STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

BULLETIN No. 75

WATER QUALITY
AND
WATER QUALITY PROBLEMS, VENTURA COUNTY

VOLUME I
TEXT AND PLATES

EDMUND G. BROWN
Governor

HARVEY O. BANKS
Director of Water Resources

February, 1959

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STATE OF CALIFORNIA
Department of Water Resources
SACRAMENTO

February 20, 1959

Honorable Edmund G. Brown, Governor, and
Members of the Legislature of the
State of California
State Water Pollution Control Board
Los Angeles Regional Water Pollution Control Board

Gentlemen:

I have the honor to transmit herewith Bulletin No. 75 entitled, "Water Quality and Water Quality Problems, Ventura County". This investigation was conducted and report prepared in accordance with provisions of Sections 229 and 230, Chapter 2, of Division 1 of the Water Code.

This report evaluates the quality of surface and ground water supplies with respect to prevailing and anticipated beneficial uses of water in the County. It discusses the feasibility of reclamation of water from sewage, and the probable effects of future development upon water quality.

Sea-water intrusion into the ground water basin in the vicinity of Port Hueneme and Point Mugu is one of the most serious water quality problems in Ventura County today. Other problems which will be intensified as the County grows and develops include the disposal of sewage and industrial wastes, and maintenance of favorable salt balance in the ground water basins.

Appendixes bound in Volume II of the report contain a wealth of analytical data used as a basis for the report. This data together with the results of the periodic and continuing surface and ground water monitoring programs currently carried on by the Department of Water Resources will constitute a firm foundation for planning the water quality aspects of future water development projects.

Very truly yours,

Harvey O. Banks

HARVEY O. BANKS
Director

ACKNOWLEDGMENTS

The voluntary and valuable cooperation received from the following organizations and individuals and their contribution of data for this report are acknowledged with thanks:

United States Geological Survey,
Water Quality and Surface Water Branches

United States Navy Construction Battalion, Port Hueneme

United States Navy Air Missile Test Center, Point Mugu

California State Department of Public Health
Bureau of Sanitary Engineering

Los Angeles Regional Water Pollution Control Board (No. 4)

Ventura County Farm Advisor

Ventura County Department of Public Works

City of Ventura

City of Los Angeles, Department of Water and Power

University of California at Los Angeles,
Division of Irrigation and Soils

University of Southern California
Sanitary Engineering Research Center

United Water Conservation District

Fruit Growers Laboratory, Incorporated

Farmers Irrigation Company

Santa Paula Water Works, Limited

Special mention is made of the assistance rendered by Dr. L. D. Doneen, Professor of Irrigation, University of California at Davis, for his contribution entitled, "Evaluating the Quality of Irrigation Waters in Ventura County", which is reproduced in Appendix F.

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WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

CHAPTER I. INTRODUCTION

Water quality problems and their effects upon surface and ground water supplies are of particular significance to Ventura County. Results of a comprehensive investigation of historic and existing quality of surface and ground water supplies, and the past and potential sources of degradation and pollution are presented in this report. In addition, there are presented the results of studies respecting the effects of proposed plans of development upon the quality of waters in Ventura County. Feasibility of the reclamation of water from sewage and industrial waste to overcome existing water supply deficiencies is also discussed.

This report on the quality of water supplements a prior county-wide investigation of the water resources and water requirements in Ventura County undertaken in 1951 as a cooperative study between the State of California and the County of Ventura. Results of that investigation are published in State Water Resources Board Bulletin No. 12, entitled "Ventura County Investigation", dated October, 1953.

Authorization

This investigation was conducted, and report prepared in accordance with Sections 229 and 230, Chapter 2 of Division 1 of the Water Code. Section 229 is quoted as follows:

> "229. The department, either independently or in cooperation with any person or county, state, federal, or other agency, to the extent that funds are allocated therefor, 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."

Section 230 reads as follows:

"The department, either independently or in cooperation with any person or any county, state, federal, or other agency, to the extent funds are allocated therefor, shall conduct surveys and investigations relating to the reclamation of water from sewage or industrial wastes for beneficial purposes, including but not limited to, the determination of quantities of such water presently wasted, and possibilities of use of such water for recharge of underground storage or for agriculture or industrial uses; and shall report to the Legislature and the appropriate regional water pollution control board thereon annually."

Statement of Problem

Water, in its eternal movement from the mountains to the ocean, dissolves minerals from the rocks and soils with which it comes in contact. Upon the nature of the soils and the amount of salts dissolved depends the character and quality of the native water of an area. As the result of consumptive use of water by agricultural crops and native vegetation, and waste disposals of domestic and industrial origin, the concentration of mineral salts in water is increased and its quality deteriorates.

In parts of Ventura County, the "undeteriorated" water supplies, both surface and in the principal water-bearing deposits, contain relatively high concentrations of total dissolved solids, sulfate, total hardness, and boron. Seepage of poor quality waters from older semipermeable formations, oil brine disposal, citrus packing plant wastes, and other wastes, have contributed additional salts to the water supplies. In the Oxnard Plain Basin, progressive lowering of piezometric levels in the confined aquifers to below sea level has resulted in sea-water intrusion.

Related Investigations and Reports

The following listed published and unpublished reports were reviewed during the investigation, and certain information and data presented therein were used in the preparation of this report. Reference is made to these reports in the text by superscript figures in parentheses.

1. California State Department of Public Works, Division of Water Resources. "Ventura County Investigation", Bulletin No. 46. 1933.

2. California State Department of Public Works, Division of Water Resources. "Ventura County Investigation, Basic Data for the Period 1927 to 1932, Inclusive", Bulletin No. 46A.

3. State of California Department of Public Works, Division of Water Resources, "First Progress Report of Ventura Oil Waste Investigation". A report to Los Angeles Regional Water Pollution Control Board (No. 4) May, 1952.

4. California State Department of Public Works, Division of Water Resources. "Ventura County Oil Waste Investigation". A report to Los Angeles Regional Water Pollution Control Board (No. 4). June, 1954.

5. California State Department of Public Works, Division of Water Resources. "Investigation of Waste Discharges from Water Softening Units, Los Angeles Region". A report to Los Angeles Regional Water Pollution Control Board (No. 4).

6. California State Department of Public Works, Division of Water Resources. "First Progress Report of Investigation of Safe Dump Sites in South Coastal Basin Within Los Angeles Region". A report to Los Angeles Regional Water Pollution Control Board (No. 4). January, 1952.

7. California State Department of Public Health, Bureau of Sanitary Engineering. "Region-Wide Sampling of Sewage Treatment Plant Effluents". A series of reports to Los Angeles Regional Water Pollution Control Board (No. 4). December, 1951; June, 1952; March, 1953; June, 1953; February, 1954; and July, 1954.

8. California State Water Pollution Control Board. "Water Quality Criteria". SWPCB Publication No. 3. 1952.

9. California State Water Pollution Control Board. "Studies of Waste Water Reclamation and Utilization". Publication No. 9. 1954.

10. California State Water Resources Board. "Water Resources of California". Bulletin No. 1. 1951.

11. California State Water Resources Board. "Ventura County Investigation". Bulletin No. 12. October, 1953.

12. Eaton, F. M. "Boron in Soils and Irrigation Waters and its Effect on Plants". United States Department of Agriculture Technical Bulletin No. 448. February, 1935.

13. Freeman, V. M. "Preliminary Report on Cost of Reclaiming Water from the Oxnard Domestic Sewer System". Santa Clara Water Conservation District. September, 1949.

14. Fruit Growers Laboratory, Inc. "Packing Plant Waste as Threatening Pollutants of Main Basin Waters". A report to Water Pollution Committee of the Ventura County Citrus Packing Associations. June, 1953.

15. Hill, Raymond A. "Salts in Irrigation Waters". Transactions of American Society of Civil Engineers. 1942.

16. Los Angeles Regional Water Pollution Control Board (No. 4). "Report on Survey of Waste Disposal Dumps in Ventura County". September, 1952.

17. Los Angeles Regional Water Pollution Control Board (No. 4). "Progress Report on Possible Ground Water Pollution from Waste Water Produced from the Citrus Packing Plants in Ventura County, California". August, 1951.

18. Los Angeles Regional Water Pollution Control Board (No. 4). "Report on Survey of Waste Disposal from Walnut Packing Houses in Los Angeles and Ventura Counties". January, 1953.

19. United States Federal Security Agency, Public Health Service. "Public Health Drinking Water Standards". 1946.

20. United States Department of Agriculture, Bureau of Soils. "Soil Survey of the Ventura Area California". 1920.

21. United States Department of the Interior, Bureau of Reclamation. "Ventura River Project, California, A Report on the Feasibility of Water Supply Development". December, 1954.

Scope of Investigation and Report

Field and office work for this investigation was initiated in the fall of 1951, and continued into 1958. In the course of the field investigation, available analyses of surface and ground waters were collected and compiled. Additional samples of surface waters collected during varying conditions and rates of flow, were analyzed in order to determine relationships between quality and discharge. Sufficient wells were sampled to insure comprehensive areal water quality coverage of each of the ground water basins. In certain areas, particularly in the vicinity of Port Hueneme, wells were sampled periodically in an effort to determine quality trends.

In all, a total of 1,840 partial and 1,584 complete analyses of ground waters and 439 partial and 566 complete analyses of surface waters were made. These analyses were made in the Department of Water Resources laboratories. In addition, in excess of 600 complete mineral analyses of surface and ground water supplies, dating back to 1927, were obtained from Fruit Grower's Laboratory Incorporated, United Water Conservation District, Ventura Farm Advisor, and Division of Water Resources Bulletin No. 46A[2].

All available data concerning sources of deterioration of water supplies were compiled. Available analyses of sewage were collected from agencies disposing of wastes to the Pacific Ocean. Reports concerning possible pollution resulting from sewage and industrial waste discharges were reviewed and pertinent data abstracted. A brief investigation was made to ascertain the location of certain of the major waste discharges and conditions of disposal. In some instances, studies were made to determine if discharges were causing pollution or deterioration of surface or ground water supplies.

Pertinent reports respecting the reclamation of water from sewage were reviewed. Studies were made to determine the quality, economic feasibility, and potential sites for beneficial use of water which could be reclaimed from this source.

As previously stated, this report is a companion investigation to Bulletin No. 12[11] of the State Water Resources Board. Therefore, the extensive studies of geology and hydrology which were prepared for and presented in that Bulletin, were utilized in the preparation of this report. Also, information pertinent to the interpretation of water quality has been abstracted therefrom.

Results of the investigation of water quality and water quality problems in Ventura County are presented in this report in the ensuing eight chapters. Chapter II contains information pertinent to this investigation which has been abstracted from Bulletin No. 12. Chapter III, "Water Utilization", cites the various beneficial uses of water in Ventura County and presents data to indicate the magnitude of the major uses. In Chapter IV, entitled "Water Quality Criteria", there are presented water quality criteria for each major prevailing beneficial use and a short discussion respecting each of the principal constituents found in water.

In Chapter V, entitled "Water Quality", there is presented a detailed discussion of the historic and present quality of the ground and surface waters in Ventura County as well as a discussion of the prospective quality of potential sources of imported supplies.

In Chapter VI, entitled "Water Quality Problems", there is presented a brief discussion of prevailing natural sources of deterioration in Ventura County and discussion of deterioration as a result of development, including the effects of industrial waste discharges, overdraft conditions, sewage disposals, and irrigation return. In addition, aspects of basin salt balance under present conditions are discussed. In Chapter VII, entitled "Reclamation of Water from Sewage", current water reclamation projects are reviewed and the results of studies to determine the feasibility of reclamation of sewage presently disposed to the Pacific Ocean are discussed.

In Chapter VIII, entitled "Water Quality Aspects of Water Resources Development", the effects of several of the proposed plans for water supply development in Ventura County are discussed. This includes proposals for the further development of existing supplies and the estimated effect of the importation of supplemental water from the Colorado River and from Northern California on the quality of waters in Ventura County. Chapter IX, entitled "Conclusions and Recommendations", summarizes the conclusions presented in the previous chapters and the actions recommended as a result of these studies of water quality and water quality problems in Ventura County.

In addition to the text there are eight appendixes containing supporting data. These data include mineral analyses of surface and ground waters, mineral and sanitary analyses of effluents from sewage treatment plants, and a cross index of State well numbers to Ventura County well numbers. Also included is a paper by Dr. Lloyd D. Doneen, entitled "Evaluating the Quality of Irrigation Water in Ventura County". These appendixes are bound separately in Volume II.

Description of Area

Ventura County forms a part of the South Coastal Area of California. It is bounded by Santa Barbara County on the west, Los Angeles County on the east and south, Kern County on the north, and the Pacific Ocean on the southwest as shown on Plate 1, "Area of Investigation". The area of the County, excluding Anacapa and San Nicolas Islands, which are a part of Ventura County, is 1,857 square miles. The area of investigation includes all of the mainland portion of Ventura County except the Cuyama River watershed.

The County is characterized by rugged mountainous terrain in the northern portion and lower mountains and alluvial valleys in the central and southern portion. Numerous ridges in these mountains extend to elevations in excess of 6,000 feet, attaining a maximum elevation of 8,826 feet at Mt. Pinos, near the northern boundary of the County.

Drainage Systems

Ventura County is drained by four principal stream systems, formed by the Ventura, Santa Clara, and Cuyama Rivers,and Calleguas Creek. With the exception of the Cuyama River, these streams discharge into the ocean along the coastal front, forming the southwesterly boundary. The headwaters of the Cuyama River rise in the northwesterly portion of the County and drain into the ocean through the Santa Maria River. The Cuyama watershed and other minor areas in the westerly, northerly, and southerly portion of the County which drain into Santa Barbara, Kern, and Los Angeles Counties, except for that portion of the Malibu Creek drainage area which lies within Ventura County, are not covered in this report. In addition to the streams mentioned above, there are several minor watercourses and drainage channels which drain the southwesterly portion of the County and discharge into the ocean.

Climate

The mediterranean type of climate, typical of the southern coastal portion of California, prevails in Ventura County, with proximity to the ocean providing a moderating effect on climatic conditions throughout the developed area. A long, dry, warm summer season is followed by a shorter wet winter period accompanied by cooler temperatures. In excess of 80 per cent of the mean seasonal precipitation occurs during the months of December through March. Precipitation occurs generally in the form of rainfall, except in the mountainous regions where there is some snowfall in most years. Fog is prevalent along the coast during portions of each year.

Temperature extremes generally increase with elevation and distance from the coast. The mean annual temperature at Oxnard is somewhat less than 60 degrees Fahrenheit. The cities of Ojai, Ventura, Santa Paula and Moorpark have mean annual temperatures of 60 degrees or slightly above. The growing season is long and generally decreases with elevation and distance from the coast. Killing frosts are rare on the coastal plain of the Santa Clara River valley. Portions of this area are producing as many as three crops per year.

Soils

In general, the soils in Ventura County may be divided into three groups: (1) residual soils, which have been developed in place from the disintegration and weathering of consolidated rocks, both of sedimentary and basic igneous origin; (2) old valley and coastal plain soils, which are derived from elevated, unconsolidated, water-laid deposits which have undergone marked changes since their deposition; and (3) recent alluvial soils, which are derived from sediments that have undergone little or no change since their deposition. These soils have their origin in a variety of materials, including shale, sandstone, conglomerate, basic igneous rocks, and old valley-fill deposits.

Residual soils are identified with hill and mountain areas and comprise a relatively small area of the county. They are found principally in the rolling hills and ridges at the perimeter of the interior valleys. Soil textures vary from medium to heavy and soil depths are generally shallow. Drainage is generally good, and moisture retention adequate, except where underlying bedrock is near the surface.

Soils of old valley fill and coastal plain groups occur both on hill and rolling lands, and on marine or stream terraces. These soils have medium texture, are friable, and are well suited to irrigated agriculture. Subsoils are somewhat more compact and heavier in texture, with local tendencies to form a hardpan. Surface drainage is good but subsurface drainage is, in some cases, retarded by the heavy compact nature of the subsoil.

Topography, identified with the recent alluvial soils, is smooth and gently sloping. The group covers nearly the entire coastal plain of the Santa Clara River valley. Depth of soil is usually good, with textures grading from light to very heavy. The soils of this group have the common characteristic of stratification in the subsoil. On alluvial fans, both surface and internal drainage is very good. However, in some of the lower valleys, where the soil is quite heavy, drainage is poor, as in the southerly portion of the coastal plain and extending northerly therefrom toward Camarillo. An extensive drainage sytem has been constructed in this area to alleviate this problem.

Population

The 1950 Federal census reported the population of Ventura County to be 114,647, as compared to the 1940 population of 69,685. The increase during this period was about 65 per cent of the 1940 total. Estimates made by Planning Research Corporation indicate that the total county population was greater than 160,000 in 1957. The City of Oxnard, which ranked third in population in 1940, was first in 1958, with a population of 21,567 and 34,326, respectively, according to a 1958 special census. The estimated 1957 population of other incorporated cities in order of their magnitude was: Ventura, 28,300; Santa Paula, 12,370; Fillmore, 4,810; Port Hueneme, 8,750; and Ojai, 4,060.

Definitions

Terms, as used in this report, are defined as follows:

Aquifer - A formation or structure sufficiently permeable to yield water to wells or springs.

Confined Ground Water - A body of ground water overlain by materials sufficiently impervious to sever free hydraulic connection with overlying water and moving under pressure caused by the elevation at the intake area.

Contamination - As defined in Section 13005 of the Water Code, "Contamination means an impairment of the quality of the waters of the State by sewage or industrial waste to a degree which creates an actual hazard to public health through poisoning or through the spread of disease. . ." Jurisdiction over matters regarding contamination rests with the State Department of Health and local health officers.

Degradation - Any impairment in the quality of water due to causes other than disposal of sewage and industrial waste.

Free or Unconfined Water - This generally refers to a body of ground water in the zone of saturation that is not confined beneath an impervious formation.

Ground Water Overdraft - The quantity of ground water withdrawn from a ground water basin in excess of safe ground water yield.

Native Water - This term, when used with respect to quality of water, signifies the quality of the waters prior to the development of the area by man. As a practical matter, however, it is usually used to signify the quality found at the time of the first mineral analyses of the water in areas where there are no evidences of pollution or deterioration.

Pollution - As defined in Section 13005 of the Water Code, "Pollution means an impairment of the quality of the waters of the State by sewage or industrial waste to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic, industrial, agricultural, navigational, recreational or other beneficial use . . ." Regional water pollution control boards are responsible for prevention and abatement of pollution as defined in this section.

However, the Attorney General has stated that the term "pollution" as used in Section 229 of the Water Code, which relates to investigations of water quality by the Department of Water Resources, is general in nature. Thus, with respect to this study, it encompasses all types of water quality deterioration, including sea-water intrusion and other types of degradation.

Quality of Water - This refers to those characteristics of water affecting its suitability for beneficial uses.

Refuse - Combustible and/or noncombustible organic and/or inorganic waste material (excepting sewage or industrial waste) originating in residential, commercial, or industrial areas.

Safe Ground Water Yield - The maximum rate of extraction of water from a ground water basin which, if continued over an indefinitely long period of years, would result in maintenance of certain desirable fixed conditions. Commonly, safe ground water yield is determined by one or more of the following conditions:

1. Mean annual extraction of water from the ground water basin

does not exceed mean annual replenishment to the ground water body.

2. Water levels are not lowered so as to cause harmful impairment of the quality of the ground water by intrusion of any other water of undesirable quality, or by accumulation and concentration of degradants or pollutants.

3. Ground water levels are not so lowered as to imperil the economy of ground water use by excessive costs of pumping from the ground water body, or by exclusion of users from that source of supply.

4. Prior rights of others in adjacent ground water basins are not interfered with.

Semiperched Ground Water - A ground water body, usually unconfined, lying above the main body of ground water and partially separated therefrom by unsaturated rock.

CHAPTER II. WATER SUPPLY

The quality of surface water is related to the geology of the tributary watershed and the frequency, intensity, and magnitude of precipitation. Likewise ground water quality is related to the sources of recharge and the geologic formations which form the ground water basins. This chapter presents a summary of the geology and hydrology of Ventura County with emphasis on the occurrence and movement of ground water in the principal ground water basins. Information set forth herein is based on detailed studies published in Bulletin 12 of the State Water Resources Board.(11)

Surface Water Supplies

The principal sources of water supply to Ventura County are direct precipitation on the valley floor and runoff from tributary drainage areas. However, a small amount of water imported from Los Angeles County and relatively minor quantities of water released from the Los Angeles aqueduct in the upper reaches of the Santa Clara River watershed have contributed to the supply. There is no record of export of water from Ventura County.

Precipitation.

Precipitation in Ventura County occurs primarily as rainfall, although light snowfall is not uncommon in the higher mountains in the northern portion of the County. The mean seasonal depth of precipitation varies from about 32 inches in the Topatopa Mountains to about 12 inches in the vicinity of Point Mugu.

Precipitation in the county exhibits extreme monthly and seasonal variation. The seasonal variation at Ojai, which is similar to the variation at other stations within the county, is shown on Plate 3, entitled "Recorded Seasonal Precipitation at Ojai". The apparent cyclic nature of the occurrence of the precipitation at this station is shown on Plate 4 entitled, "Accumulated Departure from Mean Seasonal Precipitation at Ojai". Approximately 80 per cent of the seasonal precipitation occurs during the 4-month period December through March, although it is not unusual for one or more of these months to be extremely dry in any given season.

Runoff

Runoff flowing in streams in Ventura County is derived primarily from rainfall and exhibits similar monthly and seasonal variations. Absence of snowpack in the tributary watersheds causes flow in all streams to diminish rapidly at the conclusion of the winter precipitation season, although some summer flow is maintained by springs in the upper reaches of the more productive watersheds. Seasonal natural runoff in the principal streams of the county has varied from a maximum in excess of 400 per cent of the mean to a minimum of less than 5 per cent. Following a severe storm, discharge in the larger streams has been known to increase from practically no flow to a rate of thousands of cubic feet per second in a few hours time. Seasonal variations in the runoff of Sespe Creek near Fillmore are presented on Plate 5 entitled, "Estimated Seasonal Natural Runoff of Sespe Creek near Fillmore", and the cyclic nature of the occurrence of runoff at this station is shown on Plate 6 entitled, "Accumulated Departure from Mean Seasonal Natural Runoff of Sespe Creek near Fillmore".

Major drainage systems in Ventura County which are included in this report are: Ventura River, Santa Clara River, and Calleguas Creek. In addition, a portion of the Malibu Creek system lies within Ventura County. Runoff in each of these systems is briefly discussed below. The locations of the various streams in each of the drainage systems in Ventura County are delineated on Plates 7A, B & C, entitled "Location of Surface and Drainage Water Sampling Stations".

Tributary runoff is disposed through percolation to ground water storage in absorptive stream channels and artificial spreading grounds, evaporation, consumptive use of native vegetation, diversions to meet the requirements of irrigated agriculture and urban development, and discharge to the ocean.

Ventura River System. Ventura River, which originates in the Santa Ynez and Topatopa Mountains and drains an area of approximately 226 square miles, flows in a southerly direction discharging to the Pacific Ocean at the City of Ventura. The principal tributaries of Ventura River are Matilija, Coyote, and San Antonio Creeks, and Canada Larga.

According to State Water Resources Board Bulletin No. 12[11], the discharge at Station No. 42-5.7, Ventura River near Ventura, ranged from a maximum of 256,000 acre-feet to a minimum of zero, averaging 59,000 acre-feet, for the period 1936-37 through 1950-51. Average values of runoff in the Ventura River and certain of its tributaries are presented in Table 1 entitled, "Maximum, Minimum and Average Measured and Estimated Seasonal Runoff at Key Stream Gaging Stations in or near Ventura County, 1936-37 through 1950-51". The location of each of these stations is delineated on Plate 7A entitled "Location of Surface and Drainage Water Sampling Stations, 1958".

TABLE 1

MAXIMUM, MINIMUM AND AVERAGE MEASURED AND ESTIMATED SEASONAL RUNOFF AT KEY STREAM GAGING STATIONS IN OR NEAR VENTURA COUNTY
1936-37 THROUGH 1950-51

Stream and Station	Stream mile location number	Drainage area, in square miles	Annual Runoff in acre feet		
			Maximum	Minimum	Average
Matilija Creek at Matilija	42-15.6-0.2	55	125,280	1,540	29,420
North Fork Matilija Creek at Matilija	42-15.6a-0.5	15.5	31,290	590	8,000
Coyote Creek near Ventura	42-6.0-0.3	41	50,890	50	11,220
Ventura River near Ventura	42-5.7	187	256,300	0	59,040
Santa Clara River near Saugus	43-45.5	410	49,770	220	15,900
Santa Clara River 1/2-mile west of county line	43-37.3	644	86,110	4,280	33,530
Piru Creek near Piru	43-31.8-3.2	432	226,300	2,410	57,270
Hopper Creek near Piru	43-28.9-1.0	23	15,400	140	4,430
Sespe Creek near Fillmore	43-21.5-6.0	254	371,700	1,290	90,160
Santa Paula Creek near Santa Paula	43-15.9-3.8	40	57,680	990	17,040
Arroyo Simi near Simi	44-12.2-5.8-8.5	75	7,150	0	1,120
Arroyo Las Posas near Moorpark	44-12.2-5.8-2.7	118	9,350	0	1,500
Malibu Creek at Crater Camp near Calabasas	45-4.3	103	73,220	60	15,620

Santa Clara River System. The Santa Clara River drains 1,064 square miles below the Ventura-Los Angeles County line and 627 square miles above the County line or a total of 1,691 square miles. The river originates in the Sierra Pelona and San Gabriel Mountains in Los Angeles County and flows in a westerly direction to enter the Pacific Ocean just south of the City of Ventura. The principal tributaries in Ventura County are Piru, Hopper, Sespe and Santa Paula Creeks from the north and Salt Creek from the south. Piru and Sespe Creeks, which drain 432 and 254 square miles, respectively, are the largest of these tributaries.

It was estimated in State Water Resources Board Bulletin No. 12 that the 15-year average seasonal natural runoff at Station No. 43-37.3, known as Santa Clara River one-half mile west of the Los Angeles-Ventura County line, was 33,530 acre-feet. During this period the maximum flow recorded was 86,110 acre-feet and the minimum flow recorded was 4,280 acre-feet. Average annual values of runoff during the period 1936-37 through 1950-51 at selected stations on the Santa Clara River and its tributaries are presented in Table 1. The location of the gaging stations is delineated on Plate 7B.

Historically, imported water has entered the Santa Clara River drainage area through release from the Los Angeles aqueduct or as the result of spill from Bouquet Canyon Reservoir on the aqueduct system. A total of 60,900 acre-feet of water was discharged to Santa Clara River from these sources during the period 1936-37 through 1950-51. While this release contributed to water supply to Ventura County the quantitative effect on the long time average supply is relatively small.

Calleguas Creek System. The Calleguas Creek system drains 331 square miles. Arroyo Simi and Tapo Creeks, the headwaters of this system, originate in the Santa Susanna and Santa Monica Mountains. Arroyo Simi, rising near the Los Angeles-Ventura County line east of Santa Susanna, flows in a westerly direction through Simi Valley to a short distance southwest of Moorpark, at which point the stream name changes to Arroyo Las Posas. The stream then continues in a westerly direction until near Somis, where it turns to the south, with a second change of name to Arroyo Calleguas. Southeast of Camarillo the stream is called Calleguas Creek, and flows in a southwesterly direction toward Mugu Lagoon and the Pacific Ocean.

