.01	0.0 / ---	23 / --	Fe 0.01 Zn 0.04 Al 0.01 a	96[b]	24	52	0	--		
11/1-15	13,035	---	---	---	134	7.3*	12 / 0.60	5.4 / 0.44	7.1 / 0.31	1.0 / 0.03	0 / 0.00	68 / 1.11	5.8 / 0.12	4.5 / 0.13	2.2 / 0.04	0.0 / 0.00	0.0 / ---	22 / --	Fe 0.00	93[b]	22	52	0	--		
11/16-30	13,613	---	---	---	139	7.1*	12 / 0.60	5.6 / 0.46	7.8 / 0.34	1.3 / 0.03	0 / 0.00	68 / 1.11	5.8 / 0.12	5.5 / 0.16	2.8 / 0.05	0.0 / 0.00	0.1 / ---	23 / --	Fe 0.04	98[b]	24	53	0	--		
12/1-15	13,027	---	---	---	145	7.3*	12 / 0.60	5.8 / 0.48	9.0 / 0.39	1.1 / 0.03	0 / 0.00	73 / 1.20	7.7 / 0.16	5.2 / 0.15	0.2 / 0.00	0.1 / 0.01	0.0 / ---	25 / --	Fe 0.00	102[b]	26	54	0	--		
12/16-28	11,431	---	---	---	162	7.7*	14 / 0.70	5.8 / 0.48	10 / 0.44	1.4 / 0.04	0 / 0.00	80 / 1.31	7.7 / 0.16	6.8 / 0.19	0.3 / 0.00	0.1 / 0.01	0.1 / ---	26 / --	Fe 0.00	111[b]	26	59	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										SACRAMENTO RIVER AT SNODGRASS SLOUGH (STA. 97)															USGS
1/17 0900		46	11.0	92	144	7.5	---	---	8.5 / 0.37	1.4 / 0.04	0 / 0.00	69 / 1.13	---	5.5 / 0.16	---	---	0.13 / ---	---		---	26	51	0	30	Maximum 7000.+ Minimum 2.3 Median 960.	
2/13 0845		51	10.2	91	110	7.3	---	---	5.2 / 0.23	---	0 / 0.00	60 / 0.98	---	3.8 / 0.11	---	---	0.01 / ---	---		---	21	42	0	30		
3/7 1105		52	10.5	95	120	7.3	---	---	5.5 / 0.24	---	0 / 0.00	62 / 1.02	---	4.0 / 0.11	---	---	0.03 / ---	---		---	19	50	0	40		
4/2 0850		51	10.4	93	86.7	7.3	---	---	3.6 / 0.16	---	0 / 0.00	40 / 0.66	---	3.0 / 0.08	---	---	0.00 / ---	---		---	18	37	4	30		
5/19 1525		63	9.5	98	99.3	7.3	8.8 / 0.44	3.5 / 0.29	6.7 / 0.29	1.4 / 0.04	0 / 0.00	43 / 0.70	9.6 / 0.20	5.2 / 0.15	0.3 / 0.00	0.0 / 0.00	0.06 / ---	17 / --	Fe 0.01 Al 0.01 Zn 0.01 PO_4 0.00 a	74[b]	27	37	2	35		
6/11 0830		64	9.1	95	113	7.3	---	---	6.6 / 0.29	---	0 / 0.00	55 / 0.90	---	4.8 / 0.14	---	---	0.0 / ---	---		---	26	40	0	15		
7/9 0715		71	8.4	95	163	7.3	---	---	11 / 0.48	---	0 / 0.00	74 / 1.21	---	9.8 / 0.28	---	---	0.0 / ---	---		---	30	55	0	10		
8/6 1200		73	7.5	86	163	7.3	---	---	11 / 0.48	---	0 / 0.00	74 / 1.21	---	10 / 0.28	---	---	0.2 / ---	---		---	28	62	1	10		
9/2 0820		70	7.1	88	175	7.3	14 / 0.70	6.6 / 0.54	10 / 0.44	0.9 / 0.02	0 / 0.00	79 / 1.29	8.6 / 0.18	10 / 0.28	0.0 / 0.00	0.0 / 0.00	0.1 / ---	21 / ---	Fe 0.02 PO_4 0.25 a	110[b]	26	62	0	9		
10/10 1050		66	7.8	83	138	7.4	---	---	7.2 / 0.31	---	0 / 0.00	66 / 1.08	---	5.8 / 0.16	---	---	0.0 / ---	---		---	22	51	0	9		
11/	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
											SACRAMENTO RIVER AT TOLAND LANDING (STA. 15a)															
1958	Tidal																									USBR
1/3 1120		50	—	—	156		—	—	—	—	—	—	—	—	—	—	—	—		128	—	—	—	—		
1/27 1325		49	—	—	239		—	—	—	—	—	—	—	—	—	—	—	—		220	—	—	—	—		
2/25 1050		57	—	—	170		—	—	—	—	—	—	—	—	—	—	—	—		140	—	—	—	—		
4/1 1515		55	—	—	223		—	—	—	—	—	—	—	—	—	—	—	—		188	—	—	—	—		
4/28 1425		63	—	—	199		—	—	—	—	—	—	—	—	—	—	—	—		116	—	—	—	—		
5/26 1030		63	—	—	141		—	—	—	—	—	—	—	—	—	—	—	—		100	—	—	—	—		
6/30 1015		70	—	—	129		—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—		
7/28 1200		—	—	—	191		—	—	—	—	—	—	—	—	—	—	—	—		160	—	—	—	—		
8/26 1300		78	—	—	206		—	—	—	—	—	—	—	—	—	—	—	—		144	—	—	—	—		
9/29 1355		—	—	—	155		—	—	—	—	—	—	—	—	—	—	—	—		112	—	—	—	—		
10/28 1145		68	—	—	154		—	—	—	—	—	—	—	—	—	—	—	—		120	—	—	—	—		
11/24 1335		52	—	—	151		—	—	—	—	—	—	—	—	—	—	—	—		112	—	—	—	—		
12/9 1045		52	—	—	142		—	—	—	—	—	—	—	—	—	—	—	—		124	—	—	—	—		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SACRAMENTO SLOUGH NEAR KNIGHTS LANDING (STA. 14a)																			USGS
1/17 1030	4,480	47	9.9	84	206	7.3	---	---	14 / 0.61	2.4 / 0.06	0 / 0.00	99 / 1.62	---	10 / 0.28	---	---	0.16 / ---	---		---	29	72	0	38	Maximum 7000+ Minimum 2.3 Median 620.	
2/17 1300	Flooded	54	10.4	96	128	7.3	---	---	5.9 / 0.26	---	0 / 0.00	66 / 1.08	---	3.3 / 0.09	---	---	0.00 / ---	---		---	13	58	4	30		
3/13 1100	3,280	53	9.8	90	227	7.5	---	---	13 / 0.57	---	0 / 0.00	115 / 1.88	---	9.7 / 0.27	---	---	0.01 / ---	---		---	24	88	0	65		
4/14 1020	Flooded	63	9.5	98	140	7.5	---	---	5.8 / 0.25	---	0 / 0.00	70 / 1.15	---	4.2 / 0.12	---	---	0.00 / ---	---		---	18	58	1	40		
5/9 1100	1,900	68	8.3	91	323	7.7	18 / 0.90	13 / 1.04	26 / 1.13	1.4 / 0.04	0 / 0.00	104 / 1.70	7.7 / 0.16	44 / 1.24	0.5 / 0.01	0.2 / 0.01	0.12 / ---	19 / ---	PO_4 0.25 Fe 0.08[a] Al 0.10 Cu 0.02	181[b]	36	97	12	9		
6/16 1145	2,000	79	5.8	71	729	7.7	---	---	66 / 2.87	---	0 / 0.00	223 / 3.65	---	114 / 3.21	---	---	0.1 / ---	---		---	40	212	29	20		
7/16 1100	785	73	7.5	90	347	7.7	---	---	23 / 1.00	---	0 / 0.00	197 / 3.23	---	12 / 0.34	---	---	0.1 / ---	---		---	27	138	0	60		
8/4 1155	812	84	6.8	87	361	7.5	---	---	23 / 1.00	---	0 / 0.00	207 / 3.39	---	14 / 0.39	---	---	0.0 / ---	---		---	25	148	0	35		
9/12 1135	1,090	72	7.5	85	352	7.8	26 / 1.30	19 / 1.58	23 / 1.00	2.9 / 0.07	0 / 0.00	200 / 3.28	8.6 / 0.18	16 / 0.45	0.2 / 0.00	0.2 / 0.01	0.0 / ---	31 / ---	Fe 0.04 Al 0.06[a] PO_4 0.30	226[b]	25	144	0	152		
10/6 1100	247	71	5.8	65	375	7.6*	26 / 1.30	19 / 1.58	24 / 1.04	2.0 / 0.05	0 / 0.00	200 / 3.28	3.8 / 0.08	19 / 0.54	1.0 / 0.02	0.0 / 0.00	0.1 / ---	30 / ---		224[b]	26	144	0	---		
11/3 1205	227	62	8.2	83	337	7.4*	24 / 1.20	17 / 1.37	20 / 0.87	2.5 / 0.06	0 / 0.00	179 / 2.93	6.7 / 0.14	17 / 0.48	1.0 / 0.02	0.0 / 0.00	0.0 / ---	24 / ---		200[b]	25	128	0	---		
12/1 1155	215	49	9.3	81	453	7.8*	32 / 1.60	23 / 1.86	32 / 1.39	1.9 / 0.05	0 / 0.00	232 / 3.80	9.6 / 0.20	30 / 0.85	1.3 / 0.02	0.1 / 0.01	0.0 / ---	27 / ---		271[b]	28	173	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											SALT SLOUGH AT SAN LUIS RANCH (STA. 92a)															USGS
11/10 1410	38	63	5.5	55	1,960	7.4	72 / 3.59	51 / 4.17	273 / 11.88	4.4 / 0.11	0 / 0.00	220 / 3.61	288 / 6.00	360 / 10.15	6.0 / 0.10	0.2 / 0.01	1.0 / ---	25 / --		1,190[b]	60	388	208	---		
12/1 1315	44	54	6.9	64	1,740	7.4	64 / 3.19	44 / 3.61	234 / 10.18	3.6 / 0.09	0 / 0.00	198 / 3.25	219 / 4.56	330 / 9.31	5.0 / 0.08	0.2 / 0.01	0.8 / ---	23 / --		1,020[b]	60	340	178	---		

Mineral constituents in parts per million / equivalents per million

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

s Angeles Dept of Pub Health (LADPH),

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY 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[f]	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[c] 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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SALT SLOUGH AT SAN LUIS RANCH (STA. 92a)															USBR
1/16 1405	81	50	---	---	2,405	7.5*	81 / ----	64 / ----	301 / ----	3.1 / ----	0.0 / ----	187 / ----	469 / ----	376 / ----	1.9 / ----	---	---	---		1,600	58	---	---	---		
2/17 1435	126	64	---	---	2,258	7.5*	81 / ----	61 / ----	313 / ----	2.3 / ----	0.0 / ----	222 / ----	442 / ----	362 / ----	5.0 / ----	---	---	---		1,510	60	---	---	---		
3/18 1530	214	66	---	---	1,529	7.8*	68 / ----	33 / ----	198 / ----	7.4 / ----	0.0 / ----	163 / ----	277 / ----	223 / ----	2.5 / ----	---	---	---		1,000	58	---	---	---		
4/15 1605	801	60	---	---	800	7.3*	37 / ----	21 / ----	90 / ----	2.0 / ----	0.0 / ----	97 / ----	136 / ----	111 / ----	0.6 / ----	---	---	---		506	52	---	---	---		
5/16 0805	636	70	---	---	314	7.2*	15 / ----	7.8 / ----	36 / ----	2.0 / ----	0.0 / ----	64 / ----	22 / ----	48 / ----	0.6 / ----	---	---	---		230	52	---	---	---		
6/12 1630	455	68	---	---	393	6.8*	20 / ----	8.3 / ----	40 / ----	1.6 / ----	0.0 / ----	71 / ----	44 / ----	58 / ----	0.6 / ----	---	---	---		232	50	---	---	---		
7/15 1600	187	78	---	---	670	7.0*	36 / ----	15 / ----	70 / ----	2.7 / ----	0.0 / ----	120 / ----	72 / ----	102 / ----	2.5 / ----	---	---	---		428	49	---	---	---		
8/14 1710	115	84	---	---	896	7.5*	46 / ----	22 / ----	98 / ----	2.7 / ----	0.0 / ----	137 / ----	97 / ----	140 / ----	3.1 / ----	---	---	---		632	50	---	---	---		
9/16 1500	121	78	---	---	930	7.4*	44 / ----	21 / ----	97 / ----	2.3 / ----	0.0 / ----	145 / ----	105 / ----	139 / ----	3.7 / ----	---	---	---		546	51	---	---	---		
10/16 1520	49	68	---	---	1,408	7.7*	57 / ----	34 / ----	178 / ----	2.0 / ----	0.0 / ----	193 / ----	163 / ----	267 / ----	3.1 / ----	---	---	---		944	57	---	---	---		
11/19 1130	32	50	---	---	1,956	8.0*	67 / ----	52 / ----	278 / ----	3.1 / ----	0.0 / ----	227 / ----	269 / ----	419 / ----	2.5 / ----	---	---	---		1,240	61	---	---	---		
12/18 1500	52	54	---	---	1,665	7.2*	64 / ----	28 / ----	221 / ----	2.3 / ----	0.0 / ----	196 / ----	223 / ----	310 / ----	1.9 / ----	---	---	---		1,056	63	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										SAN JOAQUIN RIVER AT ANTIOCH (STA. 28)															USGS
1/17 1310		47	10.3	87	282	7.3	---	---	22 / 0.96	1.9 / 0.05	0 / 0.00	76 / 1.25	---	30 / 0.85	---	---	0.20 / ---	---		---	36	81	19	22	Maximum 7000.+ Minimum 2.3 Median 2400.	
2/13 1210		53	9.3	85	299	7.3	---	---	24 / 1.04	---	0 / 0.00	67 / 1.10	---	36 / 1.02	---	---	0.12 / ---	---		---	37	88	33	50		
3/5 1320		54	9.6	89	332	7.3	---	---	26 / 1.13	---	0 / 0.00	66 / 1.08	---	38 / 1.07	---	---	0.17 / ---	---		---	37	98	44	80		
4/2 1300		50	9.2	81	275	7.3	---	---	22 / 0.96	---	0 / 0.00	67 / 1.10	---	30 / 0.85	---	---	0.08 / ---	---		---	38	79	24	25		
5/19 1200		69	8.3	91	172	7.3	10 / 0.50	5.1 / 0.42	14 / 0.61	1.9 / 0.05	0 / 0.00	54 / 0.89	9.6 / 0.20	18 / 0.51	1.1 / 0.02	0.1 / 0.01	0.11 / ---	17 / ---	PO_4 0.25, Fe 0.23, Cu 0.02, Al 0.18[a]	104[b]	39	46	2	8		
6/11 1150		69	7.8	86	128	7.1	---	---	10 / 0.44	---	0 / 0.00	44 / 0.72	---	14 / 0.39	---	---	0.0 / ---	---		---	39	34	0	24		
7/9 1300		74	8.4	97	157	7.3	---	---	14 / 0.61	---	0 / 0.00	49 / 0.80	---	18 / 0.51	---	---	0.0 / ---	---		---	40	45	5	17		
8/6 0700		73	7.3	83	427	7.3	---	---	52 / 2.26	---	0 / 0.00	68 / 1.11	---	84 / 2.37	---	---	0.0 / ---	---		---	59	78	22	20		
9/3 0715		72	7.1	79	512	7.3	15 / 0.75	13 / 1.05	66 / 2.87	4.3 / 0.11	0 / 0.00	80 / 1.31	27 / 0.56	106 / 2.99	0.9 / 0.01	0.1 / 0.01	0.1 / ---	14 / ---	PO_4 0.20, Fe 0.07, Cu 0.05, Al 0.12[a]	285[b]	60	90	24	6		
10/10 0750		68	7.6	83	287	7.3	---	---	30 / 1.30	---	0 / 0.00	90 / 1.48	---	43 / 1.21	---	---	0.0 / ---	---		---	48	70	0	10		
11/3 1220		65	7.7	81	277	7.2	---	---	28 / 1.22	---	0 / 0.00	74 / 1.21	---	40 / 1.13	---	---	0.3 / ---	---		---	47	70	9	20		
12/10 0800		53	8.8	81	354	7.0	---	---	40 / 1.74	---	0 / 0.00	72 / 1.18	---	59 / 1.66	---	---	0.0 / ---	---		---	52	80	21	50		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported [illegible] as 0.0 / 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily										SAN JOAQUIN RIVER NEAR BIOLA (STA.24a)															USGS
1/1-3,6-17	38	--	---	---	121	7.2*	10 / 0.50	2.1 / 0.17	11 / 0.48	1.9 / 0.05	0 / 0.00	52 / 0.85	1.0 / 0.02	9.2 / 0.26	2.0 / 0.03	0.0 / 0.00	0.0 / ---	15 / --	Fe 0.01	78[b]	40	33	0	--		
1/18-20	201	--	---	---	87.3	7.3*	6.8 / 0.34	1.2 / 0.10	7.4 / 0.32	---	0 / 0.00	30 / 0.49	5.8 / 0.12	8.5 / 0.24	1.3 / 0.02	---	0.1 / ---	11 / --	Fe 0.02	62[c]	43	22	0	--		
1/21	152	--	---	---	135	7.1*	14 / 0.70	2.8 / 0.23	9.0 / 0.39	---	0 / 0.00	27 / 0.44	---	---	----	---	---	---		124[c]	30	47	25	--		
1/22-25	184	--	---	---	67.5	7.0*	5.0 / 0.25	1.0 / 0.08	5.7 / 0.25	1.1 / 0.03	0 / 0.00	22 / 0.36	1.7 / 0.04	6.8 / 0.19	0.8 / 0.01	0.0 / 0.00	0.1 / ---	10 / --	Fe 0.02	43[b]	41	17	0	--		
1/26-31, 2/1-18	90	--	---	---	105	7.1*	7.8 / 0.39	2.1 / 0.17	9.1 / 0.40	1.8 / 0.05	0 / 0.00	45 / 0.74	2.9 / 0.06	7.0 / 0.20	1.1 / 0.02	0.2 / 0.01	0.1 / ---	14 / --	Fe 0.01	68[b]	40	28	0	--		
2/19-25	148	--	---	---	113	7.2*	9.2 / 0.46	2.4 / 0.20	9.1 / 0.40	1.9 / 0.05	0 / 0.00	48 / 0.79	2.9 / 0.06	7.5 / 0.21	0.9 / 0.01	0.1 / 0.01	0.0 / ---	14 / --	Fe 0.01	72[b]	36	33	0	--		
2/26-28	526	--	---	---	123	7.6*	10 / 0.50	3.2 / 0.26	8.8 / 0.38	3.6 / 0.09	0 / 0.00	57 / 0.93	2.9 / 0.06	5.7 / 0.16	1.1 / 0.02	---	0.1 / ---	16 / --		108[c]	31	38	0	--		
3/1-16	170	--	---	---	138	7.3*	11 / 0.55	3.5 / 0.29	11 / 0.48	2.3 / 0.06	0 / 0.00	66 / 1.08	1.9 / 0.04	8.0 / 0.23	1.8 / 0.03	0.1 / 0.01	0.3 / ---	23 / --	Fe 0.04	96[b]	35	42	0	--		
3/17-23	961	--	---	---	111	7.3*	9.6 / 0.48	3.6 / 0.30	9.6 / 0.42	2.9 / 0.07	0 / 0.00	56 / 0.92	7.7 / 0.16	6.0 / 0.17	2.4 / 0.04	0.0 / 0.00	0.1 / ---	20 / --	Fe 0.15	90[b]	33	39	0	--		
3/24-31	4,600	--	---	---	71.2	6.8*	2.4 / 0.12	3.8 / 0.31	5.3 / 0.23	1.5 / 0.04	0 / 0.00	28 / 0.46	3.8 / 0.08	5.5 / 0.16	0.6 / 0.01	0.0 / 0.00	0.2 / ---	14 / --	Fe 0.04	51[b]	33	22	0	--		
4/1-5	5,950	--	---	---	67.2	6.8*	6.4 / 0.32	3.4 / 0.28	5.6 / 0.24	1.9 / 0.05	0 / 0.00	34 / 0.56	7.7 / 0.16	6.5 / 0.18	1.3 / 0.02	0.0 / 0.00	0.1 / ---	17 / --	Fe 0.10	67[b]	27	30	2	--		
4/6-14	7,540	--	---	---	71.2	7.3*	6.7 / 0.33	1.3 / 0.11	4.5 / 0.20	1.0 / 0.03	0 / 0.00	30 / 0.49	1.9 / 0.04	4.5 / 0.13	0.6 / 0.01	0.1 / 0.01	0.1 / ---	14 / --	Fe 0.00	50[b]	30	22	0	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily										SAN JOAQUIN RIVER NEAR BIOLA (STA. 24a)															USGS
4/15-30	7,320	--	---	---	63.4	6.4*	5.7 / 0.28	0.9 / 0.07	4.3 / 0.19	1.0 / 0.03	0 / 0.00	24 / 0.39	1.9 / 0.04	4.5 / 0.13	0.9 / 0.01	0.1 / 0.01	0.1 / ---	14 / --	Fe 0.00	45[b]	33	17	0	--		
5/1-7	6,470	--	---	---	57.1	6.8*	5.2 / 0.26	1.1 / 0.09	3.5 / 0.15	1.2 / 0.03	0 / 0.00	21 / 0.34	2.9 / 0.06	4.0 / 0.11	0.5 / 0.01	0.2 / 0.01	0.1 / ---	15 / --		44[b]	28	17	0	--		
5/8-31, 6/1-8	5,670	--	---	---	42.1	6.7*	3.8 / 0.19	0.5 / 0.04	2.7 / 0.12	1.1 / 0.03	0 / 0.00	16 / 0.26	1.9 / 0.04	2.6 / 0.07	0.7 / 0.01	0.2 / 0.01	0.0 / ---	13 / --		34[b]	32	12	0	--		
6/10-12	3,150	--	---	---	36.8	6.7*	3.2 / 0.16	0.7 / 0.06	2.7 / 0.12	1.2 / 0.03	0 / 0.00	14 / 0.23	1.9 / 0.04	1.5 / 0.04	0.7 / 0.01	0.2 / 0.01	0.0 / ---	11 / --		30[b]	32	11	0	--		
6/13-19	1,640	--	---	---	42.9	6.7*	4.0 / 0.20	1.0 / 0.08	2.7 / 0.12	1.1 / 0.03	0 / 0.00	17 / 0.28	3.5 / 0.07	2.4 / 0.07	0.8 / 0.01	0.2 / 0.01	0.0 / ---	12 / --		36[b]	28	14	0	--		
6/20-29	4,020	--	---	---	98.8	6.9*	7.6 / 0.38	1.0 / 0.08	8.8 / 0.38	1.1 / 0.03	0 / 0.00	33 / 0.54	1.9 / 0.04	8.0 / 0.23	4.2 / 0.07	0.2 / 0.01	0.0 / ---	17 / --		66[b]	44	23	0	--		
7/1-11	683	--	---	---	60.0	6.7*	4.7 / 0.23	1.0 / 0.08	4.3 / 0.19	0.8 / 0.02	0 / 0.00	22 / 0.36	2.9 / 0.06	3.1 / 0.09	1.1 / 0.02	0.1 / 0.01	0.1 / ---	15 / --	Fe 0.01	44[b]	37	16	0	--		
7/12-16	419	--	---	---	63.2	6.6*	5.3 / 0.26	1.1 / 0.09	4.4 / 0.19	0.8 / 0.02	0 / 0.00	24 / 0.39	1.9 / 0.04	4.5 / 0.13	1.1 / 0.02	0.1 / 0.01	0.1 / ---	13 / --		44[b]	34	18	0	--		
7/17-31	162	--	---	---	87.6	7.3*	7.1 / 0.35	1.6 / 0.13	6.8 / 0.30	1.1 / 0.03	0 / 0.00	36 / 0.59	3.8 / 0.08	4.0 / 0.11	0.9 / 0.01	0.1 / 0.01	0.0 / ---	19 / --	Fe 0.01	62[b]	37	24	0	--		
8/1-12	141	--	---	---	84.4	7.5*	7.1 / 0.35	1.5 / 0.12	6.7 / 0.29	0.8 / 0.02	0 / 0.00	38 / 0.62	3.8 / 0.08	3.8 / 0.11	0.9 / 0.01	0.1 / 0.01	0.1 / ---	18 / --	Fe 0.01	62[b]	37	24	0	--		
8/13-30	131	--	---	---	77.4	7.2*	5.8 / 0.29	1.6 / 0.13	6.1 / 0.27	0.7 / 0.02	0 / 0.00	34 / 0.56	1.0 / 0.02	4.0 / 0.11	1.0 / 0.02	0.1 / 0.01	0.1 / ---	16 / --	Fe 0.00	53[b]	38	21	0	--		
9/1-15	135	--	---	---	77.4	7.4*	6.2 / 0.31	1.5 / 0.12	6.3 / 0.27	0.9 / 0.02	0 / 0.00	35 / 0.57	1.0 / 0.02	4.0 / 0.11	0.7 / 0.01	0.1 / 0.01	0.1 / ---	13 / --	Fe 0.00	51[b]	38	22	0	--		
9/18-30	94	--	---	---	86.3	7.4*	6.8 / 0.34	1.7 / 0.14	7.0 / 0.30	1.1 / 0.03	0 / 0.00	38 / 0.62	2.3 / 0.05	4.8 / 0.14	0.9 / 0.01	0.1 / 0.01	0.1 / ---	13 / --	Fe 0.00	57[b]	37	24	0	--		
	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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	N C ppm			
1958	Tidal									SAN JOAQUIN RIVER AT BRANDT BRIDGE (STA. 101a)																USBR
2/26 1130		56	--	--	407	---	--	--	44 --	--	--	--	--	50 --	--	--	--	--		328	47	--	--	--		
5/29 1330		68	--	--	96	---	--	--	8.5 --	--	--	--	--	14 --	--	--	--	--		92	38	--	--	--		
7/31 1030		80	--	--	557	---	--	--	78 --	--	--	--	--	125 --	--	--	--	--		484	61	--	--	--		
9/3 1410		--	--	--	717	---	--	--	78 --	--	--	--	--	117 --	--	--	--	--		460	47	--	--	--		
11/26 930		53	--	--	356	---	--	--	29 --	--	--	--	--	47 --	--	--	--	--		232	35	--	--	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH[f]	Mineral constituents in parts per million / equivalents per million														Total dis-solved solids in ppm[c]	Per-cent sod-ium	Hardness as $CaCO_3$		Tur-bid-ity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	% Sat			Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO_3)	Bicar-bonate (HCO_3)	Sul-fate (SO_4)	Chlo-ride (Cl)	Ni-trate (NO_3)	Fluo-ride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
1958	Not Rated									SAN JOAQUIN RIVER AT CROWS LANDING BRIDGE (STA. 26b)																USBR
1/16		--	---	---	1,036	---	---	---	141 ---	---	---	---	---	160 ---	---	---	---	---		704	59	---	--	--		
2/17 1225		62	---	---	903	---	---	---	113 ---	---	---	---	---	132 ---	---	---	---	---		584	55	---	--	--		
3/17 1305		60	---	---	244	---	---	---	23 ---	---	---	---	---	22 ---	---	---	---	---		212	41	---	--	--		
4/14 1230		68	---	---	103	---	---	---	3.7 ---	---	---	---	---	13 ---	---	---	---	---		88	16	---	--	--		
5/15 1225		70	---	---	173	----	---	---	23 ---	---	---	---	---	22 ---	---	---	---	---		144	58	---	--	--		
6/12 1150		72	---	---	121	---	---	---	9.7 ---	---	---	---	---	14 ---	---	---	---	---		96	35	---	--	--		
7/15 1125		76	---	---	818	---	---	---	87 ---	---	---	---	---	134 ---	---	----	---	---		520	46	---	--	--		
8/14 1255		78	---	---	918	---	---	---	112 --	---	---	---	---	155 --	---	---	---	---		500	53	---	--	--		
9/30 1030		72	---	---	599	---	---	---	66 ---	---	---	---	---	80 ---	---	---	---	---		396	48	---	--	--		
10/16 1140		68	---	---	655	---	---	---	75 ---	---	---	---	---	114 ---	---	---	---	---		436	49	---	--	--		
11/18 1235		52	---	---	1,220	---	---	---	170 ---	---	---	---	---	50 ---	---	---	---	---		800	61	---	--	--		
12/18 1250		54	---	---	1,227	---	---	---	155 ---	---	---	---	---	214 ---	---	---	---	---		876	55	---	--	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST		Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
								Mineral constituents in parts per million / equivalents per million																			
1958		Mean Daily						SAN JOAQUIN RIVER NEAR DOS PALOS (STA. 25a)																			USGS
1/27	1140	12	57	9.8	94	459	7.5	---	---	49/2.13	---	0/0.00	94/1.54	---	61/1.72	---	---	0.18/---	---		---	51	102	25	20	Maximum 7000. Minimum 2.3 Median 230.	
2/17	1200	14	63	9.4	98	491	7.7	---	---	55/2.39	---	0/0.00	108/1.77	---	67/1.89	---	---	0.02/---	---		---	52	112	23	25		
3/3	1415	26	59	9.9	98	485	7.5	---	---	55/2.39	---	0/0.00	110/1.80	---	67/1.89	---	---	0.00/---	---		---	52	109	19	20		
4/7	1215	5,940	53	9.7	88	181	7.3	---	---	15/0.65	---	0/0.00	43/0.70	---	9.2/0.26	---	---	0.00/---	---		---	41	47	12	15		
5/5	1240	5,910	64	8.9	93	97.1	7.1	6.0/0.30	2.2/0.18	9.7/0.42	1.6/0.04	0/0.00	27/0.44	14/0.29	7.0/0.20	0.5/0.01	0.3/0.02	0.23/---	13/--	Fe 0.11 PO_4 0.25 Al 0.18 Cu 0.04 a	68[b]	45	24	2	9		
6/9	1255	5,200	66	9.0	96	43.2	7.0	---	---	3.4/0.15	---	0/0.00	19/0.31	---	2.5/0.07	---	---	0.0/---	---		---	37	13	0	20		
7/7	1300	12	80	8.0	98	202	6.9	---	---	21/0.91	---	0/0.00	55/0.90	---	21/0.59	---	---	0.0/---	---		---	49	48	3	63		
8/5	1245	5	82	9.7	122	352	8.1	---	---	34/1.48	---	0/0.00	83/1.36	---	47/1.33	---	---	0.2/---	---		---	47	84	16	15		
9/2	1400	12	83	10.0	126	400	8.3	22/1.10	11/0.90	40/1.74	3.4/0.09	0/0.00	96/1.57	37/0.77	52/1.47	0.5/0.01	0.1/0.01	0.2/---	5.9/---	Zn 0.01 a PO_4 0.15	219[b]	45	100	21	24		
10/6	1525	12	60	10.8	108	468	7.9	---	---	52/2.26	---	0/0.00	110/1.80	---	63/1.78	---	---	0.1/---	---		---	50	112	22	20		
11/		Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE (STA. 25c)																			USGS
1/1-14	106	---	---	---	2130	7.4*	77 / 3.84	51 / 4.16	292 / 12.70	6.5 / 0.17	0 / 0.00	235 / 3.85	265 / 5.52	388 / 10.94	23 / 0.37	0.2 / 0.01	0.84 / ---	26 / ---	Fe 0.01	1250[b]	61	400	207	---		
1/15-25	236	---	---	---	1600	7.3*	62 / 3.09	38 / 3.15	222 / 9.66	6.8 / 0.17	0 / 0.00	241 / 3.95	227 / 4.73	258 / 7.28	28 / 0.45	0.2 / 0.01	0.92 / ---	21 / ---	Fe 0.02	983[b]	59	312	114	---		
1/28 1325	1,090	---	---	---	452	6.9*	22 / 1.10	9.0 / 0.74	57 / 2.48	4.5 / 0.12	0 / 0.00	104 / 1.70	56 / 1.17	53 / 1.49	3.1 / 0.05	0.2 / 0.01	0.28 / ---	18 / ---	Fe 0.25	274[b]	56	92	7	---		
1/26-31, 2/1-4	941	---	---	---	567	7.2*	26 / 1.30	14 / 1.18	67 / 2.91	4.2 / 0.11	0 / 0.00	130 / 2.13	65 / 1.35	66 / 1.86	1.9 / 0.03	0.2 / 0.01	0.35 / ---	20 / ---	Fe 0.08	329[b]	53	124	17	---		
2/5-7	1,473	---	---	---	387	7.1*	18 / 0.90	9.5 / 0.78	45 / 1.96	4.0 / 0.10	0 / 0.00	100 / 1.64	40 / 0.83	42 / 1.18	2.3 / 0.04	0.2 / 0.01	0.22 / ---	19 / ---	Fe 0.09	229[b]	52	84	2	---		
2/11-20	660	---	---	---	820	6.9*	37 / 1.85	21 / 1.71	100 / 4.35	4.2 / 0.11	0 / 0.00	159 / 2.61	102 / 2.12	105 / 2.96	2.8 / 0.05	0.2 / 0.01	0.46 / ---	24 / ---	Fe 0.05	475[b]	54	178	48	---		
2/21-22	2,210	---	---	---	195	7.5*	9.6 / 0.48	5.8 / 0.48	21 / 0.91	---	0 / 0.00	79 / 1.29	---	---	---	---	---	---		---		48	0	---		
2/23-28	1,778	---	---	---	462	6.9*	22 / 1.10	13 / 1.06	52 / 2.26	4.1 / 0.10	0 / 0.00	114 / 1.87	50 / 1.04	54 / 1.52	2.4 / 0.04	0.3 / 0.02	0.21 / ---	24 / ---	Fe 0.22	278[b]	50	108	15	---		
3/1-3	1,896	---	---	---	475	7.3*	25 / 1.25	11 / 0.92	55 / 2.39	3.2 / 0.08	0 / 0.00	115 / 1.88	47 / 0.98	57 / 1.61	2.1 / 0.03	---	0.4 / ---	23 / ---	Fe 0.09	281[b]	52	109	15	---		
3/4-15	798	---	---	---	970	7.5*	47 / 2.35	22 / 1.77	122 / 5.31	4.2 / 0.11	0 / 0.00	161 / 2.64	143 / 2.98	133 / 3.75	2.9 / 0.05	0.2 / 0.01	0.8 / ---	22 / ---	Fe 0.01	576[b]	56	206	74	---		
3/16-31, 4/1-3	4,018	---	---	---	238	7.1*	15 / 0.75	5.5 / 0.45	23 / 1.04	3.2 / 0.08	0 / 0.00	82 / 1.34	17 / 0.35	20 / 0.56	1.5 / 0.02	0.2 / 0.01	0.2 / ---	18 / ---	Fe 0.16	144[b]	44	60	0	---		
4/4-7	5,528	---	---	---	140	7.1*	10 / 0.50	3.6 / 0.30	13 / 0.57	3.0 / 0.07	0 / 0.00	66 / 1.08	4.8 / 0.10	6.6 / 0.19	1.6 / 0.03	0.2 / 0.01	0.1 / ---	16 / ---	Fe 0.17	92[b]	40	40	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958									SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE (STA. 25c cont.)																	USGS
4/8-24	4,514	---	---	---	196	7.0*	14 / 0.70	4.9 / 0.40	18 / 0.78	3.3 / 0.08	0 / 0.00	77 / 1.26	12 / 0.25	12 / 0.34	2.9 / 0.05	0.2 / 0.01	0.0 / ---	17 / ---	Fe 0.07	122[b]	40	55	0	---		
4/26-30	3,844	---	---	---	152	6.9*	12 / 0.60	3.0 / 0.25	13 / 0.57	2.3 / 0.06	0 / 0.00	56 / 0.92	6.7 / 0.14	12 / 0.34	1.4 / 0.02	0.2 / 0.01	0.1 / ---	14 / ---	Fe 0.07	93[b]	39	42	0	---		
5/1-10	3,748	---	---	---	154	7.2*	10 / 0.50	4.1 / 0.34	13 / 0.57	2.2 / 0.06	0 / 0.00	51 / 0.84	12 / 0.25	11 / 0.31	1.8 / 0.03	0.2 / 0.01	0.1 / ---	17 / ---	Fe 0.08	96[b]	39	42	0	---		
5/11-29	3,585	---	---	---	132	6.9*	10 / 0.50	2.9 / 0.24	11 / 0.48	1.9 / 0.05	0 / 0.00	45 / 0.74	8.6 / 0.18	9.8 / 0.28	1.6 / 0.03	0.2 / 0.01	0.0 / ---	17 / ---	Fe 0.08	85[b]	38	37	0	---		
5/30-31, 6/1-14	3,484	---	---	---	103	7.0*	8.8 / 0.44	1.5 / 0.12	8.6 / 0.37	1.7 / 0.04	0 / 0.00	37 / 0.61	6.7 / 0.14	6.2 / 0.17	1.4 / 0.02	0.2 / 0.01	0.0 / ---	14 / ---	Fe 0.07	67[b]	38	28	0	---		
6/15-19	2,326	---	---	---	217	7.4*	14 / 0.70	4.4 / 0.36	21 / 0.91	2.2 / 0.06	0 / 0.00	60 / 0.98	16 / 0.33	22 / 0.62	1.8 / 0.03	0.2 / 0.01	0.1 / ---	17 / ---	Fe 0.04	129[b]	45	53	4	---		
6/20-22	1,110	---	---	---	552	7.0*	31 / 1.55	12 / 1.01	60 / 2.61	3.4 / 0.09	0 / 0.00	111 / 1.82	53 / 1.10	80 / 2.26	1.6 / 0.03	—	0.2 / ---	24 / ---	Fe 0.06	320[b]	51	128	37	---		
6/23-24	1,615	---	---	---	269	7.2*	17 / 0.85	7.9 / 0.65	23 / 1.00	2.4 / 0.06	0 / 0.00	62 / 1.02	27 / 0.56	32 / 0.90	2.0 / 0.03	---	0.1 / ---	20 / ---		162[b]	39	75	24	---		
6/25-30	2,303	---	---	---	127	6.8*	9.6 / 0.48	2.4 / 0.20	11 / 0.48	1.7 / 0.04	0 / 0.00	38 / 0.62	8.6 / 0.18	12 / 0.34	1.7 / 0.03	0.2 / 0.01	0.0 / ---	15 / ---	Fe 0.04	81[b]	40	34	3	---		
7/1-3	1,646	---	---	---	201	6.6*	14 / 0.70	5.1 / 0.42	21 / 0.91	1.5 / 0.04	0 / 0.00	62 / 1.02	14 / 0.29	27 / 0.76	0.0 / 0.00	0.0 / 0.00	0.1 / ---	13 / ---	Fe 0.01	127[b]	44	56	5	---		
7/4-17	497	---	---	---	757	7.6*	38 / 1.90	16 / 1.34	96 / 4.18	3.2 / 0.08	0 / 0.00	128 / 2.10	68 / 1.42	136 / 3.84	0.0 / 0.00	0.2 / 0.01	0.3 / ---	19 / ---	Fe 0.00	440[b]	56	162	57	---		
7/18-31	348	---	---	---	923	7.5*	43 / 2.15	21 / 1.73	123 / 5.35	3.2 / 0.08	0 / 0.00	147 / 2.41	94 / 1.96	170 / 4.79	0.0 / 0.00	0.2 / 0.01	0.4 / ---	19 / ---	Fe 0.01	546[b]	57	194	73	---		
8/1-10	298	---	---	---	936	7.5*	47 / 2.35	21 / 1.73	123 / 5.35	3.8 / 0.10	0 / 0.00	163 / 2.67	96 / 2.00	169 / 4.77	0.7 / 0.01	0.2 / 0.01	0.3 / ---	22 / ---	Fe 0.01	563[b]	56	203	70	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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	Per-cent sod-ium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Tur-bid-ity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE (STA. 25c cont.)																			USGS
8/11-20	256	---	---	---	1080	7.5*	50 / 2.50	26 / 2.10	141 / 6.13	3.8 / 0.10	0 / 0.00	177 / 2.90	108 / 2.25	195 / 5.50	0.0 / 0.00	0.2 / 0.01	0.4 / ---	23 / ---	Fe 0.01	634[b]	56	232	87	---		
8/21-31	262	---	---	---	1020	7.5*	49 / 2.45	23 / 1.93	138 / 6.00	3.6 / 0.09	0 / 0.00	180 / 2.95	108 / 2.25	178 / 5.02	0.2 / 0.00	0.2 / 0.01	0.4 / ---	21 / ---	Fe 0.01	610[b]	57	219	71	---		
9/1-8	324	---	---	---	822	7.6*	41 / 2.05	20 / 1.61	110 / 4.79	3.6 / 0.09	0 / 0.00	170 / 2.79	90 / 1.87	134 / 3.78	0.0 / 0.00	0.2 / 0.01	0.3 / ---	26 / ---	Fe 0.04	509[b]	56	183	44	---		
9/9-16	384	---	---	---	649	7.4*	34 / 1.70	16 / 1.34	74 / 3.22	3.6 / 0.09	0 / 0.00	156 / 2.56	58 / 1.21	90 / 2.54	0.2 / 0.00	0.2 / 0.01	0.3 / ---	27 / ---	Fe 0.01	380[b]	51	152	24	---		
9/17-30	309	---	---	---	701	7.0*	35 / 1.75	17 / 1.37	86 / 3.74	3.7 / 0.09	0 / 0.00	159 / 2.61	58 / 1.21	105 / 2.96	0.9 / 0.01	0.2 / 0.01	0.1 / ---	26 / ---	Fe 0.01	410[b]	54	156	26	---		
10/1-20	209	---	---	---	794	7.4*	38 / 1.90	18 / 1.50	100 / 4.35	3.4 / 0.09	0 / 0.00	149 / 2.44	71 / 1.48	138 / 2.84	1.9 / 0.03	0.2 / 0.01	0.3 / ---	27 / ---	Fe 0.00	471[b]	55	170	48	---		
10/21-25	168	---	---	---	852	7.8*	39 / 1.95	18 / 1.47	110 / 4.78	3.0 / 0.08	0 / 0.00	120 / 1.97	83 / 1.73	160 / 4.51	4.2 / 0.07	0.3 / 0.02	0.2 / ---	23 / ---	Fe 0.00	500[b]	58	171	73	---		
10/26-31	84	---	---	---	1620	6.9*	71 / 3.54	37 / 3.02	228 / 9.92	3.6 / 0.09	0 / 0.00	155 / 2.54	213 / 4.43	338 / 9.53	5.0 / 0.08	0.3 / 0.02	0.3 / ---	24 / ---	Fe 0.00	996[b]	60	164	37	---		
11/1-9	60	---	---	---	2170	7.2*	84 / 4.19	54 / 4.45	282 / 12.27	4.0 / 0.10	0 / 0.00	207 / 3.39	230 / 4.79	460 / 12.97	4.5 / 0.07	0.3 / 0.02	0.4 / ---	32 / ---	Fe 0.00	1250[b]	58	432	262	---		
11/10-30	46	---	---	---	2580	7.4*	103 / 5.14	59 / 4.84	330 / 14.36	4.0 / 0.10	0 / 0.00	227 / 3.72	278 / 5.79	555 / 15.65	5.1 / 0.08	0.3 / 0.02	0.6 / ---	31 / ---	Fe 0.00	1480[b]	59	499	313	---		
12/1-22	60	---	---	---	2220	7.6*	87 / 4.34	50 / 4.08	298 / 12.96	3.5 / 0.09	0 / 0.00	236 / 3.87	254 / 5.29	450 / 12.69	5.5 / 0.09	0.2 / 0.01	0.8 / ---	27 / ---	Fe 0.00	1290[b]	60	421	227	---		
12/23-31	111	---	---	---	1730	7.8*	68 / 3.39	38 / 3.11	228 / 9.92	3.6 / 0.09	0 / 0.00	223 / 3.65	226 / 4.71	304 / 8.57	5.7 / 0.09	0.3 / 0.02	0.8 / ---	25 / ---	Fe 0.00	1010[b]	60	325	142	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SAN JOAQUIN RIVER AT FRIANT (STA. 24)															USGS
1/27 1515	54	51	10.8	96	54.5	6.9	---	---	5.0/0.22	---	0/0.00	22/0.36	---	5.5/0.16	---	---	0.07/---	---		---	35	20	2	10	Maximum 7000. + Minimum 1.3 Median 620.	
2/18 0900	99	48	10.7	92	56.0	6.9	---	---	4.7/0.20	---	0/0.00	21/0.34	---	4.0/0.11	---	---	0.00/---	---		---	33	20	3	10		
3/5 0830	95	49	10.5	91	68.6	6.9	---	---	5.6/0.24	---	0/0.00	29/0.48	---	4.5/0.13	---	---	0.00/---	---		---	32	26	2	10		
4/8 0835	7,090	48	12.5	108	49.5	7.0	---	---	3.9/0.17	---	0/0.00	22/0.36	---	3.8/0.11	---	---	0.00/---	---		---	38	14	0	9		
5/7 0630	6,076	51	11.2	100	42.7	7.0	4.0/0.20	1.2/0.10	4.0/0.17	1.2/0.03	0/0.00	18/0.30	4.8/0.10	3.0/0.08	0.3/0.00	0.3/0.02	0.07/---	13/---	PO_4 0.15 Al 0.11; Fe 0.08 Cu 0.02; a	41[b]	34	15	0	4		
6/10 0810	2,872	53	11.2	102	29.5	6.8	---	---	2.2/0.10	---	0/0.00	13/0.21	----	1.7/0.05	---	---	0.0/---	---		---	43	6	0	3		
7/9 0700	677	64	10.5	110	29.8	6.9	---	---	2.6/0.11	---	0/0.00	13/0.21	---	1.7/0.05	---	---	0.0/---	---		---	33	10	0	4		
8/7 0630	190	54	10.3	96	27.6	6.8	---	---	1.9/0.08		0/0.00	13/0.21	---	2.2/0.06	---	---	0.0/---	---		---	40	6	0	1		
9/4 0745	183	53	10.0	91	27.2	7.0	2.9/0.14	0.2/0.02	1.8/0.08	0.6/0.02	0/0.00	10/0.16	1.0/0.02	1.6/0.05	0.7/0.01	0.0/0.00	0.1/---	9.0/---	PO_4 0.05 a	23[b]	31	8	0	0.8		
10/9 0950	120	58	11.5	112	29.3	7.2	---	---	2.2/0.10	---	0/0.00	11/0.18	---	2.0/0.06	---	---	0.1/---	---		---	33	10	1	10		
11/12 0840	171	54	9.1	84	29.0	6.6	---	---	2.0/0.09	---	0/0.00	12/0.20	---	2.5/0.07	---	---	0.0/---	---		---	31	10	0	5		
12/3 0755	120	51	9.0	80	31.7	6.8	---	---	1.9/0.08	---	0/0.00	12/0.20	---	2.0/0.06	---	---	0.0/----	---		---	27	11	1	15		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal									SAN JOAQUIN RIVER AT GARWOOD BRIDGE (STA. 101)																USGS
1/24 1015		49	10.3	90	601	7.5	---	---	66 / 2.87	---	0 / 0.00	116 / 1.90	---	93 / 2.62	---	---	0.20 / ---	---		---	53	129	34	9	Maximum 7000.+ Minimum 23. Median 7000.	
2/10 1415		55	8.6	81	322	7.3	---	---	36 / 1.57	---	0 / 0.00	94 / 1.54	---	40 / 1.13	---	---	0.20 / ---	---		---	50	79	2	40		
3/3 1300		55	9.6	90	322	7.3	---	---	33 / 1.44	---	0 / 0.00	87 / 1.43	---	38 / 1.07	---	---	0.25 / ---	---		---	48	78	7	30		
4/11 1730		62	7.2	73	216	7.1	---	---	1[illegible] / [illegible].83	---	0 / 0.00	74 / 1.21	---	19 / 0.54	---	---	0.04 / ---	---		---	40	62	1	45		
5/20 1045		68	7.8	85	109	7.1	7.8 / 0.39	2.8 / 0.23	9.2 / 0.40	1.4 / 0.04	0 / 0.00	38 / 0.62	5.8 / 0.12	11 / 0.31	0.5 / 0.01	0.1 / 0.01	0.0 / ---	13 / --	Fe 0.03 Al 0.11 Zn 0.01 PO_4 0.20a	71[b]	38	31	0	25		
6/12 1100		69	7.6	84	146	7.1	---	---	13 / 0.57	---	0 / 0.00	47 / 0.77	---	16 / 0.45	---	---	0.0 / ---	---		---	42	40	1	40		
7/7 1330		77	7.5	90	279	7.3	---	---	27 / 1.17	---	0 / 0.00	71 / 1.16	---	38 / 1.07	---	---	0.0 / ---	---		---	47	67	9	20		
8/5 0645		80	5.1	62	648	7.3	---	---	70 / 3.04	---	0 / 0.00	158 / 2.59	---	97 / 2.74	---	---	0.3 / ---	---		---	49	159	29	10		
9/3 1445		78	7.8	94	659	7.7	33 / 1.65	19 / 1.59	72 / 3.13	4.5 / 0.12	0 / 0.00	161 / 2.64	44 / 0.92	101 / 2.85	2.1 / 0.03	0.3 / 0.02	0.3 / ---	18 / ---	Al 0.09 Fe 0.03 PO_4 0.65 a	373[b]	48	162	30	60		
10/8 1630		70	8.9	99	512	7.5*	---	---	56 / 2.44	---	0 / 0.00	124 / 2.03	---	78 / 2.20	---	---	0.1 / ---	---		---	51	116	14	9		
11/13 1650		59	9.3	92	357	7.5	---	---	39 / 1.70	---	0 / 0.00	71 / 1.16	---	56 / 1.58	---	---	0.0 / ---	---		---	52	80	22	9		
12/9 1010		53	9.9	91	379	7.2	---	---	42 / 1.83	---	0 / 0.00	76 / 1.25	---	58 / 1.64	---	---	0.1 / ---	---		---	50	90	28	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported [illegible] as 0.0 / 0.00 except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
d Annual median [illegible] range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), [illegible] Water District ([illegible]D), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL). State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents in parts per million / equivalents per million

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958											SAN JOAQUIN RIVER NEAR GRAYSON (STA. 26)															USGS
1/30 0850	1,800	56	8.4	80	503	7.5	---	---	62 / 2.70	---	0 / 0.00	116 / 1.90	---	66 / 1.86	---	---	0.33 / ---	---		---	58	99	4	45	Maximum 7000.+ Minimum 2.3 Median 620.	
2/20 1355	3,260	58	8.8	86	555	7.9	---	---	64 / 2.78	---	0 / 0.00	136 / 2.23	---	65 / 1.83	---	---	0.32 / ---	---		---	52	130	18	300		
3/6 1045	1,980	56	8.9	85	759	7.7	---	---	97 / 4.22	---	0 / 0.00	160 / 2.62	---	100 / 2.82	---	---	0.51 / ---	---		---	58	154	23	55		
4/11 0900	18,970	64	6.1	64	306	7.3	---	---	29 / 1.26	---	0 / 0.00	95 / 1.56	---	28 / 0.79	---	---	0.19 / ---	---		---	45	77	0	20		
5/8 1115	12,171	70	7.7	86	197	7.3	12 / 0.60	4.6 / 0.38	20 / 0.87	2.5 / 0.06	0 / 0.00	61 / 1.00	17 / 0.35	18 / 0.51	0.9 / 0.02	0.3 / 0.02	0.12 / ---	16 / ---	PO_4 0.45, Fe 0.20, Pb 0.01, Cu 0.05, Al 0.21 [a]	121[b]	46	49	0	20		
6/6 0830	11,430	69	7.3	81	127	7.1	---	---	12 / 0.52	---	0 / 0.00	41 / 0.67	---	12 / 0.34	---	---	0.0 / ---	---		---	45	32	0	28		
7/14 1415	1,635	78	10.1	122	717	7.5*	---	---	88 / 3.83	---	0 / 0.00	128 / 2.10	---	111 / 3.13	---	---	0.2 / ---	---		---	56	153	48	29		
8/14 1150	1,080	76	10.2	120	988	8.2	---	---	120 / 5.22	---	0 / 0.00	177 / 2.90	---	165 / 4.65	---	---	0.3 / ---	---		---	54	220	75	20		
9/24 1100	960	64	10.1	105	689	8.4	34 / 1.70	17 / 1.38	78 / 3.39	2.8 / 0.07	0 / 0.00	152 / 2.49	68 / 1.42	100 / 2.82	2.4 / 0.04	0.1 / 0.01	0.1 / ---	25 / ---	PO_4 0.45, Al 0.04 [a]	402[b]	52	154	29	20		
10/20 1220	855	64	10.2	106	772	8.2	---	---	98 / 4.26	---	0 / 0.00	180 / 2.95	---	112 / 3.16	---	---	0.3 / ---	---		---	55	174	26	10		
11/24 1010	635	56	10.1	96	1,310	7.8	---	---	157 / 6.83	---	0 / 0.00	224 / 3.67	---	216 / 6.09	---	---	0.3 / ---	---		---	55	284	100	10		
12/19 1245	465	52	11.3	102	1,330	7.9	---	---	171 / 7.44	---	0 / 0.00	198 / 3.25	---	240 / 6.77	---	---	0.5 / ---	---		---	56	294	132	35		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	Mineral constituents in parts per million / equivalents per million													Total[c] 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			
1958	Not Rated						SAN JOAQUIN RIVER AT HEAD OF CHAMBERLAIN SLOUGH (STA. 114a)																			USBR
1/16 1520		50	---	---	667	8.2*	59	14	40	2.0	0.0	134	38	109	1.2	---	---	---		410	30	---	--	--		
2/17 1530		62	---	---	255	7.2*	24	3.9	22	2.3	0.0	80	26	27	0.6	---	---	---		186	38	---	-	--		
4/15 1500		64	---	---	83	7.0*	6.6	2.9	5.5	2.0	0.0	27	10	5.7	0.0	---	---	---		76	28	---	--	--		
5/16	Not Sampled																									
6/12 1530		70	---	---	72	5.6*	5.6	1.2	5.5	1.6	0.0	23	4.8	7.5	0.0	---	---	---		---	36	---	--	--		
7/15 1430		82	---	---	433	7.3*	40	8.3	32	1.6	0.0	128	29	51	0.6	---	---	---		340	33	---	--	--		
8/14 1615		86	---	---	542	7.3*	45	10	34	0.0	0.0	106	34	70	0.0	---	---	---		376	32	---	--	--		
9/16 1550		78	---	---	592	7.4*	52	14	33	2.3	0.0	125	36	85	0.0	---	---	---		366	28	---	--	--		
10/16 1430		70	---	---	577	7.8*	54	15	37	2.0	0.0	146	39	89	0.6	---	---	---		424	29	---	--	--		
11/19 1030		47	---	---	615	7.7*	61	16	39	2.3	0.0	173	35	94	---	---	---	---		492	28	---	---	--		
12/18 1600		54	---	---	638	7.9*	67	12	39	2.3	0.0	170	41	94	1.9	---	---	---		432	28	---	---	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
							SAN JOAQUIN RIVER AT HILLS FERRY BRIDGE (STA. 25b)																			
1958																										USGS
8/5 1045	564	82	9.9	124	1,160	8.1	48 / 2.40	27 / 2.24	143 / 6.22	4.8 / 0.12	0 / 0.00	163 / 2.67	121 / 2.52	202 / 5.70	2.1 / 0.03	0.5 / 0.03	0.5 / ---	21 / ---		650[b]	57	232	98	---		
9/2 1200	536	82	10.0	125	1,050	8.1	48 / 2.40	25 / 2.08	130 / 5.66	3.8 / 0.10	0 / 0.00	172 / 2.82	108 / 2.25	178 / 5.02	2.9 / 0.05	0.2 / 0.01	0.4 / ---	23 / ---	Al 0.04; PO_4 0.50 a	604[b]	55	224	83	17		
10/6 1350	690	65	12.4	131	827	7.9	36 / 1.80	22 / 1.80	100 / 4.35	2.9 / 0.07	0 / 0.00	140 / 2.29	92 / 1.92	135 / 3.81	3.4 / 0.05	0.2 / 0.01	0.2 / ---	27 / ---		488[b]	54	180	65	---		
11/10 1215	290	64	9.5	99	1,250	8.0	47 / 2.35	32 / 2.63	155 / 6.74	2.6 / 0.07	0 / 0.00	170 / 2.79	152 / 3.16	222 / 6.26	3.7 / 0.06	0.2 / 0.01	0.2 / ---	33 / ---		732[b]	57	249	110	---		
12/1 1130	309	54	9.8	91	1,400	7.9	54 / 2.69	32 / 2.61	195 / 8.48	6.0 / 0.15	0 / 0.00	181 / 2.97	186 / 3.87	232 / 6.54	4.5 / 0.07	0.2 / 0.01	0.6 / ---	26 / ---		825[b]	61	265	117	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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 MPN/ml [d]	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal										SAN JOAQUIN RIVER AT JERSEY POINT (STA. 28b)															USBR
1/2 1120		55	---	---	274	---	---	---	---	---	---	---	---	---	---	---	---	--		236	---	---	---	--		
1/28 1445		50	---	---	373	---	---	---	---	---	---	---	---	---	---	---	---	--		296	---	---	---	--		
2/26 1210		58	---	---	266	---	---	---	---	---	---	---	---	---	---	---	---	--		200	---	---	---	--		
4/2 1100		56	---	---	276	---	---	---	---	---	---	---	---	---	---	---	---	--		204	---	---	---	--		
4/29 1455		64	---	---	221	---	---	---	---	---	---	---	---	---	---	---	---	--		164	---	---	---	--		
5/27 1325		70	---	---	127	---	---	---	---	---	---	---	---	---	---	---	---	--		--	---	---	---	--		
6/30 1245		67	---	---	154	---	---	---	---	---	---	---	---	---	---	---	---	--		132	---	---	---	--		
7/29 1305		72	---	---	178	---	---	---	---	---	---	---	---	---	---	---	---	--		140	---	---	---	--		
8/28 1035		74	---	---	197	---	---	---	---	---	---	---	---	---	---	---	---	--		104	---	---	---	--		
10/1 0945		--	---	---	190	---	---	---	---	---	---	---	---	---	---	---	---	--		132	---	---	---	--		
10/27 1330		--	---	---	203	---	---	---	---	---	---	---	---	---	---	---	---	--		120	---	---	---	--		
11/24 1320		54	---	---	230	---	---	---	---	---	---	---	---	---	---	---	---	--		164	---	---	---	--		
12/10 1440		53	---	---	236	---	---	---	---	---	---	---	---	---	---	---	---	--		212	---	---	---	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958									SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE (STA. 26a)																	USGS
1/30 1000	3,410	56	8.3	79	471	7.3	---	---	56/2.44	---	0/0.00	78/1.28	---	67/1.89	---	---	0.27/---	---		---	56	98	34	55	Maximum 7000.+ Minimum 23. Median 2400.	
2/20 1435	7,830	57	8.1	78	254	7.5	---	---	23/1.00	---	0/0.00	76/1.25	---	24/0.68	---	---	0.18/---	---		---	42	70	8	300		
3/6 1115	5,470	54	9.4	87	454	7.5	---	---	52/2.26	---	0/0.00	98/1.61	---	60/1.69	---	---	0.28/---	---		---	53	101	21	30		
4/11 0945	34,490	63	6.4	66	262	7.3	---	---	25/1.09	---	0/0.00	84/1.38	---	23/0.65	---	---	0.06/---	---		---	44	70	1	15		
5/8 1205	14,530	68	7.5	82	176	7.1	11/0.55	4.3/0.35	16/0.70	2.2/0.06	0/0.00	52/0.85	15/0.31	17/0.48	0.7/0.01	0.3/0.02	0.15/---	14/---	PO_4 0.40, Al 0.15, Fe 0.16, Cu 0.01, Pb 0.01 a	107[b]	42	45	2	15		
6/6 0915	17,660	69	7.6	83	137	7.1	---	---	13/0.57	---	0/0.00	41/0.67	---	16/0.45	---	---	0.0/---	---		---	44	36	2	37		
7/14 1310	3,890	73	9.3	107	496	7.9*	---	---	55/2.39	---	0/0.00	96/1.57	---	80/2.26	---	---	0.0/---	---		---	52	111	32	9		
8/14 1230	1,350	77	9.7	115	891	8.2	---	---	99/4.31	---	0/0.00	165/2.70	---	164/4.62	---	---	0.3/---	---		---	50	212	77	25		
9/24 1200	2,310	64	10.0	104	508	8.4	26/1.30	12/1.00	55/2.39	2.8/0.07	0/0.00	106/1.74	36/0.75	81/2.28	1.6/0.03	0.1/0.01	0.0/---	21/---	PO_4 0.40 a	288[b]	50	115	28	15		
10/20 1300	1,700	64	9.6	100	656	8.1	---	---	78/3.39	---	0/0.00	133/2.18	---	110/3.10	---	---	0.2/---	---		---	54	142	33	5		
11/24 1050	3,540	58	9.7	94	334	7.3	---	---	38/1.65	---	0/0.00	62/1.02	---	55/1.55	---	---	0.0/---	---		---	53	72	21	10		
12/9 1145	1,540	52	9.6	87	618	7.7	---	---	67/2.91	---	0/0.00	92/1.51	---	109/3.07	---	---	0.3/---	---		---	52	134	59	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
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f Field pH except when noted with *

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	Mineral constituents in parts per million / equivalents per million													Other constituents	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)				Total ppm	N.C. ppm			
1958	Mean Daily						SAN JOAQUIN RIVER NEAR MENDOTA (STA. 25)																			USGS
1/27 1300	1	55	10.3	97	84.3	7.3	---	---	8.0/0.35	---	0/0.00	30/0.49	---	8.0/0.23	---	---	0.03/---	---		---	43	23	0	30	Maximum 7000.+ Minimum 2.3 Median 42.5	
2/17 1300	1	63	9.7	100	123	7.7	---	---	11/0.48	---	0/0.00	54/0.89	---	7.5/0.21	---	---	0.00/---	---		---	38	40	0	35		
3/3 1510	6	58	10.1	98	133	7.5	---	---	9.8/0.43	---	0/0.00	64/1.05	---	6.2/0.17	---	---	0.06/---	---		---	32	46	0	40		
4/7 1325	5,840	56	9.6	91	513	7.3	---	---	43/1.87	---	0/0.00	70/1.15	---	25/0.70	---	---	0.21/---	---		---	39	146	89	20		
5/5 1400	5,870	60	9.5	95	53.1	7.2	3.6/0.18	1.5/0.12	4.6/0.20	1.3/0.03	0/0.00	24/0.39	2.9/0.06	3.0/0.08	0.7/0.01	0.2/0.01	0.01/---	13/---	PO_4 0.20, Fe 0.10 [a], Al 0.16, Cu 0.03	43 [b]	38	15	0	9		
6/9 1350	5,330	64	9.1	95	34.7	6.9	---	---	3.2/0.14	---	0/0.00	16/0.26	---	2.0/0.06	---	---	0.0/---	---		---	39	11	0	14		
7/7 1430	339	82	8.0	100	157	7.3	---	---	15/0.65	---	0/0.00	45/0.74	---	18/0.51	---	---	0.0/---	---		---	45	40	3	140		
8/5 1355	405	82	9.3	116	538	7.8	---	---	56/2.44	---	0/0.00	109/1.79	---	84/2.37	---	---	0.1/---	---		---	48	131	42	30		
9/2 1515	396	82	8.7	109	374	8.2	22/1.10	9.2/0.76	38/1.65	1.9/0.05	0/0.00	92/1.51	27/0.56	48/1.35	0.4/0.01	0.1/0.01	0.2/---	5.9/---	PO_4 0.15 [a], Fe 0.01	198 [b]	46	93	18	12		
10/6 1640	131	62	9.2	94	489	7.7	---	---	54/2.35	---	0/0.00	113/1.85	---	71/2.00	---	---	0.1/---	---		---	51	114	21	15		
11/10 1600	22	62	9.2	94	476	8.1	---	---	55/2.39	---	0/0.00	86/1.41	---	70/1.97	---	---	0.3/---	---		---	54	102	31	30		
12/1 1500	28	56	11.1	105	456	7.7	---	---	50/2.18	---	0/0.00	82/1.34	---	65/1.83	---	---	0.3/---	---		---	52	102	35	25		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
							SAN JOAQUIN RIVER ABOVE MERCED RIVER (STA. 30a)																			USBR
1958	Not Available																									
1/16 1215		49	---	---	1,437	8.8*	52 / ---	39 / ---	190 / ---	4.7 / ---	12 / ---	211 / ---	217 / ---	205 / ---	1.2 / ---	---	---	---		910	53	---	---	---		
2/17 1240		60	---	---	1,239	7.6*	47 / ---	29 / ---	173 / ---	2.3 / ---	0.0 / ---	187 / ---	197 / ---	137 / ---	1.9 / ---	---	---	---		810	61	---	---	---		
3/17 1320		60	---	---	429	7.1*	16 / ---	11 / ---	55 / ---	55 / ---	0.0 / ---	82 / ---	69 / ---	51 / ---	0.6 / ---	---	---	---		320	57	---	---	---		
4/14 1250		68	---	---	549	7.4*	26 / ---	12 / ---	61 / ---	3.5 / ---	0.0 / ---	113 / ---	82 / ---	61 / ---	0.6 / ---	---	---	---		352	52	---	---	---		
5/15 1240		70	---	---	189	7.1*	13 / ---	39 / ---	17 / ---	2.0 / ---	0.0 / ---	43 / ---	23 / ---	24 / ---	1.0 / ---	---	---	---		150	42	---	---	---		
6/12 1205		72	---	---	139	6.0*	9.2 / ---	2.6 / ---	12 / ---	1.6 / ---	0.0 / ---	39 / ---	12 / ---	13 / ---	0.0 / ---	---	---	---		114	42	---	---	---		
7/15 1105		77	---	---	1,445	7.3*	53 / ---	34 / ---	173 / ---	1.6 / ---	0.0 / ---	146 / ---	133 / ---	268 / ---	1.2 / ---	---	---	---		884	57	---	---	---		
8/14 1310		82	---	---	1,360	7.5*	56 / ---	33 / ---	170 / ---	2.7 / ---	0.0 / ---	146 / ---	169 / ---	251 / ---	1.2 / ---	---	---	---		916	58	---	---	---		
9/16 1110		75	---	---	816	7.6*	38 / ---	19 / ---	91 / ---	2.3 / ---	0.0 / ---	142 / ---	78 / ---	119 / ---	1.9 / ---	---	---	---		470	53	---	---	---		
10/16 1150		68	---	---	674	7.6*	26 / ---	20 / ---	76 / ---	2.0 / ---	0.0 / ---	116 / ---	71 / ---	105 / ---	3.1 / ---	---	---	---		436	53	---	---	---		
11/18 1245		43	---	---	3,046	7.8*	109 / ---	84 / ---	430 / ---	3.1 / ---	0.0 / ---	244 / ---	444 / ---	678 / ---	2.5 / ---	---	---	---		2,028	60	---	---	---		
12/18 1300		54	---	---	2,670	7.9*	90 / ---	69 / ---	368 / ---	2.3 / ---	0.0 / ---	243 / ---	432 / ---	529 / ---	0.6 / ---	---	---	---		1,754	61	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents are given in parts per million over equivalents per million (written ppm/epm).

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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 MOSSDALE (STA. 102)															
1958	Tidal																									USGS
1/23 1425		51	10.8	97	676	7.5	---	---	73/3.18	---	0/0.00	126/2.07	---	104/2.93	---	---	0.34/---	---		---	52	147	44	10	Maximum 7000.+ Minimum 6.2 Median 230.	
2/11 0930		55	9.0	85	455	7.5	---	---	49/2.13	---	0/0.00	106/1.74	---	61/1.72	---	---	0.23/---	---		---	51	102	15	20		
3/4 1500		55	9.7	91	333	7.5	---	---	36/1.57	---	0/0.00	91/1.49	---	40/1.13	---	---	0.16/---	---		---	48	86	11	50		
4/11 1355		62	6.9	79	219	7.2	---	---	20/0.87	---	0/0.00	72/1.18	---	18/0.51	---	---	0.00/---	---		---	42	60	1	50		
5/9 0910		67	7.8	84	158	7.2	10/0.50	4.6/0.38	14/0.61	1.7/0.04	0/0.00	52/0.85	12/0.25	16/0.45	0.6/0.01	0.1/0.01	0.00/---	16/--	Fe 0.04 Al 0.11 Zn 0.01 PO_4 0.25 a	101[b]	40	44	1	30		
6/11 1535		70	7.6	85	143	7.2	---	---	13/0.57	---	0/0.00	45/0.74	---	16/0.45	---	---	0.0/---	---		---	42	39	2	35		
7/8 0850		72	7.9	89	204	7.1	---	---	22/0.96	---	0/0.00	48/0.79	---	29/0.82	---	---	0.0/---	---		---	51	47	8	15		
8/5 0815		79	9.3	113	793	7.9	---	---	85/3.70	---	0/0.00	158/2.59	---	133/3.75	---	---	0.4/---	---		---	50	188	58	10		
9/3 1355		78	12.1	146	697	7.9	25/1.25	24/1.99	77/3.35	4.0/0.10	0/0.00	150/2.46	49/1.02	115/3.24	1.8/0.03	0.2/0.01	0.2/---	19/--	Fe 0.03 Al 0.08 PO_4 0.50 a	389[b]	50	162	39	50		
10/9 0810		67	8.7	91.5	502	7.4	---	---	56/2.44	---	0/0.00	113/1.85	---	78/2.20	---	---	0.1/---	---		---	51	116	23	15		
11/14 1000		59	8.9	88	340	7.5*	---	---	36/1.57	---	0/0.00	69/1.13	---	53/1.49	---	---	0.0/---	---		---	51	76	19	8		
12/9 1050		53	10.1	92	341	7.2	---	---	36/1.57	---	0/0.00	76/1.25	---	51/1.44	---	---	0.0/---	---		---	48	84	22	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Not Rated						SAN JOAQUIN RIVER AT PATTERSON WATER COMPANY (STA. 27a)																			USBR
1/16 1145		49	---	---	1,221	8.5*	45	30	155	2.0	7.5	184	147	168	3.1	---	---	---		742	59	---	---	---		
2/17 1150		60	---	---	907	7.4*	41	17	117	2.3	0.0	165	119	129	2.5	---	---	---		590	59	---	---	---		
3/17 1200		60	---	---	246	7.3*	22	0.9	25	3.1	0.0	59	32	25	0.0	---	---	---		204	46	---	---	---		
4/14 1200		66	---	---	320	7.0*	18	3.7	30	3.5	0.0	85	30	33	0.6	---	---	---		210	43	---	---	---		
5/15 1200		70	---	---	141	6.8*	11	5.4	14	0.0	0.0	40	18	28	0.0	---	---	---		118	38	---	---	---		
6/12 1125		72	---	---	133	6.1*	8.4	3.1	11	1.6	0.0	33	12	14	0.0	---	---	---		92	40	---	---	---		
7/15 1050		76	---	---	728	7.4*	34	16	85	1.6	0.0	117	78	112	1.2	---	---	---		504	55	---	---	---		
8/14 1225		78	---	---	1,456	7.7*	74	42	173	2.0	0.0	184	252	224	2.5	---	---	---		996	51	---	---	---		
9/16 1030		73	---	---	760	7.8*	36	18	79	2.3	0.0	138	92	102	3.7	---	---	---		452	51	---	---	---		
10/16 1100		68	---	---	684	7.5*	31	17	79	2.0	0.0	127	69	107	3.1	---	---	---		460	53	---	---	---		
11/18 1210		52	---	---	1,429	8.3*	54	29	150	2.3	0.0	206	140	215	5.0	---	---	---		---	--	---	---	---		
12/18 1230		54	---	---	1,327	8.1*	57	31	179	2.3	0.0	171	175	228	1.2	---	---	---		828	59	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

s Angeles Dept of Pub Health (LADPH),

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million[a]																			
							SAN JOAQUIN RIVER ABOVE SALT SLOUGH (STA. 111b)																			
1958	Not Available																									USBR
1/16 1250		49	---	---	193	7.3*	18 ---	9.2 ---	17 ---	2.0 ---	0.0 ---	121 ---	5.3 ---	16 ---	1.2 ---	---	---	---		178	30	---	---	---		
2/17 1315		60	---	---	376	7.3*	29 ---	3.5 ---	36 ---	2.3 ---	0.0 ---	143 ---	32 ---	34 ---	1.2 ---	---	---	---		270	41	---	---	---		
3/17 1405		62	---	---	153	7.3*	14 ---	1.8 ---	13 ---	4.7 ---	0.0 ---	63 ---	12 ---	9.9 ---	0.0 ---	---	---	---		134	37	---	---	---		
4/14	Not Sampled																									
5/15 1400		70	---	---	103	7.1*	12 ---	1.7 ---	9.9 ---	0.0 ---	0.0 ---	41 ---	15 ---	9.9 ---	0.0 ---	---	---	---		96	37	---	---	---		
6/12 1240		72	---	---	75	6.0*	6.8 ---	1.2 ---	4.8 ---	1.6 ---	0.0 ---	29 ---	5.3 ---	9.6 ---	0.0 ---	---	---	---		74	30	---	---	---		
7/15 1230		79	---	---	981	7.2*	47 ---	21 ---	110 ---	1.6 ---	0.0 ---	136 ---	89 ---	184 ---	1.8 ---	---	---	---		664	54	---	---	---		
8/14 1355		82	---	---	773	7.5*	43 ---	16 ---	86 ---	2.0 ---	0.0 ---	159 ---	52 ---	116 ---	1.2 ---	---	---	---		512	51	---	---	---		
9/16 1200		75	---	---	463	7.8*	27 ---	10 ---	44 ---	2.3 ---	0.0 ---	137 ---	25 ---	47 ---	1.2 ---	---	---	---		294	46	---	---	---		
10/16 1220		68	---	---	348	7.7*	22 ---	10 ---	34 ---	2.0 ---	0.0 ---	131 ---	16 ---	32 ---	3.7 ---	---	---	---		284	43	---	---	---		
11/18 1315		50	---	---	743	7.7*	40 ---	14 ---	99 ---	.23 ---	0.0 ---	201 ---	42 ---	121 ---	1.2 ---	---	---	---		460	57	---	---	---		
12/18 1340		54	---	---	988	8.0*	40 ---	17 ---	150 ---	2.3 ---	0.0 ---	265 ---	76 ---	159 ---	1.9 ---	---	---	---		608	65	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25° C)	pH [f]	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]	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform MPN/ml [d]	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958	Tidal									SAN JOAQUIN RIVER AT SAN ANDREAS LANDING (STA. 112b)																USBR
1/2 1355		52	---	---	252	7.3*	14 / ---	9.0 / ---	17 / ---	2.3 / ---	0.0 / ---	59 / ---	26 / ---	26 / ---	0.6 / ---	---	---	---		172	33	---	---	---		
1/28 1230		50	---	---	308	7.1*	24 / ---	3.8 / ---	23 / ---	2.0 / ---	0.0 / ---	63 / ---	34 / ---	44 / ---	2.5 / ---	---	---	---		240	34	---	---	---		
2/25 1225		57	---	---	140	7.1*	15 / ---	6.0 / ---	6.2 / ---	2.3 / ---	0.0 / ---	47 / ---	17 / ---	13 / ---	0.0 / ---	---	---	---		116	17	---	---	---		
4/1 1250		56	---	---	209	7.1*	15 / ---	8.3 / ---	12 / ---	2.0 / ---	0.0 / ---	57 / ---	21 / ---	17 / ---	0.6 / ---	---	---	---		170	26	---	---	---		
4/29 1215		64	---	---	193	6.8*	13 / ---	6.3 / ---	13 / ---	1.2 / ---	0.0 / ---	59 / ---	14 / ---	23 / ---	0.0 / ---	---	---	---		130	32	---	---	---		
5/26 1310		66	---	---	100	6.9*	7.8 / ---	6.6 / ---	6.4 / ---	1.6 / ---	0.0 / ---	35 / ---	14 / ---	12 / ---	0.0 / ---	---	---	---			22	---	---	---		
7/2 1200		--	---	---	170	7.2*	18 / ---	5.5 / ---	8.3 / ---	0.0 / ---	0.0 / ---	72 / ---	6.2 / ---	14 / ---	0.0 / ---	---	---	---		114	21	---	---	---		
7/30 1400		74	---	---	166	7.8*	15 / ---	3.0 / ---	11 / ---	0.0 / ---	0.0 / ---	66 / ---	9.6 / ---	17 / ---	0.0 / ---	---	---	---		140	25	---	---	---		
8/27 1200		74	---	---	182	7.3*	13 / ---	7.8 / ---	11 / ---	2.0 / ---	0.0 / ---	64 / ---	5.3 / ---	19 / ---	0.6 / ---	---	---	---		128	26	---	---	---		
9/29 1035		68	---	---	159	7.1*	12 / ---	5.9 / ---	9.7 / ---	2.0 / ---	0.0 / ---	56 / ---	8.6 / ---	15 / ---	0.6 / ---	---	---	---		159	27	---	---	---		
10/27 1340		66	---	---	188	7.7*	14 / ---	7.2 / ---	13 / ---	2.0 / ---	0.0 / ---	65 / ---	10 / ---	23 / ---	0.6 / ---	---	---	---		148	30	---	---	---		
11/24 1045		52	---	---	147	7.3*	14 / ---	4.4 / ---	9.2 / ---	0.0 / ---	0.0 / ---	61 / ---	7.7 / ---	7.1 / ---	1.9 / ---	---	---	---		152	27	---	---	---		
12/12 1100		53	---	---	173	7.3*	14 / ---	6.0 / ---	11 / ---	0.0 / ---	0.0 / ---	64 / ---	3.6 / ---	11 / ---	0.6 / ---	---	---	---		136	29	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SAN JOAQUIN RIVER NEAR VERNALIS (STA. 27)														Maximum 7,000.+ Minimum 62. Median 2,400.	
1/30 1100	3,520	56	8.6	82	449	7.3	---	---	52/2.26	---	0/0.00	98/1.61	---	61/1.72	---	---	0.23/---	---		---	55.	94	14	40		
2/20 1505	8,790	57	8.3	80	234	7.3	---	---	21/0.91	---	0/0.00	74/1.21	---	22/0.62	---	---	0.30/---	---		---	42	64	3	80		
3/6 1140	6,760	55	9.6	90	365	7.5	---	---	39/1.70	---	0/0.00	90/1.48	---	45/1.27	---	---	0.19/---	---		---	50	86	12	40		
4/11 1020	36,200	61	7.4	74	224	7.3	---	---	20/0.87	---	0/0.00	76/1.25	---	19/0.54	---	---	0.10/---	---		---	41	62	0	20		
5/8 1245	20,300	66	8.1	86	144	7.2	9.2/0.46	4.1/0.34	12/0.52	1.6/0.04	0/0.00	48/0.79	7.7/0.16	12/0.34	0.6/0.01	0.2/0.01	0.09/---	14/--	PO_4 0.25 Fe 0.14 Al 0.12 Cu 0.01 a	85[b]	38	40	1	11		
6/6 0940	19,600	67	8.0	86	107	7.0	---	---	9.6/0.42	---	0/0.00	35/0.57	---	10/0.28	---	---	0.0/---	---		---	42	29	0	30		
7/10 1300	4,910	80	8.4	98	353	7.3	---	---	39/1.70	---	0/0.00	82/1.34	---	51/1.44	---	---	0.0/---	---		---	51	83	16	14		
8/8 0700	1,510	75	7.7	90	751	7.8	---	---	84/3.65	---	0/0.00	156/2.56	---	124/3.50	---	---	0.1/---	---		---	51	172	44	20		
9/5 0730	1,770	71	9.4	105	708	8.0	40/2.00	16/1.32	76/3.31	3.9/0.10	0/0.00	146/2.39	46/0.96	113/3.19	2.6/0.04	0.1/0.01	0.2/---	27/--	PO_4 0.50 a	397[b]	49	166	46	10		
10/16 1500	2,570	68	9.5	103	499	7.9	---	---	56/2.44	---	0/0.00	106/1.74	---	79/2.23	---	---	0.1/---	---		---	52	114	27	10		
11/13 0915	3,400	58	9.1	89	324	7.4	---	---	36/1.57	---	0/0.00	66/1.08	---	50/1.41	---	---	0.3/---	---		---	53	70	16	10		
12/4 0840	4,010	54	9.6	89	297	7.6	---	---	33/1.44	---	0/0.00	58/0.95	---	44/1.24	---	---	0.1/---	---		---	51	68	20	10		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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 [a]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						SAN JOAQUIN RIVER NEAR VERNALIS (STA. 27)																			USGS
1/1-15	1,940	---	----	----	581	8.2*	27/1.35	13/1.06	66/2.87	3.0/0.08	0/0.00	100/1.64	44/0.92	100/2.82	1.8/0.03	0.1/0.01	0.1/---	22/--	Fe 0.00	326[b]	54	120	38	---		
1/16-27	2,600	---	----	----	560	7.7*	26/1.30	12/0.96	66/2.87	3.0/0.08	0/0.00	105/1.72	50/1.04	86/2.43	2.1/0.03	0.0/0.00	0.1/---	18/--	Fe 0.01	316[b]	55	113	27	---		
1/28-31, 2/1-5	3,870	---	----	----	440	7.9*	21/1.05	9.4/0.77	49/2.13	4.0/0.10	0/0.00	101/1.66	37/0.77	60/1.69	1.7/0.03	0.2/0.01	0.2/---	17/--	Fe 0.05	250[b]	53	91	8	---		
2/6-10	5,560	---	----	----	346	7.7*	18/0.90	7.8/0.64	37/1.61	3.4/0.09	0/0.00	89/1.46	29/0.60	43/1.21	1.4/0.02	0.2/0.01	0.13/---	16/--	Fe 0.02	200[b]	50	77	4	---		
2/11-19	4,110	---	----	----	490	7.3*	24/1.20	11/0.90	56/2.44	3.6/0.09	0/0.00	107/1.75	48/1.00	66/1.86	2.1/0.03	0.1/0.01	0.21/---	21/--	Fe 0.00	285[b]	53	105	17	---		
2/20-28	7,490	---	----	----	346	7.3*	18/0.90	8.5/0.70	36/1.57	3.0/0.08	0/0.00	88/1.44	31/0.65	41/1.16	1.3/0.02	0.2/0.01	0.14/---	15/--	Fe 0.03	197[b]	48	80	8	---		
3/1-16	6,330	---	----	----	366	7.3*	18/0.90	9.5/0.78	41/1.78	2.3/0.06	0/0.00	90/1.48	36/0.75	47/1.33	2.7/0.04	0.1/0.01	0.5/---	22/--	Fe 0.04	223[b]	51	84	10	---		
3/17-22	13,480	---	----	----	205	7.2*	13/0.65	6.2/0.51	19/0.83	2.3/0.06	0/0.00	60/0.98	21/0.44	21/0.59	2.4/0.04	0.1/0.01	0.2/---	17/--	Fe 0.11	132[b]	40	58	9	---		
3/23-31, 4/1-2	20,630	---	----	----	232	7.4*	13/0.65	6.2/0.51	22/0.96	2.3/0.06	0/0.00	70/1.15	17/0.35	24/0.68	1.9/0.03	0.1/0.01	0.0/---	20/--	Fe 0.08	141[b]	44	58	1	---		
4/3-11	37,660	---	----	----	184	7.3*	12/0.60	5.8/0.48	15/0.65	2.3/0.06	0/0.00	66/1.08	12/0.25	15/0.42	1.6/0.03	0.1/0.01	0.1/---	20/--	Fe 0.10	117[b]	36	54	0	---		
4/12-20	27,030	---	----	----	252	7.3*	16/0.80	6.3/0.52	23/1.00	2.8/0.07	0/0.00	78/1.28	19/0.40	23/0.65	1.9/0.03	0.1/0.01	0.2/---	19/--	Fe 0.04	149[b]	42	66	2	---		
4/21-30	21,720	---	----	----	199	7.4*	12/0.60	6.3/0.52	19/0.83	2.1/0.05	0/0.00	66/1.08	15/0.31	22/0.62	1.9/0.03	0.0/0.00	0.2/---	20/--	Fe 0.04	132[b]	42	56	2	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Average Mean Daily						SAN JOAQUIN RIVER NEAR VERNALIS (STA. 27 cont.)																			USGS
5/1-18	20,190	---	----	----	162	6.8*	12 / 0.60	4.9 / 0.40	13 / 0.57	1.4 / 0.04	0 / 0.00	50 / 0.82	14 / 0.29	16 / 0.45	1.0 / 0.02	0.0 / 0.00	0.0 / ---	19 / --	Fe 0.02 Zn 0.10 PO_4 0.25 a	106[b]	35	50	9	---		
5/19-31, 6/1-6	29,340	---	----	----	109	6.5*	8.8 / 0.44	1.9 / 0.20	8.0 / 0.35	0.9 / 0.02	0 / 0.00	36 / 0.59	4.8 / 0.10	12 / 0.34	0.6 / 0.01	0.0 / 0.00	0.0 / ---	15 / --	Fe 0.00	70[b]	35	30	0	---		
6/7-15	14,760	---	----	----	148	6.7*	11 / 0.55	3.0 / 0.25	13 / 0.57	1.2 / 0.03	0 / 0.00	44 / 0.72	9.6 / 0.20	18 / 0.51	0.8 / 0.01	0.0 / 0.00	0.1 / ---	17 / --	Fe 0.02	96[b]	41	40	4	---		
6/16-18	10,700	---	----	----	192	8.2*	13 / 0.65	4.3 / 0.35	19 / 0.83	1.4 / 0.04	0 / 0.00	57 / 0.93	9.6 / 0.20	24 / 0.68	0.6 / 0.01	0.1 / 0.01	0.0 / ---	16 / --	Fe 0.00	116[b]	44	50	3	---		
6/19-30	14,810	---	----	----	129	6.7*	9.2 / 0.46	2.2 / 0.18	11 / 0.48	1.1 / 0.03	0 / 0.00	37 / 0.61	2.9 / 0.06	16 / 0.45	0.5 / 0.01	0.0 / 0.00	0.0 / ---	15 / --	Fe 0.00	76[b]	42	32	2	---		
7/1-3	9,710	---	----	----	163	6.5*	11 / 0.55	3.3 / 0.27	15 / 0.65	1.2 / 0.03	0 / 0.00	42 / 0.69	9.6 / 0.20	20 / 0.56	1.0 / 0.02	0.1 / 0.01	0.1 / ---	18 / --	Fe 0.02	100[b]	43	41	7	---		
7/4-9	6,740	---	----	----	268	6.6*	20 / 1.00	3.6 / 0.30	27 / 1.17	1.5 / 0.04	0 / 0.00	63 / 1.03	19 / 0.40	36 / 1.02	1.8 / 0.03	0.1 / 0.01	0.0 / ---	22 / --	Fe 0.00	162[b]	47	65	13	---		
7/10-24	3,020	---	----	----	489	6.7*	24 / 1.20	13 / 1.08	51 / 2.22	2.3 / 0.06	0 / 0.00	101 / 1.66	36 / 0.75	74 / 2.09	2.2 / 0.04	0.0 / 0.00	0.1 / ---	27 / --	Fe 0.00	280[b]	49	114	31	---		
7/25-31	1,610	---	----	----	739	7.0*	40 / 2.00	17 / 1.40	81 / 3.52	3.5 / 0.09	0 / 0.00	146 / 2.39	54 / 1.12	120 / 3.38	2.3 / 0.04	0.1 / 0.01	0.2 / ---	32 / --	Fe 0.00	422[b]	50	170	50	---		
8/1-31	1,540	---	----	----	73[illegible]	7.1*	42 / 2.10	18 / 1.50	85 / 3.70	3.8 / 0.10	0 / 0.00	153 / 2.51	61 / 1.27	125 / 3.52	2.1 / 0.03	0.1 / 0.01	0.1 / ---	34 / --	Fe 0.00	44[illegible][b]	50	180	55	---		
9/1-10	1,820	---	----	----	[illegible]76	7.[illegible]*	54 / 2.[illegible]9	6.2 / 0.51	74 / 3.22	3.8 / 0.10	0 / 0.00	153 / 2.51	44 / 0.92	110 / 3.10	2.0 / 0.03	0.2 / 0.01	0.3 / ---	29 / --	Fe 0.00	398[b]	49	160	35	---		
[illegible]/11-25, [illegible]/30	2,580	---	----	----	50[illegible]	[illegible]*	[illegible] / 1.[illegible]	13 / 1.0[illegible]	53 / 2.31	3.2 / 0.0[illegible]	0 / 0.00	123 / 2.02	25 / 0.52	78 / 2.20	3.5 / 0.06	0.1 / 0.01	0.1 / ---	29 / --	Fe 0.00	296[b]	47	128	27	---		
12/1-17	3,540	--	---	---	3[illegible]2	7.1	17 / 0.85	8.1 / 0.67	36 / 1.57	[illegible].9 / 0.05	0 / 0.00	64 / 1.05	27 / 0.56	50 / 1.41	2.2 / 0.04	0.1 / 0.01	0.1 / ---	25 / ---	Fe 0.00	199[b]	50	76	24	---		

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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, or United States Public Health Service.

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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen % Sat	Specific conductance (micromhos at 25°C)	pH[f]	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[c] 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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN JOAQUIN RIVER AT WEST STANISLAUS I. D. INTAKE (STA. 27b)																			USBR
1/16 1120	---	49	---	---	2,292	7.8*	96 / ---	79 / ---	230 / ---	2.0 / ---	0.0 / ---	243 / ---	252 / ---	426 / ---	0.6 / ---	---	---	---		1,460	47	---	---	---		
2/17 1110	---	60	---	---	1,006	7.3*	41 / ---	26 / ---	124 / ---	2.3 / ---	0.0 / ---	163 / ---	120 / ---	164 / ---	2.5 / ---	---	---	---		640	56	---	---	---		
3/17 1125	---	58	---	---	1,073	8.2*	44 / ---	31 / ---	124 / ---	4.7 / ---	0.0 / ---	163 / ---	136 / ---	157 / ---	0.0 / ---	---	---	---		642	52	---	---	---		
4/14 1100	---	66	---	---	318	7.2*	20 / ---	8.3 / ---	30 / ---	3.5 / ---	0.0 / ---	90 / ---	33 / ---	30 / ---	0.6 / ---	---	---	---		218	42	---	---	---		
5/15 1100	---	68	---	---	152	7.0*	16 / ---	3.2 / ---	14 / ---	2.0 / ---	0.0 / ---	43 / ---	11 / ---	28 / ---	0.0 / ---	---	---	---		140	37	---	---	---		
6/12 1105	---	70	---	---	143	6.2*	9.4 / ---	2.9 / ---	12 / ---	1.6 / ---	0.0 / ---	39 / ---	15 / ---	16 / ---	0.0 / ---	---	---	---		104	41	---	---	---		
7/15 1005	---	70	---	---	717	7.3*	33 / ---	18 / ---	81 / ---	1.6 / ---	0.0 / ---	120 / ---	78 / ---	112 / ---	2.5 / ---	---	---	---		452	52	---	---	---		
8/14 1150	---	78	---	---	932	7.6*	48 / ---	21 / ---	110 / ---	2.0 / ---	0.0 / ---	153 / ---	99 / ---	142 / ---	11 / ---	---	---	---		580	53	---	---	---		
9/16 0950	---	74	---	---	657	7.4*	30 / ---	15 / ---	67 / ---	2.3 / ---	0.0 / ---	132 / ---	53 / ---	83 / ---	3.7 / ---	---	---	---		380	51	---	---	---		
10/16 1040	---	68	---	---	798	7.8*	33 / ---	24 / ---	92 / ---	2.0 / ---	0.0 / ---	154 / ---	78 / ---	132 / ---	3.7 / ---	---	---	---		520	52	---	---	---		
11/18 1145	---	57	---	---	1,252	7.9*	56 / ---	32 / ---	150 / ---	2.3 / ---	0.0 / ---	201 / ---	140 / ---	229 / ---	5.6 / ---	---	---	---		832	54	---	---	---		
12/18 1210	---	52	---	---	1,290	7.8*	56 / ---	35 / ---	163 / ---	2.3 / ---	0.0 / ---	207 / ---	168 / ---	218 / ---	3.7 / ---	---	---	---		822	55	---	---	---		

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b Determined by addition of analyzed constituents.
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TABLE B-14

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CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN JOAQUIN RIVER AT WHITEHOUSE (STA. 24b)																			USBR
1/15 1115	4	42	---	---	114	--	---	---	---	---	---	---	---	---	---	---	---	---		100	---	---	---	---		
1/29 1020	71	52	---	---	68	--	---	---	---	---	---	---	---	---	---	---	---	---		--	---	---	---	---		
2/11 1115	52	58	---	---	128	--	---	---	---	---	---	---	---	---	---	---	---	---		100	---	---	---	---		
2/25 1710	106	61	---	---	119	--	---	---	---	---	---	---	---	---	---	---	---	---		100	---	---	---	---		
2/25 0825	4,350	52	---	---	70	6.9*	6.6 ---	2.3 ---	5.1 ---	2.3 ---	0.0 ---	29 ---	10 ---	8.2 ---	0.0 ---	---	---	---		--	28	---	---	---		
3/12 1105	95	54	---	---	126	--	---	---	---	---	---	---	---	---	---	---	---	---		100	---	---	---	---		
4/15 1315	6,450	55	---	---	61	--	---	---	---	---	---	---	---	---	---	---	---	---		54	---	---	---	---		
4/29 1100	6,350	54	---	---	64	--	---	---	---	---	---	---	---	---	---	---	---	---		54	---	---	---	---		
5/13 1115	5,830	56	---	---	46	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
5/27 0900	6,040	57	---	---	35	6.9*	2.4 ---	1.2 ---	2.3 ---	2.0 ---	0.0 ---	12 ---	1.0 ---	6.4 ---	3.1 ---	---	---	---		---	27	---	---	---		
6/10 0825	3,900	58	---	---	32	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
6/24 1100	4,040	63	---	---	33	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
7/15 1045	420	73	---	---	48	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		

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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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N C ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958										SAN JOAQUIN RIVER AT WHITEHOUSE (STA. 24b cont.)																USBR
7/29 1215	119	82	---	---	71	6.7*	7.0 ---	2.6 ---	5.8 ---	2.0 ---	0.0 ---	27 ---	3.8 ---	6.7 ---	1.2 ---	---	---	---		---	29	---	---	---		
8/12 1430	100	81	---	---	64	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
8/26 1330	78	80	---	---	61	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
9/9 1100	96	76	---	---	87	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
9/23 1015	59	71	---	---	84	7.2*	6.2 ---	2.4 ---	7.4 ---	2.0 ---	0.0 ---	31 ---	14 ---	4.6 ---	0.0 ---	---	---	---		---	36	---	---	---		
10/14 1155	41	71	---	---	84	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
10/28 1130	44	65	---	---	87	--	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---		
11/11 1030	34	58	---	---	103	--	---	---	---	---	---	---	---	---	---	---	---	---		82	---	---	---	---		
11/25 1015	41	51	---	---	79	--	---	---	---	---	---	---	---	---	---	---	---	---		58	---	---	---	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SOUTH HONCUT CREEK NEAR BANGOR (STA. 90)																			
1/15 1245	32	47	11.6	98	107	7.3	---	---	6.2/0.27	---	0/0.00	57/0.93	---	4.0/0.11	---	---	0.00/---	---		---	25	40	0	3		USGS
2/18 1330	110	53	10.5	96	90.3	7.3	---	---	4.9/0.21	---	0/0.00	46/0.75	---	2.0/0.06	---	---	0.05/---	---		---	23	35	0	2		
3/11 1345	47	54	10.6	99	105	7.5	---	---	6.5/0.28	---	0/0.00	58/0.95	---	3.0/0.08	---	---	0.00/---	---		---	25	42	0	2		
4/15 1245	66	65	9.1	96	107	7.7	---	---	6.2/0.27	---	0/0.00	58/0.95	---	4.0/0.11	---	---	0.00/---	---		---	22	47	0	3		
5/12 1315	30	65	9.2	97	132	7.7	12/0.60	4.4/0.36	9.0/0.39	0.8/0.02	0/0.00	71/1.16	5.8/0.12	3.5/0.10	0.2/0.00	0.0/0.00	0.04/---	30/---	Fe 0.04 Al 0.04 Zn 0.01 PO_4 0.00[a]	101[b]	28	48	0	1		
6/16 1335	5.4	82	7.9	99	155	7.6	---	---	11/0.48	---	0/0.00	81/1.33	---	5.5/0.16	---	---	0.0/---	---		---	31	54	0	0.5		
7/14 1200	1.2	80	7.8	96	193	7.7	---	---	15/0.65	---	0/0.00	92/1.51	---	8.5/0.24	---	---	0.0/---	---		---	34	63	0	0.7		
8/11 1250	0.1	86	8.9	116	280	7.7	---	---	25/1.09	---	0/0.00	118/1.93	---	16/0.45	---	---	0.1/---	---		---	39	86	0	4		
9/8 1245	0	81	7.1	88	425	7.7	40/2.00	10/0.86	35/1.52	0.4/0.01	0/0.00	157/2.57	44/0.92	32/0.90	0.2/0.00	0.1/0.01	0.2/---	43/---	Fe 0.01 Zn 0.01 PO_4 0.05[a]	282[b]	35	143	14	1		
10/	Discontinued																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							STANISLAUS RIVER NEAR MOUTH (STA. 29)																			USGS
1/30 1200	437	56	8.8	83	191	7.3	---	---	12/0.52	---	0/0.00	100/1.64	---	7.5/0.21	---	---	0.17/---	---		---	26	74	0	20	Maximum 7000.+ Minimum 9.5 Median 2400.	
2/20 1540	1,700*	55	9.7	91	95.7	7.3	---	---	3.9/0.17	---	0/0.00	44/0.72	---	1.5/0.04	---	---	0.07/---	---		---	18	38	2	100		
3/6 1210	1,640*	54	10.2	94	107	7.3	---	---	3.9/0.17	---	0/0.00	59/0.97	---	2.5/0.07	---	---	0.00/---	---		---	16	46	0	20		
4/11 1115	3,600*	56	10.2	97	106	7.3	---	---	3.4/0.15	---	0/0.00	56/0.92	---	2.8/0.08	---	---	0.00/---	---		---	14	48	2	15		
5/8 1355	4,500*	63	9.5	98	71.7	7.2	7.2/0.36	2.9/0.24	3.6/0.16	1.3/0.03	0/0.00	36/0.59	6.7/0.14	1.5/0.04	0.3/0.00	0.2/0.01	0.00/---	16/---	PO_4 0.10/0.07 Fe; Cu 0.01 Al 0.10[a]	58[b]	20	30	0	5		
6/6 1025	5,600*	61	9.1	91	47.3	7.0	---	---	2.1/0.09	---	0/0.00	24/0.39	---	0.5/0.01	---	---	0.0/---	---		---	16	24	4	29		
7/10 1220	962	77	8.4	100	103	7.2	---	---	5.0/0.22	---	0/0.00	51/0.84	---	3.0/0.08	---	---	0.0/---	---		---	22	40	0	11		
8/8 0745	160	72	8.8	100	261	7.8	---	---	15/0.65	---	0/0.00	136/2.23	---	9.8/0.28	---	---	0.0/---	---		---	24	102	0	10		
9/5 0800	292	71	7.4	83	194	7.4	18/0.90	8.0/0.66	10/0.44	2.9/0.07	0/0.00	102/1.67	8.6/0.18	5.0/0.14	1.5/0.02	0.1/0.01	0.1/---	28/---	PO_4 0.25/0.01 Fe; Cu 0.01 Al 0.05[a]	132[b]	21	78	0	9		
10/16 1415	307	69	7.8	86	210	7.5	---	---	12/0.52	---	0/0.00	110/1.80	---	7.5/0.21	---	---	0.0/---	---		---	25	80	0	5		
11/13 0830	336	56	9.5	90	225	7.5	---	---	12/0.52	---	0/0.00	118/1.93	---	7.5/0.21	---	---	0.1/---	---		---	22	90	0	10		
12/4 0915	913	51	10.3	92	79.0	7.6	---	---	2.8/0.12	---	0/0.00	40/0.66	---	3.5/0.10	---	---	0.1/---	---		---	15	34	1	30		

*Estimated Mean Daily

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							STANISLAUS RIVER BELOW TULLOCH DAM (STA. 29a)																			USGS
1/29 1545	30 est.	56	11.1	104	102	7.1	---	---	3.1 / 0.13	---	0 / 0.00	52 / 0.85	---	1.4 / 0.04	---	---	0.04 / ---	---		---	14	41	0	10	Maximum 7000.+ Minimum 0.6 Median 62.	
2/20 1130	1,170*	51	9.7	87	99.5	7.1	---	---	3.2 / 0.14	---	0 / 0.00	50 / 0.82	---	2.0 / 0.06	---	---	0.00 / ---	---		---	13	45	4	10		
3/5 1645	1,640*	51	11.2	100	90.1	7.3	---	---	2.7 / 0.12	---	0 / 0.00	45 / 0.74	---	2.2 / 0.06	---	---	0.00 / ---	---		---	13	41	4	20		
4/10 1405	3,135*	53	11.2	102	94.4	7.5	---	---	2.9 / 0.13	---	0 / 0.00	49 / 0.80	---	2.2 / 0.06	---	---	0.00 / ---	---		---	14	41	2	8		
5/8 0830	6,270	56	10.3	98	64.9	7.3	6.4 / 0.32	2.7 / 0.22	3.1 / 0.13	1.3 / 0.03	0 / 0.00	32 / 0.52	6.7 / 0.14	1.0 / 0.03	0.2 / 0.00	0.2 / 0.01	0.00 / ---	15 / ---	PO_4 0.05 / Fe 0.04; Cu 0.01 / Al 0.04 [a]	53 [b]	19	27	1	5		
6/13 0950	3,875*	59	10.2	100	35.1	7.1	---	---	2.1 / 0.09	---	0 / 0.00	17 / 0.28	---	0.5 / 0.01	---	---	0.0 / ---	---		---	23	15	1	5		
7/10 0700	1,890	64	9.4	98	37.0	6.9	---	----	1.4 / 0.06	---	0 / 0.00	20 / 0.33	---	0.2 / 0.01	---	---	0.0 / ---	---		---	18	14	0	4		
8/7 1340	1,775	64	7.8	81	42.4	6.8	---	---	1.6 / 0.07	---	0 / 0.00	22 / 0.36	---	1.5 / 0.04	---	---	0.0 / ---	---		---	18	16	0	5		
9/4 1440	1,700	70	7.4	82	51.3	6.9	6.8 / 0.34	1.0 / 0.08	1.9 / 0.08	1.9 / 0.05	0 / 0.00	27 / 0.44	3.8 / 0.08	1.1 / 0.03	0.2 / 0.00	0.0 / 0.00	0.0 / ---	12 / ---	PO_4 0.00 / Fe 0.01; Cu 0.01 / Al 0.06 [a]	42 [b]	15	21	0	2		
10/10 1650	1,740	72	7.2	82	143	6.8	---	---	5.6 / 0.24	---	0 / 0.00	76 / 1.25	---	3.5 / 0.10	---	---	0.0 / ---	---		---	16	61	0	5		
11/12 1650	150	60	10.0	100	69.9	7.6	---	---	3.5 / 0.15	---	0 / 0.00	36 / 0.59	---	1.5 / 0.04	---	---	0.0 / ---	---		---	21	29	0	5		
12/3 1630	920	54	9.9	92	60.5	7.6	---	---	1.9 / 0.08	---	0 / 0.00	34 / 0.56	---	1.5 / 0.04	---	---	0.1 / ---	---		---	13	26	0	10		
	*Mean	Daily																								

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Mineral constituents in parts per million / equivalents per million

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
										STOCKTON SHIP CHANNEL ON RINDGE ISLAND (STA. 100)																
1958	Tidal																									USGS
1/24 0815		48	8.7	75	639	7.3	---	---	67 / 2.91	---	0 / 0.00	106 / 1.74	---	110 / 3.10	---	---	0.10 / ---	---		---	57	161	74	10		
2/10 1555		55	7.5	70	327	7.1	---	---	30 / 1.30	---	0 / 0.00	80 / 1.31	---	39 / 1.10	---	---	0.19 / ---	---		---	43	85	19	20	Maximum 7000.+ Minimum 2.3 Median 960.	
3/4 1345		55	8.5	80	357	7.3	---	---	33 / 1.44	---	0 / 0.00	86 / 1.41	---	42 / 1.18	---	---	0.15 / ---	---		---	43	96	25	30		
4/3 1400		55	9.0	84	184	7.2	---	---	15 / 0.65	---	0 / 0.00	64 / 1.05	---	16 / 0.45	---	---	0.00 / ---	---		---	37	56	4	90		
5/20 0930		69	6.9	76	134	7.1	9.6 / 0.48	3.4 / 0.28	12 / 0.52	1.9 / 0.05	0 / 0.00	45 / 0.74	7.7 / 0.16	14 / 0.39	1.1 / 0.02	0.0 / 0.00	0.04 / ---	15 / ---	Fe 0.02 Al 0.05 Cu 0.01 Zn 0.01 PO_4 0.20 a	87[b]	39	38	1	25		
6/12 1410		70	7.3	81	150	7.1	---	---	13 / 0.57	---	0 / 0.00	48 / 0.79	---	16 / 0.45	---	---	0.0 / ---	---		---	36	50	11	35		
7/7 1450		79	7.8	95	254	7.3	---	---	25 / 1.09	---	0 / 0.00	68 / 1.11	---	32 / 0.90	---	---	0.0 / ---	---		---	46	63	7	7		
8/4 1230		81	6.5	81	458	7.3	---	---	48 / 2.09	---	0 / 0.00	106 / 1.74	---	69 / 1.95	---	---	0.2 / ---	---		---	49	106	19	10		
9/4 0955		78	6.5	78	590	7.3	22 / 1.10	22 / 1.84	65 / 2.83	4.4 / 0.11	0 / 0.00	149 / 2.44	35 / 0.73	92 / 2.59	1.1 / 0.02	0.2 / 0.01	0.0 / ---	3.4 / ---	Fe 0.04 PO_4 0.40 Cu 0.02 a	318[b]	48	147	25	60		
10/5 1250		73	5.8	66	540	7.1	---	---	60 / 2.61	---	0 / 0.00	131 / 2.15	---	82 / 2.31	---	---	0.1 / ---	---		---	51	125	18	5		
11/14 1350		60	7.3	73	373	7.4*	---	---	42 / 1.83	---	0 / 0.00	74 / 1.21	---	59 / 1.66	---	---	0.0 / ---	---		---	52	84	23	9		
12/8 1550		54	9.9	92	328	7.2	---	---	37 / 1.61	---	0 / 0.00	62 / 1.02	---	50 / 1.41	---	---	0.1 / ---	---		---	51	76	25	30		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH_f	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Per-cent sod-ium	Hardness as $CaCO_3$		Tur-bid-ity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
			ppm	%Sat			Calcium (Ca)	Magne-sium (Mg)	Sodium (Na)	Potas-sium (K)	Carbon-ate (CO_3)	Bicar-bonate (HCO_3)	Sul-fate (SO_4)	Chlo-ride (Cl)	Ni-trate (NO_3)	Fluo-ride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
1958											STONY CREEK AT BLACK BUTTE DAM SITE (STA. 13c)															USGS
1/16 1045	681*	46	11.3	95	294	7.7	---	---	16 / 0.70	---	0 / 0.00	125 / 2.05	---	20 / 0.56	---	---	0.07 / ----	---		---	23	117	15	13		
2/20 0910	13,500	52	10.6	96	194	7.7	---	---	7.2 / 0.31	---	0 / 0.00	102 / 1.67	---	6.0 / 0.17	---	---	0.12 / ----	---		---	15	88	4	150		
3/12 1050	954*	48	10.8	93	364	7.9	---	---	14 / 0.61	---	0 / 0.00	176 / 2.88	---	14 / 0.39	---	---	0.04 / ---	---		---	16	160	16	42		
4/16 0850	1,170	55	10.0	94	267	7.9	---	---	10 / 0.44	---	0 / 0.00	129 / 2.11	---	7.0 / 0.20	---	---	0.06 / ----	---		---	16	114	8	138		
5/13 1025	1,010	61	9.4	95	292	7.9	26 / 1.30	14 / 1.16	12 / 0.52	1.1 / 0.03	0 / 0.00	141 / 2.31	23 / 0.48	9.5 / 0.27	0.3 / 0.01	0.1 / 0.01	0.10 / ----	13 / ----	Fe 0.08 PO_4 0.10 Al 0.14 Cu 0.01	168[b]	17	123	7	3		
6/17 1240	95	77	8.1	97	312	8.1	---	---	13 / 0.57	---	5 / 0.17	150 / 2.46	---	12 / 0.34	---	---	0.0 / ----	---	Total Alkalinity 160	---	15	159	28	9		
7/15 1130	158	67	9.1	98	299	7.7	---	---	12 / 0.52	---	0 / 0.00	169 / 2.77	---	11 / 0.31	---	---	0.1 / ---	---		---	16	138	0	4		
8/12 1030	152	71	8.3	93	333	7.7	---	---	14 / 0.61	---	0 / 0.00	172 / 2.82	---	13 / 0.37	---	---	0.3 / ---	---		---	17	146	5	40		
9/9 0925	52	71	7.7	87	349	7.7	35 / 1.75	17 / 1.37	15 / 0.65	2.1 / 0.05	0 / 0.00	184 / 3.02	17 / 0.35	15 / 0.42	0.2 / 0.00	0.0 / 0.00	0.2 / ---	18 / ---		211[b]	17	156	5	---		
10/13 1610	102	68	8.8	96	360	8.1	34 / 1.70	23 / 1.86	14 / 0.61	0.9 / 0.02	0 / 0.00	214 / 3.51	18 / 0.37	12 / 0.34	0.3 / 0.00	0.1 / 0.01	0.2 / ---	14 / ---		222[b]	15	178	3	---		
11/10 1515	18	58	10.5	102	424	7.9	40 / 2.00	22 / 1.84	17 / 0.74	0.9 / 0.02	0 / 0.00	223 / 3.65	26 / 0.54	17 / 0.48	0.5 / 0.01	0.0 / 0.00	0.2 / ---	11 / ---		245[b]	16	192	9	---		
12/5 1035	16	53	10.6	97	513	7.7	55 / 2.74	21 / 1.74	21 / 0.91	0.9 / 0.02	0 / 0.00	214 / 3.51	38 / 0.79	42 / 1.18	0.0 / 0.00	0.0 / 0.00	0.2 / ---	15 / ---		298[b]	17	224	49	---		
	*Mean Daily Flow																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

STONY CREEK NEAR HAMILTON CITY (STA. 13a)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
1958																										USGS
1/16 0940	750	47	11.3	96	303	7.7	---	---	15 / 0.65	---	0 / 0.00	134 / 2.20	---	22 / 0.62	---	---	0.10 / ---	---		---	21	121	11	40	Maximum 2400. Minimum 0.23 Median 14.6	
2/20 1020	20,000	53	10.5	96	188	7.7	---	---	6.8 / 0.30	---	0 / 0.00	101 / 1.66	---	5.5 / 0.16	---	---	0.30 / ---	---		---	16	81	0	400		
3/12 1000	987	51	10.6	95	339	7.9	---	---	13 / 0.57	---	0 / 0.00	170 / 2.79	---	11 / 0.31	---	---	0.00 / ---	---		---	17	143	4	45		
4/16 0755	1,560	58	9.4	92	301	7.9	---	---	11 / 0.48	---	0 / 0.00	150 / 2.46	---	2.0 / 0.06	---	---	0.09 / ---	---		---	16	129	6	106		
5/13 0925	752	63	9.4	97	306	7.9	30 / 1.50	14 / 1.19	12 / 0.52	1.1 / 0.03	0 / 0.00	149 / 2.44	22 / 0.46	12 / 0.34	0.8 / 0.01	0.0 / 0.00	0.07 / ---	14 / ---	Fe 0.03 Al 0.02[a] PO_4 0.10	179[b]	16	134	12	35		
6/17 1130	61	78	9.3	112	345	8.2	---	---	15 / 0.65	---	8 / 0.27	164 / 2.69	---	13 / 0.37	---	---	0.1 / ---	---	Total Alkalinity 180	---	18	148	0	5		
7/15 1005	12	78	6.8	82	357	7.5	---	---	16 / 0.70	---	0 / 0.00	178 / 2.92	---	15 / 0.42	---	---	0.2 / ---	---		---	19	149	3	2		
8/12 0940	8.9	79	5.6	68	367	7.3	---	---	16 / 0.70	---	0 / 0.00	184 / 3.02	---	16 / 0.45	---	---	0.2 / ---	---		---	19	154	3	3		
9/9 0840	17	73	8.3	95	355	7.5	40 / 2.00	15 / 1.24	17 / 0.74	2.3 / 0.06	0 / 0.00	190 / 3.11	18 / 0.37	16 / 0.45	0.1 / 0.00	0.0 / 0.00	0.1 / ---	18 / ---	Fe 0.03 Al 0.04[a] Cu 0.02 PO_4 0.00	220[b]	18	162	6	2		
10/13 1445	1.0	74	10.1	117	359	7.9	---	---	16 / 0.70	---	0 / 0.00	183 / 3.00	---	16 / 0.45	---	---	0.2 / ---	---		---	19	154	4	0.8		
11/10 1430	No flow	64	7.9	82	376	7.4	---	---	16 / 0.70	---	0 / 0.00	194 / 3.18	---	18 / 0.51	---	---	0.3 / ---	---		---	18	162	3	5		
12/11 1550	No flow	65	6.2	66	385	7.5	---	---	17 / 0.74	---	0 / 0.00	196 / 3.21	---	19 / 0.54	---	---	0.3 / ---	---		---	18	170	9	10		

Mineral constituents in parts per million / equivalents per million.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14
ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							THOMES CREEK AT PASKENTA (STA. 13d)																			USGS
10/2 1650	6.5	77	9.2	110	394	7.8	39 / 1.95	20 / 1.65	13 / 0.57	1.1 / 0.03	0 / 0.00	166 / 2.72	38 / 0.79	23 / 0.65	0.2 / 0.00	0.0 / 0.00	0.2 / ---	15 / ---		232[b]	14	180	44	--		
11/10 1710	11	56	10.4	99	427	7.8	45 / 2.25	19 / 1.59	15 / 0.65	1.1 / 0.03	0 / 0.00	185 / 3.03	34 / 0.71	26 / 0.73	0.3 / 0.00	0.0 / 0.00	0.1 / ---	11 / ---		242[b]	14	192	40	--		
12/5 0945	18	46	11.8	99	358	7.7	42 / 2.10	13 / 1.10	12 / 0.52	0.5 / 0.01	0 / 0.00	168 / 2.75	28 / 0.58	18 / 0.51	0.5 / 0.01	0.0 / 0.00	0.1 / ---	12 / ---		209[b]	14	160	22	--		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											TULE RIVER NEAR PORTERVILLE (STA. 91)															
1/28 1120	213	49	11.1	97	191	7.7	---	---	11 / 0.48	---	0 / 0.00	108 / 1.77	---	5.5 / 0.16	---	---	0.07 / ---	---		---	24	74	0	4		USGS
2/18 1335	145	55	10.4	98	227	8.1	---	---	12 / 0.52	---	0 / 0.00	130 / 2.13	---	6.0 / 0.17	---	---	0.09 / ---	---		---	22	90	0	3		
3/4 1310	185	50	11.3	100	202	7.9	---	---	11 / 0.48	---	0 / 0.00	118 / 1.93	---	6.0 / 0.17	---	---	0.02 / ---	---		---	23	82	0	10		
4/8 1315	610	55	10.6	100	157	7.7	---	---	10 / 0.44	---	0 / 0.00	89 / 1.46	---	5.0 / 0.14	---	---	0.00 / ---	---		---	27	60	0	7		
5/6 1210	685	58	9.9	97	90.1	7.6	12 / 0.60	1.2 / 0.10	4.4 / 0.19	1.4 / 0.04	0 / 0.00	48 / 0.79	3.8 / 0.08	2.9 / 0.08	0.0 / 0.00	0.0 / 0.00	0.04 / ---	16 / ---	Fe 0.02 PO_4 0.05 Al 0.09 Cu 0.01 [a]	66 [b]	20	35	0	8		
6/10 1235	346	63	9.4	97	117	7.7	---	---	5.6 / 0.24	---	0 / 0.00	66 / 1.08	---	2.0 / 0.06	---	---	0.0 / ---	---		---	21	46	0	2		
7/8 1300	115	79	8.7	106	195	8.0	---	---	8.9 / 0.39	---	0 / 0.00	115 / 1.88	---	5.0 / 0.14	---	---	0.0 / ---	---		---	20	80	0	0.8		
8/6 1015	31	76	8.9	104	303	7.9	---	---	14 / 0.61	---	4 / 0.13	176 / 2.88	---	8.0 / 0.23	---	---	0.1 / ---	---	Total Alkalinity 184	---	20	126	0	---		
9/3 1015	14	74	9.2	105	341	8.0	46 / 2.30	7.8 / 0.64	17 / 0.74	3.2 / 0.08	0 / 0.00	202 / 3.31	7.7 / 0.16	11 / 0.31	0.6 / 0.01	0.2 / 0.01	0.2 / ---	31 / ---	Fe 0.01 PO_4 0.10 [a]	225 [b]	20	147	0	1		
10/	Not sampled																									
11/11 1230	22	58	10.3	99	404	8.2	---	---	22 / 0.96	---	6 / 0.20	233 / 3.82	---	14 / 0.39	---	---	0.1 / ---	---	Total Alkalinity 245	---	22	172	0	5		
12/2 1130	37	50	12.1	106	407	8.3	---	---	20 / 0.87	---	0 / 0.00	246 / 4.03	---	12 / 0.34	---	---	0.1 / ---	---		---	19	185	0	0.8		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958										TUOLUMNE RIVER BELOW DON PEDRO DAM (STA. 31a)																USGS
1/29 1410	580	49	11.1	96	47.8	6.9	----	----	1.8 / 0.08	---	0 / 0.00	22 / 0.36	---	2.0 / 0.06	---	---	0.04 / ---	---		---	18	38	1	6	Maximum 7000.+ Minimum 0.5 Median 146.	
2/20 1020	1,320	49	10.7	93	69.4	7.1	----	----	2.2 / 0.10	---	0 / 0.00	34 / 0.56	---	1.0 / 0.03	---	---	0.05 / ---	---		---	14	30	2	15		
3/5 1545	2,530	50	10.9	96	68.4	7.3	----	----	2.3 / 0.10	---	0 / 0.00	35 / 0.57	---	2.0 / 0.06	---	---	0.10 / ---	---		---	15	29	0	20		
4/10 1245	7,240	50	12.2	108	78.5	7.3	----	----	2.6 / 0.11	---	0 / 0.00	39 / 0.64	---	1.8 / 0.05	---	---	0.00 / ---	---		---	14	33	1	35		
5/7 1650	4,740	54	11.3	104	34.5	7.1	3.2 / 0.16	1.2 / 0.10	1.7 / 0.07	0.8 / 0.02	0 / 0.00	17 / 0.28	0.0 / 0.00	2.2 / 0.06	0.0 / 0.00	0.0 / 0.00	0.00 / ---	8.2 / ---	Fe 0.01 / Zn 0.01; Al 0.04 / PO_4 0.00 [a]	25 [b]	20	13	0	8		
6/13 0830	3,070	55	10.9	102	20.7	6.8	----	----	1.4 / 0.06	---	0 / 0.00	12 / 0.20	---	0.0 / 0.00	---	---	0.0 / ---	---		---	25	9	0	4		
7/14 0930	3,670	59	12.5	123	17.1	6.9*	----	----	1.0 / 0.04	---	0 / 0.00	9 / 0.15	---	0.0 / 0.00	---	---	0.0 / ---	---		---	20	8	1	2		
8/14 0900	2,350	68	9.2	100	18.9	6.8	----	----	0.9 / 0.04	---	0 / 0.00	8 / 0.13	---	1.2 / 0.03	---	---	0.0 / ---	---		---	24	7	0	1		
9/24 ----	2300**	---	----	----	18.2	6.5*	2.0 / 0.10	0.5 / 0.04	1.1 / 0.05	0.7 / 0.02	0 / 0.00	8 / 0.13	1.9 / 0.04	1.0 / 0.03	0.1 / 0.00	0.0 / 0.00	0.0 / ---	4.0 / ---	PO_4 0.00 [a]	15 [b]	24	7	0	2		
10/20 1555	2,425	62	6.3	64	17.2	6.8	----	----	0.9 / 0.04	---	0 / 0.00	8 / 0.13	---	1.5 / 0.04	---	---	0.1 / ---	---		---	22	7	0	5		
11/24 1420	2,590	58	9.0	87	22.9	6.8	----	----	1.1 / 0.05	---	0 / 0.00	8 / 0.13	---	1.0 / 0.03	---	---	0.0 / ---	---		---	24	8	1	10		
12/23 1620	2,270	53	10.0	92	22.0	8.8	----	----	1.2 / 0.05	---	0 / 0.00	10 / 0.16	---	0.8 / 0.02	---	---	0.0 / ---	---		---	22	9	1	10		
	**Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported ..re as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
d Annual median ..d range, respectively. Calculated from analyses of duplicate monthly samples made by Calif. Dept. of Public Health, Division of Laboratories, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH[f]	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			
1958																										
							TUOLUMNE RIVER AT HICKMAN-WATERFORD BRIDGE (STA. 30)																			USGS
1/29 1645	729	54	11.5	106	123	7.3	---	---	9.8 / 0.43	---	0 / 0.00	40 / 0.66	---	17 / 0.48	---	---	0.01 / ---	---		---	39	34	1	2	Maximum 2400. Minimum 0.62 Median 21.	
2/20 1225	1,440	53	10.3	94	108	7.3	---	---	6.0 / 0.26	---	0 / 0.00	44 / 0.72	---	8.0 / 0.23	---	---	0.00 / ---	---		---	25	39	3	20		
3/6 0800	2,480	49	10.8	94	81.8	7.2	---	---	3.5 / 0.15	---	0 / 0.00	38 / 0.62	---	4.0 / 0.11	---	---	0.06 / ---	---		---	19	33	2	20		
4/10 1510	7,320	55	12.0	113	85.8	7.5	---	---	3.4 / 0.15	---	0 / 0.00	41 / 0.67	---	2.8 / 0.08	---	---	0.00 / ---	---		---	18	34	1	7		
5/8 0940	2,067	56	10.3	98	60.1	7.1	5.2 / 0.26	1.7 / 0.14	4.4 / 0.19	1.1 / 0.03	0 / 0.00	25 / 0.41	1.9 / 0.04	5.0 / 0.14	0.3 / 0.00	0.1 / 0.01	0.11 / ---	13 / ---	PO_4 0.05 Al 0.03[a] Fe 0.04 Cu 0.01	45[b]	31	20	0	3		
6/13 1050	701	64	9.2	96	105	7.1	---	---	8.9 / 0.39	---	0 / 0.00	31 / 0.51	---	16 / 0.45	---	---	0.0 / ---	---		---	40	29	4	5		
7/14 1115	786	58	9.3	91	89.0	7.4*	---	---	7.8 / 0.34	---	0 / 0.00	26 / 0.43	---	13 / 0.37	---	---	0.0 / ---	---		---	40	25	4	4		
8/14 1045	115	77	8.0	95	521	7.7	---	---	52 / 2.26	---	0 / 0.00	106 / 1.74	---	105 / 2.96	---	---	0.1 / ---	---		---	46	132	45	1		
9/24 1400	719	64	9.6	100	101	7.3	6.8 / 0.34	3.2 / 0.26	8.5 / 0.37	1.4 / 0.04	0 / 0.00	27 / 0.44	3.8 / 0.08	17 / 0.48	0.2 / 0.00	0.0 / 0.00	0.0 / ---	15 / ---	PO_4 0.05[a]	69[b]	37	30	8	0.5		
10/20 1440	99	63	9.4	97	158	7.4	---	---	15 / 0.65	---	0 / 0.00	33 / 0.54	---	31 / 0.87	---	---	0.0 / ---	---		---	46	38	11	5		
11/24 1240	2,450	58	9.9	96	41.2	7.0	---	---	2.3 / 0.10	---	0 / 0.00	16 / 0.26	---	3.5 / 0.10	---	---	0.1 / ---	---		---	25	15	2	10		
12/19 1520	1,960	54	10.7	99	92.3	7.2	---	---	6.9 / 0.30	---	0 / 0.00	26 / 0.43	---	14 / 0.39	---	---	0.1 / ---	---		---	35	28	7	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											TUOLUMNE RIVER AT TUOLUMNE CITY (STA. 31)															USGS
1/30 0800	960	56	8.6	82	328	7.1	---	---	31 / 1.35	---	0 / 0.00	64 / 1.05	---	63 / 1.78	---	---	0.07 / ---	---		---	48	74	22	15	Maximum 7000.+ Minimum 0.18 Median 1300.	
2/20 1330	5,600	55	8.2	77	98.4	7.1	---	---	6.7 / 0.29	---	0 / 0.00	34 / 0.56	---	9.5 / 0.27	---	---	0.09 / ---	---		---	30	34	6	10		
3/6 1000	2,830	52	10.1	91	165	7.1	---	---	13 / 0.57	---	0 / 0.00	44 / 0.72	---	25 / 0.70	---	---	0.00 / ---	---		---	38	47	11	20		
4/11 0825	7,970	55	10.5	98	113	7.3	---	---	6.2 / 0.27	---	0 / 0.00	47 / 0.77	---	9.3 / 0.26	---	---	0.00 / ---	---		---	25	40	1	10		
5/8 1045	4,520	60	9.8	97	87.8	7.1	6.4 / 0.32	1.9 / 0.16	6.7 / 0.29	1.3 / 0.03	0 / 0.00	25 / 0.41	1.9 / 0.04	13 / 0.37	0.0 / 0.00	0.0 / 0.00	0.00 / ---	9.6 / ---	Fe 0.01, Al 0.06, Cu 0.01, Zn 0.01, PO_4 0.15 [a]	53[b]	36	24	4	12		
6/6 0755	3,850	61	8.5	86	116	6.9	---	---	11 / 0.48	---	0 / 0.00	30 / 0.49	---	18 / 0.51	---	---	0.0 / ---	---		---	45	29	4	5		
7/14 1440	1,680	72	13.6	154	232	7.5*	---	---	23 / 1.00	---	0 / 0.00	52 / 0.85	---	42 / 1.18	---	---	0.0 / ---	---		---	49	52	9	2		
8/14 1110	460	77	6.8	81	796	8.0	---	---	79 / 3.44	---	0 / 0.00	152 / 2.49	---	176 / 4.96	---	---	0.1 / ---	---		---	47	196	71	3		
9/24 1005	1,090	65	6.8	72	347	7.3	21 / 1.05	5.7 / 0.47	36 / 1.57	3.3 / 0.08	0 / 0.00	66 / 1.08	7.7 / 0.16	68 / 1.92	1.7 / 0.03	0.1 / 0.01	0.0 / ---	20 / ---	PO_4 0.45 [a]	196[b]	50	76	22	2		
10/20 1135	700	64	7.2	75	419	7.1	---	---	46 / 2.00	---	0 / 0.00	78 / 1.28	---	85 / 2.40	---	---	0.0 / ---	---		---	52	92	28	5		
11/24 0930	2,785	58	10.5	102	125	7.0	---	---	11 / 0.48	---	0 / 0.00	28 / 0.46	---	23 / 0.65	---	---	0.2 / ---	---		---	43	32	9	10		
12/19 1340	1,170	54	9.3	87	321	7.1	---	---	34 / 1.48	---	0 / 0.00	62 / 1.02	---	66 / 1.86	---	---	0.0 / ---	---		---	50	74	23	20		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), Metropolitan Water District (MWD), Los Angeles Dept. of Water & Power (LADWP), City of Los Angeles Dept. of Pub. Health (LACPH), Long Beach Dept. of Pub. Health (LBDPH), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							YUBA RIVER AT MARYSVILLE (STA. 21)																			USGS
1/17 0835	1,690	46	11.6	97	92.2	7.3	---	---	2.9/0.13	0.7/0.02	0/0.00	49/0.80	---	1.0/0.03	---	---	0.15/--	---		---	14	39	0	14		
2/18 1030	11,600	49	11.7	102	62.1	7.2	---	---	4.1/0.18	---	0/0.00	30/0.49	---	1.2/0.03	---	---	0.00/---	---		---	26	26	1	40	Maximum 7000.+ Minimum 0.13 Median 14.6	
3/11 1055	3,430	47	11.8	100	67.0	7.3	---	---	2.0/0.09	---	0/0.00	33/0.54	---	2.0/0.06	---	---	0.00/---	---		---	14	28	1	10		
4/15 1030	9,600	54	11.0	102	66.9	7.3	---	---	2.2/0.10	---	0/0.00	35/0.57	---	1.0/0.03	---	---	0.04/---	---		---	14	30	1	22		
5/12 1105	12,300	53	11.4	104	48.5	7.1	6.0/0.30	1.5/0.12	1.8/0.08	0.7/0.02	0/0.00	24/0.39	3.8/0.08	1.0/0.03	0.3/0.00	0.1/0.01	0.01/---	12/--	PO_4 0.00 Cu 0.02 Fe 0.08 Al 0.12 a	39 [b]	15	21	1	19		
6/16 1115	5,740	61	9.8	98	46.3	7.3	---	---	1.6/0.07	---	0/0.00	24/0.39	---	1.0/0.03	---	---	0.0/---	---		---	14	21	1	10		
7/14 0940	620	79	8.2	100	69.5	7.3	---	---	1.9/0.08	---	0/0.00	33/0.54	---	1.8/0.05	---	---	0.1/---	---		---	13	26	0	10		
8/11 0900	275*	73	8.1	92	98.7	7.3	---	---	2.7/0.12	---	0/0.00	48/0.79	---	3.0/0.08	---	---	0.0/---	---		---	12	43	4	3		
9/8 0930	430*	73	7.8	89	114	7.3	14/0.70	4.4/0.36	3.0/0.13	1.8/0.05	0/0.00	62/1.02	5.8/0.12	2.1/0.06	0.2/0.00	0.0/0.00	0.1/---	17/--	PO_4 0.00 a	79 [b]	10	53	2	2		
10/16 1445	286	69	9.6	106	126	7.1	---	---	3.4/0.15	---	0/0.00	66/1.08	---	2.5/0.07	---	---	0.0/---	---		---	12	56	2	10		
11/3 1120	10 est.	64	10.6	111	178	7.5	---	---	4.0/0.17	---	0/0.00	84/1.38	---	4.0/0.11	---	---	0.0/---	---		---	10	80	11	8		
12/19 1140	180 est.	51	11.2	100	124	7.3	---	---	3.3/0.14	---	0/0.00	62/1.02	---	3.0/0.08	---	---	0.1/---	---		---	10	60	9	10		
	*Mean Daily																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.

e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.

f Field pH except when noted with *

TABLE B-14

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (5)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											YUBA RIVER NEAR SMARTVILLE (STA. 21a)															USGS
1/15 1135	747	45	12.0	99	82.9	7.3	---	---	2.7 / 0.12	---	0 / 0.00	43 / 0.70	---	1.0 / 0.03	---	---	0.02 / ---	---		---	14	36	1	9	Maximum 7,000.+	
2/18 1120	1,685	49	11.8	103	55.6	7.1	---	---	2.9 / 0.13	---	0 / 0.00	27 / 0.44	---	2.5 / 0.07	---	---	0.00 / ---	---		---	23	22	0	27	Minimum 0.13	
3/11 1250	8,744*	47	11.8	100	63.1	7.3	---	---	1.8 / 0.08	---	0 / 0.00	33 / 0.54	---	2.6 / 0.07	---	---	0.00 / ---	---		---	13	23	1	10	Median 18.	
4/15 1115	73,164	54	11.3	105	66.5	7.3	---	---	1.8 / 0.08	---	0 / 0.00	35 / 0.57	---	3.5 / 0.10	---	---	0.00 / ---	---		---	12	29	0	16		
5/12 1215	11,658	53	11.2	102	46.4	7.1	5.6 / 0.28	1.0 / 0.08	1.7 / 0.07	0.7 / 0.02	0 / 0.00	24 / 0.39	1.9 / 0.04	1.0 / 0.03	0.2 / 0.00	0.1 / 0.01	0.03 / ---	12 / --	PO_4 0.00; Cu 0.02 a; As 0.07	36[b]	16	19	0	14		
6/16 1225	6,344	60	10.2	102	43.1	7.3	---	---	1.9 / 0.08	---	0 / 0.00	23 / 0.38	---	1.0 / 0.03	---	---	0.0 / ---	---		---	18	13	0	4		
7/14 1040	14,549	63	8.7	95	55.6	7.3	---	---	1.6 / 0.07	---	0 / 0.00	29 / 0.48	---	1.4 / 0.04	---	---	0.1 / ---	---		---	14	22	0	0.6		
8/11 1100	779	73	8.7	94	86.7	7.3	---	---	2.5 / 0.11	---	0 / 0.00	44 / 0.72	---	2.8 / 0.08	---	---	0.0 / ---	---		---	13	38	2	0.6		
9/8 1125	708	76	8.2	96	114	7.3	14 / 0.70	4.4 / 0.36	2.9 / 0.13	1.8 / 0.05	0 / 0.00	62 / 1.02	5.8 / 0.12	2.0 / 0.06	0.1 / 0.00	0.0 / 0.00	0.0 / ---	16 / --	PO_4 0.00 a	78[b]	10	53	2	0.5		
10/16 1345	480	68	9.0	98	121	7.2	---	---	3.2 / 0.14	---	0 / 0.00	65 / 1.07	---	2.8 / 0.08	---	---	0.0 / ---	---		---	11	54	1	5		
11/3 1355	117	64	9.7	101	124	7.4	---	---	3.5 / 0.15	---	0 / 0.00	64 / 1.05	---	3.0 / 0.08	---	---	0.1 / ---	---		---	12	55	3	6		
12/19 1010	336	49	11.7	102	120	7.3	---	---	3.3 / 0.14	---	0 / 0.00	62 / 1.02	---	3.0 / 0.08	---	---	0.0 / ---	---		---	11	58	7	10		
	*Mean	Daily																								

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE 15-B

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958	Not Rated						CARSON RIVER, EAST FORK NEAR MARKLEEVILLE (STA. 115)																			USGS
9/5 0910		54	9.2	85	92	7.5*	10 / 0.50	2.3 / 0.19	4.2 / 0.18	1.7 / 0.04	0 / 0.00	46 / 0.75	2.9 / 0.06	1.8 / 0.05	0.0 / 0.00	0.1 / 0.01	0.1 / ---	18 / ---	Fe 0.09 Al 0.06 PO_4 0.10 a	64[b]	20	34	0	10		
10/7 1005		48	9.9	85	149	7.7	16 / 0.80	4.1 / 0.34	7.4 / 0.32	1.4 / 0.04	0 / 0.00	66 / 1.08	17 / 0.35	4.0 / 0.11	0.2 / 0.00	0.0 / 0.00	0.1 / ---	25 / ---		108[b]	21	57	3	---		
11/6 1700		47	9.6	82	132	7.6	14 / 0.70	3.6 / 0.30	7.7 / 0.33	1.2 / 0.03	0 / 0.00	64 / 1.05	11 / 0.23	3.8 / 0.11	0.0 / 0.00	0.0 / 0.00	0.1 / ---	24 / ---		97[b]	24	50	0	---		
12/17 1300		38	11.5	86	147	7.3	14 / 0.70	5.1 / 0.42	8.6 / 0.37	1.3 / 0.03	0 / 0.00	66 / 1.08	17 / 0.35	4.0 / 0.11	0.1 / 0.00	0.2 / 0.01	0.1 / ---	24 / ---		107[b]	24	56	2	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							CARSON RIVER, WEST FORK AT WOODFORDS (STA. 115a)																			USGS
8/7 1415	50	64	7.6	78	68.2	7.3	7.2 / 0.36	1.7 / 0.14	3.7 / 0.16	1.7 / 0.04	0 / 0.00	38 / 0.62	0.0 / 0.00	1.0 / 0.03	0.4 / 0.01	0.1 / 0.01	0.0 / ---	14 / ---		49[b]	23	25	0	1		
9/4 1350	36	59	8.6	84	72.1	8.0	7.7 / 0.38	1.7 / 0.14	3.0 / 0.13	1.5 / 0.04	0 / 0.00	37 / 0.61	1.9 / 0.04	1.0 / 0.03	0.1 / 0.00	0.1 / 0.01	0.0 / ---	18 / ---	Fe 0.04 Al 0.02 PO_4 0.05 Zn 0.04 a	53[b]	19	26	0	1		
10/7 0915	25	46	9.9	83	71.2	7.3	7.6 / 0.38	1.9 / 0.16	3.6 / 0.16	1.4 / 0.04	0 / 0.00	36 / 0.59	5.8 / 0.12	1.5 / 0.04	0.0 / 0.00	0.0 / 0.00	0.0 / ---	22 / ---		62[b]	22	27	0	---		
11/6 1730	23	44	10.0	82	71.3	7.4	7.8 / 0.39	1.8 / 0.15	3.5 / 0.15	1.2 / 0.03	0 / 0.00	39 / 0.64	1.9 / 0.04	1.5 / 0.04	0.0 / 0.00	0.0 / 0.00	0.0 / ---	22 / ---		59[b]	21	27	0	---		
12/17 1350	20	38	11.4	95	73.1	7.1	7.2 / 0.36	2.9 / 0.24	3.7 / 0.16	1.2 / 0.03	0 / 0.00	40 / 0.66	5.8 / 0.12	1.0 / 0.03	0.1 / 0.00	0.0 / 0.00	0.0 / ---	23 / ---		65[b]	20	30	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO3)	Bicarbonate (HCO3)	Sulfate (SO4)	Chloride (Cl)	Nitrate (NO3)	Fluoride (F)	Boron (B)	Silica (SiO2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as CaCO3 Total ppm	Hardness as CaCO3 N.C. ppm	Turbidity in ppm	Coliform d MPN/ml	Analyzed by e
							Mineral constituents in parts per million / equivalents per million																			
1958											LAKE TAHOE AT BIJOU (STA. 39)															USGS
4/18 1130		52	9.3	84	90.3	7.4	---	---	5.5 / 0.24	---	0 / 0.00	50 / 0.82	---	3.0 / 0.08	---	---	0.06 / ---	---		---	27	32	0	0	Maximum 7000. Minimum 0.045- Median 0.5	
5/16 0800		54	8.9	82	91.3	7.7	8.4 / 0.42	2.2 / 0.18	6.2 / 0.27	1.9 / 0.05	0 / 0.00	48 / 0.79	3.8 / 0.08	1.5 / 0.04	0.1 / 0.00	0.0 / 0.00	0.09 / ---	14 / --	Fe 0.03 PO4 0.00 Al 0.01 Cu 0.01 a	62b	29	30	0	5		
6/20 0710		60	8.0	79	87.1	7.5	---	---	5.6 / 0.24	---	0 / 0.00	48 / 0.79	---	1.0 / 0.03	---	---	0.0 / ---	---		---	28	31	0	4		
7/18 0745		65	7.3	77	91.6	7.3	---	---	6.2 / 0.27	---	0 / 0.00	49 / 0.80	---	3.0 / 0.08	---	---	0.0 / ---	---		---	31	30	0	0.7		
8/14 1510		74	7.2	83	93.3	7.5	---	---	6.1 / 0.27	---	0 / 0.00	50 / 0.82	---	3.5 / 0.10	---	---	0.0 / ---	---		---	29	33	0	2		
9/5 1100		67	7.6	82	91.4	7.9	9.2 / 0.46	3.2 / 0.26	5.3 / 0.23	2.5 / 0.06	0 / 0.00	50 / 0.82	4.8 / 0.10	2.4 / 0.07	0.0 / 0.00	0.1 / 0.01	0.0 / ---	15 / --	Fe 0.01 PO4 0.00 Al 0.04 a	68b	23	36	0	0.4		
10/7 0745		58	7.6	74	96.1	7.8	---	---	5.5 / 0.24	---	0 / 0.00	48 / 0.79	---	3.0 / 0.08	---	---	0.0 / ---	---		---	26	34	0	5		
11/7 0740		51	8.5	76	94.5	7.6	---	---	5.8 / 0.25	---	0 / 0.00	50 / 0.82	---	3.0 / 0.08	---	---	0.0 / ---	---		---	26	36	0	3		
12/17 1505		47	10.0	85	94.5	7.3	---	---	5.8 / 0.25	---	0 / 0.00	50 / 0.82	---	3.8 / 0.11	---	---	0.1 / ---	---		---	27	34	0	10		
January thru March not sampled - snowbound																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											LAKE TAHOE AT TAHOE CITY (STA. 38)															USGS
4/18 1345		47	10.0	85	94.2	7.5	---	---	5.9/0.26	---	0/0.00	52/0.85	---	3.0/0.08	---	---	0.00/---	---		---	29	32	0	0	Maximum 2400. Minimum 0.045- Median 0.23	
5/15 1430		52	9.3	84	91.6	7.7	9.2/0.46	1.7/0.14	6.2/0.27	2.0/0.05	0/0.00	47/0.77	5.8/0.12	1.5/0.04	0.1/0.00	0.1/0.01	0.14/---	13/--	Fe 0.03 Cu 0.01 PO_4 0.00 a	63[b]	29	30	0	4		
6/19 1630		62	8.3	84	92.3	7.7	---	---	6.1/0.27	---	0/0.00	50/0.82	---	1.5/0.04	---	---	0.0/---	---		---	30	31	0	4		
7/17 1440		65	8.0	84	93.0	7.7	---	---	6.2/0.27	---	0/0.00	52/0.85	---	3.1/0.09	---	---	0.0/---	---		---	30	31	0	0.2		
8/14 1310		72	7.4	84	95.2	7.7	---	---	6.3/0.27	---	0/0.00	50/0.82	---	3.5/0.10	---	---	0.2/---	---		---	28	34	0	2		
9/4 0700		66	7.2	76	92.9	7.6	9.2/0.46	3.4/0.28	5.4/0.23	2.5/0.06	0/0.00	50/0.82	3.8/0.08	3.5/0.10	0.1/0.00	0.1/0.01	0.0/---	14/--	Fe 0.01 Al 0.04 PO_4 0.05 a	67[b]	22	37	0	0.4		
10/7 0035		57	7.6	73	94.9	7.8	---	---	5.5/0.24	---	0/0.00	46/0.75	---	3.5/0.10	---	---	0.0/---	---		---	26	34	0	5		
11/6 1030		54	8.5	79	93.5	7.5*	---	---	5.9/0.26	---	0/0.00	50/0.82	---	2.5/0.07	---	---	0.0/---	---		---	25	38	0	2		
12/4 1500		---	---	---	95.2	7.8*	---	---	6.1/0.27	---	0/0.00	52/0.85	---	3.0/0.08	---	---	---	---		---	27	36	0	2		

January thru March not sampled - snowbound

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported [illegible] as 0.0/0.00 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, or United States Public Health Service
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), [illegible] 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											LAKE TAHOE AT TAHOE VISTA (STA. 37)															USGS
4/18 1245		52	10.1	91	105	7.5	---	---	5.9 / 0.26	---	0 / 0.00	58 / 0.95	---	3.5 / 0.10	---	---	0.01 / ---	---		---	25	39	0	0	Maximum 230. Minimum 0.045- Median 0.06	
5/15 1505		58	8.7	85	91.2	7.5	8.8 / 0.44	2.2 / 0.18	6.1 / 0.27	1.9 / 0.05	0 / 0.00	50 / 0.82	3.8 / 0.08	1.0 / 0.03	0.1 / 0.00	0.1 / 0.01	0.11 / ---	14 / --	Fe 0.02 Al 0.02 PO_4 0.00 Cu 0.01 a	63[b]	29	31	0	4		
6/19 1555		64	8.0	83	92.6	7.9	---	---	6.4 / 0.28	---	0 / 0.00	50 / 0.82	---	1.5 / 0.04	---	---	0.0 / ---	---		---	30	33	0	4		
7/18 0900		64	7.8	81	92.3	7.5	---	---	6.1 / 0.27	---	0 / 0.00	50 / 0.82	---	3.0 / 0.08	---	---	0.0 / ---	---		---	30	31	0	0.6		
8/14 1355		72	7.4	84	94.4	7.7	---	---	6.3 / 0.27	---	0 / 0.00	54 / 0.89	---	3.0 / 0.08	---	---	0.0 / ---	---		---	30	34	0	3		
9/3 1745		69	6.4	70	92.1	8.4	9.2 / 0.46	2.4 / 0.20	5.3 / 0.23	2.5 / 0.06	0 / 0.00	49 / 0.80	3.8 / 0.08	3.0 / 0.08	0.1 / 0.00	0.0 / 0.00	0.1 / ---	14 / --	Fe 0.01 Al 0.05 PO_4 0.00 a	64[b]	24	33	0	0.4		
10/6 1735		61	7.9	79	95.3	7.8	---	---	5.5 / 0.24	---	0 / 0.00	48 / 0.79	---	3.5 / 0.10	---	---	0.0 / ---	---		---	27	32	0	5		
11/6 1200		56	8.6	82	93.0	7.8	---	---	5.5 / 0.24	---	0 / 0.00	48 / 0.79	---	2.3 / 0.06	---	---	0.0 / ---	---		---	24	39	0	2		
12/17 1615		50	9.7	86	96.9	7.7	---	---	5.8 / 0.25	---	0 / 0.00	52 / 0.85	---	3.8 / 0.11	---	---	0.1 / ---	---		---	25	37	0	5		
		January thru March not sampled - snowbound																								

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15
ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							MOJAVE RIVER AT THE FORKS (STA.67a)																			DWR
1/8 1420	est. 75	47	9.2	77	224	7.3	17 / 0.85	4.6 / 0.38	21 / 0.91	1.3 / 0.03	0 / 0.00	88 / 1.45	21 / 0.43	8 / 0.23	0.06 / 0.00	1.0 / 0.05	0.00 / ----	25 / ---		172[c]	42	61	0	5-	Maximum 62. Minimum 0.46 Median 6.1	
2/12 1315	est. 200	45	9.2	76	121	7.3	---	---	---	---	0 / 0.00	57 / 0.93	---	5 / 0.13	---	---	0.00 / ----	---		---	34	39	0	5-		
3/5 1315	est. 300	61	10.0	101	155	7.5	---	---	---	---	0 / 0.00	74 / 1.22	---	7 / 0.20	---	---	0.03 / ----	---		---	29	58	0	5-		
4/4 1915	est.2500	43	8.8	71	104	7.6	12 / 0.60	3.7 / 0.30	6.6 / 0.29	1.3 / 0.03	0 / 0.00	50 / 0.82	11 / 0.23	4 / 0.11	0.5 / 0.01	0.1 / 0.00	0.04 / ----	15 / ---		101[c]	22	45	4	60		
5/7 1425	est. 300	77	6.2	74	116	7.9	14 / 0.70	2.1 / 0.17	7.4 / 0.32	1.0 / 0.03	0 / 0.00	57 / 0.94	6.2 / 0.13	3.0 / 0.08	0.1 / 0.00	0.4 / 0.02	0.00 / ----	50 / ---	Fe 0.80 Sn 0.00[a] PO_4 0.15	90[c]	26	43	0	5-		
6/10 1700	est. 50	70	7.2	80	170	7.9	---	---	---	---	0 / 0.00	85 / 1.40	---	1 / 0.02	---	---	0.13 / ----	---		---	34	56	0	5-		
7/2 1530	est. 15	73	7.0	80	207	7.9	---	---	---	---	0 / 0.00	98 / 1.60	---	5 / 0.10	---	---	0.00 / ----	---		---	47	58	0	5-		
8/5 1520	est. 15	77	7.0	84	255	8.1	---	---	26 / 1.13	---	0 / 0.00	110 / 1.80	---	8 / 0.23	---	---	0.07 / ----	---		---	44	71	0	5-		
9/3 0830	est. 8	73	8.0	92	289	7.5	20 / 1.00	5.0 / 0.50	30 / 1.31	8.8 / 0.23	0 / 0.00	126 / 2.06	28 / 0.58	11 / 0.31	0 / 0.00	1.2 / 0.06	0.00 / ----	25 / ---	Sn 0.00 PO_4 0.05[a]	201[c]	43	75	0	5-		
10/7 1630	est. 3	69	7.0	92	356	7.8	---	---	---	---	0 / 0.00	171 / 2.30	---	20 / 0.56	---	---	0.00 / ---	---		---	41	108	0	5-		
11/3 1245	est. 6	60	8.2	82	320	7.9	---	---	---	---	0 / 0.00	149 / 2.44	---	8 / 0.23	---	---	0.00 / ----	---		---	42	92	0	5-		
12/9 1630	est. 12	52	8.2	74	280	8.0	---	---	---	---	0 / 0.00	127 / 2.08	---	9 / 0.25	---	---	0.00 / ----	---		---	41	80	0	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											MOJAVE RIVER NEAR VICTORVILLE (STA 67)															
1/8 1150	42	52	8.8	79	427	7.8	---	---	---	---	0 / 0.00	165 / 2.70	---	29 / 0.82	---	---	0.00 / ----	---		---	36	130	0	5-	Maximum 700 Minimum [illegible].46 Median 13.	DWR
2/12 1045	45	45	7.4	61	408	7.7	---	---	---	---	0 / 0.00	160 / 2.61	---	24 / 0.68	---	---	0.06 / ----	---		---	37	129	0	5-		DWR
3/5 1145	34	62	9.0	92	421	7.7	---	---	---	---	0 / 0.00	170 / 2.78	---	28 / 0.30	---	---	0.03 / ----	---		---	37	131	0	5-		DWR
3/25 ----	---	--	---	--	171	7.7	15 / 0.77	5 / 0.43	13 / 0.57	1.2 / 0.03	0 / 0.00	76 / 1.25	11 / 0.22	9 / 0.25	1.0 / 0.02	---	0.00 / ----	---		133[c]	32	60	0	--		SBCFCD
4/4 1300	300	48	10.4	90	144	7.6	15 / 0.75	5.2 / 0.43	9.1 / 0.40	2.0 / 0.05	0 / 0.00	69 / 1.14	16 / 0.33	5 / 0.14	1.0 / 0.02	0.1 / 0.00	0.05 / ----	20 / ---		127[c]	26	58	1	550		DWR
5/7 1330	105	83	6.0	76	246	7.9	22 / 1.10	7.9 / 0.65	19 / 0.83	2.0 / 0.05	0 / 0.00	107 / 1.76	16 / 0.34	15 / 0.43	0.7 / 0.01	0.3 / 0.02	0.00 / ----	50 / ---	PO_4 0.27 Sn 0.00[a]	164[c]	32	88	0	5-		DWR
6/10 1815	20	75	7.2	84	443	7.9	---	---	---	---	0 / 0.00	174 / 2.85	---	30 / 0.84	---	---	0.00 / ----	---		---	40	133	0	5-		DWR
7/2 1430	22	86	5.6	73	456	8.3	---	---	---	---	0 / 0.00	135 / [illegible].03	---	29 / 0.82	---	---	0.05 / ----	---		---	39	132	0	5-		DWR
8/5 1700	17	82	6.0	76	439	8.2	---	---	41 / 1.78	---	0 / 0.00	163 / 2.68	---	31 / 0.87	---	---	0.10 / ----	---		---	41	125	0	5-		DWR
9/3 0930	19	79	7.2	87	448	7.9	40 / 2.00	7.0 / 0.58	43 / 1.87	1.7 / 0.04	0 / 0.00	173 / 2.84	43 / 0.90	31 / 0.87	0.1 / 0.00	0.4 / 0.02	0.00 / ----	25 / ---	Sn 0.00 PO_4 0.30[a]	297[c]	42	129	0	5-		DWR
10/1 1745	---	--	---	--	470	7.8*	---	---	---	---	0 / 0.00	181 / 2.96	---	32 / 0.90	---	---	---	---		---	--	140	0	--		SBCFCD
10/7 1730	20	72	5.4	61	461	7.5	---	---	---	---	0 / 0.00	178 / 2.92	---	30 / 0.85	---	---	0.00 / ----	---		---	40	138	0	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL) State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	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 (STA.67) (Cont.)															
1958																										
11/3 1420	24	61	8.4	84	447	7.8	---	---	---	---	0 / 0.00	183 / 3.00	---	26 / 0.73	---	---	0.05 / ----	---		---	40	139	0	5-		DWR
12/9 1730	32	55	7.8	73	423	7.9	---	---	---	---	0 / 0.00	177 / 2.90	---	25 / 0.71	---	---	0.00 / ----	---		---	39	130	0	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	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		f	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			
1958											SUSAN RIVER AT SUSANVILLE (STA. 17b)															USGS
4/17 0710	554	38	11.4	85	81.3	7.3	---	---	3.0 / 0.13	---	0 / 0.00	46 / 0.75	---	1.0 / 0.03	---	---	0.04 / ---	---		---	16	34	0	42	Maximum 2400. Minimum 0.19 Median 14.6	
5/14 1515	748	57	8.8	85	58.7	7.3	6.0 / 0.30	2.2 / 0.18	2.2 / 0.10	0.9 / 0.02	0 / 0.00	32 / 0.52	1.0 / 0.02	1.6 / 0.05	0.3 / 0.00	0.0 / 0.00	0.0 / ---	17 / --	Fe 0.07 Al 0.16 PO_4 0.05 / a	47[b]	17	24	0	15		
6/19 0725	108	56	9.2	88	90.1	7.5	---	---	3.8 / 0.17	---	0 / 0.00	52 / 0.85	---	1.2 / 0.03	---	---	0.0 / ---	---		---	18	38	0	5		
7/16 1505	26	67	7.8	84	124	7.5	---	---	5.5 / 0.24	---	0 / 0.00	78 / 1.28	--	0.4 / 0.01	---	---	0.0 / ---	---		---	19	52	0	1		
8/13 1515	128	73	7.0	80	56.6	7.5	---	---	2.0 / 0.09	---	0 / 0.00	33 / 0.54	---	1.6 / 0.05	---	---	0.0 / ---	---		---	15	26	0	2		
9/11 0755	8.4	54	8.7	80	161	7.5	14 / 0.70	9.0 / 0.74	5.2 / 0.23	2.9 / 0.07	0 / 0.00	102 / 1.67	1.9 / 0.04	1.5 / 0.04	0.8 / 0.01	0.0 / 0.00	0.0 / ---	35 / --	Fe 0.10 Al 0.01 PO_4 0.00 / a	120[b]	13	72	0	1		
10/16 0700	8.4	47	9.7	82	168	7.4	---	---	5.6 / 0.24	---	0 / 0.00	108 / 1.77	---	1.0 / 0.03	---	---	0.0 / ---	---		---	13	77	0	5		
11/13 0755	14	38	11.1	83	161	7.3	---	---	5.2 / 0.23	---	0 / 0.00	100 / 1.64	---	1.2 / 0.03	---	---	0.0 / ---	---		---	14	72	0	6		
12/18 1025	12	36	12.3	89	157	7.3	---	---	5.0 / 0.22	---	0 / 0.00	96 / 1.57	---	2.2 / 0.06	---	---	0.1 / ----	---		---	12	78	0	10		
January through March, Not sampled—snowbound																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											TRUCKEE RIVER NEAR FARAD (STA. 53)															USGS
4/17 1110	3,220	44	10.5	86	85.1	7.3	---	---	7.2 / 0.31	---	0 / 0.00	46 / 0.75	---	2.5 / 0.07	---	---	0.06 / ---	---		---	33	32	0	13		
5/15 1245	4,900	49	9.5	83	69.3	7.3	7.2 / 0.36	1.9 / 0.16	3.4 / 0.15	1.4 / 0.04	0 / 0.00	37 / 0.61	2.3 / 0.05	1.0 / 0.03	0.0 / 0.00	0.0 / 0.00	0.06 / ---	18 / --	Fe 0.04 Zn 0.01 PO_4 0.05 a	53[b]	21	26	0	20	Maximum 7000+ Minimum 0.6 Median 23.	
6/19 1355	2,070	55	8.8	83	48.2	7.3	---	---	2.4 / 0.10	---	0 / 0.00	25 / 0.41	---	1.0 / 0.03	---	---	0.00 / ---	---		---	22	18	0	8		
7/17 1240	585	56	8.8	84	65.0	7.3	---	---	2.9 / 0.13	---	0 / 0.00	35 / 0.57	---	1.8 / 0.05	---	---	0.00 / ---	---		---	21	25	0	15		
8/14 1105	562	59	8.4	82	66.6	7.5	---	---	3.0 / 0.13	---	0 / 0.00	34 / 0.56	---	1.5 / 0.04	---	---	0.00 / ---	---		---	21	24	0	20		
9/3 1410	553	66	7.6	81	70.1	6.8	8.0 / 0.40	1.7 / 0.14	3.0 / 0.13	2.3 / 0.06	0 / 0.00	37 / 0.61	3.8 / 0.08	1.4 / 0.04	0.6 / 0.00	0.0 / 0.00	0.00 / ---	22 / --	Fe 0.02 a PO_4 0.00	63[b]	17	27	0	2		
10/6 1540	530	58	8.3	81	95.7	7.7	---	---	5.2 / 0.23	---	0 / 0.00	49 / 0.80	---	3.0 / 0.08	---	---	0.00 / ---	---		---	24	36	0	20		
11/5 1330	459	49	10.0	87	97.6	8.0	---	---	6.0 / 0.26	---	0 / 0.00	53 / 0.87	---	2.5 / 0.07	---	---	0.00 / ---	---		---	23	44	1	3		
12/18 0800	459	40	10.8	83	97.1	7.3	---	---	5.2 / 0.23	---	0 / 0.00	54 / 0.89	---	3.5 / 0.10	---	---	0.00 / ---	---		---	24	37	0	10		

January thru March not sampled - snowbound

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											TRUCKEE RIVER NEAR TRUCKEE (STA. 52)															USGS
4/17 1205	1,950	46	9.9	83	90.8	7.3	---	---	5.5/0.24	---	0/0.00	48/0.79	---	2.0/0.06	---	---	0.02/---	---		---	27	32	0	7		
5/15 1345	2,200	52	9.0	81	93.8	7.5	10/0.50	2.2/0.18	5.0/0.22	1.7/0.04	0/0.00	46/0.75	1.0/0.02	6.0/0.17	0.0/0.00	0.0/0.00	0.07/---	15/--	Zn 0.63 PO_4 0.00 a	64[b]	23	34	0	4	Maximum 7000.+ Minimum 0.13 Median 13.	
6/19 1455	386	56	8.8	83	47.8	7.3	---	---	2.2/0.10	---	0/0.00	24/0.39	---	1.3/0.04	---	---	0.00/---	---		---	22	18	0	10		
7/17 1350	89	56	8.0	76	61.9	7.5	---	---	2.9/0.13	---	0/0.00	31/0.51	---	1.1/0.03	---	---	0.00/---	---		---	22	23	0	90		
8/14 1205	30	58	7.8	76	103	7.5	---	---	5.7/0.25	---	0/0.00	50/0.82	---	2.0/0.06	---	---	0.00/---	---		---	24	40	0	2		
9/3 1520	18	68	7.8	85	125	6.8	12/0.60	3.9/0.32	6.3/0.27	3.2/0.08	0/0.00	58/0.95	12/0.25	3.8/0.11	0.0/0.00	0.0/0.00	0.00/---	26/--	Fe 0.04 PO_4 0.00 a	96[b]	21	46	0	1		
10/6 1400	370	62	7.8	79	94.4	7.9*	---	---	5.8/0.25	---	0/0.00	50/0.82	---	3.5/0.10	---	---	0.00/---	---		---	26	36	0	5		
11/5 1500	350	55	8.3	78	95.7	7.9	---	---	6.0/0.26	---	0/0.00	49/0.80	---	2.0/0.06	---	---	0.00/---	---		---	25	38	0	2		
12/11 1030	350	43	---	---	95.7	7.7*	---	---	5.4/0.23	---	0/0.00	50/0.82	---	3.2/0.09	---	---	---	---		---	23	38	0	4		
	January thru March not sampled - snowbound																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTON REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											WALKER RIVER EAST NEAR BRIDGEPORT (STA 116a)															USGS
8/8 1000	351	67	6.6	71	125	7.3	13 / 0.65	3.0 / 0.25	7.3 / 0.32	2.5 / 0.06	0 / 0.00	67 / 1.10	4.8 / 0.10	1.0 / 0.03	1.6 / 0.03	0.5 / 0.03	0.0 / ---	15 / ---		82[b]	25	45	0	2		
9/5 0545	413	67	7.4	81	135	7.3*	7.2 / 0.36	8.0 / 0.66	7.6 / 0.33	1.9 / 0.05	0 / 0.00	72 / 1.18	5.8 / 0.12	0.8 / 0.02	1.1 / 0.02	0.2 / 0.01	0.0 / ---	12 / ---	Fe 0.08 PO_4 0.10 Al 0.11 Cu 0.01 (a)	80[b]	24	51	0	3		
10/7 1235	215	57	7.3	70	139	8.5	15 / 0.75	3.0 / 0.25	8.4 / 0.37	2.3 / 0.06	0 / 0.00	70 / 1.15	9.6 / 0.20	1.0 / 0.03	1.8 / 0.03	0.2 / 0.01	0.2 / ---	17 / ---		92[b]	26	50	0	---		
11/6 1500	28	47	8.3	70	154	7.3	18 / 0.90	1.9 / 0.16	9.1 / 0.40	2.6 / 0.07	0 / 0.00	80 / 1.31	6.7 / 0.14	1.8 / 0.05	2.0 / 0.03	0.3 / 0.02	0.0 / ---	18 / ---		99[b]	25	53	0	---		
12/17 1100	3.7	42	10.1	80	184	7.2	19 / 0.95	6.4 / 0.53	11 / 0.48	2.8 / 0.07	0 / 0.00	94 / 1.54	19 / 0.40	1.5 / 0.04	1.9 / 0.03	0.3 / 0.02	0.0 / ---	19 / ---		127[b]	24	74	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-15

ANALYSES OF SURFACE WATER

LAHONTAN REGION (6)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							WALKER RIVER, WEST NEAR COLEVILLE (STA. 116)																			USGS
8/8 0850	388	55	8.2	77	83.6	7.3	8.0 / 0.40	1.5 / 0.12	6.7 / 0.29	1.2 / 0.03	0 / 0.00	43 / 0.70	1.9 / 0.04	2.5 / 0.07	0.3 / 0.00	0.1 / 0.01	0.0 / ---	13 / ---		56[b]	35	26	0	1		
9/4 1645	109	61	7.7	77	100	7.7	9.5 / 0.47	2.6 / 0.21	8.1 / 0.35	1.4 / 0.04	0 / 0.00	51 / 0.84	6.3 / 0.13	2.8 / 0.08	0.0 / 0.00	0.1 / 0.01	0.1 / ---	13 / ---	Fe 0.03 Al 0.11 PO_4 0.05 / a	69[b]	33	34	0	1		
10/7 1130	60	49	8.1	70	150	7.8	12 / 0.60	3.4 / 0.28	16 / 0.70	1.7 / 0.04	0 / 0.00	74 / 1.21	12 / 0.25	5.0 / 0.14	0.0 / 0.00	0.1 / 0.01	0.0 / ---	18 / ---		104[b]	43	44	0	---		
11/6 1400	47	47	9.5	81	185	7.9	13 / 0.65	2.8 / 0.23	21 / 0.91	1.9 / 0.05	0 / 0.00	84 / 1.38	13 / 0.27	7.5 / 0.21	0.0 / 0.00	0.2 / 0.01	0.2 / ---	18 / ---		119[b]	49	44	0	---		
12/17 1010	31	35	11.3	81	169	7.3	14 / 0.70	2.7 / 0.22	17 / 0.74	1.7 / 0.04	0 / 0.00	82 / 1.34	12 / 0.25	5.5 / 0.16	0.2 / 0.00	0.2 / 0.01	0.2 / ---	19 / ---		112[b]	44	46	0	---		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ALAMO RIVER NEAR CALIPATRIA (STA.60)																			DWR
1/7 1120	621	54	14.2	131	3,846	7.8	---	---	---	---	0 / 0.00	218 / 3.56	---	790 / 22.27	---	---	0.56 / ----	---		---	53	916	738	330	Maximum 6200 Minimum 60 Median 910	
3/4 1235	925	59	8.2	81	3,205	8.0	---	---	---	---	0 / 0.00	198 / 3.25	---	578 / 16.30	---	---	1.64 / ----	---		---	54	774	611	500		
5/6 1100	994	78	7.5	91	3,530	8.0	207 / 10.33	94 / 7.73	440 / 19.14	11 / 0.28	0 / 0.00	224 / 3.68	712 / 14.83	690 / 19.46	19 / 0.31	0.6 / 0.03	0.49 / ----	10 / ---	Fe 0.15 Sn 0.00[a] Zn 0.18 PO_4 1.15	2424[c]	51	900	716	400		
7/8 0930	847	82	5.8	73	3,240	7.9	---	---	---	---	0 / 0.00	211 / 3.46	---	625 / 17.60	---	---	0.44 / ----	---		---	55	750	577	190		
9/2 1150	817	87	5.8	77	3,155	8.1	163 / 8.13	99 / 8.14	475 / 20.66	11 / 0.27	12 / 0.40	181 / 2.96	695 / 14.48	675 / 19.04	11 / 0.17	0.8 / 0.04	0.88 / ----	12 / ---	Sn 0.00 PO_4 0.20[a]	2355[c]	56	816	668	250		
11/11 0940	988	66	5.5	77	3,360	7.8	---	---	---	---	0 / 0.00	210 / 3.44	---	670 / 18.89	---	---	0.49 / ----	---		—	55	840	668	350		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ALAMO RIVER AT INTERNATIONAL BOUNDARY (STA. 59)																			DWR
1/7 0920	2.21	51	10.0	90	5,681	7.7	---	---	---	---	0 / 0.00	390 / 6.40	---	1130 / 31.87	---	---	1.92 / ----	---		---	60	1168	848	5-	Maximum 1300. Minimum 6.2 Median 146	
3/4 0720	2.79	53	8.6	79	5,319	8.0	---	---	---	---	0 / 0.00	346 / 5.64	---	1045 / 29.48	---	---	2.32 / ----	---		---	62	1122	840	5-		
5/6 0745	2	77	7.5	89	6,565	7.9	307 / 15.32	168 / 13.81	960 / 41.76	12 / 0.31	0 / 0.00	390 / 6.39	1288 / 26.83	1400 / 39.48	19 / 0.30	1.2 / 0.06	1.94 / ----	20 / ---	Sn 0.00 PO_4 0.15[a]	4679[c]	59	1457	1137	30		
7/8 0650	2.44	75	5.0	58	5,737	7.8	---	---	---	---	0 / 0.00	365 / 5.99	---	1190 / 36.60	---	---	1.20 / ----	---		---	61	1260	960	5-		
9/2 0555	4.48	82	5.4	68	5,102	7.8	218 / 10.88	127 / 10.44	790 / 34.37	12 / 0.29	0 / 0.00	342 / 5.60	1028 / 21.42	995 / 28.06	7.4 / 0.12	1.0 / 0.05	1.56 / ----	20 / ---	Sn 0.00 PO_4 0.12[a]	3455[c]	61	1069	789	25		
11/11 0720	2.67	78	4.0	49	1,326	7.4	94 / 4.69	36 / 2.95	160 / 6.96	4.6 / 0.12	0 / 0.00	211 / 3.46	3.82 / 7.95	120 / 3.38	4.2 / 0.07	0.6 / 0.03	0.20 / ----	16 / ---		941[c]	48	382	209	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							ALL AMERICAN CANAL NEAR PILOT KNOB (STA. 56a)																			DWR
5/8 1950	est.7000	72	7.2	86	1,078	8.2	94 / 4.69	28 / 2.30	93 / 4.05	4.3 / 0.11	0 / 0.00	165 / 2.70	283 / 5.89	90 / 2.54	0.7 / 0.01	0.4 / 0.02	0.09 / ----	20 / ---	Sn 0.00 PO_4 0.00[a]	727[c]	36	348	213	5-	4.5- 23.	
9/2 0700	5730	85	6.0	79	1,068	8.1	87 / 4.34	25 / 2.06	106 / 4.61	4.4 / 0.11	0 / 0.00	154 / 2.52	276 / 5.74	91 / 2.57	1.9 / 0.03	0.4 / 0.02	0.08 / ----	12 / ---	Sn 0.00 PO_4 0.00[a]	695[c]	41	320	194	5-	62. 6.2	

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958																										DWR
											COLORADO RIVER NEAR BLYTHE (STA.56c)															
5/9 0910	18,200	70	8.0	89	1,016	8.2	90 / 4.49	27 / 2.22	81 / 3.52	4.0 / 0.01	0 / 0.00	157 / [illegible].57	268 / 5.59	79 / 2.23	0.7 / 0.01	0.4 / 0.02	0.10 / ----	10 / ---	Zn 0.20 Sn [illegible].00[a]	692[c]	34	335	207	5-		
9/5 1115	14,100	82	7.0	89	969	7.9	84 / 4.19	26 / 2.17	87 / 3.78	4.1 / 0.10	0 / 0.00	150 / 2.46	263 / 5.47	71 / 2.00	1.7 / 0.03	0.3 / 0.02	0.06 / ----	5 / ---	Sn [illegible].00 PO_4 0.00[a]	625[c]	37	318	195	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958							COLORADO RIVER BELOW MORELOS DAM (STA 56b)																			DWR
5/8 1905	10,370	75	7.2	84	1,102	8.3	95 / 4.74	28 / 2.30	94 / 4.09	4.4 / 0.11	0 / 0.00	167 / 2.74	288 / 6.01	94 / 2.65	0.5 / 0.01	0.4 / 0.02	0.15 / ----	10 / ---	Sn 0.00[a]	743[c]	36	350	213	45	620. 230.	
9/2 0820	est. 200	86	7.2	95	1,142	8.1	88 / 4.39	28 / 2.27	118 / 5.13	4.8 / 0.12	0 / 0.00	148 / 2.42	299 / 6.23	106 / 2.99	0.8 / 0.01	0.4 / 0.02	0.14 / ----	10 / ---	PO_4 0.00 Sn 0.00	731[c]	43	333	212	5-	45.- 45.-	

Column group heading: Mineral constituents in parts per million / equivalents per million