The runoff in Calleguas Creek System is relatively minor. The seasonal flow in Arroyo Las Posas near Moorpark has varied from a minimum of zero (for several seasons) to a maximum of approximately 9,000 acre-feet during the period 1936-37 to 1950-51. The runoff averaged 1,500 acre-feet per year for the 15-year period. The locations of gaging stations on the Calleguas Creek System are delineated on Plate 7C.

Malibu Creek System. The southerly slopes of the Santa Monica Mountains within Ventura County are drained by Los Virgenes and Triunfo Creeks, tributaries of Malibu Creek, together with several minor streams discharging directly into the ocean. However, runoff from these streams is minor in quantity and has little or no effect on the water supply situation in Ventura County.

Surface Reservoir Storage

Nine reservoirs in Ventura County, utilized for stream flow regulation, are sufficiently large to be subject to the jurisdiction of the State of California. In addition, there are three reservoirs in the County which are used to impound waste from oil field operations. Information concerning these latter structures is presented in the discussion on oil industry wastes in Chapter VI.

The principal conservation reservoirs in Ventura County are created by Matilija and Santa Felicia Dams, the locations of which are delineated on Plates 7A and B. Matilija Dam is a concrete arch structure, 163 feet in height forming a reservoir with storage capacity of about 7,000 acre-feet. It was constructed in 1948 by the Ventura County Flood Control District. Santa Felicia Dam on Piru Creek, constructed by the United Water Conservation District, was completed in 1955. It is an earthfill type dam, creating a reservoir with maximum storage capacity of 100,000 acre-feet.

In addition to existing dams, the United States Department of Interior, Bureau of Reclamation has initiated construction of Casitas Dam on Coyote Creek of the Ventura River drainage area as shown on Plate 7A. An earthfill dam will provide a reservoir with a capacity of 250,000 acre-feet which will impound waters diverted from the Ventura River during periods of high runoff in addition to runoff from the Coyote Creek watershed.

Surface Diversions

Utilization of surface waters in Ventura County is limited to a relatively few users along the Ventura and Santa Clara Rivers and their tributaries. Along the Santa Clara River system, the users divert the uncontrolled surface flow including rising water, of Piru, Sespe, and Santa Paula Creeks. Supplies from these sources are not dependable in quantity, and in some years disappear completely. Many users of surface water supplies are also equipped to pump supplemental ground water.

The City of Ventura is the largest user of surface waters along the Ventura River, and has pumped ground water to supplement this supply when necessary. Above the City's diversion near Foster Park, several gravity diversions supply water to agricultural users and small urban entities adjacent to the river.

A list of the major users, sources of supply, locations of diversions, and other pertinent data is presented in Table 2 entitled "Major Diversions of Surface Water in Ventura County".

TABLE 2

MAJOR DIVERSIONS OF SURFACE WATER IN VENTURA COUNTY

User	Source of supply	General location of lands served	Point of diversion	Estimated present average seasonal diversion, in acre-feet	Principal use
Ventura County Flood Control District	Matilija Creek	Ojai Basin	Matilija Reservoir	1,048	Ground water replenishment
Miscellaneous users above Meiners Oaks[a]	Ventura River	Upper Ventura River Basin	Between confluence of Matilija and North Fork of Matilija Creeks and Meiners Oaks	1,100	Irrigation
City of Ventura	Ventura River	City of Ventura	At Foster Park	5,700[b]	Municipal
Waring Bros. Irrigation Service	Piru Creek	Piru Basin	One-half mile above railroad Bridge at Piru	800	Irrigation
United Water Conservation District (Piru Spreading Grounds)	Piru Creek	Piru Basin	At Piru	5,097	Ground water replenishment
Fillmore Irrigation Company	Sespe Creek	Fillmore Basin	One mile above U.S.G.S. gaging station near Fillmore	4,600	Irrigation
Farmer's Irrigation Company	Santa Clara River	Santa Paula and Mound Basins	One mile above Santa Paula Bridge	1,300	Irrigation
Miscellaneous agricultural users above Santa Paula Water Works diversion	Santa Paula Creek	Santa Paula Basin	------	300	Irrigation
Santa Paula Water Works, Ltd.	Santa Paula Creek	City of Santa Paula	At U.S.G.S. gaging station near Santa Paula	2,800	Municipal
Santa Clara Water and Irrigation Company	Santa Clara River	Oxnard Plain Basin	Near Saticoy	700	Irrigation
United Water Conservation District (Saticoy Spreading Grounds)	Santa Clara River	Oxnard Forebay Basin	Near Saticoy	10,300	Ground water replenishment
United Water Conservation District (El Rio Spreading Grounds)	Santa Clara River	Oxnard Plain	Near Saticoy	7,330	Ground water replenishment
Ventura County Flood Control District	Runkle Canyon Creek	Simi Valley	Two miles southwest of Santa Susana	Not measured	Ground water replenishment

a. From report "Safe Yield - Matilija Reservoir", May, 1948, by Harold Conkling, Consulting Engineer.
b. Estimated present water requirement of City of Ventura. City would divert this amount if available.

Ground Water Supplies

Regulation of the available water supplies of Ventura County is accomplished principally through utilization of the storage capacity in underlying ground water reservoirs. Usable ground water supplies are found in the valleys and in some hill areas in the southern part of the county. These supplies occur principally in alluvium and unconsolidated sediments, and to a lesser extent in consolidated and fractured rock of sedimentary and volcanic origin. Underground water supplies are replenished by percolation of surface waters, both in natural absorptive channels and in artificial spreading grounds; by deep penetration of precipitation and the unconsumed portion of applied irrigation water; and by subsurface inflow from adjacent ground water basins. Disposal of ground water supplies is effected by pumped extractions, discharge as rising water, consumptive use by native vegetation in areas subject to high ground water levels, and subsurface outflow.

As an introduction to the discussion of ground water geology and hydrology in Ventura County there is presented a discussion of geologic formations. Following this, there is a brief discussion of the geologic and hydrologic characteristics of the individual ground water basins found in each of the drainage systems in Ventura County. These data are summarized in Table 3, "Principal Geologic and Hydrologic Aspects of Ground Water Basins in Ventura County"; the areal geology of Ventura County is delineated on Plate 8. Contours depicting the ground water level in the spring of 1957 are shown on Plate 2.

Geologic Formations

Rocks found in Ventura County consist of marine and nonmarine sediments, ranging in age from Cretaceous to Recent, and volcanics of Miocene age. The sediments and volcanics are underlain by a pre-Cretaceous basement complex composed of igneous and metamorphic rocks. These formations are probably underlain by sedimentary rocks of Jurassic age in some areas. From the standpoint of water supply, geologic formations may be separated into two categories, nonwater-bearing formations and water-bearing formations. Formations included among each of these two categories are discussed in the following paragraphs.

Nonwater-Bearing Series. Nonwater-bearing deposits in Ventura County include the basement complex, sediments of Cretaceous and Tertiary age and volcanics of Miocene age. Outcrops of these deposits are delineated on Plate 8. Although the sediments of the nonwater-bearing series are generally incapable of producing a dependable supply there are domestic wells throughout Ventura County which extract limited amounts of water from these deposits, and a few wells which yield large amounts of water.

Water-Bearing Series. The water-bearing deposits in Ventura County include lower Pleistocene age sediments, upper Pleistocene sediments and Recent alluvium.

The deposits of lower Pleistocene age consist of the Santa Barbara and the San Pedro formations. The Santa Barbara formation, which ranges from upper Pleistocene to lower Pleistocene in age, contains mudstone, shale, and minor sandstone beds. Near the top of the Santa Barbara formation a deposit of sand and gravel forms the Grimes Canyon aquifer, which is an important source of ground water in Los Posas Basin. The lower Pleistocene San Pedro formation consists of marine and continental sands, gravels and clays that range up to 4,000 feet in thickness, and supply water to wells in the Santa Clara River Valley, Pleasant Valley, and Las Posas Basin areas. At the base of the San Pedro formation is an important aquifer, known as the Fox Canyon aquifer, which consists of 100 to 400 feet of sands and gravels.

Upper Pleistocene silts, sands, gravels, and clays overlay the San Pedro formation. In the Oxnard Plain area these sediments extend from the top of the San Pedro formation to within about 20 to 50 feet of the surface. The main aquifer in the Oxnard Plain Basin is a stream-deposited gravel within these upper Pleistocene sediments, termed the Oxnard aquifer. Some water is also obtained from lenticular upper Pleistocene gravels in the Pleasant Valley area.

Deposits of Recent alluvium in the region are usually less than 50 to 60 feet thick and consist of sands, gravels, and clays. As the Recent alluvium is very shallow, most wells obtain water from older formations.

Ground Water Basins, Ventura River System

Ground water basins within the Ventura River system include the Upper Ojai, Ojai, Upper Ventura River and Lower Ventura River Basins. The location of these basins is delineated on Plate 2 and a summary of geologic and hydrologic information is set forth in Table 3. In general, the basins of this system are small and have limited storage capacity. For this reason, they are quickly recharged during wet periods and rapidly depleted during periods of drought. The lands of this system not included within the indicated limits of ground water basins are principally underlain by formations of low permeability which do not yield water readily to wells. However, in these areas, some water is obtained from fractures and pervious zones within consolidated Tertiary deposits.

Upper Ojai Basin. Upper Ojai Basin is situated in the northwesterly part of the Ventura River system. The principal water-bearing deposits are found in the Pleistocene and Recent alluvium that covers the floor of the Basin to an average depth of approximately 60 feet. The alluvium is flanked by the folded and faulted Pico, Santa Margarita, Modelo, Rincon, Vaqueros and Sespe formations as shown on Plate 8. Fractures in these Tertiary formations contain some ground water and many small springs are supplied from fractures in these rocks.

In the Upper Ojai Basin, ground water moves westerly into Lyon Canyon of the Ventura River drainage system as shown by contours of water levels on Plate 2. Consolidated Tertiary formations prevent any appreciable subsurface outflow of ground water from the Upper Ojai Basin into Ojai Basin.

Ojai Basin. Ojai Basin, the principal ground water basin in the Ventura River drainage system is a down faulted and folded area that has been filled with Recent and Pleistocene stream alluvium to depths which range up to 700 feet in thickness. The alluvium rests on and is flanked by Tertiary formations. Although some ground water is contained in fractures derived from the flanking Tertiary formations, the major portion of the readily available supply is contained in the alluvial floor of the basin. Water diverted from Matilija Reservoir into the Ojai spreading grounds serves as a partial source of recharge to the ground water reservoir.

Ground water in the Ojai Basin moves south and west and converges on San Antonio Creek at its outlet from Ojai Valley. However, during periods of low water levels the water table slope has been reversed to form a depression or trough in the vicinity of Ojai as indicated by ground water contours on Plate 2. During periods of high water levels, some wells located in the southwestern part of the basin exhibit conditions of artesian flow, suggesting the occurrence of locally confining conditions.

At the west end of Ojai Valley available evidence suggests that subsurface outflow is blocked by nonwater-bearing materials of the Sespe formation. This, and the fact that bedrock is exposed in San Antonio Creek indicate that subsurface outflow from Ojai Basin into Upper Ventura River Basin is probably insignificant.

Upper Ventura River Basin. The Recent alluvium is the principal water-bearing deposit found in the Upper Ventura River Basin. This basin includes the Upper Ventura River Valley, the Coyote Creek drainage area, and that part of the San Antonio Creek drainage area downstream from Ojai Valley. In the Ventura River Valley the depth of this alluvium ranges from 60 to 100 feet, while in the smaller San Antonio and Coyote Creeks the fill is thinner, ranging from 5 to 30 feet in depth. These alluvial deposits rest on and are flanked by folded and faulted Tertiary formations. Most of the ground water in the basin is contained in the alluvial deposits, although some water is contained in fractures in older formations. Free ground water conditions generally prevail throughout the basin, although there are some localized bodies of confined water. Subsurface flow to Lower Ventura River Basin occurs around the east end of a subsurface barrier built by the City of Ventura near Foster Park.

Lower Ventura River Basin. Alluvial deposits that range from 60 to 100 feet thick in the floor of the Ventura River Valley are the important aquifers in this basin. The alluvium of the basin is generally underlain by nonwater-bearing Tertiary formations. The water-bearing San Pedro formation flanks and underlies the alluvium at the mouth of the Ventura River, although this aquifer appears to be hydraulically isolated from the alluvium by impermeable formations, and is considered to be part of the Mound Basin. Utilization of ground water from the Lower Ventura River Basin has been negligible since 1926, when most wells were abandoned because of poor quality.

Ground Water Basins, Santa Clara River System.

Ground water basins in this system comprise Piru, Fillmore, Santa Paula, Mound, Oxnard Forebay, Oxnard Plain, and Pleasant Valley Basins. Collectively, they are the most productive basins in Ventura County. The location of these basins is delineated on Plate 2, and the principal geologic and hydrologic characteristics of these basins are given in Table 3. Direction of movement of ground water in the spring of 1957, as indicated by lines of equal elevation of ground water, is shown on Plate 2.

Piru Basin. Piru Basin is the easternmost basin lying entirely within Ventura County. The principal water-bearing deposits of upper Pleistocene and Recent alluvium and underlying Pleistocene San Pedro formation coincide axially with the Santa Clara River syncline, and the San Pedro formation has been folded into the syncline. Southeast of Piru the synclinal axis has been folded upward, causing the San Pedro formation to be truncated by erosion. In addition, Tertiary formations have been moved over the younger San Pedro formation by thrusting along the San Cayetano and Oakridge faults. These older formations are essentially nonwater-bearing but may contribute some water of poor quality to the main aquifers.

The thickness of the alluvial deposits rangesfrom 85 to 200 feet, whereas the San Pedro formation may attain a thickness approaching 4,000 feet. At the eastern boundary of the basin, near Blue Cut, the alluvium covering the nonwater-bearing deposits is thin, with the result that subsurface inflow is negligible. At the western boundary of Piru Basin a constriction impedes the flow of ground water and results in rising water in Santa Clara River.

Fillmore Basin. The principal water-bearing deposits in Fillmore Basin are the alluvium of Pleistocene to Recent age, up to 250 feet in thickness, and the San Pedro formation, which may have a thickness as great as 4,000 feet. East of Santa Paula, the cross sectional area of the San Pedro formation has been reduced by warping of the Santa Clara River syncline. This restriction forms the western boundary of the basin, through which a minor amount of subsurface outflow occurs. On the south side of the basin, in the Bardsdale area, the alluvium overlies the shelf of nonwater-bearing rocks which have been thrust upward by the Oakridge fault. The alluvium overlying this shelf is up to 180 feet thick.

Historically, the alluvium has been substantially dewatered in certain areas along the north and south sides of Fillmore Basin, with the result that several wells have gone dry. However, in most areas, deepening of wells into the underlying San Pedro formation would probably have alleviated the difficulty. An exception to this general situation exists in the southerly portion of Fillmore Basin, south of the Oakridge fault, where the alluvium is underlain by relatively nonwater-bearing Tertiary deposits.

Santa Paula Basin. The alluvium in the Santa Paula Basin ranges up to 200 feet in thickness, while the underlying San Pedro formation is about 4,000 feet thick. In the northwestern part of the basin near Saticoy, deposits of yellow silty clay overlie the principal gravel zones in the alluvial deposits creating locally confined conditions. Underlying and flanking the San Pedro formation are semipermeable Tertiary deposits, which may yield water of poor quality to wells.

Ground water moves toward the west end of the basin, where movement is impeded by the Saticoy fault. Water levels are 50 to 100 feet higher on the upstream side of the fault than on the downstream side, indicating that this fault is an effective ground water barrier. Between Santa Paula and Mound Basins there is a relatively steep hydraulic gradient, which may be caused by a decrease in permeability in the underlying sediments or by some unknown faulting in the San Pedro formation.

Mound Basin. The San Pedro formation, which is the principal water-bearing deposit in the basin, is overlain by alluvium and underlain by Santa Barbara formation. The alluvial deposits, which range from upper Pleistocene to Recent in age, consist of yellow clay that has intercalated lenses of sand and gravel. The alluvium is underlain by 4,000 feet of gravels, sand, silts, and clays which make up the San Pedro formation. The upper 500 to 1,000 feet of the San Pedro formation consists of many permeable beds of sands and gravels that are discontinuous and extremely lenticular. These form the principal sources of ground water in this basin.

At the present time, there is insufficient evidence to indicate that sea water is intruding into the San Pedro formation. It is possible that the submarine extensions of the formations may be in hydraulic continuity with the ocean, and consequently, inflow of sea water or outflow of fresh water can occur. There is uncertainty as to the hydraulic continuity of the San Pedro formation between the Mound Basin and Oxnard Plain Basin, but it is possible that subsurface inflow to or outflow from the Oxnard Plain Basin may occur when water levels are favorable.

Oxnard Forebay Basin. Formations in this basin include Recent and upper Pleistocene alluvium underlain unconformably by the San Pedro formation and, in a small area, by the Santa Barbara formation.

Alluvium of Recent and upper Pleistocene age is the most important material in the Oxnard Forebay since it forms the ground water reservoir for most of the water used in Oxnard Plain Basin. The alluvium consists of up to about 400 feet of river deposited gravel, clay, and sand.

The Oxnard Forebay Basin is a free ground water basin in which there is hydraulic continuity between ground surface and the ground water table. The upper gravels are continuous with the Oxnard aquifer of Oxnard Plain Basin. The alluvium is underlain by permeable sands and gravels of the San Pedro formation, called the Fox Canyon member.

Ground water in the Oxnard Forebay Basin is the principal source of recharge to the Oxnard Plain Basin through the aquifers in the alluvium and the San Pedro formation. Outflow through the San Pedro formation into Mound Basin may occur at times in the area near Montalvo.

Oxnard Plain Basin. The principal water-bearing formations in the Oxnard Plain Basin are Recent and Pleistocene alluvial deposits, which range in thickness from 400 to 500 feet and the underlying San Pedro formation, the thickness of which ranges from about 600 feet in the south to almost 1,800 feet in the north of the basin. The Oxnard aquifer, of Recent and Pleistocene age, is the most important aquifer in the basin. It ranges from 75 to 200 feet in thickness and is confined by a layer of clay with interbedded lenses of sand and gravel up to 150 feet in thickness. The clay supports a semiperched water body, but slow infiltration through the cap probably contributes to the recharge of the Oxnard aquifer. Another aquifer is found in the southeastern part of the basin where a fairly continuous bed of gravel 70 feet thick is encountered at depths of about 400 feet near the base of the upper Pleistocene alluvium. The most important aquifer in the San Pedro formation is the Fox Canyon member, consisting of sands and gravels which range from 100 to 300 feet in thickness. These three aquifers are in hydraulic continuity with the ocean near Port Hueneme, or Point Mugu or both. Limited quantities of water are obtained from other permeable zones in the San Pedro formation and in the upper Pleistocene sediments.

Pleasant Valley Basin. The Recent and upper Pleistocene alluvium and the San Pedro and Santa Barbara formations are the principal sources of ground water in Pleasant Valley Basin. In the area north of the Camarillo fault and south of the Camarillo hills, the alluvium consists of about 400 feet of yellow and blue clays with lenticular water-bearing sands and gravels. South of the Camarillo fault, the alluvium consists mostly of clay with irregularly interbedded sands and gravels, with a total thickness of 400 feet. The San Pedro formation underlies the entire basin, ranging in thickness from 400 to 1,500 feet, and has at its base the Fox Canyon member. The Fox Canyon member, ranging in thickness from 100 to 300 feet, is the most important aquifer in Pleasant Valley Basin. Underlying the San Pedro formation is the Santa Barbara formation, which varies from 50 to 900 feet in thickness. Only a few wells obtain water from this latter formation and, since the sediments are of a fine-grained nature, it has not been developed as an important aquifer. Adjacent to and underlying the southern part of the basin are volcanic rocks which yield water to wells from fractures and from gravels interbedded with volcanic flows.

Nearly all ground water bodies of this basin are confined, the exception being the Fox Canyon member, which is unconfined in a limited area near Somis. During periods of heavy draft, ground water moves toward the center of the basin, whereas when water levels are high, ground water moves in a southerly direction through the basin.

Ground Water Basins, Calleguas Creek System.

Ground water basins in the Calleguas Creek drainage system include Simi, East and West Las Posas, Conejo, Tierra Rejada, and Santa Rosa Basins. The remaining lands of the system are principally underlain by formations of low permeability, which do not yield water readily into wells. The location of these basins is delineated on Plate 2. Table 3 presents a summary of some of the characteristics of these basins. The direction of ground water movement, as evidenced by contours of ground water elevation for the spring of 1957, is shown on Plate 2.

Simi Basin. The principal water-bearing formation in Simi Valley is the Recent and Pleistocene alluvium consisting of sands, gravels, and clays, covering the floor of the valley to depths that range up to 730 feet. The clay content increases toward the west end of the basin causing localized conditions of confined ground water. Underlying the alluvium are semipermeable Tertiary formations which contain water in fractures and interstices. However, they do not yield large amounts of water to wells. In the Tapo Canyon area about 1,000 feet of water-bearing sands and gravels and some clays of the Santa Barbara formation have been folded into a tight syncline. This formation, the second most important source of ground water in Simi Valley, is separated from alluvium of Simi Valley by nonwater-bearing rocks as shown on Plate 8.

Subsurface outflow from this basin moves through the alluvium to Arroyo Simi where the alluvium appears to be only 60 to 100 feet deep and about 1,000 feet wide.

East Las Posas Basin. The principal aquifers in this basin are the alluvium and the San Pedro and Santa Barbara formations. The alluvium is Pleistocene to Recent in age and reaches a maximum thickness of 200 feet in the vicinity of Moorpark. The San Pedro formation in this basin consists of about 2,000 feet of gravel, sands, and clays, and contains two important aquifers, the Epworth gravels and the Fox Canyon member. The Epworth gravels, which consist of up to 2,000 feet of gravels, sands and silts and clay, are located near the top of the San Pedro formation. The Fox Canyon member, situated near the base of the San Pedro formation, is about 100 to 400 feet thick and consists of sands, gravels with interbedded clay and silt lenses. With the exception of these two aquifers, the San Pedro formation does not yield large amounts of water to wells. The underlying Santa Barbara formation is up to

2,000 feet thick and has at its top a coarse gravel member known as the Grimes Canyon aquifer. The thickness of this aquifer varies greatly, ranging from a few feet to 1,000 feet. The portion of the Santa Barbara formation underlying the Grimes Canyon aquifer has low permeability and yields little water to wells.

Subsurface inflow into the basin is limited to that coming from older rocks and minor amounts from Simi Valley through the alluvium. Subsurface outflow is to Pleasant Valley Basin.

West Las Posas Basin. West Las Posas Basin is geologically similar to East Las Posas Basin. The important aquifers of the basin are the Fox Canyon member of the San Pedro formation and the Grimes Canyon member of the Santa Barbara formation. The San Pedro formation is over 1,300 feet thick with the lowermost Fox Canyon member, consisting of sand and gravel, being 200 to 300 feet thick. In this basin, the Grimes Canyon member is up to 300 feet thick. Between the Grimes Canyon and Fox Canyon aquifers there is a bed of clay ranging up to 600 feet in thickness, which generally acts as an impermeable barrier between the two aquifers. There are places, however, where the clay has been eroded away at the base of the Fox Canyon aquifer and continuity exists between the aquifers. The alluvial deposits, 200 to 300 feet in thickness, that overlie the San Pedro formation consist of silts and clays similar to those in the San Pedro formation. These deposits yield minor amounts of water from sand and gravel lenses.

Folding of the formations underlying the alluvium has resulted in the Fox Canyon aquifer being exposed along the edges of the basin, and deeply buried in the middle. Ground water is confined in both the Fox

Canyon and Grimes Canyon aquifers except where they are exposed on the south slopes of the Oak Ridge and where they are folded in the Camarillo Hills. Subsurface outflow is to the Oxnard Plain Basin.

Conejo Basin. Conejo Basin differs from most of the other basins in Ventura County in that its boundaries coincide with the drainage divides. Geologic formations in the basins consist of alluvium and sedimentary and volcanic formations of Tertiary and older age. The alluvium is shallow, except at Newbury Park and Thousand Oaks, where it attains a thickness of about 60 feet. Although the formations underlying the alluvial deposits are folded and faulted, the geologic structure appears to have little effect on the occurrence and movement of ground water. Ground water is contained in the alluvium, in fractures and weathered portions of volcanic rocks and Modelo shales, and in pervious zones of the Modelo sandstones and Topanga formations.

Tierra Rejada Basin. This basin is underlain by water-bearing volcanic rocks about 2,000 feet thick. These rocks underlie the entire basin with the exception of a small area underlain by sedimentary formations of Tertiary age. Most of the water in the basin occurs as unconfined water in highly fractured volcanic rocks. Ground water moves toward the west end of the basin where subsurface outflow to Santa Rosa Basin is impeded by a north trending fault.

Santa Rosa Basin. The Santa Rosa Basin is covered with Recent and Pleistocene alluvium consisting of sands, gravels, and clays, ranging up to 200 feet in thickness. Underlying the alluvium is the San Pedro formation, which contains up to 200 feet of gravel, sand, silt, and clay. At the base of this formation, in the western part of the basin, there is a sand and gravel bed which is about 100 feet thick and is probably the equivalent of the Fox Canyon member. On the south side of the basin the San Pedro formation is underlain by Tertiary volcanics. Some Tertiary sedimentary rocks also underlie and are adjacent to the basin. There is subsurface inflow from both Tierra Rejada and Conejo Basins, but the magnitude of the inflow cannot be estimated because of insufficient data. Subsurface outflow through the San Pedro formation is westward into Pleasant Valley.

Ground Water Basins, Malibu Creek System.

Russell and Hidden Valleys comprise the principal areas in the Malibu Creek drainage area in Ventura County where ground water is extracted. In these basins ground water is derived primarily from alluvial deposits although some water is also extracted from volcanic rocks and the Topanga and Modelo formations. Nearly all formations have low storage capacity and low specific yield.