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											COLORADO RIVER AT PARKER DAM (STA.55)															
1/1	---	54	--	--	----	8.2*	---	---	---	---	---	---	---	80 ----	---	---	---	---	Total Alkalinity 132	---	--	--	--	--		MWD USPHS
1/8	---	52	--	--	----	8.5*	---	---	---	---	---	---	---	90 ----	---	---	---	---	Total Alkalinity 140	---	--	--	--	--		MWD USPHS
1/16	---	52	--	--	----	---	---	---	---	---	---	---	---	95 ----	---	---	---	---	Total Alkalinity 135	---	--	--	--	--		MWD USPHS
1/22	---	52	--	--	----	---	---	---	---	---	---	---	---	88 ----	---	---	---	---	Total Alkalinity 141	---	--	--	--	--		MWD USPHS
1/29	---	54	--	--	----	---	---	---	---	---	---	---	---	85 ----	---	---	---	---	Total Alkalinity 128	---	--	--	--	--		MWD USPHS
2/5	---	53	--	--	----	---	---	---	---	---	---	---	---	87 ----	---	---	---	---	Total Alkalinity 133	---	--	--	--	--		MWD USPHS
2/13	---	53	--	--	----	---	---	---	---	---	---	---	---	79 ----	---	---	---	---	Total Alkalinity 129	---	--	--	--	--		MWD USPHS
2/19	---	58	--	--	----	---	---	---	---	---	---	---	---	87 ----	---	---	---	---	Total Alkalinity 132	---	--	--	--	--		MWD USPHS
3/5	---	59	--	--	----	---	---	---	---	---	---	---	---	74 ----	---	---	---	---	Total Alkalinity 126	---	--	--	--	--		MWD USPHS
3/12	---	57	--	--	----	---	---	---	---	---	---	---	---	74 ----	---	---	---	---	Total Alkalinity 127	---	--	--	--	--		MWD USPHS
3/19	---	58	--	--	----	---	---	---	---	---	---	---	---	71 ----	---	---	---	---	Total Alkalinity 132	---	--	--	--	--		MWD USPHS
3/26	---	62	--	--	----	---	---	---	---	---	---	---	---	74 ----	---	---	---	---	Total Alkalinity 128	---	--	--	--	--		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16
ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							COLORADO RIVER AT PARKER DAM (STA. 55) Cont.																			
4/2	---	62	--	--	----	8.0*	---	---	---	---	---	---	261 / ----	77 / ----	---	---	---	---	Total Alkalinity 129	703[c]	--	321	--	25		MWD USPHS
4/9	---	61	--	--	----	7.6*	---	---	---	---	---	---	269 / ----	80 / ----	---	---	---	---	Total Alkalinity 125	650[c]	--	321	--	25		MWD USPHS
4/16	---	64	--	--	----	7.7*	---	---	---	---	---	---	298 / ----	76 / ---	---	---	---	---	Total Alkalinity 118	608[c]	--	330	--	20		MWD USPHS
4/23	---	69	--	--	----	8.0*	---	---	---	---	---	---	280 / ----	75 / ----	---	---	---	---	Total Alkalinity 124	646[c]	--	341	--	20		MWD USPHS
5/7	---	70	--	--	----	7.3*	---	---	---	---	---	---	270 / ----	73 / ----	---	---	---	---	Total Alkalinity 122	702[c]	--	322	--	5	0.62 / 0.5	MWD USPHS
5/9 1140	18,000	66	8.2	83	996	8.3	89 / 4.44	27 / 2.22	79 / 3.44	4.0 / 0.10	0 / 0.00	156 / 2.55	260 / 5.42	74 / 2.09	0.9 / 0.02	0.4 / 0.02	0.07 / ----	20 / ---	Sn 0.00 PO_4 0.00[a]	675[c]	34	333	205	5-		DWR
5/14	---	74	--	--	----	8.0*	---	---	---	---	---	---	280 / ----	74 / ----	---	---	---	---	Total Alkalinity 122	698[c]	--	311	--	5		MWD USPHS
6/11	---	79	--	--	----	7.8*	---	---	---	---	---	---	280 / ----	74 / ----	---	---	---	---	Total Alkalinity 132	594[c]	--	340	--	5		MWD USPHS
6/18	---	80	--	--	----	8.1*	---	---	---	---	---	---	276 / ----	78 / ----	---	---	---	---	Total Alkalinity 127	660[c]	--	313	--	5		MWD USPHS
6/25	---	--	--	--	----	7.9*	---	---	---	---	---	---	300 / ----	74 / ----	---	---	---	---	Total Alkalinity 126	642[c]	--	344	--	5		MWD USPHS
9/5 0730	8,220	78	6.0	73	939	7.9	73 / 3.89	26 / 2.17	83 / 2.61	3.8 / 0.10	0 / 0.00	143 / 2.43	247 / 5.15	69 / 1.95	2.0 / 0.03	0.3 / 0.02	0.13 / ----	12 / ---	Sn 0.00 PO_4 0.00[a]	606[c]	37	303	186	5-	62. / 2.3	DWR
11/26	---	60	--	--	----	7.6*	---	---	---	---	---	---	334 / ----	72 / ----	---	---	---	---	Total Alkalinity 120	634[c]	--	315	--	5		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											COLORADO RIVER NEAR TOPOCK, ARIZONA (STA.54)															DWR
5/9 1500	19,400	63	8.0	82	978	8.2	86 / 4.29	27 / 2.22	76 / 3.31	4.0 / 0.10	0 / 0.00	153 / 2.51	246 / 5.13	71 / 2.00	1.3 / 0.02	0.4 / 0.02	0.05 / ----	20 / ---	Sn 0.00 PO_4 0.00[a]	654[c]	33	325	199	5-		
9/5 0540	13,400	68	7.6	83	1,219	7.5	79 / 3.94	26 / 2.16	81 / 3.52	3.9 / 0.10	0 / 0.00	145 / 2.38	256 / 5.34	65 / 1.83	2.3 / 0.04	0.3 / 0.02	0.18 / ----	10 / ---	Sn 0.00 PO_4 0.00[a]	590[c]	36	305	186	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							COLORADO RIVER AT YUMA, ARIZONA (STA. 56)																			
3/1	---	72	--	--	----	7.6*	---	---	---	---	---	---	---	106	---	---	---	---	Total Alkalinity 150	---	--	382	--	28		USPHS
5/8 1815	7,400	77	7.8	93	1,110	8.4	95 / 4.74	29 / 2.38	94 / 4.09	4.5 / 0.12	0 / 0.00	165 / 2.70	295 / 6.15	93 / 2.62	0.6 / 0.10	0.5 / 0.03	0.09 / ---	20 / ---	Sn = 0[a] PO_4 = 0.12	746[c]	36	355	220	20	6.2 / 62.	DWR
9/2 0730	1,420	84	6.2	80	1,150	8.1	91 / 4.54	28 / 2.26	118 / 5.13	4.6 / 0.12	0 / 0.00	163 / 2.68	291 / 6.06	106 / 2.99	1.8 / 0.03	0.4 / 0.02	0.25 / ---	10 / ---	Sn = 0[a] PO_4 = 0	740[c]	43	340	206	5-	13. / 23.	DWR
9/15	---	77	--	--	----	8.2*	---	---	---	---	---	---	---	102	---	---	---	---	Total Alkalinity 136	---	--	324	--	20		USPHS
9/29	---	75	--	--	----	8.2*	---	---	---	---	---	---	---	100	---	---	---	---	Total Alkalinity 134	---	--	330	--	30		USPHS
10/6	---	75	--	--	----	7.8*	---	---	---	---	---	---	---	---	---	---	---	---	Total Alkalinity 150	---	--	332	--	25		USPHS
10/13	---	74	--	--	----	8.0*	---	---	---	---	---	---	---	---	---	---	---	---	Total Alkalinity 140	---	--	320	--	27		USPHS
10/20	---	74	--	--	----	8.2*	---	---	---	---	---	---	---	115	---	---	---	---	Total Alkalinity 110	---	--	352	--	25		USPHS
10/27	---	72	--	--	----	8.2*	---	---	---	---	---	---	---	98	---	---	---	---	Total Alkalinity 148	---	--	328	--	18		USPHS
11/10	---	69	--	--	----	8.2*	---	---	---	---	---	---	---	96	---	---	---	---	Total Alkalinity 144	---	--	324	--	23		USPHS
11/17	---	55	--	--	----	8.2*	---	---	---	---	---	---	---	92	---	---	---	---	Total Alkalinity 150	---	---	336	--	12		USPHS
11/24	---	58	--	--	----	8.2*	---	---	---	---	---	---	---	98	---	---	---	---	Total Alkalinity 174	---	---	330	--	15		USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-16
ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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 MPN/ml [d]	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
							COLORADO RIVER AT YUMA, ARIZONA (STA. 56) Cont.																			
1958																										
12/1	---	54	--	--	----	8.2*	---	---	---	---	---	---	---	96	---	---	---	--	Total Alkalinity 146	---	---	332	--	15		USPHS
12/8	---	59	--	--	----	8.2*	---	---	---	---	---	---	---	90	---	---	---	--	Total Alkalinity 152	---	---	316	--	27		USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE 8-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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	Per-cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform [d] MPN/ml	Analyzed by [e]
							Mineral constituents in parts per million / equivalents per million																			
1958							LAKE HAVASU AT COLORADO RIVER AQUEDUCT INTAKE (STA. 56d)																			
1/7		54	---	---	1,115	8.3*	91 4.54	30 2.47	102 4.44	5 0.13	1 0.03	156 2.56	302 6.28	92 2.59	2.4 0.04	---	---	9.4 ---	Total Alkalinity 130	713[c]	38	351	221	1.9		MWD
3/4		54	---	---	1,040	8.3*	89 4.44	27 2.18	87 3.78	5 0.13	0 0.00	156 2.56	277 5.76	80 2.26	1.6 0.03	---	---	8.6 ---	Total Alkalinity 128	653[c]	36	331	203	1.6		MWD
3/18		59	---	---	1,000	8.4*	85 4.24	28 2.26	86 3.74	4 0.10	1 0.03	151 2.48	269 5.60	76 2.14	2.2 0.04	---	---	9.0 ---	Total Alkalinity 126	635[c]	36	325	199	1.7		MWD
4/29		68	---	---	1,015	8.0	86 4.29	26 2.14	88 3.83	5 0.13	0 0.00	154 2.53	270 5.62	78 2.20	1.4 0.02	---	---	10.2 ---	Total Alkalinity 126	642[c]	37	322	196	---		MWD
4-30		69	---	---	---	---	---	---	---	---	---	---	---	74 ---	---	---	---	---	Total Alkalinity 126	---	---	---	---	---		MWD USPHS
5/27		78	---	---	993	8.3*	82 4.09	27 2.18	84 3.65	4 0.10	0 0.00	144 2.36	274 5.70	72 2.03	2.1 0.03	---	---	10.0 ---	Total Alkalinity[a] 118	627[c]	36	314	196	---		MWD
6/24		85	---	---	978	8.4*	82 4.09	25 2.06	82 3.57	4 0.10	1 0.03	139 2.28	269 5.60	71 2.00	0.03 ---	---	---	10.0 ---	Total Alkalinity 116	615[c]	36	308	192	---		MWD
7/2		83	---	---	---	---	---	---	---	---	---	---	---	74 ---	---	---	---	---	Total Alkalinity 129	---	---	---	---	---		MWD USPHS
7/8 1000		80	---	---	969	8.5*	82 4.09	25 2.06	82 3.57	4 0.10	4 0.13	133 2.18	269 5.60	70 1.97	1.4 0.02	0.3 0.02	---	10.7 ---	Total Alkalinity 115	615[c]	36	308	193	---		MWD
7/9		--	---	---	---	---	---	---	---	---	---	---	---	70 ---	---	---	---	---	Total Alkalinity 122	---	---	---	---	---		
7/16		82	---	---	---	7.7*	---	---	---	---	---	---	265 ---	68 ---	---	---	---	---	Total Alkalinity 126	638[c]	---	299	---	5		MWD USPHS
7/23		79	---	---	---	7.6*	---	---	---	---	---	---	265 ---	69 ---	---	---	---	---	Total Alkalinity 119	664[c]	---	302	---	5		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE 8-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH f	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			
1958							LAKE HAVASU AT COLORADO RIVER AQUEDUCT INTAKE (STA. 56d) (Cont.)																			
7/30		82	---	---	---	7.6*	---	---	---	---	---	---	268 ---	74 ---	---	---	---	---	Total Alkalinity 124	684[c]	---	303	---	5		MWD USPHS
8/6		82	---	---	---	7.6*	---	---	---	---	---	---	268 ---	74 ---	---	---	---	---	Total Akalinity 125	660[c]	---	319	---	5		MWD USPHS
8/14		83	---	---	---	7.7*	---	---	---	---	---	---	250 ---	76 ---	---	---	---	---	Total Alkalinity 123	660[c]	---	319	---	5		MWD USPHS
8/21		84	---	---	---	7.7*	---	---	---	---	---	---	260 ---	77 ---	---	---	---	---	Total Alkalinity 128	656[c]	---	307	---	5		MWD USPHS
8/27		83	---	---	---	---	---	---	---	---	---	---	233 ---	76 ---	---	---	---	---	Total Alkalinity 125	608[c]	---	307	---	5		MWD USPHS
9/2 0945		84	---	---	932	8.3*	78 3.89	25 2.06	79 3.44	5 0.13	0 0.00	133 2.18	262 5.45	69 1.95	1.4 0.02	0.3 0.02	---	10.8 ---	Total Alkalinity[a] 109	597[c]	36	298	189	---		MWD
9/3		85	---	---	---	8.2*	---	---	---	---	---	---	231 ---	81 ---	---	---	---	---	Total Alkalinity 122	622[c]	---	299	---	---		MWP USPHS
9/10		84	---	---	---	8.2*	---	---	---	---	---	---	252 ---	78 ---	---	---	---	---	Total Alkalinity 119	640[c]	---	310	---	---		MWD USPHS
9/17		82	---	---	---	7.6*	---	---	---	---	---	---	145 ---	75 ---	---	---	---	---	Total Alkalinity 117	590[c]	---	277	---	---		MWD USPHS
9/24		79	---	---	---	7.5*	---	---	---	---	---	---	210 ---	74 ---	---	---	---	---	Total Alkalinity 113	630[c]	---	293	---	---		MWD USPHS
10/1		75	---	---	---	7.6*	---	---	---	---	---	---	234 ---	77 ---	---	---	---	---	Total Alkalinity 118	646[c]	---	307	---	---		MWD USPHS
10/8		76	---	---	---	8.0*	---	---	---	---	---	---	214 ---	72 ---	---	---	---	---	Total Alkalinity 115	614[c]	---	297	---	---		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
c Gravimetric determination.
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e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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
							Mineral constituents in parts per million / equivalents per million																			
1958							LAKE HAVASU AT COLORADO RIVER AQUEDUCT INTAKE (STA. 56d) (Cont.)																			
10/14		78	---	---	948	8.3*	79 / 3.94	25 / 2.01	83 / 3.61	5 / 0.13	0 / 0.00	138 / 2.26	263 / 5.47	70 / 1.97	1.5 / 0.02	---	---	10.8 / ----	Total Alkalinity 113	606c	37	298	185	--		MWD
10/15		76	---	---	---	7.8*	---	---	---	---	---	---	216 / ---	74 / ---	---	---	---	---	Total Alkalinity 114	628c	---	316	---	---		MWD USPHS
10/22		73	---	---	---	7.6*	---	---	---	---	---	---	122 / ---	72 / ---	---	---	---	---	Total Alkalinity 115	632c	---	325	---	---		MWD USPHS
10/29		72	---	---	---	7.7*	---	---	---	---	---	---	132 / ---	67 / ---	---	---	---	---	Total Alkalinity 119	520c	---	323	---	5		MWD USPHS
11/5		69	---	---	---	---	---	---	---	---	---	---	---	74 / ---	---	---	---	---	Total Alkalinity 116	---	---	---	---	---		MWD USPHS
11/12		66	---	---	---	7.8*	---	---	---	---	---	---	123 / ---	75 / ---	---	---	---	---	Total Alkalinity 112	568c	---	330	---	5		MWD USPHS
11/20		61	---	---	---	7.8*	---	---	---	---	---	---	134 / ---	75 / ---	---	---	---	---	Total Alkalinity 112	376c	---	308	---	5		MWD USPHS
11/24		60	---	---	950	8.1*	81 / 4.04	25 / 2.06	80 / 3.48	5 / 0.13	0 / 0.00	144 / 2.36	261 / 5.43	67 / 1.89	1.4 / 0.02	0.3 / 0.02	---	10.8 / ----	Total Alkalinity 118	604c	---	305	187	---		MWD
12/3		60	---	---	---	7.2*	---	---	---	---	---	---	237 / ---	97 / ---	---	---	---	---	Total Alkalinity 119	670c	---	301	---	5		MWD USPHS
12/10		57	---	---	---	7.6*	---	---	---	---	---	---	248 / ---	71 / ---	---	---	---	---	Total Alkalinity 122	582c	---	306	---	5		MWD USPHS
12/17		56	---	---	---	7.5*	---	---	---	---	---	---	238 / ---	69 / ---	---	---	---	---	Total Alkalinity 120	568c	---	320	---	5		MWD USPHS
12/24		55	---	---	---	7.8*	---	---	---	---	---	---	237 / ---	68 / ---	---	---	---	---	Total Alkalinity 130	568c	---	306	---	5		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ except as shown.
b Determined by addition of analyzed constituents.
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f Field pH except when noted with *

TABLE 8-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958							LAKE HAVASU AT COLORADO RIVER AQUEDUCT INTAKE (STA. 56d) (Cont.)																			
12/30		54	---	---	944	8.1*	82 4.09	25 2.01	83 3.61	5 0.13	0 0.00	146 2.39	260 5.41	68 1.92	1.7 0.03	0.3 0.02	---	10.7 ----	Total Alkalinity 120	608[c]	37	306	186	---		MWD
12/31		54	---	---	---	8.0*	---	---	---	---	---	---	245 ---	68 ---	---	---	---	---	Total Alkalinity 118	574[c]	---	301	---	5		MWD USPHS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							NEW RIVER AT INTERNATIONAL BOUNDARY (STA.57)																			
1/7 0845	125	43	9.5	76	4,424	7.9	---	---	---	---	0 / 0.00	239 / 3.92	---	1040 / 29.32	---	---	0.82 / ----	---		---	57	831	635	—	Maximum 700,000+ Minimum 6200 Median 62000	DWR
3/4 0645	115	55	8.0	75	4,931	8.0	---	---	---	---	0 / 0.00	233 / 3.82	---	1090 / 30.72	---	---	0.84 / ----	---		---	57	1030	839	10		
5/6 0810	145	77	5.5	66	5,249	7.4*	225 / 11.23	123 / 10.11	735 / 31.97	21 / 0.55	0 / 0.00	253 / 4.14	694 / 14.46	1270 / 35.81	13 / 0.21	0.6 / 0.03	0.98 / ----	15 / ---	Sn 0.00 PO_4 0.95[a]	3483[c]	59	1070	863	40		
7/8 0505	128	82	2.8	35	6,470	7.8*	---	---	---	---	0 / 0.00	248 / 4.06	---	1690 / 47.60	---	---	1.18 / ----	---		---	66	1120	917	5		
9/2 0515	180	85	4.0	52	5,313	7.7	215 / 10.73	118 / 9.70	880 / 38.28	37 / 0.93	0 / 0.00	237 / 3.88	695 / 14.48	1445 / 40.75	5.0 / 0.08	0.8 / 0.04	1.8 / ----	20 / ---	Sn 0.00 PO_4 0.30[a]	3746[c]	64	1026	827	125		
11/11 0650	138	62	3.7	38	5,865	7.8	---	---	---	---	0 / 0.00	250 / 4.10	---	1730 / 48.80	---	---	1.64 / ----	---		---	69	977	772	25		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											NEW RIVER NEAR WESTMORLAND (STA.58)															DWR
1/7 1045	521	55	10.5	99	4,587	7.8	---	---	---	---	0 / 0.00	244 / 4.00	---	1190 / 33.57	---	---	0.98 / ----	---		---	59	958	758	150	Maximum 700,000 Minimum 450- Median 6200	
3/4 1200	577	61	6.6	66	4,602	7.8	---	---	---	---	0 / 0.00	237 / 3.88	---	1060 / 29.90	---	---	1.00 / ----	---		---	56	1118	924	240		
5/6 1030	673	78	6.2	75	3,906	8.1	210 / 10.48	79 / 6.49	525 / 22.84	13 / 0.32	0 / 0.00	327 / 3.72	567 / 11.82	855 / 24.11	12 / 0.19	0.6 / 0.03	0.82 / ----	20 / ---	Sn 0.00 PO_4 1.07[a]	2561[c]	57	849	663	400		
7/8 0820	537	82	5.0	63	4,470	7.8	---	---	---	---	0 / 0.00	235 / 3.85	---	1040 / 29.30	---	---	0.84 / ----	---		---	62	855	662	180		
9/2 1115	675	88	5.2	69	3,922	8.0	172 / 8.58	83 / 6.82	575 / 25.01	15 / 0.38	0 / 0.00	212 / 3.48	572 / 11.91	873 / 24.62	5.0 / 0.08	0.8 / 0.04	0.98 / ----	15 / ---	Sn 0.00 PO_4 0.35[a]	2650[c]	61	773	599	700		
11/11 0905	560	65	5.4	56	4,446	7.6	---	---	---	---	0 / 0.00	239 / 3.92	---	1120 / 31.60	---	---	0.98 / ----	---		---	65	882	686	330		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SALTON SEA AT SALTON SEA STATE PARK (STA. 68a)																			DWR
1/7 1215		60	13.5	136	42,370	8.4	---	---	---	---	0 / 0.00	203 / 3.34	---	14,500 / 409.00	---	---	7.00 / ----	---		---	78	5725	5558	20	Maximum 2.3 Minimum 0.45- Median 0.45-	
3/4 1320		64	7.0	73	40,800	8.5	---	---	---	---	23 / 0.78	157 / 2.58	---	14,200 / 400.50	---	---	7.80 / ----	---		---	79	5698	5569	5-		
5/6 1230		81	5.7	71	40,190	8.4	950 / 47.5	1125 / 92.5	10250 / 445.0	158 / 4.04	0 / 0.00	366 / 6.00	7766 / 161.8	14,370 / 405.20	3.1 / 0.05	3.0 / 0.16	7.5 / ----	0 / ---	Sn 0.00 PO_4 0.11 [a]	33795 [c]	76	7000	6700	5-		
7/8 1030		88	5.4	72	39,900	8.4	---	---	---	---	0 / 0.00	100 / 1.64	---	14,100 / 398.00	---	---	6.2 / ----	---		---	79	5700	5618	5-		
9/2 1235		94	2.6	41	41,150	8.2	731 / 36.48	991 / 81.46	10,250 / 445.88	160 / 4.10	0 / 0.00	195 / 3.20	7184 / 149.57	14,600 / 411.72	2.5 / 0.04	2.4 / 0.13	7.8 / ----	5 / ---	Sn 0.00 PO_4 0.05 [a]	35165 [c]	79	5918	5758	5-		
11/11 1100		69	1.6	18	36,500	8.2	---	---	---	---	0 / 0.00	193 / 3.16	---	14,200 / 400.40	---	---	7.8 / ----	---		---	78	5860	5702	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	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			
1958											WHITEWATER RIVER AT MECCA (STA.68b)															DWR
1/7 1250	est. 45	61	11.0	110	4,291	3.2	---	---	---	---	0 / 0.00	330 / 5.42	---	690 / 19.45	---	---	0.77 / ----	---		---	66	768	497	200	Maximum 2400 Minimum 23 Median 170	
3/4 1400	est. 50	64	8.0	84	3,831	8.3	---	---	---	---	0 / 0.00	311 / 5.10	---	568 / 16.03	---	---	0.64 / ----	---		---	69	619	364	300		
5/6 1300	est. 45	80	9.5	89	3,134	8.3	163 / 8.13	46 / 3.78	512 / 22.27	12 / 0.29	0 / 0.00	296 / 4.86	810 / 16.88	460 / 12.97	15 / 0.24	2.8 / 0.15	0.75 / ----	20 / ---	Sn 0.00 PO_4 0.44[a]	2240[c]	65	598	355	500		
7/8 1100	est. 50	79	8.2	100	3,373	8.4	---	---	---	---	0 / 0.00	282 / 4.62	---	490 / 13.80	---	---	0.76 / ----	---		---	69	542	311	270		
9/5 1850	est. 50	36	6.4	84	4,093	8.4	163 / 8.13	49 / 4.03	740 / 32.19	14 / 0.36	0 / 0.00	312 / 5.12	971 / 20.22	663 / 18.70	16 / 0.26	3.0 / 0.16	1.00 / ----	20 / ---	Sn 0.00 PO_4 0.32[a]	2840[c]	72	611	355	500		
11/11 1120	est. 50	68	5.5	60	3,920	8.0	---	---	---	---	0 / 0.00	320 / 5.24	---	655 / 18.47	---	---	1.07 / ----	---		---	73	614	352	150		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported are as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-16

ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN (7)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											WHITEWATER RIVER AT WHITEWATER (STA.68)															
1/7 1445	4.2	64	10.7	112	446	7.7	---	---	---	---	0 / 0.00	215 / 3.52	--	8 / 0.22	---	---	0.00 / ----	---		----	14	200	24	5-		DWR
3/4 1535	2.2	61	7.4	74	640	8.2	---	---	---	---	0 / 0.00	234 / 3.84	---	8 / 0.22	---	---	0.30 / ----	---		----	12	301	109	5-		DWR
4/7 1300	75	57	--	--	407	8.1*	49 / 2.45	16 / 1.30	7 / 0.29	2.8 / 0.06	0 / 0.00	186 / 3.05	42 / 0.87	8 / 0.72	1.5 / 0.02	0.3 / 0.02	0.05 / ----	11 / ---	PO_4 0.00[a]	280[c]	7	65	0	--		TTL
5/6 1500	4.9	73	8.2	94	366	8.4	44 / 2.20	13 / 1.07	9.7 / 0.42	3.7 / 0.10	0 / 0.00	174 / 2.86	31 / 0.65	6 / 0.17	0.4 / 0.06	0.6 / 0.03	0.00 / ----	20 / ---	Sn 0.00 PO_4 0.04[a]	213[c]	11	163	20	5-		DWR
7/8 1315	29	75	8.0	94	395	8.4	---	---	---	---	0 / 0.00	193 / 3.16	---	5 / 0.10	---	---	0.00 / ----	---		----	13	170	12	5-		DWR
9/2 1430	30	79	6.4	78	354	8.2	42 / 2.10	14 / 1.15	13 / 0.57	4.3 / 0.11	10 / 0.32	173 / 2.84	29 / 0.60	7 / 0.20	0.5 / 0.01	1.0 / 0.05	0.00 / ----	12 / ---	Sn 0.00 PO_4 0.00[a] Total Alkalinity 193	235[c]	15	158	0	5-		DWR
10/28	5 est.	68	--	--	354	8.3*	48 / 2.40	10 / 0.85	10 / 0.44	4.0 / 0.10	3 / 0.10	177 / 2.90	21 / 0.43	5 / 0.15	1.5 / 0.02	0.8 / 0.04	0.10 / ----	16 / ---	Total Alkalinity 183	215[c]	12	163	13	--		DWR
11/11 1355	29	57	6.6	61	388	8.1	---	---	---	---	0 / 0.00	193 / 3.16	---	5 / 0.14	---	---	0.00 / ----	---		----	15	168	10	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											CHINO CREEK NEAR CHINO (STA. 86)															
1/7 1435	½ est.	61	8.0	80	937	7.8	---	---	---	---	0 0.00	352 5.77	---	39 1.10	---	---	0.13 ---	---		---	27	349	60	50	Maximum 24,000 Median 230 Minimum 4.6	DWR
2/3	---	---	---	---	243	6.9*	26 1.29	5 0.43	7 0.30	13 0.33	0 0.00	105 1.72	11 0.23	12 0.34	1.0 0.02	---	0.18 ---	---		150[c]	13	86	0	---		SBCFCD
2/4 1605	---	---	---	---	---	---	30 1.50	10 0.86	14 0.61	15 0.39	0 0.00	143 2.35	22 0.46	16 0.45	1.0 0.02	---	0.12 ---	---		235[c]	18	118	0	---		SBCFCD
2/11 1205	2 est.	58	9.8	94	1,061	8.1	103 5.14	32 2.63	82 3.57	11 0.29	0 0.00	400 6.55	155 3.22	50 1.41	28 0.45	0.3 0.02	0.13 ---	25 ---		673[c]	31	389	61	5-		DWR
2/19 1150	50 est.	58	---	---	294	7.8*	31 1.55	6 0.49	12 0.52	17 0.42	0 0.00	120 1.96	16 0.34	15 0.42	8.0 0.13	0.3 0.02	0.10 ---	5 ---	PO_4 1.8	180[c]	18	102	4	2,000		DWR
3/4 1030	5 est.	59	11.5	113	1,088	7.9	---	---	---	---	0 0.00	406 6.65	---	48 1.35	---	---	0.16 ---	---		---	28	428	93	5-		DWR
4/8 1400	30 est.	72	7.4	84	1,040	8.1	110 5.49	37 3.04	54 2.35	16 0.40	0 0.00	318 5.21	218 4.54	44 1.24	21 0.34	0.3 0.02	0.09 ---	15 ---		730[c]	22	426	165	220		DWR
5/6 1230	1 est.	83	7.6	70	1,109	8.4	118 5.89	37 3.04	78 3.39	14 0.36	0 0.00	445 7.30	171 3.56	54 1.52	19 0.31	0.4 0.02	0.18 ---	30 ---	Sn 0 PO_4 4.8 [a]	740[c]	27	449	74	50		DWR
6/10 1150	1 est.	79	8.0	98	1,235	8.3	---	---	---	---	0 0.00	431 7.06	---	48 1.34	---	---	0.09 ---	---		---	25	512	159	5-		DWR
7/2 1925	½ est.	70	5.6	62	832	8.3	---	---	---	---	0 0.00	329 5.40	---	37 1.04	---	---	0.13 ---	---		---	31	292	22	10		DWR
8/5 1100	Trickle	86	17.4	228	991	8.4	---	---	85 3.70	---	0 0.00	406 6.66	---	56 1.58	---	---	0.20 ---	---		---	35	340	137	5-		DWR
9/2 0915	Ponded	73	9.0	102	1,366	8.0	121 6.04	45 3.70	126 5.48	15 0.38	0 0.00	451 7.40	293 6.10	80 2.26	0.5 0.01	0.6 0.03	0.24 ---	30 ---	Sn 0 Fe 0.16 PO_4 1.6 NH_3 2.7 [a]	945[c]	35	486	116	300		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported · :re as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
							CHINO CREEK NEAR CHINO (STA. 86) Continued																			
1958																										
10/7 1225	½ est.	70	7.6	85	1,247	7.9	---	---	---	---	38 / 1.28	332 / 5.44	---	60 / 1.69	---	---	0.05 / ---	---		---	27	516	180	45		DWR
11/11 1345	¼ est.	58	15.[illegible]	144	1,111	8.3	---	---	---	---	0 / 0.00	440 / 7.22	---	40 / 1.13	---	---	0.15 / ---	---		---	29	475	114	5-		DWR
12/9 1110	¼ est.	53	11.2	101	1,008	8.2	---	---	---	---	0 / 0.00	395 / 6.48	---	37 / 1.04	---	---	0.04 / ---	---		---	28	425	101	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							LAKE ELSINORE NEAR ELSINORE (STA.89)																			DWR
1/6 0915																										
3/3 1000		59	13.0	128	29,940	8.6	9 / 0.45	7 / 0.58	8400 / 365.4	120 / 3.07	353 / 11.76	681 / 11.16	4400 / 91.67	8740 / 246.5	10 / 0.16	4.0 / 0.21	7.00 / ----	5 / ---		24500[c]	99.8	52	0	100	Maximum 2400. Minimum 0.45- Median 138	
5/5 0820		74	4.5	52	3,497	7.9	26 / 1.30	43 / 3.53	675 / 29.36	19 / 0.49	0 / 0.00	256 / 4.20	432 / 9.00	768 / 21.66	3.0 / 0.05	0.6 / 0.03	0.88 / ----	10 / ---	Sn 0.00 PO_4 1.80[a]	2150[c]	84	242	32	200		
7/7 1045		84	6.2	90	6,562	8.6	43 / 2.16	16 / 1.33	1410 / 61.34	34 / 0.87	0 / 0.00	448 / 7.34	823 / 17.14	1520 / 42.86	1.6 / 0.02	1.4 / 0.07	1.50 / ----	15 / ---		4150[c]	93	174	0	150		
9/1 0930		[illegible]	9.6	106	10,638	8.6	55 / 2.74	31 / 2.55	2500 / 108.8	55 / 1.41	108 / 3.60	588 / 9.64	1374 / 28.62	2640 / 74.45	2.5 / 0.04	2.0 / 0.10	4.0 / ----	6 / ---	Sn 0.00 PO_4 2.50[a] NH_3 3.00	7144[c]	94	264	84	250		
11/10 1000		63	7.5	77	17,160	8.4	---	---	---	---	218 / 7.28	927 / 15.20	---	4750 / 133.9	---	---	7.3 / ----	---		----	98	229	0	290		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA ANA RIVER NEAR ARLINGTON (ST. 51)															
2/11 1410	28	66	9.2	93	1,021	8.0*	109/5.44	25/2.05	72/3.13	5.3/0.14	0/0.00	328/5.37	99/2.07	103/2.90	24/0.39	0.5/0.03	0.00/----	20/---		615[c]	29	376	107	5-	Maximum 24,000 Minimum 13 Median 620	DWR
3/4 1300	28	60	9.5	95	986	8.0	---	---	---	---	23/0.77	277/4.55	---	103/2.90	---	---	0.14/----	---		----	32	355	89	15		DWR
3/17 1210	---	--	--	--	463	7.6	52/2.53	12/0.99	28/1.22	6.1/0.16	0/0.00	186/3.06	39/0.82	31/0.87	0.5/0.01	---	0.00/----	---		288[c]	25	178	35	---		SBCFCD
4/8 1600	est. 75	70	8.4	93	876	8.1	88/4.39	21/1.73	58/2.52	7.1/0.18	0/0.00	270/4.43	96/2.01	82/2.31	10/0.16	0.4/0.02	0.08/----	20/---		567[c]	29	305	83	1600		DWR
5/6 1430	---	83	6.4	81	992	8.2	106/5.29	27/2.22	76/3.31	5.3/0.14	0/0.00	327/5.36	102/2.12	109/3.07	18/0.29	0.8/0.04	0.12/----	20/---	Sn 0.00 PO_4 0.52[a]	660[c]	30	376	108	5-		DWR
6/10 1335	27	84	8.0	102	1,011	8.2	---	---	---	---	0/0.00	323/5.29	---	106/3.01	---	---	0.00/----	---		----	30	366	101	5-		DWR
7/2 1805	26	73	4.8	56	1,009	8.0	---	---	---	---	0/0.00	322/5.28	---	102/2.88	---	---	0.20/----	---		----	32	340	76	5-		DWR
8/5 1230	23	82	6.0	76	1,007	8.2	---	---	73/3.18	---	0/0.00	322/5.28	---	105/2.96	---	---	0.12/----	---		----	31	355	194	5-		DWR
9/2 1130	25	79	8.0	97	977	8.0	104/5.20	23/1.89	78/3.39	4.7/0.12	0/0.00	320/5.24	109/2.28	104/2.93	20/0.32	0.5/----	0.16/----	25/---	Sn 0.00 PO_4 0.32[a]	635[c]	32	354	92	5-		DWR
10/7 1345	24	74	7.0	82	995	8.1	---	---	---	---	0/0.00	325/5.32	---	102/2.88	---	---	0.00/----	---		----	28	366	100	5-		DWR
11/11 1515	25	60	8.6	86	949	7.9	---	---	---	---	0/0.00	325/5.32	---	98/2.76	---	---	0.04/----	---		----	31	353	87	5-		DWR
12/9 1300	33	63	8.0	82	948	8.1	---	---	---	---	0/0.00	322/5.28	---	95/2.68	---	---	0.00/----	---		----	30	360	96	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17
ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH[f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA ANA RIVER NEAR MENTONE (STA.51b)															DWR
1/8 1540	est. 24	45	11.0	90	228	8.3	---	---	---	---	0/0.00	114/1.87	---	6/0.17	---	---	0.00/----	---		----	27	84	0	5-		
2/11 1530	est. 55	47	9.6	81	196	8.1	---	---	---	---	0/0.00	103/1.69	---	6/0.17	---	---	0.00/----	---		----	23	80	0	5-	Maximum 62. Minimum 0.45- Median 2.3	
3/4 1415	est. 64	47	11.5	97	208	7.9	---	---	---	---	0/0.00	107/1.75	---	5/0.14	---	---	0.04/----	---		----	25	30	0	5-		
4/8 1730	est.132	50	10.4	92	165	8.0	20/1.00	4.2/0.35	9.5/0.41	1.1/0.03	0/0.00	84/1.37	12/0.25	5/0.14	0.8/0.01	0.2/0.01	0.00/----	20/---		129[c]	24	67	1	5-		
5/6 1630	est.160	57	8.6	81	157	8.0	16/0.80	5/0.41	9/0.39	1.5/0.04	0/0.00	81/1.32	8/0.17	6/0.17	0.5/0.01	0.4/0.02	0.00/----	20/---	Zn 0.00 PO_4 0.04[a]	100[c]	24	60	0	25		
6/10 1435	est.100	54	9.4	35	150	8.1	---	---	---	---	0/0.00	76/1.25	---	7/0.20	---	---	0.00/----	---		----	23	60	1	5-		
7/2 1700	est. 70	55	8.4	79	157	8.0	---	---	---	---	0/0.00	80/1.31	---	3/0.08	---	---	0.00/----	---		----	25	58	0	5-		
8/5 1410	est. 53	59	7.8	77	164	8.1	---	---	8.8/0.38	---	0/0.00	85/1.40	---	5/0.14	---	---	0.00/----	---		----	23	65	0	5-		
9/2 1315	est. 70	64	10.0	102	179	7.9	18/0.90	6/0.49	12/0.52	1.5/0.04	0/0.00	93/1.52	9/0.19	6/0.17	0.5/0.01	0.2/0.11	0.06/----	20/---	Zn 0.00 PO_4 0.05[a]	120[c]	27	69	0	5-		
10/7 1440	est. 41	75	9.2	107	192	7.9	---	---	---	---	0/0.00	98/1.60	---	4/0.11	---	---	0.00/----	---		----	26	73	0	5-		
11/11 1715	est. 48	48	12.8	105	191	8.0	---	---	---	---	0/0.00	96/1.58	---	4/0.11	---	---	0.00/----	---		----	24	76	0	5-		
12/9 1415	est. 37	47	10.6	88	203	8.0	---	---	---	---	0/0.00	106/1.74	---	4/0.11	---	---	0.00/----	---		----	27	76	0	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as 0.0/0.00 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, or United States Public Health Service.
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f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Mineral constituents in parts per million / equivalents per million

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											SANTA ANA RIVER AT NORCO (STA. 51e)															DWR
1/7 1545	42	60	7.8	78	1,061	8.0	---	---	---	---	0 / 0.00	320 / 5.25	---	115 / 3.22	---	---	0.26 / ---	---		---	35	345	82	5-	Maximum 2,400 Median 230 Minimum 6	
2/11 1330	35 est.	64	8.0	84	1,086	8.2	---	---	---	---	0 / 0.00	320 / 5.25	---	121 / 3.40	---	---	0.21 / ---	---		---	36	348	85	25		
2/19 1400	50 est.	57	---	---	955	8.0*	95 / 4.74	19 / 1.56	80 / 3.48	5.5 / 0.14	0 / 0.00	287 / 4.70	96 / 1.99	102 / 2.88	14 / 0.23	0.6 / 0.03	0.28 / ---	20 / ---	PO4 20 a	605[c]	35	315	80	300		
3/4 1220	40	66	8.5	91	1,052	7.9	---	---	---	---	14 / 0.47	287 / 4.70	---	120 / 3.37	---	---	0.40 / ---	---		---	39	348	89	70		
4/8 1530	200 est.	70	9.4	104	873	7.9	81 / 4.04	18 / 1.48	68 / 2.96	8.1 / 0.21	0 / 0.00	253 / 4.16	96 / 1.99	90 / 2.54	12 / 0.18	0.5 / 0.03	0.26 / ---	25 / ---		547[c]	35	275	67	250		
5/6 1345	40 est.	83	6.6	83	1,117	8.2	98 / 4.89	32 / 2.63	98 / 4.26	6.2 / 0.16	0 / 0.00	337 / 5.52	115 / 2.40	132 / 3.72	12 / 0.18	0.8 / 0.04	0.38 / ---	25 / ---	Sn 0 PO4 1.7 a	750[c]	36	378	102	10		
6/10 1300	28	84	6.6	86	1,109	8.2	---	---	---	---	0 / 0.00	332 / 5.45	---	128 / 3.60	---	---	0.15 / ---	---		---	36	370	98	5-		
7/2 1835	17	75	7.0	83	1,134	8.2	---	---	---	---	0 / 0.00	334 / 5.58	---	129 / 3.64	---	---	0.31 / ---	---		---	37	363	84	5-		
8/5 1200	22	84	7.6	98	1,098	8.2	---	---	97 / 4.22	---	0 / 0.00	334 / 5.48	---	131 / 3.69	---	---	0.45 / ---	---		---	38	348	74	5-		
9/2 1100	29	78	9.0	104	1,072	8.1	103 / 5.14	23 / 1.89	95 / 4.13	5.6 / 0.14	0 / 0.00	332 / 5.44	102 / 2.12	128 / 3.61	10 / 0.16	0.7 / 0.04	0.34 / ---	25 / ---	Sn = 0 PO4 = 1.2 a	678[c]	37	354	62	5-		
10/7 1320	27	77	9.0	107	1,060	8.3	---	---	---	---	31 / 1.04	259 / 4.24	---	125 / 3.53	---	---	0.28 / ---	---			37	344	80	5-		
11/11 1445	36	59	10.4	101	1,031	8.1	---	---	---	---	0 / 0.00	321 / 5.26	---	120 / 3.38	---	---	0.34 / ---	---			37	338	75	15		
12/9 1215	39	57	9.4	91	1,028	8.0	---	---	---	---	0 / 0.00	329 / 5.40	---	119 / 3.36	---	---	0.25 / ---	---			36	352	82	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), hexavalent chromium (Cr^{+6}), and tin (Sn), reported here as 0.0 / 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958											SANTA ANA RIVER NEAR PRADO DAM (STA. 51a)															
1/7 1500	59	63	8.6	88	1,024	8.1	99 / 4.94	23 / 1.89	79 / 3.44	4.7 / 0.12	0 / 0.00	313 / 5.14	103 / 2.15	104 / 2.93	11 / 0.18	0.4 / 0.02	0.16 / ----	30 / ---		642[c]	33	343	86	5-	Maximum 70,000. Minimum 6. Median 230.	DWR
2/11 1230	100	60	7.8	78	1,074	8.0	111 / 5.54	25 / 2.06	83 / 3.61	6.9 / 0.18	0 / 0.00	330 / 5.41	131 / 2.72	104 / 2.93	14 / 0.23	0.5 / 0.03	0.15 / ----	20 / ---		643[c]	32	381	110	400		DWR
3/4 1100	87	57	10.3	100	1,023	7.9	---	---	---	---	14 / 0.47	304 / 4.98	---	101 / 2.84	---	---	0.26 / ----	---	Total Alkalinity 332	----	33	370	97	125		DWR
3/17 1540	----	--	--	--	378	7.8*	41 / 2.06	9 / 0.78	25 / 1.09	9.1 / 0.23	0 / 0.00	139 / 2.27	39 / 0.81	27 / 0.76	7.0 / 0.11	---	0.08 / ----	---		243[c]	26	142	28	--		SBCFCD
4/8 1440	749	54	10.0	108	475	7.6	45 / 2.25	13 / 1.07	29 / 1.26	9.9 / 0.25	0 / 0.00	153 / 2.51	65 / 1.36	33 / 0.93	6.8 / 0.11	0.2 / 0.01	0.10 / ----	10 / ---		323[c]	28	163	37	440		DWR
4/14 0930	----	--	--	--	1,140	7.8*	120 / 6.00	26 / 2.15	83 / 3.63	5.7 / 0.15	0 / 0.00	351 / 5.75	155 / 3.22	106 / 3.00	15 / 0.24	0.4 / 0.02	0.15 / ----	20 / ---		736[c]	30	408	120	--		DWR
5/6 1300	76	75	6.4	75	1,100	8.1	103 / 5.14	33 / 2.71	86 / 3.74	6.2 / 0.16	0 / 0.00	344 / 5.64	127 / 2.64	115 / 3.24	11 / 0.18	0.7 / 0.04	0.26 / ----	30 / ---	Sn 0.00 PO_4 1.00[a]	690[c]	32	393	211	800		DWR
6/10 1215	59	75	8.0	94	1,050	8.1	108 / 5.39	26 / 2.17	82 / 3.57	5.4 / 0.14	0 / 0.00	335 / 5.49	119 / 2.48	111 / 3.13	9.5 / 0.15	0.6 / 0.03	0.09 / ----	20 / ---	NH_4 0.00	660[c]	32	378	103	30		DWR
7/2 1905	48	73	6.8	79	1,059	8.1	105 / 5.24	25 / 2.08	85 / 3.70	5.0 / 0.13	0 / 0.00	336 / 5.50	117 / 2.44	115 / 3.24	9.4 / 0.15	0.5 / 0.03	0.23 / ----	25 / ---		659[c]	34	366	91	5-		DWR
8/5 1130	31	73	7.6	88	1,049	8.2	102 / 5.09	28 / 2.27	82 / 3.57	3.9 / 0.10	0 / 0.00	329 / 5.40	111 / 2.32	118 / 3.33	9.0 / 0.14	0.4 / 0.02	0.27 / ----	25 / ---		689[c]	33	368	203	5-		DWR
9/2 1000	36	70	8.2	100	1,063	8.0	105 / 5.24	24 / 1.97	88 / 3.83	4.5 / 0.12	0 / 0.00	332 / 5.44	107 / 2.23	120 / 3.38	10 / 0.16	0.5 / 0.03	0.30 / ----	25 / ---	Sn 0.00 PO_4 0.05[a]	665[c]	34	365	93	5-		DWR
10/7 1300	40	73	8.4	97	1,027	7.9	102 / 5.09	24 / 2.01	84 / 3.65	4.6 / 0.12	36 / 1.20	246 / 4.04	108 / 2.24	116 / 3.27	10 / 0.16	0.5 / 0.03	0.21 / ----	20 / ---	Total Alkalinity 318	662[c]	34	355	93	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled (PST)	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	Per-cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1959							SANTA ANA RIVER NEAR PRADO DAM (STA. 81a) Cont.																			
11/11 1409	48	60	12.0	121	996	8.2	102 / 5.09	23 / 1.89	83 / 3.61	6.0 / 0.15	0 / 0.00	315 / 5.16	106 / 2.21	114 / 3.21	16 / 0.26	0.5 / 0.03	0.20 / ----	25 / ---	NH_4 0.00	621[c]	34	349	91	5-		DWR
12/9 1145	55	55	8.6	81	988	8.0	96 / 4.79	26 / 2.15	84 / 3.65	4.5 / 0.12	0 / 0.00	322 / 5.28	106 / 2.20	111 / 3.13	18 / 0.29	0.5 / 0.03	0.17 / ----	25 / ---	NH_4 0.00	635[c]	34	347	83	5-		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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	Per cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA ANA RIVER AT RIVERSIDE (STA. 51d)															
1/7 1640	25	61	7.6	76	1,000	7.8	---	---	---	---	0 / 0.00	320 / 5.25	---	100 / 2.83	---	---	0.09 / ----	---		---	30	352	89	5-		USGS

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
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TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							WARM CREEK AT COLTON (STA. 50b)																			DWR
1/8 **	12.7	64	0	0	876	7.3*	56 2.79	14 1.15	79 3.44	14 0.36	0 0.00	252 4.14	68 1.42	74 2.09	56 0.91	0.6 0.03	0.31 ----	25 ---	NH_4 14.0	530[c]	46	198	0	160	Maximum 70,000+ Minimum 62 Median 2300	
2/6 **	Not Available	66	0	0	902	7.1*	58 2.89	19 1.56	86 3.74	14 0.36	0 0.00	242 3.96	89 1.86	82 2.31	46 0.74	0.8 0.04	0.31 ----	30 ---	NH_4 11.0	504[c]	35	224	26	5		
3/14 **	33	60	0	0	917	7.2*	70 3.49	16 1.32	72 3.13	14 0.36	0 0.00	296 4.86	86 1.80	71 2.00	29 0.47	1.0 0.05	0.48 ----	20 ---	NH_4 16.0	563[c]	40	239	0	15		
4/12 **	27	66	0	0	824	7.4*	70 3.49	19 1.56	60 2.61	10 0.26	0 0.00	261 4.27	92 1.92	55 1.55	52 0.84	1.2 0.06	0.29 ----	20 ---	NH_4 7.90	530[c]	34	254	40	5-		
5/12 **	Not Available	61	0	0	612	7.4*	43 2.15	13 1.07	56 2.44	9.5 0.24	0 0.00	189 3.10	61 1.27	44 1.24	36 0.58	1.0 0.05	0.20 ----	30 ---	NH_4 6.50 Sn 0.00[a] PO_4 11.0	370[c]	39	164	9	150		
6/10 **	Not Available	76	--	--	886	7.2*	51 2.54	12 1.02	99 4.31	14 0.37	0 0.00	195 3.19	74 1.55	98 2.76	66 1.06	0.6 0.03	0.35 ----	30 ---	NH_4 4.00	549[c]	55	178	18	5-		
7/9 **	Not Available	86	--	--	832	7.3*	46 2.30	15 1.22	81 3.56	14 0.35	0 0.00	229 3.76	97 2.03	76 2.14	51 0.82	1.0 0.05	0.30 ----	25 ---	NH_4 10.0	474[c]	44	178	0	5-		
8/15 **	28	82	--	--	755	6.9*	49 2.45	16 1.33	76 3.31	11 0.29	0 0.00	193 3.16	70 1.46	68 1.92	63 1.02	0.6 0.03	0.47 ----	30 ---	NH_4 1.80	502[c]	47	189	91	5-		
9/11 **	18	77	--	--	847	7.4*	42 2.10	21 1.73	82 3.57	15 0.37	0 0.00	224 3.68	60 1.25	80 2.26	42 0.68	1.0 0.05	0.36 ----	40 ---	Sn 0.00 NH_4 8.60[a] PO_4 22.0	524[c]	43	192	8	25		
10/6 **	19	78	--	--	853	7.1*	44 2.19	17 1.41	86 3.74	13 0.34	0 0.00	234 3.84	75 1.56	70 1.97	58 0.93	1.0 0.05	0.40 ----	30 ---	NH_4 12.0	438[c]	45	130	0	5-		
11/12 **	13	73	--	--	921	7.2*	57 2.84	18 1.48	92 4.00	14 0.35	0 0.00	224 3.68	84 1.74	88 2.43	64 1.04	1.0 0.05	0.27 ----	28 ---	NH_4 9.70	573[c]	43	216	32	5-		
12/11 **	19	71	--	--	913	7.4*	56 2.79	15 1.21	86 3.74	16 0.40	0 0.00	271 4.44	76 1.58	76 2.14	44 0.71	1.0 0.05	0.54 ----	30 ---	NH_4 16.0	525[c]	41	200	0	5-		

**24 Hr. composite sample.

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-17

ANALYSES OF SURFACE WATER

SANTA ANA REGION (8)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH f	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			
1958												WARM CREEK AT SAN BERNARDINO (STA. 50c)														DWR
1/8	DRY																									
2/6 **	est. 150	56	4.0	38	581	7.5*	78/3.89	19/1.56	20/0.87	5.4/0.14	0/0.00	227/3.72	94/1.95	18/0.51	6.8/0.11	0.3/0.02	0.09/----	20/---		347[c]	14	273	87	5-	Maximum 7000+ Minimum 60 Median 1460	
3/14 **	est. ½	61	6.0	60	766	7.3*	108/5.39	18/1.48	34/1.48	4.8/0.12	0/0.00	296/4.86	133/2.78	26/0.73	1.5/0.02	0.5/0.03	0.10/----	20/---		510[c]	18	346	103	10		
4/12 0900	DRY																									
5/12 **	est. 2½	73	—	—	377	7.4*	47/2.35	9/0.74	20/0.87	3.2/0.08	0/0.00	140/2.30	59/1.23	19/0.54	2.0/0.03	0.5/0.03	0/----	25/---	Sn 0.00 PO_4 0.20[a]	260[c]	22	156	41	150		
6	DRY																									
7	DRY																									
8	DRY																									
9	DRY																									
10	DRY																									
11	DRY																									
12	DRY																									
** 24 hour composite sample																										

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

ESCONDIDO CREEK NEAR HARMONY GROVE (STA. 63)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
1958																										DWR
1/6 1145	est. 1	48	4.7	41	2,070	7.1	---	---	---	---	0 / 0.00	233 / 3.82	---	313 / 8.93	---	---	0.55 / ----	---		----	61	370	179	5-	Maximum 70,000 Minimum 4.5 Median 620	
2/4 1100	est. 30	56	--	--	338	7.2*	17 / 0.35	6 / 0.49	38 / 1.65	2.5 / 0.22	0 / 0.00	62 / 1.02	40 / 0.84	45 / 1.27	2.5 / 0.04	0.2 / 0.01	0.20 / ----	7 / ---	PO_4 3.20	200[c]	51	67	16	550		
3/3 1430	est. 1	55	4.0	38	1,114	7.2	---	---	---	----	0 / 0.00	155 / 2.55	---	161 / 4.53	---	---	0.36 / ----	---		----	59	217	89	40		
5/5 1130	est. 1	74	9.5	109	2,037	7.7	74 / 3.69	61 / 5.01	272 / 11.83	14 / 0.36	0 / 0.00	315 / 5.16	271 / 5.65	344 / 9.70	35 / 0.56	0.9 / 0.05	0.68 / ----	20 / ---	Sn 0.00 PO_4 19.0[a]	1290[c]	57	436	178	109		
7/7 1420	est. 1/2	75	5.2	61	1,687	7.4	---	---	---	---	0 / 0.00	244 / 4.00	---	270 / 7.76	---	---	0.45 / ----	---		----	62	314	114	5-		
9/1 1200	est. 1/2	72	6.0	68	1,648	7.4	61 / 3.04	32 / 2.62	234 / 10.18	14 / 0.37	0 / 0.00	242 / 3.96	194 / 4.05	275 / 7.76	9.9 / 0.16	0.6 / 0.03	0.59 / ----	15 / ---	Sn 0.00 Mn 0.10[a] PO_4 28.5	991[c]	63	283	85	5-		
11/10 1350	est. 2	62	3.0	31	1,855	7.2	---	---	---	---	0 / 0.00	211 / 3.46	---	285 / 8.04	---	---	0.51 / ----	---		----	65	296	123	5-		

Mineral constituents in parts per million / equivalents per million

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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	Per-cent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[d] MPN/ml	Analyzed by[e]
							Mineral constituents in parts per million / equivalents per million																			
1958							FORESTER CREEK AT MISSION GORGE ROAD (STA. 65a)																			DWR
1/6 1420	est. 2	59	9.5	94	2,074	7.2	---	---	---	---	0 / 0.00	173 / 2.82	---	364 / 10.25	---	---	0.60 / ---	---		----	58	380	239	40	Maximum 70,000 Minimum 600 Median 6200	
3/3 1825	est. 2	63	6.2	64	2,012	7.5	---	---	---	---	0 / 0.00	162 / 2.65	---	364 / 10.25	---	---	0.40 / ----	---	NH_4 13.0	----	55	426	293	100		
5/5 1530	est. 3	84	9.5	122	2,381	8.1	94 / 4.69	65 / 5.34	292 / 12.70	20 / 0.50	0 / 0.00	277 / 4.54	312 / 6.51	450 / 12.69	47 / 0.76	1.0 / 0.05	0.60 / ----	20 / ---	Sn 0.00 PO_4 30.0[a]	1490[c]	53	505	278	75		
7/7 1800	est. 2	78	5.4	60	2,006	7.8	---	---	---	---	0 / 0.00	349 / 5.75	---	338 / 9.53	---	---	0.59 / ----	---		----	59	335	47	5		
9/1 1510	est. 2	81	5.6	70	1,724	7.6	67 / 3.34	35 / 2.84	208 / 9.05	18 / 0.47	0 / 0.00	265 / 4.34	183 / 3.81	295 / 8.32	13 / 0.22	0.4 / 0.02	0.76 / ----	5 / ---	Sn 0.00 NH_4 19.0[a] PO_4 36.0	967[c]	54	309	92	5		
11/10 1630	est. 3	70	3.5	39	1,703	7.2	---	---	---	---	0 / 0.00	268 / 4.40	---	251 / 7.08	---	---	0.45 / ----	---		----	58	330	110	160		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18
ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958							SAN DIEGO RIVER AT OLD MISSION DAM (STA. 65)																			
1/6 1400	Pond	57	16.0	154	2,631	7.9	---	---	---	---	0 0.00	240 3.93	---	562 15.85	---	---	0.52	--		---	54	568	371	30	Maximum 700+ Minimum 13 Median 53-	DWR
2/4 0800	200 est.	57	--	--	2,348	7.4*	108 5.39	59 4.85	304 13.22	9.0 0.23	0 0.00	210 3.44	270 5.62	485 13.66	20 0.32	0.6 0.03	0.44	15	PO_4 5.5	1,430[c]	56	512	335	600		DWR
3/3 1800	1 est.	57	6.6	64	2,092	8.0	105 5.24	50 4.11	262 11.40	11 0.27	0 0.00	217 3.56	261 5.43	411 11.59	24 0.392	1.2 0.06	0.48	15		---	55	469	291	125		DWR
4/4 1530	2,000 est.	59	--	--	360	7.0*	16 0.80	7 0.60	42 1.81	12 0.32	0 0.00	57 0.94	53 1.10	54 1.52	2.3 0.04	0 0.00	0.10	33	PO_4 1.0	241[c]	51	70	23	--		TTL
4/30 1130	4 est.	68	--	--	1,677	7.1*	76 3.82	41 3.43	202 8.78	6.5 0.17	0 0.00	189 3.10	187 3.89	317 8.93	5.0 0.08	0.4 0.02	0.50	38		1,036[c]	54	363	208	--		TTL
5/5 1515	4 est.	84	5.5	71	1,730	7.7	72 3.59	54 4.44	210 9.14	7.5 0.19	0 0.00	198 3.24	197 4.11	340 9.59	16 0.03	0.6 0.03	0.32	25	Sn 0 PO_4 4.4[a]	1,080[c]	53	402	240	500		DWR
7/7 1725	¼ est.	84	16.0	207	2,109	8.4	---	---	---	---	0 0.00	276 4.52	---	429 12.10	---	---	0.41	--		---	57	443	217	5		DWR
9/1 1530	Pond	84	11.6	150	2,421	8.4	112 5.59	62 5.07	306 13.31	10 0.26	0 0.00	318 5.22	228 4.76	505 14.24	1.0 0.016	0.5 0.03	0.65	10	Sn 0 PO_4 3.6[a]	1,456[c]	55	533	272	5-		DWR
11/10 1700	Pond	64	9.0	94	2,021	7.6	---	---	---	---	0 0.00	243 3.98	---	394 11.11	---	---	0.52	--		---	57	458	259	90		DWR

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH [f]	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			
1958										SAN DIEGUITO RIVER BELOW SAN PASQUAL VALLEY (STA.64)																DWR
1/6	DRY NO FLOW																									
3/3 1500	DRY NO FLOW																									
5/5 1200	est. 1/2	95	8.5	133	1,235	8.4	69 3.44	47 3.86	140 6.09	7.2 0.18	0 0.00	301 4.94	136 2.84	187 5.27	0.5 0.01	0.4 0.02	0.10 ----	20 ---	Sn 0.00 PO_4 0.48[a]	760[c]	45	367	120	5-		
7/7	DRY NO FLOW																									
9/1 1315	DRY NO FLOW																									
11/10	DRY NO FLOW																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											SAN LUIS REY RIVER NEAR PALA (STA.62)															DWR
1/6 1045	est. 1/5	59	8.5	84	698	7.2	---	---	---	---	0 / 0.00	175 / 2.87	---	48 / 1.35	---	---	0.00 / ----	---		----	29	242	98	5-		
2/3 1600	est. 1	59	--	--	701	7.4*	65 / 3.24	22 / 1.81	47 / 2.04	5.0 / 0.13	0 / 0.00	174 / 2.86	145 / 3.02	49 / 1.38	0 / 0.00	0.2 / 0.01	0.00 / ----	30 / ---	NH_4 0.00 PO_4 0.05[a]	477[c]	28	252	109	5-	Maximum 240 Minimum 4.5- Median 62	
3/3 1335	est. 4	59	9.0	89	818	8.0	---	---	---	---	0 / 0.00	150 / 2.46	---	94 / 2.64	---	---	0.04 / ----	---		----	44	213	90	5-		
5/5 1025	est. 6	68	10.0	109	531	7.9	48 / 2.40	21 / 1.73	28 / 1.22	4.8 / 0.12	0 / 0.00	200 / 1.96	130 / 2.71	31 / 0.87	0.5 / 0.01	0.4 / 0.02	0.00 / ----	30 / ---	Sn 0.00 PO_4 0.14[a]	470[c]	22	207	109	5-		
7/7 1315	est.1/25	72	7.4	84	574	7.7	---	---	---	---	0 / 0.00	140 / 2.30	---	33 / 0.90	---	---	0.00 / ----	---		----	28	206	91	5-		
9/1 1115	est.1/25	68	7.4	81	594	7.4	54 / 2.69	18 / 1.49	38 / 1.65	4.4 / 0.11	0 / 0.00	137 / 2.24	131 / 2.72	33 / 0.93	0.6 / 0.01	---	0.00 / ----	15 / ---	PO_4 0.2[a]	360[c]	28	209	97	5-		
11/10 1300	est.1/25	63	6.8	7.0	594	7.3	---	---	---	---	0 / 0.00	150 / 2.46	---	38 / 1.07	---	---	0.11 / ----	---		----	28	223	100	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH f	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											SANTA MARGARITA RIVER NEAR FALLBROOK (STA. 51c)															DWR
1/6 1000	est. 1	47	9.7	82	1,273	7.7	---	---	---	---	0 / 0.00	326 / 5.33	---	160 / 4.50	---	---	0.17 / ----	---		----	46	337	70	5-	Maximum 1300 Minimum 0.6 Median 45.-	
3/3 1220	6.5	54	9.2	85	----	8.1	SAMPLE LOST																			
5/5 0930	17	68	9.0	98	827	8.1	54 / 2.69	27 / 2.22	83 / 3.61	2.7 / 0.07	0 / 0.00	246 / 4.04	84 / 1.75	101 / 2.85	0.5 / 0.01	0.5 / 0.03	0.16 / ----	30 / ---	Sn 0.00 PO_4 0.36[a]	520[c]	42	248	46	10		
7/7 1210	est. 3/4	79	6.8	83	1,057	7.9	---	---	---	---	0 / 0.00	332 / 5.45	---	130 / 3.67	---	---	0.08 / ----	---		----	44	303	30	5-		
9/1 1000	est. 1	71	7.4	83	1,211	8.0	87 / 4.34	27 / 2.22	145 / 6.31	4.0 / 0.10	0 / 0.00	381 / 6.24	116 / 2.41	150 / 4.23	0.5 / 0.01	0.6 / 0.03	0.24 / ----	30 / ---	Sn 0.00 PO_4 0.44[a]	768[c]	49	333	21	5-		
11/10 1120	est. 1	61	5.5	55	1,031	7.9	---	---	---	---	0 / 0.00	361 / 5.92	---	138 / 3.89	---	---	0.12 / ----	---		----	48	307	11	5-		

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
1958											SPRING VALLEY CREEK NEAR LA PRESSA (STA.65b)															DWR
3/3 1715	est. 1/3	59	8.2	80	4,695	8.0	191 / 9.53	121 / 9.95	660 / 28.71	3.0 / 0.08	0 / 0.00	411 / 6.74	418 / 8.70	1115 / 31.44	60 / 0.97	1.0 / 0.05	0.52 / ----	25 / ---		3125[c]	59	981	644	5-	Maximum 620 Minimum 23 Median 96	
5/5 1415	est. 3	79	13.5	164	4,762	8.4	211 / 10.53	140 / 11.51	660 / 28.71	4.0 / 0.10	0 / 0.00	449 / 7.36	485 / 10.11	1175 / 33.14	64 / 1.03	0.8 / 0.04	0.56 / ----	30 / ---	Sn 0.00 PO_4 3.40[a]	3280[c]	56	1108	740	10		
7/7 1630	est. 1	80	11.8	146	5,058	8.4	---	---	---	---	0 / 0.00	437 / 7.17	---	1260 / 35.50	---	---	0.59 / ----	---		----	59	1036	677	5-		
9/1 1410	est. 1	81	17.0	210	4,812	8.4	215 / 10.73	116 / 9.53	684 / 29.75	6.6 / 0.17	0 / 0.00	420 / 6.88	437 / 9.11	1178 / 33.22	65 / 1.04	0.4 / 0.02	0.58 / ----	10 / ---	Sn 0.00 PO_4 3.70[a]	3081[c]	59	1013	557	5		
11	NO REPORT																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-18

ANALYSES OF SURFACE WATER

SAN DIEGO REGION (9)

Date and time sampled PST	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH [f]	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]
							Mineral constituents in parts per million / equivalents per million																			
1958											TIA JUANA RIVER AT INTERNATIONAL BOUNDARY (STA.66)															
1/6	DRY NO FLOW																									
3/3 1605	DRY NO FLOW																									
4/4 1100	est. 100	59	--	--	519	7.4*	24 / 1.20	10 / 0.84	67 / 2.91	5.7 / 0.15	0 / 0.00	103 / 1.69	66 / 1.37	75 / 2.11	3.3 / 0.05	0.4 / 0.02	0.00 / ----	21 / ---	PO_4 2.00	338[c]	57	102	17	--		TTL
5/5 1330	DRY NO FLOW																									
7/7 1825	DRY NO FLOW																									
9/1 1545	DRY NO FLOW																									
11/10 1530	DRY NO FLOW																									

a Iron (Fe), aluminum (Al), arsenic (As), copper (Cu), lead (Pb), manganese (Mn), zinc (Zn), and hexavalent chromium (Cr^{+6}), reported here as $\frac{0.0}{0.00}$ 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, or United States Public Health Service.
e Mineral analyses made by USGS, Quality of Water Branch (USGS), United States Public Health Service (USPHS), San Bernardino County Flood Control District (SBCFCD), 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), Terminal Testing Laboratories, Inc. (TTL), State Department of Water Resources (DWR), as indicated.
f Field pH except when noted with *

TABLE B-19

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION (NO. 1)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
5	Eel River	McCann	5-8 9-11	1.12 ± 4.7 3.72 ± 5.6	3.05 ± 4.9 1.08 ± 3.9	0.00 ± 0.31 0.17 ± 0.39	0.17 ± 0.27 0.33 ± 0.51
6	Eel River	Scotia	5-8 9-11	2.35 ± 4.8 3.56 ± 5.5	3.97 ± 5.1 2.52 ± 4.0	0.17 ± 0.39 0.00 ± 0.39	0.34 ± 0.39 0.68 ± 0.56
7	Eel River, South Fork	Miranda	5-8 9-11	0.00 ± 4.8 5.05 ± 5.6	0.00 ± 4.9 6.37 ± 4.0	0.00 ± 0.28 0.08 ± 0.31	0.17 ± 0.39 0.17 ± 0.34
1	Klamath River	Copco	5-16 9-16	22.9 ± 5.1 0.00 ± 5.7	0 3.04 ± 4.0	0.18 ± 0.39 0.00 ± 0.20	0.16 ± 0.33 0.33 ± 0.34
3	Klamath River	Klamath	5-6 9-9	4.00 ± 4.8 16.00 ± 6.1	0.53 ± 5.1 2.10 ± 3.8	0.18 ± 0.29 0.24 ± 0.24	0.00 ± 0.33 0.17 ± 0.28
2	Klamath River	Somesbar	5-7 9-10	2.54 ± 4.8 3.75 ± 5.7	1.96 ± 5.2 2.32 ± 4.0	0.09 ± 0.33 0.17 ± 0.28	0.33 ± 0.48 0.17 ± 0.34
10	Russian River	Guerneville	5-9 Sept.	5.01 ± 4.8 Not Sampled	4.25 ± 4.9	0.09 ± 0.47	0.09 ± 0.34
9	Russian River	Healdsburg	5-9 9-12	5.43 ± 4.8 0.50 ± 5.4	4.87 ± 4.9 8.78 ± 4.0	0.42 ± 0.36 0.08 ± 0.28	0.08 ± 0.31 0.24 ± 0.37
8a	Russian River	Hopland	5-9 9-12	0.00 ± 4.8 13.91 ± 5.9	5.37 ± 4.9 4.23 ± 3.9	0.17 ± 0.29 0.00 ± 0.28	0.08 ± 0.31 0.59 ± 0.46
10b	Russian River	Ukiah	5-9 9-12	3.11 ± 4.6 2.12 ± 5.2	4.25 ± 5.0 2.85 ± 3.9	0.09 ± 0.35 0.08 ± 0.24	0.85 ± 0.51 0.00 ± 0.20
8	Russian River, East Fork	Calpella	5-9 9-12	0.00 ± 4.8 5.13 ± 5.6	2.74 ± 5.0 6.34 ± 4.0	0.17 ± 0.33 0.08 ± 0.31	0.60 ± 0.50 0.08 ± 0.24
10a	Russian River, East Fork	Potter Valley Powerhouse	5-9 9-12	0.28 ± 4.6 2.89 ± 5.4	6.24 ± 4.8 0.00 ± 3.9	0.00 ± 0.44 0.08 ± 0.31	0.75 ± 0.53 0.24 ± 0.24

TABLE B-19

RADIOASSAY OF SURFACE WATERS

NORTH COASTAL REGION (NO. 1)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
3a	Smith River	Crescent City	5-6	5.93 ± 4.8	2.54 ± 5.1	0.09 ± 0.25	0.16 ± 0.33
			9-9	39.68 ± 6.7	7.00 ± 3.9	0.17 ± 0.20	0.24 ± 0.31
4	Trinity River	Hoopa	5-7	3.00 ± 4.7	1.20 ± 5.0	0.08 ± 0.31	0.17 ± 0.39
			9-10	0.00 ± 5.7	0.25 ± 3.7	0.17 ± 0.48	0.24 ± 0.46
4a	Trinity River	Lewiston	5-13	2.77 ± 4.8	0.75 ± 4.9	0.00 ± 0.31	0.50 ± 0.39
			9-4	1.38 ± 5.5	4.60 ± 3.9	0.00 ± 0.24	0.68 ± 0.64

TABLE B-20

RADIOASSAY OF SURFACE WATERS

SAN FRANCISCO BAY REGION (NO. 2)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
73	Alameda Creek	Niles	5-16	5.34 ± 4.6	0.56 ± 4.8	0.18 ± 0.37	0.28 ± 0.25
			9-8	1.49 ± 5.4	7.31 ± 4.1	0.42 ± 0.37	0.33 ± 0.39
71	Arroyo del Valle	VA Hospital	May	Not Sampled			
			9-8	6.18 ± 5.4	2.71 ± 4.2	0.08 ± 0.31	0.00 ± 0.31
82	Coyote Creek	Madrone	5-15	1.03 ± 4.6	5.88 ± 4.8	0.18 ± 0.37	0.47 ± 0.58
			9-8	1.38 ± 5.5	0.55 ± 3.9	0.42 ± 0.42	0.33 ± 0.34
74	Los Gatos Creek	Los Gatos	5-16	1.48 ± 4.6	3.50 ± 4.9	0.18 ± 0.31	1.30 ± 0.65
			9-10	4.63 ± 5.6	7.53 ± 4.1	0.08 ± 0.37	0.33 ± 0.44
72	Napa River	Saint Helena	5-14	2.21 ± 4.5	2.66 ± 4.8	0.38 ± 0.38	0.37 ± 0.43
			9-10	2.35 ± 5.2	3.13 ± 4.2	0.33 ± 0.39	0.33 ± 0.39

TABLE B-21

RADIOASSAY OF SURFACE WATERS

CENTRAL COASTAL REGION (NO. 3)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
83	Carmel River	Carmel	5-15	2.12 ± 4.4	7.19 ± 4.5	0.21 ± 0.32	0.00 ± 0.33
			9-9	4.66 ± 5.4	6.48 ± 3.9	0.17 ± 0.34	0.17 ± 0.44
43b	Nacimiento River	San Miguel	May	Not Sampled			
			9-9	4.30 ± 5.7	5.15 ± 3.9	0.50 ± 0.39	1.20 ± 0.56
77	Pajaro River	Chittenden	5-15	0.00 ± 4.6	1.82 ± 4.5	0.00 ± 0.24	0.28 ± 0.33
			9-8	11.73 ± 5.7	9.69 ± 4.0	0.00 ± 0.34	0.59 ± 0.53
43c	Salinas River	Bradley	May	Not Sampled			
			9-9	11.31 ± 5.9	5.48 ± 3.9	0.24 ± 0.51	0.85 ± 0.56
43a	Salinas River	Paso Robles	5-6	5.74 ± 4.3	3.24 ± 4.5	0.00 ± 0.34	0.18 ± 0.37
			Sept.	Not Sampled			
43	Salinas River	Spreckels	5-15	0.39 ± 4.4	2.38 ± 4.6	0.09 ± 0.37	0.18 ± 0.53
			9-9	27.48 ± 6.3	9.30 ± 4.0	0.24 ± 0.24	0.24 ± 0.46
43d	San Antonio River	Pleyto	May	Not Sampled			
			9-9	6.09 ± 5.8	6.70 ± 4.1	0.00 ± 0.48	0.59 ± 0.57
77a	San Benito River	Bear Valley Fire Station	May	Not Sampled			
			9-9	0.20 ± 5.2	1.33 ± 9.2	0.00 ± 0.28	0.08 ± 0.42
75	San Lorenzo River	Big Trees (nr Felton)	5-16	1.54 ± 4.6	4.59 ± 4.8	0.09 ± 0.14	0.18 ± 0.30
			9-10	2.62 ± 5.7	5.87 ± 4.1	0.08 ± 0.37	0.00 ± 0.39
45	Santa Ynez River	Los Laureles Canyon	5-8	0.00 ± 4.7	0.00 ± 4.7	0.18 ± 0.30	0.49 ± 0.40
			Sept.	Not Sampled			
45a	Santa Ynez River	Solvang	5-8	2.01 ± 4.6	1.29 ± 4.8	0.55 ± 0.36	0.27 ± 0.34
			Sept.	Not Sampled			
76	Soquel Creek	Soquel	5-16	1.82 ± 4.7	3.97 ± 4.6	0.07 ± 0.32	0.14 ± 0.28
			9-10	4.88 ± 5.4	5.42 ± 4.1	0.08 ± 0.31	0.59 ± 0.46

TABLE B-21

RADIOASSAY OF SURFACE WATERS

CENTRAL COASTAL REGION (NO. 3)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
96	Uvas Creek	Morgan Hill	5-15	3.64 ± 5.1	2.74 ± 5.3	0.26 ± 0.47	0.25 ± 0.37
			9-8	6.40 ± 5.55	6.56 ± 3.9	0.17 ± 0.44	0.50 ± 0.44

TABLE B-22

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION (NO. 4)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
47	Los Angeles River	Los Angeles	5-8	4.03 ± 4.5	6.24 ± 4.3	0.14 ± 0.20	0.15 ± 0.34
			9-10	5.63 ± 5.6	5.26 ± 4.0	0.00 ± 0.34	0.24 ± 0.37
48	Los Angeles River	Long Beach	5-8	19.01 ± 5.0	6.46 ± 4.4	0.29 ± 0.37	0.45 ± 0.42
			9-10	13.52 ± 5.9	5.34 ± 3.9	0.42 ± 0.53	0.94 ± 0.48
45b	Matilija Creek	Matilija Dam	5-8	0.00 ± 4.3	8.79 ± 4.4	0.30 ± 0.29	0.00 ± 0.28
			9-10	9.71 ± 5.6	6.98 ± 3.9	0.17 ± 0.34	1.02 ± 0.59
49a	Mission Creek	Whittier Narrows	5-6	8.09 ± 4.4	2.38 ± 5.0	0.43 ± 0.32	0.17 ± 0.28
			9-2	5.18 ± 5.6	7.31 ± 3.9	0.24 ± 0.46	0.76 ± 0.42
46c	Piru Creek	Piru	5-5	13.04 ± 4.8	3.67 ± 4.5	0.14 ± 0.29	0.52 ± 0.46
			9-1	2.51 ± 5.5	2.99 ± 3.9	0.50 ± 0.56	0.24 ± 0.51
49	Rio Hondo	Whittier Narrows	5-6	13.16 ± 4.8	0.00 ± 5.0	0.72 ± 0.50	0.07 ± 0.27
			9-2	8.85 ± 5.7	7.89 ± 3.9	0.68 ± 0.59	0.50 ± 0.34
50	San Gabriel River	Whittier Narrows	5-6	6.94 ± 4.8	3.32 ± 4.8	0.34 ± 0.34	0.17 ± 0.28
			9-2	8.66 ± 5.7	7.97 ± 3.9	0.24 ± 0.42	0.17 ± 0.44
50d	San Gabriel River	Azusa Powerhouse	5-6	6.88 ± 4.9	3.81 ± 4.9	0.17 ± 0.39	0.33 ± 0.20
			9-2	9.88 ± 5.3	2.54 ± 3.9	0.00 ± 0.37	0.59 ± 0.56
46	Santa Clara River	L.A.-Ventura County Line	5-5	8.42 ± 4.5	0.00 ± 4.4	0.14 ± 0.29	0.37 ± 0.40
			9-1	7.14 ± 5.7	9.77 ± 3.9	0.33 ± 0.28	0.08 ± 0.24
46a	Santa Clara River	Santa Paula	5-5	4.42 ± 4.5	3.05 ± 4.5	0.30 ± 0.33	0.29 ± 0.34
			9-1	7.36 ± 5.7	3.51 ± 3.9	0.17 ± 0.34	0.24 ± 0.37
46e	Santa Paula Creek	Santa Paula	5-5	3.41 ± 4.6	11.17 ± 4.6	0.21 ± 0.23	0.22 ± 0.36
			9-1	4.77 ± 5.6	3.40 ± 4.0	0.17 ± 0.34	0.17 ± 0.39
46d	Sespe Creek	Fillmore	5-5	3.92 ± 4.6	6.10 ± 4.6	0.14 ± 0.24	0.00 ± 0.40
			9-1	2.09 ± 5.5	7.75 ± 3.9	0.17 ± 0.42	0.42 ± 0.53

TABLE B-22

RADIOASSAY OF SURFACE WATERS

LOS ANGELES REGION (NO. 4)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
61	Ventura River	Ventura	5-5	2.32 ± 4.6	6.66 ± 4.8	0.08 ± 0.24	0.00 ± 0.49
			9-1	7.50 ± 5.3	7.11 ± 3.9	0.00 ± 0.28	0.59 ± 0.53

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
22	American River	Sacramento	5-20 9-5	0.86 ± 4.8 2.91 ± 4.5	2.63 ± 5.1 3.54 ± 4.0	0.50 ± 0.39 0.17 ± 0.34	0.25 ± 0.37 0.33 ± 0.34
22b	American River, Middle Fork	Auburn	May 9-5	Not Sampled 0.00 ± 4.3	1.24 ± 3.9	0.24 ± 0.46	0.17 ± 0.64
22c	American River, South Fork	Lotus	May 9-5	Not Sampled 3.08 ± 4.4	5.62 ± 4.0	0.00 ± 0.34	0.17 ± 0.48
78	Bear River	Wheatland	5-12 9-8	0.47 ± 4.5 0.93 ± 4.4	3.15 ± 5.5 4.87 ± 3.9	0.08 ± 0.24 0.42 ± 0.37	0.00 ± 0.34 0.42 ± 0.42
17c	Burney Creek	Burney	5-14 9-10	0.95 ± 4.6 0.00 ± 4.5	6.30 ± 5.0 0.99 ± 3.9	0.00 ± 0.20 0.00 ± 0.34	0.68 ± 0.49 0.42 ± 0.46
80	Cache Creek	Capay	5-14 9-11	5.26 ± 4.6 6.79 ± 4.5	0.47 ± 5.4 6.95 ± 3.9	0.08 ± 0.32 0.08 ± 0.28	0.08 ± 0.31 0.42 ± 0.44
42	Cache Creek	Lower Lake	5-14 9-11	5.96 ± 4.6 0.00 ± 4.8	0.00 ± 5.2 3.68 ± 3.9	0.08 ± 0.24 0.24 ± 0.31	0.51 ± 0.48 0.17 ± 0.34
79	Cache Creek, North Fork	Lower Lake	5-14 9-11	1.62 ± 4.6 3.30 ± 4.5	1.34 ± 5.4 1.91 ± 3.9	0.34 ± 0.34 0.08 ± 0.24	0.25 ± 0.37 0.00 ± 0.20
16a	Calaveras River	Jenny Lind	5-8 9-4	3.27 ± 4.7 1.67 ± 4.5	0.00 ± 5.3 4.29 ± 4.1	0.00 ± 0.28 0.42 ± 0.42	0.00 ± 0.40 0.17 ± 0.51
16b	Calaveras River	Stockton	May 9-5	Not Sampled 2.53 ± 4.5	4.59 ± 4.0	0.24 ± 0.46	0.08 ± 0.37
114	Chowchilla River	Buchanan Dam Site	5-7 9-4	3.05 ± 5.2 5.19 ± 4.8	1.00 ± 5.2 5.17 ± 3.9	0.17 ± 0.34 0.17 ± 0.34	0.17 ± 0.40 0.42 ± 0.51
40	Clear Lake	Clear Lake Oaks	5-14 9-11	5.06 ± 4.5 4.67 ± 4.5	0.00 ± 5.1 5.40 ± 4.0	0.07 ± 0.32 0.17 ± 0.34	0.44 ± 0.38 0.17 ± 0.34

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter: Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
41	Clear Lake	Lakeport	5-14	6.60 ± 4.4	0.00 ± 5.2	0.08 ± 0.24	0.00 ± 0.20
			9-11	3.96 ± 4.5	8.22 ± 4.0	0.08 ± 0.37	0.59 ± 0.51
94a	Cosumnes River	McConnell	May	Not Sampled			
			9-5	0.30 ± 4.7	7.75 ± 3.9	0.50 ± 0.52	1.28 ± 0.75
12b	Cottonwood Creek	Cottonwood	5-13	1.68 ± 4.7	3.55 ± 5.0	0.26 ± 0.32	0.62 ± 0.55
			9-9	2.09 ± 5.2	5.51 ± 3.5	0.08 ± 0.42	0.17 ± 0.39
92	Delta-Mendota Canal	Mendota	5-5	6.21 ± 4.6	3.58 ± 5.1	0.08 ± 0.32	0.44 ± 0.47
			9-2	8.52 ± 5.7	3.10 ± 3.9	0.33 ± 0.48	0.17 ± 0.39
20a	Feather River	Below Shanghai Bend	May	Not Sampled			
			9-8	6.43 ± 4.5	6.37 ± 3.9	0.17 ± 0.20	0.24 ± 0.57
20	Feather River	Nicolaus	5-12	0.00 ± 4.4	0.00 ± 5.2	0.00 ± 0.28	0.49 ± 0.33
			9-8	4.70 ± 4.5	5.01 ± 3.7	0.42 ± 0.51	0.24 ± 0.31
19	Feather River	Oroville	5-12	1.12 ± 4.8	5.91 ± 4.8	0.25 ± 0.37	0.25 ± 0.46
			9-8	6.02 ± 4.5	3.01 ± 3.6	0.00 ± 0.31	0.00 ± 0.28
113	Fresno River	Daulton	5-7	0.20 ± 5.2	6.16 ± 5.1	0.17 ± 0.44	0.26 ± 0.38
			9-4	3.99 ± 4.5	10.88 ± 4.0	0.00 ± 0.28	0.00 ± 0.31
17d	Indian Creek	Crescent Mills	5-15	0.00 ± 4.4	6.21 ± 4.8	0.00 ± 0.34	0.25 ± 0.41
			9-11	3.27 ± 4.7	0.69 ± 3.9	0.17 ± 0.28	0.50 ± 0.44
35	Kaweah River	Three Rivers	5-6	3.41 ± 4.5	2.15 ± 5.2	0.37 ± 0.32	0.60 ± 0.45
			9-3	4.95 ± 4.3	2.57 ± 4.0	0.00 ± 0.31	0.33 ± 0.34
36	Kern River	Bakersfield	5-6	5.09 ± 4.6	7.59 ± 5.2	0.30 ± 0.36	0.60 ± 0.45
			9-3	3.49 ± 4.8	4.15 ± 3.9	0.24 ± 0.42	0.50 ± 0.34
36a	Kern River	Isabella Dam	5-16	0.00 ± 4.5	0.73 ± 5.2	0.00 ± 0.35	0.00 ± 0.34
			9-16	0.00 ± 4.7	2.29 ± 3.9	0.17 ± 0.44	0.17 ± 0.39

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter: Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
36b	Kern River	Kernville	5-16	3.08 ± 4.6	1.65 ± 5.2	0.00 ± 0.39	0.37 ± 0.36
			9-16	2.69 ± 4.8	3.82 ± 4.0	0.50 ± 0.44	1.02 ± 0.56
33c	Kings River	Below North Fork	5-13	6.44 ± 4.6	0.36 ± 5.1	0.00 ± 0.38	0.89 ± 0.45
			9-9	19.47 ± 4.8	4.59 ± 3.8	0.00 ± 0.20	0.33 ± 0.34
34	Kings River	Peoples Weir	5-6	2.01 ± 4.4	0.00 ± 5.2	0.00 ± 0.27	0.97 ± 0.53
			9-3	4.59 ± 4.3	4.29 ± 3.8	0.00 ± 0.31	1.02 ± 0.68
33b	Kings River	Pine Flat Dam	5-13	4.36 ± 4.6	6.69 ± 5.0	0.07 ± 0.36	0.97 ± 0.50
			9-9	0.00 ± 4.8	3.29 ± 3.6	1.53 ± 0.71	0.94 ± 0.64
18	McCloud River	Shasta Lake	5-14	0.92 ± 4.8	5.96 ± 4.8	0.08 ± 0.37	0.34 ± 0.44
			9-9	5.85 ± 4.5	4.60 ± 3.4	0.24 ± 0.34	0.17 ± 0.44
32a	Merced River	Exchequer Dam	5-7	1.62 ± 4.7	4.28 ± 5.1	0.14 ± 0.28	0.07 ± 0.32
			9-4	1.89 ± 5.0	6.78 ± 3.7	0.17 ± 0.39	0.50 ± 0.48
32	Merced River	Stevinson	5-5	2.18 ± 4.6	1.40 ± 5.1	0.21 ± 0.31	0.00 ± 0.24
			9-2	6.78 ± 4.7	4.57 ± 3.6	0.68 ± 0.46	0.76 ± 0.53
23a	Mokelumne River	Lancha Plana	5-8	2.10 ± 4.8	3.05 ± 4.8	0.09 ± 0.35	0.09 ± 0.56
			9-4	2.94 ± 4.5	1.52 ± 4.0	0.17 ± 0.28	0.33 ± 0.63
23	Mokelumne River	Woodbridge	5-8	3.05 ± 4.8	0.47 ± 4.9	0.28 ± 0.35	0.76 ± 0.57
			9-5	3.87 ± 4.6	0.00 ± 4.0	0.00 ± 0.31	0.85 ± 0.53
17a	Pit River	Canby	5-14	8.03 ± 4.6	3.44 ± 5.0	0.08 ± 0.23	0.26 ± 0.42
			9-10	7.94 ± 4.8	0.00 ± 3.7	0.00 ± 0.48	0.68 ± 0.61
17	Pit River	Montgomery Creek	5-14	0.67 ± 4.5	0.00 ± 5.0	0.00 ± 0.28	0.78 ± 0.58
			9-9	3.71 ± 4.4	1.66 ± 3.9	0.00 ± 0.44	0.59 ± 0.57
18a	Pit River, South Fork	Likely	May	Not Sampled			
			9-10	7.20 ± 4.7	0.47 ± 3.3	0.42 ± 0.46	0.24 ± 0.51

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
81	Putah Creek	Winters	5-9 9-11	2.69 ± 4.4 0.00 ± 4.7	2.60 ± 5.1 0.00 ± 3.8	0.43 ± 0.32 0.17 ± 0.44	0.08 ± 0.38 1.02 ± 0.65
11	Sacramento River	Delta	5-12 9-5	4.50 ± 4.6 8.80 ± 5.3	4.50 ± 4.9 3.76 ± 3.9	0.17 ± 0.29 0.24 ± 0.31	0.26 ± 0.37 0.08 ± 0.37
13	Sacramento River	Hamilton City	5-13 9-9	2.10 ± 4.7 1.71 ± 5.1	13.72 ± 5.0 6.45 ± 3.7	0.08 ± 0.24 0.33 ± 0.39	0.00 ± 0.48 0.24 ± 0.42
12	Sacramento River	Keswick	5-13 9-4	4.31 ± 4.5 10.76 ± 5.4	2.10 ± 5.0 2.13 ± 4.0	0.08 ± 0.32 0.08 ± 0.31	0.53 ± 0.50 0.50 ± 0.52
14	Sacramento River	Knights Landing	5-9 9-12	3.83 ± 4.6 1.54 ± 4.8	7.92 ± 5.0 0.55 ± 3.9	0.17 ± 0.28 0.42 ± 0.46	0.25 ± 0.47 0.08 ± 0.37
12a	Sacramento River	Redding	5-13 9-4	6.52 ± 4.6 0.60 ± 5.1	0.00 ± 5.0 6.75 ± 3.5	0.00 ± 0.29 0.00 ± 0.42	0.45 ± 0.48 1.11 ± 0.67
16	Sacramento River	Rio Vista	5-19 9-2	0.33 ± 4.6 5.69 ± 4.7	1.62 ± 5.0 4.98 ± 4.1	0.00 ± 0.28 0.33 ± 0.48	0.35 ± 0.40 0.08 ± 0.67
15	Sacramento River	Sacramento	5-7 9-5	0.00 ± 4.4 3.00 ± 4.5	6.83 ± 5.0 2.10 ± 4.0	0.00 ± 0.20 0.33 ± 0.48	0.35 ± 0.40 0.50 ± 0.65
14a	Sacramento Slough	Knights Landing	5-9 9-12	3.52 ± 4.8 2.00 ± 4.8	0.42 ± 4.8 2.35 ± 4.0	0.26 ± 0.32 0.00 ± 0.39	0.44 ± 0.38 0.33 ± 0.39
28	San Joaquin River	Antioch	5-19 9-3	1.20 ± 4.6 2.09 ± 4.8	2.85 ± 5.0 7.47 ± 3.9	0.38 ± 0.49 0.33 ± 0.48	0.19 ± 0.48 0.00 ± 0.28
25a	San Joaquin River	Dos Palos	5-5 9-2	6.49 ± 4.5 3.98 ± 4.9	0.39 ± 5.2 0.00 ± 3.9	0.37 ± 0.41 0.33 ± 0.44	0.27 ± 0.40 0.00 ± 0.42
24	San Joaquin River	Friant	5-7 9-4	2.15 ± 4.8 7.59 ± 4.7	5.26 ± 5.0 0.00 ± 3.6	0.28 ± 0.41 0.00 ± 0.28	0.00 ± 0.43 0.42 ± 0.51