TABLE 3

PRINCIPAL GEOLOGIC AND HYDROLOGIC ASPECTS
OF GROUND WATER BASINS IN VENTURA COUNTY

Ground water basin Number	Ground water basin Name	Area in acres	Water-bearing formations	Principal aquifers	General direction of ground water movement within basin	Direction of underflow out of basin	Condition of occurrence of ground water
				Ventura River System			
4-1	Upper Ojai	1,950	Recent and Pleistocene alluvium	Lenses of permeable sediments	Westerly and easterly[a]	Westerly as rising water to Lion Canyon Valley and easterly as rising water to Sisar Creek, thence to Santa Paula Basin	Unconfined
4-2	Ojai	6,040	Recent and Pleistocene alluvium	Lenses of permeable sediments	Westerly and southwesterly	Southwesterly as rising water to San Antonio Creek and Upper Ventura Basin	Essentially unconfined, locally semiconfined
4-3.02	Upper Ventura River	4,900	Recent and Pleistocene alluvium	Sand and gravel beds	Southerly	Southerly to Lower Ventura River Basin	Unconfined
				Santa Clara River System			
4-4.06	Piru	6,520	Recent and Pleistocene alluvium	Sand and gravel beds	Westerly	Westerly to Fillmore Basin	Unconfined
			San Pedro	Sand and gravel beds	Westerly	Westerly to Fillmore Basin	Unconfined
4-4.05	Fillmore	16,870	Recent and Pleistocene alluvium	Sand and gravel beds	Westerly	Westerly to Santa Paula Basin	Unconfined
			San Pedro	Sand and gravel beds	Westerly	Westerly to Santa Paula Basin	Unconfined
4-4.04	Santa Paula	13,520	Recent and Pleistocene alluvium	Lenses of permeable sediments	Westerly	Southwesterly to Oxnard Forebay Basin and westerly to Mound Basin	Essentially unconfined
			San Pedro	Lenses of permeable sediments	Westerly	Southwesterly to Oxnard Forebay Basin and westerly to Mound Basin	Essentially unconfined
4-4.03	Mound	12,300	San Pedro	Lenses of permeable sediments near top	Southwesterly	Southwesterly to the ocean	Confined

PRINCIPAL GEOLOGIC AND HYDROLOGIC ASPECTS
OF GROUND WATER BASINS IN VENTURA COUNTY
(continued)

Ground water basin Number	Name	Area in acres	Water-bearing formations	Principal aquifers	General direction of ground water movement within basin	Direction of underflow out of basin	Condition of occurrence of ground water
				Santa Clara River System (continued)			
4-4.02	Oxnard Forebay	6,170	Recent and Pleistocene alluvium	Most of formation	Southerly, south-westerly and westerly	Southerly and south-westerly to Oxnard Plain Basin and westerly to Mound Basin	Unconfined
4-4.01	Oxnard Plain	46,460	Recent alluvium	Semiperched water-bearing zone	Southwesterly	Southwesterly to the ocean	Unconfined
			Upper Pleistocene alluvium	Oxnard aquifer	Southwesterly	Southwesterly to the ocean	Confined
			San Pedro	Fox Canyon	Southerly	Southerly to the ocean	Confined
4-6	Pleasant Valley	23,850	Recent and Pleistocene alluvium	Permeable lenses not connected with Oxnard aquifer	Southwesterly	Southwesterly to Oxnard Plain Basin	Essentially confined
			San Pedro	Fox Canyon	Southerly	Southwesterly to Oxnard Plain Basin	Essentially confined
				Calleguas Creek System			
4-9	Simi	10,760	Recent and Pleistocene alluvium	Lenses of permeable deposits	Westerly	Westerly to Las Posas Basin[b]	Mostly unconfined, some confined in western part of basin
			Older formations	Fracture zones and permeable lenses	Westerly	-----	Essentially unconfined
4-8	East and West Las Posas	47,820	Recent and Pleistocene alluvium	Lenses of permeable sediments	Westerly	Southwesterly to Pleasant Valley Basin and westerly to Oxnard Plain Basin	Unconfined
			San Pedro	Epworth gravels	Southerly	-----	Essentially confined

PRINCIPAL GEOLOGIC AND HYDROLOGIC ASPECTS
OF GROUND WATER BASINS IN VENTURA COUNTY
(continued)

Ground water basin: Number	Ground water basin: Name	Area in acres	Water-bearing formations	Principal aquifers	General direction of ground water movement within basin	Direction of underflow out of basin	Condition of occurrence of ground water
				Callegua<u></u>s Creek System (continued)			
4-8	East and West Las Posas (continued)			Fox Canyon	Southwesterly	Southwesterly to Pleasant Valley Basin and westerly to Oxnard Plain Basin	Confined except near outcrop
			Santa Barbara	Grimes Canyon	-----	-----	Confined except near outcrop
4-10	Conejo	28,930	Recent and Pleistocene alluvium	Lenses of permeable sediments	Converges toward Conejo Creek	Northerly to Santa Rosa Basin and southeasterly toward Triumfo Canyon	Unconfined
			Volcanics and older sedimentary rocks	Fracture zones and permeable lenses in sedimentary rocks	-----	Northerly to Santa Rosa Basin and possibly westerly to Pleasant Valley Basin	Essentially unconfined
4-7.02	Tierra Rejada	4,390	Volcanics	Fractured zones	Converges toward west end of basin	Westerly to Santa Rosa Basin	Essentially unconfined
4-7.01	Santa Rosa	3,490	Recent and Pleistocene alluvium	Lenses of permeable sediments	Westerly	Westerly to Pleasant Valley Basin	Unconfined
			San Pedro	Fox Canyon and other permeable lenses	Southerly	Westerly to Pleasant Valley Basin	Confined and unconfined
			Volcanics	Fractured zones	Northerly	Westerly to Pleasant Valley Basin	Confined and unconfined
				Malibu Creek System			
4-16.01	Hidden Valley		Alluvium and volcanic	-----	Easterly toward Lake Sherwood	-----	-----

a. There is a ground water divide near the eastern end of the basin.
b. Simi Valley is essentially a valley of internal drainage, especially during periods of low water levels.

CHAPTER III. WATER UTILIZATION

In Ventura County, water is utilized for many beneficial uses, including irrigated agriculture, urban, recreational, and preservation and propagation of fish and wildlife. In addition, water is consumptively used by native vegetation, lost by evaporation from surface water bodies and impervious areas, and utilized as a vehicle for the disposal of wastes.

Irrigation Use

At the present time the greatest use of applied water in Ventura County is for the irrigation of crops. Data presented in State Water Resources Board Bulletin No. 12[11] indicate that the annual use in agriculture is approximately 160,000 acre-feet of water. The principal crops are citrus, avocados, beans, nuts, truck, and alfalfa. Minor crops include deciduous fruit, sugar beets, and irrigated pasture. Forecasts of the ultimate land use pattern in Ventura County indicate that the acreage devoted to irrigated agriculture will probably increase gradually for the next 10 or 15 years when water requirements will approximate 186,000 acre-feet annually. After that time, it is estimated that agricultural acreages will decrease and agricultural water requirements will decrease to roughly one-half of present values or approximately 80,000 acre-feet annually.

Urban Use

The urban uses of water include domestic, municipal, and industrial. Utilization of water for domestic and municipal purposes includes requirements for single family, rural, and multiple residences; stores, hotels, motels, laundries, and other commercial establishments; schools, public buildings, and fire protection. Industrial uses of water are primarily represented by fruit, nut, and vegetable processing, and petroleum production and refining. Data presented in State Water Resources Board Bulletin No. 12[11] indicate that the present utilization of water for urban uses in Ventura County exceeds 20,000 acre-feet per year. Under ultimate conditions, it is estimated that use of water for urban purposes will increase more than ten-fold and probably exceed 300,000 acre-feet per year.

Recreational Use

Fishing, swimming, boating, and aesthetic enjoyment are the principal recreational uses of surface waters in Ventura County. Areas of fishing include the Pacific Ocean, Matilija and Piru Lakes and the upper reaches of such streams as Sespe and Piru Creeks. Beaches are utilized for swimming and bathing. Several resort areas and camping grounds in Ventura County have private swimming pools. Boating is confined almost entirely to the Pacific Ocean, Lake Sherwood, and Piru Lake.

Fish and Wildlife

The surface waters of Ventura County are extensively utilized for the preservation and propagation of fish and wildlife. Surface waters of major and minor streams are necessary to maintain animal and bird life. The California State Department of Fish and Game maintains a fish hatchery at Fillmore which obtains its water supply by pumping from Piru Basin. Many of the creeks and lakes in Ventura are regularly stocked with trout. These include eight of the larger streams and Piru, Matilija and Rose Valley

Lakes. In the Pacific Ocean both surf and deep-sea fishing are important recreational and commercial activities.

Waste Disposal

In a semiarid area, such as Ventura County, multiple use generally must be made of available water resources. Conflicts will often develop where pressure for minimizing the cost of treating sewage and industrial waste is opposed to the preservation of water quality for beneficial uses, such as for domestic and industrial water supply, irrigation, maintenance and enhancement of fish and wildlife, and recreation. Proper administration and utilization of available water resources for waste disposal involves reconciliation, so far as possible, of these essential, but inherently competitive uses of water.

All of these uses must be considered legitimate and their relative importance to the economy of the state and county must be evaluated. Whenever a conflict arises, considered analysis of the situation will be required in order to establish priorities of use and set waste discharge requirements. The best interests of the State will be served through efforts to achieve a balanced agricultural, urban, and industrial economy. This necessarily implies the balanced use of available water resources for the many purposes demanded.

The control of pollution of water supplies must be fully integrated and coordinated with the other aspects of water development and use. The keynote to a successful and efficient pollution control program is prevention. Experience in control activities has shown that prevention is better and cheaper than abatement. The administration of waste disposal activities should provide for the maintenance of the highest practicable level of water quality. There must be no possibility of deterioration of water quality to a degree which precludes use of the available waters for necessary purposes, present or potential. The various types of wastes disposed to the waters of Ventura County, together with their effects upon such waters, are discussed in greater detail in Chapter VI, "Water Quality Problems".

CHAPTER IV. WATER QUALITY CRITERIA

Ventura County is primarily an agricultural area, with citrus and truck crops constituting the major segment of the economy. These crops, particularly citrus, require good quality water supplies to sustain vigorous growth and maintain high production. Water of this quality is available, as evidenced by the high crop yields obtained. However, mineral analyses indicate that poor quality waters may be found in certain of the rivers and creeks during periods of low flow. Ground waters derived from certain of the geologic formations also are of inferior quality. Further, recent depression of piezometric levels in the coastal plain to below sea level has permitted sea-water intrusion into the Oxnard Plain Basin.

Dissolved Constituents in Ground and Surface Waters

Precipitation, as it reaches the earth, normally contains few dissolved solids, although it may contain carbon dioxide and oxygen. These waters, in their passage to the sea, either on the surface or through the ground, dissolve minerals from the materials and rocks with which they come in contact. The amount and type of minerals dissolved reflect the composition of the material with which the water comes in contact and the hydrologic conditions governing the rate of movement of the water. In addition, salts, and other pollutants may be added to water by industrial waste, sewage,and irrigation return wastes. The significance as regards source and effect on usefulness of water, of each of the principal constituents normally found in water is discussed in the following paragraphs.

Calcium (Ca)

Calcium is dissolved from practically all rocks, the highest concentrations usually being found in waters which have been in contact with limestone, dolomite, and gypsum. Irrigation waters containing a large percentage of this constituent, with respect to other bases, are desirable, as a calcium saturated soil is permeable and easily worked.

The presence of calcium in domestic and industrial water supplies, however, results in a hard water. Calcium is largely responsible for the formation of scale in boilers and water pipes. Its reaction with stearates in soap products prevents lathering and produces a gray scum commonly called "bath tub ring".

Magnesium (Mg)

Magnesium is dissolved primarily from volcanic and dolomitic rocks, although large amounts may also originate from the leachings of weathered soils and from marine deposits. Magnesium reacts with soil in much the same manner as calcium and its effects in regard to hardness are similar to those of calcium. For domestic use, the upper limit of concentration is usually maintained somewhat less than 200 parts per million as concentrations above this level may cause taste problems. High magnesium concentrations, when associated with high sulfate content, may cause drinking water to have a laxative effect.

Sodium (Na) and Potassium (K)

Sodium and potassium are dissolved from practically all rocks.

Fresh water supplies having very low concentrations of dissolved solids usually contain as much potassium as sodium. However, as these and other constituents increase in concentration, the relative proportion of sodium generally becomes much larger. Moderate quantities of sodium and potassium have little effect on the usefulness of water. For industrial purposes, waters containing more than 50 to 100 parts per million of a combination of these two elements may require careful operation of steam boilers to prevent foaming. Its presence in water, in combination with carbonate, promotes corrosion in boiler tubes, condensate lines, and hot water systems.

For irrigation use, waters having a high per cent sodium, $\frac{Na \times 100}{(Na+K+Ca+Mg)}$ (constituents expressed in epm), will, as a result of cation exchange, cause dispersion of the soil, reducing its permeability and tilth.

Carbonate (CO_3) and Bicarbonate (HCO_3)

These two constituents are derived principally from dolomite, limestone and other rock minerals. They are closely related and comparative concentrations may change with variations in the pH. In California the bicarbonate constituent is normally the predominant acid radical in both surface and ground waters.

Sulfate (SO_4)

Sulfate is dissolved from many types of rocks and soils. It is derived in large quantities from gypsiferous deposits and from shale deposits of marine origin. Its presence is particularly significant in waters that contain large amounts of calcium and magnesium, as its combination with these two constituents may cause deposits of hard scale in water pipes, hot water heaters, and boilers. For irrigation use, when sulfate is combined with magnesium and sodium, in the absence of sufficient calcium to precipitate sulfate from the soil solution, it may reach concentrations sufficient to become injurious to plants.

For domestic use, when concentrations in excess of 500 parts per million of sulfate are combined with magnesium and/or sodium, there is a noticeable laxative effect. This condition reflects the probable unsuitability of high sulfate waters for domestic use.

Chloride (Cl)

Chloride, present in nearly all waters, is dissolved originally from rocks and natural salt deposits. Sewage and some industrial wastes are also rather heavily charged with this constituent. Large amounts of chloride in water render it unsatisfactory for drinking purposes and for use in processing food beverages. Chloride may be especially harmful in water intended for irrigation use as it may cause subnormal growing rates and burning of leaves.

Nitrate (NO_3)

Nitrate, when occurring in ground water in quantities exceeding a few parts per million, is usually dissolved from evaporates, such as dry salt beds, or originates from soil percolate charged with fertilizer losses and the by-products of organic decomposition. In rare instances nitrate may be derived from magmatic sources.

Nitrate is of particular significance from the standpoint of public health. Methemoglobinemia (cyanosis) among infants, in many cases, appears to have been due to concentrations of nitrate generally exceeding 10 parts per million as nitrogen (44 ppm as NO_3) in the household water supplies. For industrial uses it has been reported that about 2 parts per million of nitrate in boiler feed water tends to decrease intercrystalline cracking in boiler steel.

Boron (B)

In nature, boron is never found in the uncombined or elemental state. It occurs in the form of boric acid or, more commonly, as borate, especially in regions that are or have been volcanic. It is not a rare element and is widely distributed. The known boron deposits in the United States are located principally in the semiarid regions of the west[12].

Boron, as an ingredient in washing compounds and cleansers, is widely used both in the home and industry. Its concentration in water is important to agriculture for two reasons; first, it is essential in very small amounts to the growth of many, but not all, plants and, second, it is extremely toxic to a large number of plants if present in soil solutions in concentrations exceeding a few parts per million.

Total Hardness

Hardness is caused principally by compounds of calcium and magnesium, although other substances such as iron manganese, aluminum, barium, silica, strontium, and free hydrogen contribute to the total effect. Hardness in water is primarily an economic problem. Its presence requires an increased use of soap, which it coagulates to form an insoluble precipitate, and it forms scale which tends to reduce the efficiency of boilers and plumbing systems. It is usually considered that soft water (100 parts per million or less as $CaCO_3$) will not interfere with the use of water for most purposes, although lower concentrations may be required for use in high pressure steam boilers and for some industrial processes. Water considered moderately hard (101 to 200 parts per million as $CaCO_3$) may in the upper ranges require softening for laundry and industrial use. Very hard waters (exceeding 200 parts per million as $CaCO_3$) usually require some softening prior to use for most domestic or industrial purposes.

Hydrogen Ion Concentration (pH)

The acidic or alkaline nature of water is given in terms of pH, a measure of the hydrogen ion concentration. pH, which denotes the "hydrogen ion exponent" is the logarithm to the base of 10 of (H), the negative sign being omitted. A neutral solution has a pH of 7.0. As pH decreases the acidity increases and pH increases as the liquid becomes more alkaline. The pH of most water is between 6 and 9.

The hydrogen ion is a potential pollutant because of its corrosive action. In addition, it is related in various ways to other pollutants. It increases the toxicity of such weakly acidic substances as cyanide and it dissolves other pollutants from substances with which it comes in contact. In nature its effect is limited by the presence of buffering substances, principally bicarbonates. These have a partially neutralizing effect on added acid so that the hydrogen ion concentration is less than it would have been in the absence of the buffer. Similarly, a buffer will increase the hydrogen ion concentration of an added base.

Fluoride (F)

Fluoride is obtained chiefly from fluorspar and cryolite rocks. It is reported that this constituent may be found in the above-named rocks in concentrations similar to that of chloride; however, owing to their origin in only certain types of rocks, high concentrations of fluoride are not common to surface waters but may occur in detrimental concentrations in ground waters.

Fluoride is reported to be toxic to humans in concentrations as low as 180 parts per million (8). However, there is considerable information to indicate that waters containing this constituent in excess of 2 to 3 parts per million may cause mottling on teeth of growing children, particularly, between the ages of 8 and 12. Many dental authorities maintain fluoride concentrations ranging from 0.8 to 1.5 parts per million in drinking water is of considerable aid in the prevention of dental caries. Fluoridation of water supplies to bring the fluoride content within this range is increasingly practiced.

Salts of Heavy Metals

Included in this group are salts of lead, arsenic, hexavalent chromium, selenium, copper, zinc, iron, and manganese. All of these metals in small concentrations may be detrimental to human health, livestock, or otherwise be objectionable in the water supply.

Certain of these salts, such as lead and arsenic, apparently are toxic to humans in concentrations as low as 0.1 to 0.2 parts per million. Other of the constituents such as copper and zinc will impart an astringent taste to water in concentrations of very few parts per million. Iron and manganese have staining properties at low concentrations and for this reason they are objectionable in waters to be used for domestic and laundry purposes.

Total Dissolved Solids (TDS)

The concentration of total dissolved solids furnishes an indication of the overall mineral quality of a water and as such serves as a valuable criterion for determining the suitability of a water for beneficial use. In general, the total dissolved solids concentration is determined by evaporation. In certain of the analyses presented in Appendixes A and B, the total dissolved solids is reported as the arithmetic sum of the parts per million of all the constituents with the exception of bicarbonate, which is included as equivalent carbonate.

Criteria established for dissolved solids for irrigation use are generally given in the form of electrical conductance or conductivity ($EC \times 10^6$ at 25° C). Conductivity is a physical property of water which depends, to a great extent, upon the quantity of salts in solution. For most waters if the conductance is multiplied by 0.7, a value approximating that of the total dissolved solids is obtained. Further, dividing the conductivity by 100 will give an approximate value of the total anions or cations in equivalent parts per million (epm).

Physical Properties of Water

In addition to dissolved mineral constituents, there are certain physical properties of water which must be considered in determining its suitability for beneficial uses. Included among these are dissolved oxygen, color, turbidity, odor, and taste.

Dissolved Oxygen (DO)

The presence or absence of dissolved oxygen in water is of special significance when dealing with surface waters as it is important to natural purification processes. Natural surface waters of a satisfactory quality should be saturated, or nearly so, with dissolved oxygen (7 to 14 parts per million depending upon the temperature). A consistant deficiency in this constituent is an indicator of organic pollution. In the absence of sufficient quantities of dissolved oxygen, anaerobic bacteria attack organic pollution in the stream and result in the evolution of foul-smelling gases.

Color

In water analyses, the term color refers to the appearance of a water that is free from suspended solids. Color may be due to mineral or organic matter in solution, in suspension, or as a colloid. Its presence is undesirable for domestic and industrial purposes as it may stain laundry, food, or other materials with which it comes in contact. Color may be objectionable in waters used for recreational purposes.

Turbidity

Turbidity is a measure of the suspended and colloidal matter in water. It is generally composed of fine particles of sand and/or clay which are not particularly detrimental to the potability of the water or to most uses. Turbidity in surface water may be removed by chemical coagulation, sedimentation, or filtration. Its particular significance is generally in connection with the spreading of surface waters containing quantities of suspended and colloidal material which tend to clog spreading basins, and thus, reduce infiltration rates. Turbidity is objectionable in waters utilized primarily for recreational purposes.

Odor and Taste

Odors and tastes in water may result from any one or a combination of micro-organisms, living or dead; dissolved gases such as hydrogen sulfide, marsh gas, carbon dioxide or oxygen combined with organic matter; mineral substances such as chloride, iron, carbonates, and sulfates; and phenols or other tarry or oily wastes, especially after chlorination. Some tastes such as those imparted by oxygen and carbon dioxide are pleasant. Most of the other substances mentioned have a disagreeable taste. The odor of a water is dependent to some extent upon its temperature, and the heated odor may be different from the cold odor. While standard methods of analysis of the United States Public Health Service[19] include a quantitative method for the determination of odor, the application of the method depends to a great extent upon the skill and the experience of the analyst. There is no known method for analyzing for taste.

Water Quality Requirements

As stated in Chapter III, the waters of Ventura County are used principally for domestic, municipal, and irrigation purposes with lesser amounts utilized for industrial and recreational purposes. Suitability of these waters for each of these uses depends in part upon the amount and kind of minerals dissolved therein. Water quality criteria for the above beneficial uses are discussed in the following paragraphs, in order that the reader may better interpret the analyses and evaluate the suitability of a particular water for a specific purpose.

Domestic and Municipal Use

Water that is to be used for drinking and culinary purposes should be clean, colorless, odorless, pleasant to the taste, free from toxic salts, and should not contain an excessive amount of dissolved mineral solids. Probably the most widely used criteria in determining the suitability of a water for this use are the "United States Public Health Service Drinking Water Standards, 1946". Limits for mineral constituents in water are divided into mandatory requirements and recommended criteria. The mandatory limits are as follows:

Lead (Pb)	0.1 ppm
Fluoride (F)	1.5 ppm
Arsenic (As)	0.05 ppm
Selenium (Se)	0.05 ppm
Hexavalent chromium	0.05 ppm

Nonmandatory, but recommended, limits are as follows:

Copper (Cu)	3.0	ppm	
Iron (Fe) and Manganese (Mn) together	0.3	ppm	
Magnesium (Mg)	125	ppm	
Zinc (Zn)	15	ppm	
Chloride (Cl)	250	ppm	
Sulfate (SO_4)	250	ppm	
Phenolic compounds in terms of phenol	0.001	ppm	
Total solids	500	ppm	(1000 permitted)

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

Mean Annual Temperature	Mean Monthly Fluoride ion concentration
50° F	1.5 ppm
60° F	1.0 ppm
70° F - above	0.7 ppm

Irrigation

Criteria for the determination of the suitability of waters for irrigation use are usually based upon four factors. These are electrical conductivity ($ECx10^6$ at 25° C), chloride concentration, boron concentration, and percentage sodium. Dr. L. D. Doneen of the University of California has proposed criteria based on these four factors as follows:

"Because of diverse climatological conditions, crops, and soils in California it has not been practical to establish rigid limits for all conditions. Instead, field experience has indicated the classification should be used for the purpose of orientation and as a guide and that local conditions must be considered in judging the suitability of water for irrigation.

"Class 1--Excellent to Good. Regarded as safe and suitable for most plants under any condition of soil or climate.

"Class 2--Good to Injurious. Regarded as possibly harmful for certain crops under certain conditions of soil or climate, particularly in the higher ranges of this class.

"Class 3--Injurious to Unsatisfactory. Regarded as probably harmful to most crops and unsatisfactory for all but the most tolerant.

"Tentative standards for irrigation waters have taken into account four factors or constituents as listed below:

Factor	Class 1 Excellent To Good	Class 2 Good to Injurious	Class 3 Injurious to Unsatisfactory
Conductance ($ECx10^{6}$ at $25^{o}C$)	Less than 1,000	1,000-3,000	More than 3,000
Chloride, epm	Less than 5	5-10	More than 10
Per cent sodium	Less than 60	60-75	More than 75
Boron, ppm	Less than 0.5	0.5-2.0	More than 2.0

(End of quotation)

Actual practice in Ventura County indicates that waters rated as Class 2 or Class 3, particularly in regard to conductance, are successfully utilized to irrigate citrus, a relatively sensitive plant. Accordingly, a method of evaluating the effective salinity of irrigation water, together with standards based on the evaluation, is presented in Appendix F. The tentative classification of irrigation waters in Ventura County established as a result of field surveys in Ventura County is as follows:

Soil Conditions	Effective salinity in milliequivalents: Class 1	Class 2	Class 3
Little or no leaching of the soil may be expected	Less than 3	3-5	More than 5
Some leaching but restricted Deep percolation or slow drainage	Less than 5	5-10	More than 10
Open soils. Deep percolation of water easily accomplished	Less than 7	7-15	More than 15

It should be emphasized that the criteria based upon effective salinity are a substitute for the previously discussed criteria based upon the electrical conductance of water supplies.

Review of the United States Department of Agriculture Soil Survey of Ventura County[20] indicates that more than 75 per cent of the irrigable lands in this county may be classified as open soils. For this reason water quality criteria for open soils will obtain throughout this report unless otherwise stated.

Industrial Use

Allowable concentrations of dissolved minerals in water to be utilized by laundries, textile manufacturing plants, and various other industries are presented in Table 4, entitled "Water Quality Tolerances for Various Industrial Uses". The values presented in this table are suggested in the Progress Report of the Committee on Quality Tolerances of Water for Industrial Uses, Journal New England Water Works Association, Volume 54, 1940. These limits are tentative and serve only as a guide in evaluating the suitability of water for certain industrial uses. The concentrations listed are those beyond which treatment of the water is generally necessary. Specifications suggested by the above-named committee for boiler waters are more exacting and a separate list of allowable concentrations for that use is presented in Table 5 entitled "Suggested Water Quality Tolerances for Boiler Feed Water".

TABLE 4

WATER QUALITY TOLERANCE FOR INDUSTRIAL USES[a]

Allowable limits in parts per million

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

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

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

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

TABLE 5

SUGGESTED WATER QUALITY TOLERANCES FOR BOILER FEED WATER[a]

(Allowable limits in parts per million)

Pressure (lb. per sq. in.)	0-150	150-250	250-400	Over 400
Turbidity	20	10	5	1
Color	80	40	5	2
Oxygen consumed	15	10	4	3
Dissolved oxygen[b]	1.4	.14	.0	.0
Hydrogen sulfide (H_2S)[c]	5	3	0	0
Total hardness as $CaCO_3$	80	40	10	2
Sulfate-carbonate ratio (A.S.M.E.) (Na_2SO_4:Na_2CO_3)	1:1	2:1	3:1	3:1
Aluminum oxide (Al_2O_3)	5	.5	.5	.1
Silica (SiO_2)	40	20	5	1
Bicarbonate (HCO_3)	50	30	5	0
Carbonate (CO_3)	200	100	40	20
Hydroxide (OH)	50	40	30	15
Total Solids[d]	3,000-500	2,500-500	1,500-100	50
pH value (minimum)	8.0	8.4	9.0	9.6

(a) Moore, E. E., Progress report of the Committee on Quality Tolerances of Water for Industrial Uses: Jour. New England Water Works Assoc., Vol. 54, page 263, 1940.
(b) Limits applicable only to feed water entering boiler, not to original water supply.
(c) Except when odor in live steam would be objectionable.
(d) Depends on design of boiler.

CHAPTER V. WATER QUALITY

This chapter discusses the quality of the ground and surface waters in Ventura County. It also includes a discussion of the prospective quality of imported supplemental supplies which may be made available to Ventura County in the future. Based upon complete and partial mineral analyses, the character and quality of surface waters and the variation of quality with changes in flow is derived. The character and quality of ground waters, including changes which have occurred in the interval between this investigation and the investigation reported in Bulletin No. 46(1), is also discussed.

Sources and Character of Data

Basic data used to evaluate the quality of water in Ventura County include complete and partial mineral analyses of samples collected from wells and streams during the period 1951 to 1958 in the Department of Water Resources' monitoring programs, historical data from Bulletin No. 46A of the Division of Water Resources, and data from files of Fruit Growers Laboratory and of the Ventura County Farm Advisor. Analyses of samples collected from wells in the vicinity of Port Hueneme in 1954, and related data obtained by the Division of Water Resources in a study conducted for Los Angeles Regional Water Pollution Control Board (No.4) have also been utilized. A total of 2,750 complete and 2,279 partial analyses, exclusive of those published in Bulletin No. 46A(2) have been used in studies made for this report. The complete and partial analyses of surface waters are presented in Appendixes A and G, analyses of ground water are presented in Appendixes B and H, analyses of heavy metals and trace constituents determined for about 346 samples are presented in Appendix B, Tables B-17 and H-17 and partial analyses of selected wells of long record are presented in Appendix C. Analyses presented in Bulletin No. 46A have not been reproduced in this report.

Complete mineral analyses reported in this bulletin include the determination of calcium, magnesium, sodium and potassium, carbonate, bicarbonate, chloride, sulfate, nitrate, fluoride, boron, total dissolved solids, electrical conductance (EC x 10^6 at 25° C), pH, per cent sodium, and effective salinity. Partial mineral analyses include determination of chloride, bicarbonate, pH, and electrical conductance. In some instances, the boron determination was included in the partial mineral analysis. Analysis for trace constituents included the determination of iron, aluminum, manganese, chromium, zinc, copper, lead, silica, and arsenic. In some instances determinations were also made for strontium, barium, nickel, silver, tin, molybdenum, and vanadium.

Concentrations of the principal constituents in a complete mineral analysis are reported in Appendixes A and B in both parts per million (ppm), a weight basis, and equivalents per million (epm), a chemical equivalent basis. Exceptions are boron, fluoride, and total dissolved solids, which are reported in ppm only. To convert equivalents per million to parts per million the concentration in equivalents per million should be multiplied by the equivalent weight of the ion. To convert parts per million to equivalents per million the concentration in parts per million should be divided by the equivalent weight of the ion. Equivalent weights of the principal constituents found in water supplies are presented in the following tabulation:

Cation	Equivalent weight	Anion	Equivalent weight
Calcium	20.0	Carbonate	30.0
Magnesium	12.2	Bicarbonate	61.0
Sodium	23.0	Chloride	35.5
Potassium	39.1	Sulfate	48.0
		Nitrate	62.0

In the following discussion the terms used to describe the chemical character of water are specific. For example, a sodium type water is a water in which the sodium is equal to or greater than 50 per cent of the cations (usually includes sodium, potassium, calcium, and magnesium). A sodium-calcium water is a water in which sodium is more abundant than calcium but is less than 50 per cent of the total cations. A chloride water is a water in which the chloride is equal to or greater than 50 per cent of the anions (usually includes carbonates, bicarbonate, chloride, and sulfate).

The chemical character of a water may be depicted graphically using a geochemical chart[15] such as that shown on Plate 11. By utilization of this chart, it is possible to compare the character of two or more waters. If two waters of different character are mixed it is logical to presume that the character of the resulting mixture will be a combination of the characters of the two waters. Utilizing this principle it is possible, using a geochemical chart, to determine graphically which of various sources of supply are affecting a water body and, more specifically, which of several sources of degradation are causing deterioration.

Quality of Surface Water

The quality and character of surface waters in Ventura County are extremely variable, both areally and with quantity of flow. In general, the quality of the surface water fluctuates inversely with flow as illustrated on Plate 9,entitled "Relationship Between Discharge and Total Dissolved Solids Concentration in Santa Clara River", and Plate 10, entitled "Relationship Between Discharge and Total Dissolved Solids Concentration in Tributaries of Santa Clara River". This is because low flows are generally derived from effluent ground water, which has a greater opportunity to dissolve salts than has rapid runoff from rainfall.

Analyses may also indicate fluctuations in quality at similar flows. For example, samples collected during the early part of the rainy season generally contain greater salt concentration than samples collected at an identical flow in the latter part of the season, and a sample collected during the rising stage of a flood may contain greater salt concentrations than a sample collected at the same flow during the falling stage. Thus, the quality of surface water varies with discharge and time with respect to both season and flood crest.

In the following paragraphs the character and quality of the surface waters are described for each of the stream systems in Ventura County, Ventura and Santa Clara Rivers, and Calleguas and Malibu Creeks. The locations of surface sampling points are delineated on Plates 7A, B, and C, entitled "Location of Surface and Drainage Water Sampling Stations". An explanation of the numbering system used is given in Appendix A.

Ventura River System.

Water of good quality for domestic, municipal, industrial, and irrigation uses is found in the Ventura River above Foster Park, during periods of high flow, generally reflecting the quality of the principal tributaries above this point, namely, Coyote, San Antonio, and Matilija Creeks. However, during periods of low flow, these waters may contain concentrations of certain constituents which render them marginal for irrigation use. This is indicated by the data presented in Table 6, entitled "Summary of Character and Quality of Surface Flow in Ventura River System".

TABLE 6

SUMMARY OF CHARACTER AND QUALITY OF SURFACE FLOW IN VENTURA RIVER SYSTEM

Stream	Station number	Average composition of waters in per cent of epm values high flow / low flow: Ca	Mg	Na	HCO_3	SO_4	Cl	Range in boron ppm high flow / low flow	Range of total dissolved solids ppm high flow / low flow	Range of effective salinity epm high flow / low flow	Quality classification for irrigation use high flow / low flow
Ventura River	42-0.5	32/29	34/20	34/51	33/21	49/38	18/41	0.3-0.6 / 0.7-1.9	760-853 / 1335-1619	8.2 / 14.5-19.6	2 / 2-3
Canada Larga	42-4.5-0.2	44/22	26/29	30/49	18/14	71/70	11/16	0.4 / 1.1-1.2	1444 / 2775-3298	12.0 / 31.9-37.6	2 / 3
Ventura River	42-5.7	54/54	28/22	18/24	41/40	49/39	10/21	0-0.4 / 0.4-0.5	259-611 / 668-1037	1.3-7.4 / 4.8-8.6	1-2 / 1-2
Coyote Creek	42-6.0-0.3	56/50	26/27	18/23	50/45	38/41	12/14	0.1-0.2 / 0-0.27	272-614 / 342-840	1.9-4.4 / 3.2-8.6	1 / 1-2
San Antonio Creek	42-7.7-0.2	57/54	27/24	16/22	40/31	48/49	12/20	0.2 / 0.2-0.5	226-458 / 998-1209	1.2-3.8 / 7.8-8.4	1 / 2
Matilija Creek	42-15.6-0.2	55/48	32/22	13/30	39/31	56/45	5/24	0.1-0.30 / 2.1-2.6	424-545 / 789-929	2.3-4.5 / 6.5-7.9	1 / 3

The character of the waters flowing in the Ventura River above Foster Park generally reflects the character of the three principal tributaries, as may be observed from the data presented in Table 6. However, the data are insufficient to correlate in detail the effect of any one of the tributaries on the parent stream. The predominant cation is calcium at both high and low flows in nearly all cases, while the anion character is principally sulfate-bicarbonate. Because of the predominantly calcium character of the flow in this river, and high concentrations of dissolved salts, the waters are generally very hard.

Mineral analyses of samples collected during periods of low flow in Matilija Creek, at a point below the dam, show boron concentrations exceeding 2.0 ppm prior to December, 1951, when the reservoir filled and spilled for the first time. After that date,boron concentrations in samples collected below the dam have varied from 0.1 to 1.0 ppm. Source of this boron is believed to be water from two springs seeping from Cretaceous deposits located in an upstream portion of the watershed.

Data were presented in Bulletin No. 46[1] to show that Wheeler Springs affect the boron concentration in the flow in the North Fork of Matilija Creek. Although data collected during this investigation at station 42-15.6a-0.7 does not seem to confirm this effect, the samples were collected during periods of relatively high flow and it is probable that the effect of flow from Wheeler Springs is masked by runoff from rainfall on the watershed tributary to the station.

Data presented in Table 6 suggest the flow in Canada Larga at station 42-4.5-0.2 to be Class 2 for irrigation use during periods of high flow and Class 3 during periods of low flow because of the excessive dissolved solids and high effective salinity. By inspection of Table A1 of Appendix A it may be seen that tributaries to Canada Larga, namely, Cash, Sulphur Canyon, and Lion Canyon Creeks, also discharge poor quality waters which are calcium-sodium sulfate in character. Origin of these poor quality waters is probably geologic, since the surface watershed tributary to these streams consists primarily of Pico and Santa Barbara formations. It is known that gypsum crystals (Calcium sulfate) are commonly found in these deposits.

The effect of streams such as Canada Larga which are tributary to the Ventura River below Foster Park is evidenced by the data presented in Table 6 for the Ventura River at station 42-0.7. These data indicate that even the higher flows at this station exhibit effective salinities of sufficient magnitude to classify the waters as marginal for irrigation use. An additional effect of discharges to the Ventura River by tributaries below Foster Park is an increase in the percentage of sulfate between stations 42-5.9 and 42-0.7.

Rincon Creek and those small streams discharging to the Pacific Ocean between Rincon Creek and the Ventura River have been included in the Ventura River system. There is a paucity of data with which to evaluate the quality of the surface flow in these streams. However, available analyses presented in Table A1 of Appendix A suggest that waters of Rincon Creek are of good quality at flows exceeding one second-foot. At flows below this value, however, the quality appears to depreciate rapidly. Waters in Los Sauces Creek are of very poor quality, at least during periods of low flow.

Hall Canyon Creek, also included within the Ventura River system, discharges to the Pacific Ocean between the Ventura and Santa Clara Rivers. The analyses of the waters of this creek, presented in Appendix A, reveal them to be of poor quality, with excessive chloride and boron concentrations. As described in Chapter VI, this creek has a history of pollution by oil brine discharges, which generally contain high concentrations of these constituents. It is considered that the available analyses reflect, to some degree at least, the effect of the brine discharges and not the native quality of Hall Canyon Creek.

Santa Clara River System

During periods of relatively high flow, the waters of the Santa Clara River and its tributaries are of good quality and suitable for domestic, municipal, industrial, and irrigation uses. However, during periods of low flow, certain of the streams exhibit characteristics which reduce the quality for irrigation purposes to Class 2 or Class 3 and impair suitability for prevailing uses. In general, the character of both high and low flow waters is calcium to calcium-sodium sulfate and the parent stream generally reflects the character and quality of its tributaries. However, data are insufficient to correlate, in any detail, the effect of any one tributary on the Santa Clara River. Because of the predominantly calcium character, many of the surface waters are very hard. All available analyses of surface waters flowing in the Santa Clara River and its tributaries are presented in Appendix A, Tables A2 and G2. Data for certain stations is given in Table 7, entitled "Summary of Character and Quality of Surface Flow in Santa Clara River System". Locations of sampling points are shown on Plate 7B.

TABLE 7

SUMMARY OF CHARACTER AND QUALITY OF SURFACE FLOW IN SANTA CLARA RIVER SYSTEM

Stream	Station number	Average composition of waters in per cent of epm value (high flow / low flow): Ca	Mg	Na	HCO_3	SO_4	Cl	Range in boron ppm (high flow / low flow)	Range of total dissolved solids ppm (high flow / low flow)	Range of effective salinity epm (high flow / low flow)	Quality classification for irrigation use (high flow / low flow)
Santa Clara River	43-4.5	45/34	27/23	28/43	30/15	61/76	9/9	0-0.6 / 0.6-0.9	440-1022 / 1342-2018	3.1-9.0 / 13.3-22.3	1-2 / 2-3
Santa Paula Creek	43-15.9-3.8	56/47	26/23	18/30	46/43	47/36	7/11	0-0.3 / 0.1-0.8	266-427 / 462-2216	1.5-3.5 / 4.0-17.3	1 / 1-3
Santa Clara River	43-17.0	44/44	25/29	31/27	23/25	64/65	13/10	0.7-1.4 / 0.6-0.8	962-1731 / 1212-1675	8.5-14.7 / 9.5-14.5	2 / 2
Sespe Creek	43-21.5-6.0	56/40	25/18	19/42	43/30	51/40	6/30	0.1-0.7 / 1.1-4.1	149-526 / 497-848	0.9-3.9 / 4.8-8.3	1-2 / 2-3
Hopper Creek	43-28.9-1.0	51/29	24/32	25/39	37/29	58/65	5/6	0-0.3 / 0.2-0.6	411-646 / 1373-2120	1.5-6.00 / 13.1-19.7	1 / 2-3
Piru Creek	43-31.8-1.3	49/38	28/30	23/32	31/26	64/66	5/8	0.1-1.5 / 1.5-1.7	291-918 / 838-1442	2.4-8.2 / 8.5-12.0	1-2 / 2
Santa Clara River	43-34.5	46/36	27/30	27/34	22/24	70/67	8/9	0.2-0.6 / 0.4-1.3	516-1816 / 898-3157	4.5-16.6 / 9.0-32.0	1-3 / 2-3

The quality of the surface waters entering the county in the Santa Clara River is represented by analyses of samples collected at station 43-37.5. These waters, which typically contain high percentages of sulfate, range from Class 1 to Class 3 for irrigation use even during periods of high flow. They may contain dissolved solids concentrations ranging as high as 1000 ppm. However, boron concentrations are generally within limits for use on even the most sensitive crops. During periods of low flow the quality of waters at this station ranges from Class 2 to Class 3 for irrigation purposes with effective salinities reaching 30 epm, total dissolved solids sometimes exceeding 3000 ppm, and boron concentrations often greater than 1.0 ppm.

Piru Creek, a major tributary to the Santa Clara River, is generally a calcium-magnesium sulfate water of only moderate salinity, even during periods of low flow. However, with the exception of periods of flood flow, waters of this stream contain boron concentrations of such magnitude as to render them unsuitable for irrigation use on the more sensitive crops. Analyses indicate that flows as large as 200 or more second-feet must be reached before boron concentrations consistently become less than 1 ppm. Source of this boron appears to be, in part, Seymour and Lockwood Creeks which drain Lockwood Valley. Bulletin No. 46[1] reports that along the north side of this valley there are boron minerals, chiefly colemanite, which on weathering yield boron salts. Analyses of waters derived from springs in this area indicate boron concentrations as high as 32 ppm. Previous studies further suggest that not all of the boron in Piru Creek is derived from Lockwood Valley, since waters from Agua Blanca Creek and other minor streams in that vicinity contain relatively high concentrations of this constituent.

Sespe Creek, another major tributary of the Santa Clara River, discharges waters containing a relatively low total dissolved solids concentration even during periods of low flow. However, during periods of low flow, boron concentrations are high. Analyses of samples collected at times when flows were less than about 30 second-feet indicate concentrations of this constituent usually too high to be suitable for use on citrus, walnuts, and other boron sensitive crops. Inflow from Hot Springs Creek appears to be one of the more important boron sources. Of interest concerning the character of waters of Sespe Creek is the higher percentage of chloride found during periods of low flow. While the increased percentage of chloride is accompanied by an increase in chloride concentration the values are not of sufficient magnitude to render the waters unsuitable for beneficial uses. Source of the chloride appears to be, at least in part, the flow from Hot Springs Creek. Four analyses of this creek presented in Bulletin No. 46A[2] show relatively high concentrations of this constituent. Historically, oil brines have been discharged directly to Sespe Creek and to Tar Creek, a tributary. While there is no direct evidence of the effect of these brine discharges it seems probable that they have contributed to the total amount of chloride in the waters of Sespe Creek.

Hopper and Santa Paula Creeks, important tributaries of the Santa Clara River, generally discharge water of good quality during periods of high flow. During periods of low flow, Santa Paula Creek generally maintains good quality, but the waters of Hopper Creek become marginal or unsatisfactory for irrigation or domestic use.

In addition to the creeks discussed above, there are many small streams discharging into the Santa Clara River and its principal tributaries. On the basis of the scattered analyses presented in Table A2 of Appendix A, these appear to have generally poor quality water during periods of low flow. These minor tributaries include Aliso Canyon, Wheeler Canyon, Adams, North Tapo Canyon, and Salt Creeks, all tributary to the Santa Clara River; Mud Creek, tributary to Santa Paula Creek; Little Sespe Creek, tributary to Sespe Creek; and Modelo Canyon and Holser Canyon Creeks, tributary to Piru Creek.

Data presented in Table 7 for Santa Clara River at station 43-17.0 indicate the waters of the river at this point to be Class 2 for irrigation use during periods of both high and low flow. The highest flow for which analyses are available is 1500 second-feet. The analyses of samples collected at this station during periods of low flow probably represent the quality of rising water effluent of Fillmore Basin and entering Santa Paula Basin.

Analyses of the Santa Clara River at station 43-4.5 generally represent the quality of waters which constitute the principal recharge waters for the Oxnard Forebay Basin, and consequently the Oxnard Plain Basin. Available data indicate these waters are Class 1 for irrigation use during periods of high flow, and range from Class 2 to Class 3 during times of low discharge.

Calleguas Creek System

Many of the streams of the Calleguas Creek system discharge relatively minor amounts of water and flow generally continues only for short periods of time following rainfall. For this reason, there is a paucity of data with which to evaluate the quality of surface waters of this system.

In general, data exhibited in Tables A3 and G3 of Appendixes A and G for Calleguas Creek near the Camarillo State Hospital station 44-6.5, suggest that the quality of these waters varies from Class 1 to Class 2 for irrigation use, with total dissolved solids concentration ranging from about 380 to 1060 ppm, the lower concentration being associated with the higher discharges. Calleguas Creek at station 44-9.7, above its confluence with Conejo Creek, appears on the basis of seven analyses to be of somewhat better quality, with total dissolved solids concentration generally less than 900 ppm. The data available indicate the character of the waters flowing in this creek to be calcium sulfate.

Analyses of Conejo Creek, a tributary of Calleguas Creek, at station 44-7.9-3.0 indicate these waters to be of excellent quality with total dissolved solids concentrations ranging less than 264 ppm. However, at station 44-7.9-12.8 the low flow quality ranges from Class 2 to Class 3, with higher total dissolved solids and effective salinity values. The cation character of the waters in Conejo Creek varies from calcium-magnesium to magnesium-calcium,while the anion character at station 3.0 is bicarbonate-sulfate and at station 12.8 is sulfate.

Analyses of samples collected from Arroyo Simi on March 7, and 15, 1952, present a rather interesting phenomenon. The sample collected March 7, at a time when discharge was estimated to be 60 second-feet, contained 679 ppm of total dissolved solids while the sample collected March 15 during a flow estimated to be 2000 second-feet,contained 1453 ppm total dissolved solids. The character of both samples was calcium sulfate, the only difference in the two samples being a higher percentage of calcium and sulfate in the March 7 sample. The analysis of a sample collected at this station on April 16, 1952, showing over 7000 ppm total dissolved solids, is considered to be effluent flow from a semiperched zone which exists in the western portion of Simi Basin.

Analyses of samples collected from Tapo Creek, a tributary of Arroyo

Simi, indicates the waters of this creek to be of Class 3 quality for irrigation and generally unsuitable for domestic use during periods of low flow. As in the Arroyo Simi, the quality of the flow on March 7, 1952, was considerably better than the quality on March 15 of the same year although the flow on the latter date was five times that of the former.

Data collected for Revolon Slough at station 44-2.1-1.7 indicate the water to be of poor quality. However, this slough is primarily used as a wasteway for the disposal of irrigation drainage from the Oxnard Plain, and Pleasant Valley ground water basins, and the character of the analyses for this stream presented in Table A3 of Appendix A strongly suggests that irrigation drainage represents the primary source of the sample collected.

Malibu Creek System

Data for this stream system are limited to seven analyses presented in Tables A4 and G4 of Appendixes A and G, three from Big Sycamore Creek and three from Little Sycamore Creek and one from La Jolla Creek. These analyses indicate the waters to be of good quality and suitable for beneficial uses. However, both streams discharge waters that are classified as very hard.

Quality of Ground Water

The quality and character of ground waters in Ventura County vary widely, depending upon the geologic formations from which the water is derived; the quality of the ground water recharge; the extent to which the ground water has been affected by pollutants and degradants; and fluctuations resulting from cyclic periods of above normal and subnormal water supply. The suitability of the ground waters for beneficial use depends upon the quantity and type of salts in the water. For irrigation use, suitability depends on soil drainage, climate, and sensitivity of the crop.

In general, much of the ground water in Ventura County is of suitable or marginal quality for the prevailing beneficial uses although many of the waters are very hard. For this reason, water softening may be desirable before use of ground water for domestic and certain industrial purposes. There is discernible variation in both the character and quality of ground water, not only between drainage systems but between basins within drainage systems and aquifers within basins.

In view of this diversity, the ensuing discussion of ground water quality has, for simplicity of presentation, been divided into drainage systems and subdivided into ground water basins. A tabulation of complete mineral analyses, including a limited number made for trace constituents, of samples collected subsequent to the publication of Bulletin No. 46A[2] is presented in Appendix B, while partial mineral analyses for selected wells are presented in Appendix C. Appendix H contains analyses made subsequent to 1952.

Ventura River System

Ground water basins within this system include Upper Ojai, Ojai, and Upper and Lower Ventura River Basins.

Upper Ojai Basin. In general the ground waters of Upper Ojai Basin are of good quality and suitable for domestic and irrigation uses. This is shown by the following data summarizing the values of total dissolved solids, boron, and effective salinity of samples collected from 12 wells in this basin during the late fall of 1951 and the summer of 1952.

Chemical Property	Maximum	Minimum	Average	Median
Total dissolved solids, ppm.	1249	438	707	605
Boron, ppm.	1.5	trace	0.4	0.2
Effective salinity, epm.	11.8	2.8	5.5	4.0

Ground waters derived from the western part of the basin are calcium to calcium-sodium bicarbonate in character, while the waters found in the eastern part of the basin are primarily calcium sulfate.

In the extreme easterly portion of the basin, the limited occurrence of sodium chloride waters of unsatisfactory quality is indicated. These waters contain total dissolved solids concentrations ranging from 2000-3000 ppm, effective salinities up to 31 epm, and high boron concentrations. In addition, wells 4N/22W-11P1 and 11R1, located on the south of the basin, yield waters containing high boron concentrations. Sources of degradation probably include connate brines seeping from the Modelo shales located on the south side of the valley, and oil brines which, historically, have been disposed to unlined sumps in the eastern portion of the valley. (3).

In general, analyses made subsequent to 1952 show little change in character or quality. One well, however, No. 4N/22W-9R4 increased in salinity from 1249 ppm total dissolved solids in 1952 to 1766 ppm in 1954 and then declined to a value of 1004 ppm in 1958. Table H-1 in Appendix H shows several other wells in which quality has improved between 1951 and 1958.

Ojai Basin. Mineral analyses indicate nearly all the ground waters derived from this basin to be of good mineral quality and suitable for the prevailing beneficial uses. On the basis of analyses of samples from 19 wells collected in 1952, the total dissolved solids content ranges from about 450 to about 1140 ppm and averages 640 ppm. Effective salinity, while ranging from about 3 to over 11 epm, seldom exceeds 6 epm and averages about 4.8 epm. Boron concentrations are in the order of 0.1 ppm and never exceed 0.4 ppm.

In comparison to the data presented in the foregoing paragraph, analyses of samples collected from nine wells in 1933 show that the average total dissolved solids concentration at that time was about 490 ppm. Thus, it is indicated that in an interval of 19 years, the average concentration of total dissolved solids has increased about 150 ppm in Ojai Basin. This increase suggests that the inflow of salts to the ground water body may exceed the disposal of salts therefrom. Sixty-eight analyses of samples collected during the period 1953 to 1957 from 27 wells show this trend of increasing salinity to be continuing. Although this continuing increase indicates a possible adverse salt balance, consideration must be given to the fact that the period of increase has not occurred over an average water supply period.

Ground waters of Ojai Basin are principally calcium bicarbonate-sulfate in character although several of the wells, scattered throughout the basin, yield waters with bicarbonate concentrations exceeding 50 per cent of the total anions. In addition, several wells, including Nos. 4N/22W-6D3, 4N/22W-9B1, and 4N/34W-12K2, produce waters with sulfate as the principal anion and there is one well, No. 5N/22W-32J3, with a chloride concentration exceeding 50 per cent of the total anions.

With the exception of well 6D3, the quality of the water derived from these wells is somewhat inferior to that of waters found in other parts of the basin, as the total dissolved solids content exceeds 1000 ppm. Information is lacking concerning the depth or the deposits encountered while drilling the three wells yielding poorer quality waters. However, it is possible that a portion of this water is in some manner derived from older deposits underlying or bounding the alluvium.

Upper Ventura River Basin. The quality and character of waters derived from wells in this basin generally reflect the quality and character of the surface waters of the Ventura River, particularly those found during periods of high flow. The effect may be seen by reference to Table 8, entitled "Similarity of Quality and Character of Surface and Ground Water in Upper Ventura River Basin". This close correspondence occurs because the primary source of recharge to this basin is deep percolation of surface flow in the river. Furthermore, the shallow alluvial deposits, from which the major portion of ground water in this basin is derived, permit only limited amounts of carryover storage. Hence, ground water storage and quality rapidly reflect changes in quantity and quality of flow in the river.

TABLE 8

SIMILARITY OF QUALITY AND CHARACTER OF SURFACE AND GROUND WATER IN UPPER VENTURA RIVER BASIN

Source	Constituents in percentage equivalents						Boron	Total dissolved solids	Effective salinity
	Ca	Mg	Na	HCO_3	SO_4	Cl	ppm	ppm	epm
Ventura River at Foster Park (high flow)	54	28	18	41	49	10	0.2	500	4.3
Ventura River at Foster Park (low flow)	54	22	24	40	39	21	0.5	841	6.3
Average of eight wells pumping from alluvium of Upper Ventura River Basin	55	25	20	43	37	10	0.5	618	4.6

In general the quality of ground waters produced from this basin may be considered suitable for domestic, municipal, and irrigation uses. Presented below are data which reflect the extreme and average mineral quality attributes of these ground waters. This summary is based upon analyses of 23 samples collected in August of 1952, and April and May of 1953.

Chemical Property	Maximum	Minimum	Average	Median
Total dissolved solids, ppm	1420	370	732	620
Boron, ppm	0.6	0.0	0.3	0.4
Effective salinity, epm	10.4	1.9	5.3	4.8

Analyses made during the period 1953 to 1958 show only minor changes in quality except for several wells in which the 1958 samples showed improvement in quality.

About 75 per cent of the samples collected in 1952 and 1953 and between 1953 and 1958, indicate that the cation character of the ground waters is predominately calcium, although waters of a sodium-calcium and magnesium-calcium type were derived from a few scattered wells. The anion character of the majority of the waters varies narrowly between sulfate-bicarbonate and bicarbonate-sulfate. There are, however, analyses from two wells drilled into deposits in San Antonio Creek which show a sulfate character and nine analyses from wells deriving waters from deposits in Santa Ana Creek, in the vicinity of Meiner's Oaks and along the east side of the Ventura River above Oakview, which show a bicarbonate character. Comparison of the locations of wells of deviating anion character with the areal geology, suggests that the sulfate waters are derived from shale deposits, while nearly all waters of bicarbonate character are from wells drilled into the Sespe formation or adjacent deposits.

The bicarbonate character of waters, produced from the Sespe formation, is indicated by the analysis of spring 4N/23W-14A1, which emanates from these deposits. The excellent quality of the water from this spring suggests that waters of the Sespe formation are of good quality near the surface. However, data obtained from electric logs of wells drilled into these deposits suggest that saline waters may occur at depth.