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
26	San Joaquin River	Grayson	5-8 9-24	7.61 ± 4.8 8.38 ± 5.0	5.23 ± 5.2 0.00 ± 3.9	0.28 ± 0.41 0.50 ± 0.44	0.19 ± 0.52 0.50 ± 0.44
25b	San Joaquin	Hills Ferry Bridge	May 9-2	Not Sampled 10.58 ± 5.0	1.91 ± 4.0	0.00 ± 0.34	0.17 ± 0.34
26a	San Joaquin River	Maze Road Bridge	5-8 9-24	2.71 ± 4.6 5.55 ± 5.0	8.00 ± 5.0 1.91 ± 4.0	0.19 ± 0.30 0.24 ± 0.31	0.83 ± 0.50 0.76 ± 0.64
25	San Joaquin River	Mendota	5-5 9-2	8.23 ± 4.7 4.40 ± 4.8	0.56 ± 5.2 1.82 ± 3.9	0.09 ± 0.35 0.08 ± 0.24	0.19 ± 0.37 0.00 ± 0.34
27	San Joaquin River	Vernalis	5-8 9-5	2.88 ± 4.7 6.38 ± 5.0	8.34 ± 5.0 3.13 ± 4.0	0.19 ± 0.37 0.50 ± 0.44	0.65 ± 0.55 0.17 ± 0.52
29	Stanislaus River	Mouth	5-8 9-5	1.87 ± 4.7 6.21 ± 4.5	7.39 ± 5.0 4.84 ± 3.9	0.19 ± 0.31 0.24 ± 0.42	0.57 ± 0.57 0.00 ± 0.34
29a	Stanislaus River	Tulloch Dam	5-8 9-4	0.31 ± 4.6 4.75 ± 4.5	2.15 ± 5.2 2.93 ± 3.9	0.19 ± 0.38 0.00 ± 0.28	0.94 ± 0.66 0.68 ± 0.52
13c	Stony Creek	Black Butte Dam Site	May 9-9	Not Sampled 1.52 ± 5.1	8.56 ± 3.8	0.17 ± 0.34	0.42 ± 0.56
13a	Stony Creek	Hamilton City	5-13 9-9	0.00 ± 4.4 2.48 ± 5.2	0.00 ± 4.6 6.98 ± 3.7	0.00 ± 0.32 0.42 ± 0.42	0.08 ± 0.47 0.17 ± 0.44
91	Tule River	Porterville	May 9-3	Not Sampled 0.46 ± 4.8	0.00 ± 3.6	0.33 ± 0.48	1.02 ± 0.68
31a	Tuolumne River	Don Pedro Dam	5-7 9-24	0.92 ± 4.7 5.72 ± 4.7	0.00 ± 5.1 4.87 ± 4.0	0.14 ± 0.33 0.24 ± 0.42	0.44 ± 0.42 0.33 ± 0.39
30	Tuolumne River	Hickman-Waterford Bridge	5-8 9-24	1.54 ± 4.6 4.89 ± 4.4	0.00 ± 5.1 2.54 ± 3.9	0.00 ± 0.38 0.08 ± 0.31	0.19 ± 0.48 0.33 ± 0.48

TABLE B-23

RADIOASSAY OF SURFACE WATERS

CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
31	Tuolumne River	Tuolumne City	5-8	2.26 ± 4.6	2.94 ± 5.2	0.07 ± 0.27	0.37 ± 0.44
			9-24	2.53 ± 4.5	0.00 ± 3.8	0.08 ± 0.42	0.33 ± 0.48
21	Yuba River	Marysville	5-12	7.05 ± 4.8	0.00 ± 5.3	0.17 ± 0.39	0.59 ± 0.52
			9-8	0.00 ± 4.2	5.15 ± 3.9	0.08 ± 0.13	0.00 ± 0.46
21a	Yuba River	Smartville	5-12	2.52 ± 4.8	1.37 ± 5.2	0.17 ± 0.28	0.68 ± 0.51
			9-8	3.71 ± 4.5	2.52 ± 4.0	0.17 ± 0.20	0.42 ± 0.42

TABLE B-24

RADIOASSAY OF SURFACE WATERS

LAHONTAN REGION (NO. 6)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter: Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
115	Carson River, East Fork	Markleeville	May 9-5	Not Sampled 3.38 ± 4.0	8.11 ± 3.8	0.17 ± 0.20	0.42 ± 0.42
115a	Carson River, West Fork	Woodfords	May 9-4	Not Sampled 8.19 ± 4.1	6.67 ± 3.7	1.36 ± 0.56	0.17 ± 0.39
39	Lake Tahoe	Bijou	5-16 9-5	3.33 ± 5.0 0.00 ± 4.7	2.99 ± 5.2 9.83 ± 4.1	0.17 ± 0.34 0.08 ± 0.37	0.00 ± 0.33 1.20 ± 0.57
38	Lake Tahoe	Tahoe City	5-15 9-4	0.00 ± 5.0 0.00 ± 4.7	0.08 ± 5.2 5.95 ± 4.0	0.00 ± 0.34 0.08 ± 0.42	0.44 ± 0.38 0.24 ± 0.46
37	Lake Tahoe	Tahoe Vista	5-15 9-3	6.21 ± 5.2 4.67 ± 4.8	2.63 ± 5.2 4.43 ± 4.0	0.00 ± 0.38 0.24 ± 0.24	0.25 ± 0.43 0.24 ± 0.42
67a	Mojave River	The Forks	5-7 9-3	6.52 ± 5.0 6.13 ± 4.2	4.53 ± 5.0 0.00 ± 3.9	0.09 ± 0.34 0.00 ± 0.34	0.48 ± 0.51 0.42 ± 0.37
67	Mojave River	Victorville	5-7 9-3	6.30 ± 5.0 2.64 ± 4.5	3.44 ± 5.2 1.08 ± 4.0	0.25 ± 0.42 0.59 ± 0.46	0.34 ± 0.33 0.42 ± 0.34
17b	Susan River	Susanville	5-14 9-11	4.51 ± 5.2 2.11 ± 4.8	0.84 ± 5.3 4.34 ± 3.9	0.08 ± 0.38 0.17 ± 0.28	0.25 ± 0.43 0.33 ± 0.48
53	Truckee River	Farad	5-15 9-3	4.50 ± 4.9 2.55 ± 4.5	3.61 ± 5.2 2.46 ± 4.0	0.00 ± 0.35 0.17 ± 0.34	0.42 ± 0.36 0.76 ± 0.46
52	Truckee River	Truckee	5-15 9-3	0.00 ± 4.8 1.78 ± 4.8	0.00 ± 5.2 2.77 ± 4.0	0.00 ± 0.29 0.24 ± 0.31	0.00 ± 0.33 0.94 ± 0.46
116a	Walker River, East	Bridgeport	May 9-5	Not Sampled 9.54 ± 4.2	3.60 ± 3.9	0.42 ± 0.57	0.00 ± 0.52
116	Walker River, West	Coleville	May 9-4	Not Sampled 3.38 ± 4.1	3.13 ± 3.6	0.00 ± 0.44	1.36 ± 0.74

TABLE B-25

RADIOASSAY OF SURFACE WATERS

COLORADO RIVER BASIN (NO. 7)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
60	Alamo River	Calipatria	5-6 9-2	8.28 ± 5.0 11.44 ± 3.9	3.95 ± 4.9 0.00 ± 3.9	0.16 ± 0.39 0.00 ± 0.31	0.33 ± 0.33 0.24 ± 0.24
59	Alamo River	International Boundary	5-6 9-2	11.25 ± 4.8 9.13 ± 3.9	0.00 ± 4.7 0.00 ± 3.9	0.00 ± 0.38 0.17 ± 0.20	0.43 ± 0.37 0.17 ± 0.20
56a	All American Canal	Pilot Knob	5-8 9-2	9.94 ± 5.2 9.87 ± 4.1	0.00 ± 5.0 6.62 ± 4.0	0.29 ± 0.29 0.68 ± 0.48	1.55 ± 0.69 0.00 ± 0.28
56c	Colorado River	Blythe	5-9 9-5	7.05 ± 5.1 11.08 ± 4.1	5.32 ± 5.1 4.73 ± 3.9	0.86 ± 0.52 0.42 ± 0.46	0.17 ± 0.34 0.24 ± 0.31
56b	Colorado River	Morelos Dam	5-8 9-2	8.17 ± 5.1 10.64 ± 4.1	0.95 ± 5.1 2.74 ± 3.9	0.51 ± 0.36 0.00 ± 0.28	0.15 ± 0.32 0.08 ± 0.28
55	Colorado River	Parker Dam	5-9 9-5	10.72 ± 4.9 9.29 ± 4.1	5.74 ± 5.0 0.94 ± 3.9	0.59 ± 0.42 0.42 ± 0.34	0.15 ± 0.34 0.59 ± 0.51
54	Colorado River	Topock, Arizona	5-9 9-5	12.65 ± 5.2 8.30 ± 4.2	3.75 ± 4.9 5.92 ± 3.9	0.09 ± 0.41 0.59 ± 0.52	0.38 ± 0.42 0.00 ± 0.42
56	Colorado River	Yuma, Arizona	5-8 9-2	7.39 ± 5.5 8.00 ± 4.1	3.44 ± 5.2 6.28 ± 4.0	0.81 ± 0.40 0.00 ± 0.28	0.22 ± 0.36 0.08 ± 0.39
57	New River	International Boundary	5-6 9-2	0.33 ± 4.9 9.35 ± 4.0	4.90 ± 5.0 3.40 ± 3.9	0.08 ± 0.31 0.00 ± 0.46	0.25 ± 0.37 0.50 ± 0.48
58	New River	Westmorland	5-6 9-2	11.78 ± 5.1 9.51 ± 3.9	1.45 ± 4.9 7.39 ± 4.0	0.25 ± 0.38 0.17 ± 0.34	0.17 ± 0.28 0.24 ± 0.37
68a	Salton Sea	State Park	5-6 9-2	3.55 ± 5.0 6.10 ± 4.2	5.09 ± 5.0 1.08 ± 4.0	0.00 ± 0.00 0.08 ± 0.31	0.00 ± 0.33 0.00 ± 0.31
68b	Whitewater River	Mecca	5-6 9-5	18.95 ± 5.2 14.96 ± 4.3	7.25 ± 5.1 1.41 ± 3.8	0.09 ± 0.34 0.08 ± 0.37	0.96 ± 0.66 0.00 ± 0.39

TABLE B-25

RADIOASSAY OF SURFACE WATERS

COLORADO RIVER BASIN (NO. 7)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
68	Whitewater River	Whitewater	5-6	15.42 ± 5.2	1.87 ± 5.0	0.59 ± 0.41	0.33 ± 0.28
			9-2	7.04 ± 4.1	0.36 ± 3.9	0.17 ± 0.48	0.59 ± 0.46

TABLE B-26

RADIOASSAY OF SURFACE WATERS

SANTA ANA REGION (NO. 8)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter: Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
86	Chino Creek	Chino	5-6	10.30 ± 5.3	0.00 ± 4.9	0.29 ± 0.59	0.00 ± 0.40
			9-2	18.34 ± 4.4	3.01 ± 4.1	0.94 ± 0.61	0.24 ± 0.46
89	Lake Elsinore	Elsinore	5-5	12.99 ± 5.5	5.26 ± 5.5	0.21 ± 0.35	0.30 ± 0.35
			9-1	27.33 ± 4.5	0.83 ± 4.2	0.08 ± 0.31	0.24 ± 0.37
51	Santa Ana River	Arlington	5-6	13.27 ± 5.0	11.90 ± 5.0	0.94 ± 0.67	0.33 ± 0.33
			9-2	11.27 ± 4.2	4.90 ± 3.7	0.42 ± 0.42	0.00 ± 0.39
51b	Santa Ana River	Mentone	5-6	11.98 ± 5.0	3.55 ± 4.8	0.29 ± 0.48	0.56 ± 0.53
			9-2	8.71 ± 4.2	2.99 ± 3.5	0.76 ± 0.71	1.11 ± 0.67
51e	Santa Ana River	Norco	5-6	5.74 ± 4.8	0.00 ± 4.8	0.50 ± 0.54	0.64 ± 0.58
			9-2	12.57 ± 4.2	0.11 ± 4.1	0.76 ± 0.57	0.33 ± 0.48
51a	Santa Ana River	Prado Dam	5-6	17.44 ± 5.0	9.99 ± 4.9	1.00 ± 0.70	0.64 ± 0.55
			9-2	9.51 ± 4.2	3.62 ± 3.7	0.42 ± 0.53	0.76 ± 0.61
50b	Warm Creek	Colton	May	Not Sampled			
			9-11	12.03 ± 5.4	6.81 ± 3.9	0.00 ± 0.39	0.24 ± 0.46

TABLE B-27

RADIOASSAY OF SURFACE WATERS

SAN DIEGO REGION (NO. 9)

Sta. No.	Stream	Near	Date 1958	Micro-micro curies per liter			
				Dissolved Beta	Solid Beta	Dissolved Alpha	Solid Alpha
63	Escondido Creek	Harmony Grove	5-5	12.85 ± 5.2	0.20 ± 4.8	0.65 ± 0.55	0.22 ± 0.32
			9-1	8.19 ± 4.3	15.84 ± 4.3	0.08 ± 0.24	0.17 ± 0.44
65a	Forester Creek	Mission Gorge Road	5-5	11.56 ± 5.5	2.43 ± 5.4	0.10 ± 0.42	0.25 ± 0.31
			9-1	18.50 ± 4.4	15.45 ± 4.4	0.17 ± 0.34	0.33 ± 0.28
65	San Diego River	Old Mission Dam	5-5	12.34 ± 5.0	7.03 ± 4.8	0.00 ± 0.32	0.69 ± 0.34
			9-1	13.58 ± 4.4	15.23 ± 4.3	0.17 ± 0.34	0.17 ± 0.28
64	San Dieguito River	Below San Pasqual Valley	5-5	11.31 ± 5.2	0.00 ± 4.0	0.26 ± 0.42	0.00 ± 0.25
			Sept.	Not Sampled			
62	San Luis Rey River	Pala	5-5	7.22 ± 5.2	0.00 ± 4.8	0.00 ± 0.41	0.00 ± 0.25
			9-1	0.00 ± 4.1	17.20 ± 4.3	0.24 ± 0.31	0.08 ± 0.42
51c	Santa Margarita River	Fallbrook	5-5	3.75 ± 5.1	1.99 ± 5.1	0.00 ± 0.29	0.15 ± 0.35
			9-1	3.57 ± 4.2	10.69 ± 4.2	0.08 ± 0.24	0.08 ± 0.37
65b	Spring Valley Creek	La Pressa	5-5	3.30 ± 5.1	0.00 ± 4.5	0.70 ± 0.49	0.08 ± 0.23
			9-1	6.71 ± 4.1	14.15 ± 4.3	0.50 ± 0.34	0.24 ± 0.20

TABLE B-28

RADIOASSAY OF SNOW

CENTRAL VALLEY REGION (NO. 5)

Stream basin	Snow survey course	Date 1958	Gross radioactivity micro-micro curies per liter
American River	Phillips	4-30	232
Feather River	Lower Lake Helen	5-3	510
Kings River	Sand Meadow	5-1	392
Mokelumne River	Lumber Yard	5-2	1,110
San Joaquin River	Kaiser Pass	5-5	418
Tuolumne River	Gin Flat	5-26	399
Yuba River	Castle Creek	April	30 to 103*
		May	4 to 51*
		June	Negligible to 21*
		July	Negligible to 12*
		August	Negligible to 15*
		Sept.	Negligible to 13*
		Oct.	Negligible to 19*
		Nov.	3 to 37*
		Dec.	Negligible to 30*
	Soda Springs (Fresh snowfall)	4-23	10,000
		4-29	350
		5-1	340
		5-1	490
		5-1	350
		5-1	1,120
		5-1	810
		5-1	540

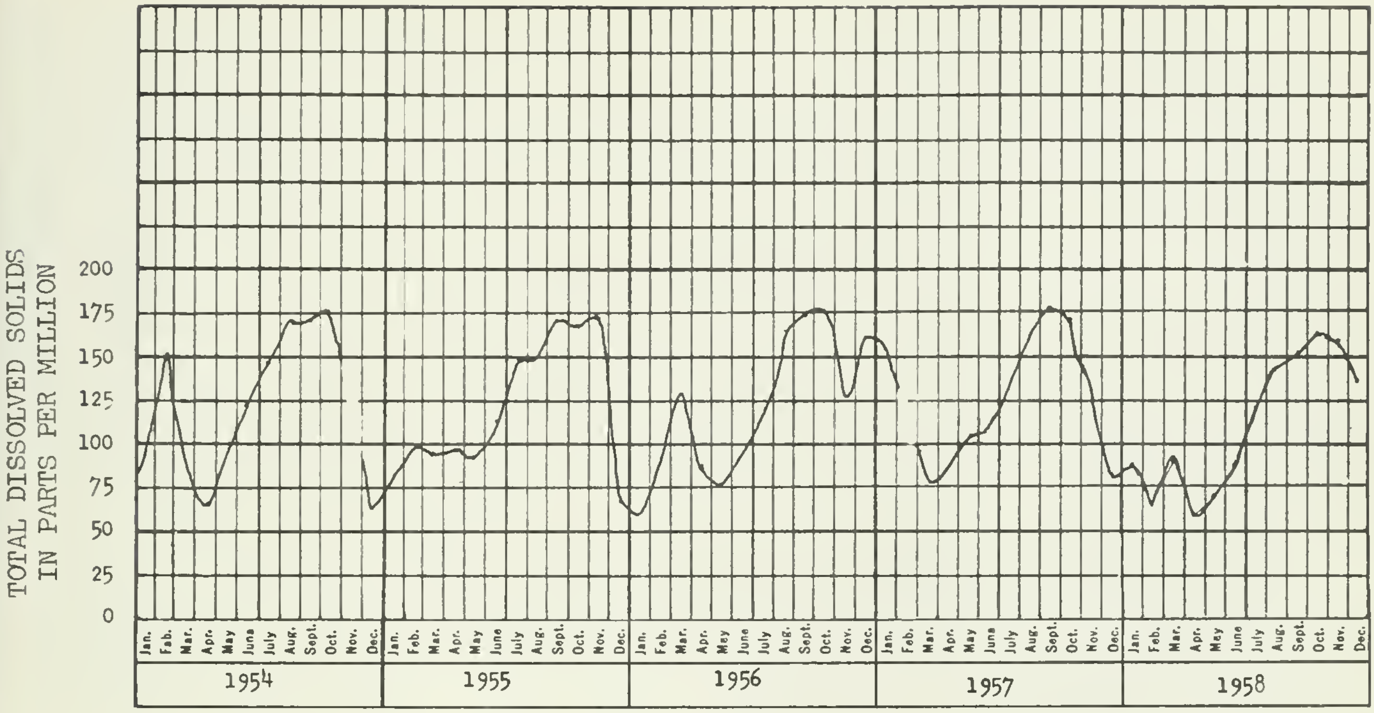
* Monthly range

TABLE B-29

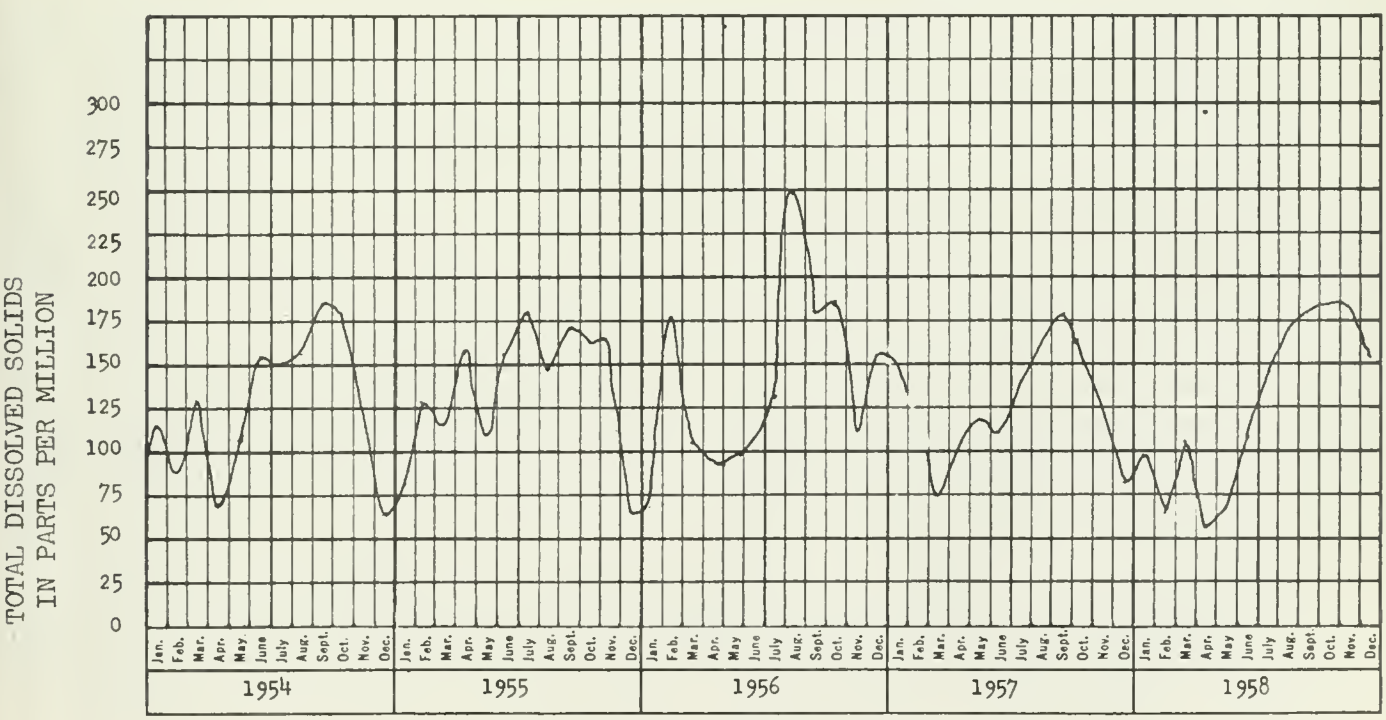
RADIOASSAY OF SNOW

LAHONTAN REGION (NO. 6)

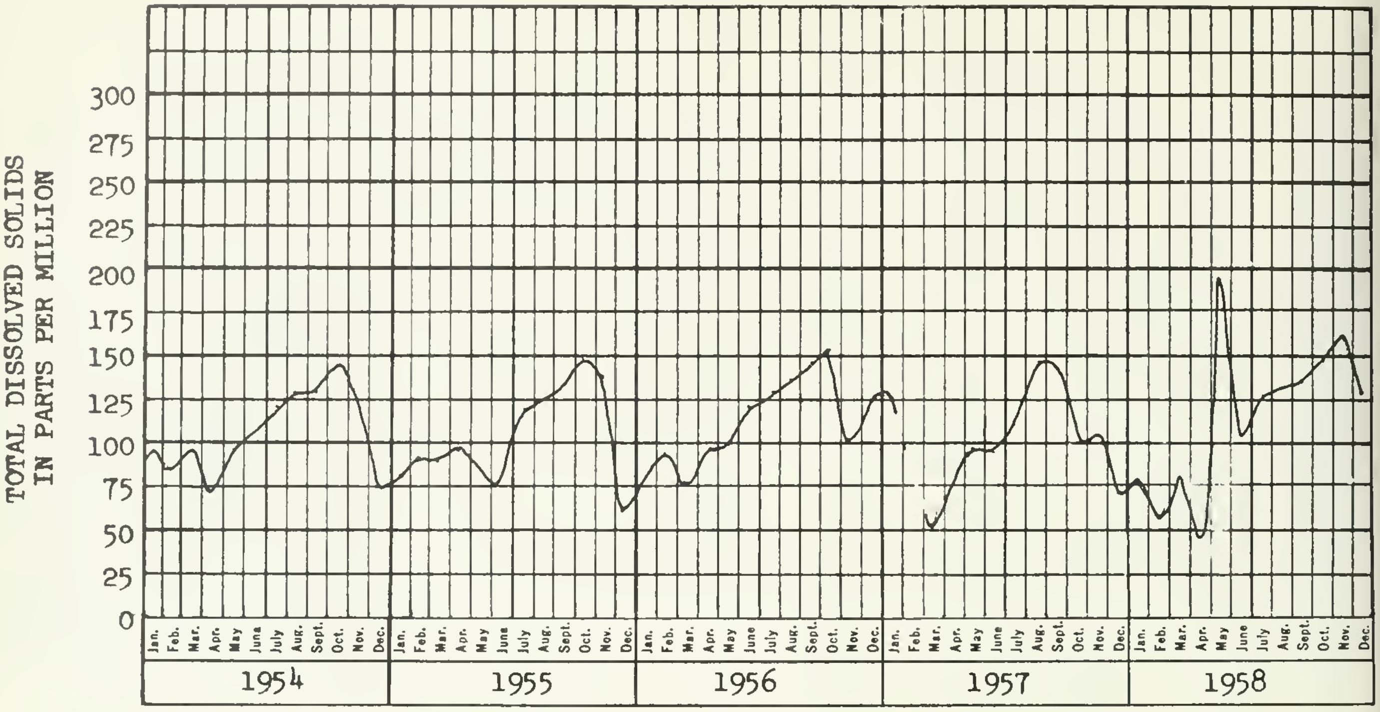
Stream basin	Snow survey course	Date 1958	Gross radioactivity micro-micro curies per liter
Lake Tahoe	Upper Truckee River	4-28	353
Owens River	Upper Minarettes No. 2	5-2	425
		6-16	595



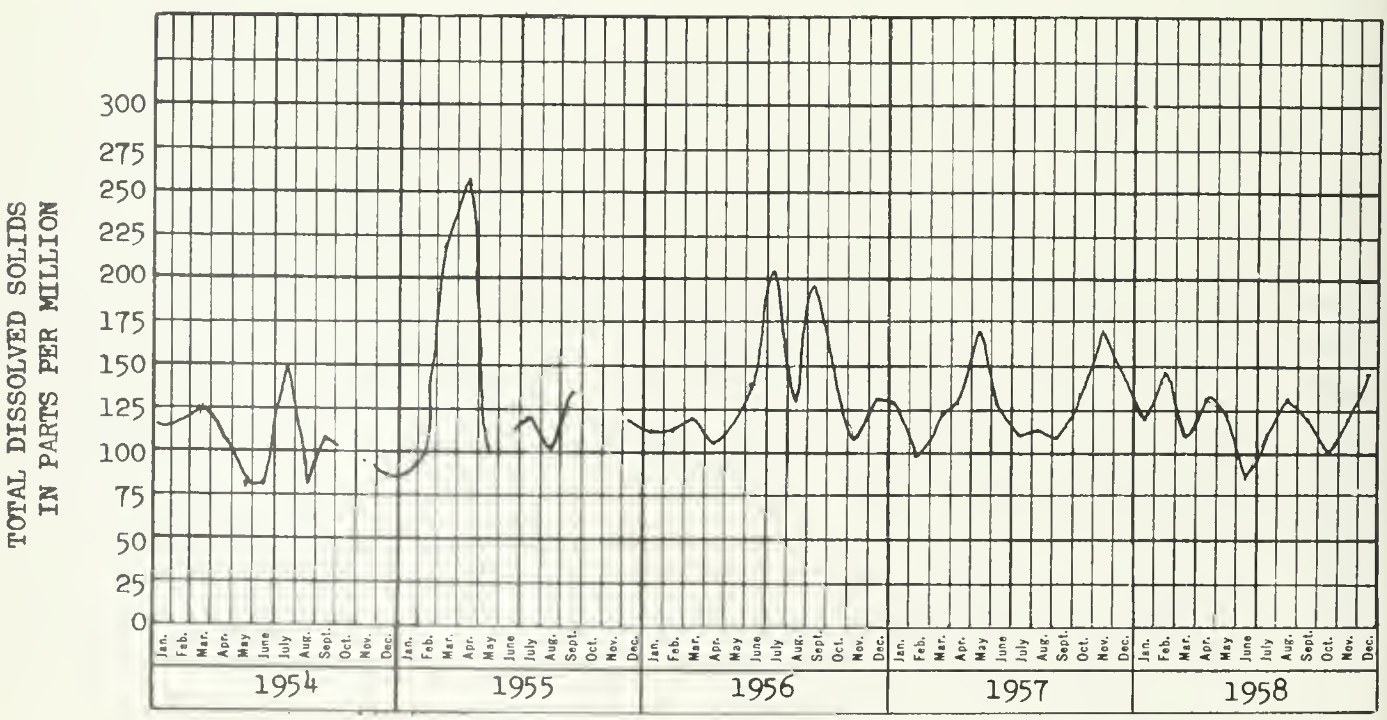
QUALITY CHARACTERISTICS OF
EEL RIVER NEAR McCANN (STATION 5)



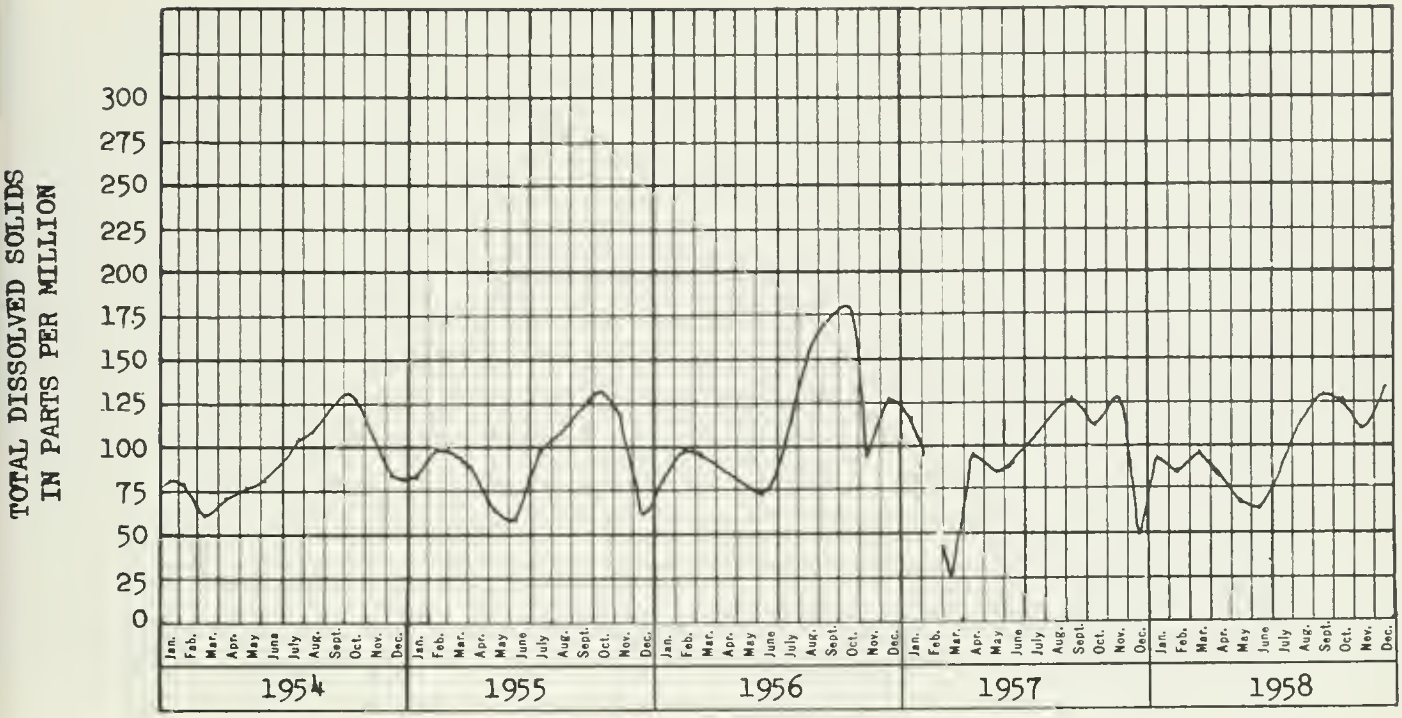
QUALITY CHARACTERISTICS OF
EEL RIVER AT SCOTIA (STATION 6)



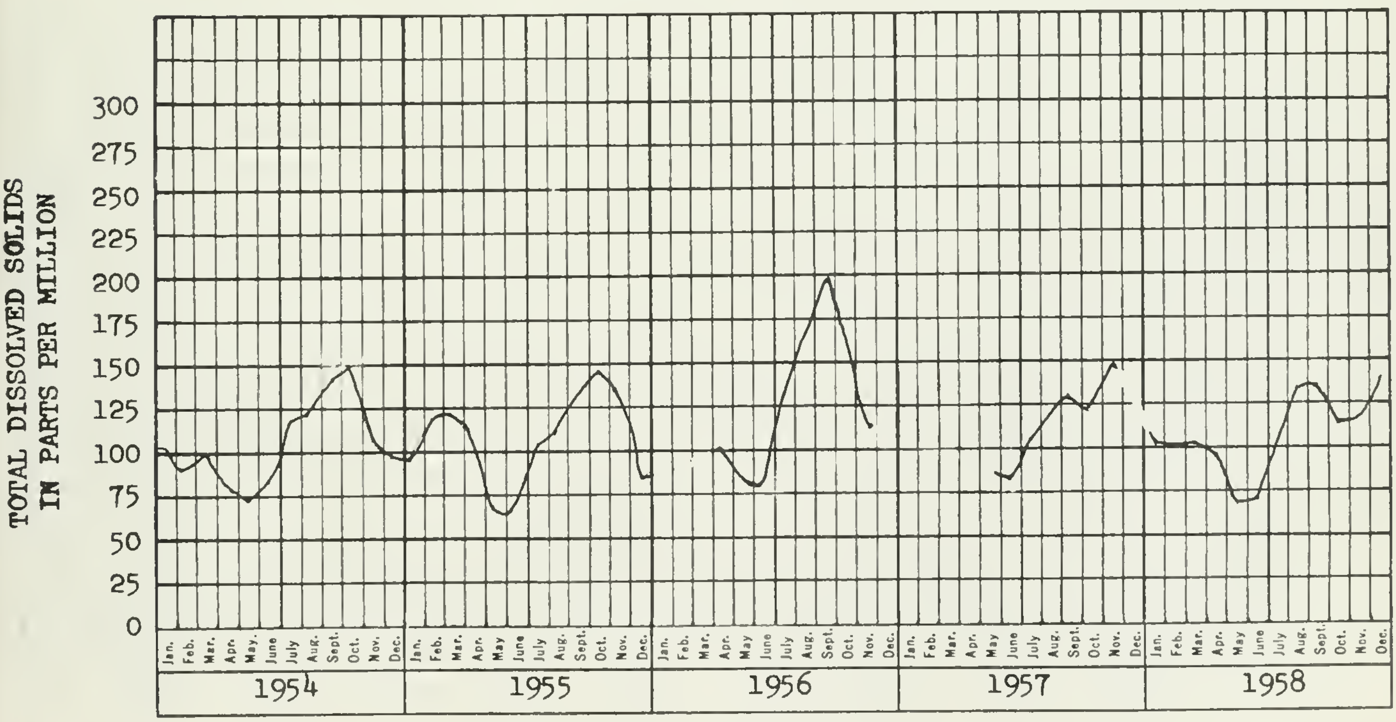
QUALITY CHARACTERISTICS OF
EEL RIVER, SOUTH FORK NEAR MIRANDA (STATION 7)



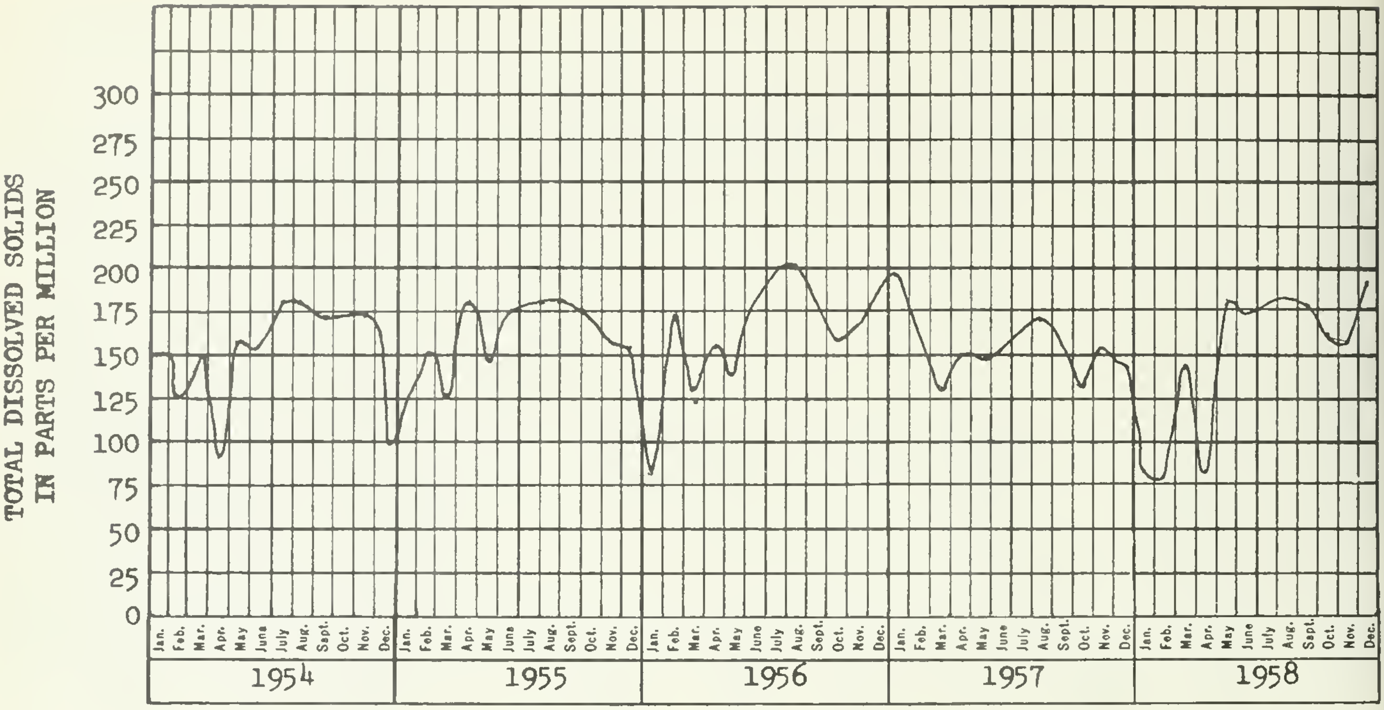
QUALITY CHARACTERISTICS OF
KLAMATH RIVER NEAR COPCO (STATION 1)



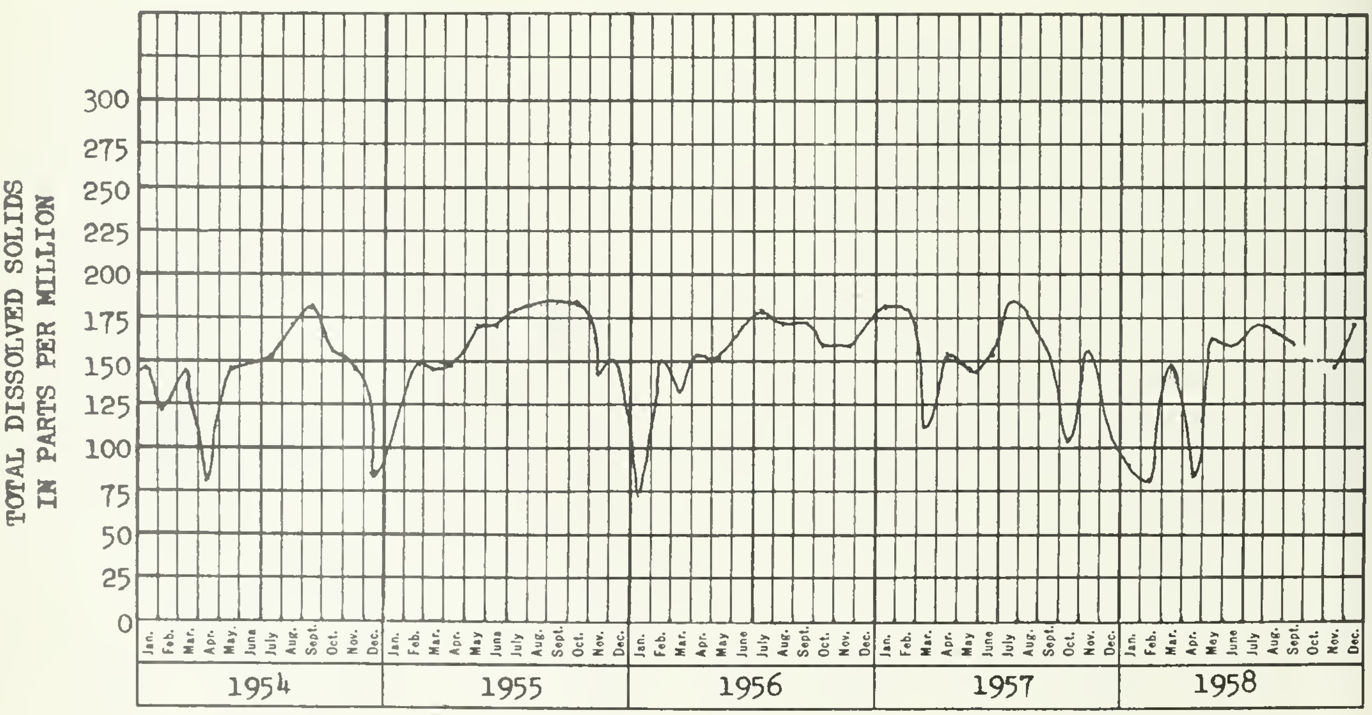
QUALITY CHARACTERISTICS OF
KLAMATH RIVER NEAR KLAMATH (STATION 3)



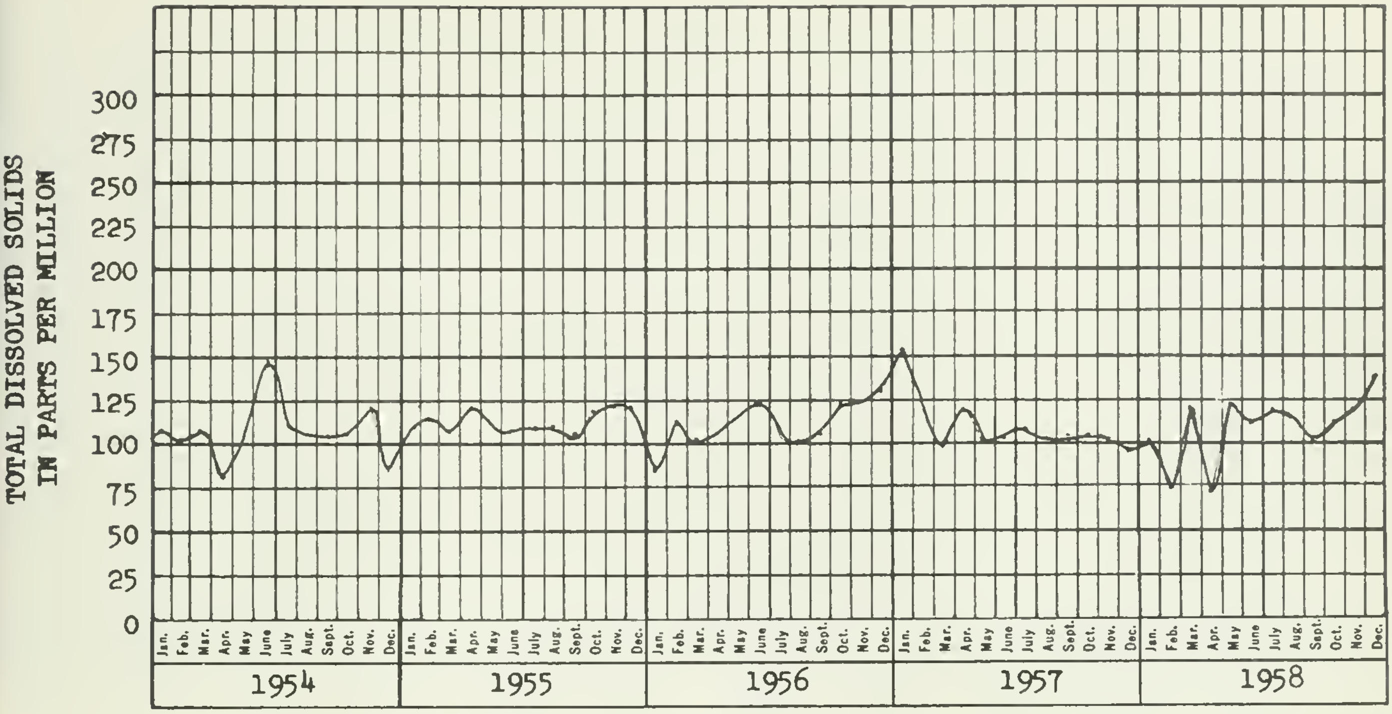
QUALITY CHARACTERISTICS OF
KLAMATH RIVER AT SOMESBAR (STATION 2)



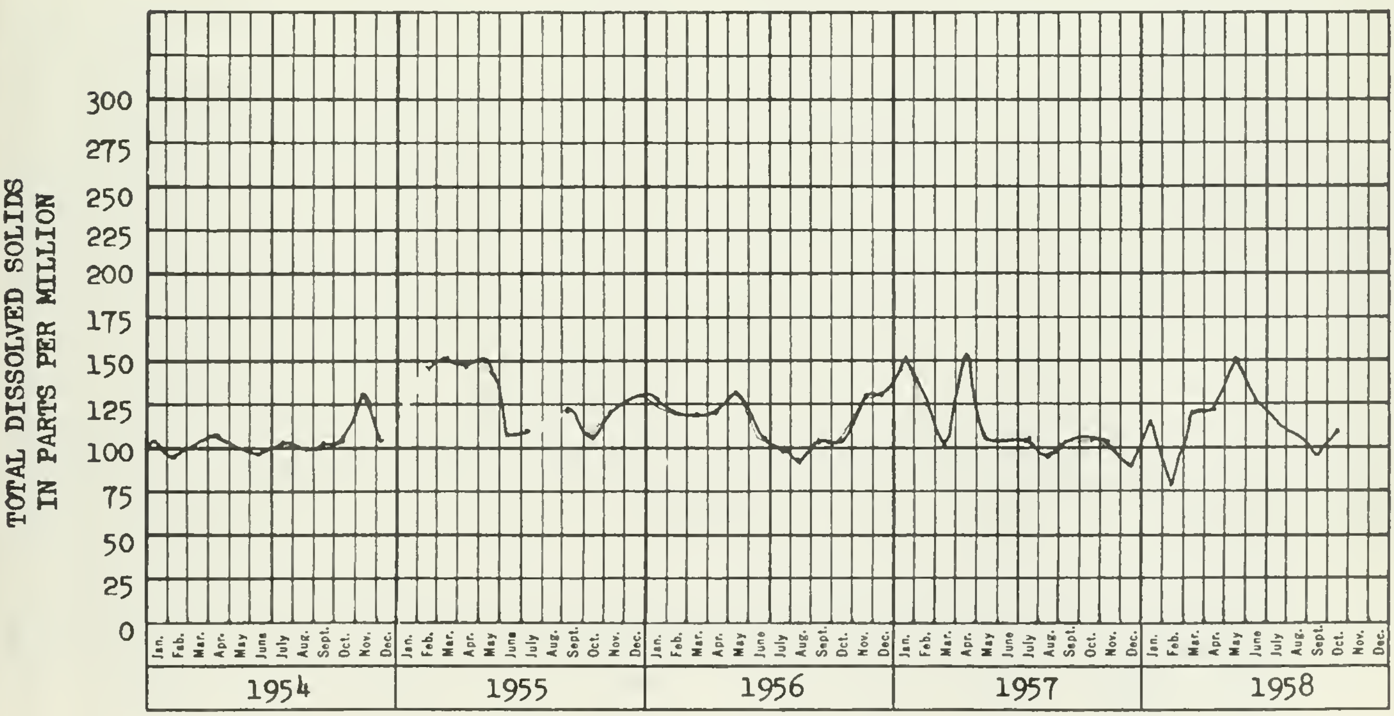
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER AT GUERNEVILLE (STATION 10)



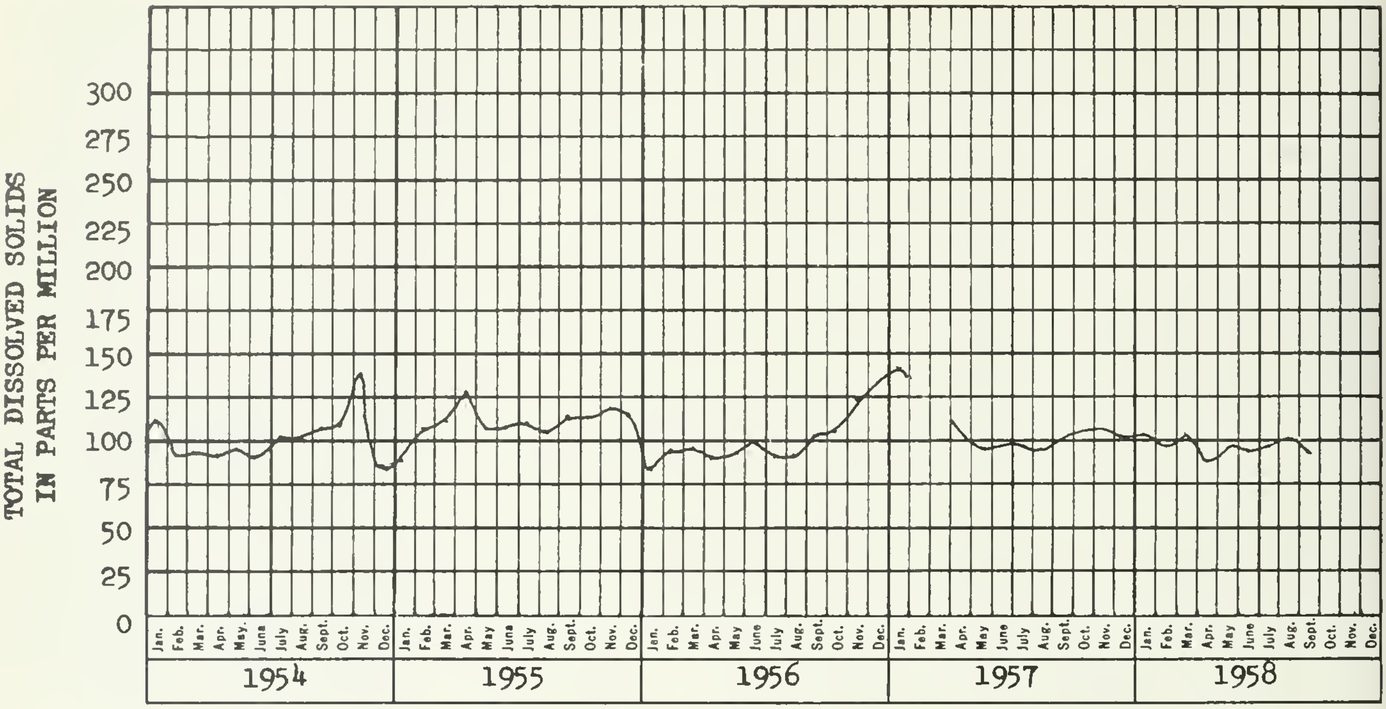
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER NEAR HEALDSBURG (STATION 9)



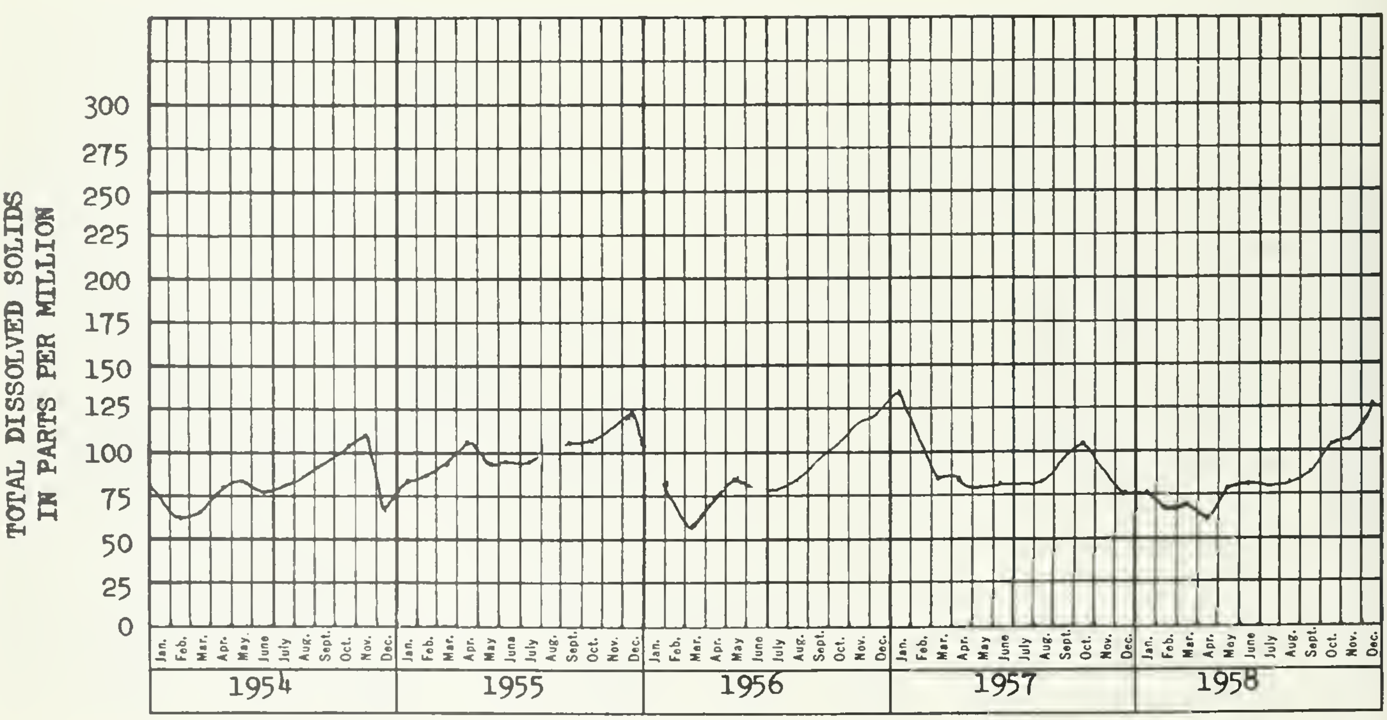
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER NEAR HOPLAND (STATION 8a)



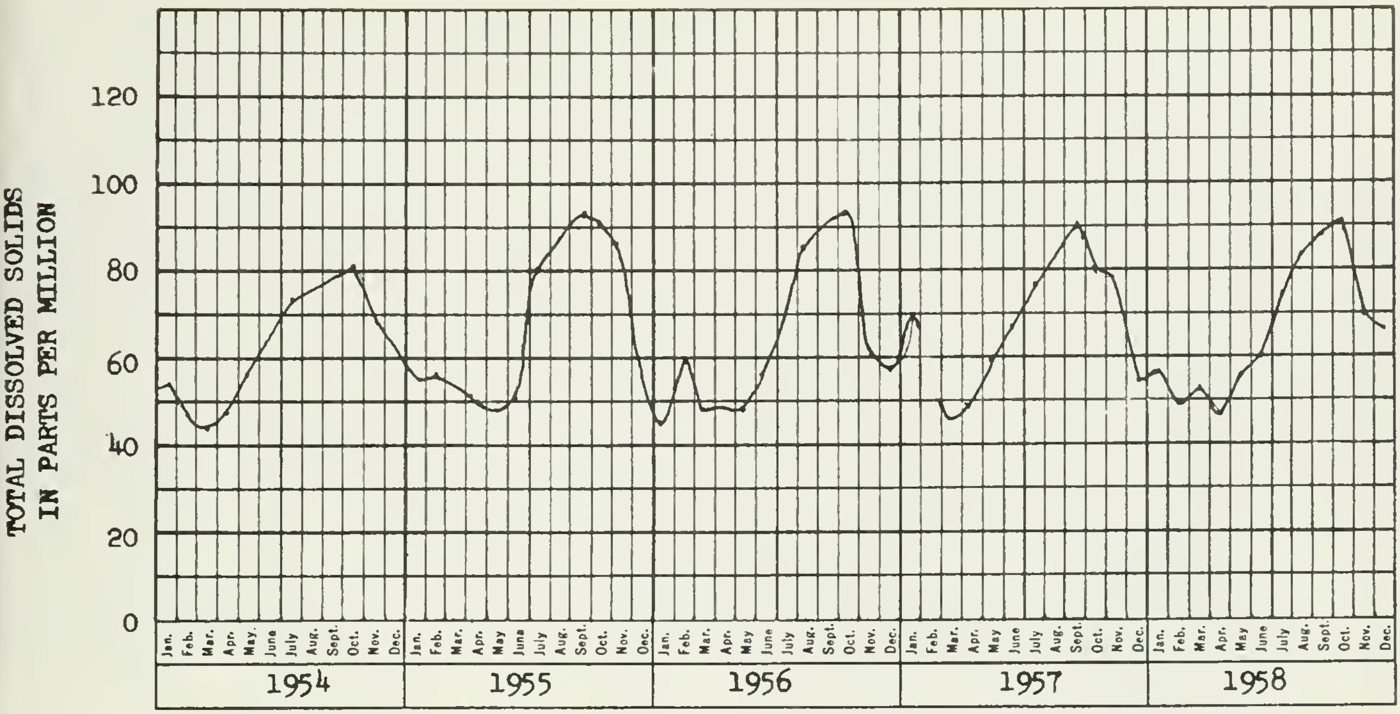
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER NEAR UKIAH (STATION 10b)



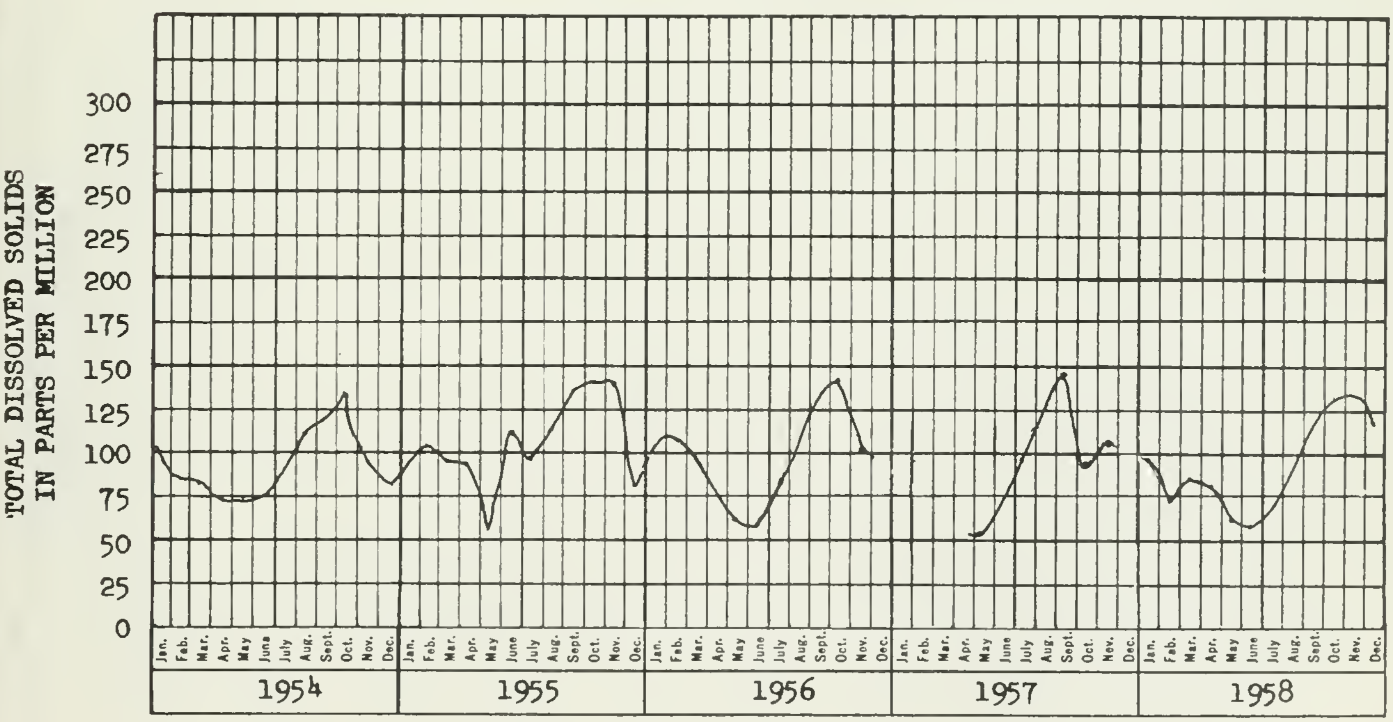
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER, EAST FORK NEAR CALPELLA (STATION 8)



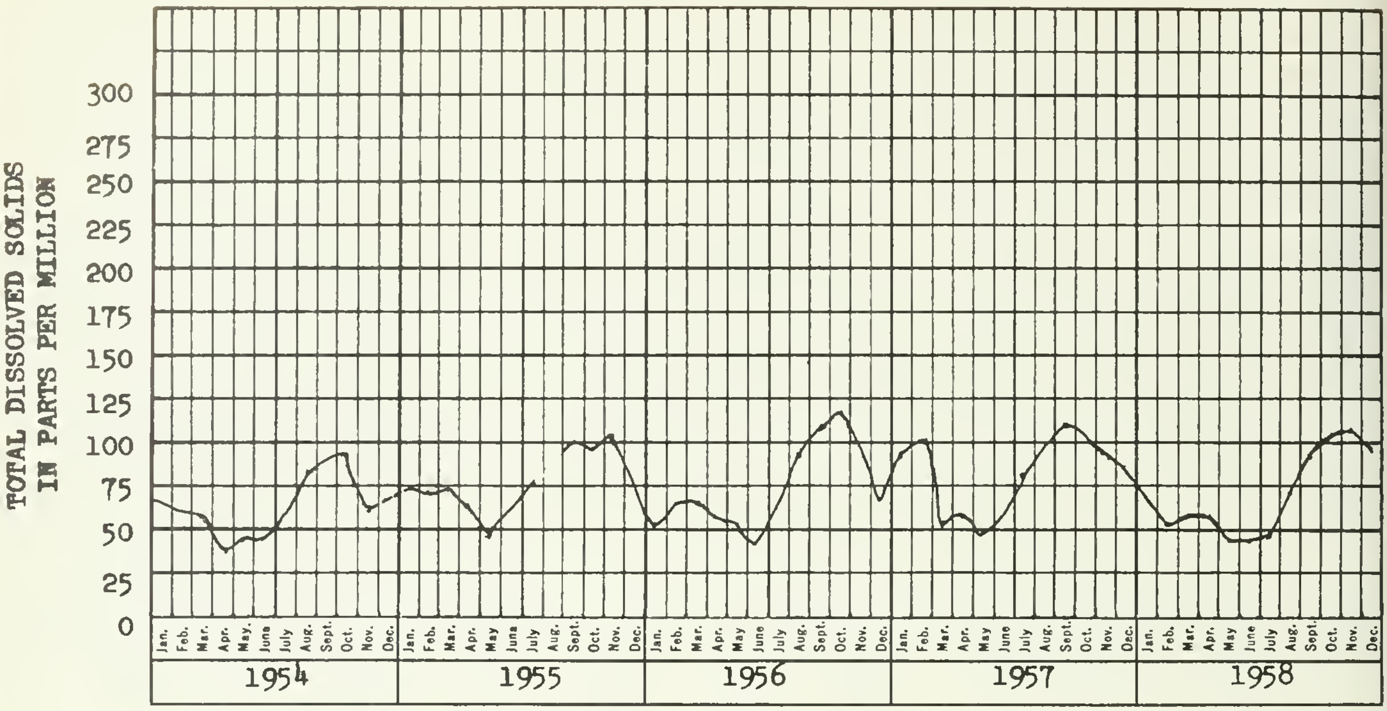
QUALITY CHARACTERISTICS OF
RUSSIAN RIVER, EAST FORK AT POTTER VALLEY POWERHOUSE (STATION 10a)



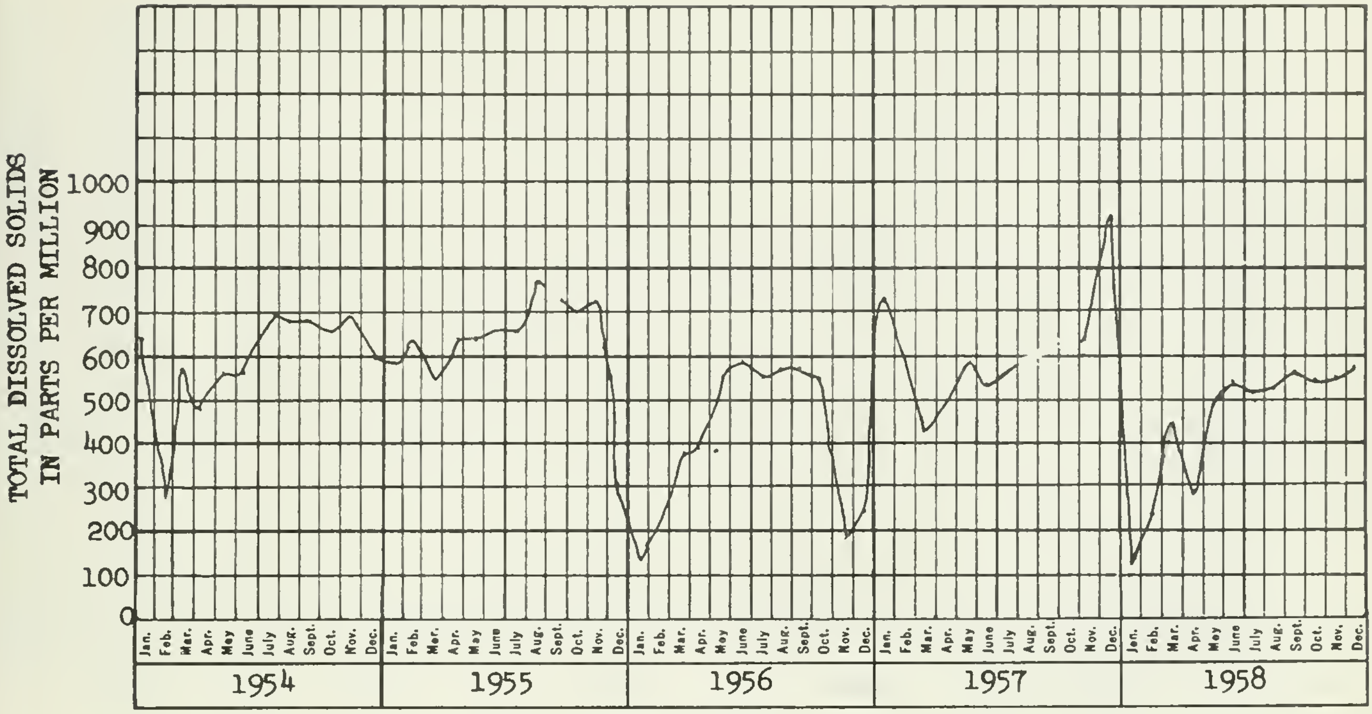
QUALITY CHARACTERISTICS OF
SMITH RIVER NEAR CRESCENT CITY (STATION 3a)



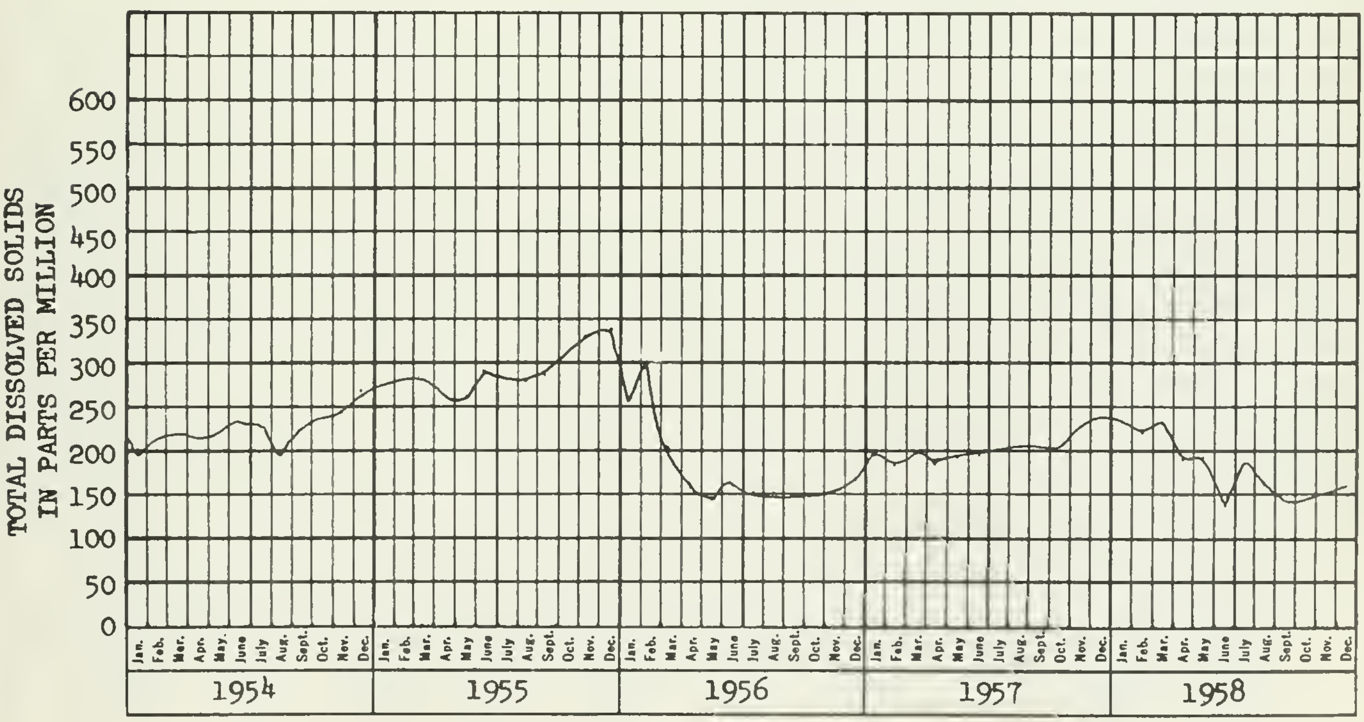
QUALITY CHARACTERISTICS OF
TRINITY RIVER NEAR HOOPA (STATION 4)



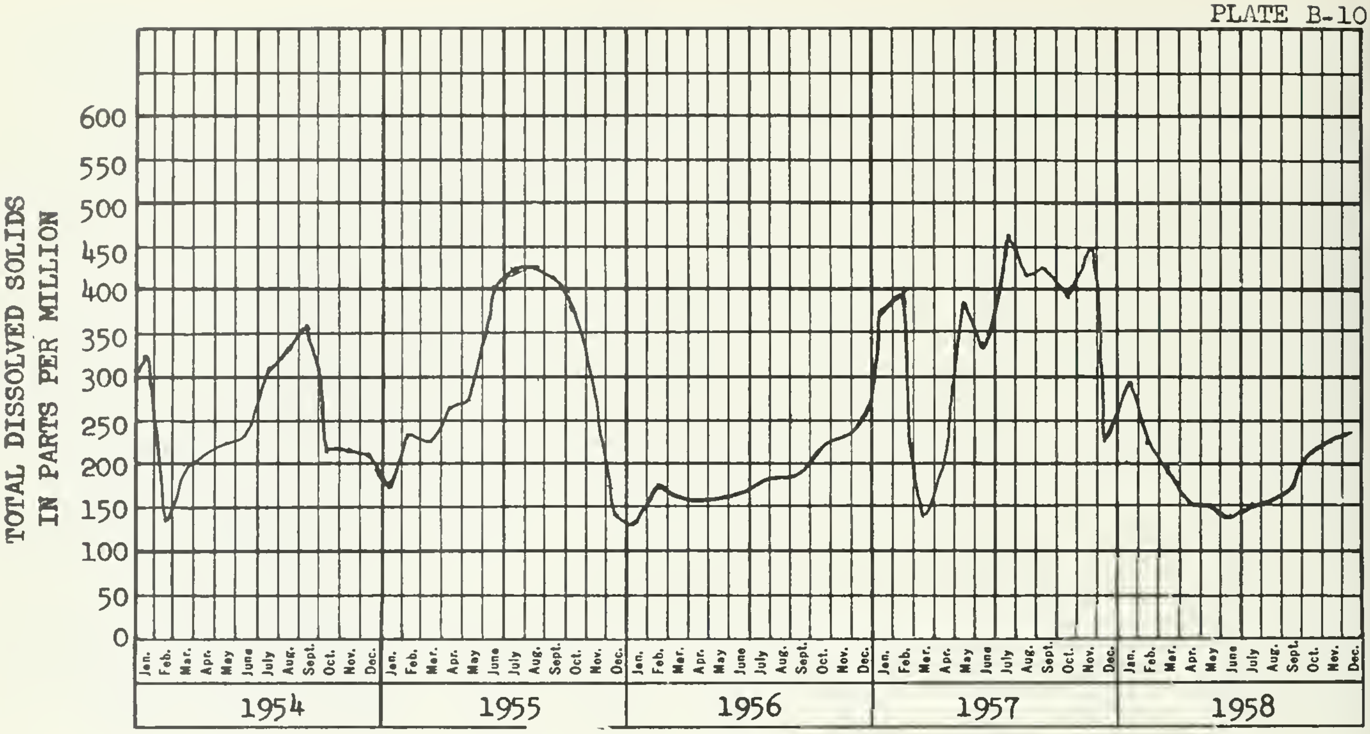
QUALITY CHARACTERISTICS OF
TRINITY RIVER AT LEWISTON (STATION 4a)



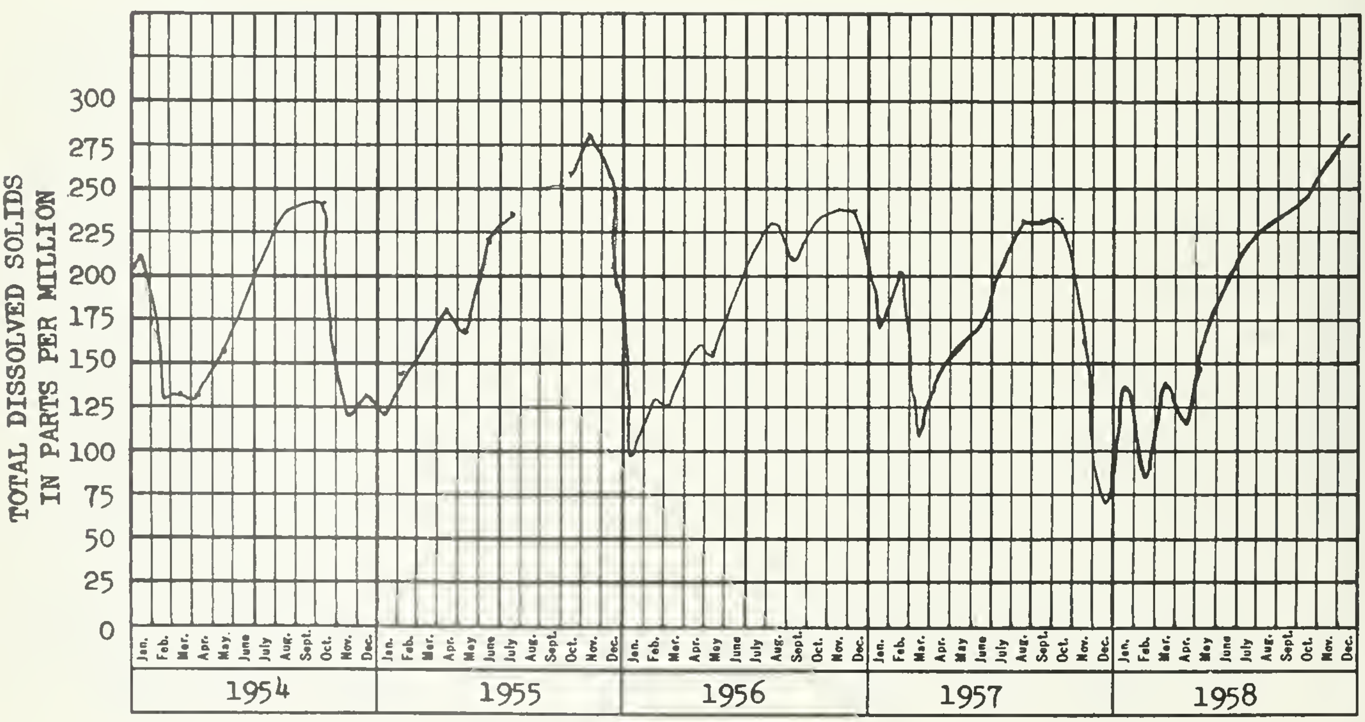
QUALITY CHARACTERISTICS OF
ALAMEDA CREEK NEAR NILES (STATION 73)



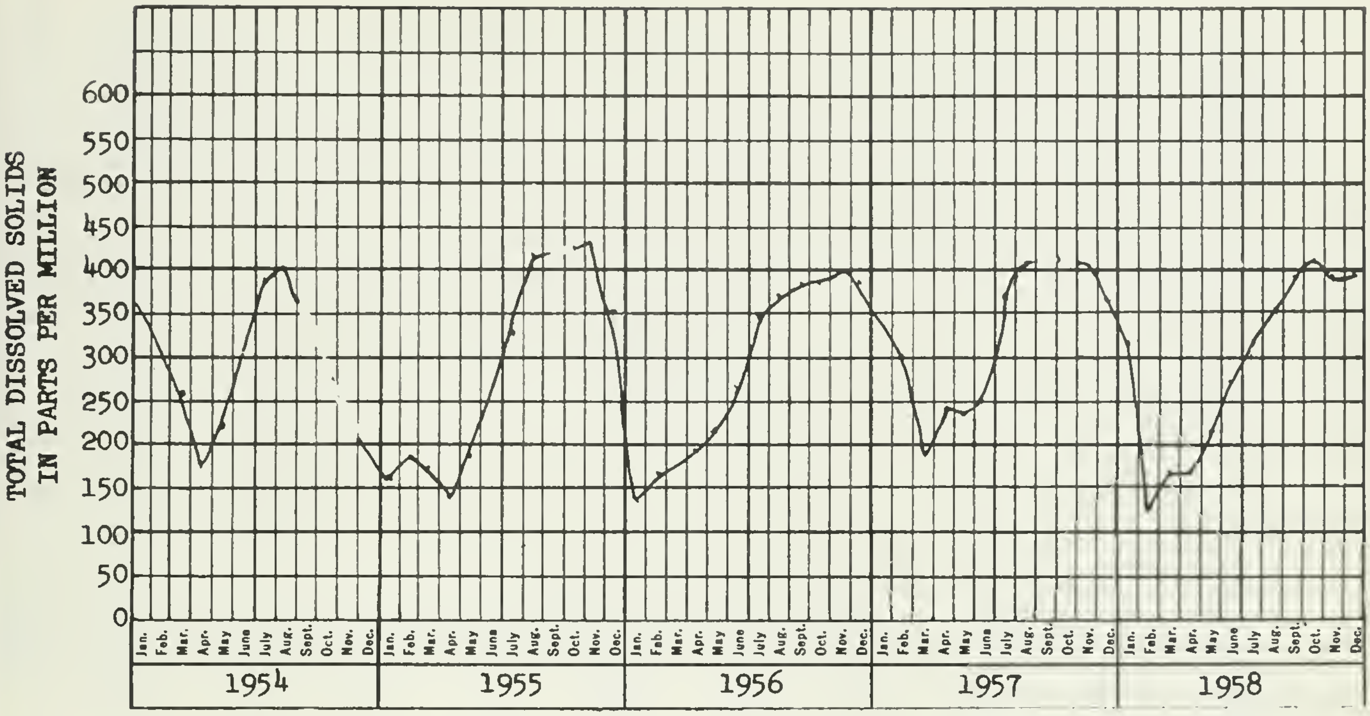
QUALITY CHARACTERISTICS OF
COYOTE CREEK NEAR MADRONE (STATION 82)



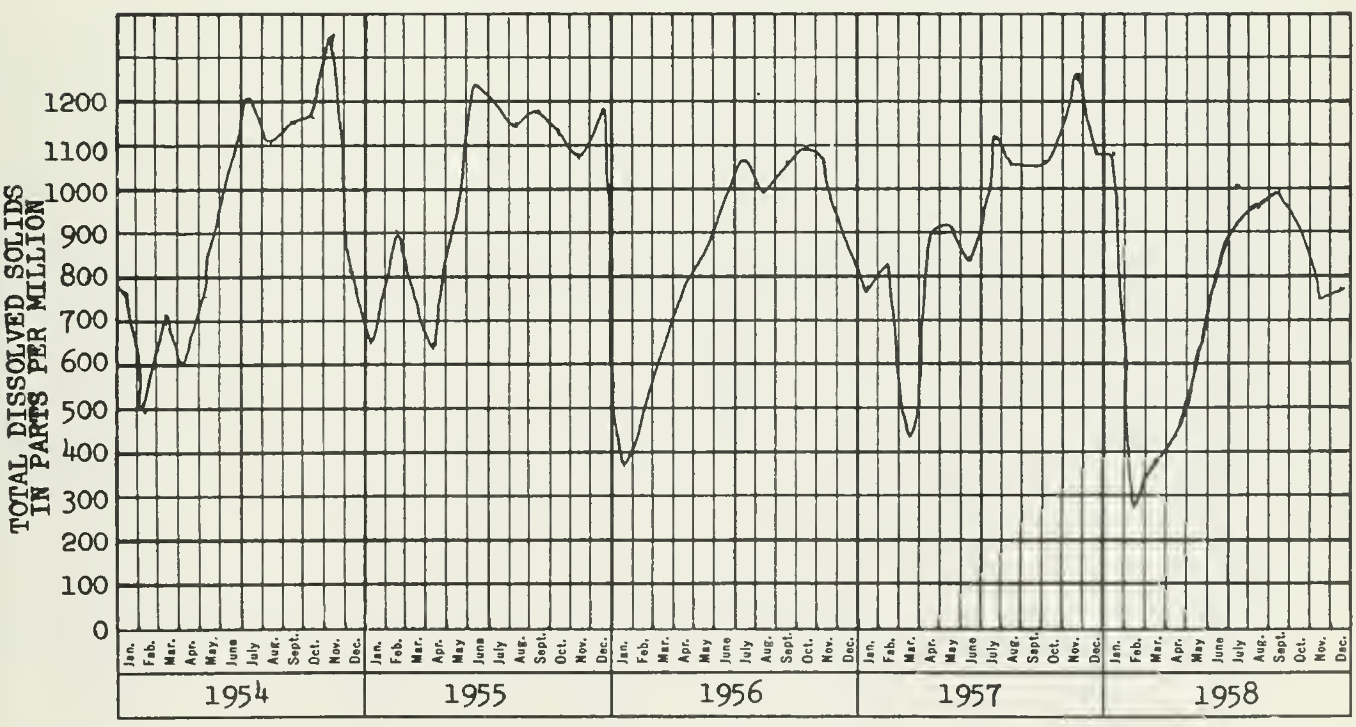
QUALITY CHARACTERISTICS OF
LOS GATOS CREEK AT LOS GATOS (STATION 74)



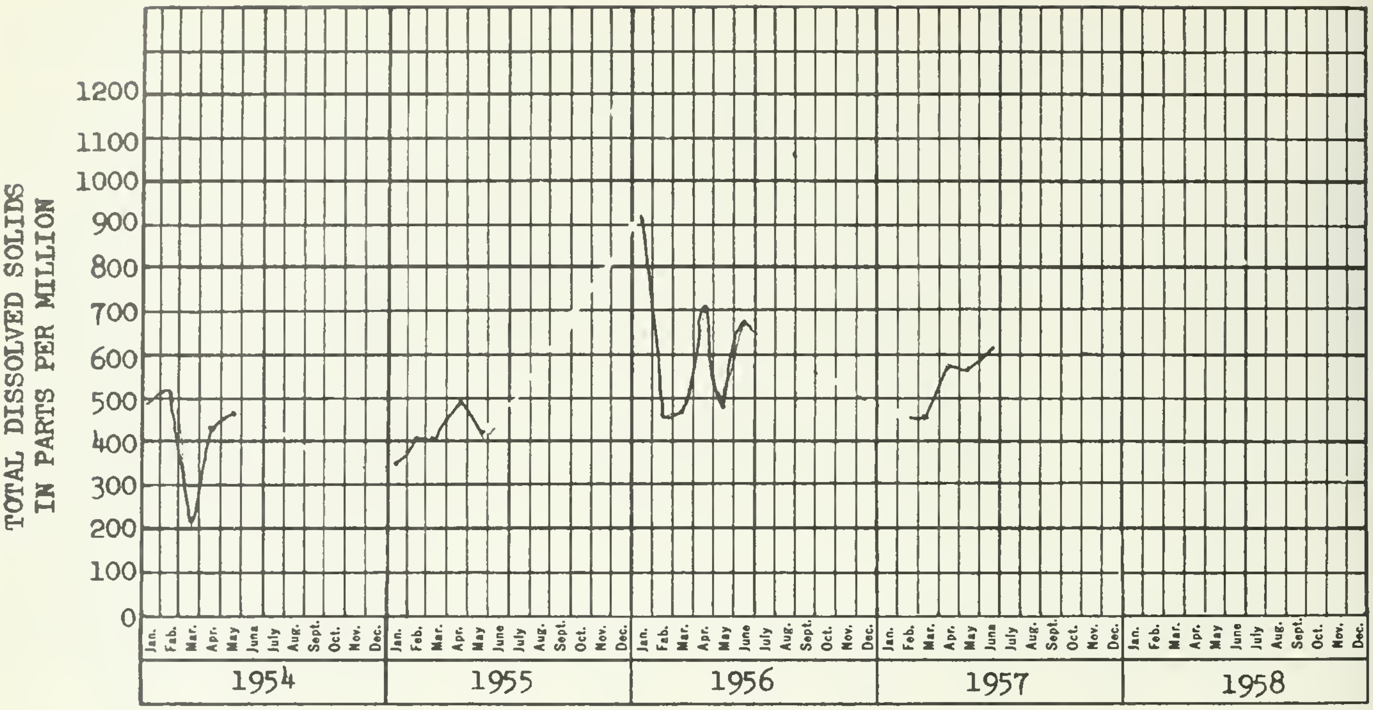
QUALITY CHARACTERISTICS OF
NAPA RIVER NEAR ST. HELENA (STATION 72)



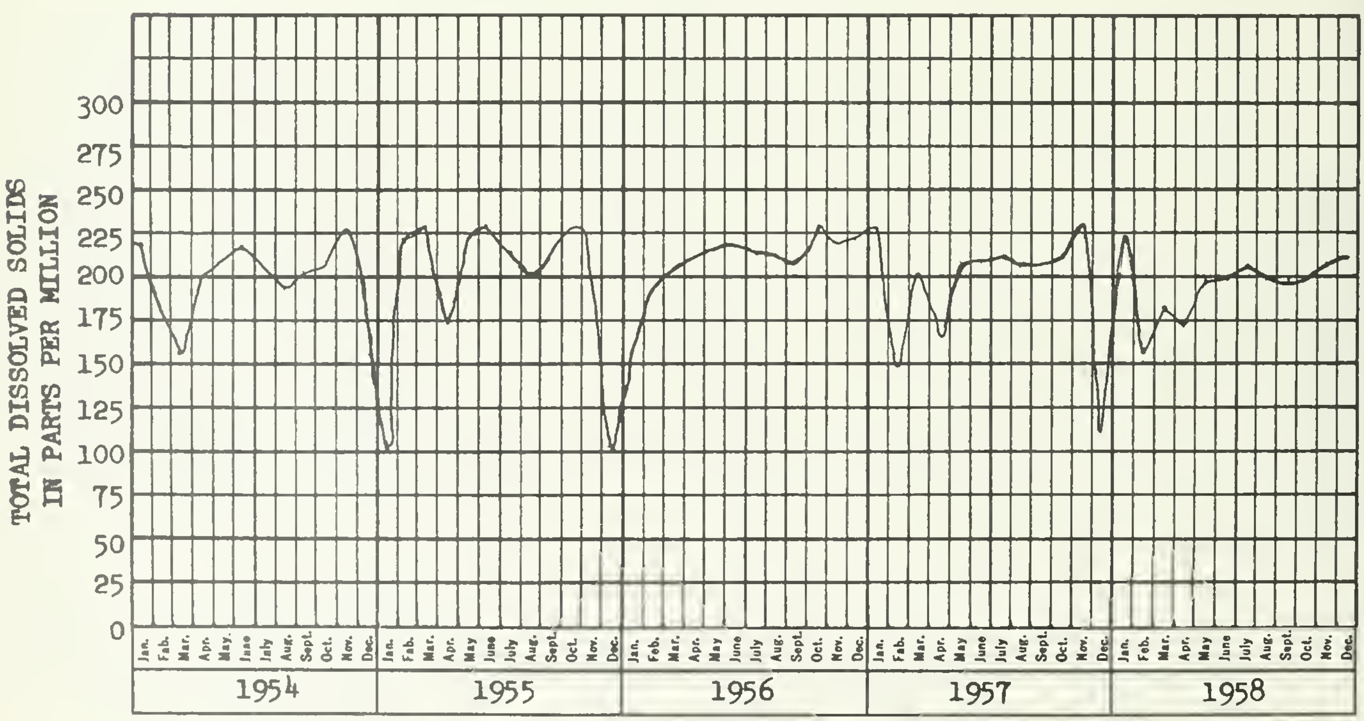
QUALITY CHARACTERISTICS OF
CARMEL RIVER NEAR CARMEL (STATION 83)



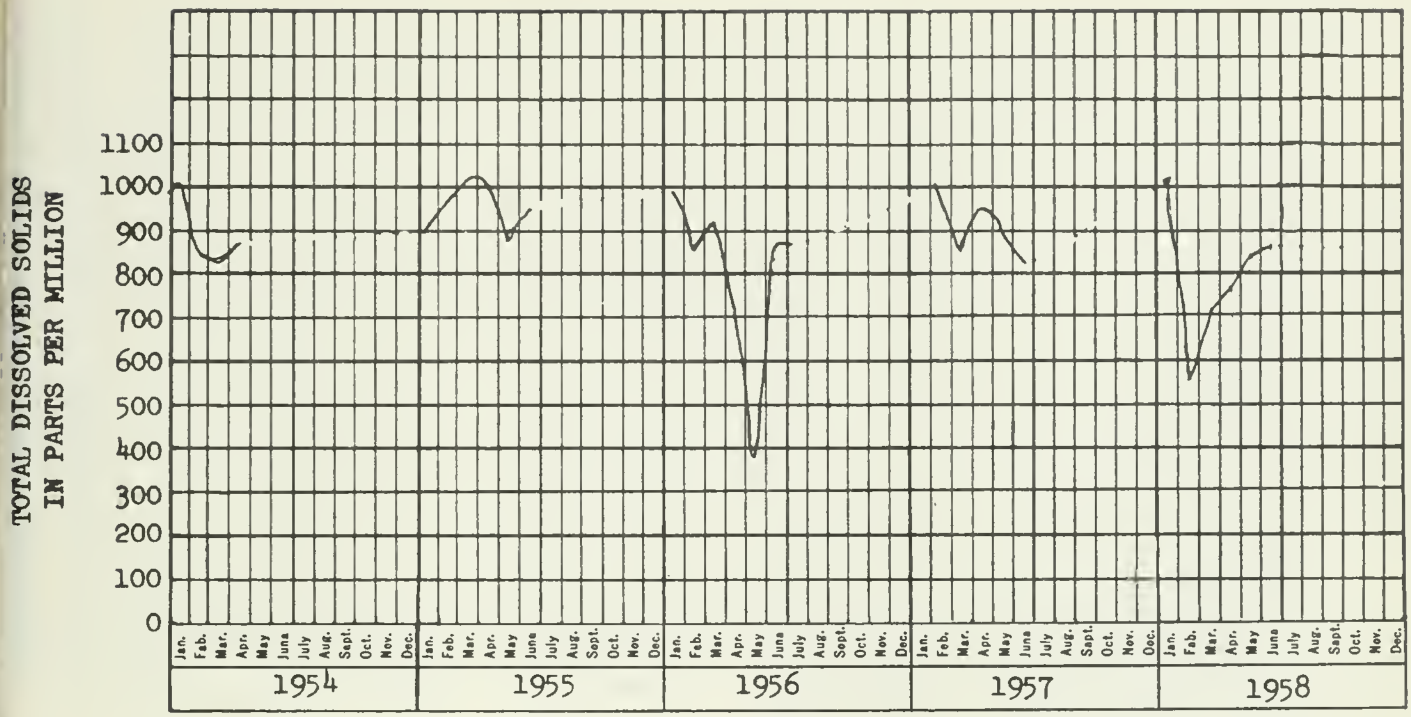
QUALITY CHARACTERISTICS OF
PAJARO RIVER NEAR CHITTENDEN (STATION 77)



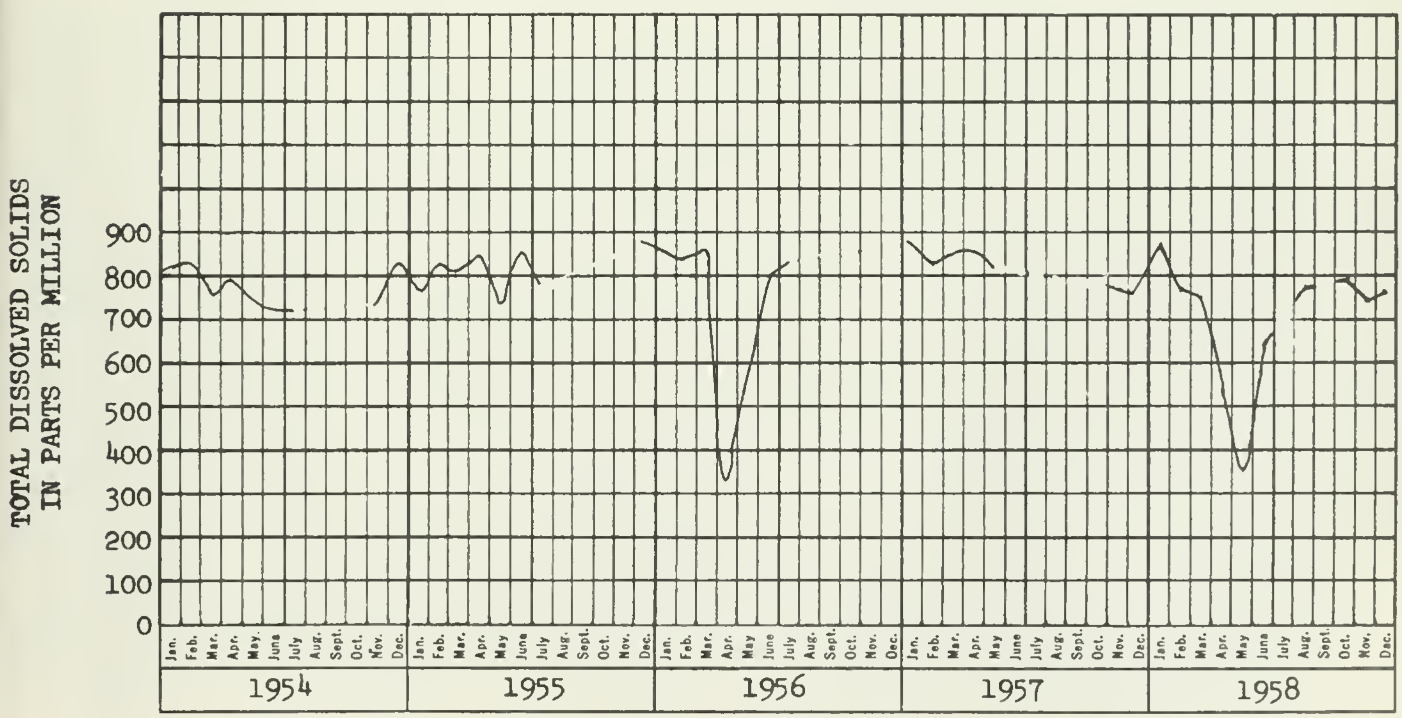
QUALITY CHARACTERISTICS OF
SALINAS RIVER AT PASO ROBLES (STATION 43a)



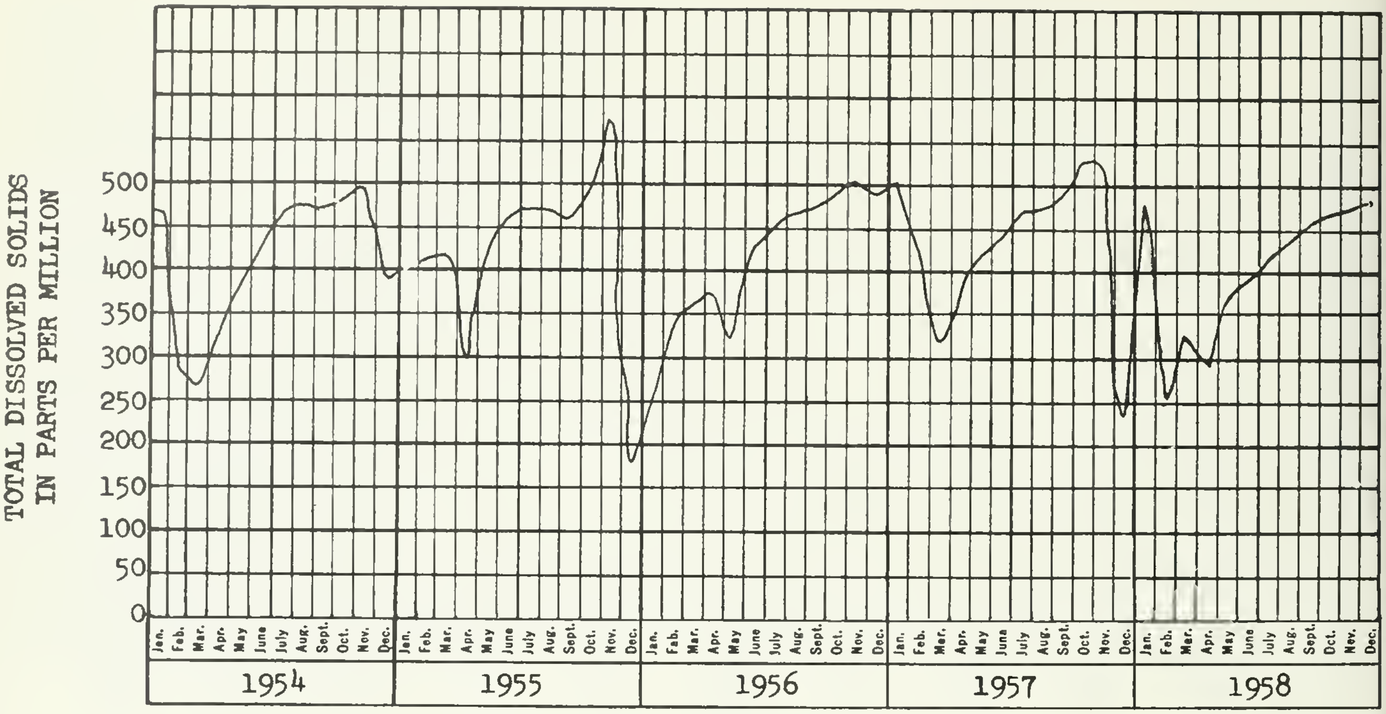
QUALITY CHARACTERISTICS OF
SAN LORENZO RIVER AT BIG TREES (NEAR FELTON) (STATION 75)



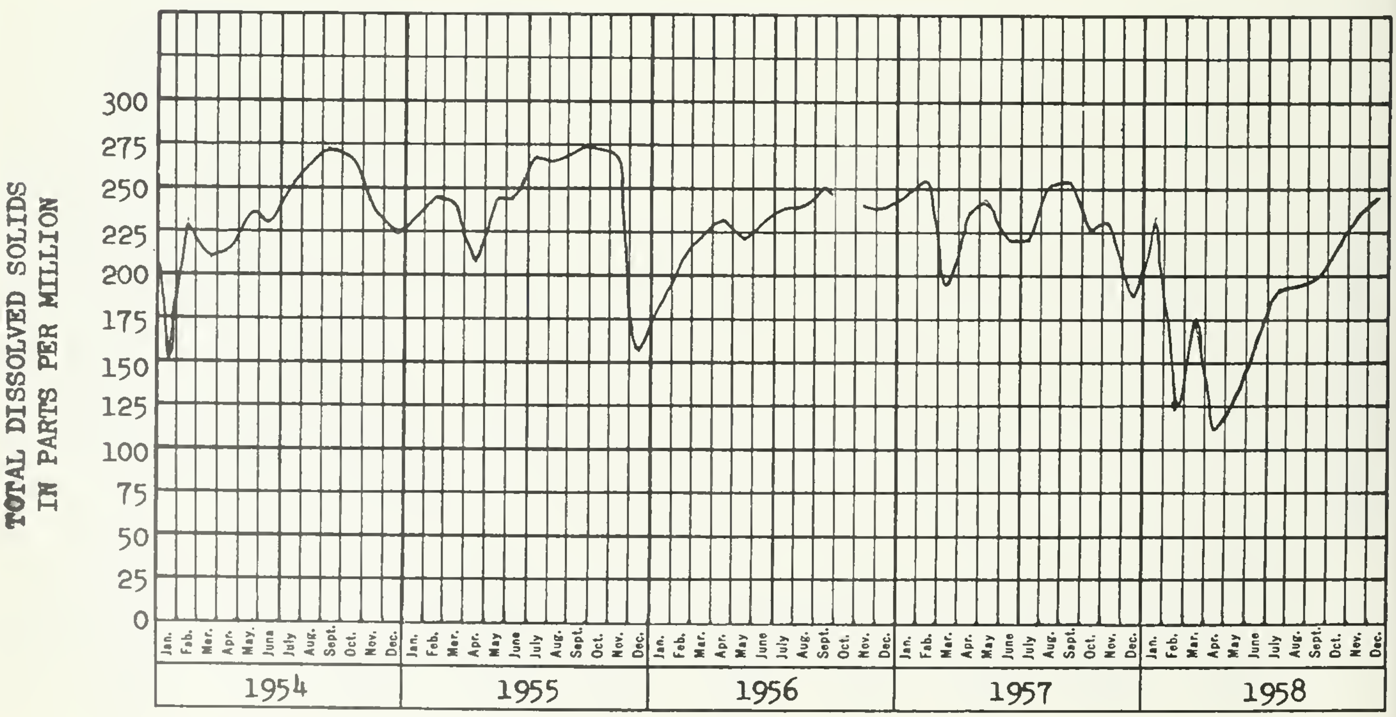
QUALITY CHARACTERISTICS OF
SANTA YNEZ RIVER BELOW LOS LAURELES CANYON (STATION 45)



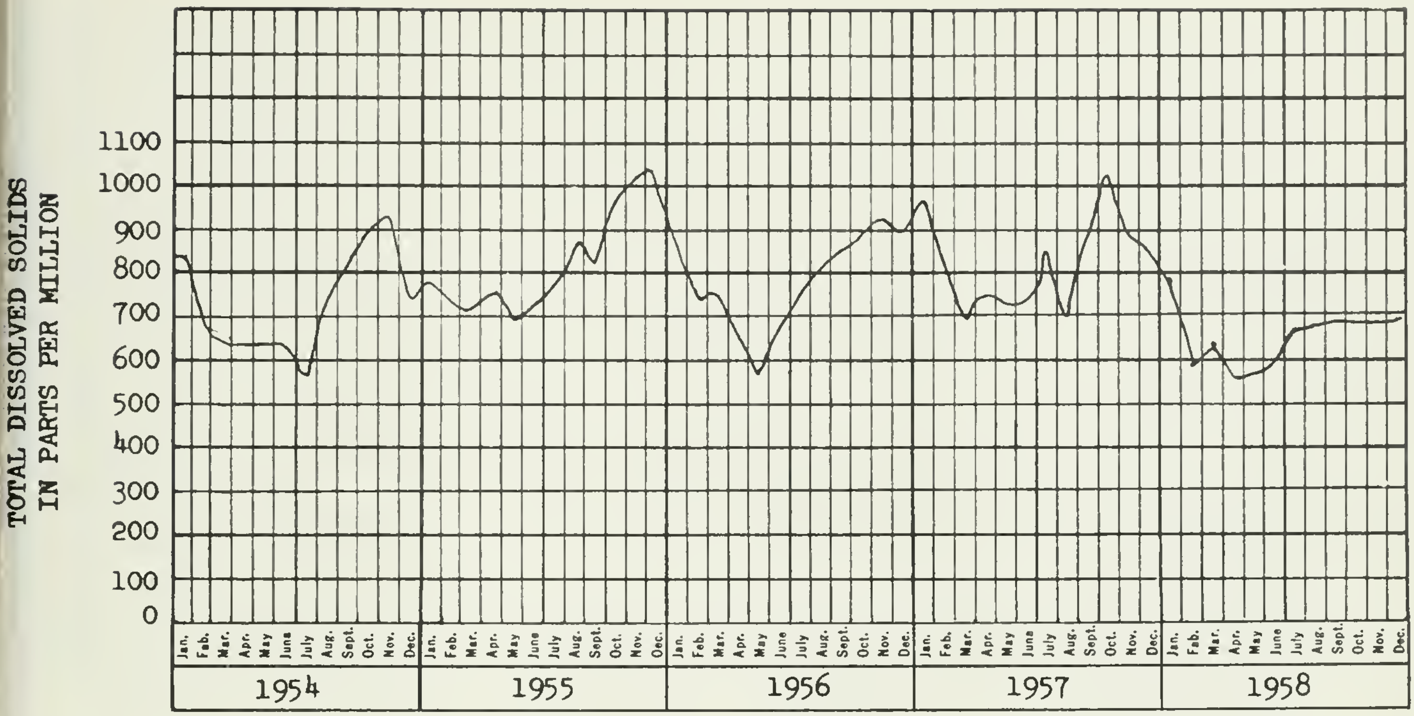
QUALITY CHARACTERISTICS OF
SANTA YNEZ RIVER AT SOLVANG (STATION 45a)



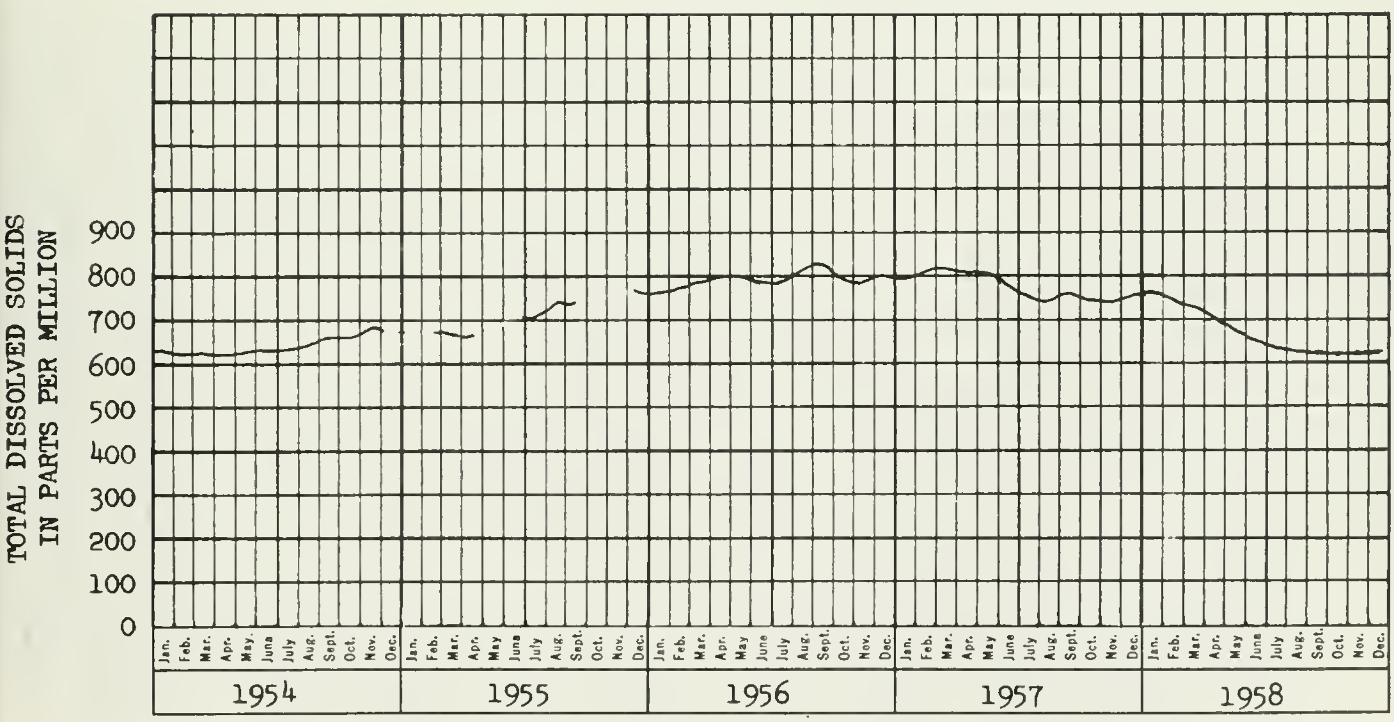
QUALITY CHARACTERISTICS OF
SOQUEL CREEK AT SOQUEL (STATION 76)



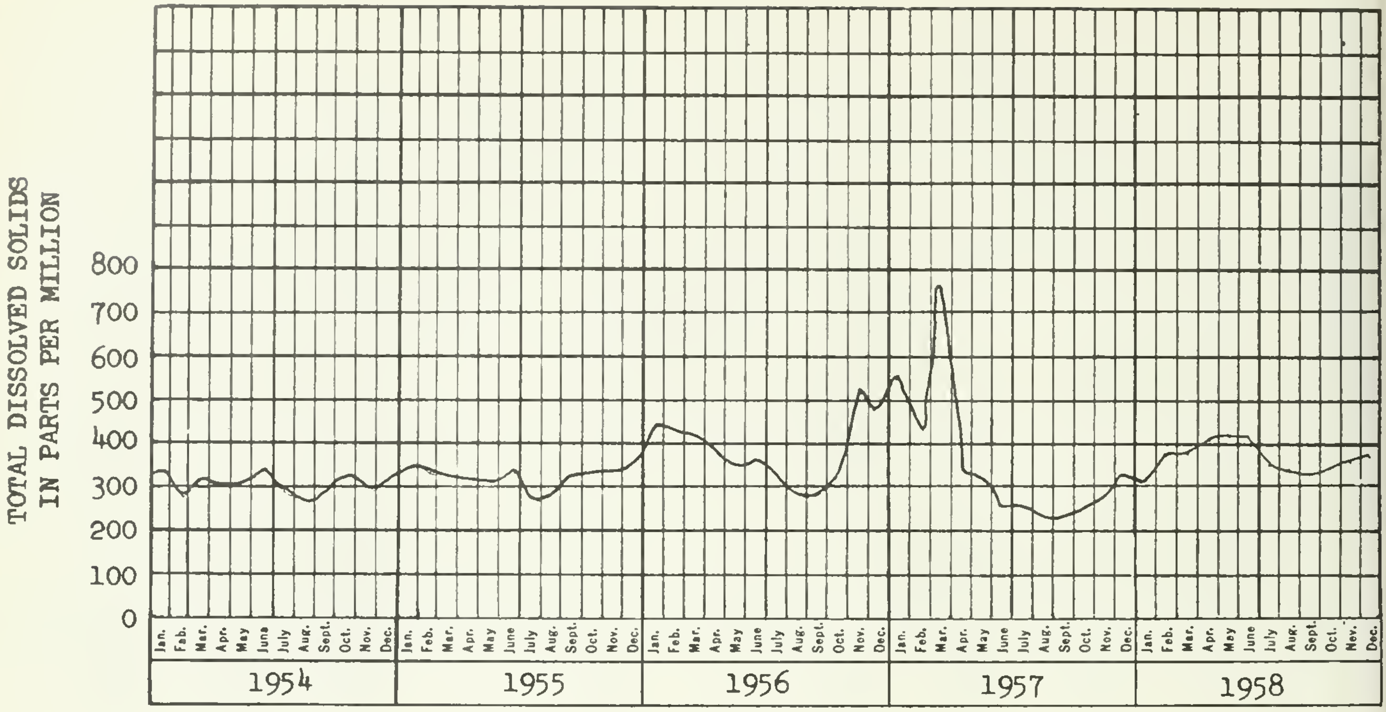
QUALITY CHARACTERISTICS OF
UVAS CREEK NEAR MORGAN HILL (STATION 96)



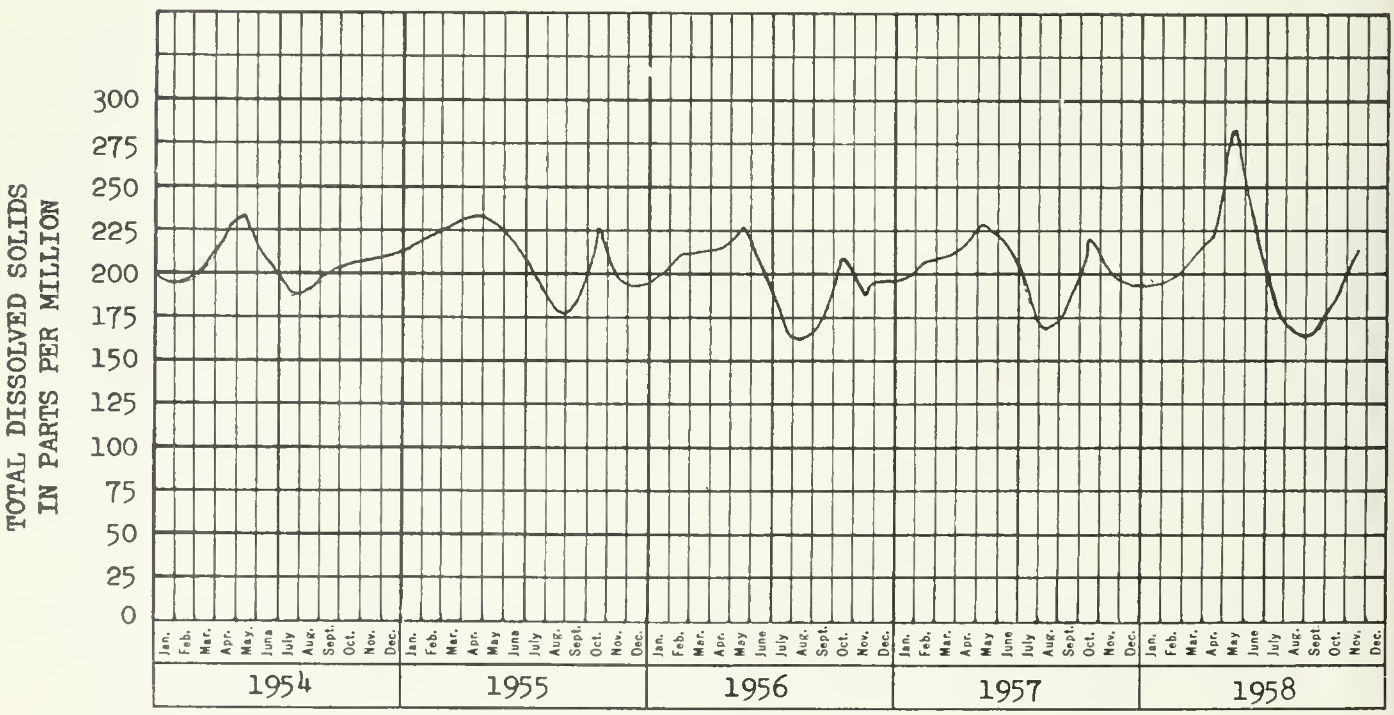
QUALITY CHARACTERISTICS OF
MATILIJA CREEK ABOVE MATILIJA DAM (STATION 45b)



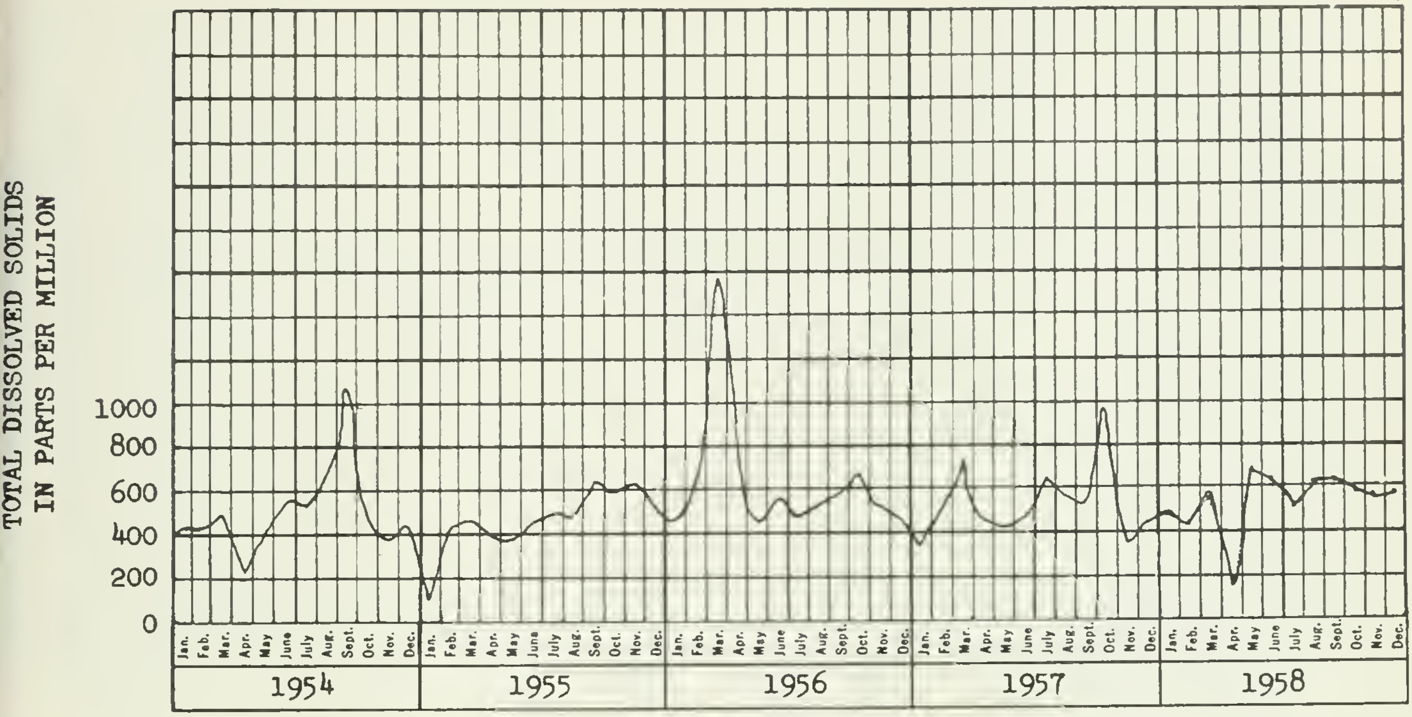
QUALITY CHARACTERISTICS OF
COLORADO RIVER AQUEDUCT AT LA VERNE (STATION 69)



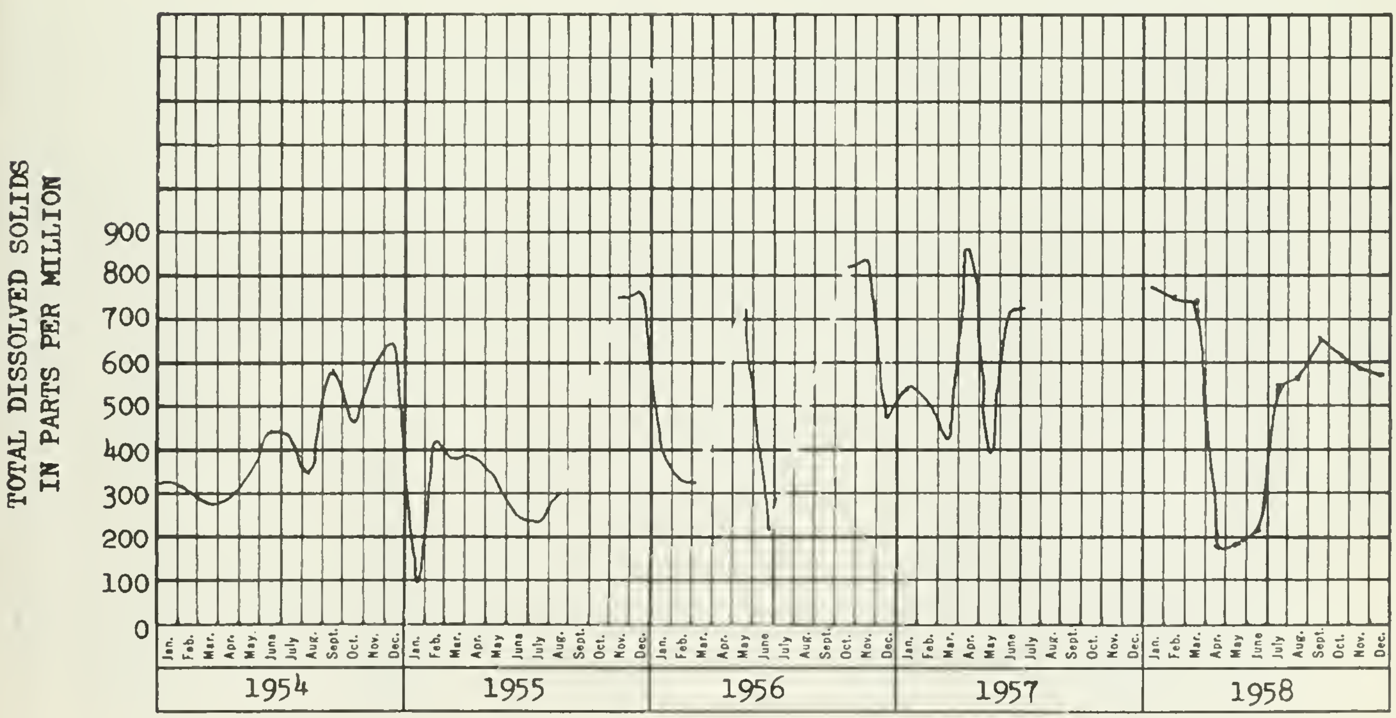
QUALITY CHARACTERISTICS OF
MISSION CREEK AT WHITTER NARROWS (STATION 49a)



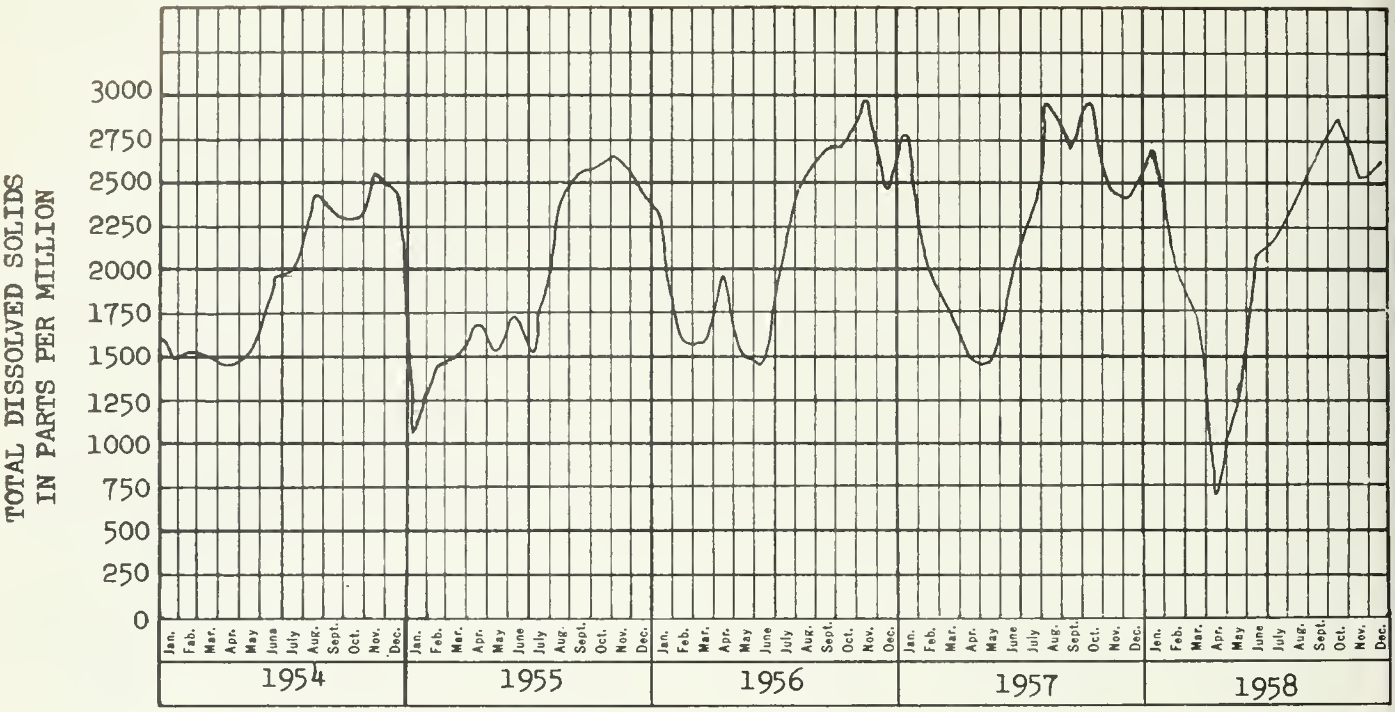
QUALITY CHARACTERISTICS OF
LOS ANGELES AQUEDUCT NEAR SAN FERNANDO (STATION 70)



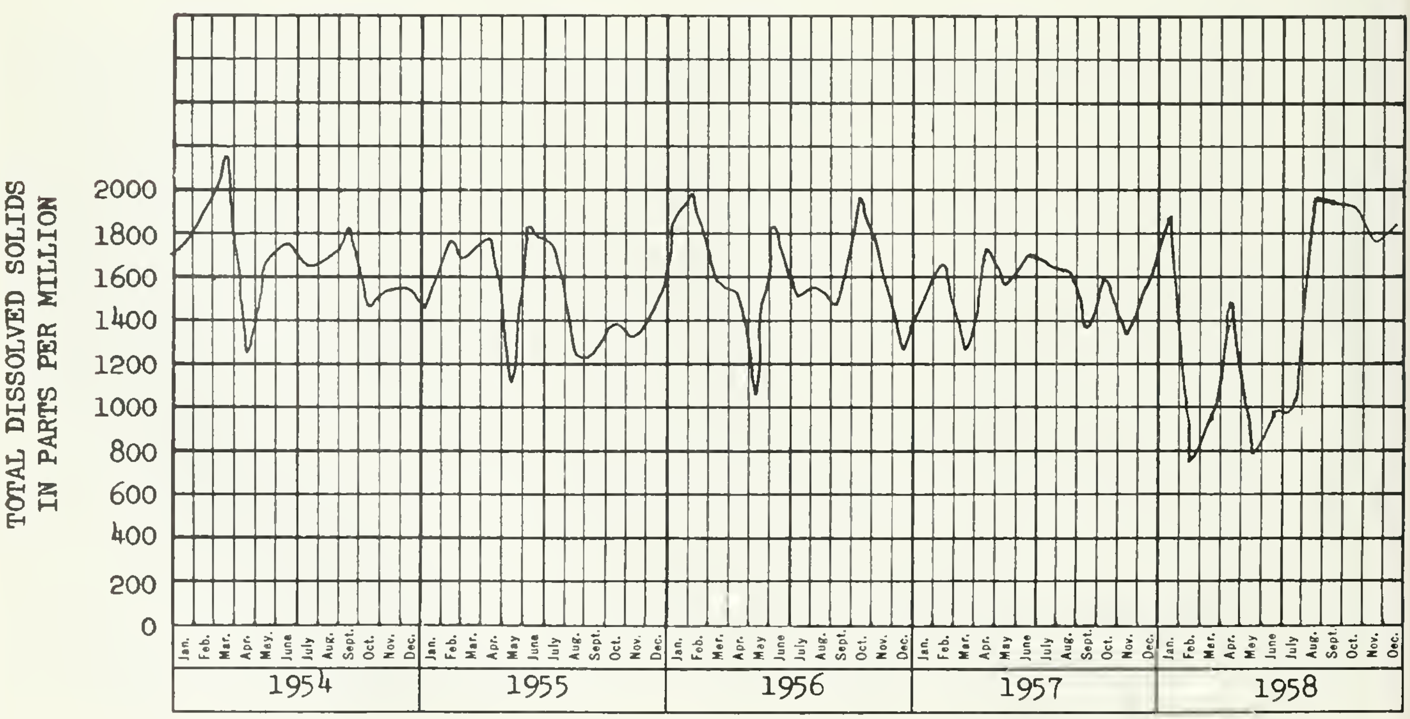
QUALITY CHARACTERISTICS OF
RIO HONDO AT WHITTER NARROWS(STATION 49)



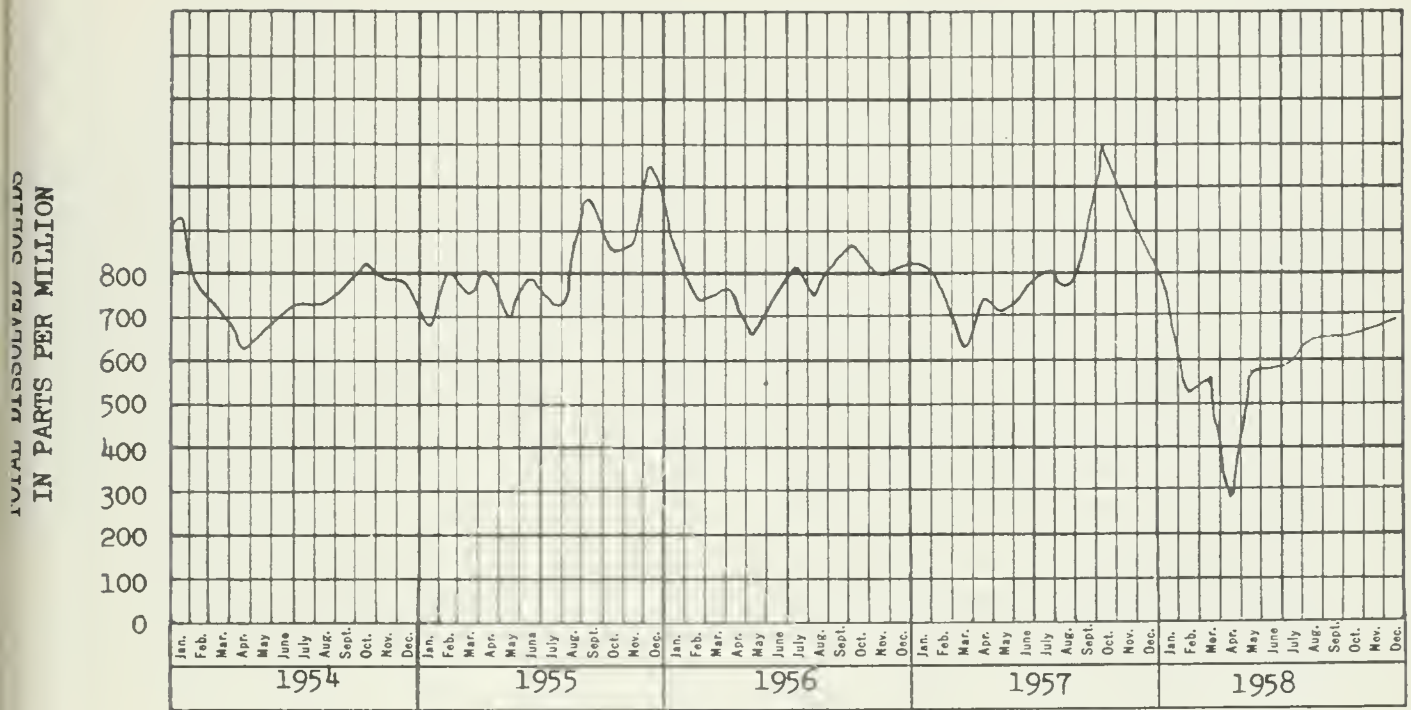
QUALITY CHARACTERISTICS OF
SAN GABRIEL RIVER AT WHITTER NARROWS (STATION 50)



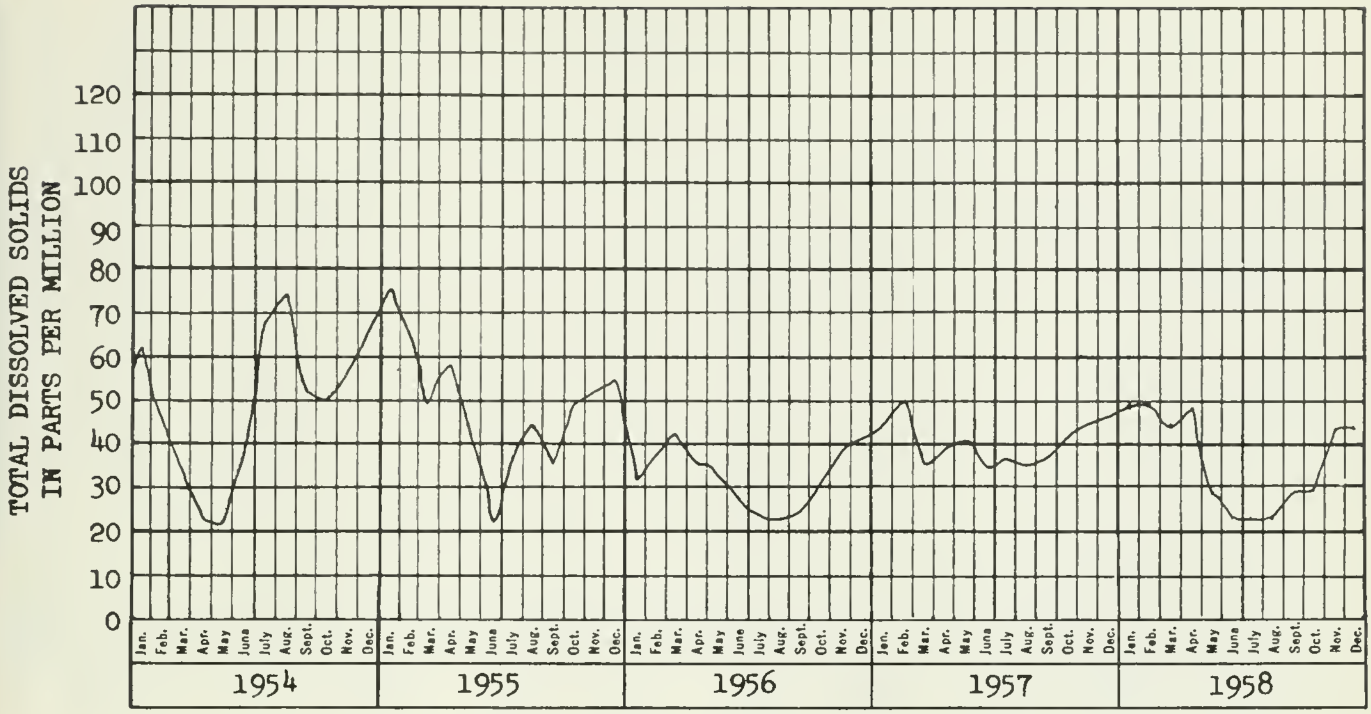
QUALITY CHARACTERISTICS OF
SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE (STATION 46)



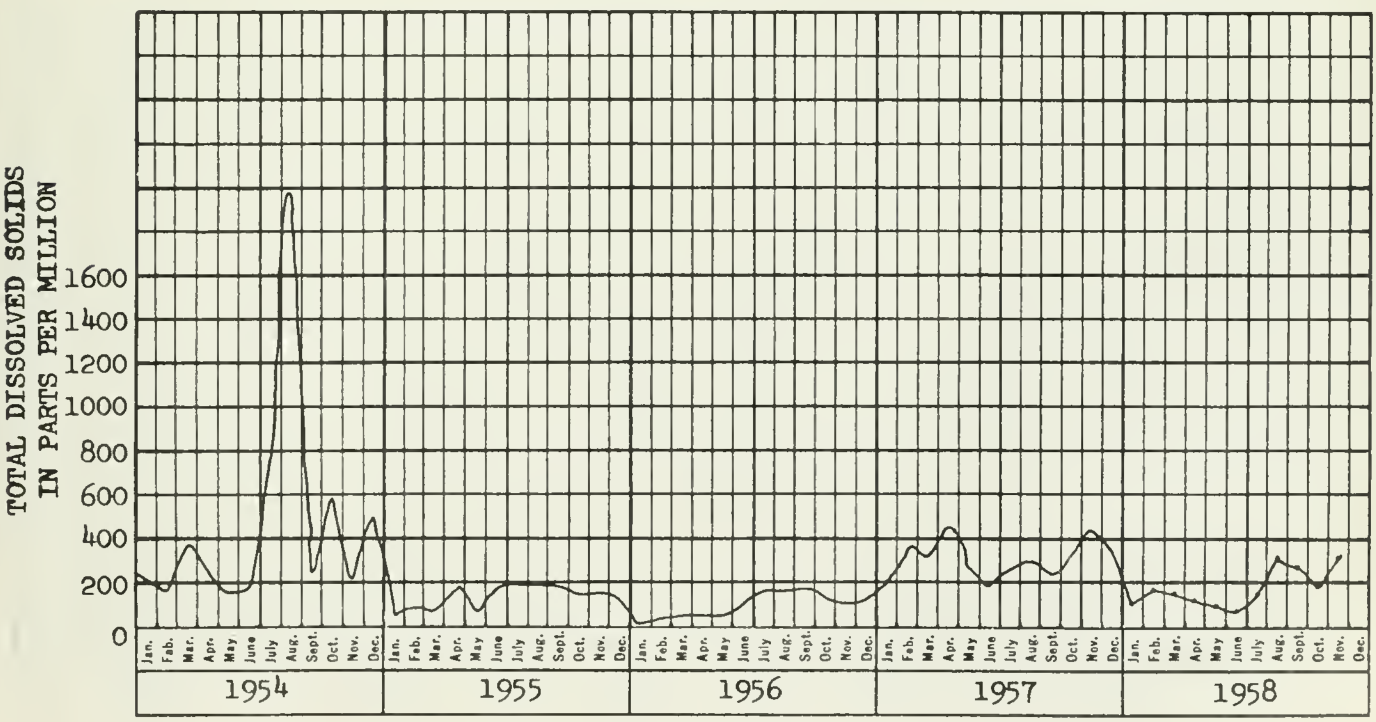
QUALITY CHARACTERISTICS OF
SANTA CLARA RIVER NEAR SANTA PAULA (STATION 46a)



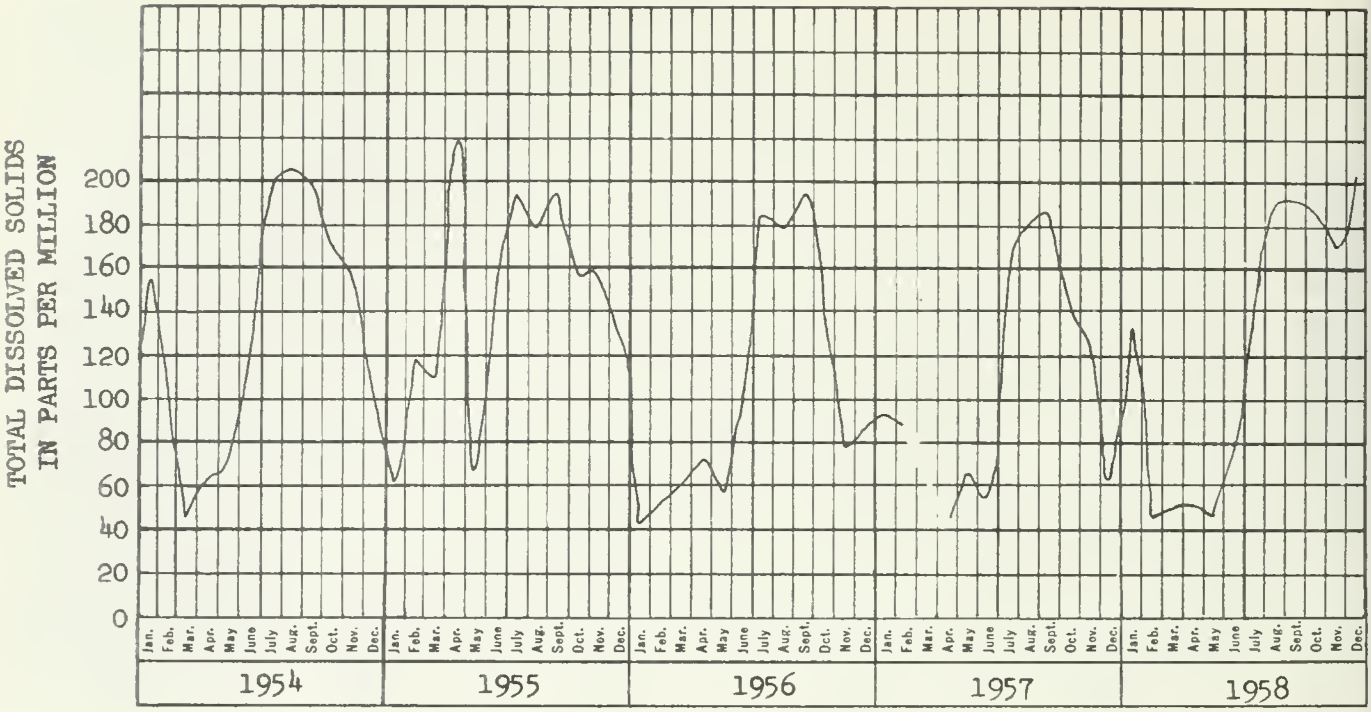
QUALITY CHARACTERISTICS OF
VENTURA RIVER NEAR VENTURA (STATION 61)



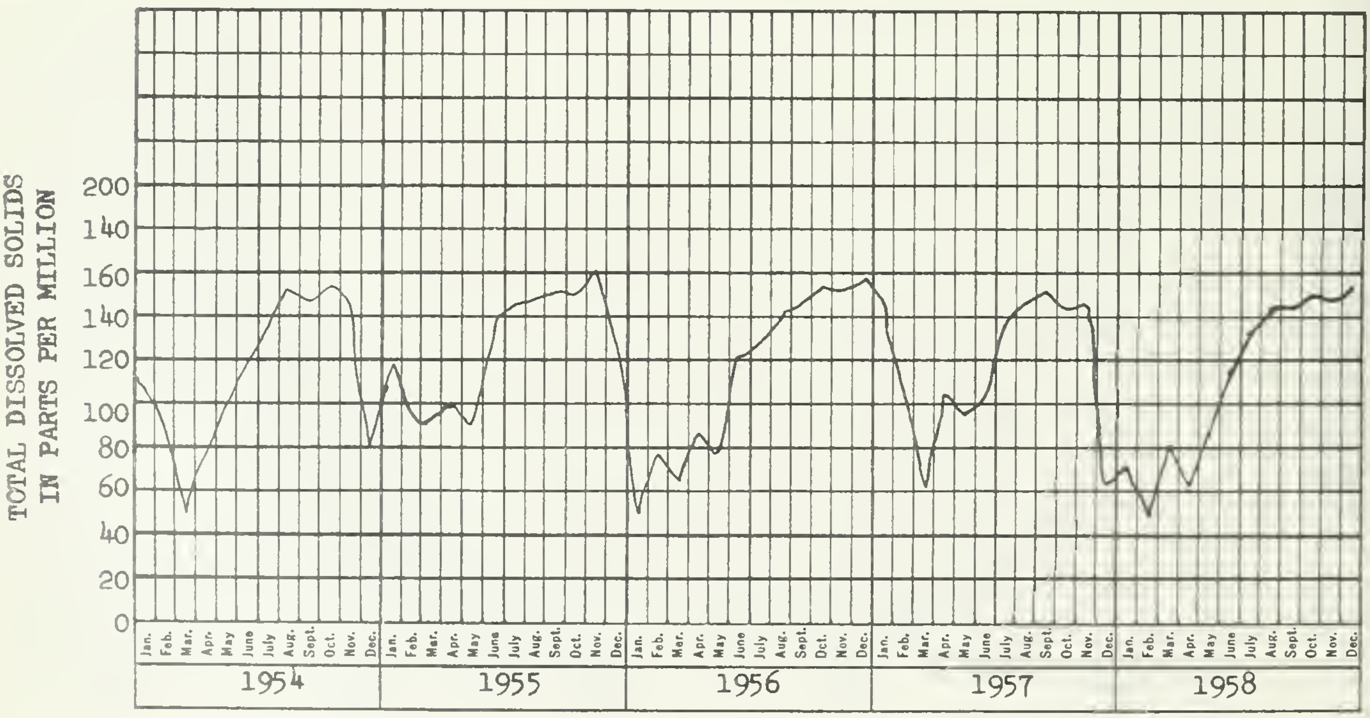
QUALITY CHARACTERISTICS OF
AMERICAN RIVER AT SACRAMENTO (STATION 22)



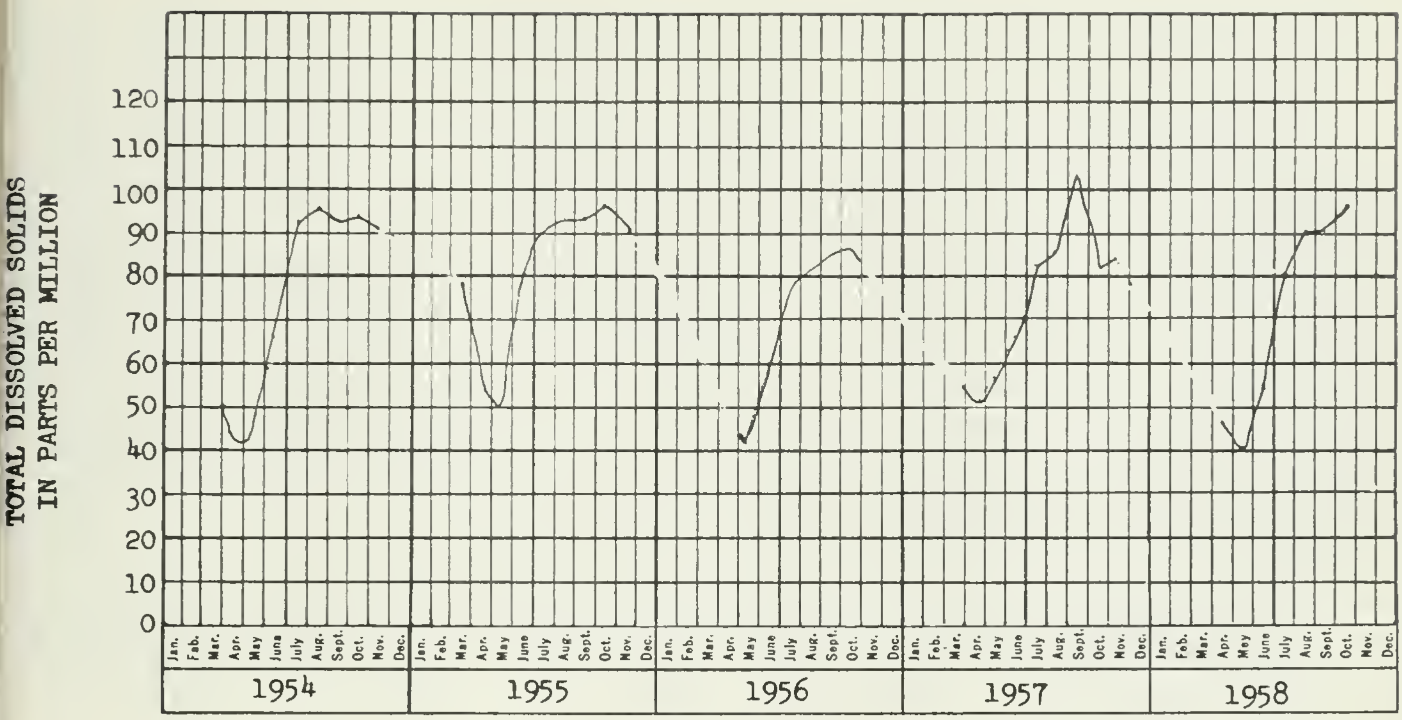
QUALITY CHARACTERISTICS OF
BEAR CREEK NEAR STEVINSON (STATION 111)



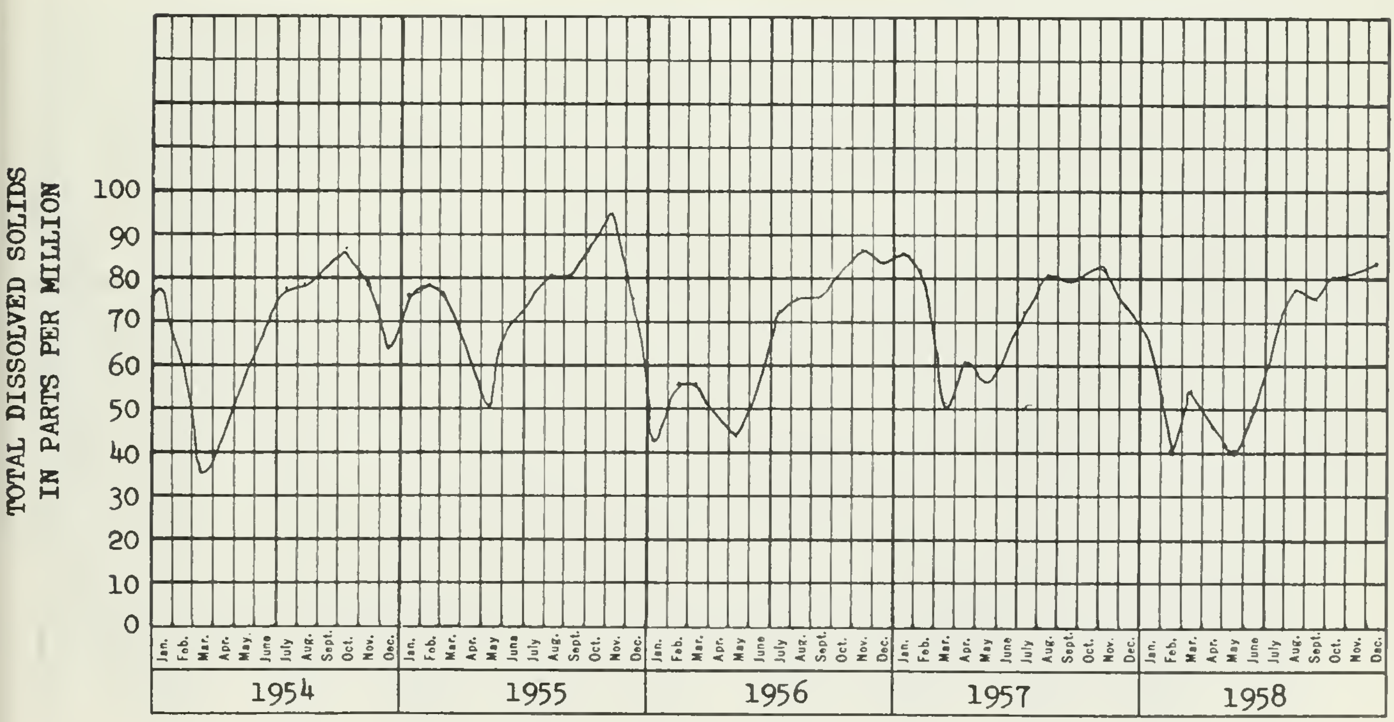
QUALITY CHARACTERISTICS OF
BEAR RIVER NEAR WHEATLAND (STATION 78)



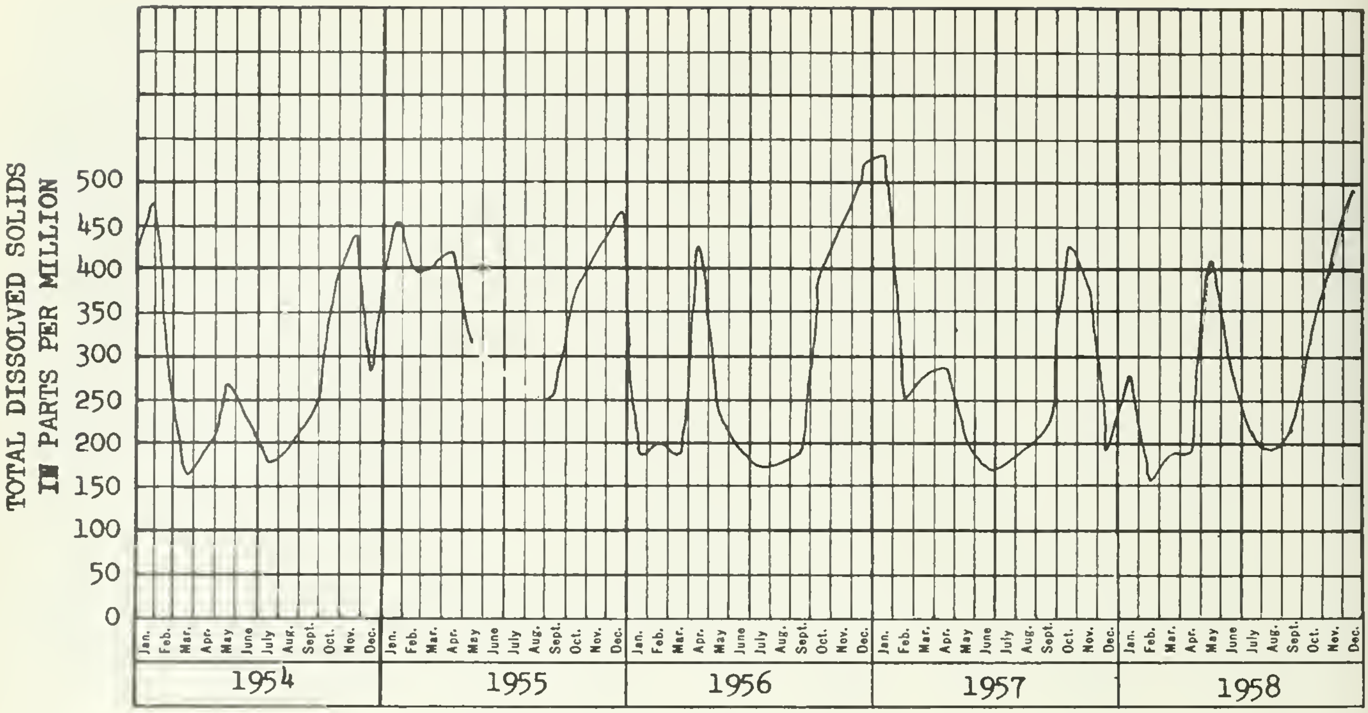
QUALITY CHARACTERISTICS OF
BIG CHICO CREEK NEAR CHICO (STATION 85)



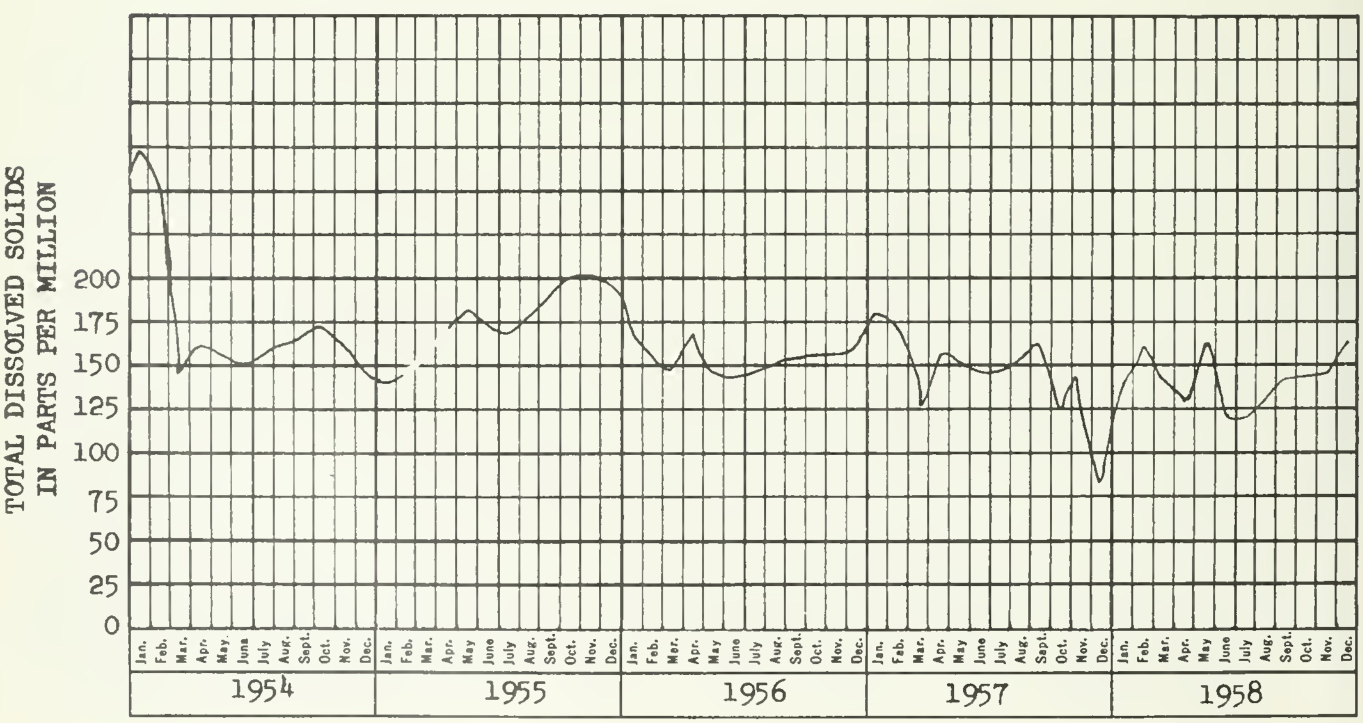
QUALITY CHARACTERISTICS OF
BURNEY CREEK NEAR BURNEY (STATION 17c)



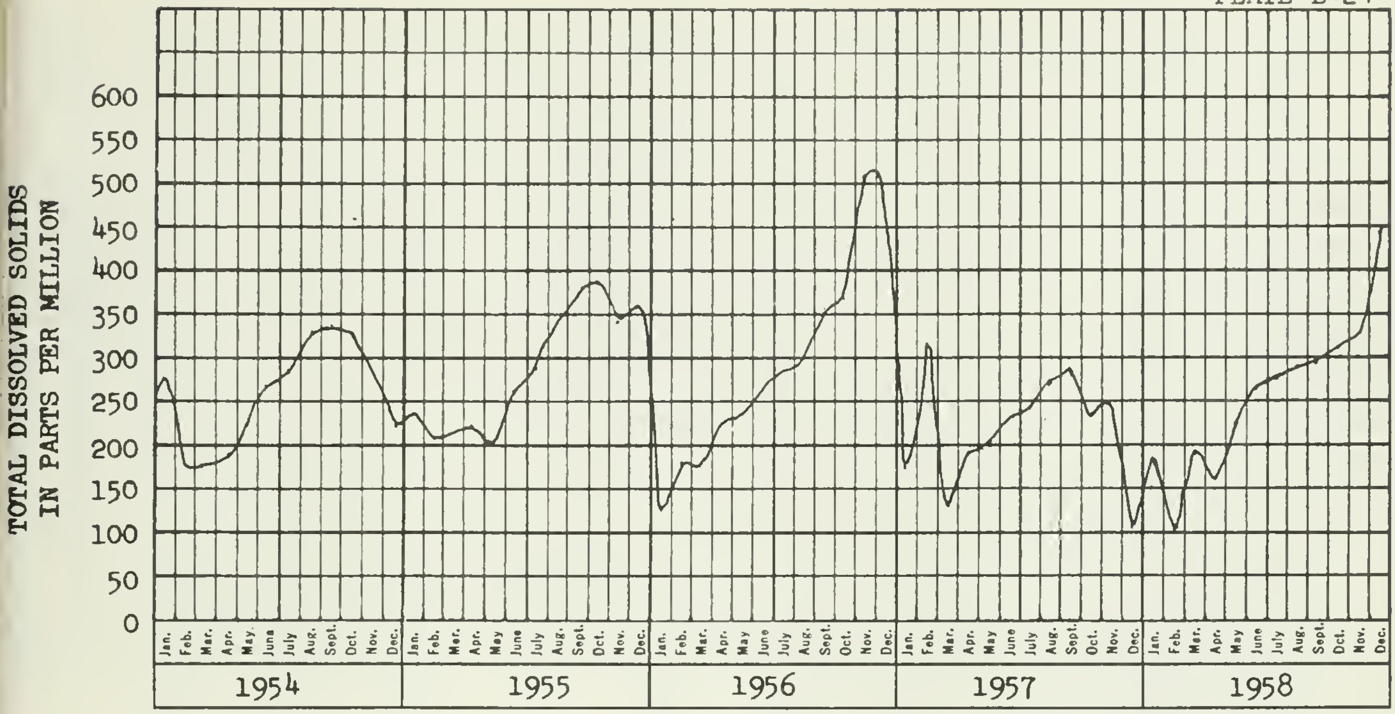
QUALITY CHARACTERISTICS OF
BUTTE CREEK NEAR CHICO (STATION 84)



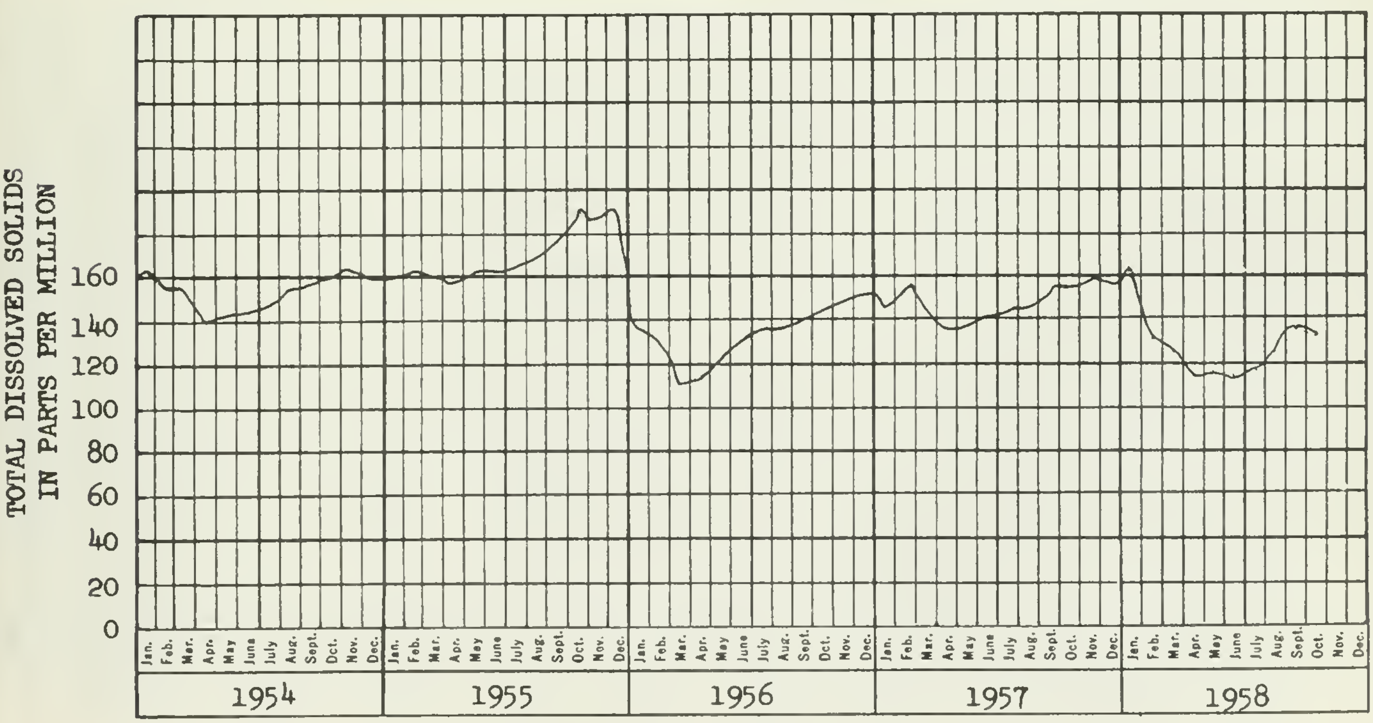
QUALITY CHARACTERISTICS OF
CACHE CREEK NEAR CAPAY (STATION 80)



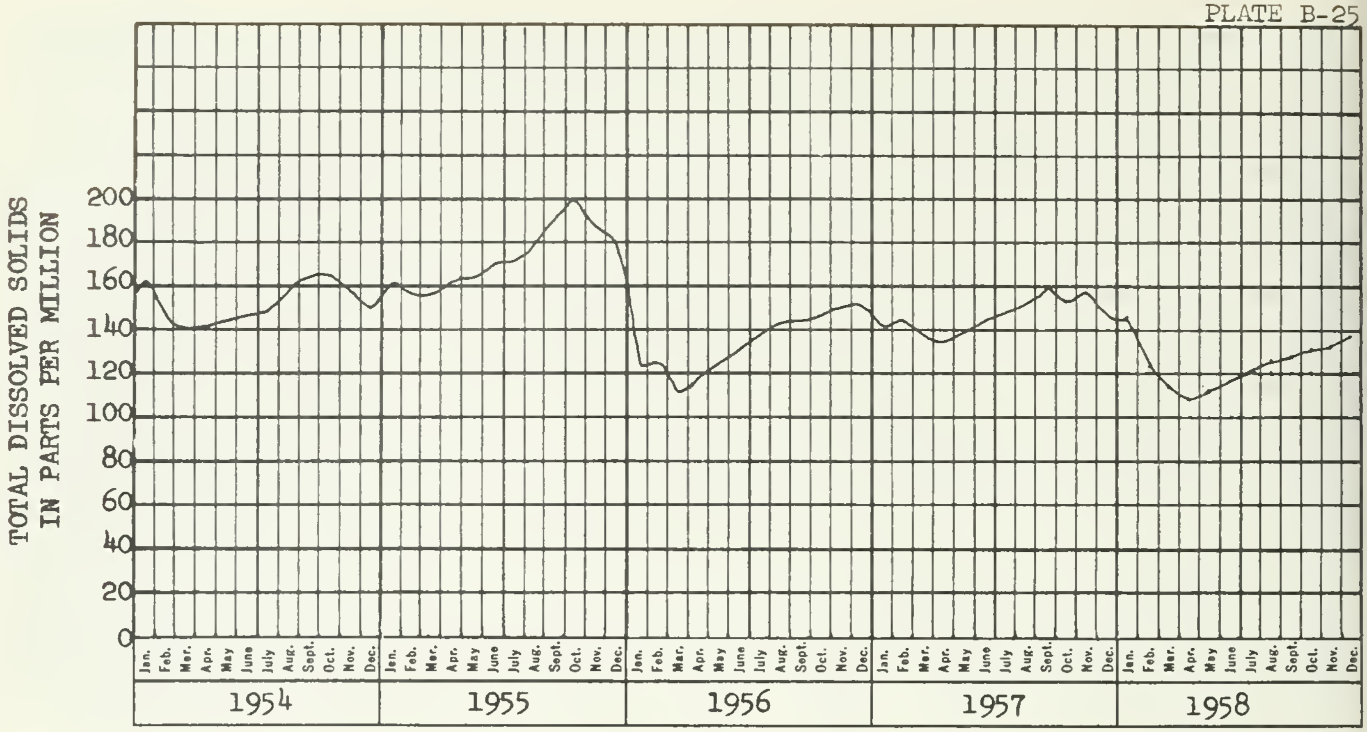
QUALITY CHARACTERISTICS OF
CACHE CREEK NEAR LOWER LAKE (STATION 42)



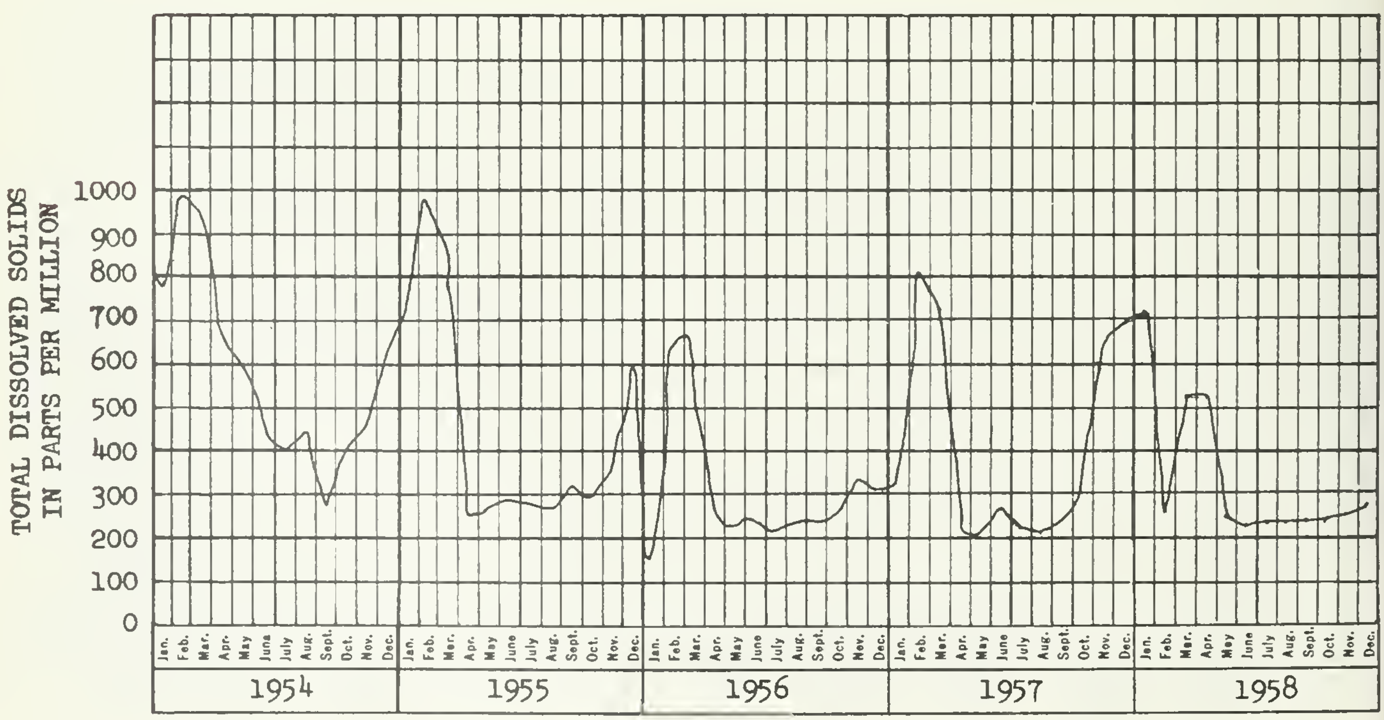
QUALITY CHARACTERISTICS OF
CACHE CREEK,NORTH FORK NEAR LOWER LAKE (STATION 79)



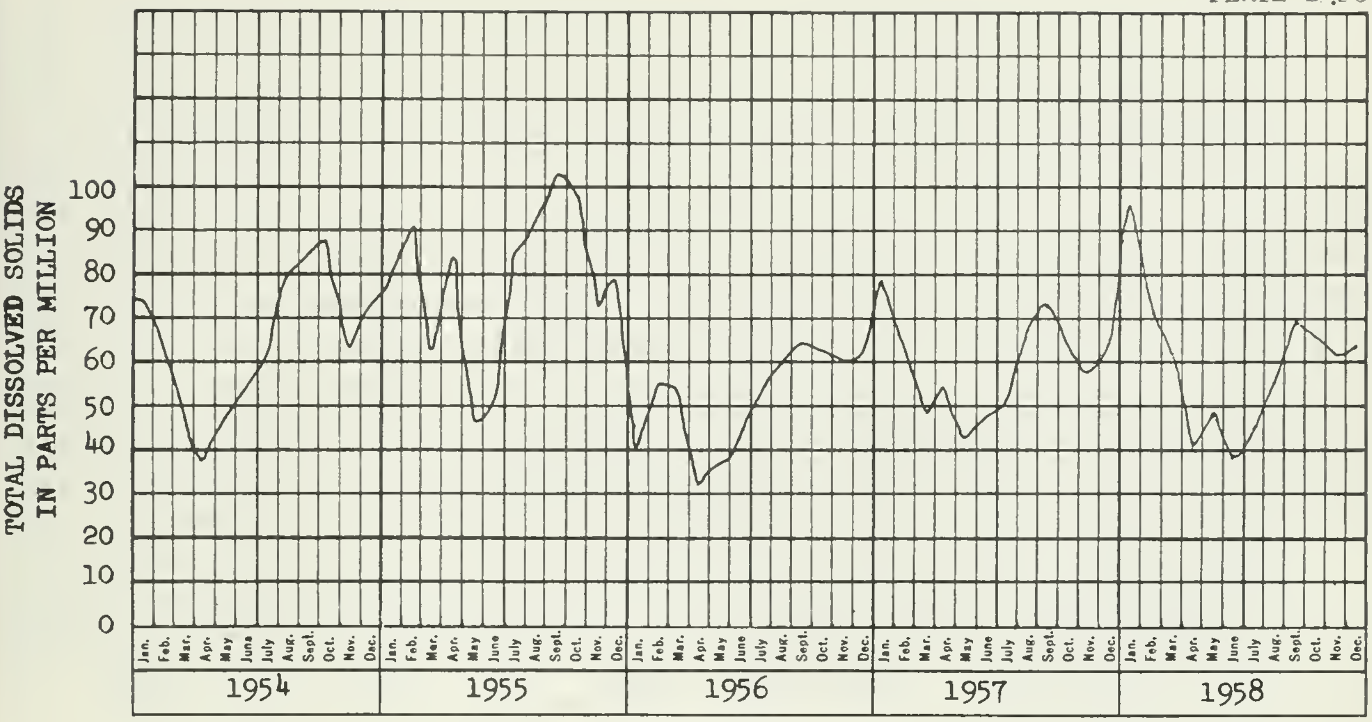
QUALITY CHARACTERISTICS OF
CLEAR LAKE NEAR CLEARLAKE OAKS (STATION 40)