There are two wells located adjacent to San Antonio Creek, which yield waters with total dissolved solids and effective salinity values considerably above average. These waters are Class 2 for irrigation use, have a sulfate anion character, and are probably derived from Tertiary deposits such as the Modelo shale and the Vaqueros formations. However, only a minor quantity of water is derived from these deposits and their effect on the overall quality of the waters in the Upper Ventura River Basin is considered minor.

Lower Ventura River Basin. There are very few water wells drilled into the alluvium of this basin and mineral analyses with which to interpret the quality of the ground water are almost completely lacking. Furthermore, available analyses present somewhat conflicting information. Analyses of well 3N/23W-33N1 suggest the waters to be of very poor mineral quality, while the analysis of well 3N/23W-33C1 suggests excellent mineral quality. Of significance, however, is the fact that these samples were collected by bailing the wells and for an extended period prior to sampling neither of the wells had been pumped. The effect of such a period of idleness is evidenced by the analyses of well 3N/23W-33N1 presented in Appendix B, Table B3, wherein samples of rather different quality were found at variations in depth of only 10 feet. These differences may be the result of slow settling of ions in solution with a consequent increase in salt concentration near the bottom of the well and decrease in concentration near the top.

Discussion presented in Bulletin No. 46[1] indicates that concentrations of chloride, boron, and dissolved solids in the ground waters of the basin make the waters unsuitable for beneficial use. This is substantiated by reports from local farmers and by the electric log of well 2N/23W-5P1, which suggests salty water to occur for the first 300 feet. It is further reported that hydrogen sulfide gas may be found in these waters, particularly during periods when water levels are lowest, and that the waters often contain oil.

Reasons for this poor quality water are obscure, although it is reported that oil field waste disposal practices in the early history of the Ventura Oil Field may have polluted ground water.

The quality of ground waters derived from the alluvial deposits in Canada Larga, a tributary of the Lower Ventura River Basin, is shown by the analyses of well 3N/23W-12D1 presented in Appendix B, Table B3. These waters are apparently Class 3 for irrigation uses and unsuitable for domestic use. The source of the poor quality water is considered to be geologic in origin, since the salts are probably derived from nearby deposits of Tertiary age.

Santa Clara River System

Ground water basins within this drainage system include Piru, Fillmore, Santa Paula, Mound, Oxnard Forebay, Oxnard Plain, and Pleasant Valley. The character and quality of ground waters in each of these basins and the suitability of the waters for prevailing and anticipated beneficial uses are discussed in detail in the following section.

Piru Basin. Ground waters, derived from the alluvium and underlying San Pedro formation within Piru Basin, range in quality from Class 1 to Class 3 for irrigation use. In some instances, certain of the constituents, notably magnesium, fluoride, sulfate and total dissolved solids, exceed the recommended and/or mandatory limits for domestic use established in the United States Public Health Service Drinking Water Standards. Summarized below are pertinent statistics relative to total dissolved solids, boron and effective salinity for a series of samples collected from 26 wells during the last week of May, 1952. These data emphasize the variation in quality in this basin.

Chemical Property	Maximum	Minimum	Average	Median
Total dissolved solids, ppm	3386	778	1320	1477
Boron, ppm	1.3	0.4	0.8	0.8
Effective salinity, epm	25.2	6.9	10.4	11.7

The above data indicate that ground waters in Piru Basin are on the average Class 2 for irrigation use. However, the soils in the alluvium of this basin are in general very permeable and excellent subdrainage is afforded. For this reason, many of the ground waters of this basin have been successfully applied on even the more sensitive of crops. However, the Ventura County Farm Advisor and local farmers have reported that in 1951 citrus and other crops showed symptoms of salt injury of a magnitude sufficient to cause concern. This condition was relieved by heavy rains which fell during the winter of 1951-52, since deep percolation of precipitation considerably reduced the concentration of the soil solution. However, it serves to emphasize the fact that many of the waters of this basin are marginal and that determination of requirements for applied water must consider not only consumptive use requirements, but also an allowance for sufficient irrigation return to prevent excessive concentration of salts in the root zone.

An indication of the changes in quality that have occurred in the ground waters of Piru Basin over a period of time is furnished by analyses of samples collected from 19 wells in 1929. These data show that the average total dissolved solids content of these ground waters was about 1240 ppm in 1929 compared to an average of 1320 ppm in 1952. Direct comparison of analyses of samples collected from four wells in 1929 and 1952 indicates that during the 23-year period the total dissolved solids content increased from 1125 to 1540 ppm. It is apparent from these data that the ground waters of Piru Basin have experienced an increase in salt content. However, the magnitude of the increase indicated is not necessarily a dependable figure since the period of comparison does not correspond to an average water supply period. Forty-three analyses of ground water from 26 wells for the period 1953-1958 are presented in Table H-4. These analyses indicate that no significant changes in quality or character have occurred during this period.

The character of the ground waters of Piru Basin is consistent, with calcium the most important cation and sulfate the predominant anion. Studies relating quality and location indicate that the water in the upstream portion of the basin contains considerably greater concentrations of dissolved salts than the water derived from the downstream portion. As previously stated, the quality of surface waters of the Santa Clara River at the upstream end of the basin, as evidenced by analyses of samples collected at Blue Cut, station 43-34.5, is very poor. It is considered probable that the higher total dissolved solids concentrations found in the upstream part of the basin reflect the deep percolation of these poor quality surface waters. The lesser quantity of dissolved salts evidenced in the downstream portion of the basin is considered to reflect, at least in part, the influence of waters derived from Piru Creek. The effect of the flows in this creek on ground waters of Piru Basin is emphasized by the high boron concentrations found in the waters derived from wells located in the vicinity of and downstream of the mouth of the creek where the concentrations of boron are in the order of 1 ppm.

Three of the wells in this basin, Nos. 4N/18W-29P2, 4N/19W-25C1, and 34C2, yield waters of relatively poor quality. The effective salinity of waters from these wells generally exceeds 16 epm and total dissolved solids concentrations are proportionately high. Water levels in well 4N/18W-29P2 are considerably higher than in other nearby wells and the general water table elevation of the basin. The inference is that the water in this well is supplied from older deposits which form the southerly boundary of the alluvial deposits. Concerning the other two wells, similar hydrologic data suggest the effect of ground water emanating from older deposits. However, well 25C1, which is drilled near the mouth of Hopper Creek, may, to some extent, reflect the poor quality waters which are found in this creek during periods of low flow.

There are available analyses of three wells located outside the principal water-bearing formations of Piru Basin, but within the drainage area of the basin. Wells 4N/18W-3Q1 and 3Q2 are drilled into the alluvium of Piru Creek, and well 4N/18W-12P1 into the alluvium of Holser Canyon. The waters derived from the wells adjacent to Piru Creek contain high concentration of boron. The quality of waters derived from the alluvium of Holser Canyon is extremely poor with effective salinity values in excess of 60 epm.

<u>Fillmore Basin.</u> Ground waters of this basin, principally derived from alluvial and San Pedro deposits, vary in quality from Class 1 to Class 3 for irrigation use. Furthermore, certain constituents in waters from various parts of the basin, notably sulfate, fluoride, and total dissolved solids, exceed the recommended and/or mandatory limits for drinking water.

To illustrate the quality traits in this basin, there is presented below a summary of data secured from analyses of samples collected from 44 wells during the months of May and June, 1952.

Chemical Property	Maximum	Minimum	Average	Median
Total dissolved solids, ppm	2661	516	1206	945
Boron, ppm	1.5	0.2	0.6	0.6
Effective salinity, epm	21.2	3.3	9.4	8.3

These data indicate that over 50 per cent of the wells sampled yield waters of Class 2 or Class 3 quality. Because the soils of Fillmore Basin are in general very permeable and there is excellent subdrainage, ground waters of this basin have in the past been utilized without significant crop damage. However, waters which contain concentrations of salts which exceed the average values shown, should be used with care to insure that soil solution concentrations do not increase to the point that injury to crops will result. It is noted that the values presented in the foregoing tabulation indicate a large variation between the average and median figures for total dissolved solids concentration and effective salinity. This variation indicates the effect of a minority of wells yielding water of much poorer quality than the average values.

As an indication of changes which have occurred in the quality of the ground waters of Fillmore Basin over a period of time, comparison of data presented in the foregoing tabulation with data presented in Bulletin No. 46A[2] is of significance. Analyses of samples collected from 20 wells in 1930 indicate that the average total dissolved solids content in the ground waters of Fillmore Basin was about 970 ppm at that time. This is compared to an average total dissolved solids content of about 1200 ppm in 1952. Direct comparison of analyses of samples collected from six wells indicates the average total dissolved solids concentration to have increased from 660 ppm in 1932 to 1090 ppm in 1952. However, the foregoing comparisons do not cover an average water supply period and the magnitude of the increases may not accurately indicate the average rate of increase of salt concentration in this basin. Ninety-three analyses of ground water from 50 wells covering the period of 1953 through 1957 are presented in Table H-5. These analyses indicate that no major changes in ground water quality or character have occurred during this period.

The principal cation in the ground waters of Fillmore Basin is generally calcium, although analyses indicate that there are a few wells producing waters of a calcium-magnesium or calcium-sodium type. Sulfate exceeds 50 per cent of the total anions throughout the major part of the basin, although in ground waters derived from that portion of the basin lying north of Santa Clara River and west of Sespe Creek the predominant anion is generally bicarbonate. These waters are of relatively good quality, although two of the wells, Nos. 4N/20W-25D1 and 26P1, have boron concentrations somewhat in excess of maximum values recommended for use on sensitive crops. No specific water quality data are available with which to determine the source of the water of this character.

A study comparing the quality of the waters on an areal basis revealed that poorer than average quality waters are found in the southern portion of the basin and in a limited area south and west of the City of Fillmore. The waters in the southern portion of the basin have effective salinities generally exceeding 12-15 epm and boron concentrations in the order of 1 ppm, while the waters found in the vicinity of Fillmore have effective salinity values in the order of 150 per cent of the average for the basin.

Wells in the southern portion of the basin which yield waters of poor quality are found in Sections 8, 9, 10, and 11 of Township 3 North, Range 20 West. The areal extent of degradation is much more widespread in this area than in other areas adjacent to the hills flanking the south side of the Santa Clara River and it is therefore considered that surface runoff from nearby hills is not the sole contributing factor to the poor quality.

Furthermore, it has been previously stated that Tertiary rocks bordering the basin on the south have been eroded by the Santa Clara River, followed by the deposition of up to about 200 feet of Recent alluvium. Most of the wells which yield poor quality water are drilled into this overlying alluvium. Available information does not indicate that any of the wells have been drilled into the Tertiary deposits. It is therefore considered that in this area there is an upward movement of water from the Tertiary deposits which is causing at least part of the indicated degradation.

Ground water movement in this area, as indicated by the contours delineated on Plate 2, is in a westerly direction toward the main stream of the basin. At the present time the extent of appreciable degradation is probably limited by dilution by better quality waters. However, it is believed that during periods when water levels are drawn down in the main part of the basin, an increased volume of this poor quality water moves a greater distance into the basin. It follows that any plan to operate Fillmore ground water basin as a ground water reservoir should consider the effects of this poor quality water on the overall quality of the water of the basin.

The areal extent of the poorer quality water found south and west of the City of Fillmore is in the form of a triangle with its apex near the point where Sespe Creek discharges into the Santa Clara River and its base through the city. The quality of these waters is Class 2 for irrigation use with effective salinity values in the order of 150 per cent of the average for the basin.

The source of this inferior quality is obscure. However, available data suggest two possibilities: (1) percolate from Pole Creek which, based upon available analyses, discharges waters of relatively poor quality and (2) discharges to cesspools and septic tanks, possibly within the City of Fillmore, which over a long period of time may have caused impairment of ground waters.

Santa Paula Basin. Ground water derived from the Recent and Pleistocene alluvium and the San Pedro formation in this basin varies in quality from Class 1 to Class 3 for irrigation use. In some instances, certain of the constituents, notably sulfate and total dissolved solids, exceed the limits for domestic use recommended by the United States Public Health Service. The following summary illustrates the quality conditions which exist in this basin. The values are computed from analyses of samples from 28 wells collected during the fall of 1951 and the spring of 1952.

Chemical Property	Maximum	Minimum	Average	Median
Total dissolved solids, ppm	2542	800	1349	1198
Boron, ppm	1.9	0.1	0.8	0.6
Effective salinity, epm	21.8	6.1	10.4	9.3

Comparison of the median and average values presented in the foregoing summary suggests that the waters of this basin are generally Class 2 for irrigation use. However, a few wells, yielding water of poor quality, have a discernible influence on the average quality.

Historically, the quality of the waters of Santa Paula Basin has tended to deteriorate with time. Analyses of samples collected from 30 wells in 1931 indicate that the average total dissolved solids content of ground water at that time was about 980 ppm, or about 370 ppm less than the 1951-52 value. Direct comparison of analyses of samples collected from 15 wells indicates that the average total dissolved solids concentration increased from 955 ppm in 1931 to 1220 ppm in 1951. Analyses of water from 34 wells sampled during the period 1953-1958 show no significant changes in quality or character and no notable trends of increase or decrease in salinity throughout the basin.

Santa Paula Basin is the only ground water basin in Ventura County for which historical quality data exists in sufficient quantity to fully justify study and conclusions. Available data comprise analyses of samples collected approximately once each year since 1928. In general, these data indicate that, in the period from 1928 to about 1935 or 1936, the salt concentration in the waters of this basin evidenced a substantial rise, with increases amounting to as much as 100 per cent of the 1928 concentration. In the period between 1936 and about 1945, salt concentrations decreased, although not to the 1928 level. Between 1945 and 1952, salt concentrations again reached, and in some instances exceeded, 1935 values. An attempt was made to correlate quality fluctuations with hydrologic factors such as rainfall, runoff, and ground water levels. It is indicated that a qualitative relationship does exist, although the data available did not permit the determination of quantitative values.

The cation character of the ground waters of Santa Paula Basin is usually calcium, although several analyses indicate a calcium-sodium character. The principal anion is sulfate, except for water derived from a very few wells located near the mouth of Santa Paula Creek. These latter wells have a sulfate-bicarbonate character similar to that of the high flow waters of the creek.

With respect to geographical location, the ground water derived from the eastern portion of the basin in the vicinity of the mouth of Santa Paula Creek indicates the effect of the high quality waters from this creek on the underlying ground water.

A few wells in this basin produce waters of considerably poorer than average quality. These include wells 3N/21W-16H1, 28M1, and 31C1, and 3N/22W-35P1. In the instance of well 16H1, observations made in the course of water level measurements indicate the well to have a leaky casing, suggesting that the waters are being degraded by a poor quality water, possibly from a localized semiperched body, migrating to the principal aquifer through the leaky casing. A similar occurrence is suspected in the instance of wells 3N/21W-31C1 and 3N/22W-35P1. Both of these wells produce waters of Class 3 quality. They are more than 250 feet deep and yield waters of similar chemical character to the ground water in much of the remainder of the basin, suggesting irrigation return water as the source of deterioration. Suitable methods of construction and abandonment of wells should be developed and utilized in pressure portions of this basin.

Well 3N/21W-28M1, mentioned previously as producing waters of poor quality, is located south of the Oak Ridge fault and adjacent Pico formation. It seems probable that poor quality waters migrating from these older Pico deposits are reflected in the water derived from this well.

In addition to the cited instances of poor quality water, the analyses presented in Appendixes B & H indicate that four wells, Nos. 3N/21W-21B1, 21E1, 21F1, and 21F2, produce waters with boron concentrations exceeding one ppm. These wells which are located downstream from the sewage treatment of the City of Santa Paula have been affected by discharges from the plant.

An additional source of deterioration to the ground waters of this basin is percolation of poor quality surface waters flowing in Wheeler Canyon. Analyses of two wells, Nos. 3N/22W-2G2 and 3N/22W-11H1, suggest the direct effect of waters from Wheeler Canyon on ground waters. Both of these wells produce Class 3 waters with a sodium-calcium sulfate character. The effect of surface flow from Wheeler Canyon is also evidenced in the quality of well 3N/22W-24R1.

Mound Basin. The principal deposits yielding ground water to wells in this basin are of the San Pedro formation, although minor amounts of water are also derived from the overlying Recent alluvial and upper Pleistocene deposits.

The quality of the waters derived from the San Pedro formation, as depicted by analyses of samples collected from 15 wells in June and July of 1952, ranges from Class 1 to Class 3 for irrigation use. The total dissolved solids content ranges from a minimum of 700 ppm to a maximum of 2,599 ppm, with an average of 1,211 ppm and a median of 1,113 ppm; the boron concentration ranges from a minimum of 0.2 to a maximum of 0.6; averaging 0.4; and the effective salinity ranges from a maximum of 20.6 to a minimum of 7.7 epm, averaging 10.1 epm. The median value for effective salinity is 9.6 epm. The character of the waters derived from these deposits is generally calcium-sodium sulfate.

Thirty-five ground water analyses are available from 20 wells covering the period since 1952. With but one exception these analyses show no significant changes in mineral quality or character and do not indicate any basin-wide trends. The exception is analyses from well 2N/23W-5L1 which show a pronounced increase in chloride ion and total dissolved solids content. Insufficient data are available to establish the source of impairment; which may be poor quality waters from adjacent formations, oil well brines, or sea-water intrusion.

Since the soils of this basin are fairly permeable, it is believed that the waters are usable for irrigation. However, as the concentrations increase above the average, care must be taken to prevent an undesirable soil solution condition. Concerning domestic use, certain of the mineral constituents, notably sulfate and total dissolved solids may, in some instances, exceed the limits recommended by the United States Public Health Service.

Information concerning the quality of the waters derived from the alluvium is limited to one analysis from well 2N/22W-10R2. It would appear from these meager data that the water derived from the alluvium is of suitable quality for established beneficial uses, at least in the vicinity of the cited well.

In Chapter II, it is stated that the San Pedro deposits within the lower portion of the Ventura River drainage area are separated from the overlying Recent alluvium and probably hydrologically interconnected with the Mound Basin. Available water quality data, although meager, tends to support this suggestion. This may be seen from an inspection of Table 9, entitled "Comparison of Quality and Character of Waters in Alluvium and San Pedro Deposits of Lower Ventura River and Mound Basin". This table presents water quality data for high and low flows in the Ventura River, for waters derived from the alluvium of the lower Ventura Basin, for two wells deriving waters from the San Pedro deposits in the Lower Ventura River Basin, and average quality of water from 15 wells producing from the San Pedro deposits in the Mound Basin. This effect is also shown on Plate 11, entitled "Mineral Character of Ground Waters, Mound and Lower Ventura River Basins", graphically illustrating the character of these waters. The data indicate that the water from the two wells producing from the San Pedro deposits in the Ventura Basin is similar in character and quality to the waters in Mound Basin and differs from the waters found in the alluvium of the Ventura Basin and low flows in the Ventura River.

TABLE 9

COMPARISON OF QUALITY AND CHARACTER OF WATERS IN ALLUVIUM AND SAN PEDRO DEPOSITS OF LOWER VENTURA RIVER AND MOUND BASINS

Source	Date Sampled	Average composition of waters in per cent of epm values						Total Dissolved Solids ppm	Boron ppm	Effective Salinity epm
		Ca	Mg	Na	HCO_3	SO_4	Cl			
Ventura River Station (42-0.5)										
High flows[a]		32	34	34	33	49	18	760-853	0.3-0.6	8.2
Low flows[b]		29	20	51	21	38	41	1335-1619	0.7-1.9	14.5-19.6
Wells in Ventura Basin alluvium										
3/23-33C1	4-14-52	42	17	41	45	16	39	254	0.2	2.4
3/23-33N1[c]	2-23-53	24	16	60	20	12	68	2630	3.3	33.1
Wells in Ventura Basin San Pedro formation										
2/23-5L1	4-2-52	47	20	33	32	53	15	1261	0.5	10.1
2/23-5P1	8-1-52	46	21	33	31	46	23	1354	0.4	11.0
Mound Pressure Basin[d]	1952	44	21	35	32	56	12	1074	0.4	9.1

a From Table 6.

b From Table 6.

c Average of analyses of four thief samples collected at 20, 30, 40, 50 foot depths.

d Average of analyses of samples collected in the summer of 1952 from 15 wells producing from the San Pedro formation.

Oxnard Forebay Basin. Ground water produced from the Oxnard Forebay Basin is derived from Recent and Pleistocene alluvium and the San Pedro formation. The quality of the waters in these deposits, which are contiguous and in hydraulic continuity, is generally Class 2 for irrigation use. Analyses of samples collected from 14 wells in the summer of 1952 indicate a concentration of total dissolved solids ranging from a maximum of 1940 ppm to a minimum of 838 ppm, with an average of about 1270 ppm, and a median concentration of 1245 ppm. The boron content ranges from a minimum of 0.3 ppm to a maximum of 0.9 ppm with average and median values of 0.6 ppm. The effective salinity ranges from a minimum of 7.8 to a maximum of 15.3 epm, with an average of 10.6 and a median of 10.0 epm.

An indication of the quality trend in this ground water basin during a period of 21 years is furnished by comparison of data presented in the foregoing paragraph with analyses of samples collected in 1931. Based upon 7 analyses, the average total dissolved solids concentration was about 1000 ppm in 1931 or about 270 ppm less than the 1952 value. While it appears that there is a general over-all increase in the salt concentration in this basin, the period of record does not correspond to an average water supply period. The magnitude of the difference, therefore, should not be used to determine the average rate of salt concentration increase.

Seventy-two analyses of ground water are available from 27 wells covering the period 1953 to 1958. These analyses indicate only minor increases in dissolved solids and show no significant changes in quality or character.

The character of the ground waters found in the Oxnard Forebay is generally calcium-sodium sulfate, similar to the high flow waters in the

Santa Clara River. Since the area is not only recharged under natural conditions by the Santa Clara River, but also by artificial spreading of this water during periods of high runoff, the similarity to the surface supply is to be expected.

Oxnard Plain Basin. Ground water produced for beneficial use in the basin is derived primarily from the Oxnard aquifer, although some water is obtained from the Fox Canyon aquifer of the San Pedro formation, from discontinuous gravels of the upper San Pedro formation and, in minor amounts, from the Santa Barbara formation and Quaternary alluvium. In addition there is a semiperched ground water body in permeable deposits overlying the clay cap which confines the Oxnard aquifer. These latter waters are of poor quality and there are no known wells which intentionally derive water from this zone.

Nearly all wells for which analyses are presented in Appendix Tables B, B9, and H-9 produce from the Oxnard aquifer. However, there are analyses available for three wells pumping from the Fox Canyon aquifer, one well deriving water from miscellaneous gravels of the upper San Pedro formation, and two wells producing from the Quaternary alluvium. To indicate the quality of the waters from these aquifers, the results of a series of samples collected during the summer of 1952 are summarized in the following tabulation.

Source and chemical property	Maximum	Minimum	Average	Median
Oxnard Aquifer (81 analyses)				
Total dissolved solids, ppm	2071	700	977	914
Boron, ppm	1.1	0.1	0.6	0.6
Effective salinity, epm	17.3	5.7	8.1	7.4

Source and chemical property	Maximum	Minimum	Average	Median
Fox Canyon Aquifer (3 analyses)				
Total dissolved solids, ppm	820	744	770	745
Boron, ppm	0.4	0.1	0.2	0.2
Effective salinity, epm	7.2	6.9	7.1	7.1
Quaternary Alluvium (2 analyses)				
Total dissolved solids, ppm	932	672	802	---
Boron, ppm	0.6	0.4	0.5	---
Effective salinity, epm	7.6	5.4	6.5	---
San Pedro Formation (1 analysis)				
Total dissolved solids, ppm	880	---	---	---
Boron, ppm	0.3	---	---	---
Effective salinity, epm	8.4	---	---	---

Data presented in the foregoing summary relative to the Fox Canyon aquifer, the Quaternary alluvium, and the San Pedro formation, although meager, suggest the quality of the waters derived from these deposits to be suitable for both irrigation and domestic use, at least in the southern and southeastern portions of the basin, where the wells producing from these deposits are located. The character of the water from these zones is generally calcium-sodium sulfate.

The quality of the waters derived from the Oxnard aquifer ranges from Class 1 to Class 3 for irrigation use. Some constituents, notably sulfate and total dissolved solids, exceed the recommended limits for domestic use published in Drinking Water Standards of the United States Public Health Service 1946[19]. Wells recently found to contain waters of high chloride content have not been considered, since these wells are believed to have been degraded by sea water entering the Oxnard aquifer near Port Hueneme. Sea-water intrusion is discussed in Chapter VI, entitled "Water Quality Problems".

Analyses of samples collected in 1931 from 27 wells producing from the Oxnard aquifer indicate that the average total dissolved solids content in that zone was about 850 ppm at that time. When this figure is compared to the 977 ppm average for 1952, it is apparent that there has been an increase in the salt concentration in the waters of this zone. The Oxnard aquifer is confined, as previously discussed, and is recharged primarily by subsurface movement from the Oxnard Forebay Basin. It is, therefore, not subject to quality fluctuations characteristic of free ground water aquifers which are recharged directly by deep penetrating rainfall and percolating surface waters of variable quality. It will, however, show an integrated reflection of changes in the Oxnard Forebay Basin, which is subject to variations in quality related to both time and hydrologic conditions. One hundred thirty-six analyses of water from 66 wells producing from the Oxnard aquifer and covering the period 1953 to 1956 are presented in Table H-9 of Appendix H. Except in the vicinity of Port Hueneme where sea-water intrusion is continuing, the analyses show no significant changes in quality or character. However, the trend of increasing salt concentration within this zone appears to be continuing.

The most important cation in the waters of the Oxnard aquifer is calcium generally followed by sodium, although certain wells, particularly in the area north of the City of Oxnard, yield waters with magnesium as the second most important cation. Sulfate is in nearly all instances the predominate anion, although a few wells located adjacent to the line delineated as the boundary between Pleasant Valley and the Oxnard Plain Basins, have sulfate concentrations of less than 50 per cent of the total anions with bicarbonate as the second most important anion. This is believed to be, at least in part, the result of pumping from a series of continuous or discontinuous lenses of water-bearing deposits recharged principally from the alluvial and Upper San Pedro deposits of adjacent Pleasant Valley Basin.

Studies relating the quality of water in the Oxnard aquifer with geographical location indicate that waters found in the area between the City of Oxnard and the Oxnard Forebay Basin and adjacent to the periphery of the Oxnard Forebay Basin are generally inferior in quality to those waters found in the balance of the aquifer. This may be seen from the data presented in the following tabulation.

Basin or aquifer	Total dissolved solids, ppm		Effective salinity epm	
	Average	Median	Average	Median
Oxnard Forebay	1269	1245	10.6	10.0
Oxrard Aquifer	977	914	8.1	7.4
Oxrard Aquifer near Forebay*	1280	1132	10.3	9.4

* Values based on 14 wells producing from Oxnard aquifer and located adjacent to Oxrard Forebay.

Recharge to the Oxnard aquifer is effected primarily through movement of water from the Oxnard Forebay Basin. The data indicates that the quality of the forebay area water is generally inferior to that in the Main Oxnard aquifer. It is apparent that some deterioration of the quality of the ground waters of the Oxrard aquifer has occurred, as previously discussed, and doubtless will continue to occur as a result of normal recharge.