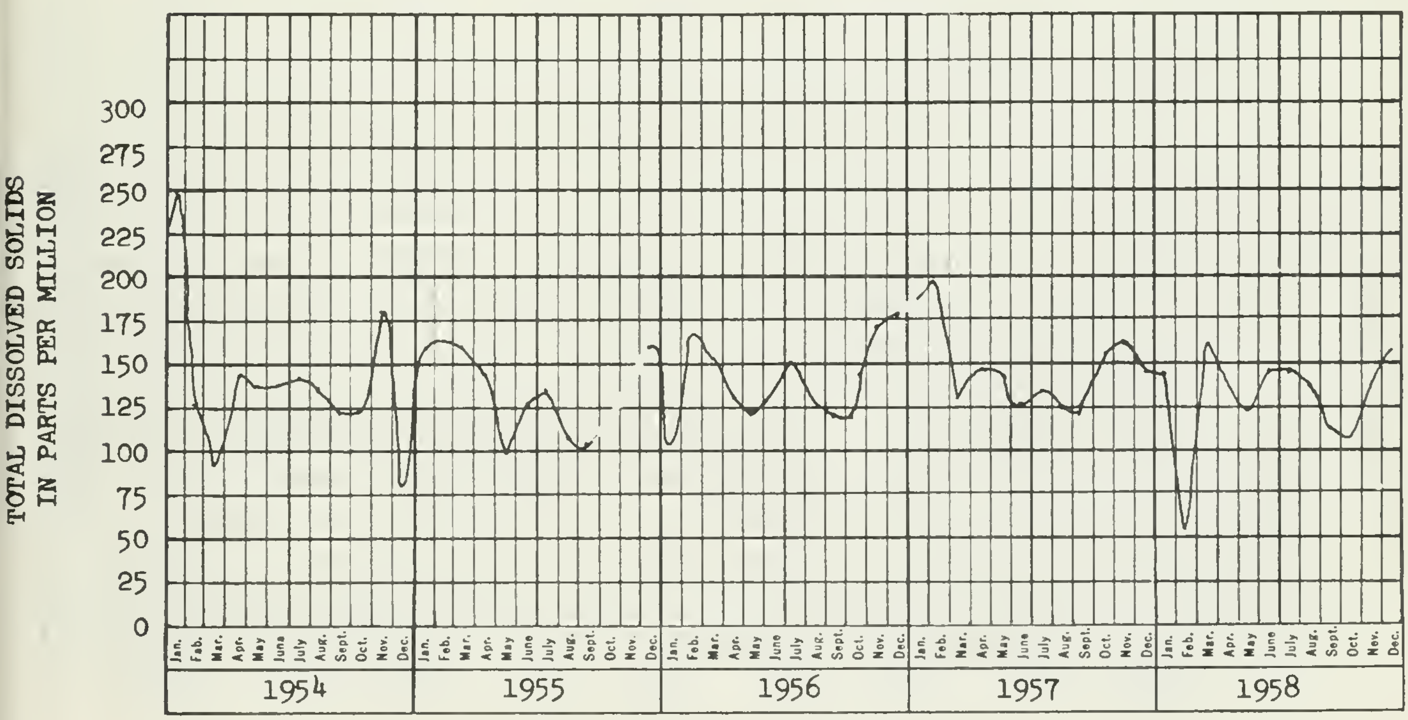
QUALITY CHARACTERISTICS OF
CLEAR LAKE AT LAKEPORT (STATION 41)



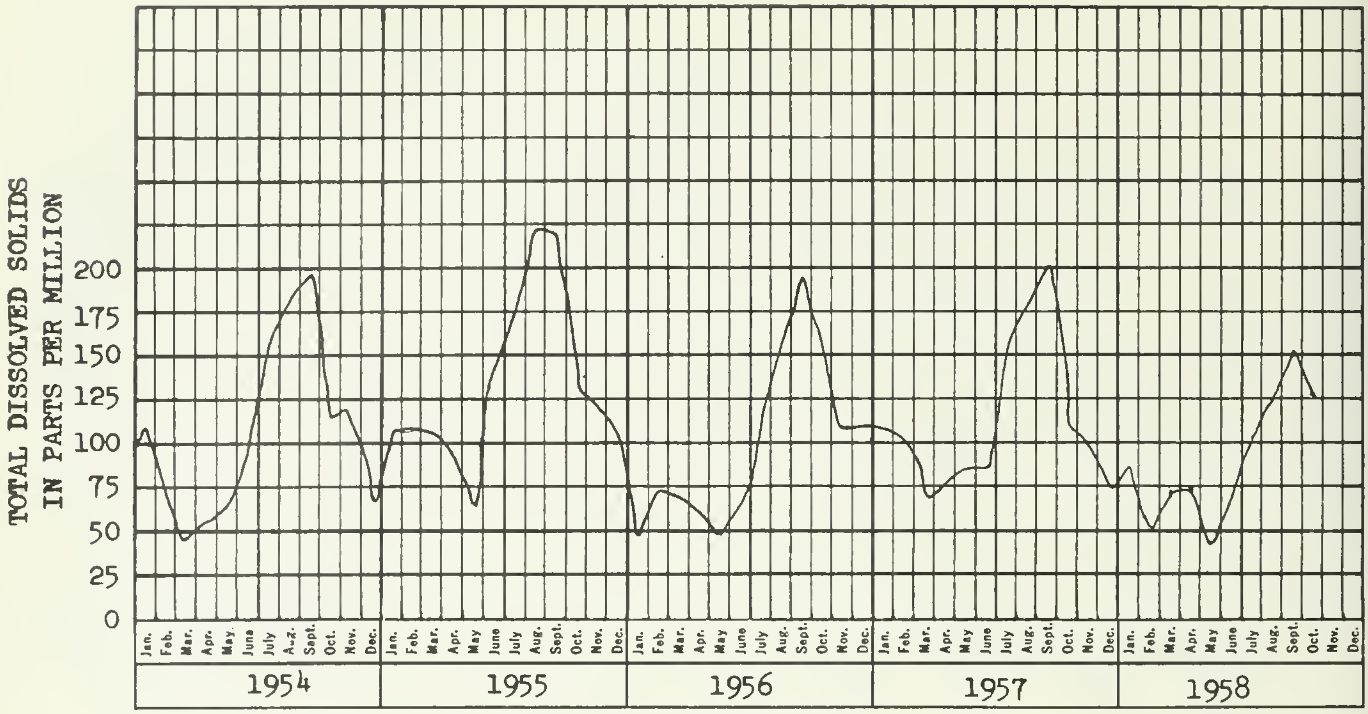
QUALITY CHARACTERISTICS OF
COLUSA TROUGH NEAR COLUSA (STATION 87)



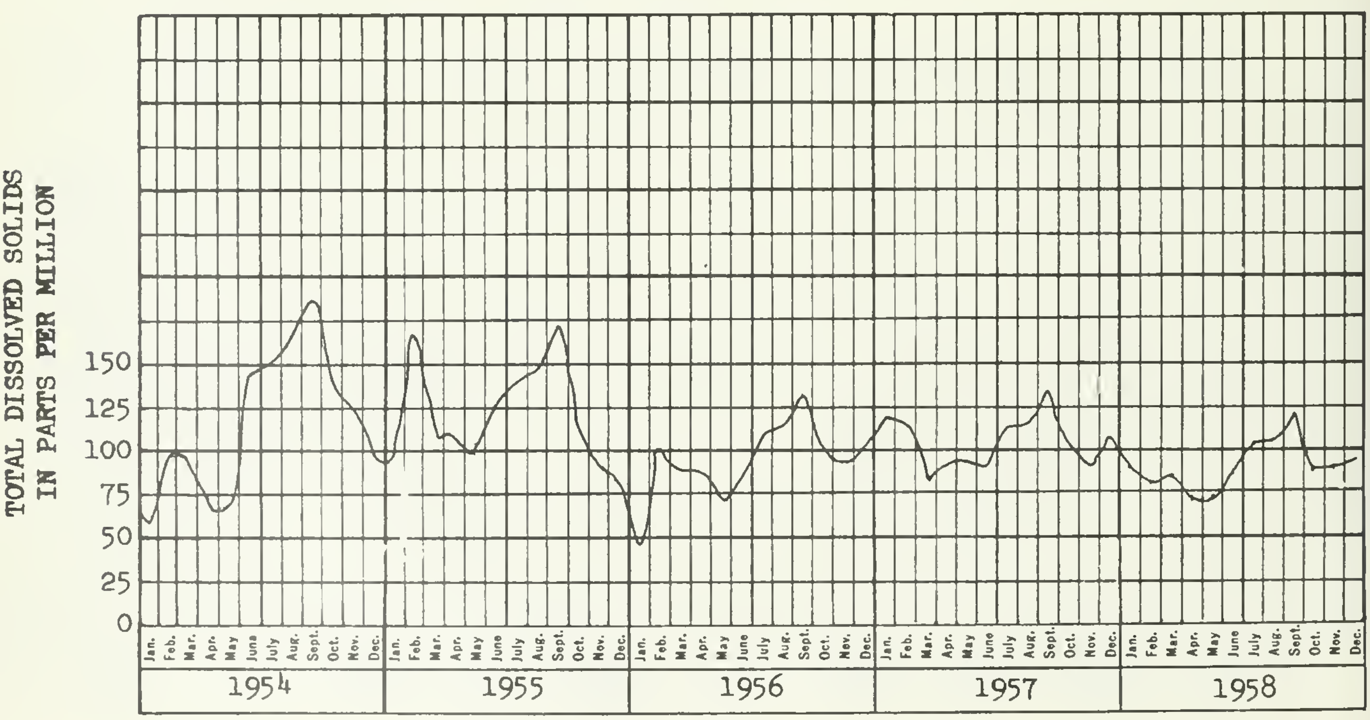
QUALITY CHARACTERISTICS OF
COSUMNES RIVER AT MICHIGAN BAR (STATION 94)



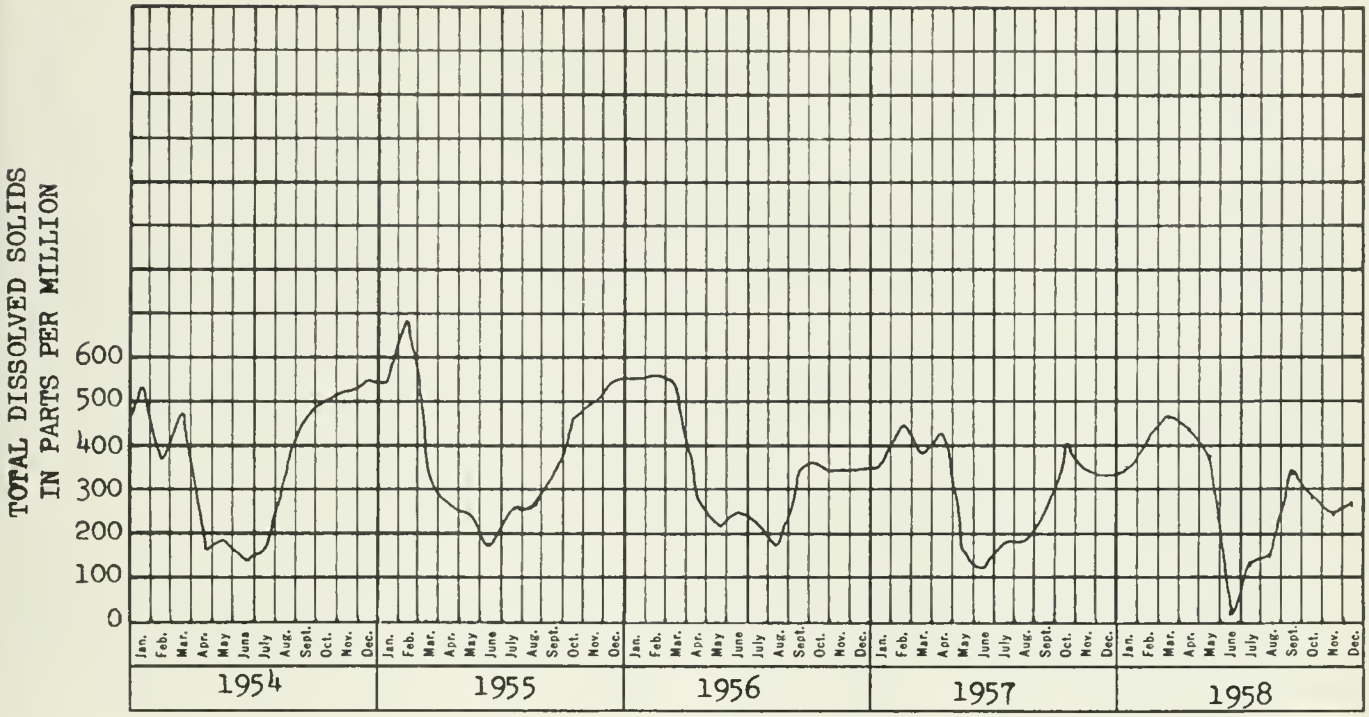
QUALITY CHARACTERISTICS OF
COTTONWOOD CREEK NEAR COTTONWOOD (STATION 12b)



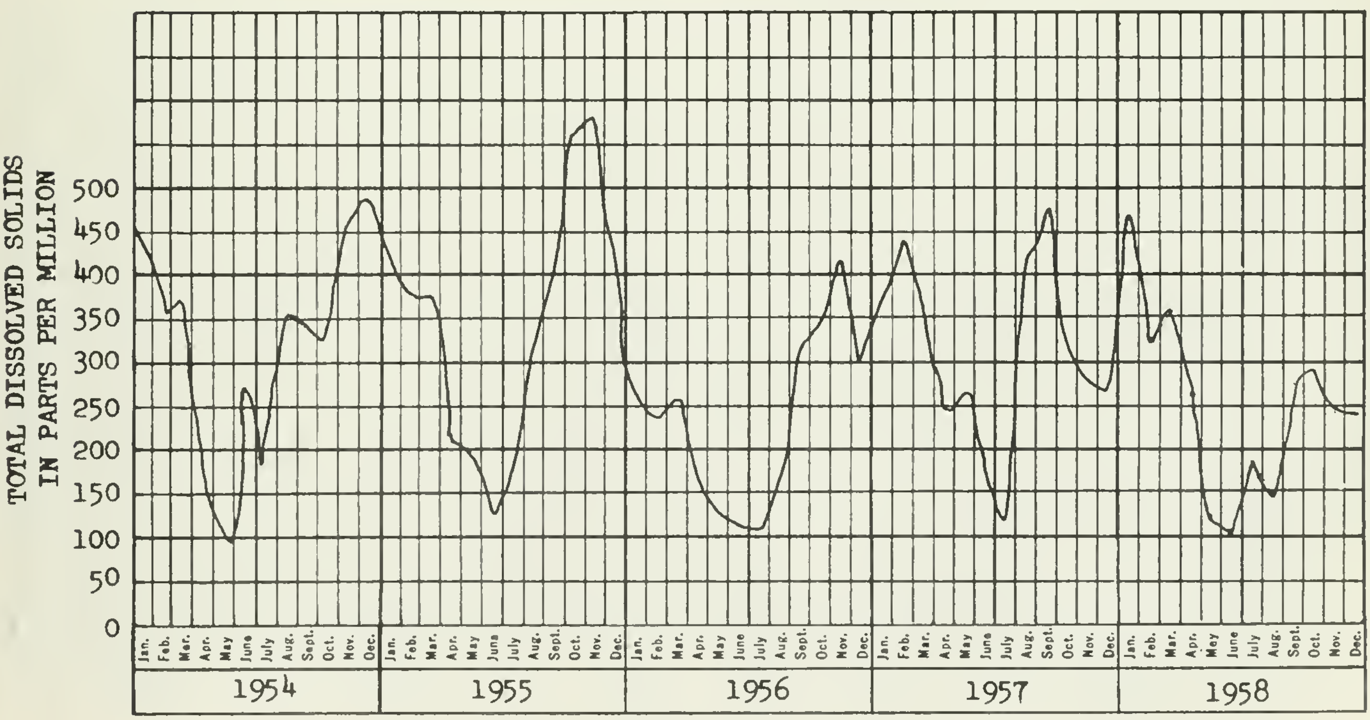
QUALITY CHARACTERISTICS OF
DEER CREEK NEAR VINA (STATION 95)



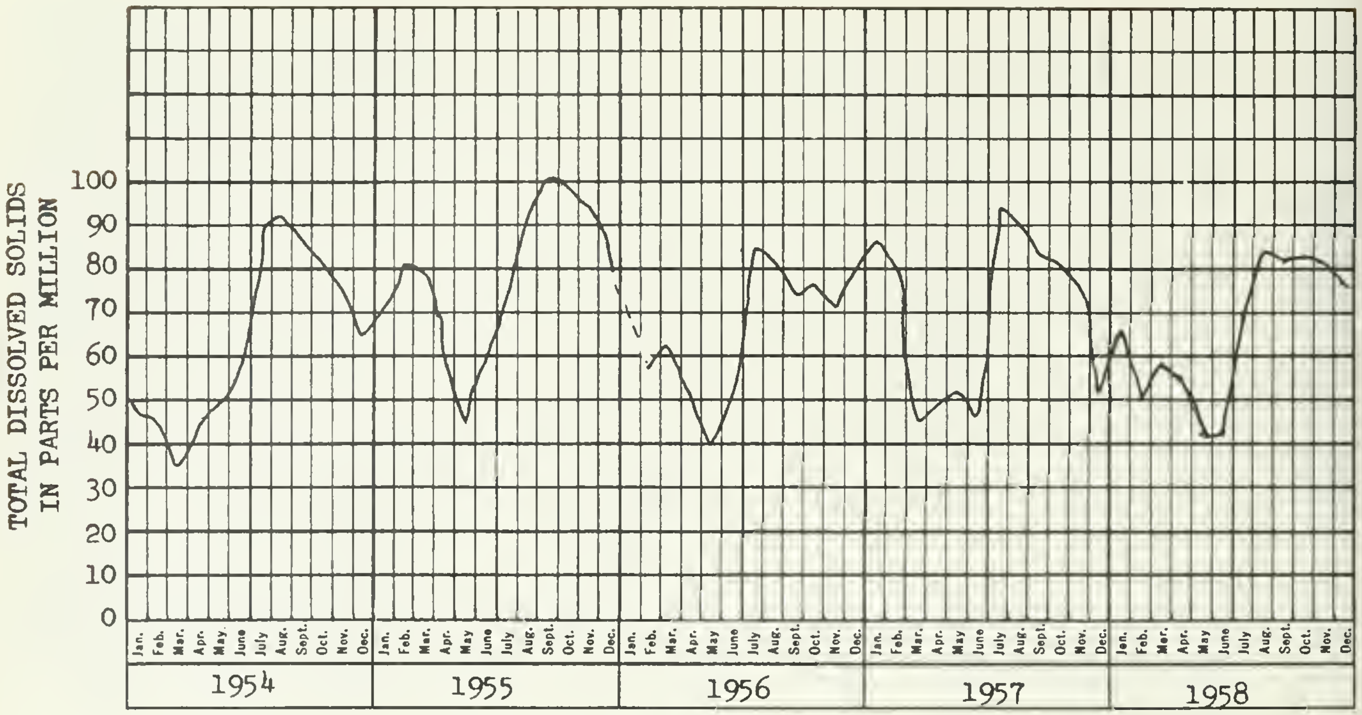
QUALITY CHARACTERISTICS OF
DELTA CROSS CHANNEL AT WALNUT GROVE (STATION 98)



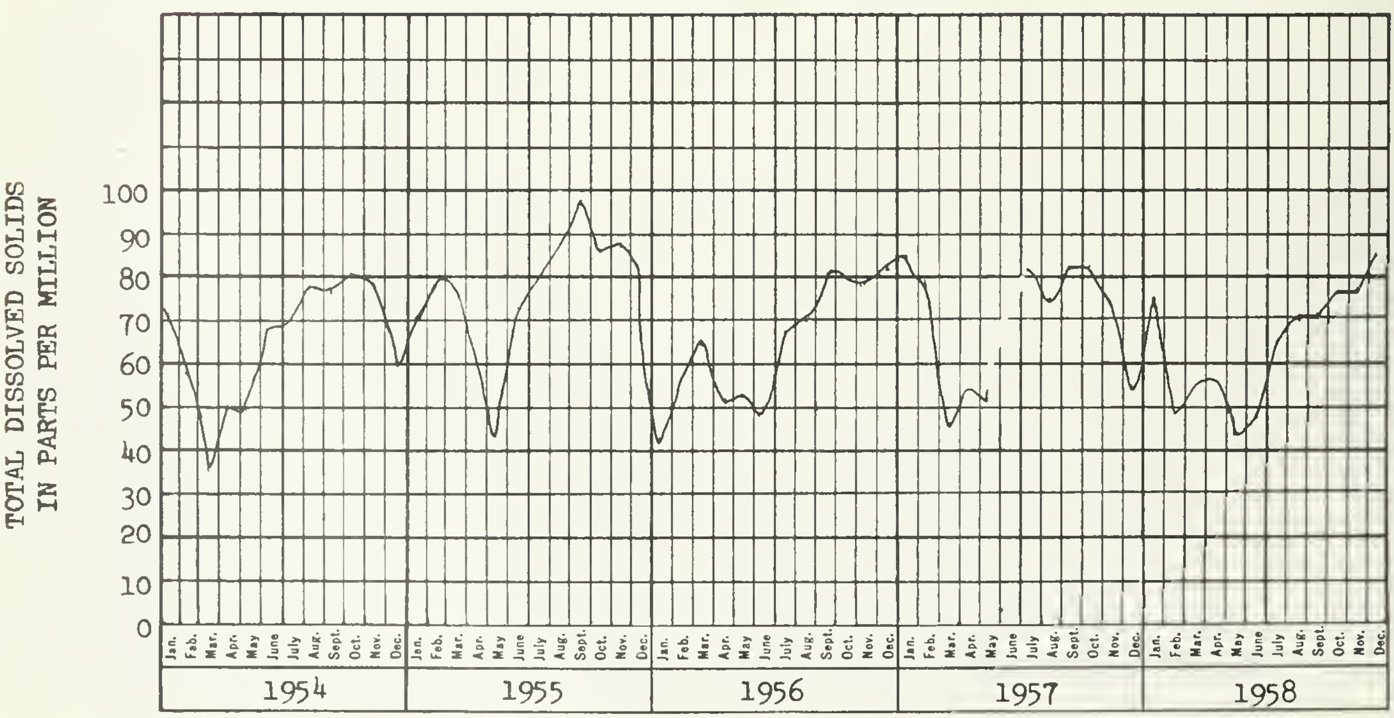
QUALITY CHARACTERISTICS OF
DELTA-MENDOTA CANAL NEAR MENDOTA (STATION 92)



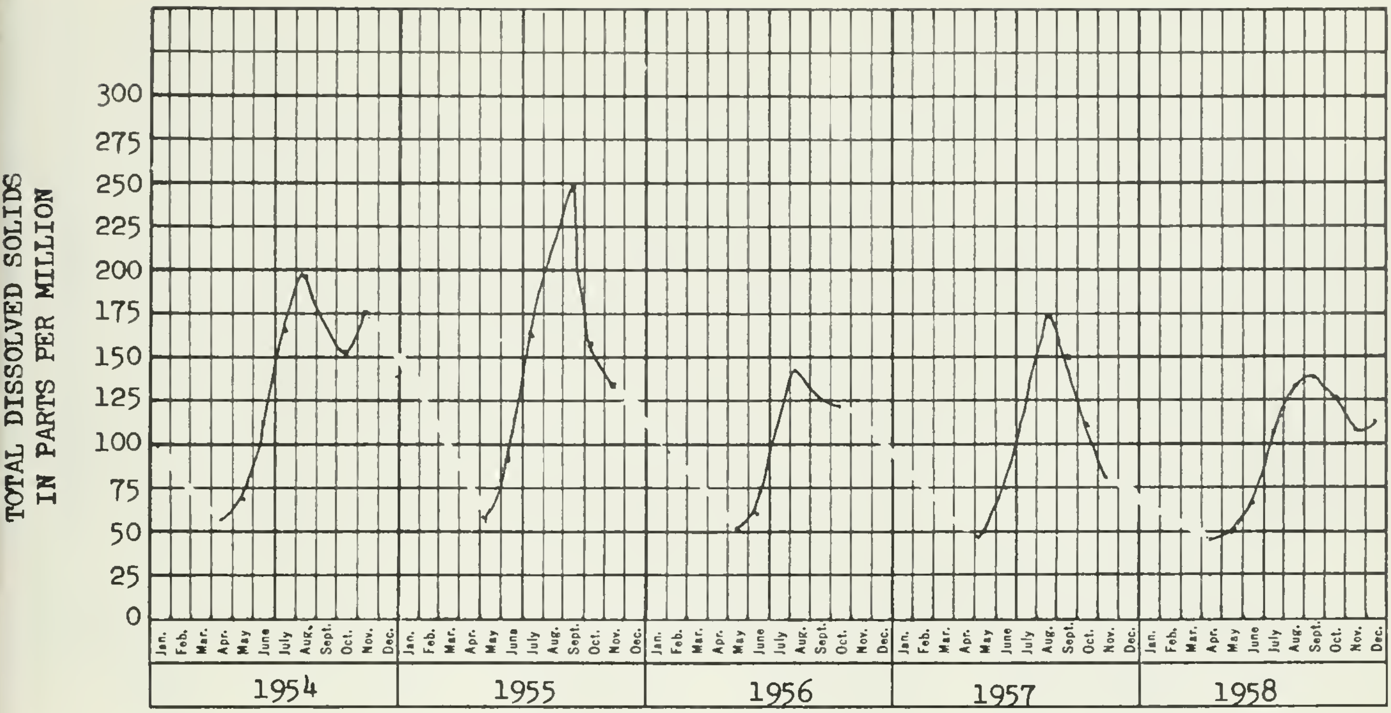
QUALITY CHARACTERISTICS OF
DELTA-MENDOTA CANAL NEAR TRACY (STATION 93)



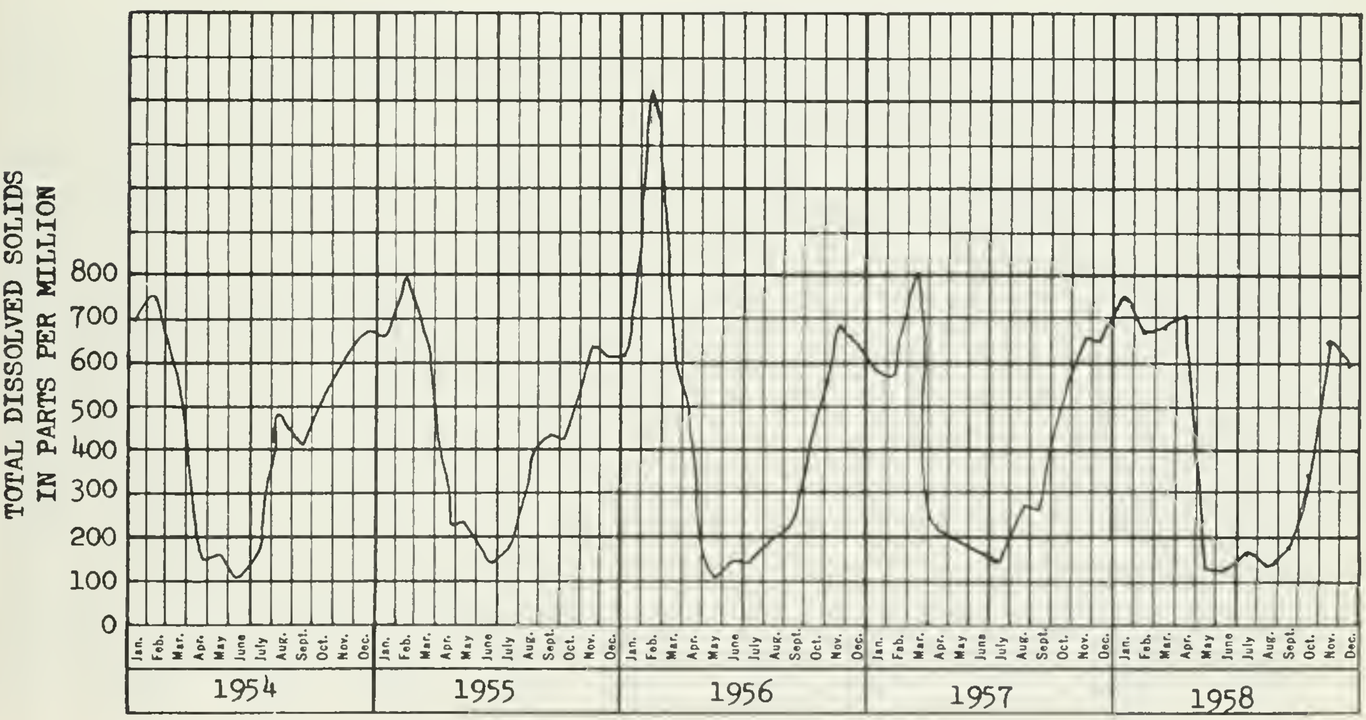
QUALITY CHARACTERISTICS OF
FEATHER RIVER AT NICOLAUS (STATION 20)



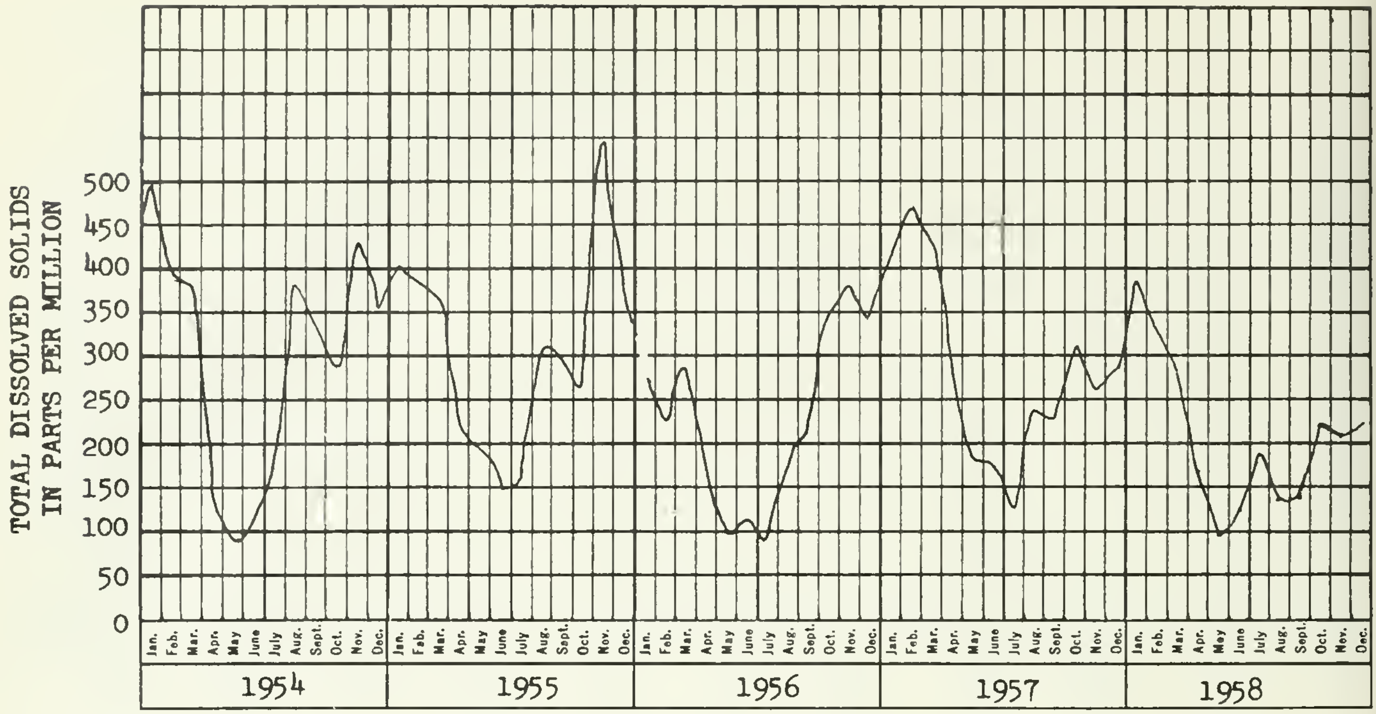
QUALITY CHARACTERISTICS OF
FEATHER RIVER NEAR OROVILLE (STATION 19)



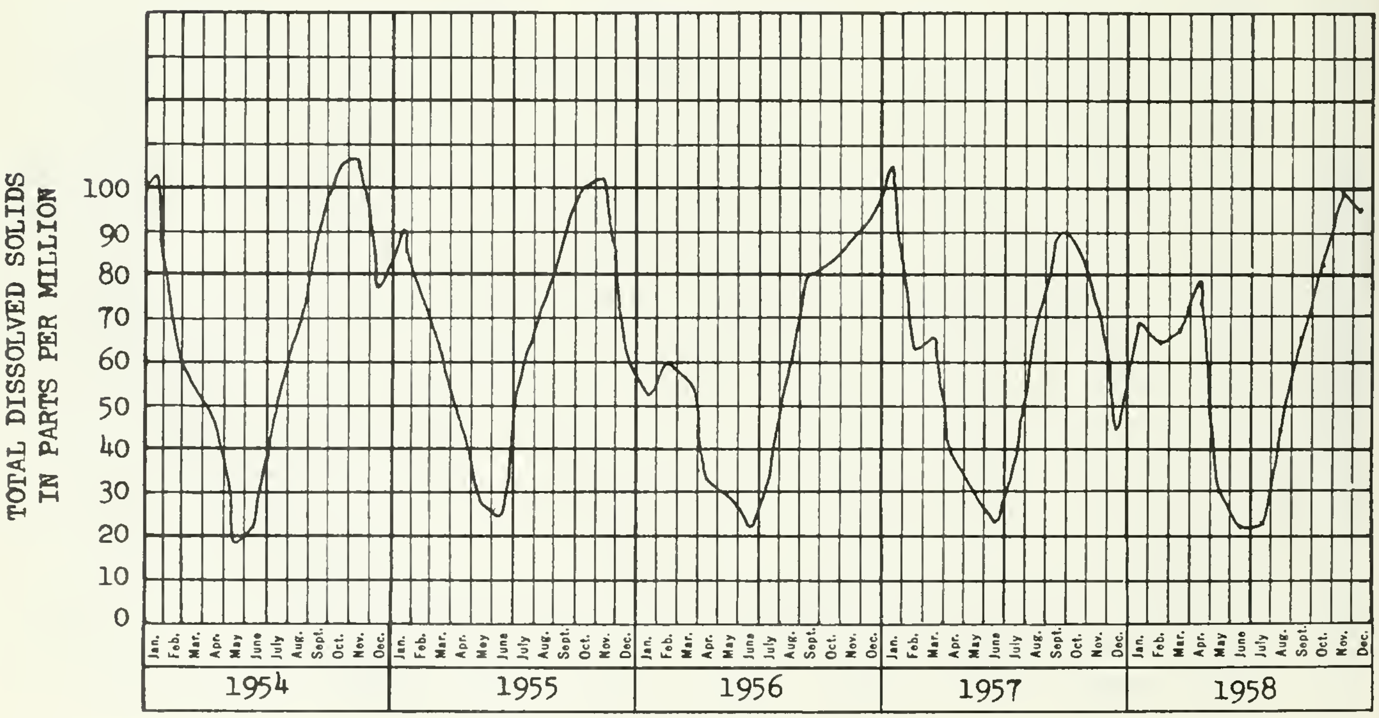
QUALITY CHARACTERISTICS OF
INDIAN CREEK NEAR CRESCENT MILLS (STATION 17d)



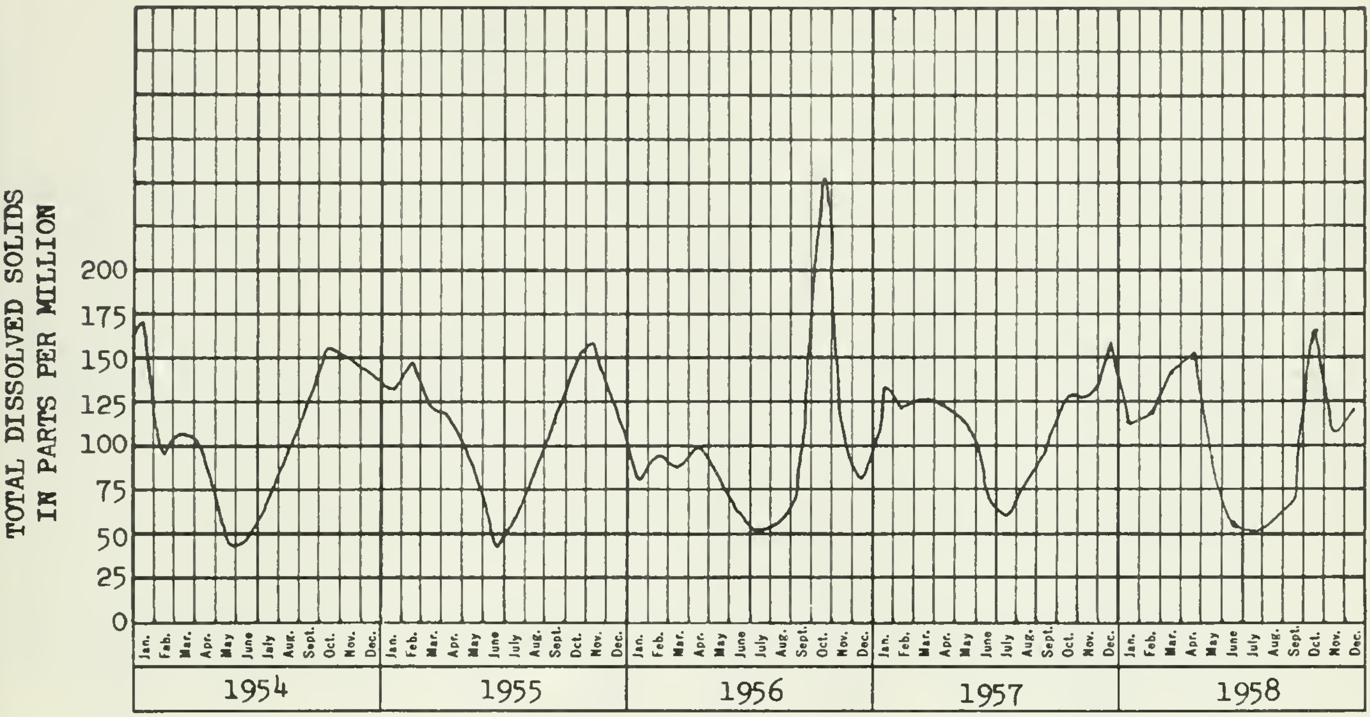
QUALITY CHARACTERISTICS OF
INDIAN SLOUGH NEAR BRENTWOOD (STATION 107)



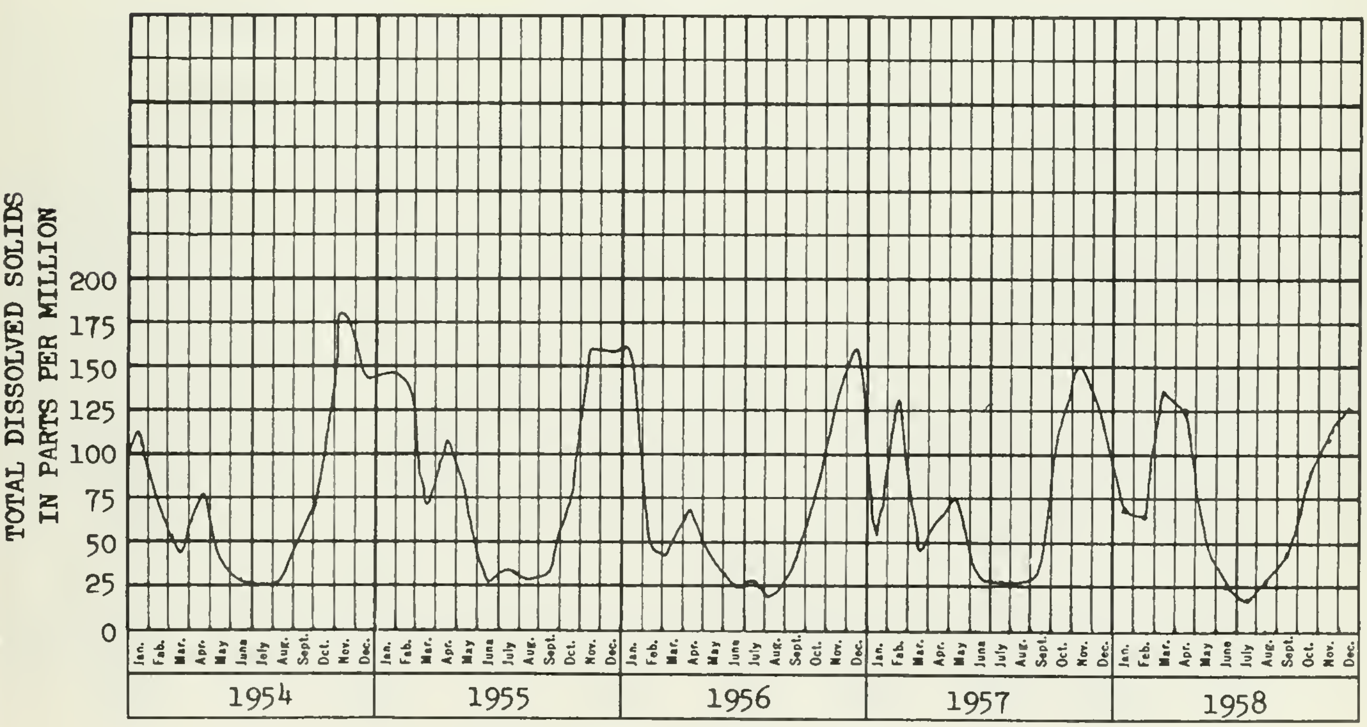
QUALITY CHARACTERISTICS OF
ITALIAN SLOUGH NEAR MOUTH (STATION 106)



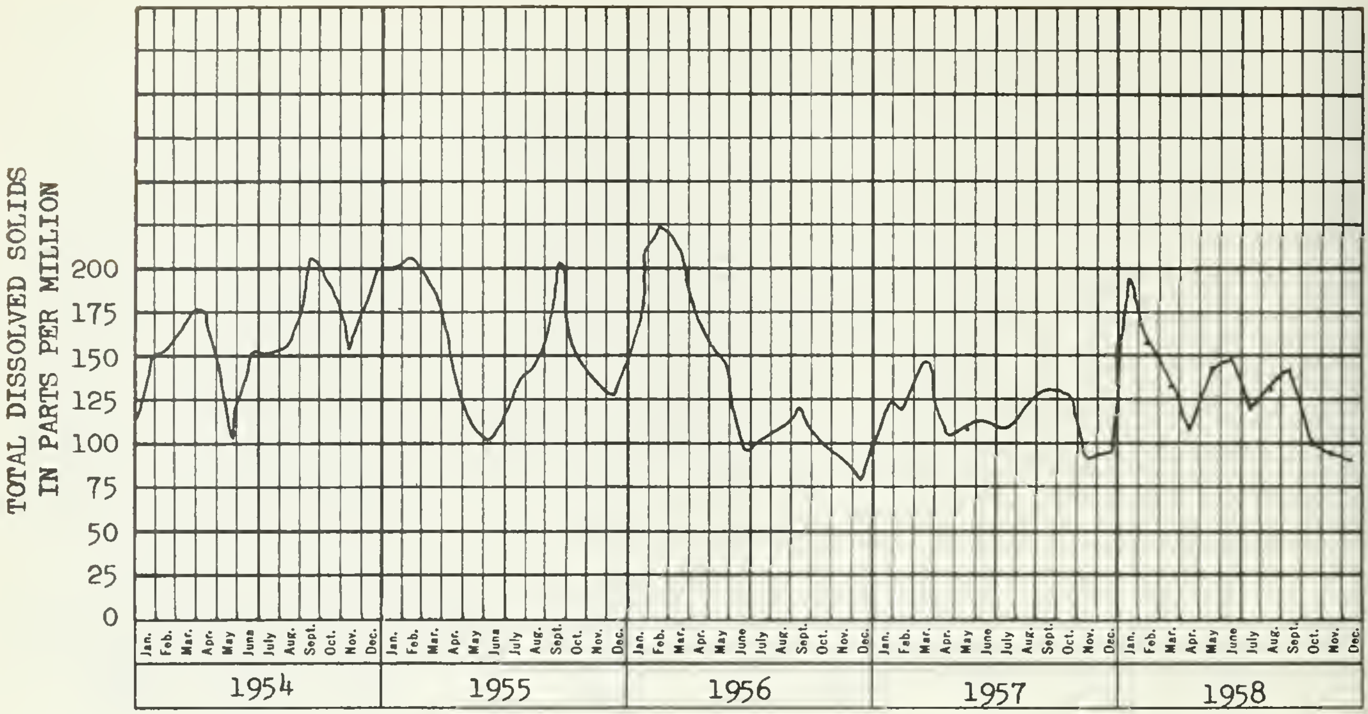
QUALITY CHARACTERISTICS OF
KAWEAH RIVER NEAR THREE RIVERS (STATION 35)



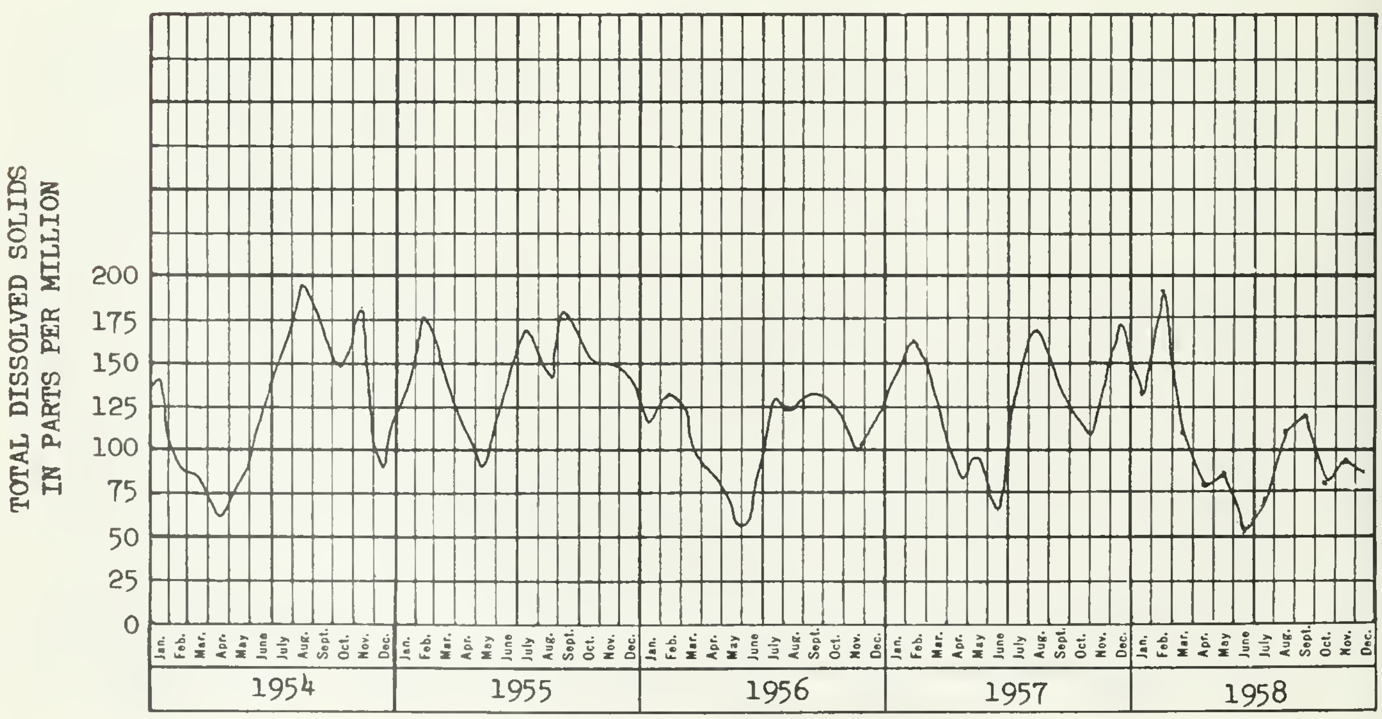
QUALITY CHARACTERISTICS OF
KERN RIVER NEAR BAKERSFIELD (STATION 36)



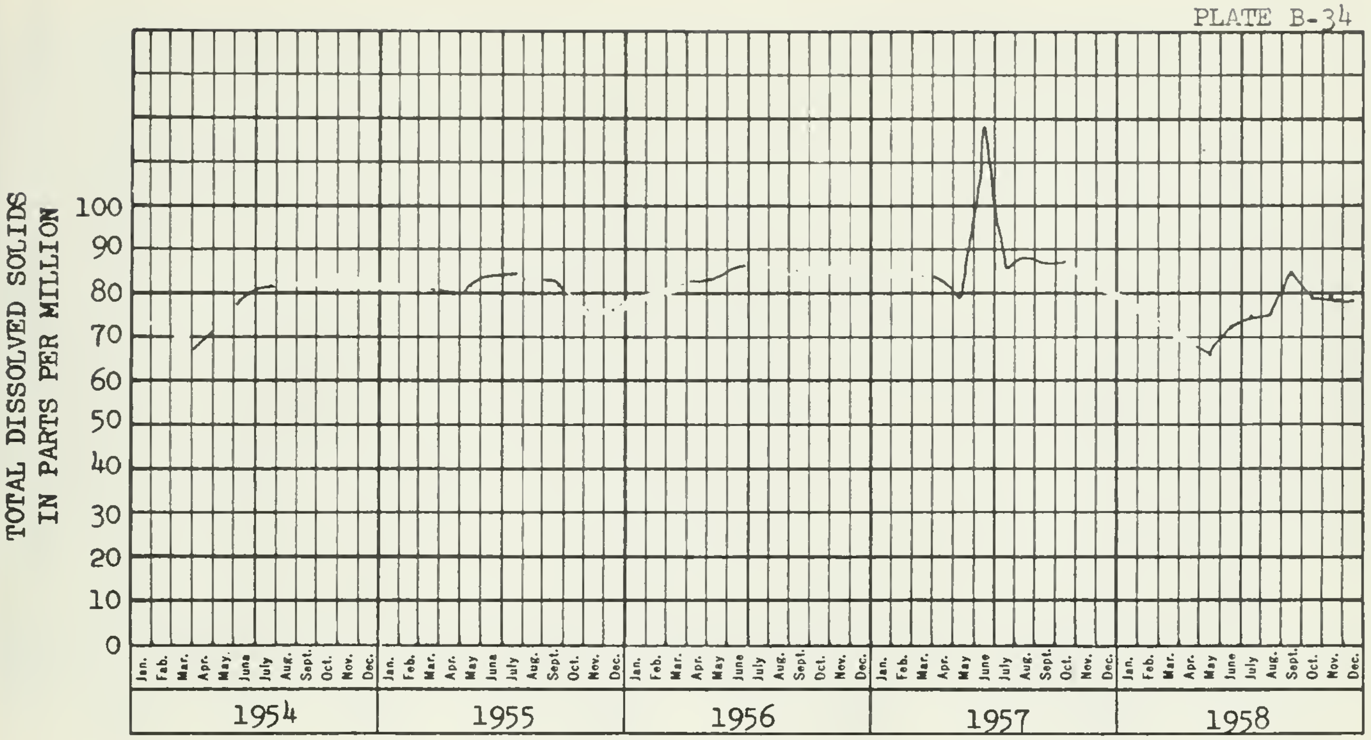
QUALITY CHARACTERISTICS OF
KINGS RIVER BELOW PEOPLES WEIR (near Kingsburg) (STATION 34)



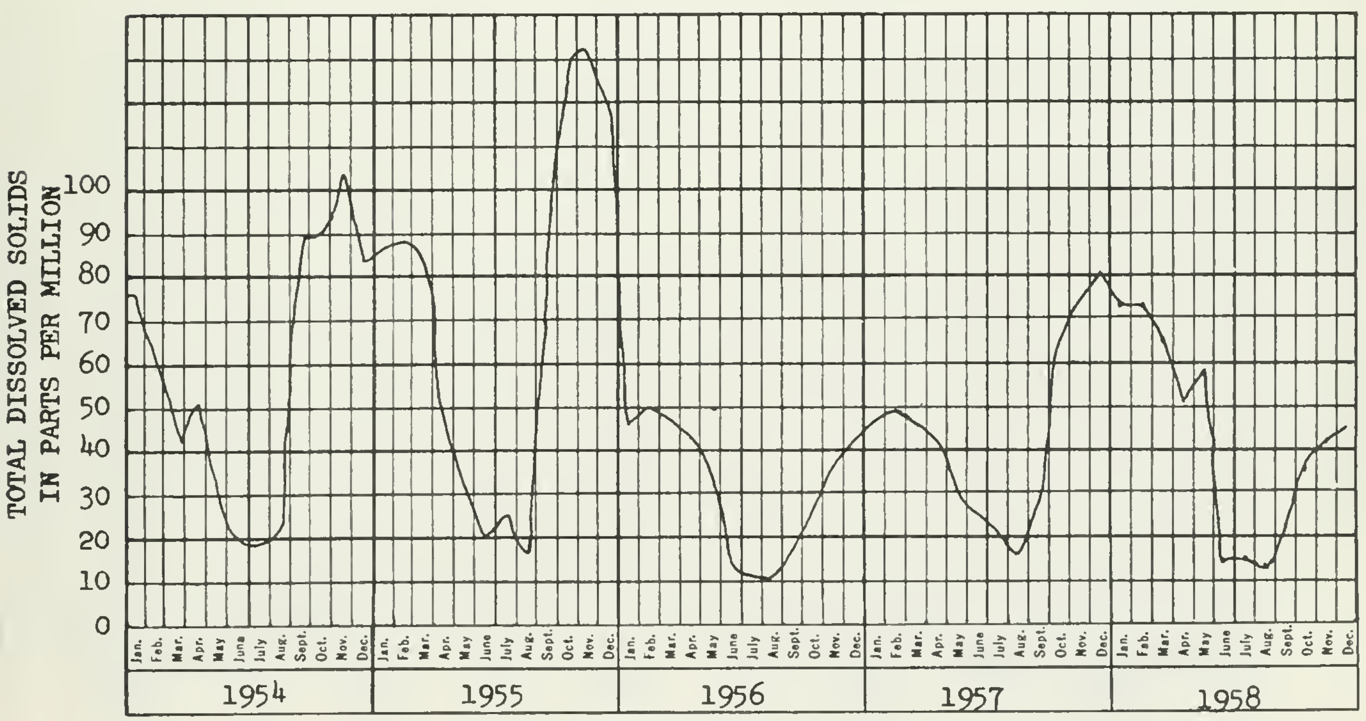
QUALITY CHARACTERISTICS OF
LINDSEY SLOUGH NEAR RIO VISTA (STATION 110)



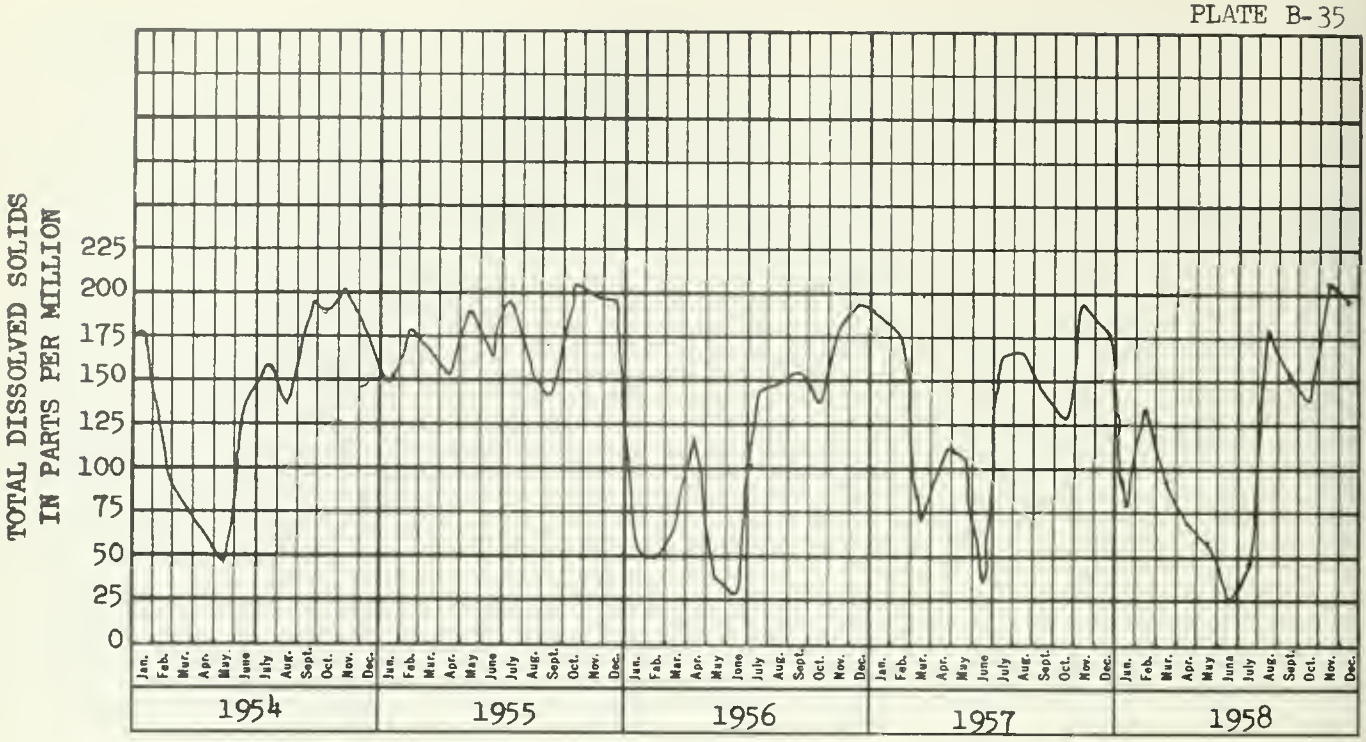
QUALITY CHARACTERISTICS OF
LITTLE POTATO SLOUGH AT TERMINOUS (STATION 99)



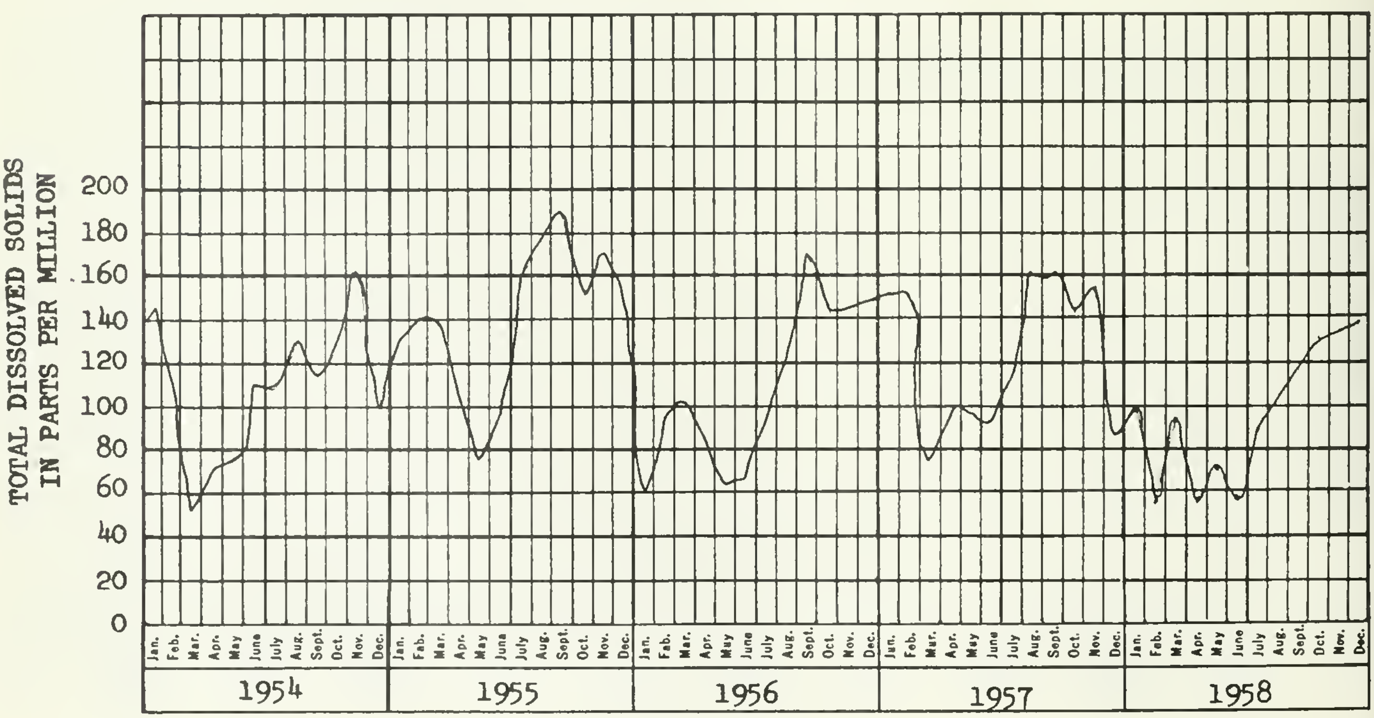
QUALITY CHARACTERISTICS OF
MCCLOUD RIVER ABOVE SHASTA LAKE (STATION 18)



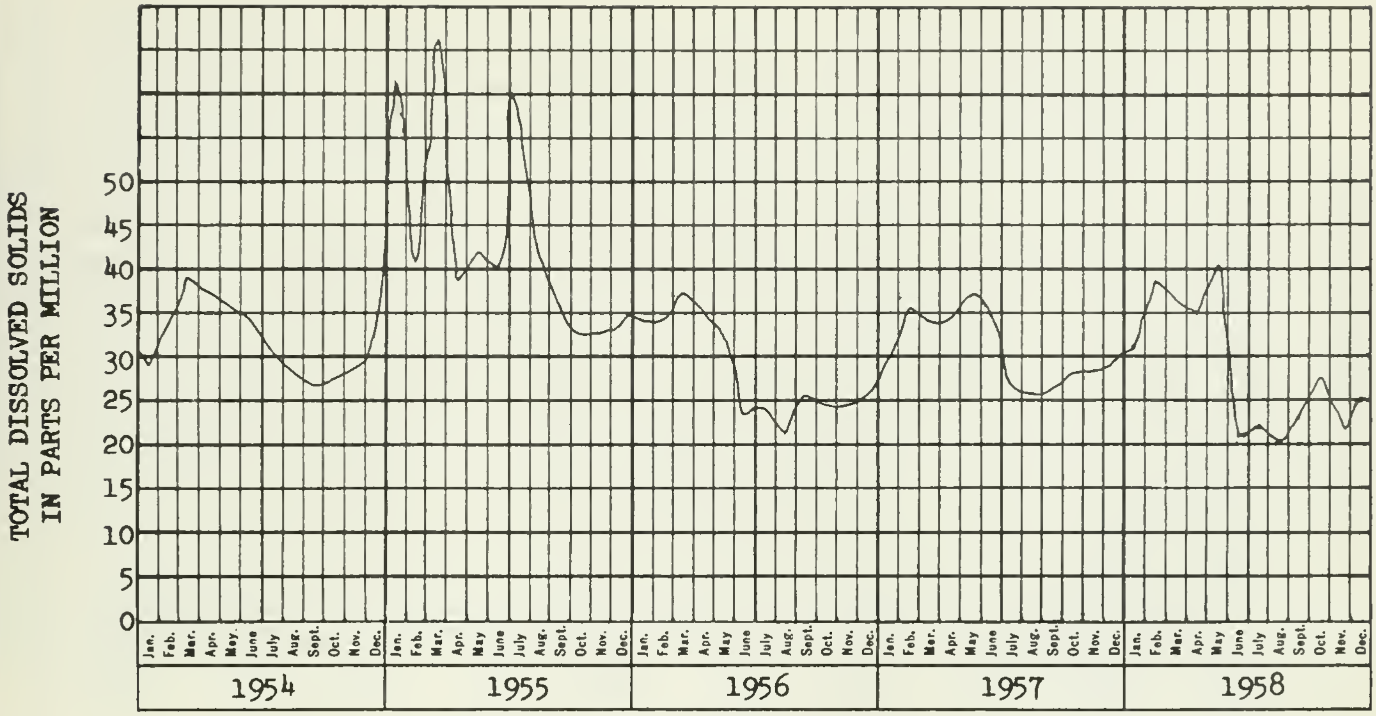
QUALITY CHARACTERISTICS OF
MERCED RIVER BELOW EXCHEQUER DAM (STATION 32a)



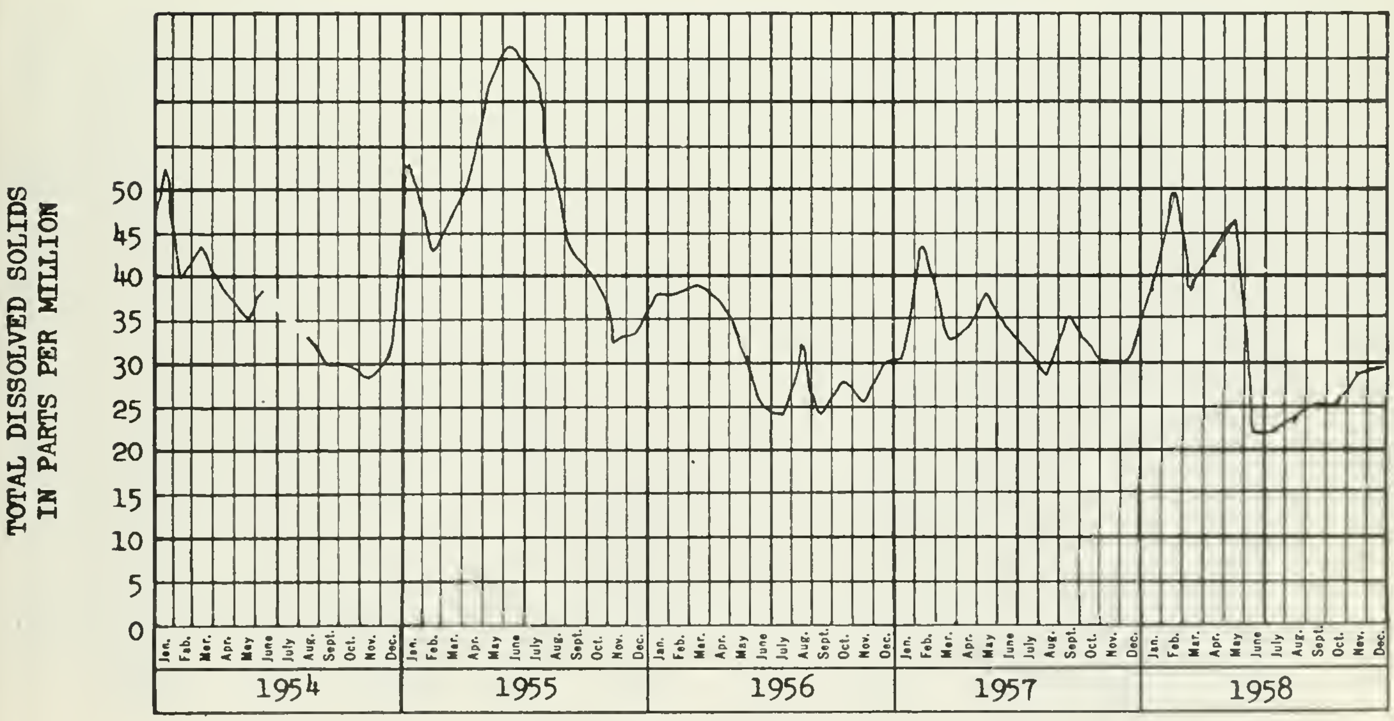
QUALITY CHARACTERISTICS OF
MERCED RIVER NEAR STEVINSON (STATION 32)



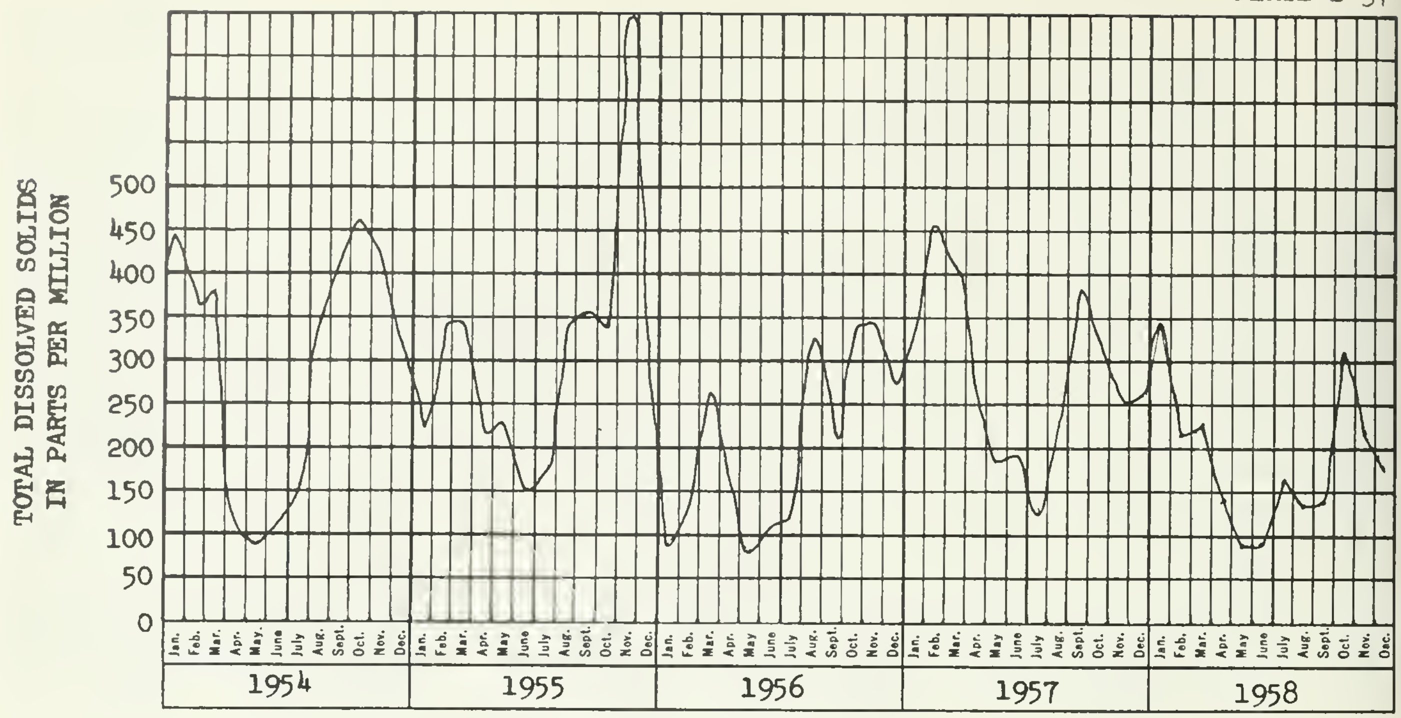
QUALITY CHARACTERISTICS OF
MILL CREEK NEAR LOS MOLINOS (STATION 88)



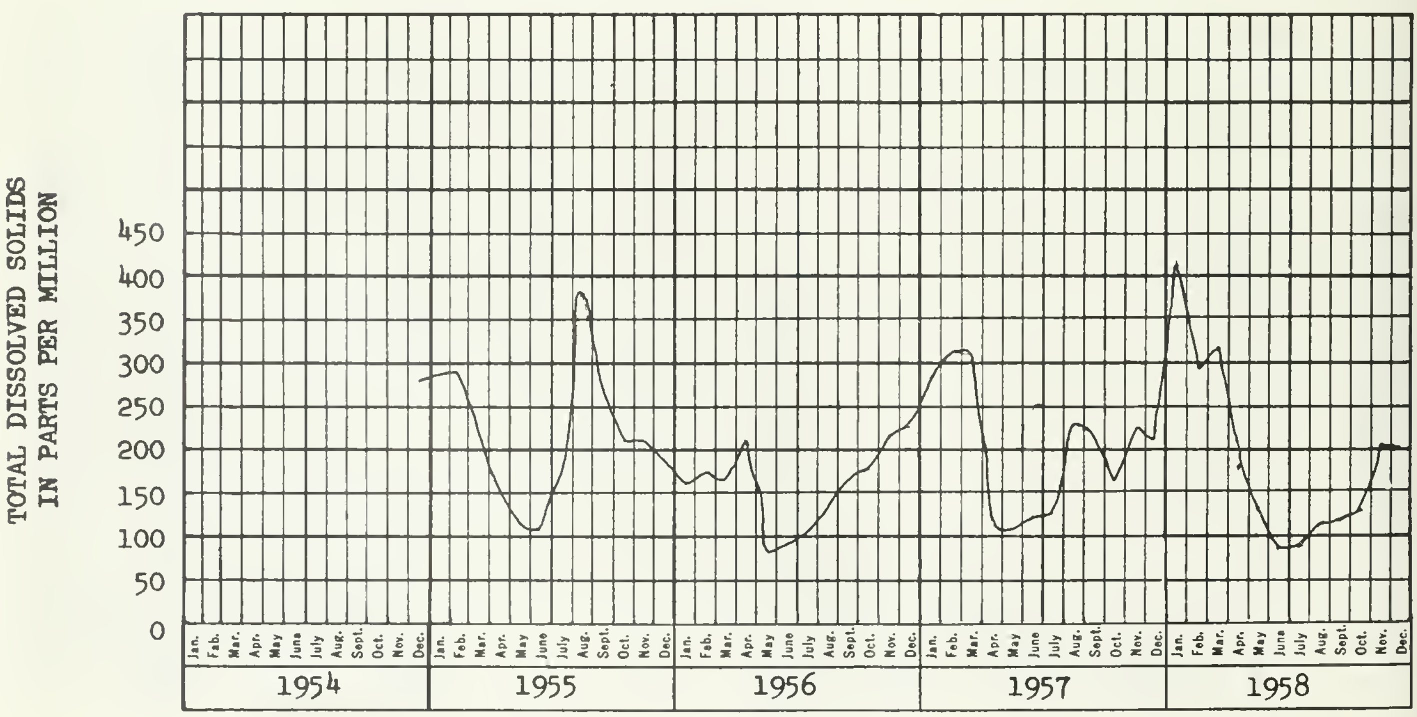
QUALITY CHARACTERISTICS OF
MOKELUMNE RIVER NEAR LANCHA PLANA (STATION 23a)



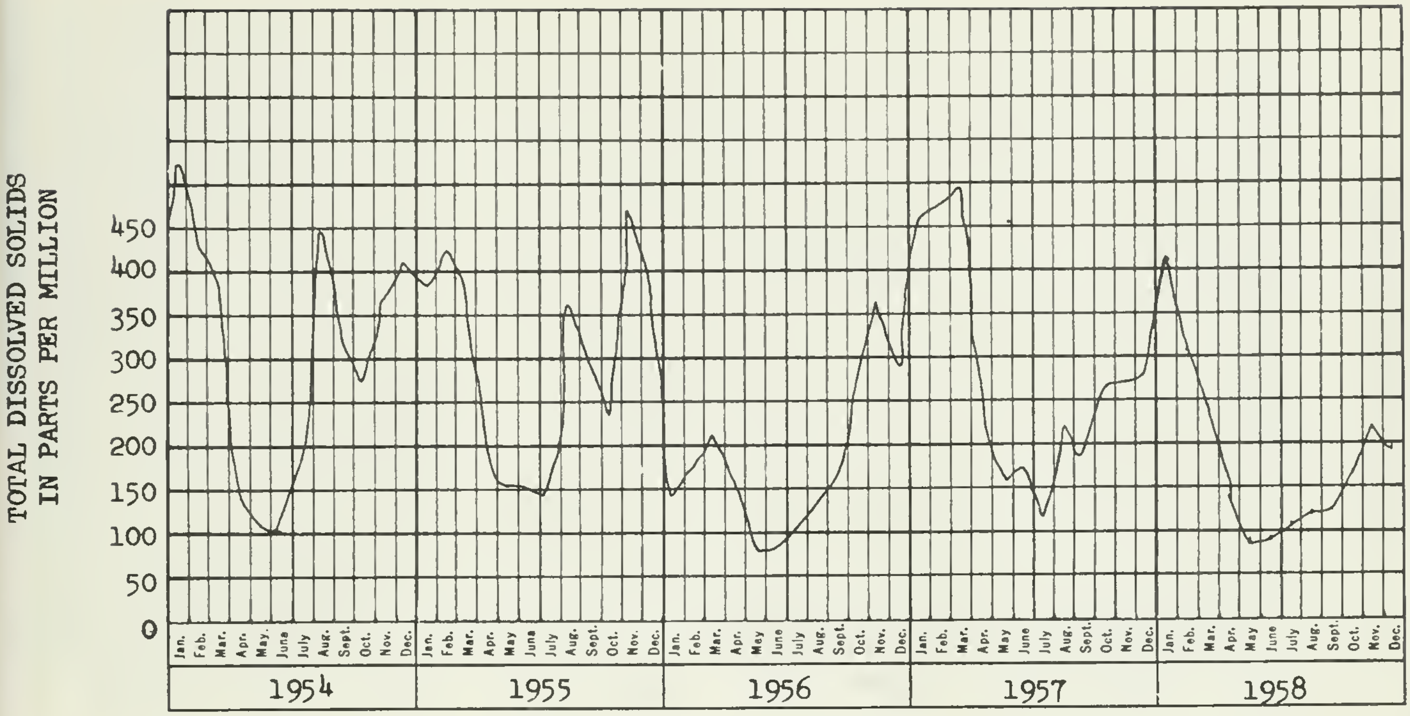
QUALITY CHARACTERISTICS OF
MOKELUMNE RIVER AT WOODBRIDGE (STATION 23)



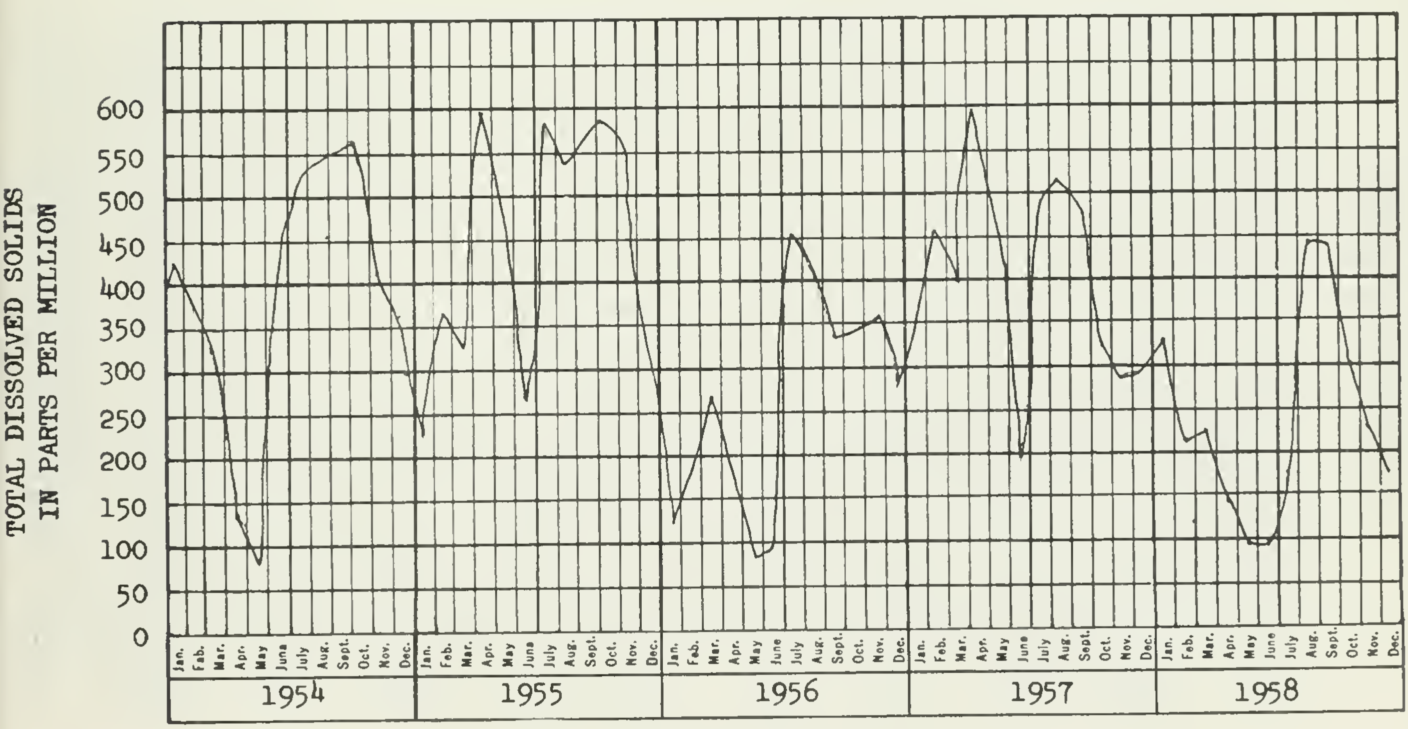
QUALITY CHARACTERISTICS OF
OLD RIVER AT CLIFTON COURT FERRY (STATION 104)



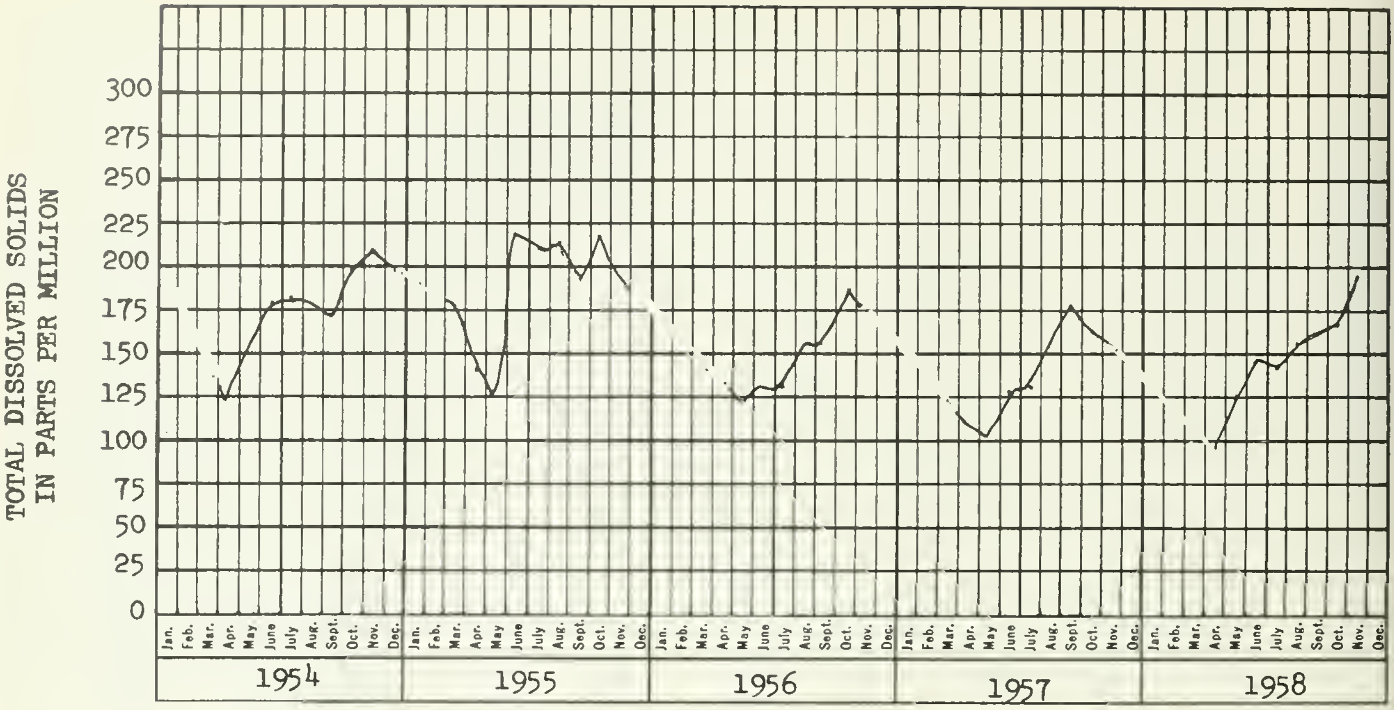
QUALITY CHARACTERISTICS OF
OLD RIVER AT MANDEVILLE ISLAND (STATION 112)



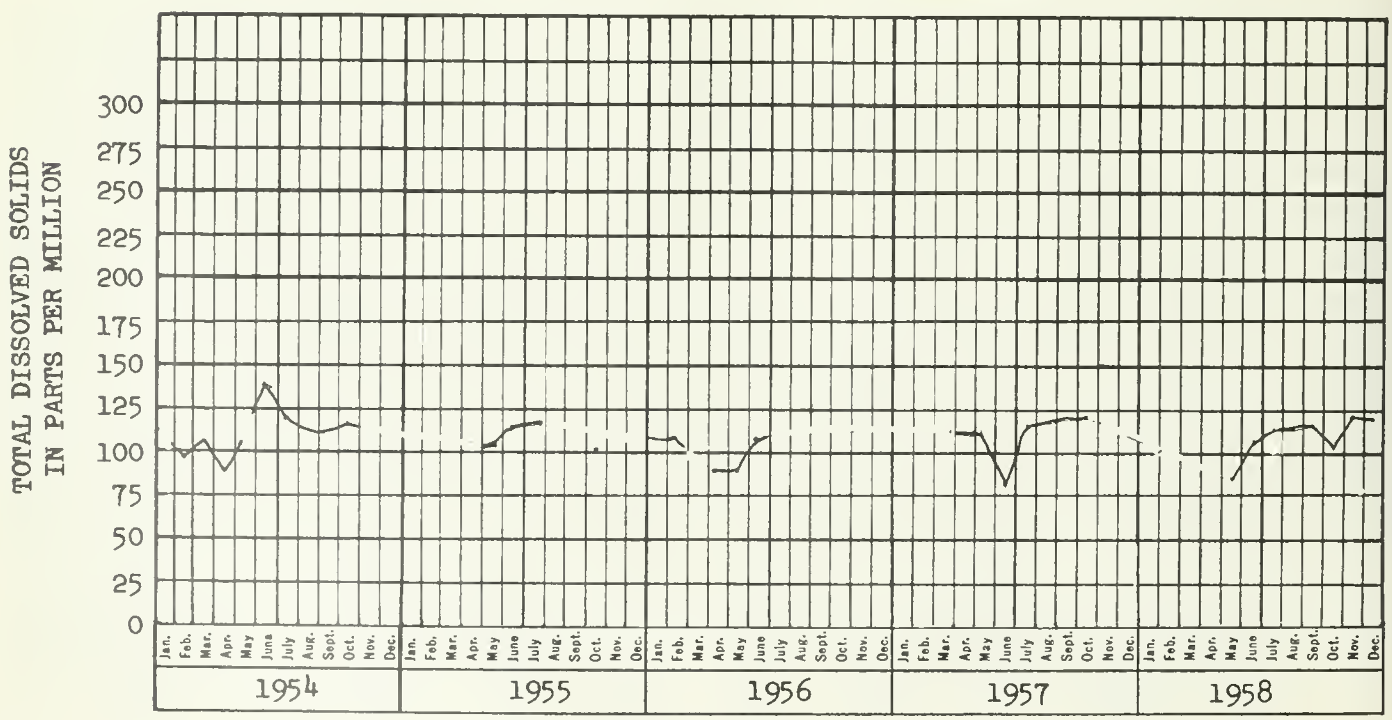
QUALITY CHARACTERISTICS OF
OLD RIVER AT ORWOOD BRIDGE (STATION 108)



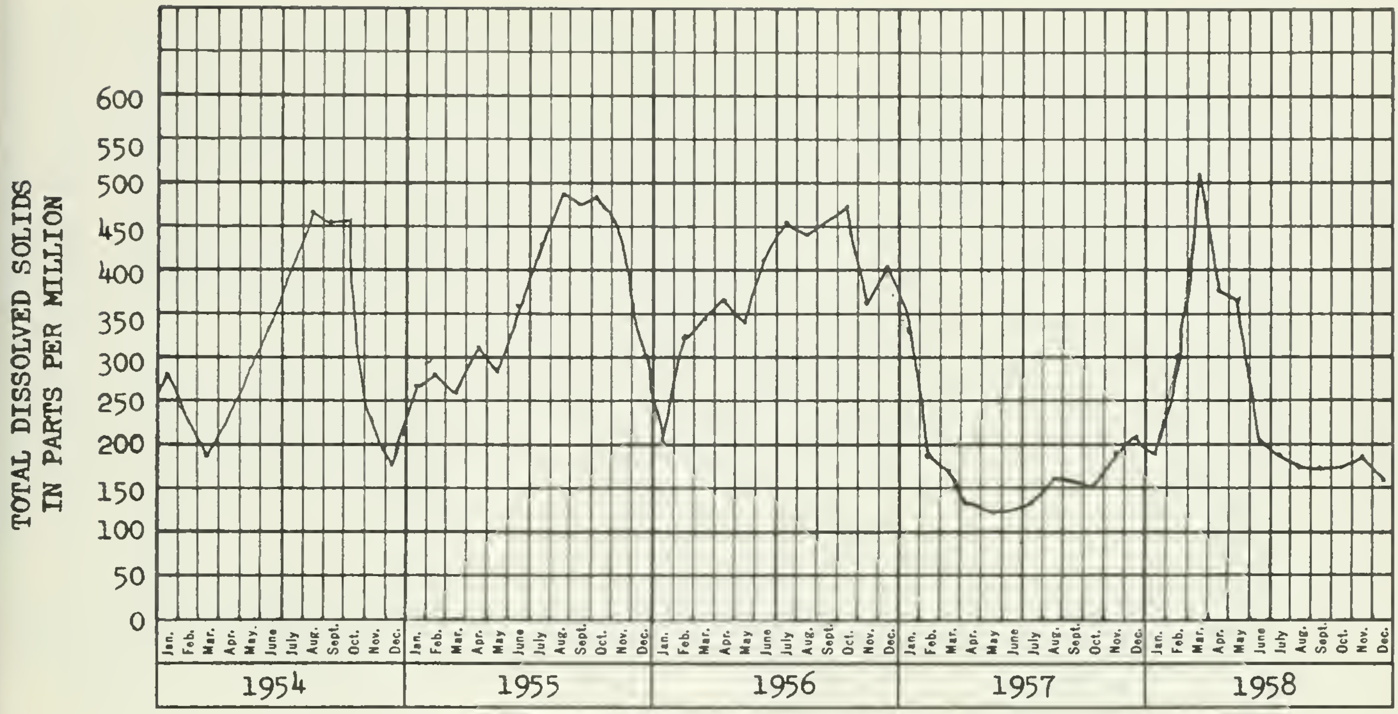
QUALITY CHARACTERISTICS OF
OLD RIVER NEAR TRACY (STATION 103)



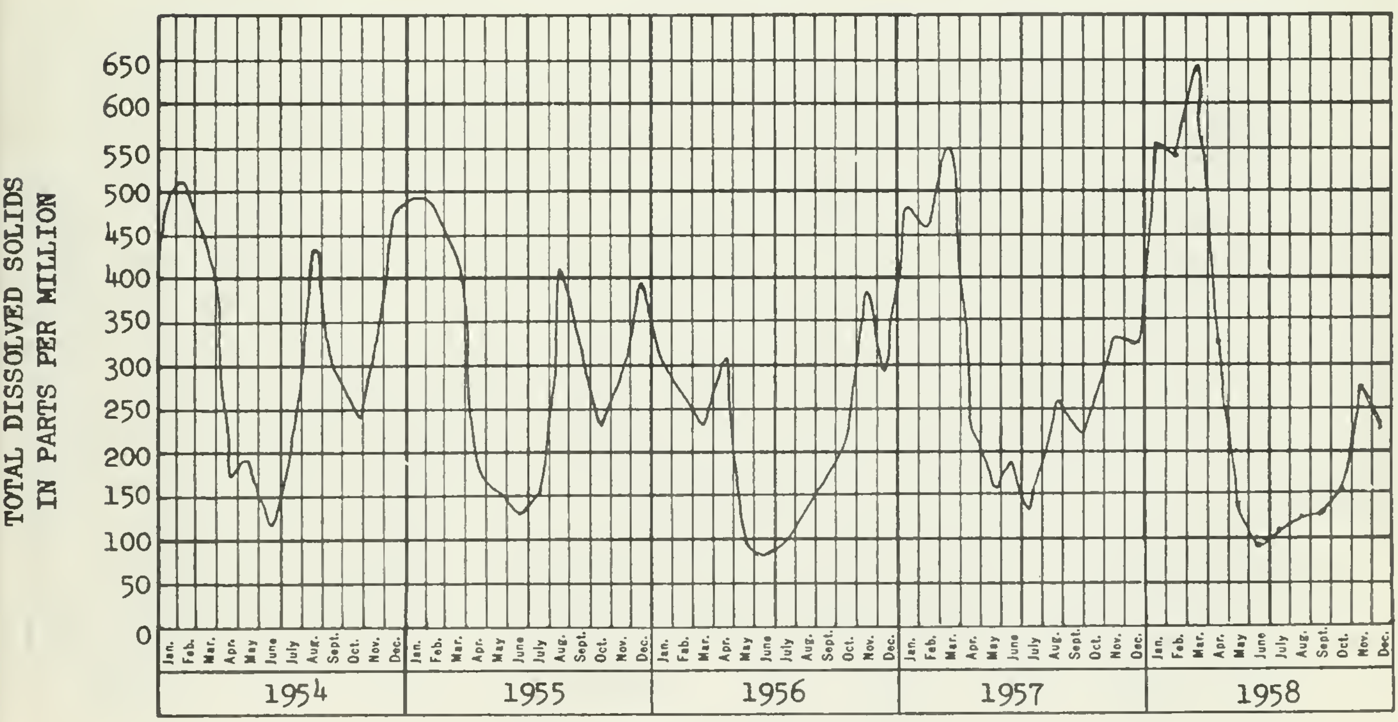
QUALITY CHARACTERISTICS OF
PIT RIVER NEAR CANBY (STATION 17a)



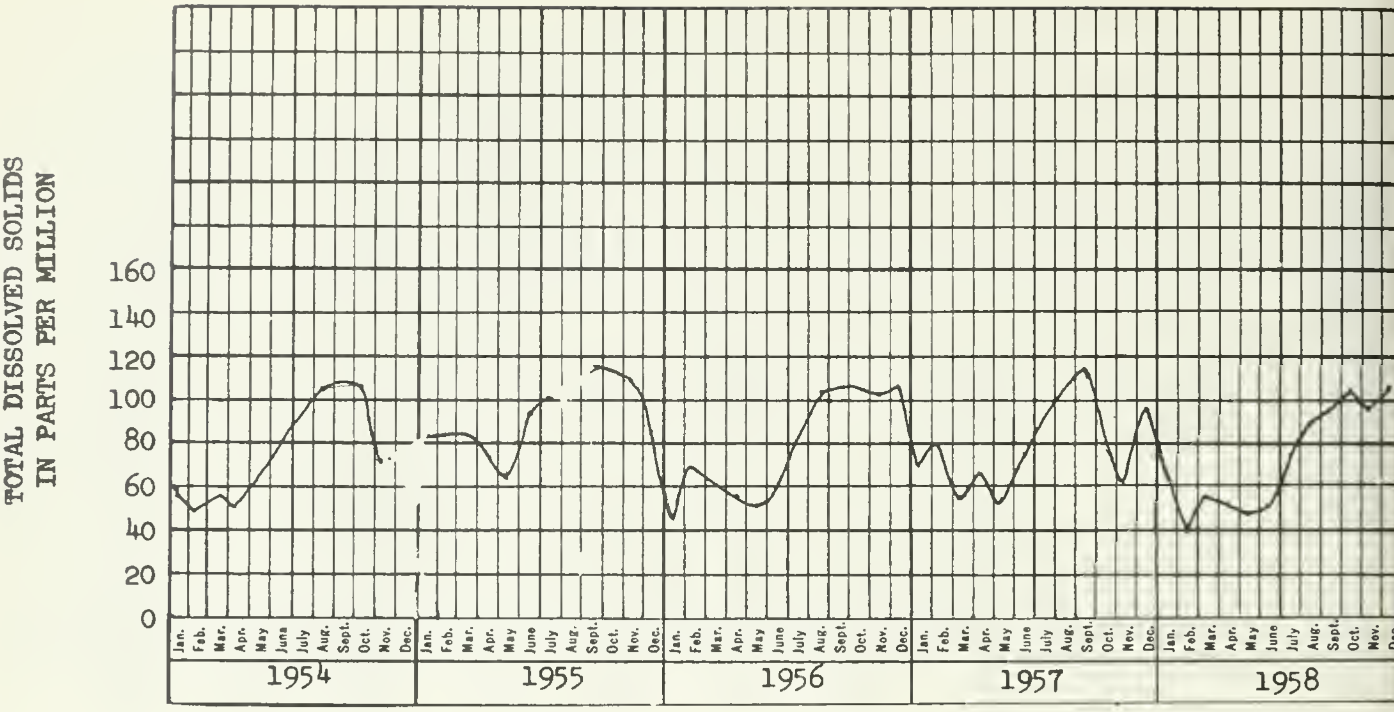
QUALITY CHARACTERISTICS OF
PIT RIVER NEAR MONTGOMERY CREEK (STATION 17)



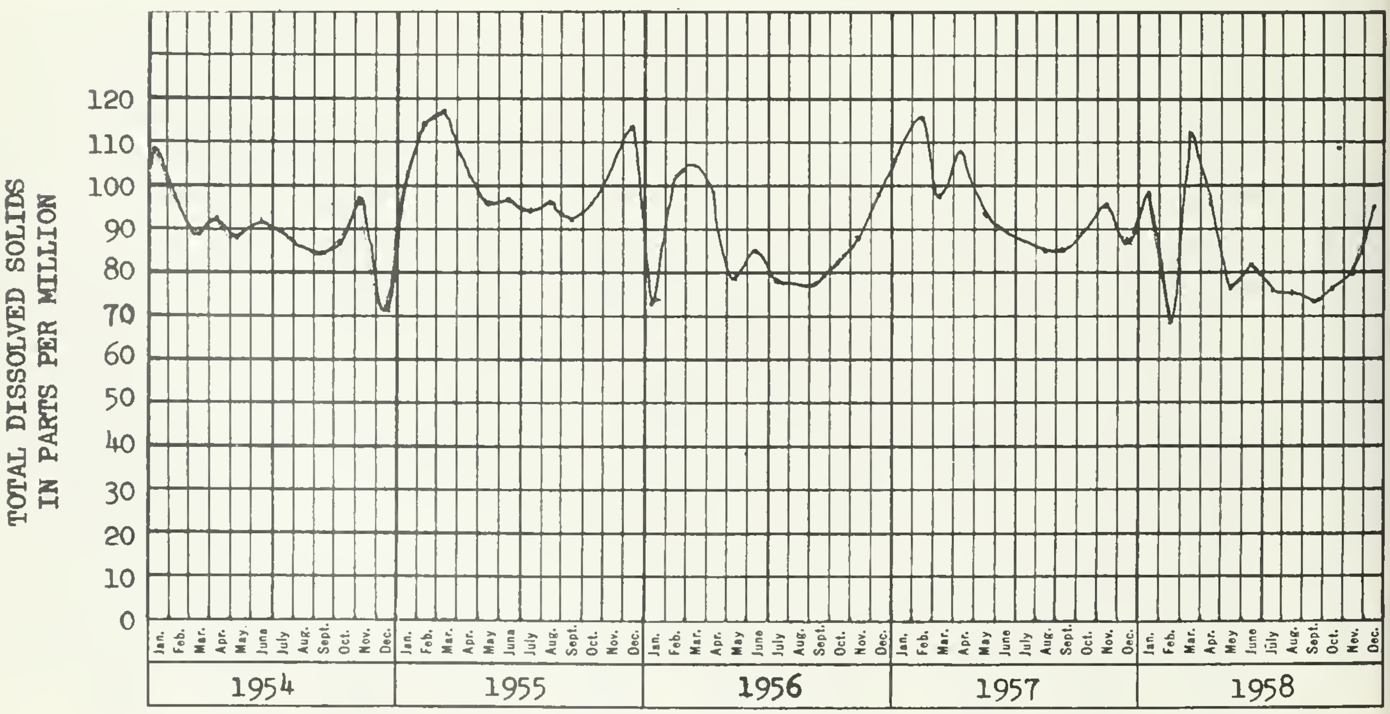
QUALITY CHARACTERISTICS OF
PUTAH CREEK NEAR WINTERS (STATION 81)



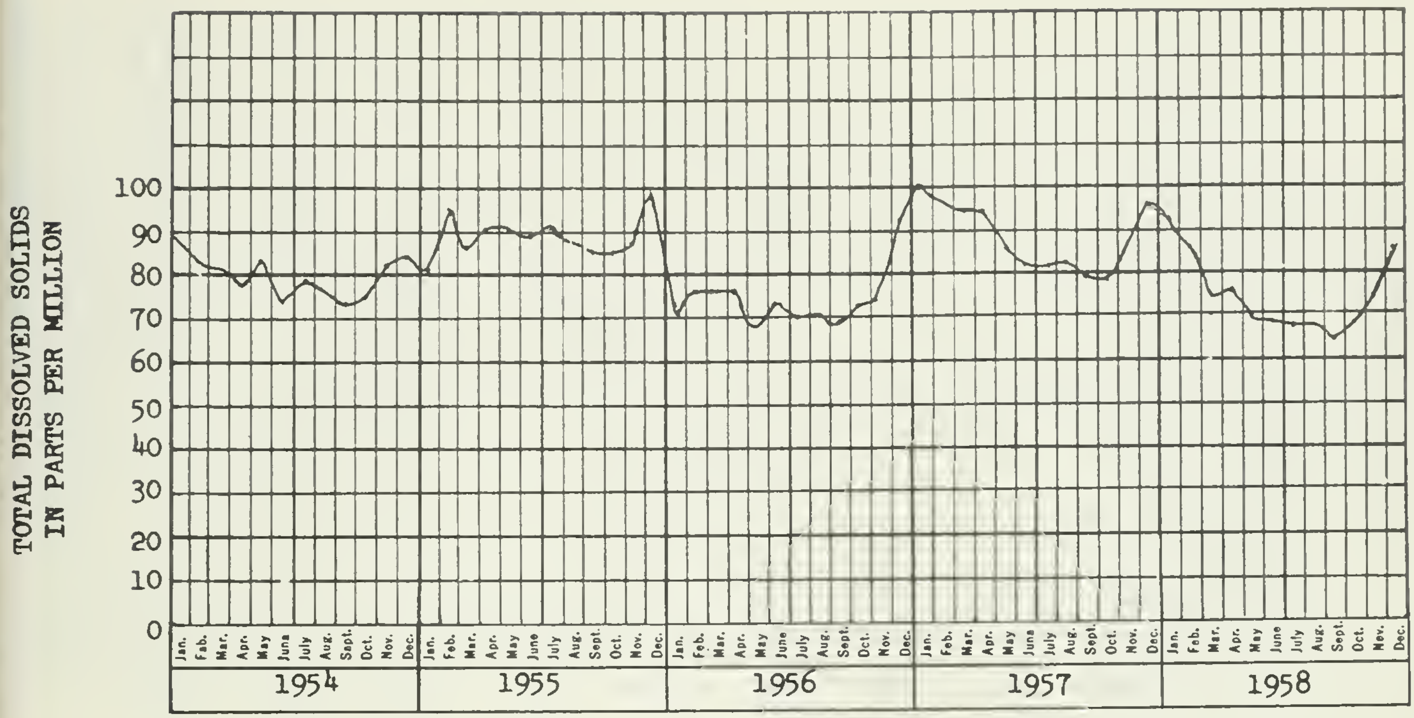
QUALITY CHARACTERISTICS OF
ROCK SLOUGH NEAR KNIGHTSEN (STATION 109)



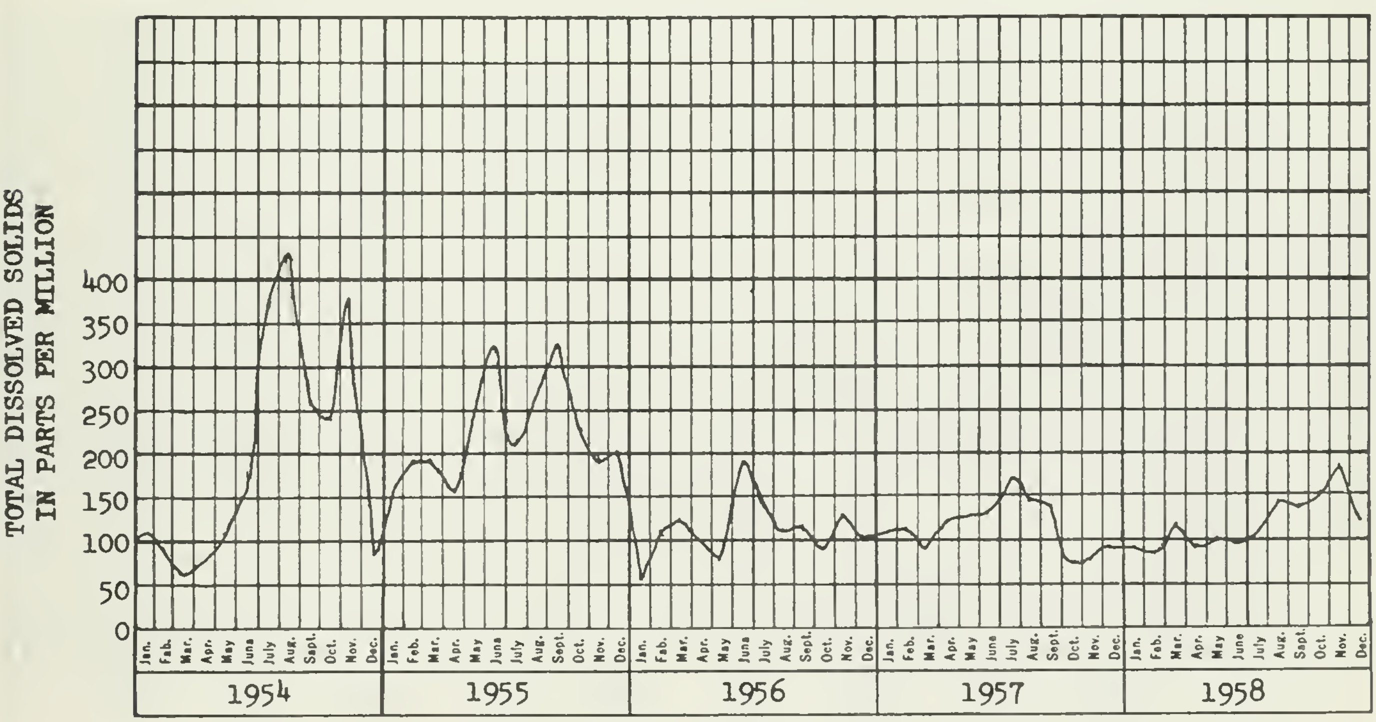
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT DELTA (STATION 11)



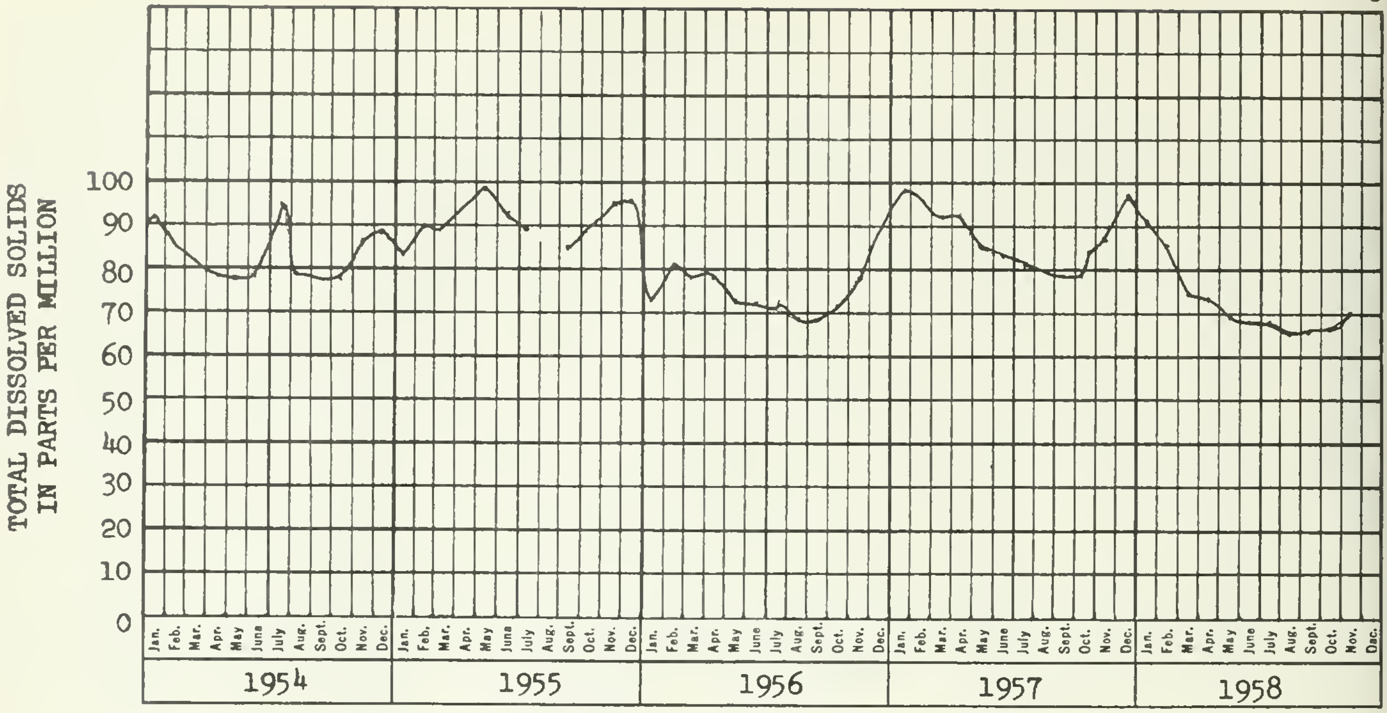
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER NEAR HAMILTON CITY (STATION 13)



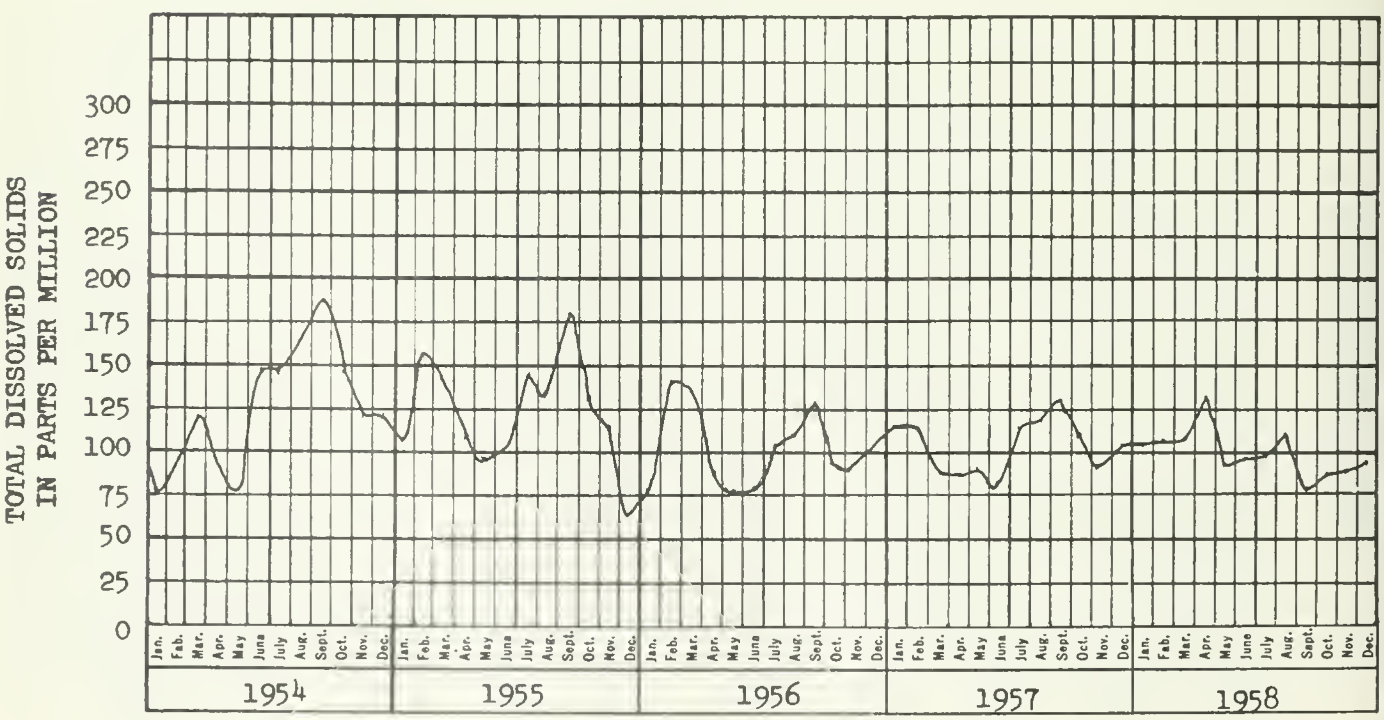
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT KESWICK (STATION 12)



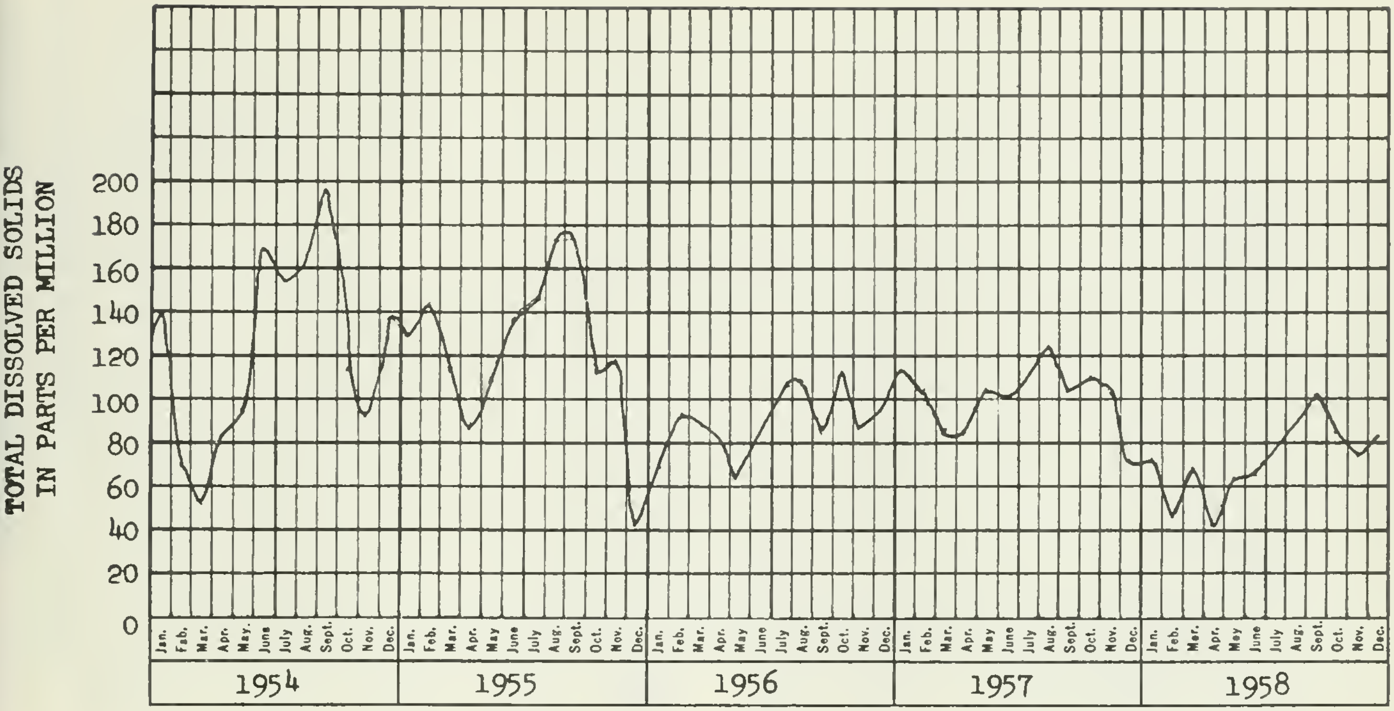
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT KNIGHTS LANDING (STATION 14)



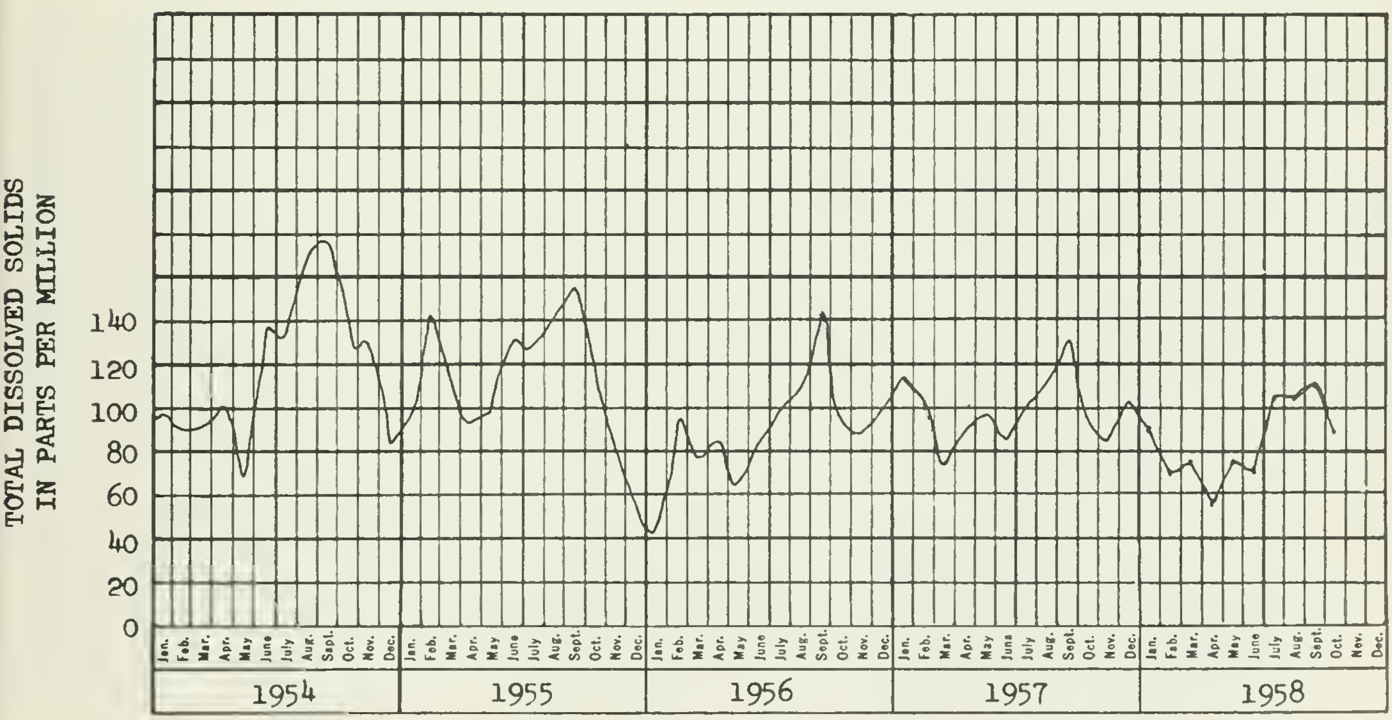
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER NEAR REDDING (STATION 12a)



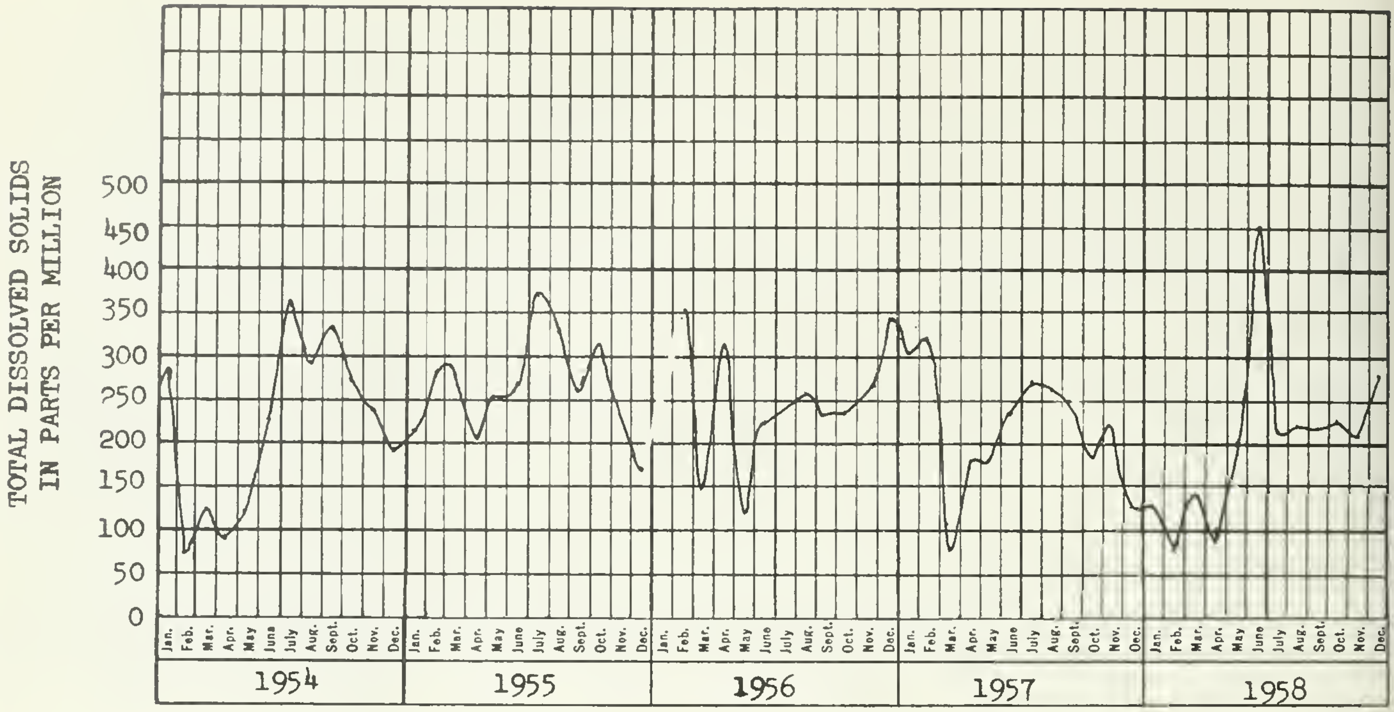
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT RIO VISTA (STATION 16)



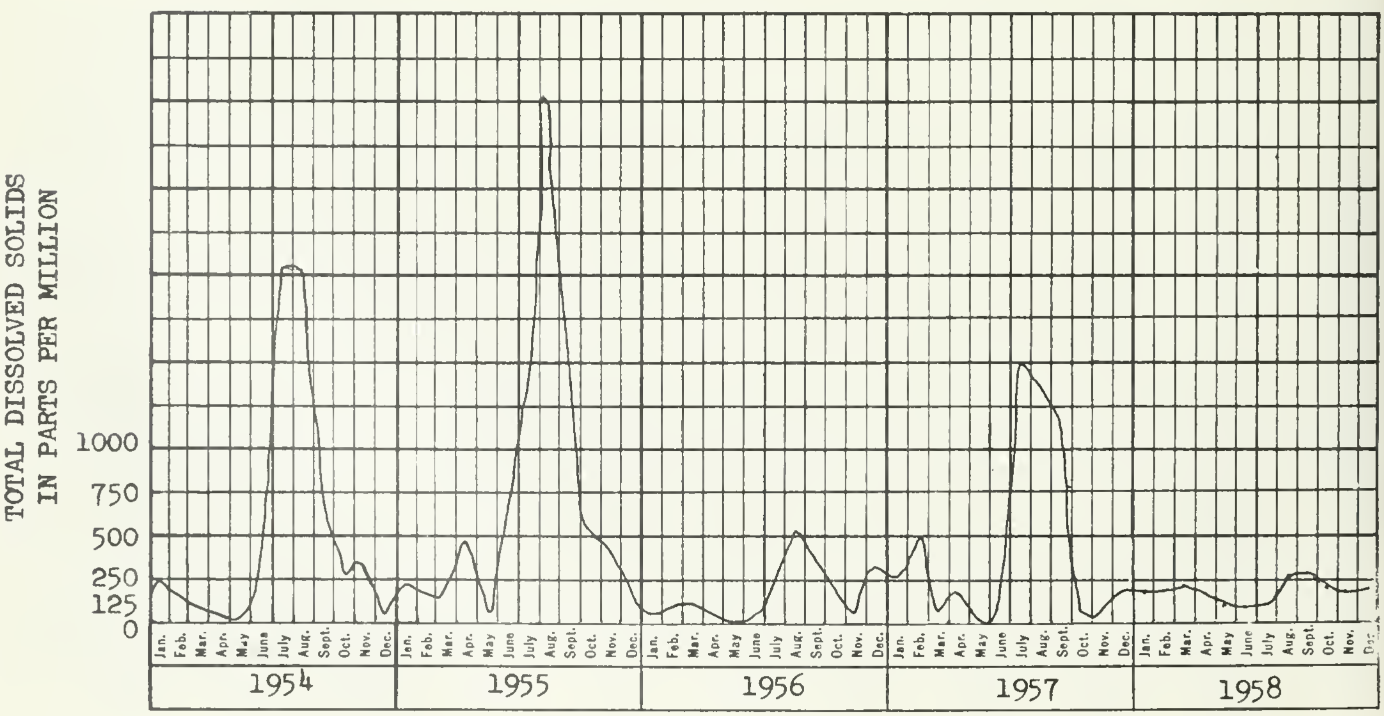
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT SACRAMENTO (STATION 15)



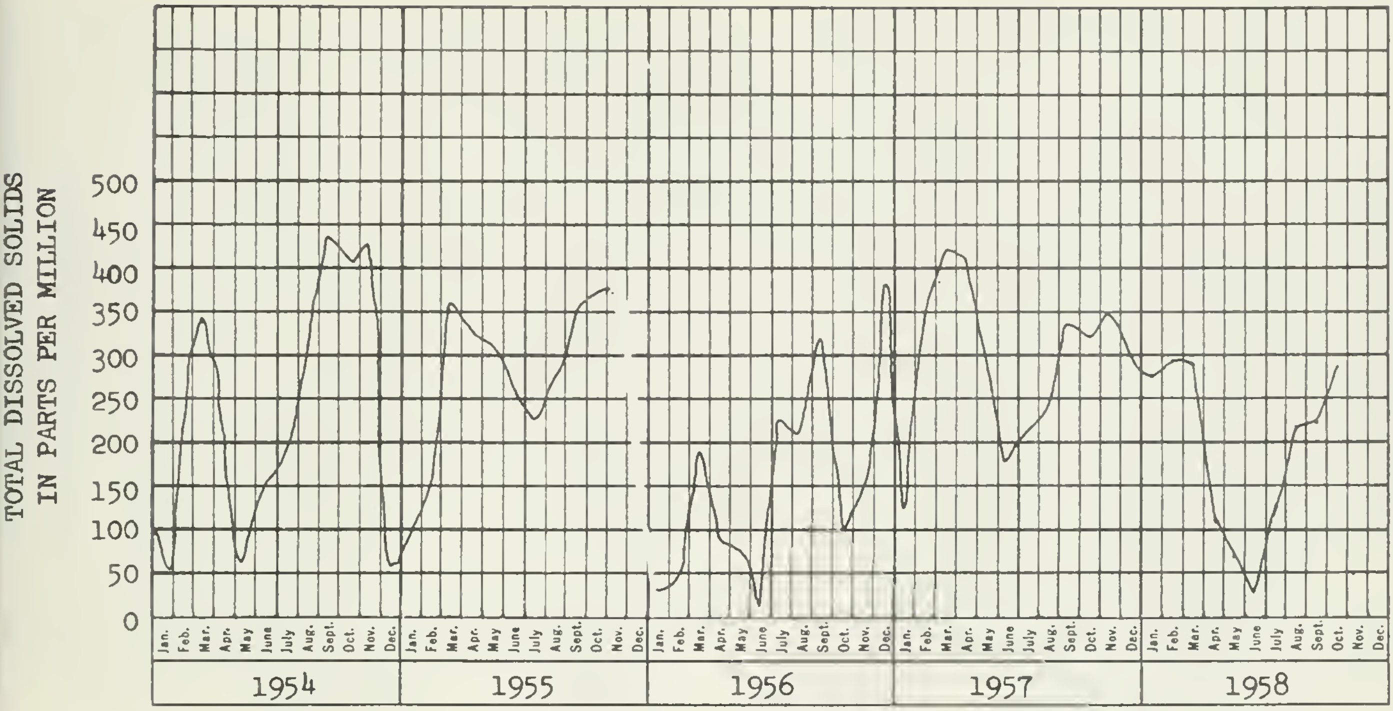
QUALITY CHARACTERISTICS OF
SACRAMENTO RIVER AT SNODGRASS SLOUGH (STATION 97)



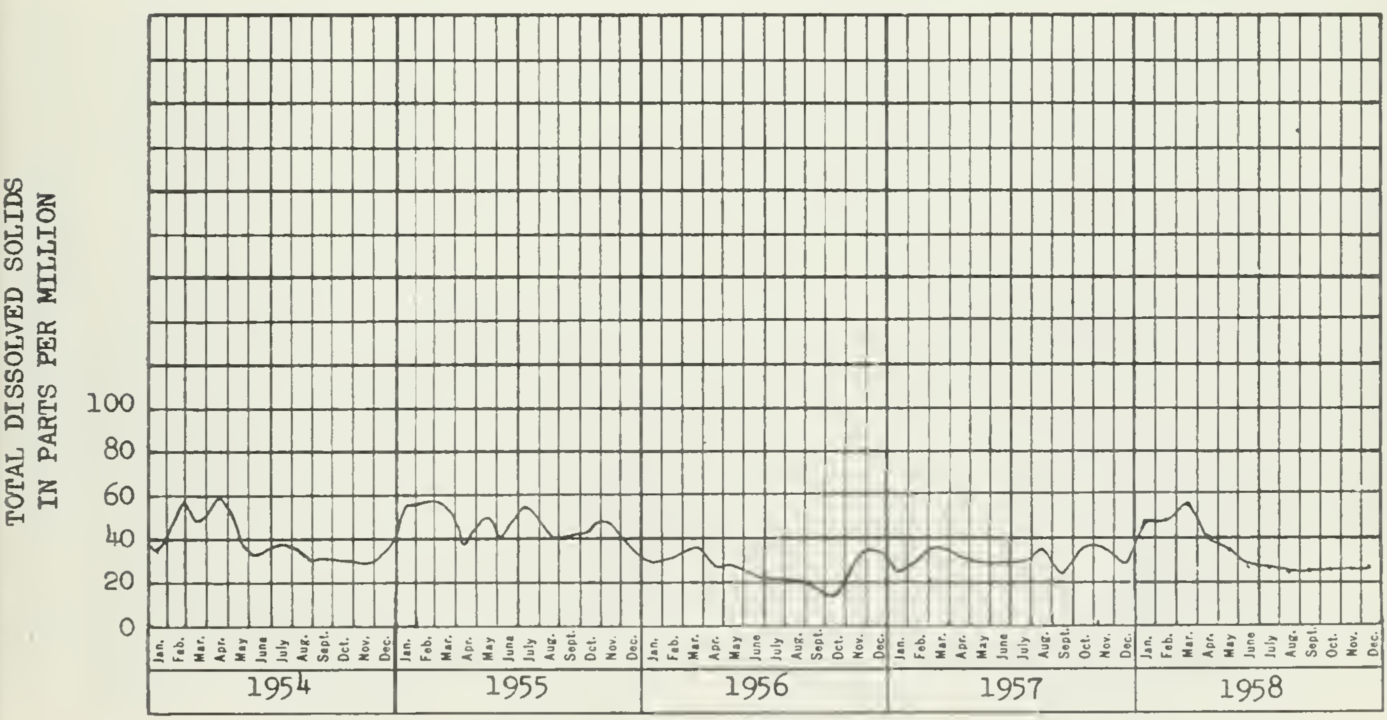
QUALITY CHARACTERISTICS OF
SACRAMENTO SLOUGH NEAR KNIGHTS LANDING (STATION 14a)



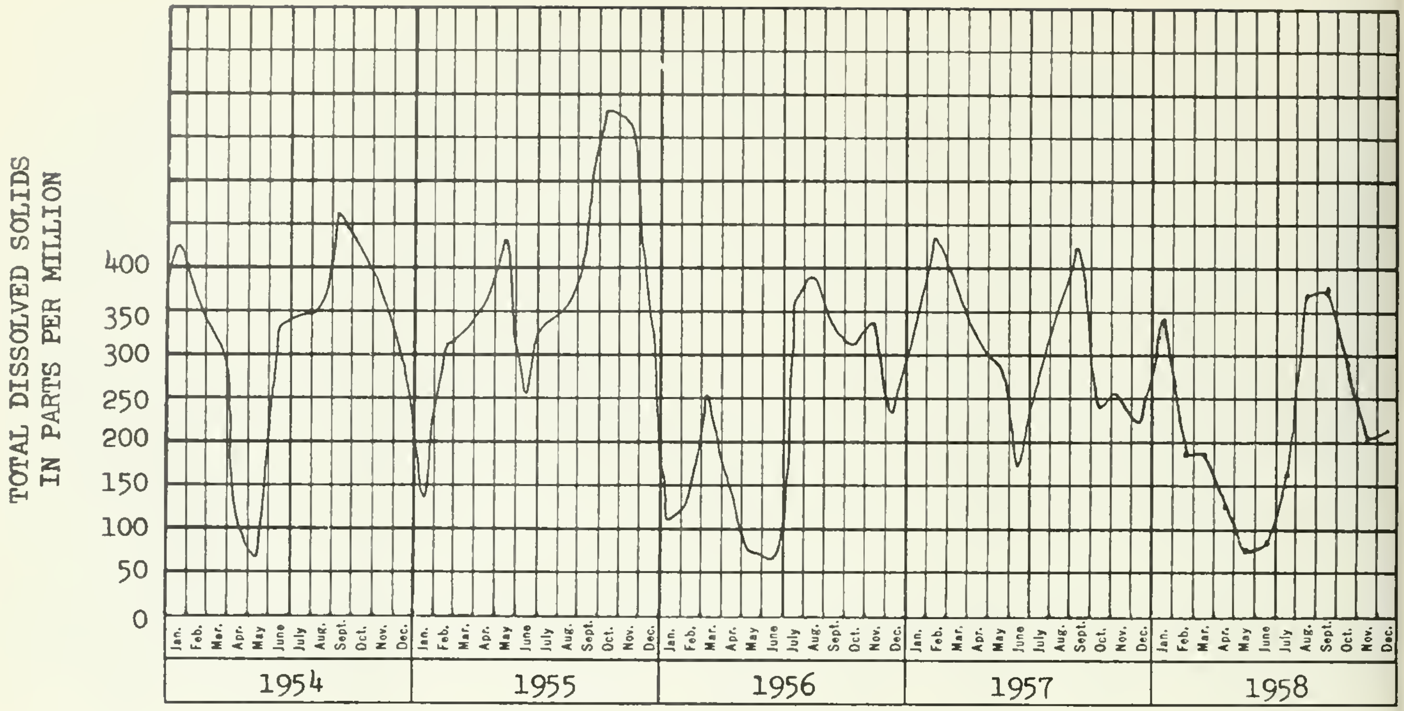
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER AT ANTIOCH (STATION 28)



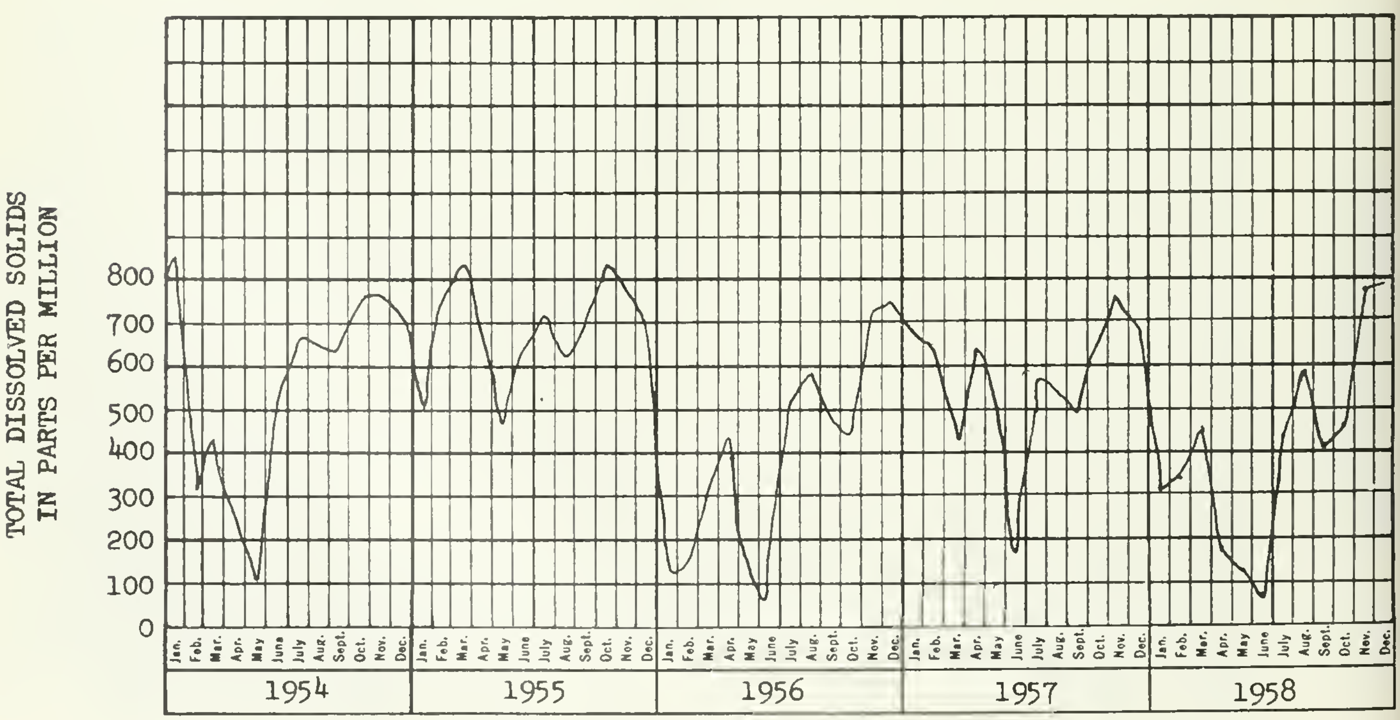
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER NEAR DOS PALOS (STATION 25a)



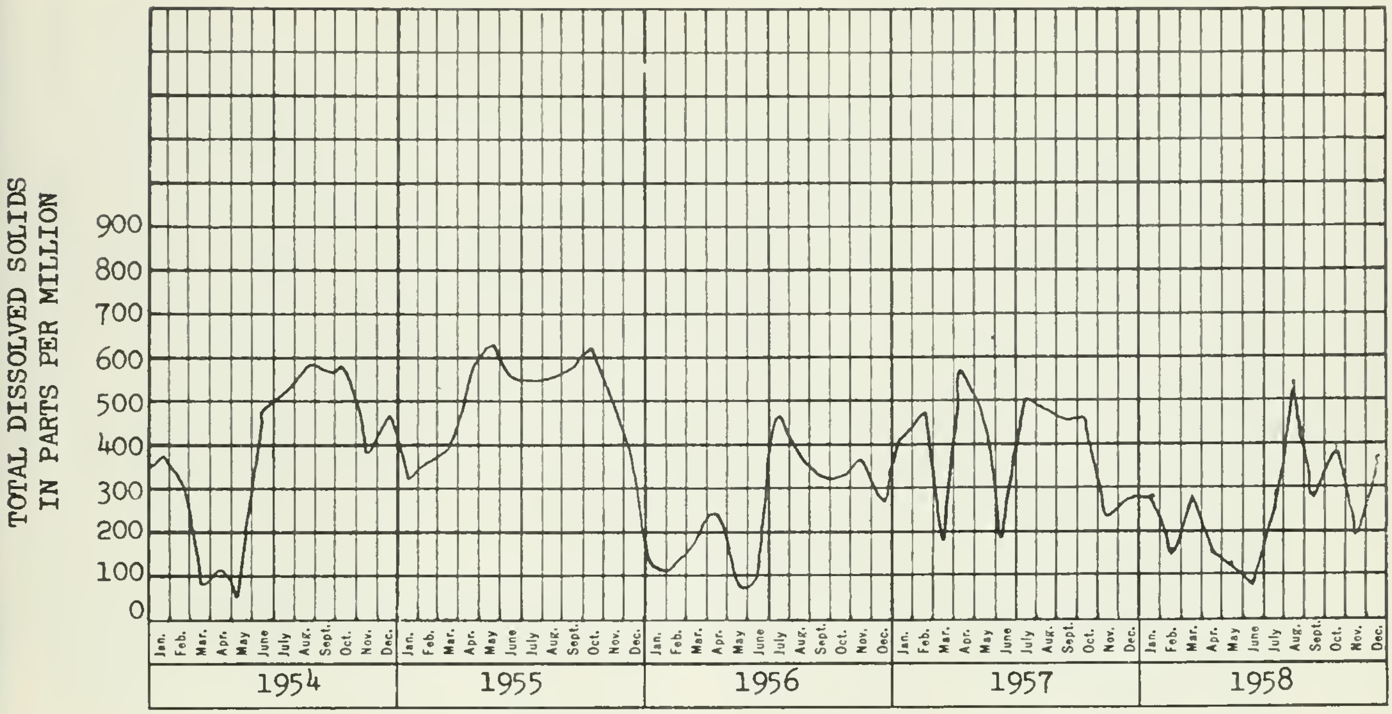
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER AT FRIANT (STATION 24)



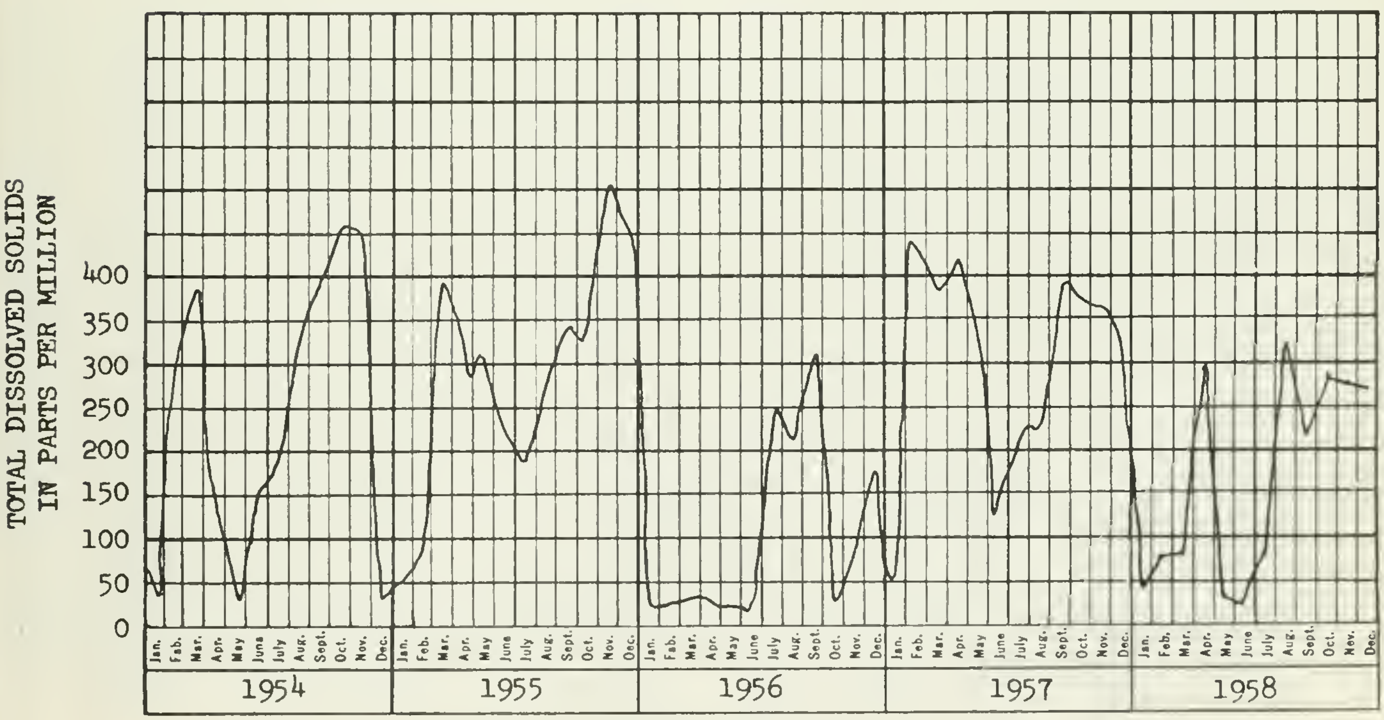
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER AT GARWOOD BRIDGE (STATION 101)



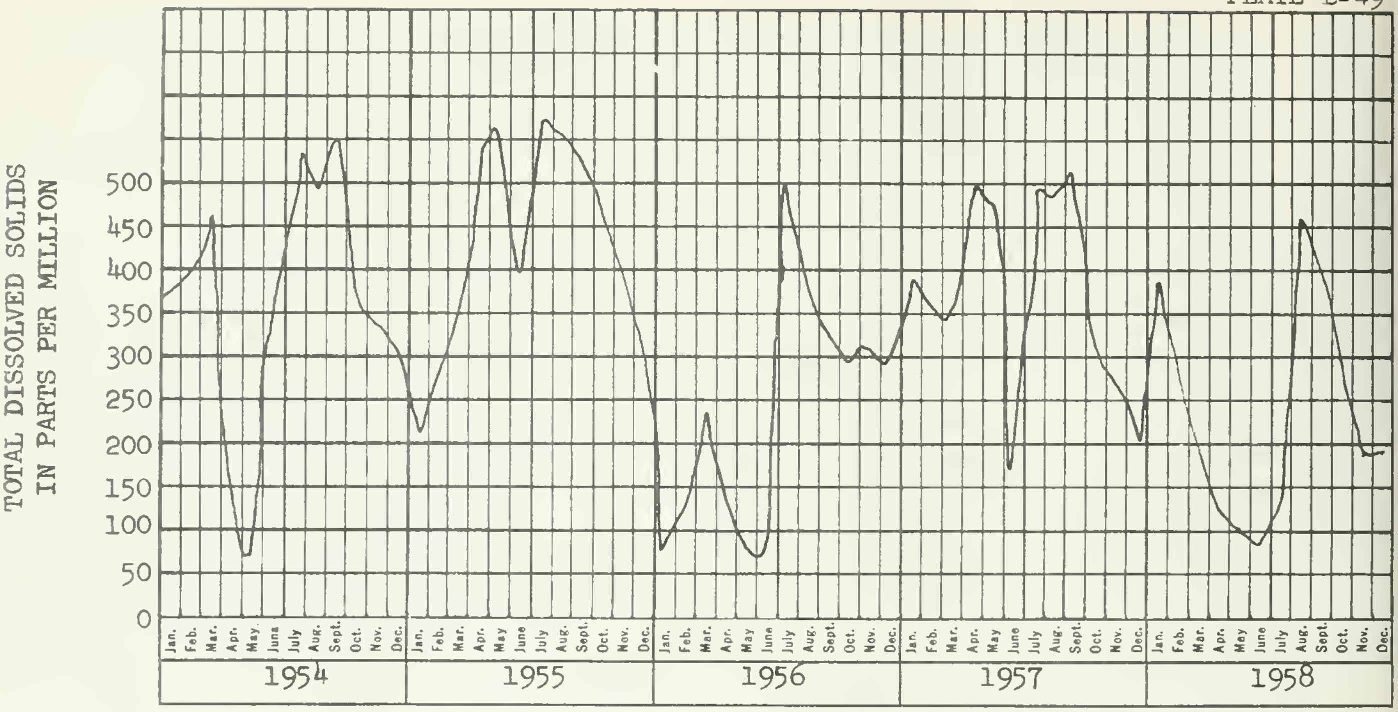
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER NEAR GRAYSON (STATION 26)



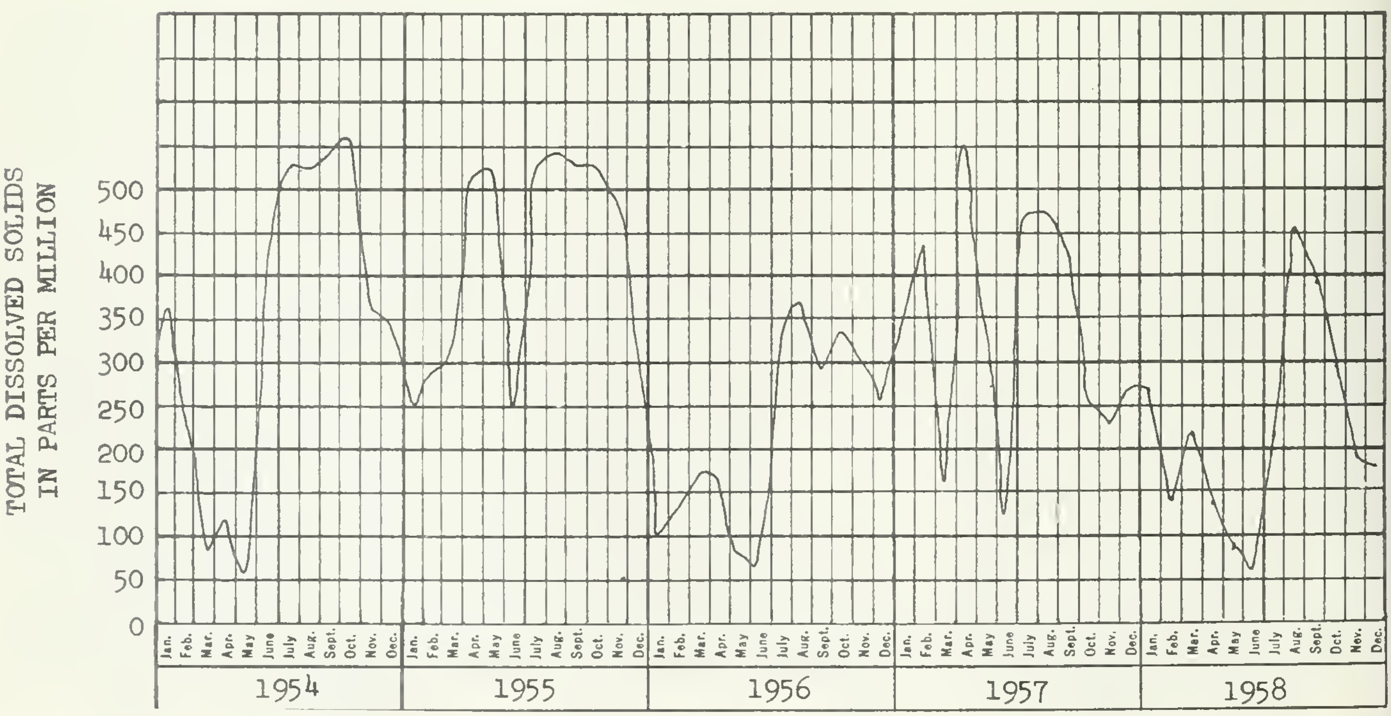
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER AT MAZE ROAD BRIDGE (STATION 26a)



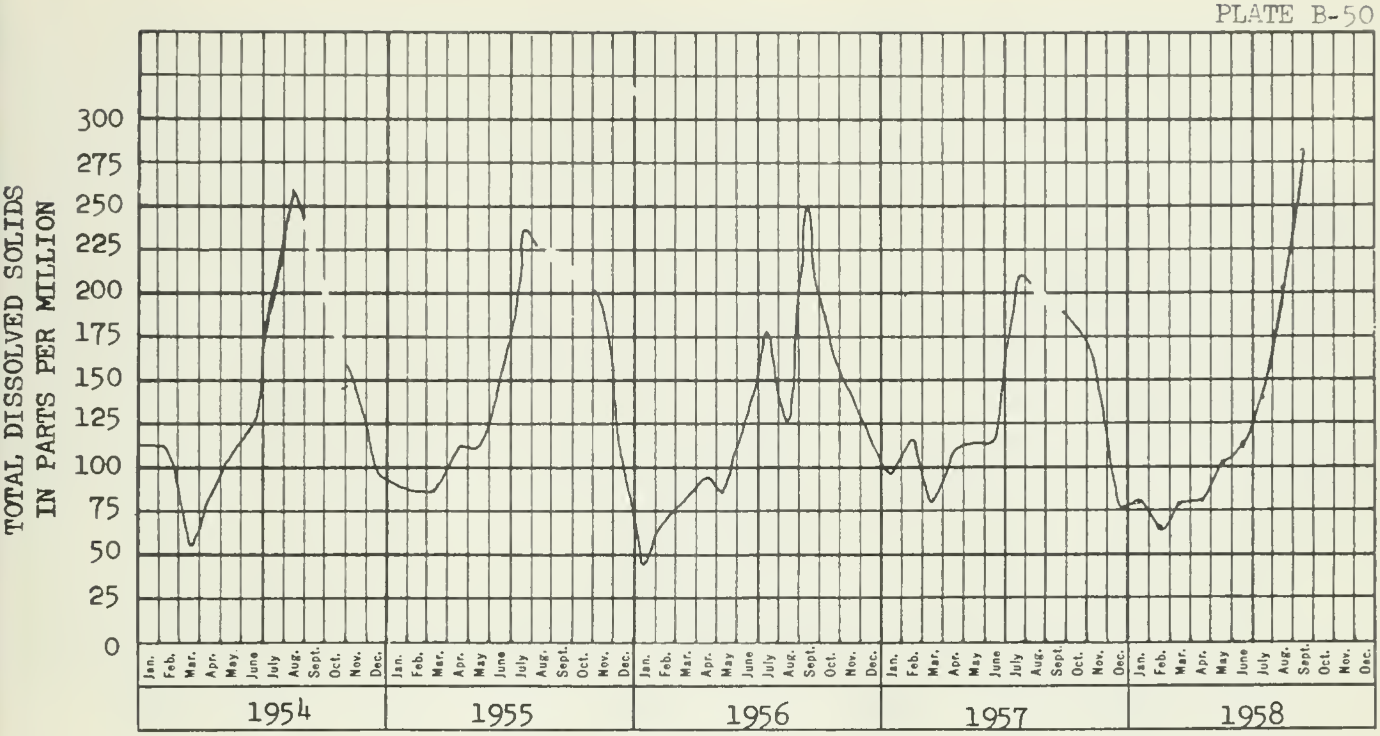
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER NEAR MENDOTA (STATION 25)



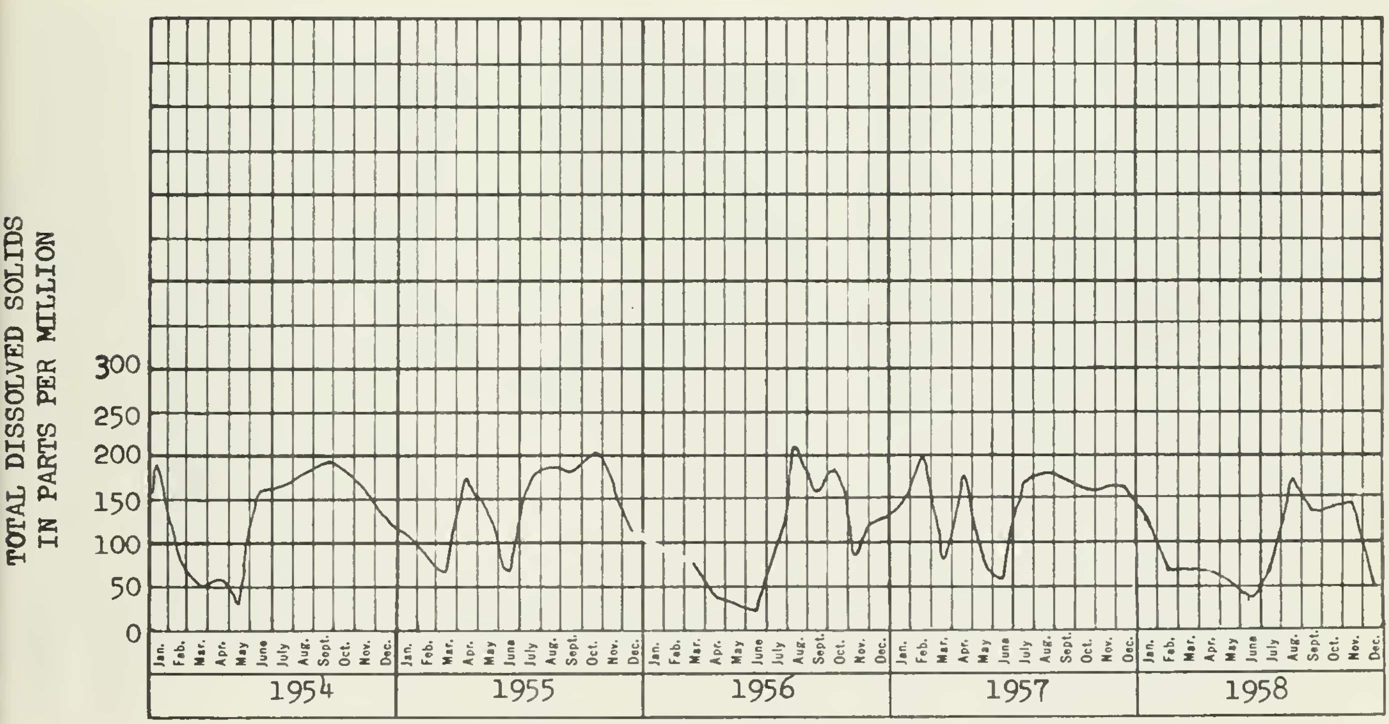
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER AT MOSSDALE BRIDGE (STATION 102)



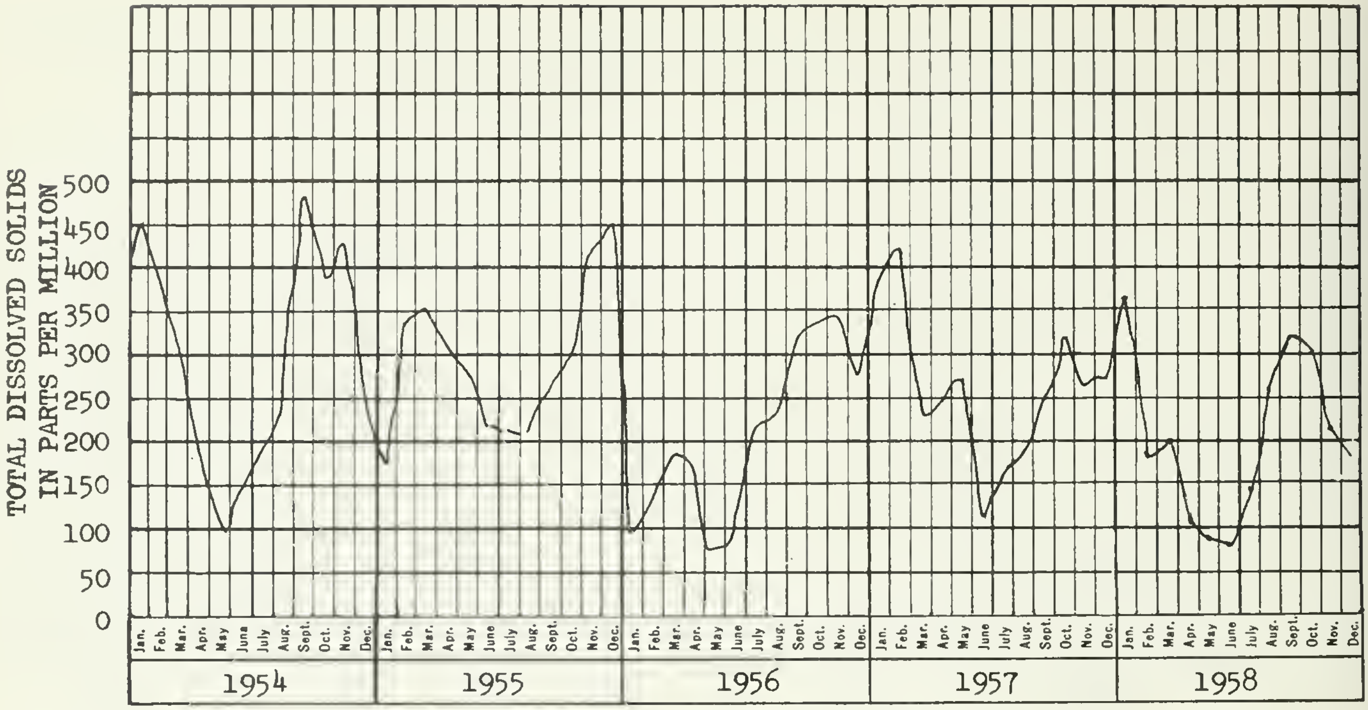
QUALITY CHARACTERISTICS OF
SAN JOAQUIN RIVER NEAR VERNALIS (STATION 27)



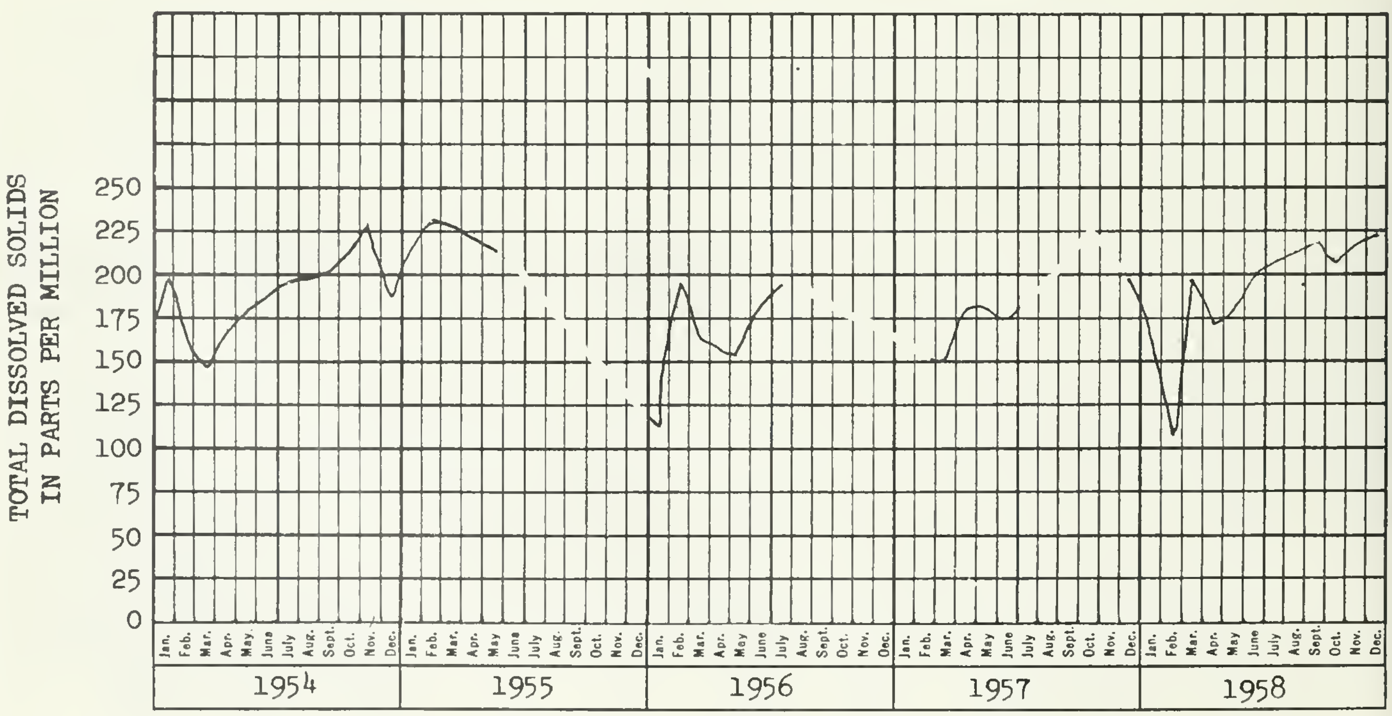
QUALITY CHARACTERISTICS OF
SOUTH HONCUT CREEK NEAR BANGOR (STATION 90)



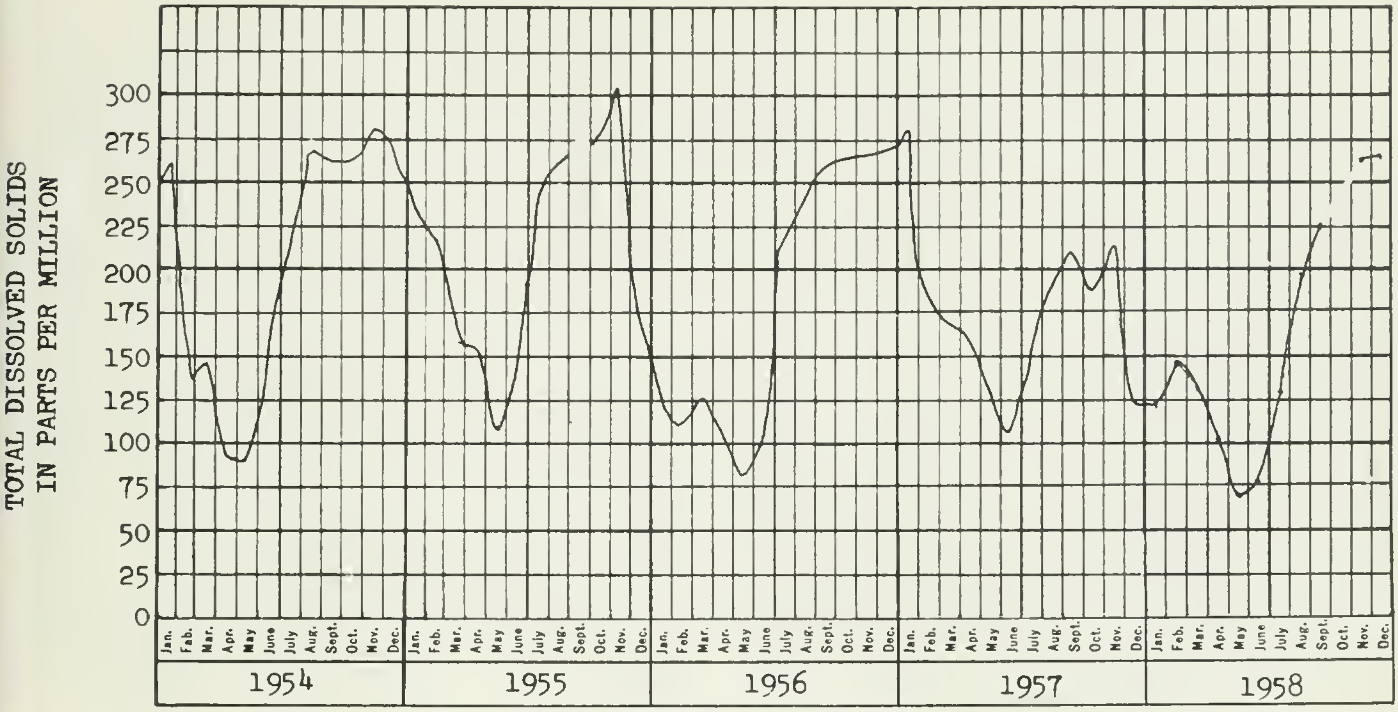
QUALITY CHARACTERISTICS OF
STANISLAUS RIVER NEAR MOUTH (STATION 29)



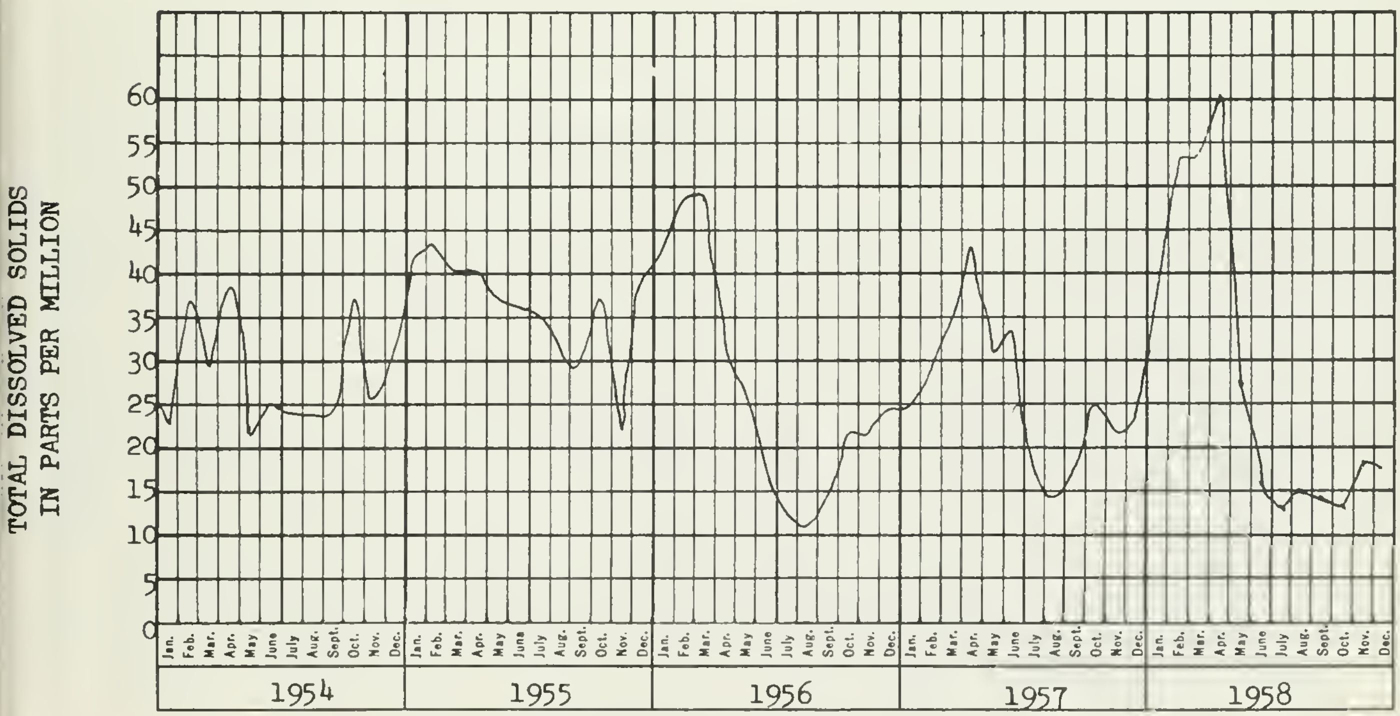
QUALITY CHARACTERISTICS OF
STOCKTON SHIP CHANNEL ON RINDGE ISLAND (STATION 100)



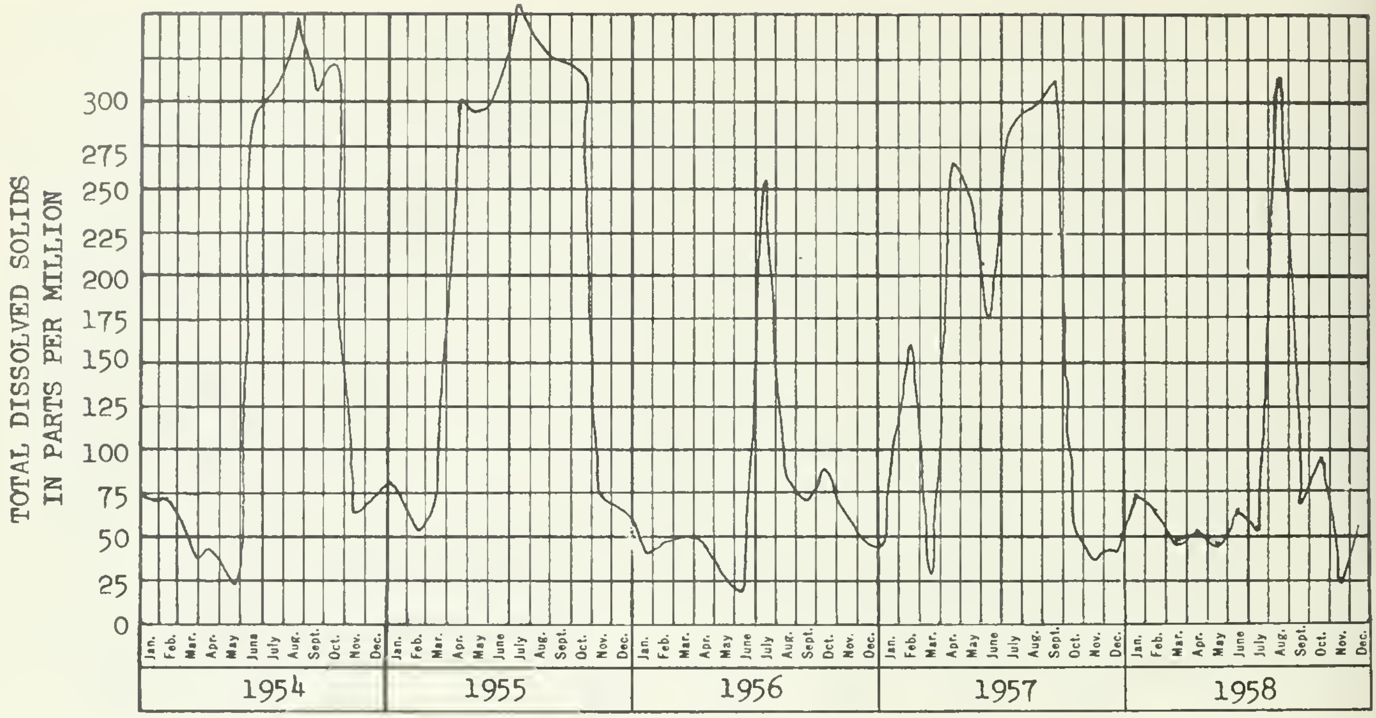
QUALITY CHARACTERISTICS OF
STONY CREEK NEAR HAMILTON CITY (STATION 13a)