It was previously mentioned that at shallow depth in the alluvial deposits of the Oxnard Plain Basin there exists a semiperched water-bearing zone which is recharged principally by deep penetration of rainfall and return irrigation water. Because of the extensive application of irrigation water, it has become necessary to install a tile drainage system in portions of Oxnard Plain in order to maintain the water level below the root zone of crops. Analyses of samples of these semiperched waters, collected near points of discharge of drainage water, are presented in Table 10, entitled "Mineral Analyses of Drainage Water from Coastal Plain of Ventura County". The locations of sampling points used are delineated on Plate 7B.

Inspection of Table 10 will indicate that the waters of the semiperched body are similar in character to the waters derived from the Oxnard aquifer; however, they are Class 2 to Class 3 quality for irrigation use and generally unsuitable as a domestic supply. It is apparent that the semiperched ground water body represents a potential source of degradation to the valuable aquifers which underlie it. This water may gain access to the underlying deposits through improperly constructed or abandoned wells or through the lenticular sands and gravels which tend to increase the permeability of the cap. At the present time there is no direct evidence of degradation of the Oxnard aquifer by water of the semiperched body. However, it is suspected that waters from this source are contributing to the poor quality waters found adjacent to the zone of recharge and in the vicinity of well 1N/22W-11C2 which evidences high total dissolved solids and boron concentrations.

TABLE 10

MINERAL ANALYSES OF DRAINAGE WATER FROM COASTAL PLAIN OF VENTURA COUNTY

Location of sampling point S.B.B. & M	Date / Time	Discharge second-feet	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	B	Total dissolved solids ppm	Effective salinity epm	Per Cent Na
					Mineral constituents in parts per million / equivalents per million												
1N/21W-7K	6-6-52[a]	4[b]	2925	7.6	316 / 15.80	121 / 9.95	256 / 11.11	--	0 / 0	309 / 5.07	1358 / 28.27	112 / 3.15	45 / 0.72	1.9	2680	21.1	30
	8-4-52 / 1125	2[b]	2907	7.0	315 / 15.7	170 / 14.0	300 / 12.6	10 / 0.25	0 / 0	335 / 5.48	1230 / 25.6	283 / 7.98	74 / 1.20	1.5	2815	26.9	30
17A	8-4-52 / 1135	--	10990	7.1	392 / 19.6	430 / 35.3	2700 / 117	10 / 0.24	0 / 0	690 / 11.3	6270 / 131	910 / 25.7	7 / 0.12	8.3	11400	152.5	68
19K	8-4-52[a] / 1200	1.5	5440	7.4	401 / 20.04	220 / 18.17	672 / 29.20	10 / 0.25	0 / 0	370 / 6.07	2430 / 50.70	365 / 10.29	74 / 1.20	2.8	4660	47.6	43
	1-14-53 / 1030	2[b]	6536	7.7	460 / 23.0	221 / 18.2	1000 / 43.5	14 / 0.36	0 / 0	420 / 6.88	3120 / 64.9	420 / 11.8	84 / 1.35	4.1	5912	62.1	51
19Q	6-6-52[a] / 1045	4[b]	4720	7.6	360 / 18.02	176 / 14.48	626 / 27.20	--	0 / 0	352 / 5.77	2220 / 47.30	213 / 5.99	57 / 0.92	1.4	4266	41.7	46
21L	8-4-52 / 1150	6[c]	9010	7.2	396 / 19.8	327 / 26.9	2200 / 95.7	2 / 0.05	0 / 0	586 / 9.60	5180 / 108	835 / 23.5	18 / 0.29	6.9	9740	122.7	67
	1-27-56 / 1505	100[b]	4440	7.0	231 / 11.55	124 / 10.25	719 / 31.30	3.4 / 0.086	0 / 0	228 / 3.75	2006 / 41.80	231 / 6.50	56.9 / 0.918	2.6	3683	41.6	59
28B	4-7-53[a] / 0900	1[b]	13650	7.6	401 / 20.05	394 / 32.24	2520 / 109.50	6 / 0.14	0 / 0	517 / 8.48	4650 / 97.00	2060 / 58.10	24 / 0.38	4.6	11026	141.9	68
1N/22W-6M	8-4-52[a] / 1000	0.5[b]	6750	7.6	476 / 28.32	350 / 28.94	960 / 41.70	4 / 0.12	0 / 0	490 / 8.04	3610 / 75.10	393 / 11.05	64 / 1.04	4.1	6525	70.8	44
	1-14-53 / 1324	2.5[b]	4525	7.7	287 / 14.4	206 / 16.9	590 / 25.6	8 / 0.20	0 / 0	330 / 5.40	2130 / 44.4	250 / 7.05	63 / 1.01	3.3	3968	42.7	45
	2-27-53 / 1305	4[b]	2890	7.8	250 / 12.5	128 / 10.5	330 / 14.4	6 / 0.16	0 / 0	305 / 5.00	1387 / 28.9	130 / 3.67	25 / 0.41	2.0	2648	25.1	38

MINERAL ANALYSES OF DRAINAGE WATER FROM COASTAL PLAIN OF VENTURA COUNTY
(Continued)

Location of sampling point S.B.B.& M	Date / Time	Discharge second-feet	$ECx10^6$ at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	B	Total dissolved solids ppm	Effective salinity epm	Per Cent Na
1N/22W-7J	6-4-52[a] / 1510	1.5	4220	7.8	410 / 20.50	217 / 17.83	416 / 18.10	--	0 / 0	351 / 5.75	2262 / 47.18	140 / 3.95	32 / 0.52	1.6	3503	35.9	32
	1-14-53 / 1315	1[b]	3774	8.0	371 / 18.5	186 / 15.3	350 / 15.2	7 / 0.17	0 / 0	405 / 6.64	1875 / 39.1	145 / 4.09	23 / 0.37	2.5	3628	30.7	31
18A	6-4-52[a] / 1530	0.75[b]	8140	7.5	591 / 29.53	232 / 19.10	1057 / 45.80	--	0 / 0	343 / 5.62	2010 / 41.80	1653 / 46.63	32 / 0.52	1.5	6332	64.9	49
	1-14-53 / 1310	1.5[b]	3774	7.9	367 / 18.3	170 / 14.0	380 / 16.5	6 / 0.15	0 / 0	332 / 5.44	1750 / 36.4	236 / 6.65	15 / 0.25	1.9	3428	20.6	34
	2-27-53[a] / 1255	1[b]	3990	8.2	360 / 18.00	176 / 14.50	495 / 21.50	5 / 0.13	Tr.	326 / 5.34	1910 / 39.75	324 / 9.12	22 / 0.36	2.7	3795	36.1	40
18B	8-4-52[a] / 1010	2[b]	5780	7.5	372 / 18.62	271 / 22.41	820 / 35.60	7 / 0.18	0 / 0	410 / 6.72	2825 / 58.90	341 / 9.60	29 / 0.46	3.6	5131	58.2	46
21B	8-4-52[a] / 1030	2[b]	1830	7.5	249 / 12.44	71 / 5.87	136 / 5.90	4 / 0.12	0 / 0	327 / 5.36	782 / 16.30	74 / 2.07	21 / 0.34	0.9	1674	11.9	24
21F	6-6-52[a] / 1200	4[b]	2150	7.8	271 / 13.55	65 / 5.37	162 / 7.03	--	0 / 0	330 / 5.41	846 / 17.61	85 / 2.40	19 / 0.30	0.8	1846	12.4	27
	1-14-53 / 1300	1[b]	2198	7.9	278 / 13.9	73 / 6.00	165 / 7.17	5 / 0.13	0 / 0	334 / 5.48	893 / 18.6	88 / 2.48	14 / 0.22	1.0	1832	13.3	26
	2-27-53[a] / 1245	4[b]	1890	7.7	249 / 12.45	68 / 5.61	153 / 6.64	4 / 0.12	0 / 0	323 / 5.29	830 / 17.30	77 / 2.16	14 / 0.23	0.9	1703	12.4	27
21Q	8-4-52[a] / 1045	5[b]	2218	7.6	262 / 13.08	68 / 5.65	162 / 7.04	5 / 0.13	0 / 0	335 / 5.48	846 / 17.63	94 / 2.66	12 / 0.20	0.9	1760	12.8	27

MINERAL ANALYSES OF DRAINAGE WATER FROM COASTAL PLAIN OF VENTURA COUNTY
(Continued)

Location of sampling point S.B.B.& M.	Date / Time	Dis-charge: second-feet	ECx10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	B	Total dissolved solids ppm	Effective salinity epm	Per Cent Na
1N/22W-27C	6-6-52[a] / 1140	5[b]	4110	7.6	280 / 14.00	202 / 16.60	474 / 20.62	--	0 / 0	332 / 5.45	1930 / 40.20	204 / 5.74	50 / 0.80	1.8	3500	37.2	40
	8-4-52 / 1055	4[b]	2994	7.1	320 / 16.0	149 / 12.2	370 / 16.1	4 / 0.10	0 / 0	322 / 5.28	1575 / 32.8	180 / 5.08	56 / 0.91	1.9	3010	28.4	36
	1-14-53 / 1555	2[b]	4149	7.8	377 / 15.3	187 / 15.4	620 / 27.0	8 / 0.20	0 / 0	337 / 5.52	2150 / 44.8	247 / 6.96	59 / 0.94	2.7	3565	42.6	47
	2-27-53[a] / 1207	6[b]	3490	7.8	301 / 15.05	138 / 11.40	390 / 16.95	37 / 0.60	0 / 0	308 / 5.04	1605 / 33.40	160 / 4.50	37 / 0.60	2.1	2976	29.0	39
36M	6-6-52[a] / 1110	0[c]	1745	7.6	140 / 7.02	53 / 4.39	187 / 8.12	--	0 / 0	379 / 6.22	518 / 10.70	107 / 3.00	4 / 0.07	0.8	1330	12.5	42
	1-14-53 / 1145	1[b]	5347	7.5	219 / 10.9	196 / 16.1	920 / 40.0	42 / 1.09	0 / 0	600 / 9.84	1824 / 38.0	675 / 19.0	18 / 0.30	2.5	4335	57.2	59

Analyses by Division of Water Resources except as otherwise noted.
a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Ponded.

Pleasant Valley Basin. Ground waters of the Pleasant Valley Basin are derived from Recent and Pleistocene alluvium; the San Pedro formation, of which the principal aquifer is the Fox Canyon aquifer; and to a limited extent, the Santa Barbara formation and Miocene volcanics. The interpretation of the character and quality of the ground waters derived from each of these water-bearing deposits is difficult because of the widespread practice of multiple zone perforation of wells and the folding, faulting, and rapid thinning of formations.

To summarize the quality of the waters in the water-bearing deposits wherein data are available, there is presented in the following tabulation the maximum, minimum, average, and median values for total dissolved solids, boron, and effective salinity for a series of samples collected from 19 wells during the summer of 1952.

Chemical property	Maximum	Minimum	Average	Median
Quaternary Alluvium (7 analyses)				
Total dissolved solids, ppm	2878	746	2141	2452
Boron, ppm	1.5	0.3	0.7	0.7
Effective salinity, epm	25.2	5.5	18.4	20.6
San Pedro Formation (4 analyses)				
Total dissolved solids, ppm	1384	568	899	---
Boron, ppm	0.6	0.1	0.3	---
Effective salinity, epm	15.9	3.9	8.8	---
Fox Canyon Aquifer (7 analyses)				
Total dissolved solids, ppm	1492	460	1045	1282
Boron, ppm	0.6	0.0	0.3	0.3
Effective salinity, epm	14.9	3.0	10.3	12.7

The foregoing data show that, in general, the quality of the waters derived from the San Pedro formation and the Fox Canyon aquifer are Class 1 to Class 2 for irrigation purposes. However, certain constituents, notably sulfates and total dissolved solids, generally exceed the recommended limits for domestic use. Comparison of the quality of waters in relation to geographic location indicates that waters derived from the northern and eastern portions of the basin are generally of better quality than those extracted from the central and the southwestern parts.

Eighty ground water analyses from 50 wells in Pleasant Valley Basin covering the period 1953 to 1958 are presented in Table H-14 of Appendix H. These analyses show no significant changes in the general character or quality of the waters of this basin.

Available data indicate that the quality of the water obtained from deposits of Quaternary alluvium is generally unsuitable for domestic and/or irrigation use. Individual exceptions to this may occur, however, as evidenced by the analysis of well 2N/20W-33Q1 which produces water of good quality. Source of the poor quality water found in this deposit is obscure, but it appears probable that irrigation return is a factor.

The character of the ground waters of this basin varies widely, not only between aquifers, but within aquifers. Generally, the cation character is calcium-sodium, although several wells yield waters of a sodium-calcium character and a few waters show relatively high magnesium percentages. The predominant anion is usually sulfate, although sulfate-bicarbonate and bicarbonate waters are not unusual, particularly in the northern portion of the basin.

Comparison of the character of the ground waters of this basin with respect to geographical location and direction of ground water movement, suggests the influence of inflow from Las Posas and Santa Rosa Basins on the character of ground water of Pleasant Valley. The influence of inflow from Santa Rosa basin is particularly noticeable because of the relatively high percentage of magnesium found in the waters from that basin. Over-all studies of ground water in Ventura County indicate that waters derived from volcanic formations nearly always contain a high percentage of magnesium. This characteristic provides a convenient indicator with which to trace the movement of waters emanating from volcanic formations. The influence of runoff from the volcanic formations which form the southeastern border of the basin is indicated by analyses of well 2N/20W-33Q1. While the character of water extracted from this well is similar to that emanating from Santa Rosa Basin, hydrologic conditions are such that the hills forming the southeastern border of the basin are the only possible source for water extracted from this well.

Calleguas Creek System

Ground water basins within the Calleguas Creek System include Simi, East and West Las Posas, Conejo, Tierra Rejada, and Santa Rosa Basins.

Simi Basin. The principal water-bearing deposits in Simi Basin are Recent and Pleistocene alluvium. Underlying and flanking the alluvium are semipermeable deposits which yield some water to wells. These include volcanics, the Sespe formation, the upper and lower Llajas formations, the Santa Susana-Martinez formation, and Cretaceous sandstones. In addition, considerable quantities of water are imported to the basin from Santa Barbara deposits found in Tapo Canyon which is within the drainage area tributary to Simi Basin. The quality of the waters derived from each of these deposits, as indicated by analyses of samples collected in the summer of 1952, is suggested by the data presented in the following tabulation.

Source and chemical property	Maximum	Minimum	Average	Median
Quaternary Alluvium (18 analyses)				
Total dissolved solids, ppm	2,122	638	1,500	1,587
Boron, ppm	1.5	0.2	0.6	0.6
Effective salinity, epm	17.7	4.2	11.8	12.6
Cretaceous Deposits (3 analyses)				
Total dissolved solids, ppm	1,762	425	1,272	
Boron, ppm	0.3	<0.1	0.1	
Effective salinity, epm	20.1	5.6	13.2	
Sespe Formation (5 analyses)				
Total dissolved solids, ppm	1,061	340	737	670
Boron, ppm	0.1	0.0	<0.1	<0.1
Effective salinity, epm	8.6	2.2	5.4	5.2
Upper Llajas Formation (2 analyses)				
Total dissolved solids, ppm	1,548	797	--	--
Boron, ppm	0.3	0.0	--	--
Effective salinity, epm	16.7	6.9	--	--

Several water producing formations have been developed to only a limited extent. In four of these formations a single analysis is available, which will serve to indicate the quality to be expected. These analyses are presented in the following tabulation.

Formation	Total dissolved solids ppm	Boron ppm	Effective salinity, epm
Volcanic	625	<0.1	5.2
Martinez	747	0.1	7.1
Lower Llajas	1,750	0.9	19.4
Santa Barbara	600	<0.1	5.2

Eighty-nine additional ground water analyses from 55 wells in Simi Basin covering the period of 1953 to 1958 are presented in Table H-10 of Appendix H. These analyses show no general changes in quality or character in the ground waters from the Quaternary alluvium. However, seven analyses of waters from the Cretaceous deposits are available in Table H-10 and show better quality water than indicated by the average in the above summary.

Data in the above summary indicate that, while the quality of the waters derived from the alluvium ranges from Class 1 to Class 3 for irrigation use, the average and median values are of such magnitude that many of the waters may be unsuitable and should be used with caution on the more sensitive crops. Where possible, a larger than normal quantity should be applied to insure that soil solution concentrations do not become so great as to permit appreciable crop damage. The character of waters derived from the alluvium ranges from calcium sulfate to calcium-sodium sulfate, although a few analyses show magnesium as the second most important cation.

Studies relating the quality of the waters derived from the alluvium with respect to geographic location indicate a gradual increase in the salt content in the ground water from east to west. In general, the waters of poorest quality are found in the western portion of the basin, particularly in Section 8, T. 2 N., R. 18 W. As may be perceived from inspection of Plate 2, the general direction of ground water movement is from east to west, suggesting that the indicated deterioration is caused by concentration through re-use. Under present conditions of deficient water supply in this valley it is anticipated that this condition will not only continue but become increasingly severe.

The situation is further complicated by the existence of a poor quality semiperched ground water body in a portion of the westerly end of the basin. This water body serves to prevent dispersion of the salts in irrigation return waters. While this protects immediately underlying water, it results in serious degradation at points where the semiperched water commingles with the principal ground water body in the alluvium. This effect is demonstrated by the very poor quality water found in Section 8, T. 2 N., R. 18 W, beyond the westerly extent of the semiperched body. The existence of the poor quality semiperched water indicates the necessity of careful well construction and abandonment within the areal extent of the semiperched water body to prevent further deterioration of the principal ground water body from this source.

There is a paucity of data relative to the quality of the waters derived from the older deposits which bound and underlie the alluvium. However, waters derived from the Sespe formation appear to be Class 1 and Class 2 waters and suitable for both domestic and irrigation use, at least within the limited depths from which water is extracted in this basin. The quality of water derived from the other formations ranges from Class 1 to Class 3 and varies widely in character between deposits. The effect of these variations is reflected in the seemingly erratic quality and character of water found in the eastern part of the basin. In this region many of the wells produce from both the alluvium and an underlying formation and it is believed that quality and character fluctuations reflect the influence of water from deeper formations.

In the latter part of the recent period of subnormal water supply, the water level in Simi Basin was lowered to such an extent that the alluvium was dewatered in part of the eastern area. For this reason, samples collected during this time may be considered representative of waters derived from deeper deposits. It appears that water pumped from Cretaceous deposits is of good quality, at least within the limited depths of wells in this valley, while the water derived from the Santa Susana-Martinez formation is variable in quality ranging from poor to good in quality.

There is evidence of dissolved hydrogen sulfide in waters extracted from six wells located in the southern and eastern parts of the basin. These wells, Nos. 2N/17W-9F1 and 9Q3, and 2N/18W-14D2, 15F1, 15J5, and 16G2, derive all or part of their supply from older deposits. The presence of the gas, together with lower than average sulfate content and higher than average bicarbonate concentrations, suggests the occurrence of sulfate reduction by bacteria of genus Desulfovibrio. The existence of this gas in concentrations normally found in water subjected to sulfate reduction has little effect upon its suitability for agriculture use, although it will impart a disagreeable taste and odor to the water.

The limited data available indicate that ground waters derived from the Santa Barbara formation in Tapo Canyon are of good quality and suitable for prevalent beneficial uses.

East and West Las Posas Basins. Ground water extracted for beneficial use in the Las Posas Basins is derived primarily from the Fox Canyon aquifer of the San Pedro formation. However, some water is also pumped from the Epworth gravels, an upper member of the San Pedro formation found primarily in the northern part of the basin; from the Grimes Canyon aquifer, which underlies the Fox Canyon formation; and from the Quaternary alluvium. In addition minor amounts of water are produced from scattered lenses of sand and gravel distributed throughout the upper San Pedro formation.

A summary of the information obtained from a series of samples collected from wells in this basin during the summer of 1952 follows.

Source and chemical property	Maximum	Minimum	Average	Median
Quaternary Alluvium (8 analyses)				
Total dissolved solids, ppm	4927	755	2700	2772
Boron, ppm	2.4	0.1	1.3	1.9
Effective salinity, epm	50.9	6.0	25.4	25.2
Upper San Pedro Formation (10 analyses)				
Total dissolved solids, ppm	2530	225	1127	1202
Boron, ppm	1.3	0.1	0.4	0.4
Effective salinity, epm	24.9	1.2	10.1	11.5
Epworth Gravels (4 analyses)				
Total dissolved solids, ppm	255	206	228	--
Boron, ppm	0.1	0.1	0.1	--
Effective salinity, epm	1.4	1.0	1.2	--
Fox Canyon Aquifer (7 analyses)				
Total dissolved solids, ppm	1226	265	604	547
Boron, ppm	0.5	0.0	0.3	0.2
Effective salinity, epm	10.9	1.5	4.9	4.3
Grimes Canyon Aquifer (3 analyses)				
Total dissolved solids, ppm	1030	602	757	--
Boron, ppm	0.5	0.1	0.3	--
Effective salinity, epm	8.5	5.6	6.7	--

It is apparent from these data that the quality of the water produced from the Fox Canyon and Grimes Canyon aquifers and the Epworth Gravels is generally good, with average and median values well below criteria established for both domestic and irrigation use. Conversely, water derived from the Quaternary alluvium appears to be of poor quality and generally unsuitable for most beneficial uses. The quality of water produced from the upper San Pedro formation ranges from Class 1 to Class 3 for irrigation use. It is noted that many of the wells, particularly those penetrating only to shallow depths in the formation, yield waters of good quality.

Thirty-seven analyses of ground water from 30 wells in the Los Posas Basins are available for the period of 1953 to 1958. These analyses show no significant changes in general quality or character of the ground waters. However, it is notable that 10 of 14 analyses of waters from the San Pedro formation showed total dissolved solids content of less than 700 ppm during this period.

The mineral character of water derived from the Epworth Gravels is generally calcium-sodium bicarbonate while the character of water produced from the Fox Canyon aquifer ranges from calcium bicarbonate in East Las Posas Basin to calcium-sodium bicarbonate-sulfate in West Las Posas Basin. It is noted however, that a majority of wells yield waters of calcium bicarbonate character. Waters derived from the Grimes Canyon aquifer range in character from calcium-sodium sulfate to sodium bicarbonate, while waters derived from the undifferentiated San Pedro formations vary rather widely in character from calcium sulfate to calcium-sodium bicarbonate. Waters derived from the alluvium are generally calcium sulfate to calcium-sodium or calcium-magnesium sulfate in character. With minor exceptions, the bicarbonate anion character indicated above is peculiar to basins in the Calleguas Creek system, with the result that the influence of ground waters moving from the Las Posas Basins on the character of the ground waters of the northwestern portion of Pleasant

Valley Basin is readily discernable.

Studies relating the quality of waters from each of the aquifers or formations on an areal basis revealed little significant information. However, the wide difference in quality between the waters of the Quaternary alluvium and those derived from deeper formations indicates the necessity for the promulgation and utilization of adequate standards for well construction and abandonment.

Santa Rosa Basin. Ground water of Santa Rosa Basin is derived from three formations: Recent alluvium, Miocene volcanics, and the San Pedro formation. The latter formation can be divided into two parts, one of which is probably the equivalent of the Fox Canyon aquifer, which may be traced in the western portion of the valley. The other part is generally silty and is found throughout the central and eastern portion of the valley. The silty deposits include lenses of sand and gravel which contain extractable ground water.

Data tabulated below from a series of samples collected during the summer of 1952 indicate the general quality of the waters derived from each of the three water-bearing formations.

Source and chemical property	Maximum	Minimum	Average	Median
San Pedro Formation (7 analyses)				
Total dissolved solids, ppm	842	552	644	608
Boron, ppm	0.4	0.1	0.2	0.1
Effective salinity, epm	5.8	3.2	4.7	4.3
Volcanic Formation (4 analyses)				
Total dissolved solids, ppm	658	528	583	--
Boron, ppm	0.6	0.1	0.3	--
Effective salinity, epm	7.7	3.8	5.1	--

Source and chemical property	Maximum	Minimum	Average	Median
Recent Alluvium (1 analysis)				
Total dissolved solids, ppm	719	--	--	--
Boron, ppm	0.6	--	--	--
Effective salinity, epm	6.2	--	--	--

The data indicate that ground waters of Santa Rosa Basin are of good quality and suitable for prevalent beneficial uses. The most important cation in nearly all of the ground water of this valley is magnesium, and in nearly all instances the predominant anion is bicarbonate.

Twenty-two additional analyses of ground water from 12 wells within this basin are available covering the period 1953 to 1958 and are presented in Table H-13 of Appendix H. These analyses show no significant changes in water quality or character.

Tierra Rejada Basin. Ground water in the Tierra Rejada Basin is derived almost entirely from highly fractured volcanic rock. Available analyses indicate water produced from these rocks to be of excellent quality and suitable for prevalent beneficial uses. The maximum total dissolved solids concentration is less than 800 parts per million, effective salinities are generally less than 5 epm, and the boron content is less than 0.4 ppm. The character of ground water is magnesium-calcium bicarbonate, illustrating the high magnesium percentage typical of water derived from volcanic formations in Ventura County.

Conejo Basin. Ground water in Conejo Basin is principally derived from fissures and weathered zones in the volcanic rock, although water is also produced from older sedimentary formations, such as the Modelo and Topanga sandstones and shales. The alluvium in this basin is very thin and not considered significant as a source of ground water.

The quality of waters extracted from the volcanic, Topanga, and Modelo formations is presented in the following summary, based upon samples collected in June and July, 1952.

Source and chemical property	Maximum	Minimum	Average	Median
Volcanic Formation (11 analyses)				
Total dissolved solids, ppm	1118	353	631	511
Boron, ppm	0.2	0.0	0.1	0.1
Effective salinity, epm	10.9	2.0	5.1	4.3
Modelo Formation (4 analyses)				
Total dissolved solids, ppm	2064	726	1344	--
Boron, ppm	0.2	0.1	0.1	---
Effective salinity, epm	21.1	5.9	13.2	---
Topanga Formation (2 analyses)				
Total dissolved solids, ppm	1355	404	--	--
Boron, ppm	0.1	0.0	--	--
Effective salinity, epm	12.0	2.8	--	--

The data indicate that, in general, water extracted from the volcanic formation is of good quality and suitable for the prevalent beneficial uses. The quality of waters produced from the other formations appears to vary from Class 1 to Class 3 for irrigation purposes, but data available are too meager for accurate evaluation.

Seventy-one analyses of ground water from 40 wells within Conejo Basin covering the period 1953 to 1958 are presented in Table H-15 of Appendix H. These analyses show large variations in quality of waters extracted from each of the producing formations and no significant changes in character or quality.

The character of ground water produced from the volcanic formation generally ranges from magnesium-calcium bicarbonate to calcium-magnesium bicarbonate. The character of waters derived from the Modelo and Topanga formations varies from calcium-magnesium bicarbonate to magnesium-calcium sulfate, with the poorer quality waters usually being calcium sulfate in character.

In this basin the preponderance of poorer quality water is found in the vicinity of Section 9, T. 1 N., R. 19 W., where water is derived from the Topanga and Modelo formations.

Malibu Creek System

Information concerning ground water quality in this drainage system is limited to analyses of samples collected from a few of the wells drilled in Hidden and Russell Valleys. The scarcity of available data permits only a general evaluation of the quality and character of the ground waters.

Ground waters of Hidden Valley are derived primarily from fissures in volcanic rocks and from overlying alluvium. The quality of ground water appears to be good, with total dissolved solids concentrations less than 800 ppm, effective salinity values less than 6 epm, and boron concentrations less than 0.5 ppm. The character usually varies from calcium bicarbonate to calcium-magnesium bicarbonate.