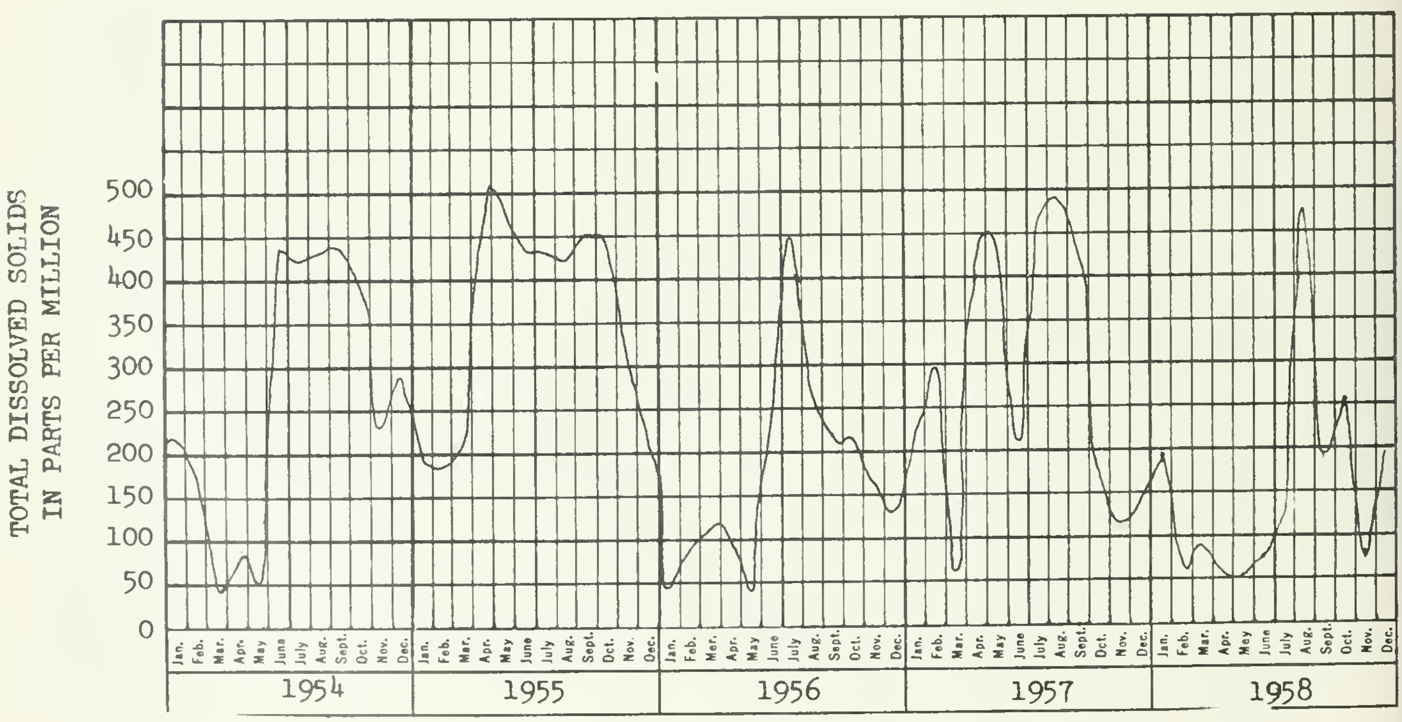
QUALITY CHARACTERISTICS OF
TULE RIVER NEAR PORTERVILLE (STATION 91)



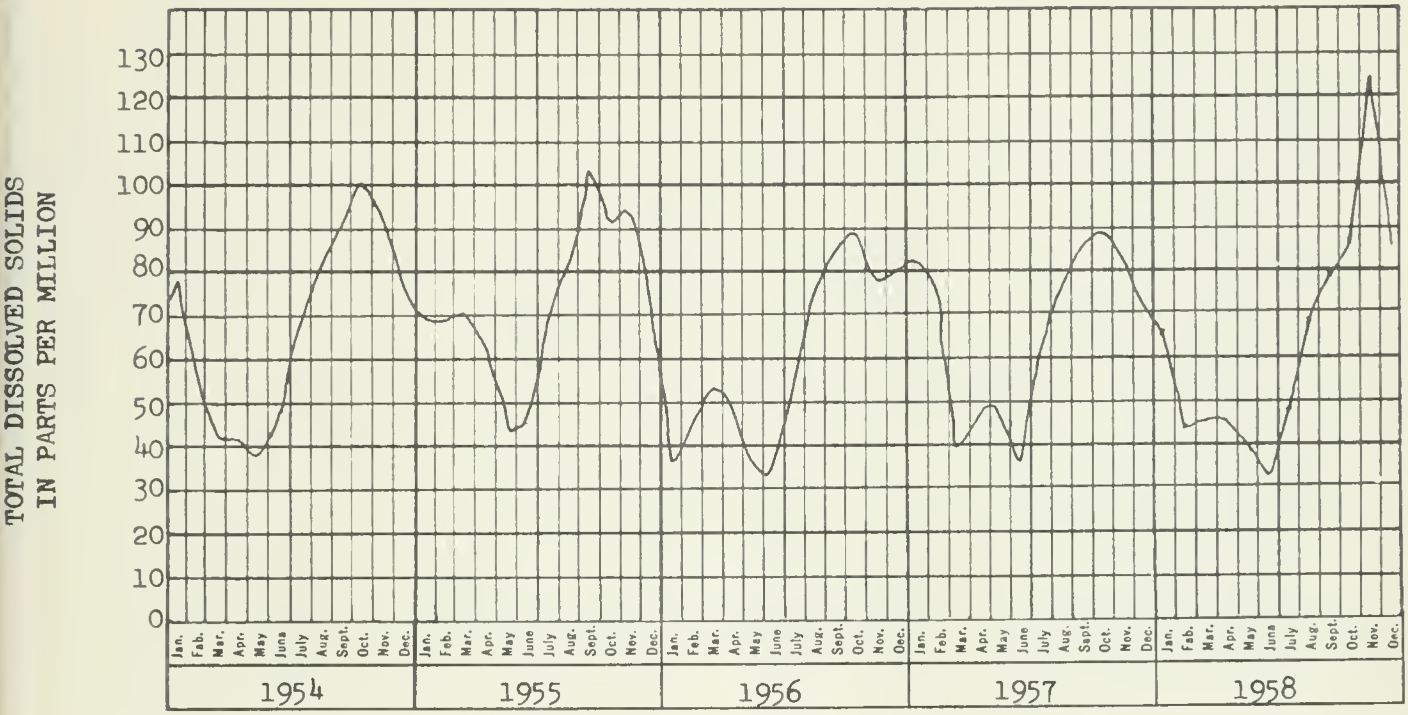
QUALITY CHARACTERISTICS OF
TUOLUMNE RIVER BELOW DON PEDRO DAM (STATION 31a)



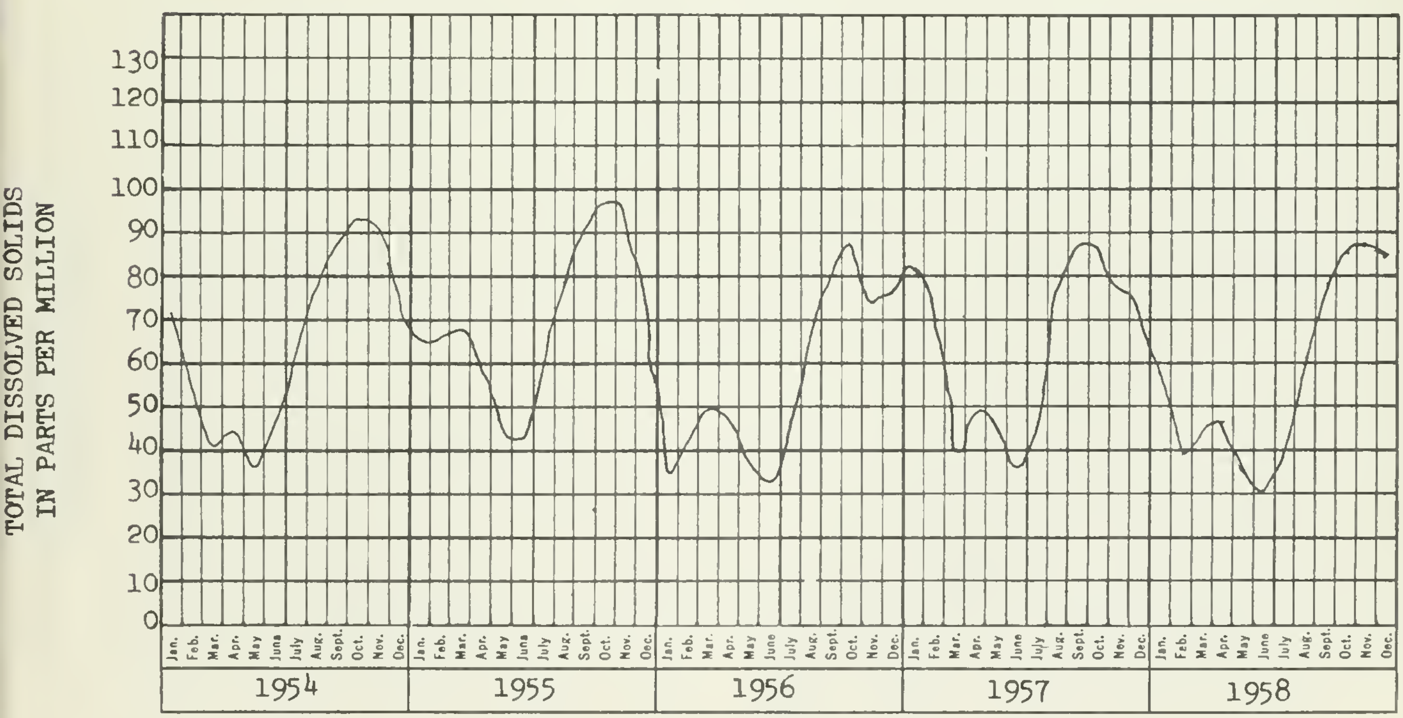
QUALITY CHARACTERISTICS OF
TUOLUMNE RIVER AT HICKMAN-WATERFORD BRIDGE (STATION 30)



QUALITY CHARACTERISTICS OF
TUOLUMNE RIVER AT TUOLUMNE CITY (STATION 31)

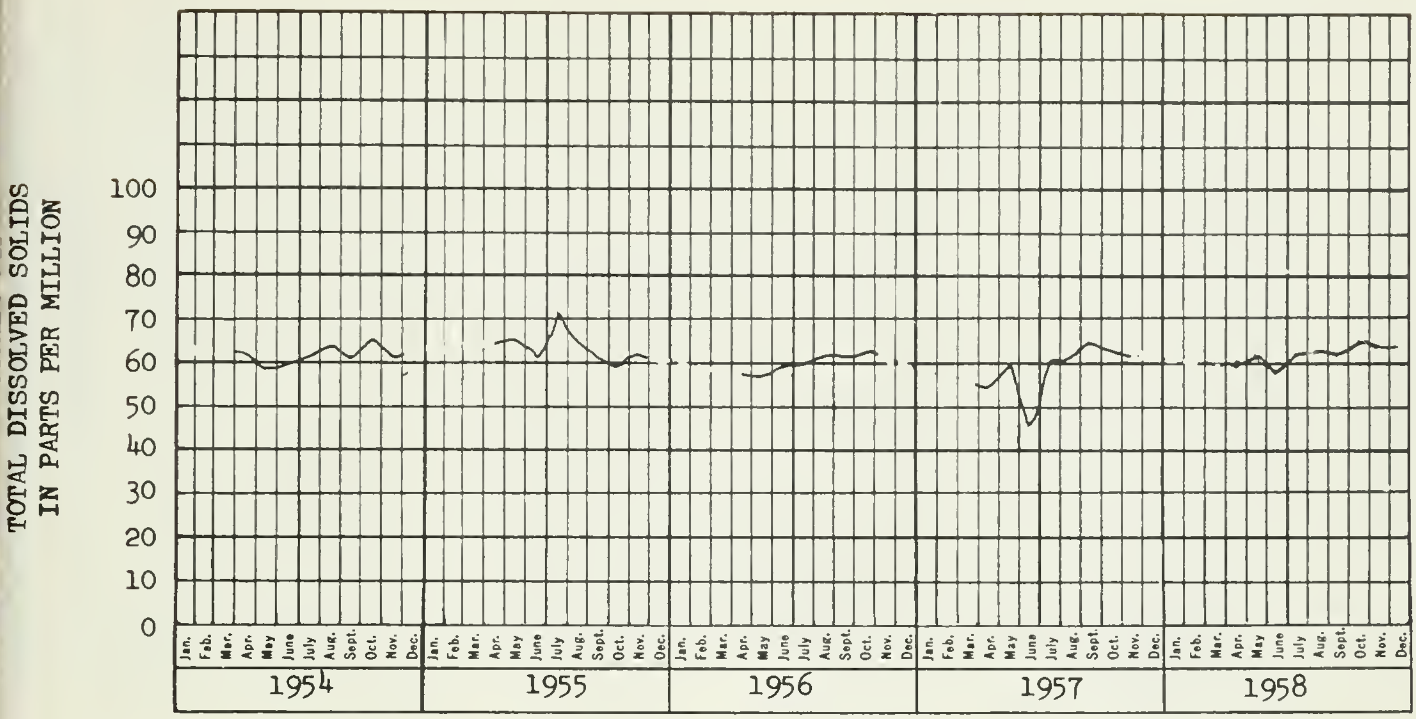


QUALITY CHARACTERISTICS OF
YUBA RIVER AT MARYSVILLE (STATION 21)

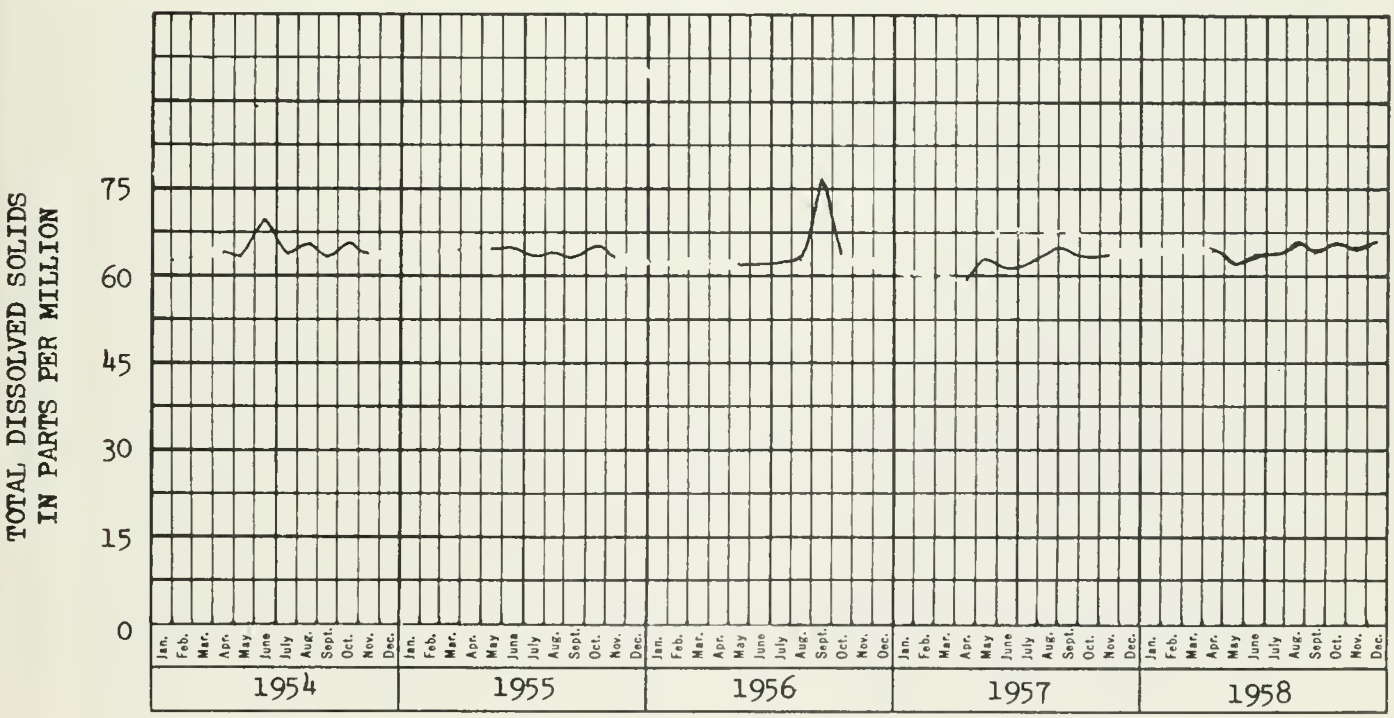


QUALITY CHARACTERISTICS OF
YUBA RIVER NEAR SMARTVILLE (STATION 21a)

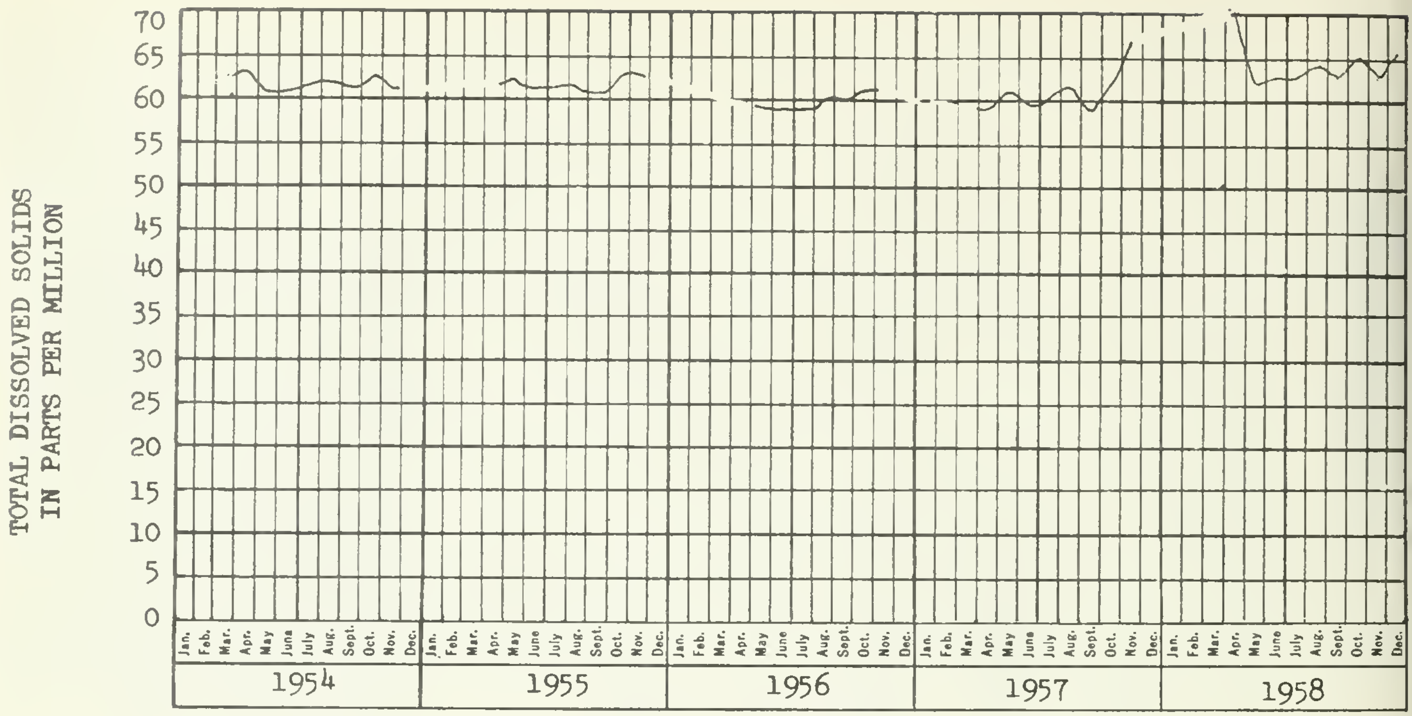
TOTAL DISSOLVED SOLIDS



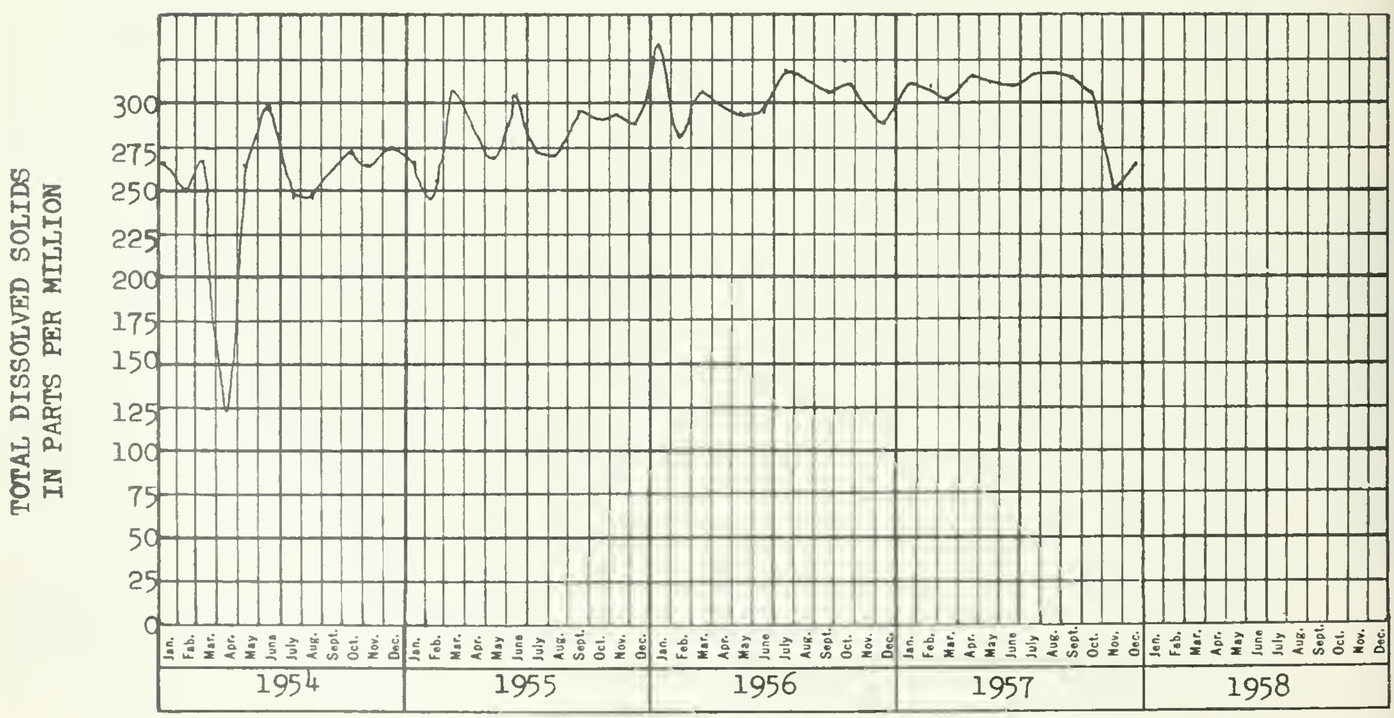
QUALITY CHARACTERISTICS OF
LAKE TAHOE AT BIJOU (STATION 39)



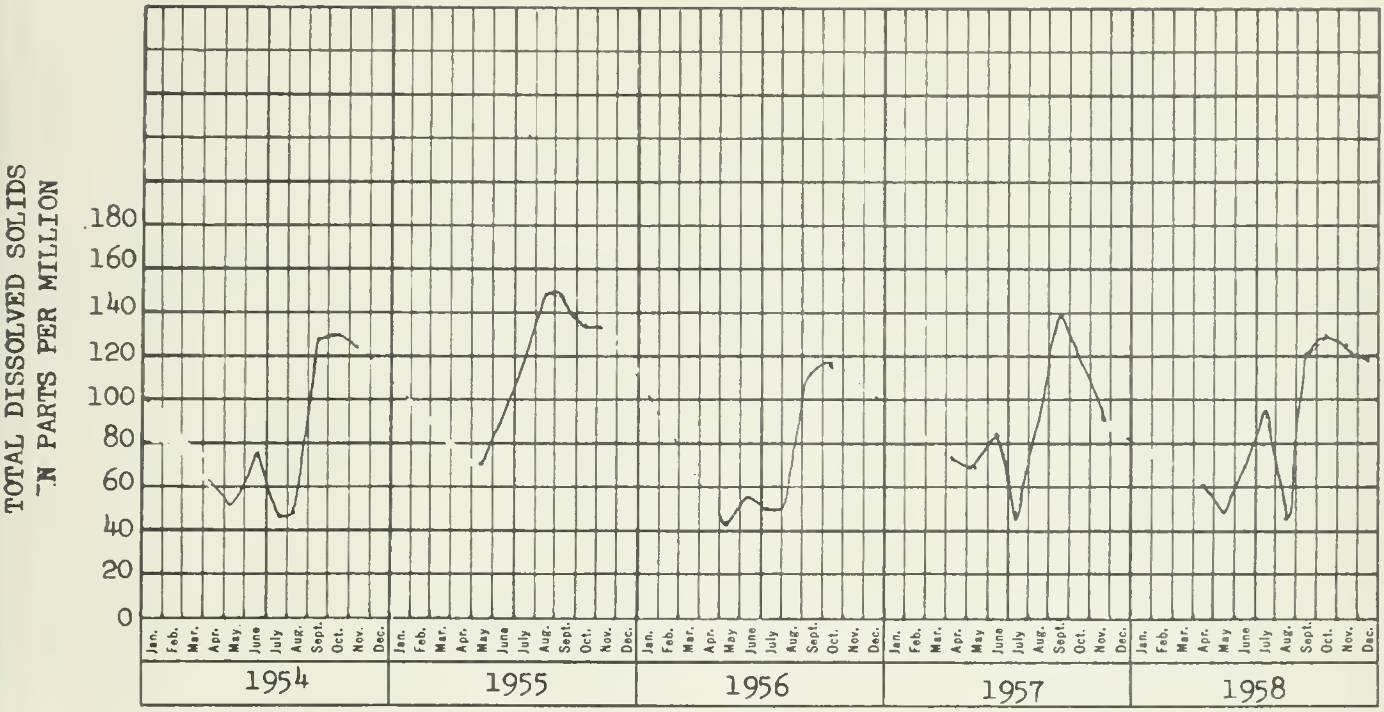
QUALITY CHARACTERISTICS OF
LAKE TAHOE AT TAHOE CITY (STATION 38)



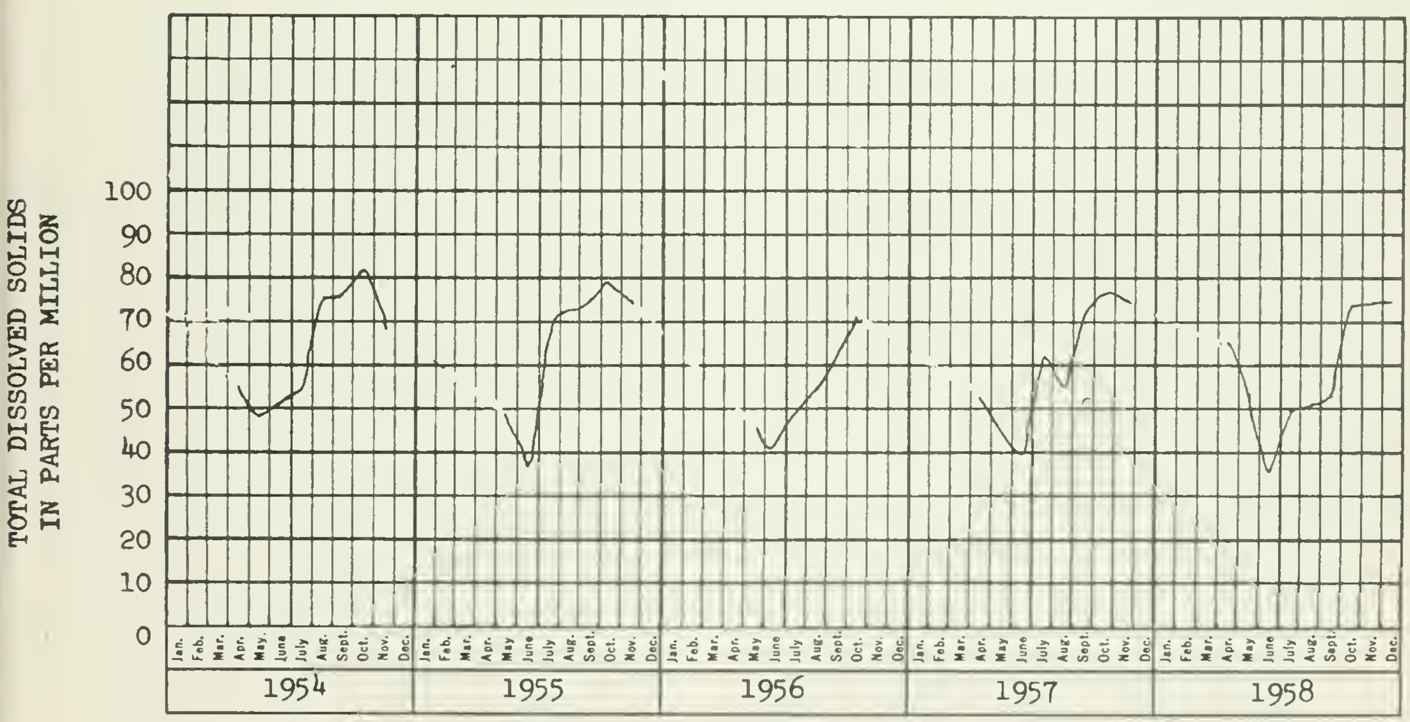
QUALITY CHARACTERISTICS OF
LAKE TAHOE AT TAHOE VISTA (STATION 37)



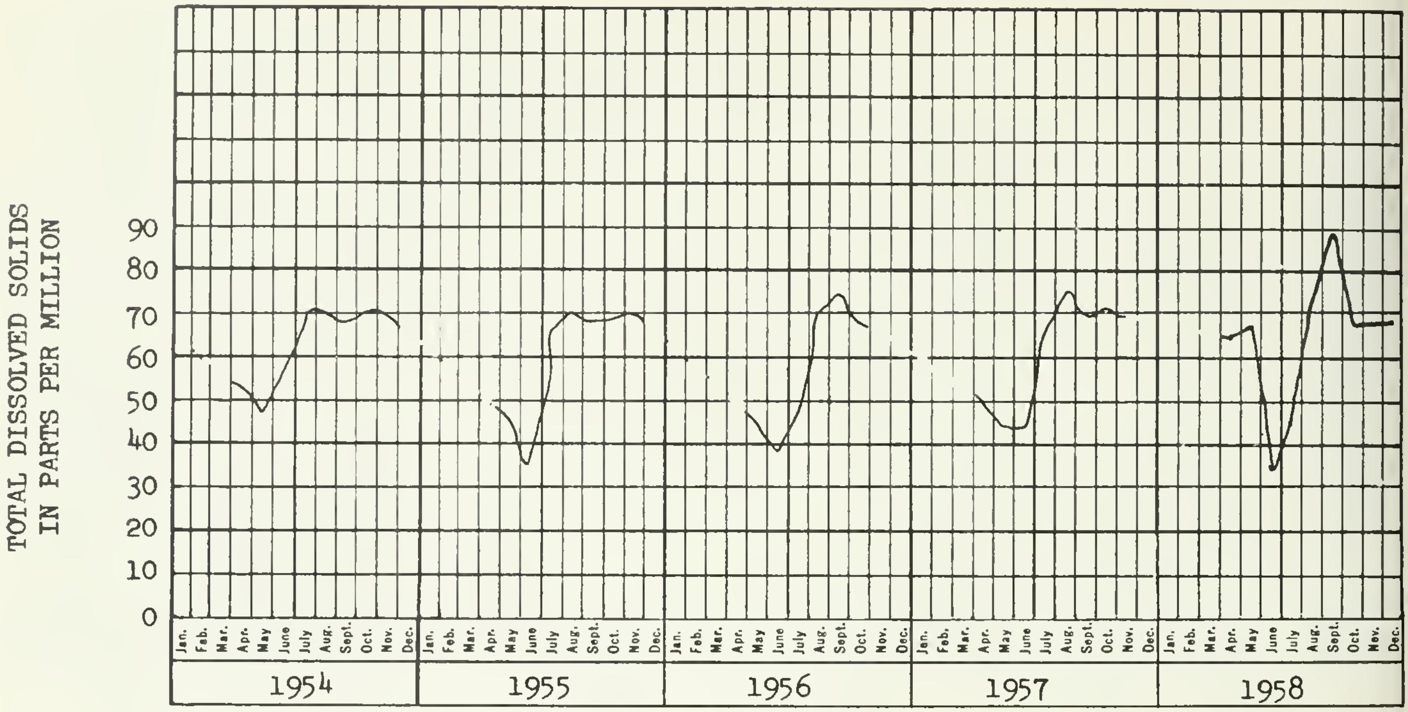
QUALITY CHARACTERISTICS OF
MOJAVE RIVER NEAR VICTORVILLE (STATION 67)



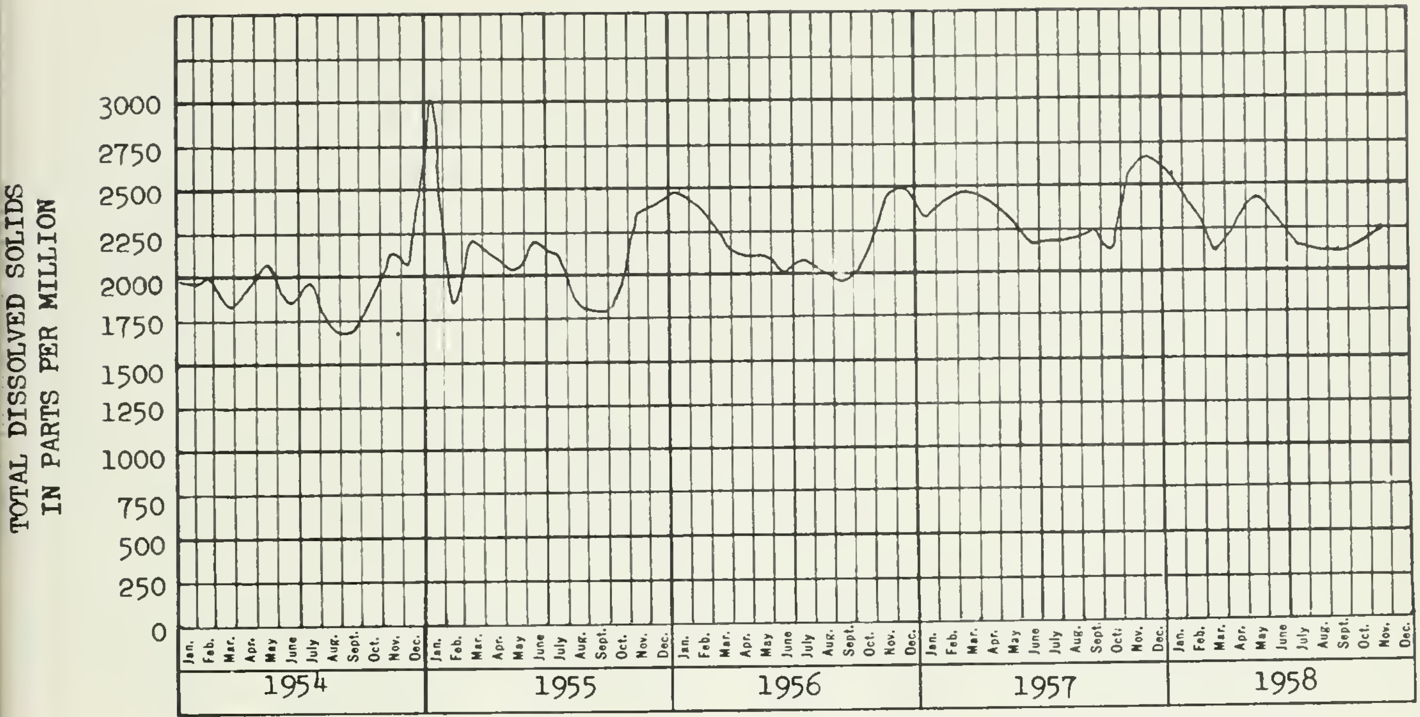
QUALITY CHARACTERISTICS OF
SUSAN RIVER AT SUSANVILLE (STATION 17b)



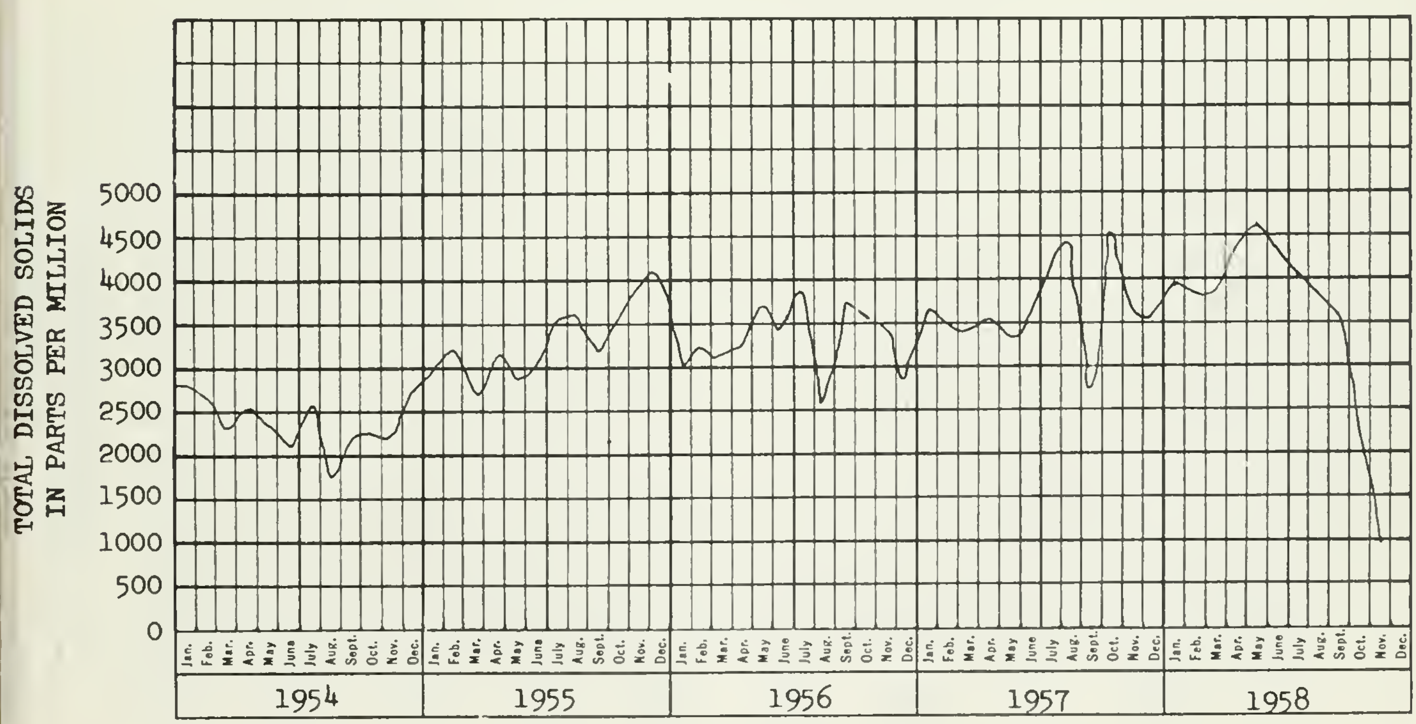
QUALITY CHARACTERISTICS OF
TRUCKEE RIVER NEAR FARAD (STATION 53)



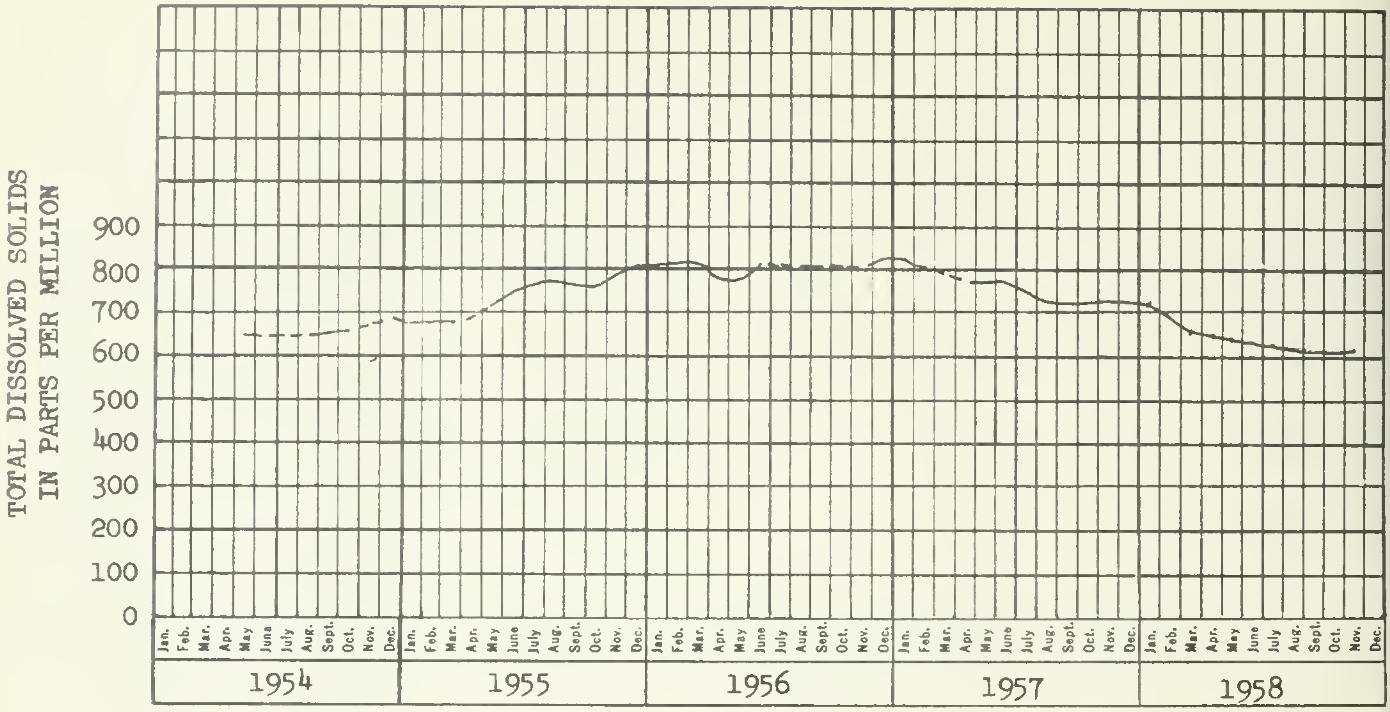
QUALITY CHARACTERISTICS OF
TRUCKEE RIVER NEAR TRUCKEE (STATION 52)



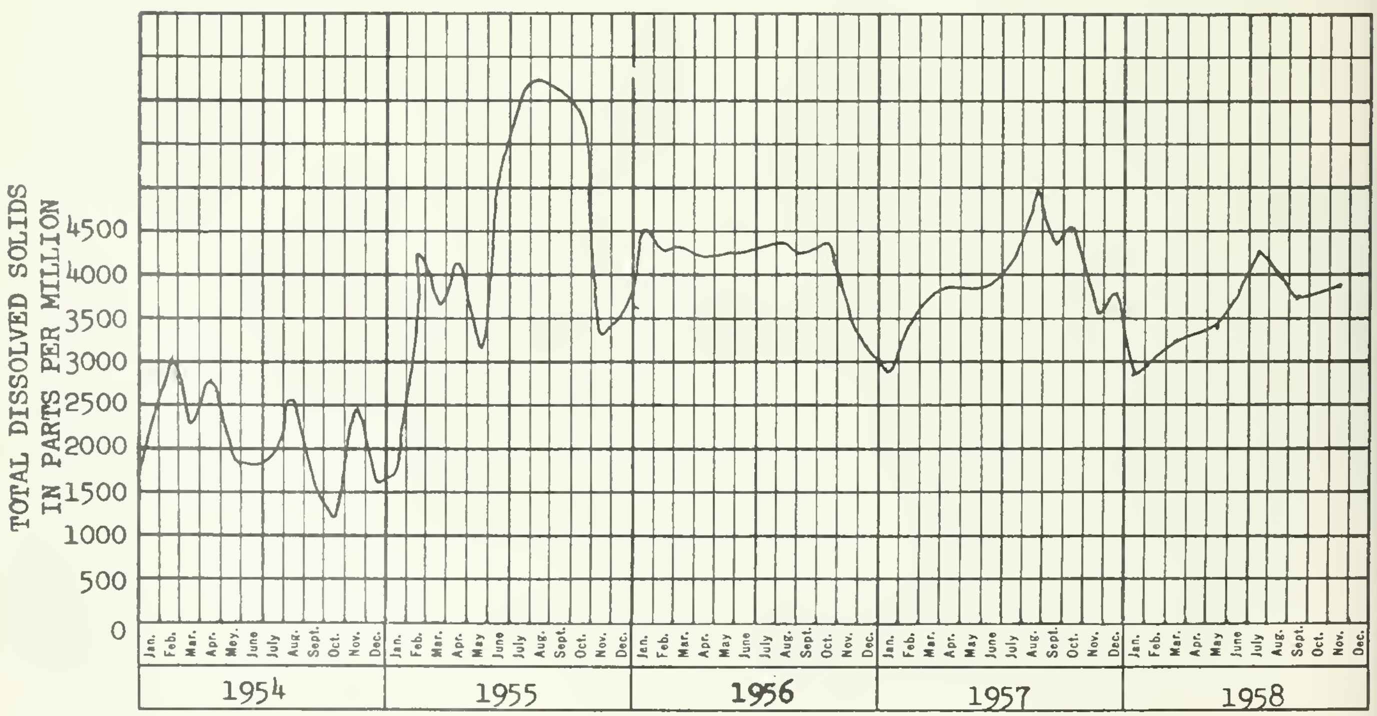
QUALITY CHARACTERISTICS OF
ALAMO RIVER NEAR CALIPATRIA (STATION 60)



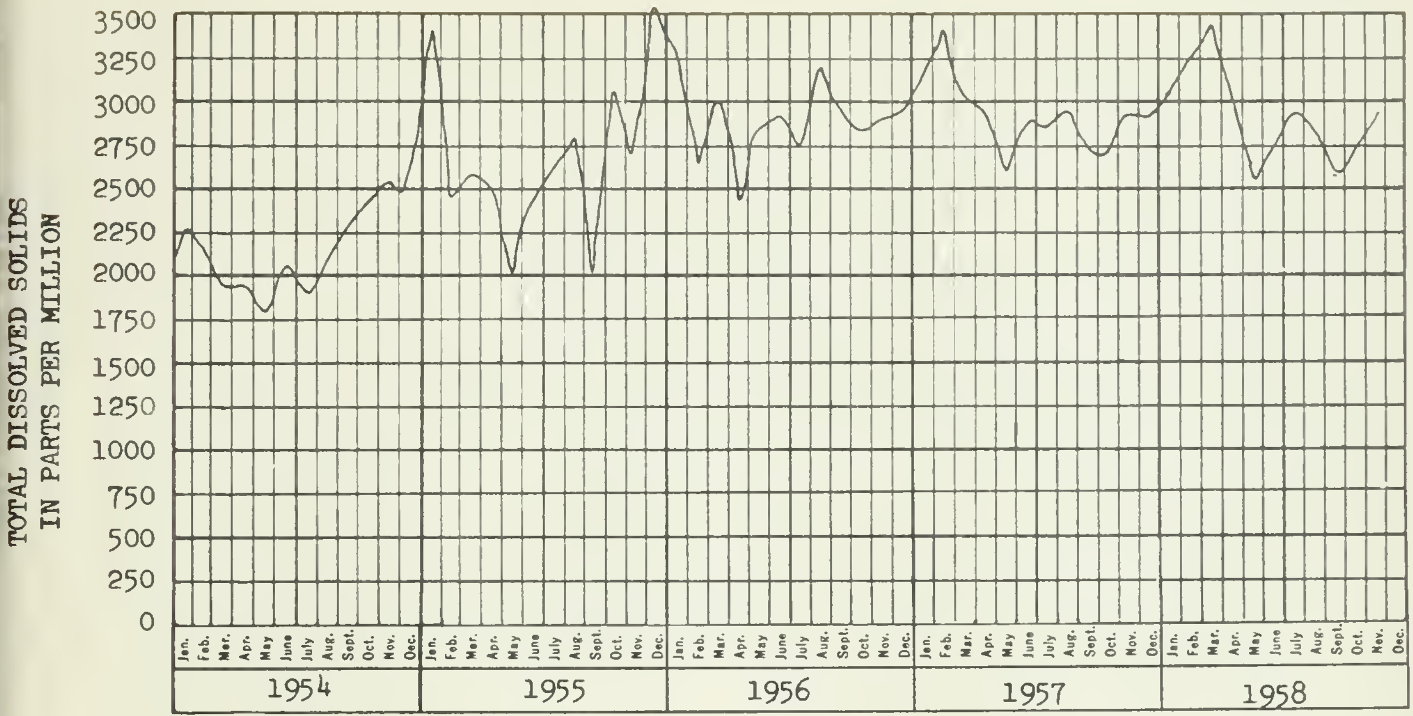
QUALITY CHARACTERISTICS OF
ALAMO RIVER AT INTERNATIONAL BOUNDARY (STATION 59)



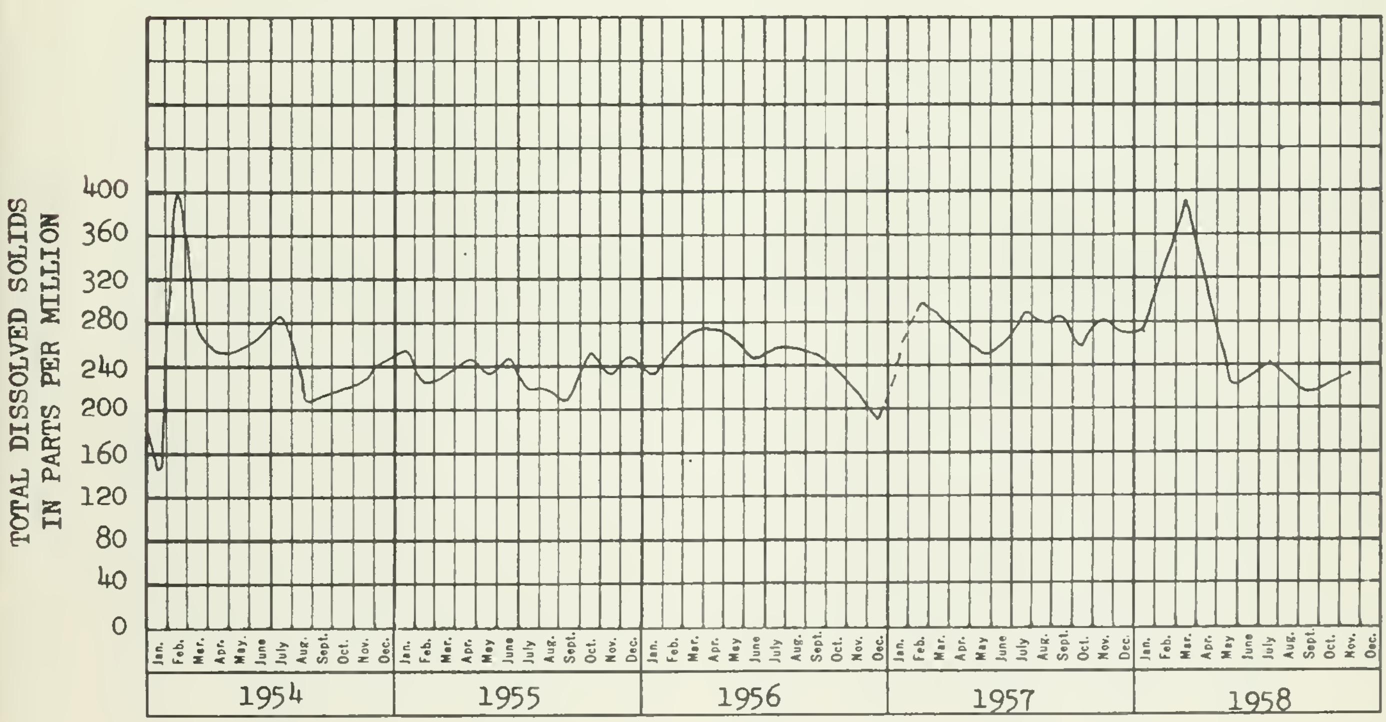
QUALITY CHARACTERISTICS OF
LAKE HAVASU AT COLORADO RIVER AQUEDUCT INTAKE (STATION 56d)



QUALITY CHARACTERISTICS OF
NEW RIVER AT INTERNATIONAL BOUNDARY (STATION 57)

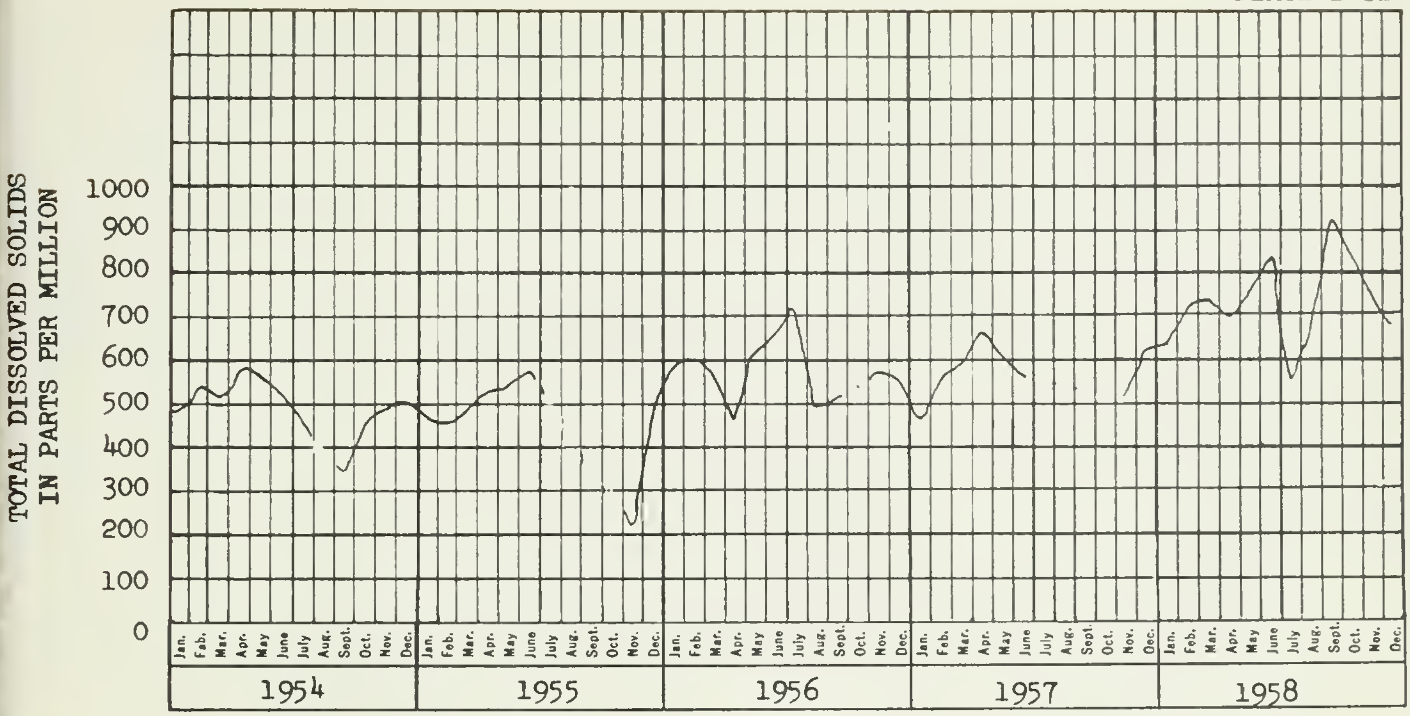


QUALITY CHARACTERISTICS OF
NEW RIVER NEAR WESTMORLAND (STATION 58)

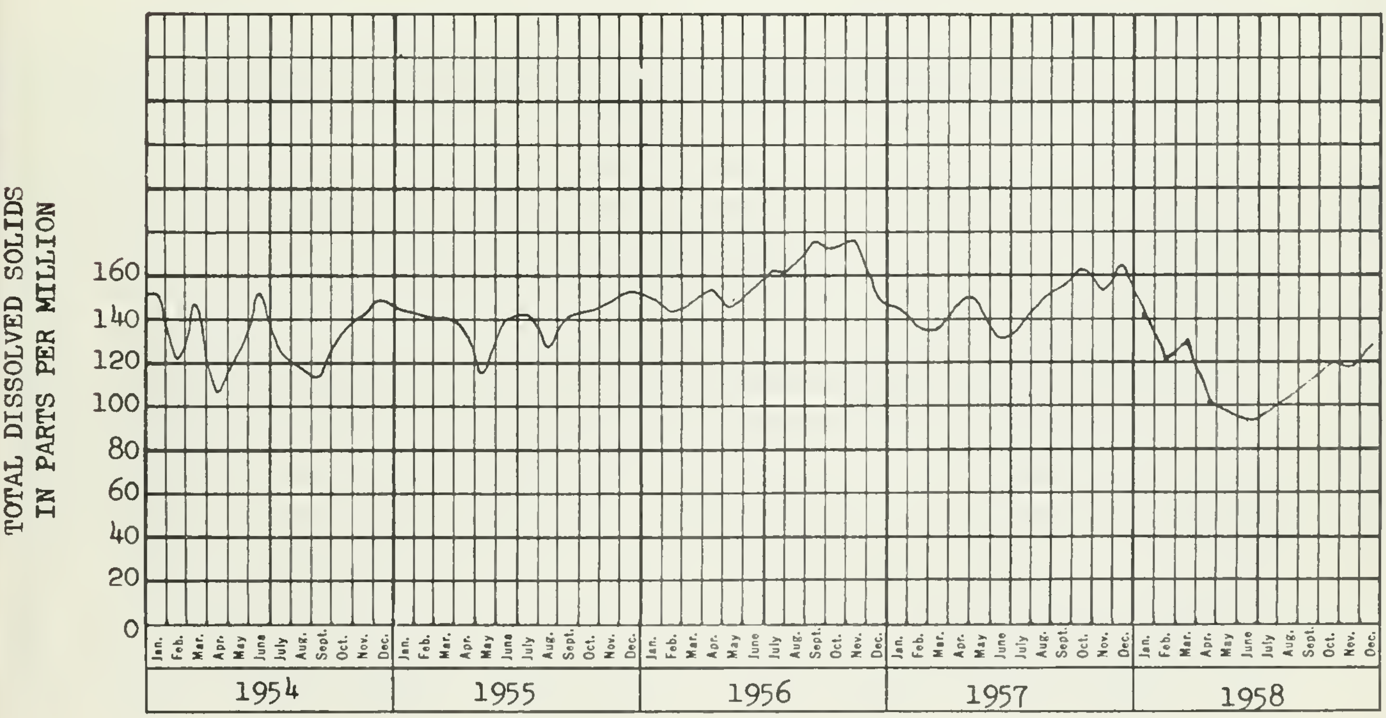


QUALITY CHARACTERISTICS OF
WHITEWATER RIVER AT WHITEWATER (STATION 68)

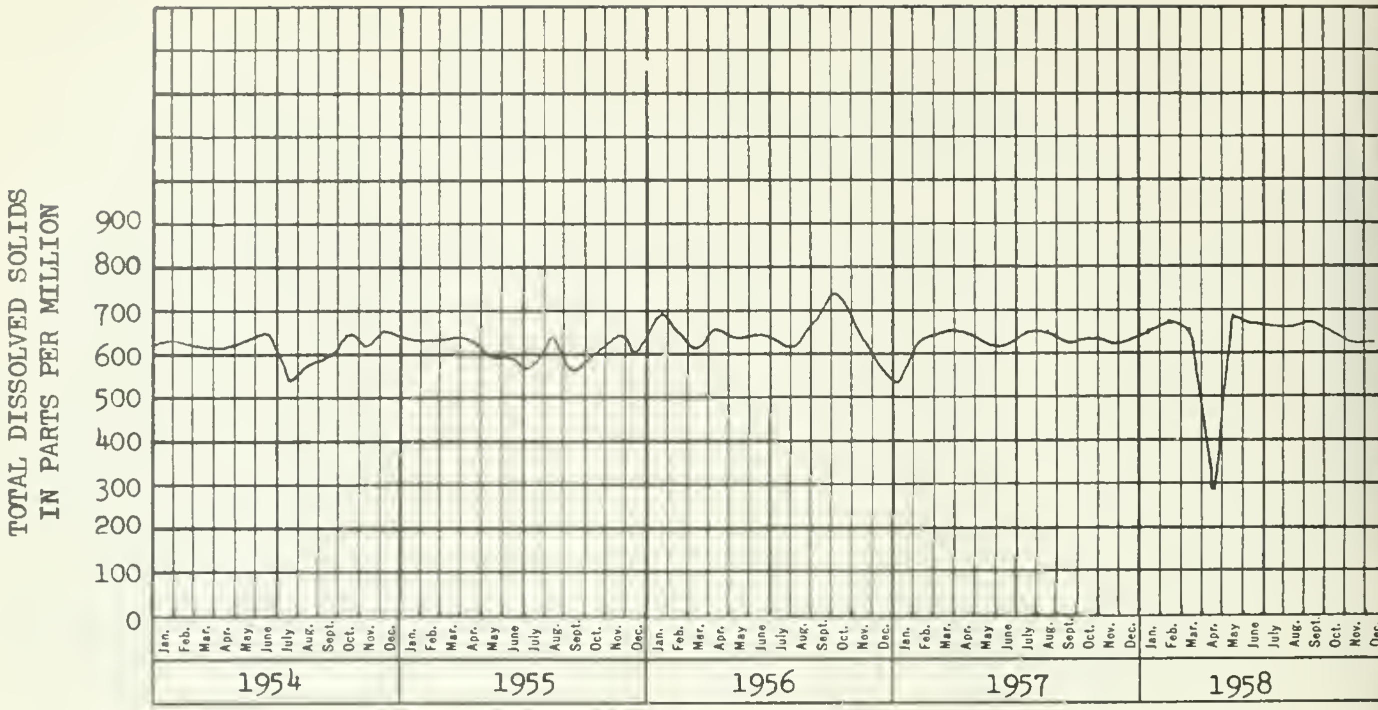
TOTAL DISSOLVED SOLIDS



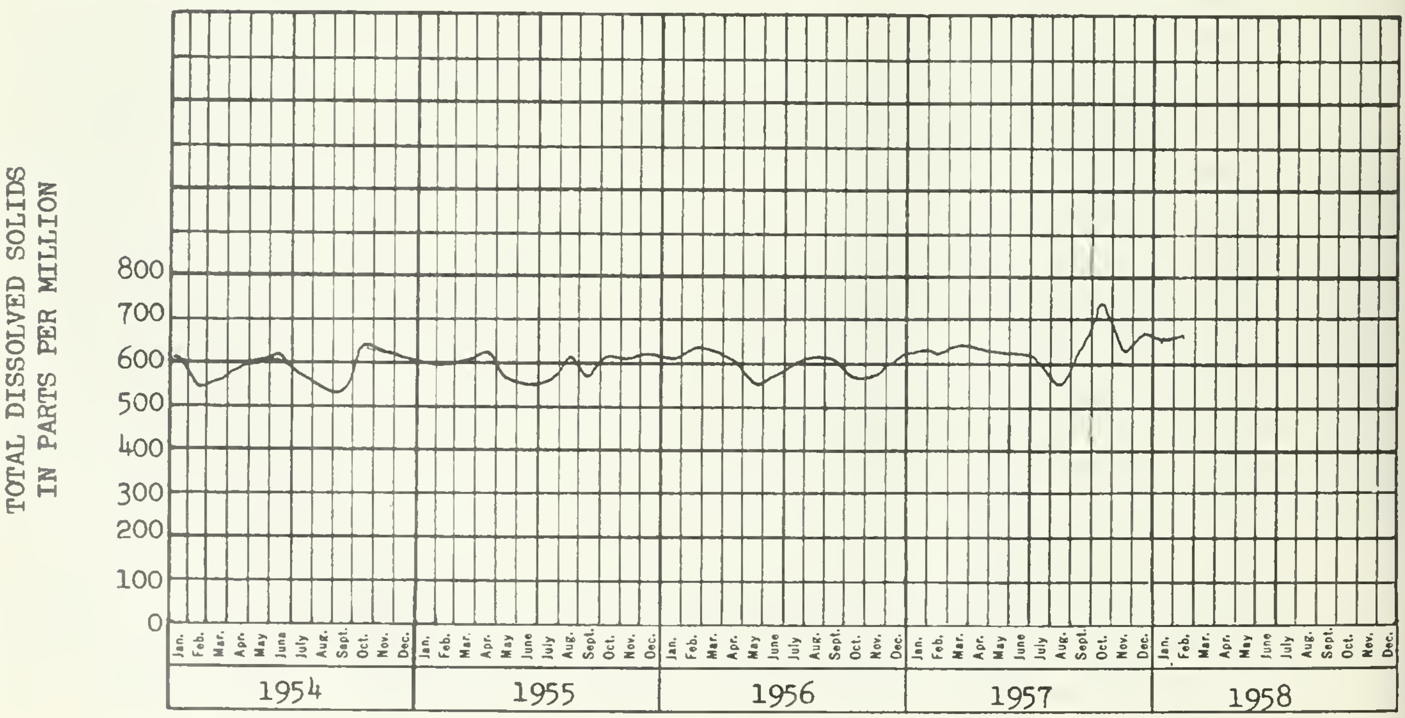
QUALITY CHARACTERISTICS OF
CHINO CREEK NEAR CHINO (STATION 86)



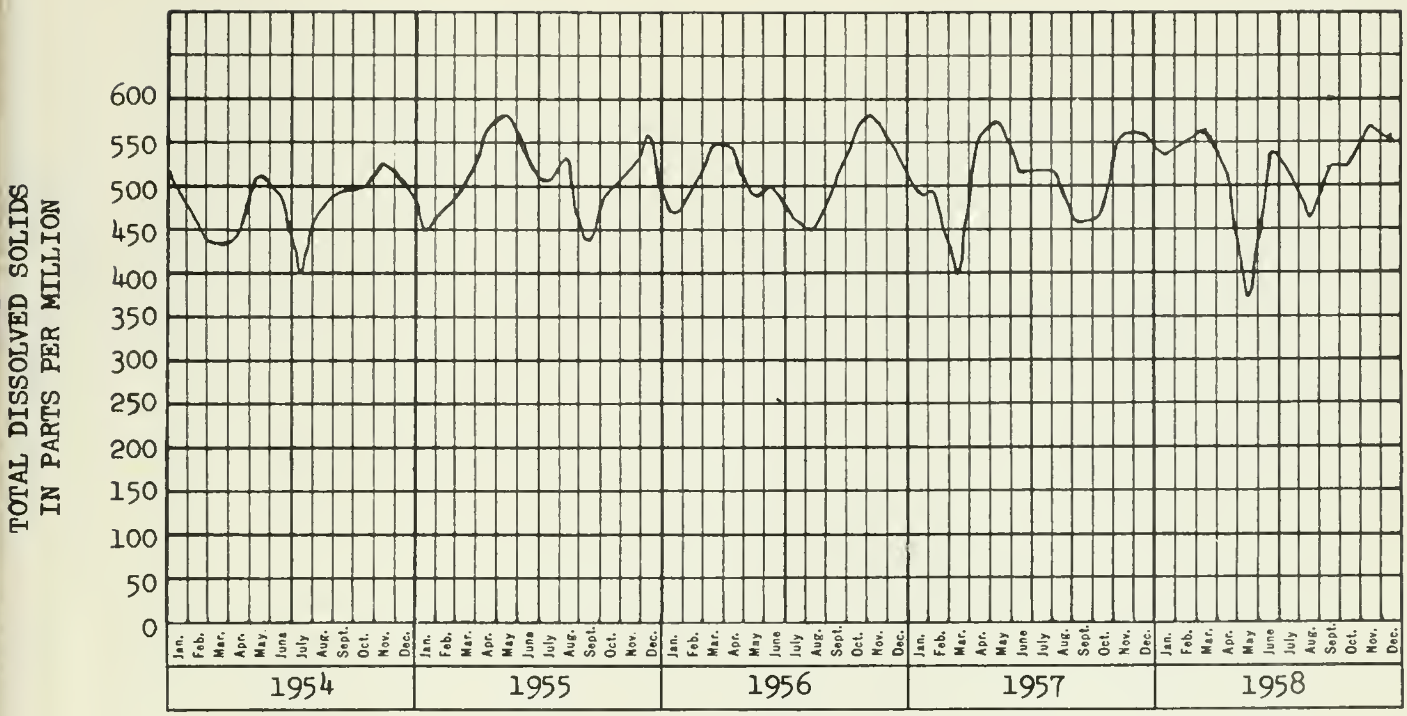
QUALITY CHARACTERISTICS OF
SANTA ANA RIVER NEAR MENTONE (STATION 51b)



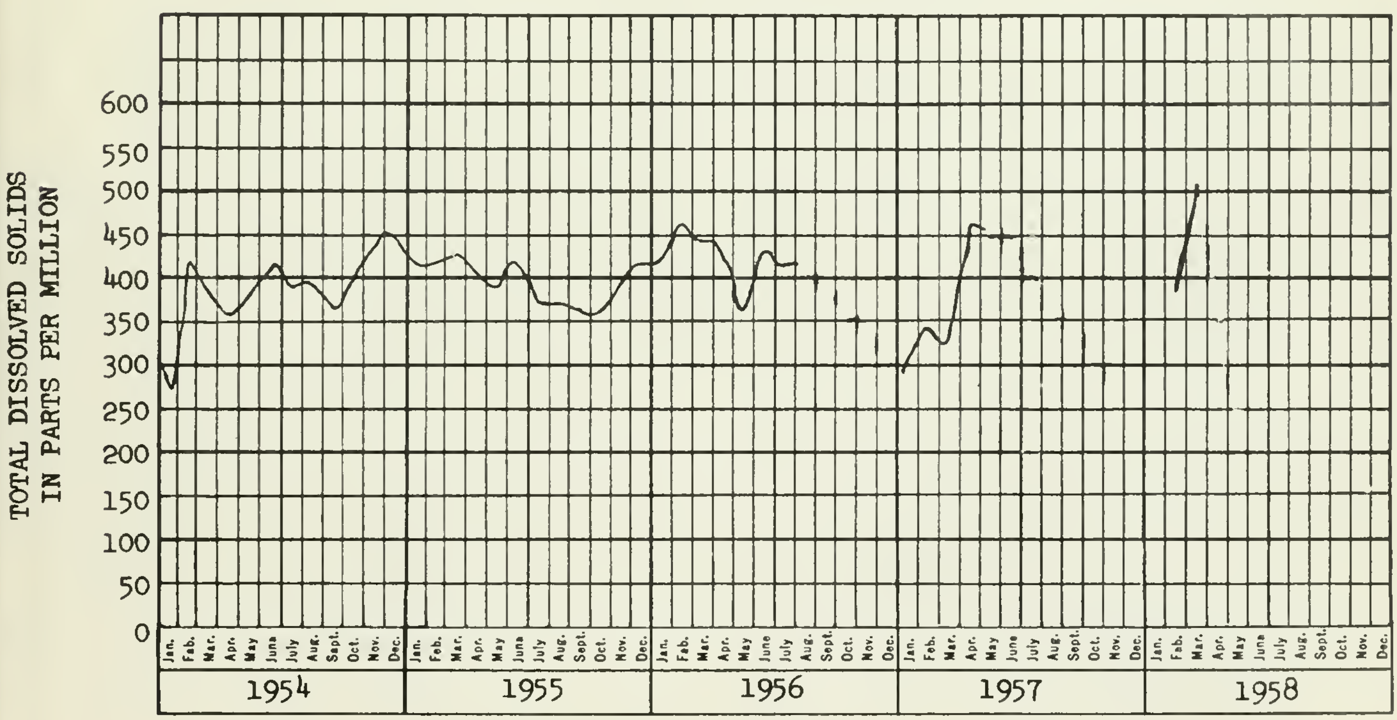
QUALITY CHARACTERISTICS OF
SANTA ANA RIVER NEAR PRADO DAM (STATION 51a)



QUALITY CHARACTERISTICS OF
SANTA ANA RIVER AT RIVERSIDE (STATION 51d)



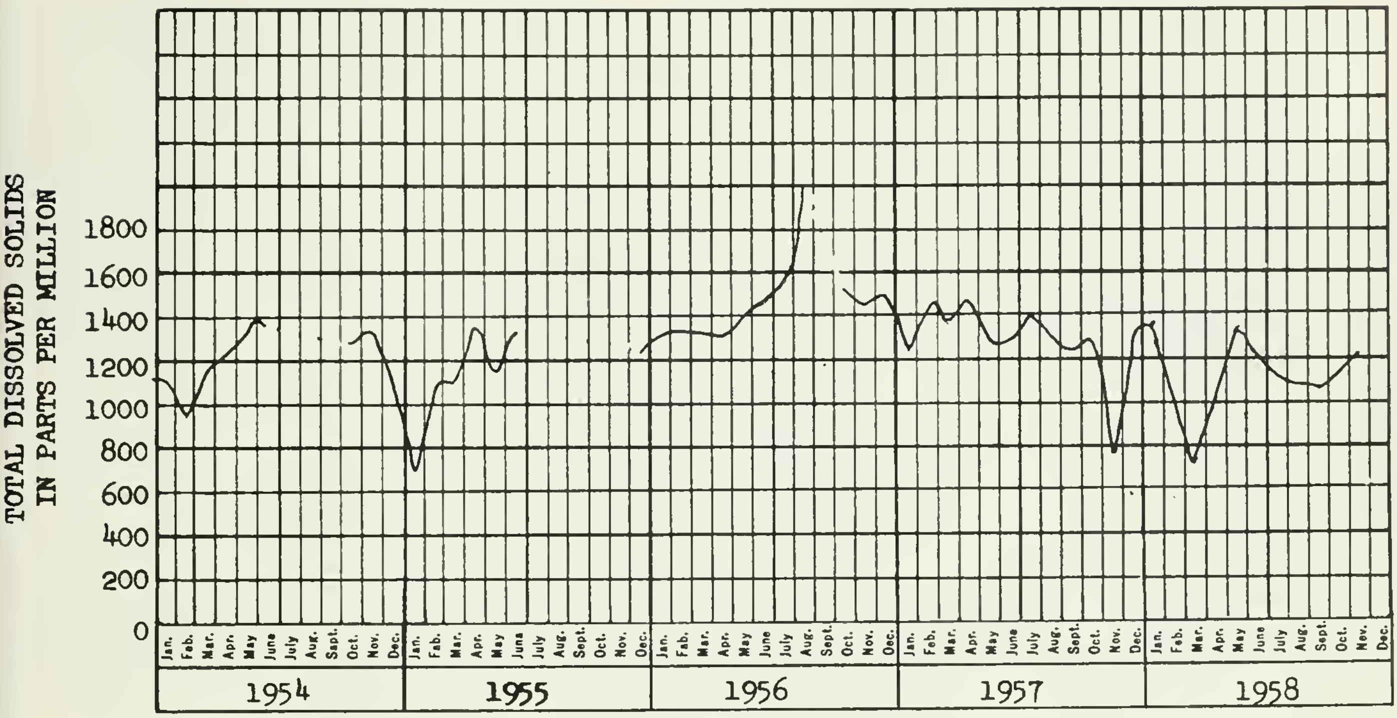
QUALITY CHARACTERISTICS OF
WARM CREEK AT COLTON (STATION 50b)



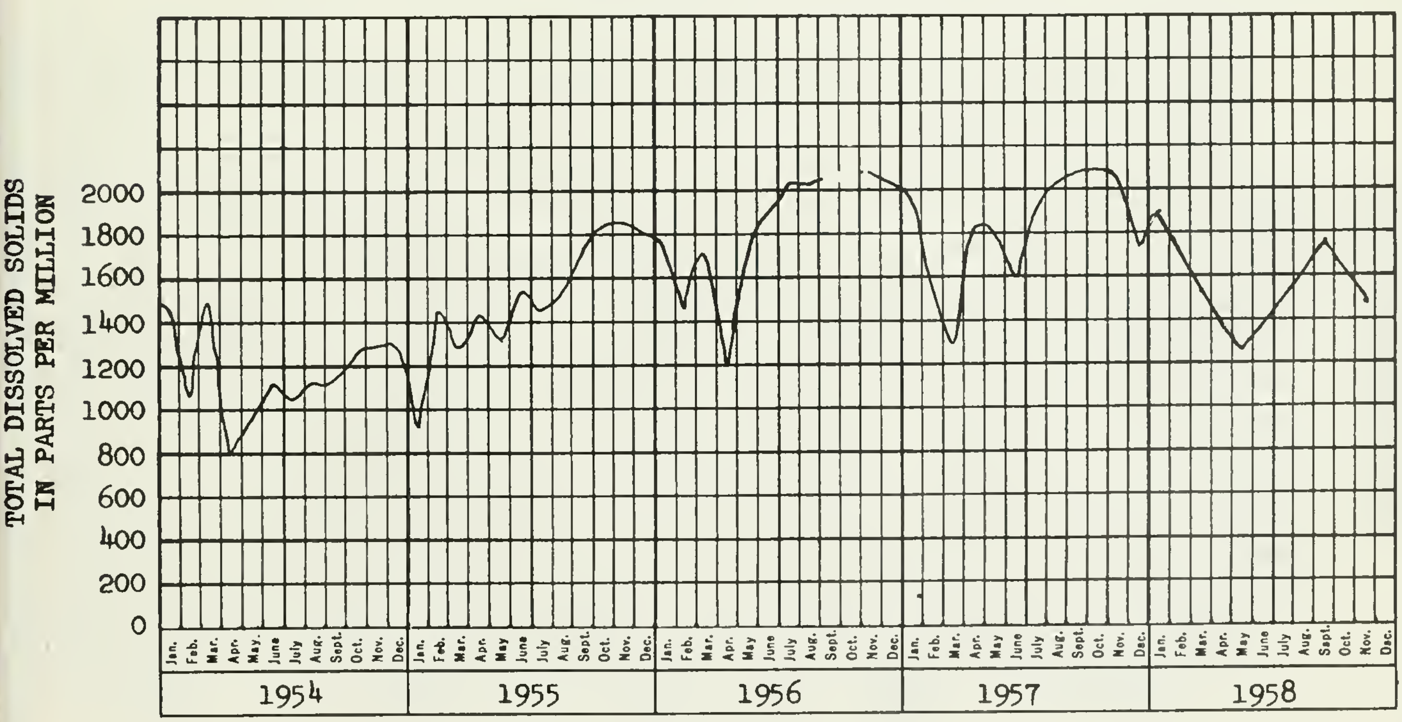
QUALITY CHARACTERISTICS OF
WARM CREEK AT SAN BERNARDINO (STATION 50c)

TOTAL DISSOLVED SOLIDS

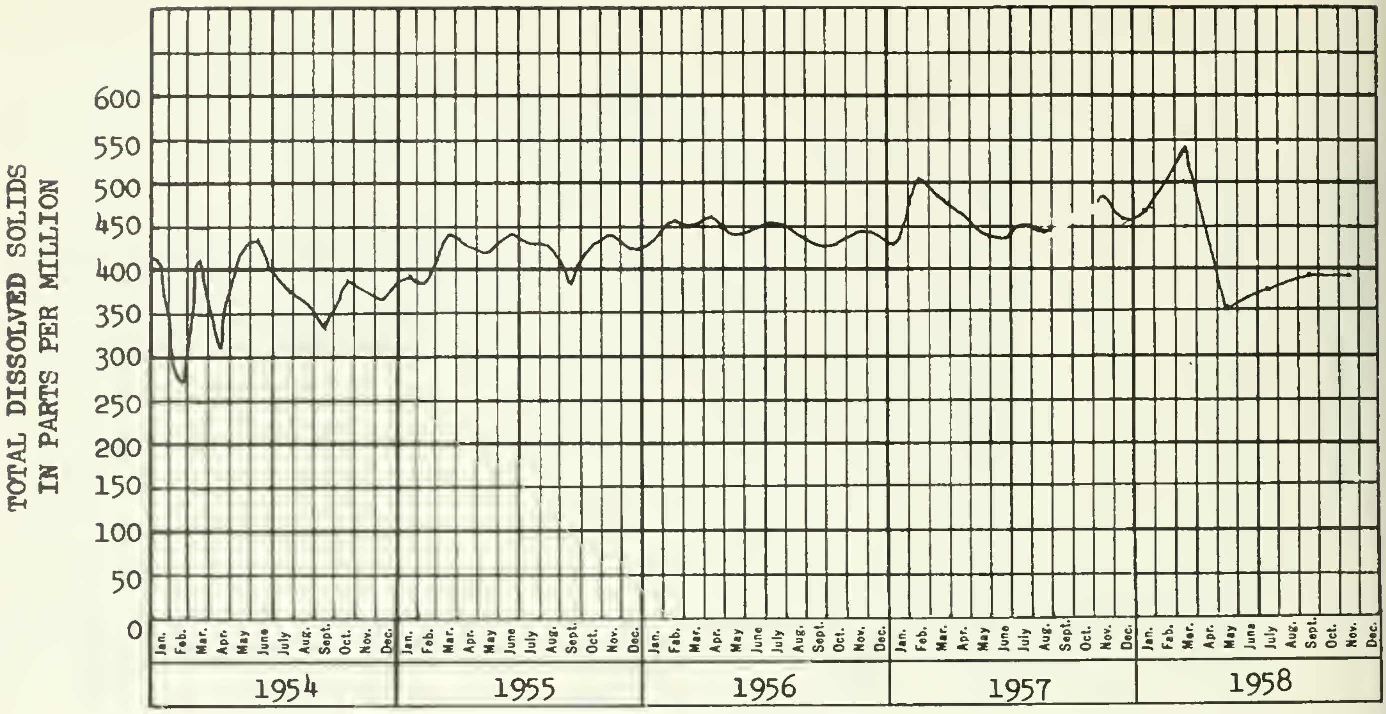
TOTAL DISSOLVED SOLIDS



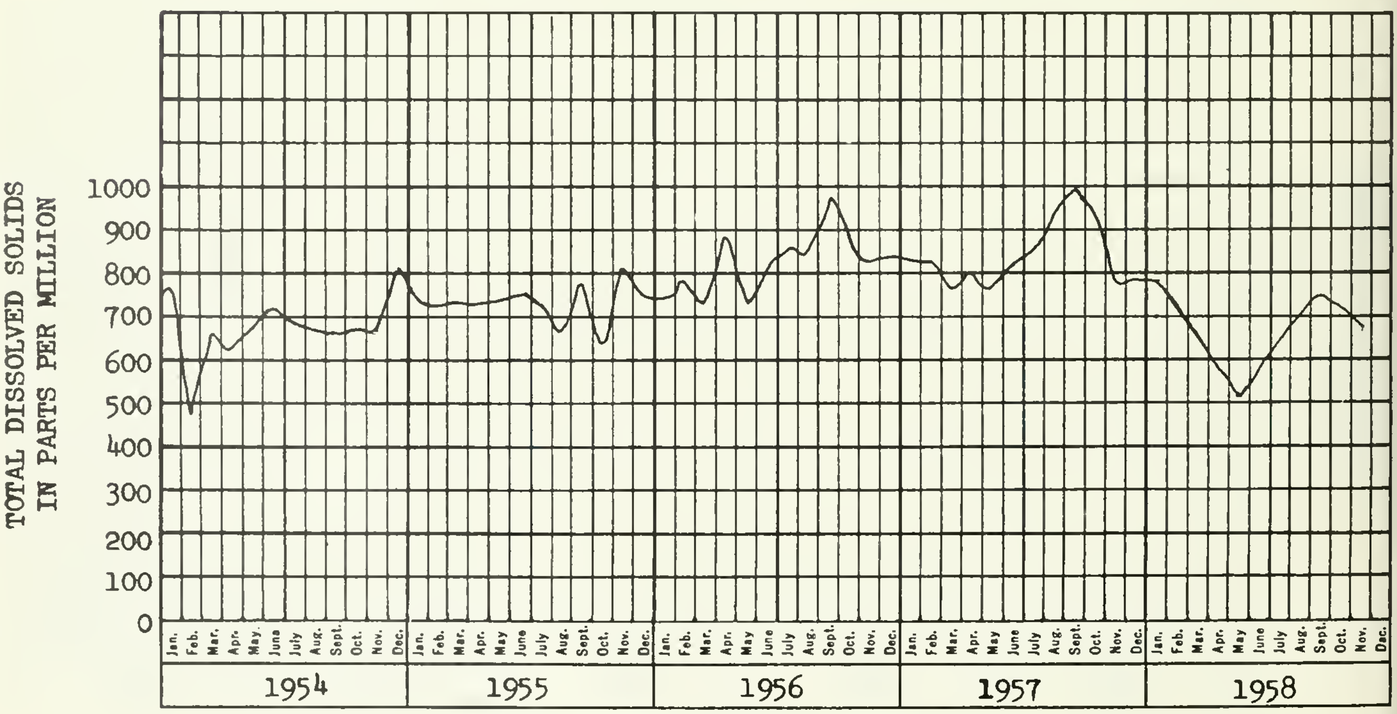
QUALITY CHARACTERISTICS OF
ESCONDIDO CREEK NEAR HARMONY GROVE (STATION 63)



QUALITY CHARACTERISTICS OF
SAN DIEGO RIVER AT OLD MISSION DAM (STATION 65)



QUALITY CHARACTERISTICS OF
SAN LUIS REY RIVER NEAR PALA (STATION 62)



QUALITY CHARACTERISTICS OF
SANTA MARGARITA RIVER NEAR FALLBROOK (STATION 51c)

35749