Ground waters of Russell Valley are produced from alluvium, volcanic, Topanga, and Modelo formations. These waters range in quality from Class 1 to Class 3 for irrigation use, with total dissolved solids concentrations ranging from about 400 to 2800 ppm, and effective salinity values ranging from about 2.5 to over 28 epm. Insufficient data are available to enable differentiation of the quality of water from different deposits or to determine sources of poor quality waters. The character of ground water in this valley varies from sodium bicarbonate to calcium-magnesium sulfate.

Quality of Prospective Imported Supplemental Supplies

On the basis of presently planned future water supply development in California, there are two possible sources from which a supplemental water supply could be imported into Ventura County. These sources are the Colorado River, from which water could be imported through facilities of The Metropolitan Water District of Southern California, and surplus waters from northern California to be conveyed in the facilities of the authorized Feather River Project of the State of California.

Colorado River Water

Either natural or softened Colorado River water could be imported into Ventura County, depending on the location of the connection made to the Metropolitan Water District System. The mineral quality of the treated and natural waters is indicated by the analyses presented in Table 11, entitled "Mineral Analyses of Natural and Softened Colorado River Water". These data indicate that the natural waters have sodium-calcium sulfate character similar to that of many waters of Ventura County, particularly in the Santa Clara River valley, and are of better quality than most of the ground water in Ventura County. The softened water is sodium sulfate in character, with a total dissolved solids concentration nearly the same as that for the unsoftened water. The softened water has a high sodium percentage and would therefore be less desirable for prolonged irrigation of certain crops.

TABLE 11

MINERAL ANALYSES OF NATURAL AND SOFTENED COLORADO RIVER WATER[a]

Type	$EC \times 10^6$ at 25°C	pH	Mineral constituents in parts per million											Total dissolved solids ppm	Effective Salinity epm	Percent sodium
			Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	B	F			
Natural	1,260	8.4	96	35	121	5	1	146	364	109	1.1	0.16	0.4	815	8.28	40
Softened	1,335	8.5	36	14	225	5	4	126	364	114	0.8	0.16	0.4	836	10.28	76

a. Data obtained from 19th Annual Report Metropolitan Water District of Southern California. Analyses represent average for period July 1, 1956 to June 30, 1957.

San Joaquin Valley - Southern California Aqueduct System

The San Joaquin Valley - Southern California Aqueduct System authorized by the Legislature in 1951 provides, among other things, for the export of surplus waters available in the Sacramento-San Joaquin Delta to areas of deficiency in southern California. Water will be transported to the San Luis Reservoir for storage and regulation prior to delivery to the San Joaquin Valley service area and to southern California.

A study of the mineral quality of water which may be expected under the most adverse conditions has been made. In this study, an evaluation of the effect of the San Luis Reservoir water to be delivered south has been made. These studies reflected the effect of evaporation losses in the reservoir but canal losses were assumed to be negligible. As a result of these detailed studies, it was found that the water to be delivered to southern California under the most adverse conditions would not exceed a mean monthly value of 300 ppm total dissolved solids, 40 ppm chlorides, and 150 ppm total hardness. The mean annual value of water diverted for use in southern California based on the mean of an historic eight-year drought period is 200 ppm total dissolved solids, 30 ppm chloride, and 100 ppm total hardness. The mineral character of the water will be calcium bicarbonate with each constituent less than 100 ppm. Detailed information on recommended limits for other constituents is presented in Chapter III of Bulletin No. 3, "The California Water Plan", State Department of Water Resources, May, 1957.

On the basis of these studies, it is apparent that northern California surplus waters planned for export to southern California will be of better mineral quality than any of the existing water supplies in Ventura County The cation character will be calcium similar to most of the waters in Ventura County. The anion character, however, is bicarbonate as opposed to sulfate which is predominate in most of the water supplies in Ventura County. This difference should not cause or create any problems or difficulties upon mixing.

Quality of Tidal Waters

Tidal waters in Ventura County consist almost entirely of saline waters from the Pacific Ocean. The mineral quality of these waters is typified by the following analysis of a sample collected from the ocean near the intersection of West 5th Street and Beach Road, Ventura County, in May, 1953.

Cations	epm	ppm	Anions	epm	ppm
Ca	20.3	406	HCO_3	2.4	148
Mg	108.5	1,318	SO_4	55.3	2,650
Na	466.0	10,700	Cl	535.0	19,000
K	10.5	408	NO_3	0.2	12
			Boron	--	3.8

Total dissolved solids ppm 34,766

The mineral quality of tidal waters is affected by high flood flows in the Ventura and Santa Clara Rivers and Calleguas Creek. The effect of such flows, however, is temporary and limited in extent.

Tidal waters receive oil brine wastes near the mouth of the Ventura River, cannery wastes in Hueneme Harbor and combined industrial wastes carried in the industrial outfall at Oxnard. The volume of these industrial wastes is such that their effect upon the mineral quality of tidal waters is negligible.

Sanitary wastes are discharged to the ocean, via ocean outfalls, by the cities of Ventura and Oxnard, the Port Hueneme Sanitary District, and the U. S. Naval Construction Battalion Center at Port Hueneme. Sanitary wastes from the U. S. Naval Air Missile Test Center are discharged into tidal waters of Mugu Lagoon. The effect of these discharges on the mineral quality of tidal waters is insignificant but their effect upon sanitary quality is important. The Los Angeles Regional Water Pollution Control Board has adopted waste discharge requirements for all discharges except those by the naval installations. At this time the discharges to tidal waters do not appear to have adversely affected beneficial uses. However, as the population grows and larger areas are sewered, the discharges of wastes to tidal waters will increase, with attendant pollution problems.

Summary

During periods of high flow, the quality of waters in the surface streams of Ventura County is generally suitable for nearly all beneficial uses. However, during periods of relatively low flow, certain of these streams contain sufficient concentrations of total dissolved solids, or of a particular constituent, notably boron, to render them marginal or unsuitable for some uses. Streams which contain high concentrations of total dissolved solids include Canada Larga, Hopper Creek, Santa Clara River near Blue Cut, Arroyo Simi, and Tapo Creek. Streams which contain high concentrations of boron during low flow periods include Matilija, Sespe, and Piru Creeks.

The quality of ground water derived from Recent and Pleistocene deposits in Ventura County ranges from suitable to unsuitable, with the preponderance of the waters becoming of marginal quality for prevailing beneficial uses during periods of below normal water supply. For domestic, municipal, and industrial uses the ground waters are, almost without exception, "very hard". Waters of good mineral quality are generally produced from the Miocene volcanics in Conejo, Tierra Rejada and Santa Rosa Basins. Waters derived from normally semipermeable Tertiary deposits, which are capable of yielding only minor quantities of water, are generally of very poor quality and contain high concentrations of calcium and sulfate.

In areas where antecedent data are available, it is indicated that the quality of ground water has deteriorated measurably during the past 20 years. In nearly all of the 17 ground water basins in Ventura County there are areas of good quality water and areas of very poor quality water. There are notable areas of good quality water in Conejo, Los Posas, Ojai, Santa Rosa, and Tierra Rejada Basins. Specific areas where the quality of ground water is such that it is essentially unusable include the Recent alluvial deposits of the Lower Ventura River Basin and the semiperched ground water body of the Oxnard Plain Basin. Poor quality waters in other basins range from marginal to completely unsuitable. The extent of such poor quality water, however, is usually confined to localized areas.

CHAPTER VI. WATER QUALITY PROBLEMS

Deleterious effects on the quality of water are generally manifested as a consequence of surface and ground water deficiencies, lack of drainage, and improper disposal of wastes. Problems of water quality are common to nearly all other water problems. In order to provide for the maximum beneficial uses of the available water supplies, thus minimizing the necessity for the importation of costly supplies from other areas of the state, it is necessary that every practicable effort to maintain the existing quality of locally available waters be made.

Man's development has characteristically exerted an adverse effect upon the native quality of waters. Most uses of water by man, for irrigation, for instance, as well as for the disposal of sewage and industrial wastes, add pollutants to the waters with resultant deterioration in quality. Hence, as these uses increase, the necessity for adequate treatment and disposal of waste waters becomes increasingly imperative if the quality is to be maintained at satisfactory levels for the higher beneficial uses. This is particularly true in areas of deficiency, for the quality of imported waters must be maintained at sufficiently high levels to permit necessary re-use.

In numerous coastal ground water basins normally containing fresh water, overdraft conditions have resulted in the intrusion of sea water into the aquifers, the natural underground formations which store and transmit water. This has been caused by reversal of the natural seaward ground water gradient due to excess of pumped extractions over the natural ground water replenishment. The restoration of basins which have been lost to sea-water intrusion, or to any other type of impairment, will be a long process - if possible at all. Saline water must be physically removed, either by pumping or by maintenance of favorable gradients for an extended period.

Potential sources of quality degradation from deep connate brines and adverse salt balance also exist. Connate brines are ocean waters that were trapped in ground water basins which were inundated in past geologic periods.

Salt balance refers to that desirable condition wherein the amount of soluble salts entering a basin is balanced by the amount of salts leaving a basin, either by natural disposal, sewage outflow, or by pumping for export. The extent of adverse salt balance in ground water basins is not known at the present time, due to the lack of long-term records of mineral analyses.

In the process of drilling and altering wells, improper methods are being employed in many instances. Such practices may result in an inadequate seal between strata of usable and unusable waters, thus allowing interchange, and degradation or pollution of ground water. Lack of adequate surface seals may permit inflow of inferior surface waters with consequent damage to ground water quality. Likewise, failure to seal abandoned wells, or improper sealing when attempted, may result in pollution of ground water. These problems are rapidly becoming more serious as older well casings deteriorate and are abandoned and the drilling of new wells continues at an unprecedented rate.

Disastrous results may be caused by disposal of inadequately treated sewage and industrial wastes to streams and to ground water basins. Waste disposal problems may arise not only from liquid-borne wastes but also from disposal of garbage, refuse, and industrial wastes. Every effort must be made to maintain the quality of available waters by appropriate planning for, and control of, the treatment and disposal of wastes, giving consideration to the effect of such waste disposal upon future planned uses as well as the present uses of the receiving waters. To this end the Legislature in 1949 created the State and 9 Regional Water Pollution Control Boards to exercise authority over the disposal of wastes.

Problems of water quality may be broadly classified as resulting from (1) degradation from natural causes, or (2) impairment as the result of cultural development. This chapter discusses the various sources of impairment and degradation which have altered or may, in the future, affect the mineral quality of surface and ground waters of Ventura County.

Degradation from Natural Sources

Degradation from natural sources results in the deterioration of surface and ground water supplies through the introduction and commingling of native waters of poor quality. In Ventura County, such poor quality waters usually exist in marine sedimentary deposits of Tertiary age or older. Because of the tightness of the older soils and formations, these deposits have not been entirely leached of the more soluble salts. In some instances, these waters may be connate waters which have been released by changes in hydrologic or geologic conditions.

Surface and ground waters in Ventura County have been subjected to degradation by natural sources in many instances. Boron concentration in the low flow of several streams is above the safe limit for irrigation use on highly sensitive crops. Several of the smaller creeks and streams in Ventura County discharge waters containing high salt concentrations, particularly during periods of low flow.

Basins where ground water has been degraded by poor quality waters from natural sources include Upper Ojai, Piru, Fillmore, and Santa Paula Basins. There are three wells in the eastern end of Upper Ojai Basin which have been degraded by high chloride waters. In Piru Basin, in the vicinity of the mouth of Piru Creek, ground waters occur which contain high concentrations of boron. To the south of Piru, Fillmore, and Santa Paula Basins, there are wells which apparently have been degraded by ground waters moving from the older formations bounding these basins. In addition, it seems probable that some degradation of ground waters in nonpressure areas has occurred as a result of deep percolation of poor quality waters near the mouths of the numerous small streams.

Impairment as a Result of Cultural Development

In the normal processes of day-to-day living in any developed area, wastes which may have a degrading effect on the quality of surface and ground waters are produced. These wastes include irrigation return water, effluents from industrial operations, sewage, and miscellaneous wastes produced by the population inhabiting the area. Continued pumpage and utilization of water from ground water basins may result in adverse salt balance. Intrusion of saline ocean water may occur in aquifers outcropping under the sea if piezometric levels are depressed below sea level for protracted periods.

Irrigation Return Water

Evaporation and transpiration consume much of the water applied to irrigated crops with little or no effect on the quantity of dissolved minerals originally contained in the water. As a result, the portion of applied water which percolates below the root zone contains a higher concentration of dissolved minerals than the water from which it was derived. It has been estimated that the salt concentration in this residual water ranges from two to over eight times that in the water originally applied. This effect prevails despite the precipitation of certain salts, as described in Appendix F, "Evaluating the Quality of Irrigation Waters in Ventura County".

In Ventura County, where large land areas are devoted to irrigated agriculture, the percolation and commingling of irrigation return water with underlying ground water supplies can result in appreciable degradation of the over-all quality of the ground water. Derivation of the magnitude of such degradation involves determination and analysis of a large number of variables. Intensive studies leading to definition and solution of the intricate chemical relationships involved are presently being accomplished by the Department of Water Resources. The over-all effect of the numerous known or suspected sources of degradation are described by using the concept of salt balance, as discussed later in this chapter.

In basins where free ground water table conditions prevail, such as Piru, Fillmore, and Ojai Basins, irrigation return water percolates directly to, and commingles with, the underlying ground water. Degradation attributable to this source is, therefore, fairly evenly distributed over the basin. Its effect is usually recognizable as a gradual increase in the salt concentrations of ground waters as they move downstream under the prevailing hydraulic gradient.

In areas where semiperched bodies of water occur, as on the Oxnard Plain and in Pleasant Valley, Simi, and Las Posas Basins, irrigation return water percolates to a semiperched water zone and remains as a body of poor quality water which may affect underlying aquifers containing waters of better quality. Degradation of good quality water may occur by slow percolation through tight materials underlying the semiperched zone, movement around discontinuous clay lenses which support the semiperched zone, and/or interconnection of aquifers through broken well casings, improperly constructed or abandoned wells, or gravel-packed wells.

Ground water basins in Ventura County wherein degradation is considered to have occurred as the result of the downward migration of irrigation return water include Oxnard Plain, Santa Paula, Mound, Simi, and Conejo Basins. In Santa Paula Basin three wells yield water which may have been degraded by poor quality semiperched water migrating to the principal aquifer, apparently through casing leaks in the wells.

In the Oxnard aquifer of the Oxnard Plain Basin, ground waters between the City of Oxnard and the Forebay Basin, and on the periphery of the Forebay Basin, are generally inferior in quality to those waters found throughout the balance of the aquifer. It appears that this inferior quality may be due to the downward movement of semiperched water through the clay cap. Interconnection of aquifers by wells improperly constructed or abandoned may also contribute to the degradation of the water in the Oxnard aquifer.

Ground waters in the alluvium of the western part of Simi Valley appear to have been degraded by semiperched waters moving downstream from a limited pressure area which exists in this basin. It also seems possible that poorly constructed or abandoned wells have allowed ingress of poor quality semiperched water at other points in the pressure portion of this basin. Some deterioration from irrigation return water may also have occurred in the older Topanga and Modelo formations which occur in Conejo Basin.

From the foregoing discussion it is apparent that wells improperly constructed or abandoned and wells with leaky casings are providing a convenient route through which semiperched waters may migrate to and deteriorate the mineral quality of important ground water aquifers in Ventura County. It appears that appropriate action should be taken to establish standards for the construction and abandonment of wells in areas where interconnection of aquifers may result in degradation of ground waters.

Sewage

Sewage is defined in the Water Code as "any and all waste substance, liquid or solid, associated with human habitation, or which contains or may be contaminated with human or animal excreta or excrement, offal, or any feculent matter". The organic increment normally associated with sewage can be readily reduced or removed by treatment. However, the contribution of dissolved mineral salts resulting from the utilization of water for domestic purposes is not removed by ordinary treatment processes. According to Publication No. 9 of the California State Water Pollution Control Board, entitled "Waste Water Reclamation and Utilization", the increment of total dissolved solids contributed to domestic sewage will, on the average, range from 100 to 300 ppm. In areas where sewage treatment and disposal facilities result in planned or incidental recharge to ground water, some deterioration in ground water quality will undoubtedly occur.

The principal sewage treatment plants in Ventura County are listed in Table 12, entitled "Sanitary Sewage Treatment Plants, Ventura County", together with pertinent information concerning plant facilities, method and volume of discharge, and effect on receiving waters. The locations of the various plants are delineated on Plate 12, entitled "Oil Fields and Waste Discharge Locations". Mineral and sanitary analyses of the plant effluents are presented in Table D3 of Appendix D.

The Los Angeles Regional Water Pollution Control Board has prescribed waste discharge requirements for all sewage treatment plants except the City of Ventura and the United States naval installations. In all cases where discharges are to land the Board has also prescribed ground water monitoring programs to determine the effects of the discharges on receiving waters.

TABLE 12

SANITARY SEWAGE TREATMENT PLANTS,
VENTURA COUNTY

Plant	Type of Waste	Population served in 1957	Discharge: Million gallons Per day	Discharge: Acre-feet per year	Treatment	Effluent disposed to	Effect of discharge on Mineral quality of Receiving Waters
					VENTURA RIVER DRAINAGE SYSTEM		
City of Ojai	Domestic sewage and industrial wastes	4,060[a]	0.31[a]	350	Pre-chlorination, screening, primary sedimentation, trickling filtration with dosing tank, secondary sedimentation, sand filtration, sludge digestion and post chlorination.	Steward Creek to San Antonio Creek to Ventura River	Direct hydraulic continuity exists between surface and ground water table of Ojai Basin. Mineral concentration in ground water below discharge is higher, indicating a degradation as result of the discharge
City of Ventura	Domestic sewage and industrial wastes	25,180	2.30	2,580	Screening, primary sedimentation, sludge digestion and chlorination.	Pacific Ocean	None
					SANTA CLARA RIVER DRAINAGE SYSTEM		
City of Santa Paula	Domestic sewage and industrial wastes	12,189	1.0[b]	1,100	Comminution, primary and secondary clarification primary and secondary trickling filtration, chlorination, third stage clarification, and sludge digestion.	Open ditch to Santa Clara River. Some used for irrigation	Mineral concentration in ground water of Santa Paula Basin below discharge is higher than that in ground water above point of discharge. Indicates degradation as result of discharge.
Saticoy Sanitary District	Domestic sewage and industrial wastes	1,500	.15[b]	170	Primary sedimentation (septic tanks).	Percolation lagoons in Oxnard Forebay Basin	Direct hydraulic continuity exists between surface and ground water table. No discernable effects in 1957.
City of Oxnard	Domestic sewage and industrial wastes	31,000	3.60	4,040	Screening, primary clarification, aeration, secondary clarification, chlorination, sludge digestion.	Pacific Ocean	None

TABLE 12

SANITARY SEWAGE TREATMENT PLANTS, VENTURA COUNTY
(continued)

Plant	Type of waste	Population served in 1957	Discharge: Million gallons per day	Discharge: Acre-feet per year	Treatment	Effluent disposed to	Effect of discharge on mineral quality of receiving waters
				SANTA CLARA RIVER DRAINAGE SYSTEM (continued)			
Montalvo Municipal Improvement District	Domestic sewage and industrial waste	1,500[c]	0.115[b]	170	Trickling filtration (septic tank), exodation-percolation ponds.	Ponds adjacent to Salta Clara River	Direct hydraulic continuity exists between surface and ground water table. No discernable effects in 1957.
U. S. Naval Construction Battalion - Port Hueneme	Domestic sewage and industrial waste	--	0.79	880	Primary sedimentation	Pacific Ocean	None
Port Hueneme Sanitary District	Domestic sewage	6,900	0.70[b]	780	Screening, primary sedimentation, sludge digestion, chlorination	Pacific Ocean	None
Point Mugu Naval Station	Domestic sewage	--	0.13[e]	150	Primary sedimentation	Mugu Lagoon to Pacific Ocean	None
City of Fillmore	Domestic sewage and industrial waste	2,805	0.30[d]	340[d]	Comminution, primary and secondary clarification, trickling filtration, percolation ponds.	Percolation ponds adjacent to Santa Clara River	No apparent degradation to surface or ground waters.
				CALLEGUAS CREEK DRAINAGE SYSTEM			
Camarillo State Hospital	Domestic sewage	7,000	0.75[c]	840	Primary sedimentation, trickling filtration, secondary sedimentation, sludge digestion and chlorination.	Holding pond to Pleasant Valley Basin to irrigation or Calleguas Creek.	No apparent degradation to surface or ground waters.

a. Obtained from report to County of Ventura "Ventura County Waste Disposal Study" - May, 1958.
b. Estimate by discharging agency.
c. Estimate by Los Angeles Regional Water Pollution Control Board.
d. Based on servicing of 60% of population and .05 MGD industrial load.
e. 1954-55 data.

As stated, domestic use of water adds on the average between 100 and 300 ppm total dissolved solids. The estimated incremental quantities of salts, in sewage annually discharged in such a manner that it can percolate to economically important ground water bodies in the Ventura River, Santa Clara River, and Calleguas Creek systems, are presented in the following tabulation. In the instance of sewage treatment plants, discharge volumes based upon metered flows were used where available. In other areas, estimates were based upon the average increment, average sewage disposal of 70 gallons per capita per day and population estimates as obtained from a report to the County of Ventura entitled "Ventura County Waste Disposal Study".

Source of discharge	Estimated quantity of salts discharged tons per year: Minimum	Maximum
Ventura River System Above Foster Park		
Ojai Sewage Treatment Plant	50	145
Cesspools and septic tanks	45	135
TOTALS	95	280
Santa Clara River System Above Oxnard Plain Basin		
Santa Paula Sewage Treatment Plant	150	450
Saticoy Sanitary District Sewage Treatment Plant	25	70
Fillmore Sewage Treatment Plant	45	140
Cesspools and septic tanks	355	1065
TOTALS	575	1725
Calleguas Creek System		
Cesspools and septic tanks	135	400
TOTALS	135	400

It is apparent from the foregoing tabulation that, in the areas considered, discharges to cesspools and septic tanks constitute the principal metho of disposal of sewage. While the over-all effect of these disposals is certain to result in deterioration of ground water, it is considered that the individual effect of discharges to private disposal systems on the mineral quality of receiving waters is of minor significance. On the other hand, the concentration of effluent discharges from community sewage treatment plants may have a noticeable effect upon ground water in the vicinity of the discharge.

The only sewage treatment plants in Ventura County discharging large quantities of sewage effluent to streams or percolation ponds are the Cities of Fillmore, Ojai, and Santa Paula, the Saticoy Sanitary District, and the Camarillo State Hospital. The discharges of the Cities of Ojai and Santa Paula, the Saticoy Sanitary District, and the Camarillo State Hospital were investigated and memorandum reports were made to the Los Angeles Water Pollution Control Board (No. 4) in June and July, 1954. As of the date of survey, it did not appear that degradation of ground water had occurred as a result of these discharges. In the Santa Paula and Ojai Basins, however, recent mineral analyses of ground water indicate that mineral concentrations have increased in ground waters below the effluent disposal site. It is probable that the higher concentrations of dissolved salts are due, at least in part, to discharges from these plants.

A memorandum report was also made in March, 1955, to the Los Angeles Water Pollution Control Board (No. 4) concerning the proposed waste discharge from the City of Fillmore sewage treatment plant. The effects of this discharge on the receiving waters are not yet known.

Industrial Waste

The production, manufacture, or processing of many marketable goods results in the production of waste materials or solutions requiring disposal. In some instances, industries by means of reprocessing can evolve a marketable product from such wastes. In the majority of cases, however, disposal of the waste is made by the most convenient and economical means available, commensurate with public welfare.

The mineral quality of wastes may range from innocuous wastes containing little, if any, dissolved or water soluble salts to wastes containing acids, caustics, toxic substances or high concentrations of minerals. Where these latter wastes are disposed to land, especially in areas where movement to surface streams or percolation to economically important ground water bodies may occur, pollution or contamination may result. In areas such as Ventura County, where the quality of much of the water supply is marginal, the addition of such wastes may ultimately render the water supply unfit for domestic or irrigation use.

Industries in Ventura County which produce waste containing relatively high concentrations of dissolved minerals include the petroleum industry and citrus, walnut, and vegetable processing and packing plants. Other sources of degradants are the by-products of the regeneration of industrial and domestic water softeners,and salts leached from industrial and domestic wastes which have been deposited in dump sites. The methods of disposal and their effect on water supplies have been the subject of investigations and reports by the former Division of Water Resources and the Los Angeles Regional Water Pollution Control Board (No. 4). In the paragraphs to follow there is presented a summary of information found as a result of these surveys and such additional data as were gathered in the course of the investigations for this report.

Oil Industry. One of the major industries in Ventura County is the extraction of oil from subterranean formations. Coincident with this extraction, a waste water which usually contains high concentrations of dissolved minerals and small quantities of oil is obtained. Newly drilled oil wells generally have a low production of brines in relation to their oil production. However, as a well or a field grows older, the brine production generally increases and oil production decreases. According to figures obtained from the State of California, Division of Oil and Gas, oil production from the 15 oil fields of Ventura County during the period July 1, 1951, to June 30, 1952, exceeded 37 million barrels. Waste production for the same period was estimated to exceed eight million barrels.

In an investigation of oil waste disposal practices in Ventura County for the Los Angeles Regional Water Pollution Control Board, it was found that ultimate disposal of oil field waste waters could be made to the Pacific Ocean, to injection wells, or to sumps or stream channels. When properly controlled, the first two disposal practices cause no pollution of fresh or saline waters. The disposal of oil field waste waters to permeable stream channels or to unlined sumps can be a serious pollution hazard to both surface and ground water.

Statistical data respecting discharges are summarized for each of the oil fields in Ventura County in Table 13, entitled "Summary of Oil Waste Disposal Data, Ventura County". Disposal practices, areas of disposal, and effects on receiving waters are summarized in Table 14, entitled "Oil Waste Disposal Practices, Ventura County". Typical mineral analyses of oil brines are presented in Table 15, entitled "Typical Mineral Analyses of Oil Field Wastes, Ventura County". These latter data indicate the highly mineralized character of the waste.

In the report entitled "Ventura County Oil Waste Investigation", June, 1954, prepared for the Los Angeles Regional Water Pollution Control Board by the former Division of Water Resources, it was estimated that the brine disposed of annually contained approximately 27,400 tons of salt. It was concluded that the disposal of oil field waste waters in the South Mountain, Sespe, Bardsdale, Piru, Temescal, and Simi Oil Fields and the unconfined discharges and spill from sumps in portions of the Ventura Avenue, Ojai, and Santa Paula Oil Fields constituted a threat of pollution to ground waters in Ventura County.

Acting on the data and conclusions reached in these reports the Regional Board took immediate steps to correct discharge practices which were considered as a source of pollution or a threat of pollution. In virtually all cases improper waste disposal practices were voluntarily corrected by the industry. Wherever appropriate, waste discharge requirements have been prescribed by the Regional Board.

TABLE 13

SUMMARY OF OIL WASTE DISPOSAL DATA, VENTURA COUNTY[a]

Oil field	Number of sumps as of August 1952		Total area of active unlined sumps, in square feet	Number of unconfined discharges	Brine production for period July, 1951, to June, 1952, inclusive, in barrels[b]	Estimated salts in brine produced, in tons
	Total	Active				
Rincon	58	48	266,500	12	1,682,600	6,655
San Miguelito	14	9	21,500	4	270,600	1,139
Ventura Avenue	156	149	3,176,400	6	4,565,100	15,659
Ojai	64	33	131,000	8	37,100	75
Santa Paula	27	16	23,700	6	54,900	101
South Mountain	61	46	93,900	5	226,500	809
Sespe	3	3	1,600	7	53,600	58
Bardsdale	32	20	36,800	3	338,800	1,541
Piru	10	9	56,500	7	473,200	632
Temescal	9	7	12,900	4	176,700	219
Ramona	8	8	44,000	0	144,100	340
Simi	8	8	9,300	0	12,300	63
West Montalvo	1	1	8,800	0	18,400	102
Oxnard	16	15	58,600	1	30,600	50
Conejo	1	1	600	1	1,100	c
Totals	468	73	4,470,100	64	8,085,600	27,443

a. Data from First Progress Report on "Ventura County Oil Waste Investigation", May, 1952,(3) and "Ventura County Oil Waste Investigation", June, 1954.(4)

b. Equal to 42 gallons.

c. Less than 0.5 tons.

TABLE 14

OIL WASTE DISPOSAL PRACTICES, VENTURA COUNTY

Name of oil field	Waste material	Disposal practices	Drainage areas	Effects on receiving waters
Rincon	Oil, waste water, asphalt, and drilling mud	Discharge to small water courses, thence to ocean	Pacific Ocean	No threat of pollution if oil removal is complete
San Miguelito	Oil, waste water, asphalt, and drilling mud	Discharge to small water courses, thence to ocean	Diablo Canyon and Pacific Ocean	No threat of pollution if oil removal is complete
Ventura Avenue	Oil, waste water, asphalt, and drilling mud	Seepage sumps, unconfined discharges, and joint salt water disposal line	Sexton, Harmon, Hall, San Joaquin, and Lake Canyons, Diablo Creek, Ventura River, and Pacific Ocean	Ground water in lower Ventura River have been degraded beyond use since 1926
Ojai	Oil, waste water, asphalt, and drilling mud	Seepage sumps, injection, unconfined discharges, evaporation, and hauling	Weldon Canyon, Sisar, Santa Paula and San Antonio Creeks, and Ventura River	Threat of pollution to Sisar Creek
Santa Paula	Oil and waste water	Seepage sumps, and unconfined discharges (prior to 1953)	Anlauf, Timber, Wheeler, and Adams Canyons, and Santa Paula Creek	Possible source of pollution to surface and ground waters of Santa Paula Basin
South Mountain	Oil, waste water, asphalt, and drilling mud	Seepage sumps, unconfined discharges	Willard, Morgan Richardson, Fox and Coyote Canyons and Santa Clara River	No apparent threat of pollution
Sespe	Oil and waste water	Seepage sumps and unconfined discharges	Sespe and Tar Creeks and Pole Canyon	Direct discharges to Sespe Creek and seepage sumps are polluting the surface and ground waters of Sespe Creek and Santa Clara River Valleys

OIL WASTE DISPOSAL PRACTICES, VENTURA COUNTY
(continued)

Name of oil field	Waste materials	Disposal practices	Drainage areas	Effects on receiving waters
Bardsdale	Oil, waste water, asphalt and drilling mud	Seepage sumps, unconfined discharges, and flood injection	Grimes, Shiells and Calumet Canyons, and Santa Clara River	Threat of pollution to * ground water of Fillmore Basin adjacent to the mouth of Grimes Canyon
Piru	Oil, waste water, and drilling mud	Seepage sumps, unconfined discharges, flood injection (Tapo Canyon), and direct discharges to Piru Creek	Hopper, Torrey, North Tapo, Modelo, and Eureka Canyons, and Piru Creek	Threat of pollution to * Hopper Canyon Creek and to surface and ground waters of Piru Creek and Santa Clara River Valleys
Temescal	Oil, waste water, and drilling mud	Seepage sumps and unconfined discharges	Lime Canyon and Piru Creek	Threat of pollution to * surface and ground waters of Piru Creek and Santa Clara River Valleys
Ramona	Oil, waste water, and drilling mud	Seepage sumps and flood injection	Holser and San Martinez Grande Canyons	Source of pollution to * the ground waters of Santa Clara River Valley
Simi	Oil, waste water, and drilling mud	Seepage sumps	Brea and South Tapo Canyons	Source of pollution to useable ground water in Simi Basin
West Montalvo	Waste water	Seepage sumps	Ocean	None
Oxnard	Oil, asphalt, tar and waste water	Seepage sumps and unconfined discharges	Ocean	None
Conejo	Oil and waste water	Seepage sumps	Conejo Creek	None

* Data from "First Progress Report on Ventura County Oil Waste Investigation", May,1952,[3] and "Ventura County Oil Waste Investigation", June,1954[4].

TABLE 15

TYPICAL MINERAL ANALYSES OF OIL FIELD WASTES, VENTURA COUNTY [a]

Oil field	Location of sampling point S.B.B.&M.	Date sampled	ECx10^6 at 25o C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	B ppm	Total dissolved solids ppm
Rincon	3N/24W-17B	8-19-52	8197	10.7	7 / 0.35	2 / 0.16	2400 / 104	53 / 1.35	1245 / 41.5	400 / 6.56	1800 / 37.5	840 / 23.7	10 / 0.16	0.6	7420
San Miguelito	3N/24W-26J	8-20-52	34480	7.5	340 / 17.0	405 / 33.3	10000 / 435	120 / 3.08	0 / 0	3220 / 52.8	5 / 0.11	15150 / 427	9 / 0.15	45.6	28200
Ventura Avenue	3N/23W-21K	1-14-52	14700	7.6	53 / 2.64	33 / 2.71	3290 / 143.1	126 / 3.22	0 / 0	2170 / 35.6	1 / 0.02	4280 / 120.7	— / --	30	8910[b]
Ojai	3N/23W-4A	4-9-52	6494	7.1	64 / 3.19	13 / 1.04	2050 / 89.0	54 / 1.38	0 / 0	5330 / 87.4	6 / 0.13	250 / 7.05	0 / 0	6.2	5310
Santa Paula	4N/21W-20J	4-17-52	3571	7.2	98 / 4.89	88 / 7.22	800 / 34.8	16 / 0.41	0 / 0	2350 / 38.5	153 / 3.18	177 / 4.97	0 / 0	3.5	2730
South Mountain	3N/21W-22A	7-14-52	25600	7.2	3060 / 153	73 / 6.0	3500 / 152	29 / 0.74	0 / 0	180 / 2.96	25 / 0.51	11200 / 316	12 / 0.2	5.6	18866
Sespe	5N/19W-28L	5-9-52	9430	7.1	179 / 8.95	82 / 6.73	2500 / 109	29 / 0.74	0 / 0	4530 / 74.4	5 / 0.11	1600 / 45.1	15 / 0.25	17.8	6909
Bardsdale	3N/20W-12C	6-25-52	11490	7.6	222 / 11.1	56 / 4.60	3000 / 130	34 / 0.87	0 / 0	293 / 48.0	276 / 5.76	3300 / 93.1	12 / 0.20	4.0	8490
Piru	4N/18W-8E	5-19-52	7092	7.6	51 / 2.54	13 / 1.07	2500 / 108.7	28 / 0.73	0 / 0	5527 / 90.6	2 / 0.05	610 / 17.2	26 / 0.42	5.1	6106
Temescal	4N/18W-4R	5-21/52	7751	8.1	17 / 0.85	3 / 0.25	2900 / 126	43 / 1.10	94 / 3.12	7381 / 121	25 / 0.53	105 / 2.96	44 / 0.70	0.6	6884
Ramona	4N/18W-13K	5-23-52	16949	7.9	121 / 6.04	24 / 1.97	5000 / 218	49 / 1.26	0 / 0	3172 / 52.0	17 / 0.36	6250 / 176	81 / 1.31	42.1	14784
Simi	3N/17W-36L	7-17-52	37000	7.2	724 / 36.2	825 / 67.7	9600 / 407	62 / 1.59	0 / 0	407 / 6.68	7 / 0.14	17900 / 505	0 / 0	9.8	23930
Oxnard	1N/21W-6L	7-15-52	4670	5.2	51 / 2.54	57 / 4.69	960 / 41.7	39 / 0.99	0 / 0	66 / 1.08	140 / 2.91	1640 / 46.2	7 / 0.12	2.5	3290

a. Data from "First Progress Report on Ventura County Oil Waste Investigation", May, 1952(3), and "Ventura County Oil Waste Investigation, June 1954"(4).
b. Total dissolved solids by summation.

Citrus Packing Plants. In order to inhibit spoilage, citrus fruit is washed, cleaned, given fungicidal treatment, and final rinse prior to packing for shipment. Agents commonly used in this treatment are "Red Star Crystals", soap, borax, soda ash, sodium hypochlorite, and "Decco". These agents may be used alone or in combination.

Wastes from citrus packing plants consist of water mixed with the various chemical agents used to facilitate washing and fungicidal treatment. Discharges consist primarily of dumping of the final rinse tanks and occasional draining of washing tanks. Mineral analyses of various types of packing plant wastes are presented in Table 16, entitled "Mineral Analyses of Citrus Packing Plant Wastes". The data in this table reveal a considerable variation in the chemical composition of the different types of wastes. Total dissolved solids range from over 24,000 ppm for borax treatment to 2,700 ppm for "Decco" treatment. The pH ranges from 1.8 for "Decco" waste to over 10 for combinations of soap and "Red Star Crystals". It is noted that all of the wastes with the exception of that from the "Decco" treatment contain high concentrations of boron and a high percentage of sodium. Boron concentrations exceeding one part per million have an adverse effect on boron sensitive crops, and the effect of sodium degradation can assume widespread proportions. It is apparent that packing plant wastes have a serious potential effect upon the quality of ground water.

TABLE 16

MINERAL ANALYSES OF CITRUS PACKING PLANT WASTES[a]

(Constituents in parts per million)

	Type of waste				
	Decco	Soda ash	Borax	Soda ash and hypo-chlorite	Soap and Red Star Crystals
pH	1.8	9.6	9.06	8.9	10.1
Calcium	122.5	60.5	9	59	12.5
Magnesium	68	27.2	5	6.6	30
Sodium	138	3,670[b]	6,008	2,170	1,290
Potassium	5.2	26.3	0	21.6	36
Hydroxide	0	1,250	171	--	--
Carbonate	0	4,160	412	640	200
Bicarbonate	0	--	0	2,940	1,400
Chloride	1,846	110.0	101	790	44
Sulphate	505	846.0	884	368	870
Nitrate	1.0	2.8	Trace	4.0	--
Boron	0.9	5.6	4,582	328	5.5
Borax (B_4O_7)	--	--	16,450	--	--
Total solids	2,700	14,166	24,040	10,300	4,670
Total hardness	586	263	58	174	154
% Sodium	34	96	99.7	97	95

a From "Progress Report on Possible Ground Water Pollution from Waste Water Produced from Citrus Packing Plants in Ventura County California", August, 1951[17].

b Approximately 400 ppm of this sodium is contained in organic compounds such as soaps of the fatty acids.

Waste discharges from citrus packing plants were investigated and reported upon by the Los Angeles Regional Water Pollution Control Board (No. 4) in August, 1951. The results of that investigation are reported in the "Progress Report on Possible Ground Water Pollution from Waste Water Produced from the Citrus Packing Plants in Ventura County".[17] The following information is extracted from that report.

In 1951, there were 28 citrus packing plants in operation in Ventura County. Two of these plants discharged their waste to cesspools, 14 to nearby stream channels, and seven to community sewer systems with ultimate disposal to pond or stream. Five plants discharged waste into sewers with ultimate discharge to the Pacific Ocean. It was estimated that roughly 8 tons of boron, 1.4 tons of chloride, and 12.75 tons of sodium were annually disposed to land by citrus packing plants.

The report prepared by the Regional Water Pollution Control Board recommended an investigation to be undertaken by the citrus industry to develop safe and permanent means for the disposal of waste water produced from packing plants in Ventura County on an industry-wide basis. As a result of this report, the industry formed a Water Pollution Committee of the Ventura County Citrus Packing Association to investigate ways and means of reducing or eliminating deleterious materials from the waste discharges. The cooperation of the packing plants in this effort to protect water quality is demonstrated by the fact that five of seven plants formerly using boron processes changed to cleaning agents containing little or no boron.

Waste discharge and disposal practices for each packing plant whose waste may have an effect on the quality of water is presented in Table 17 entitled "Significant Industrial Waste Disposals, Ventura County - June 1954". Locations of the discharges are delineated on Plate 12.

TABLE 17

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			VENTURA RIVER DRAINAGE SYSTEM			
			Ojai Basin			
Citrus Processing		Ojai Orange Association	Waste water containing soda - ash and hypochlorite	--	Discharged to Ojai sewer system	See effects of disposal from Ojai sewage treatment plant located in 4N/23W-12F
Miscellaneous		Culligan Soft Water Service	High chloride water from regeneration of water softeners	--	Discharged to City of Ojai sewer system	See effects of disposal from Ojai sewage treatment plant located in 4N/23W-12F. Discharge, 96 tons of salts per year.
			Upper Ventura River Basin			
Dump Site						
1	4N/23W-16M	Ventura County Ojai Dump - Class II	Combustible and noncombustible rubbish and cull citrus material	--	Cut, fill, and cover operation	
			Lower Ventura River Basin			
Citrus Processing						
2	3N/23W-16C	Ventura Citrus Association	Waste water containing soda ash	--	Discharged to Ventura River	
Miscellaneous						
3	3N/23W-16P	Cardox Corporation	Sulfide scrubber liquor from CO_2 manufacturing processes	0.31	Discharged to settling and skimming basin, thence to Ventura River	Waste contains 10 lbs. of potassium permanganate, 0.5 lbs. oxalic acid, and 40 lbs. H_2SO_4 per day

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Lower Ventura River Basin (continued)			
Miscellaneous (continued)						
4	3N/23W-16P	Shell Chemical Corporation	Waste from ammonia manufacturing processes	2.1 laboratory waste, 1.0 regenerant, 90 cooling-tower blow-down water, and 15 boiler blow-down water	Laboratory waste discharged to septic tank, zeolite water softener waste to pipeline to ocean, solid waste hauled to approved disposal site, and cooling tower and boiler blowdown water discharged to Ventura River	
			Rincon Area			
Miscellaneous						
5	4N/24W-32A	Wason Hog Ranch	Garbage and hog manure	--	Garbage and hog manure used as fertilizer for walnut grove	Los Sauces Creek drainage area
6	4N/24W-33G&K	Hopkins Hog Ranch	Garbage and hog manure	--	Spreading and discing-under	Los Sauces Creek drainage area
			SANTA CLARA RIVER DRAINAGE SYSTEM			
			Piru Basin			
Citrus Processing						
7	4N/18W-20M	Piru Citrus Association	Waste water containing soap and "Red Star" crystals	--	Discharged to septic tanks and/or cesspools and leaching lines	
Dump Site						
8	4N/18W-29M	Ventura County Piru Dump - Class II	Combustible and noncombustible rubbish and cull citrus material	--	Cut, fill and cover operation	

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed: gal/min	Disposal practices	Remarks
			Fillmore Basin			
Citrus Processing						
9	3N/21W-12D	Teague-McKevett Association	Waste water containing soda ash	--	Discharged to drainage ditch	
10	4N/19W-30L	Ventura County Citrus Association	Waste water containing borax	--	Discharged to cesspool and/or septic tank and leaching lines	Source of boron pollution to Santa Clara River
11	4N/19W-30M	Fillmore Citrus Association No. 1	Waste water containing soda ash	--	Piped to Sespe Creek downstream of State Highway No. 126	
12	4N/19W-30M	Fillmore Citrus Association No. 2	Waste water containing soda ash	--	Piped to Sespe Creek downstream of State Highway No. 126	
13	4N/19W-30M	Fillmore Lemon Association	Waste water containing soda ash	--	Piped to Sespe Creek downstream of State Highway No. 126	
14	4N/20W-25B	Ventura County Orange and Lemon Association	Waste water containing soda ash	--	Discharged to cesspool and/or septic tank and leaching lines	
15	4N/20W-27Q	Rancho Sespe	Waste water containing soda ash	--	Discharged to cesspool and/or septic tank and leaching lines	
Dump Site						
16	4N/19W-31F	City of Fillmore Dump - Class II	Combustible and noncombustible rubbish and cull citrus material	--	Cut, fill, and cover operation	

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Santa Paula Basin			
Citrus Processing						
		Culbertson Lemon Association	Waste water containing soda ash	--	Discharged to Saticoy sewer system, thence to oxidation and percolation ponds	See effects of disposal from Saticoy sewage treatment plant located in 2N/22W-11A
		Mupu Citrus Association	Waste water containing tri-sodium phosphate and sodium hypochlorite	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A
		American Fruit Growers	Waste water containing soda ash and sodium hypochlorite	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A
		Santa Paula Citrus Fruit Association	Waste water containing soda ash	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A
		Santa Paula Orange Association	Waste water containing soda ash	--	Discharged to City of Santa Paula Sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A
		Briggs Lemon Association	Waste water containing soda ash and "Deoco"	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A
17	3N/21W-19C	Limoneira Fruit Growers	Waste water containing soda ash	--	Discharged to Santa Clara River or tributary system	

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Santa Paula Basin (continued)			
Walnut Packing						
		Santa Paula Walnut Association	Waste water containing spent sodium hypochlorite	--	Discharge to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A. Discharge, 1.5 tons of salt per year.
18	2N/22W-2J	Upton and Williams Incorporated	Waste water containing spent sodium hypochlorite	--	Percolation and discharge to roadside ditch	Discharge, 2.8 tons of salt per year
19	2N/22W-2J	Saticoy Walnut Growers Association	Waste water containing spent sodium hypochlorite	---	Discharged to ravine	Discharge, 4.2 tons of salt per year
Dump Site						
20	3N/21W-15G	City of Santa Paula Dump - Class II	Combustible and noncombustible rubbish and cull citrus material	--	Compaction on ground surface	
Miscellaneous						
		Culligan Soft Water Service	High chloride water from regeneration of water softeners	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A. Discharge, 108 tons of salts per year
		Master Craft Laundry	Waste water from laundry operations	--	Discharged to City of Santa Paula sewer system	See effects of disposal from City of Santa Paula sewage treatment plant located in 3N/21W-21A Discharge, 100 lbs. caustic potash, 2000 lbs. soap, 100 lbs. sodium metasilicate, and 20 gals. dry cleaner per month.

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Mound Basin			
Citrus Processing						
21	2N/22W-16G	Saticoy Lemon Association	Waste water containing soda ash	--	Discharged to Santa Clara River	
22	2N/22W-17P	Ventura County Orange and Lemon Association	Waste water containing soda ash and "Decco"	--	Discharged to open ditch	
23	2N/22W-17R	Ventura Pacific Company	Waste water containing soda ash and "Decco"	--	Discharged to drainage ditch, thence to Santa Clara River	
24	2N/23W-14B	Ventura County Citrus Association	Waste water containing soda ash and sodium hypochlorite	--	Discharged to Santa Clara River	
Dump Site						
25	2N/22W-11G	Ventura County Saticoy Dump - Class II	Combustible and non-combustible rubbish and cull citrus material	--	Citrus materials dumped into excavations and other materials deposited on ground surface	
26	2N/23W-23M	City of Ventura Dump - Class I	Combustible and non-combustible rubbish and oil field waste	--	Dumping and ponding	
			Oxnard Forebay Basin			
Vegetable Processing						
27	2N/22W-14C	California Vegetable Concentrates, Inc.	Waste water from washing vegetables	--	Discharged through pipeline and open ditch, to gravel pit in Santa Clara River Channel	
Miscellaneous						
28	2N/22W-22N	Vactron Corporation	Rinse water from copper and nickel plating operations	8.3	Discharged to seepage pit	Concentrated waste hauled to safe dump

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Oxnard Plain Basin			
Dump Site						
29	1N/22W-7L&M	Ventura County Oxnard Dump - Class I	Combustible and non-oombustible rubbish	--	Cut, fill and cover operation	
30	1N/22W-28J	City of Oxnard Dump Class I	Combustible and non-combustible rubbish and garbage	--	Compaction on ground surfaoe	
31	1N/23W-1L	Culligan Soft Water Service - El Rio	High ohloride water from regeneration of water softeners	--	Hauled to beach at end of West 5th Street	Disoharge, about 180 tons of salt per year
			Pleasant Valley Basin			
Citrus Processing						
32	2N/21W-36B	Camarillo Citrus Association	Waste water containing soda ash and "Decoo"	--	Discharged to Calleguas Creek	
Walnut Packing						
33	2N/21W-36B	Walnut Growers Association Ventura County	Waste water containing spent sodium hypochlorite	--	Ponding	Discharge, about 2.8 tons of salt per year
Dump Site						
34	2N/20W-29B	Ventura County Camarillo Dump -Class II	Industrial waste and oombustible and non-oombustible rubbish	--	Cut, fill and cover operation and dumping into ravine	This dump site was originally considered a Class I dump. However, dumping of liquid waste has subsequently been prohibited

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			CALLEGUAS CREEK DRAINAGE SYSTEM			
			Simi Valley Basin			
Citrus Processing						
35	2N/18W-1G	Tapo Citrus	Waste water containing soap and "Red Star" crystals	--	Discharged to leach lines	
Walnut Packing						
36	2N/18W-12H	Simi Valley Walnut Growers Association	Waste water containing spent sodium hypochlorite	--	Discharged to leach lines	Discharge, about 1 ton of salt per year. No apparent effect on surface or ground waters
Dump Site						
37	2N/18W-12J	Ventura County Santa Susana Dump - Class II	Combustible and non-combustible rubbish and garbage	--	Compaction on ground surface	
			Las Posas Basin			
Walnut Packing						
38	2N/19W-4L	Moor Park Walnut Growers Association	Waste water containing spent sodium hypochlorite	--	Discharged to seepage pond	
Dump Site						
39	2N/19W-4A&H	Ventura County Moorpark Dump - Class II	Combustible and non-combustible rubbish	--	Dumping into ravine	
40	2N/20W-8B	Ventura County Somis Dump - Class II	Combustible and non-combustible rubbish	--	Dumping into ravine	

SIGNIFICANT INDUSTRIAL WASTE DISPOSALS, VENTURA COUNTY - JUNE 1954
(continued)

Map number	Location (S.B.B.&M.)	Industry or source of waste	Waste material	Quantity of waste disposed gal/min	Disposal practices	Remarks
			Las Posas Basin (continued			
Miscellaneous						
41	2N/19W-9C	Paige Turkey Ranch	Wash water from cleaning and packing operations	35	Leach lines and seepage pits	
42	3N/20W-32H	Butchke and Company Ranch	Waste from hog feeding pens	--	Spreading and discing-under on adjacent farming property	
			Conejo Basin			
Dump Site						
43	1N/19W-14E	Ventura County Thousand Oaks Dump - Class II	Combustible and non-combustible rubbish	--	Dumping into ravine	

Water Softener Regeneration Wastes. As has been stated, the waters of Ventura County are generally very hard. Total hardness concentrations nearly always exceed 200 ppm and values exceeding 600 ppm are not uncommon. Hardness in water utilized for domestic and industrial purposes requires excessive quantities of soap and causes scaling of boilers and plumbing fixtures. Excessive cost and inconvenience have resulted in increased use of ion exchange type water softeners.

There are two general types of ion exchangers, cation exchangers and anion exchangers. The cation exchangers may be subdivided into hydrogen cycle exchangers and sodium cycle exchangers, while anion exchangers may be divided into weakly basic exchangers and strongly basic exchangers. Of these exchangers only the sodium cycle softener is extensively utilized, the other softeners having only limited industrial application at the present time. The sodium cycle softener removes calcium and magnesium ions from solution and replaces them with sodium ions. When the capacity of the exchange medium (commonly called zeolite) has been reached, it is regenerated by permitting the material to come in contact with a highly concentrated sodium chloride solution.

In general, the two regeneration systems in common usage are the central regeneration system and the privately-owned system. In the former, a commercial agency rents water softeners to domestic and commercial establishments. The exchange medium is periodically replaced with the used material which has been regenerated at a centrally-located plant. Privately-owned softeners are normally regenerated by the owner. Wastes from the regeneration process include the backwash used to remove silts and fines from the exchange material, the regeneration solution, and rinse water used to remove the regeneration solution from the exchange medium.

Typical mineral analyses of waste from both centrally-regenerated and privately-owned softeners are given in Table 18, entitled "Mineral Analyses of Water Softener Regeneration Wastes". These data indicate that the regeneration solution and the predominate portion of the rinse wastes contain extremely high concentrations of sodium, chloride, and total dissolved solids. Backwash waste water, however, appears to be little impaired in quality.

TABLE 18

MINERAL ANALYSES OF WATER SOFTENER REGENERATION WASTES[a]

Date sampled	Time from beginning of cycle, in minutes	Stage in cycle	Flow gpm	ECx10^6 at 25° C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm
		Central Regeneration Plant															
4-23-54	12, 21	Backwash[b]	22	460	7.9	4 / 0.18	0.5 / 0.04	92 / 4.00	4 / 0.09	0 / 0	162 / 2.66	14 / 0.30	48 / 1.35	2 / 0.03	0.7	0.6	294
4-23-54	45	Regeneration	7	481	8.2	9 / 0.44	0.5 / 0.04	102 / 4.44	2 / 0.05	0 / 0	157 / 2.58	33 / 0.68	56 / 1.59	0 / 0	1.0	0.5	300
4-23-54	63	Regeneration	7	19,300	7.2	910 / 45.5	538 / 44.4	2370 / 103	70 / 1.80	0 / 0	135 / 2.21	34 / 0.70	6970 / 196.8	0 / 0	0.1	0.4	14,248
4-23-54	89	Regeneration	7	233,500	6.5	1472 / 73.6	291 / 24.0	106000 / 4620	1700 / 43.8	0 / 0	96 / 1.58	695 / 14.50	171500 / 4830	4 / 0.07	0.3	0.9	310,445
4-23-54	114	Regeneration	12	17,700	7.8	102 / 5.10	27 / 2.26	3800 / 2.26	43 / 165	0 / 0	165 / 2.70	89 / 1.85	6080 / 171.5	1 / 0.02	0.5	0.8	10,538
4-23-54	125	Rinse	12	8,270	8.0	36 / 1.78	4 / 0.35	1710 / 74.4	18 / 0.45	0 / 0	160 / 2.62	36 / 0.75	2640 / 74.4	2 / 0.03	0.6	0.6	4,500
		Privately-Owned Domestic Softener															
5-19-54	---	Backwash[c]	--	648	8.0	51 / 2.53	16 / 1.33	65 / 2.82	4 / 0.10	0 / 0	228 / 3.74	70 / 1.47	55 / 1.56	6 / 0.11	0.4	0.4	422
5-20-54	0	Rinse	19	170,000	7.0	2300 / 115	382 / 3.15	50700 / 2200	381 / 9.75	0 / 0	203 / 3.33	237 / 4.88	85000 / 2400	6 / 0.10	0.0	0.3	145,276
5-20-54	5	Rinse	19	200,000	6.8	8780 / 439	1280 / 106	63700 / 2770	740 / 19.0	0 / 0	180 / 2.95	288 / 6.00	120000 / 3380	4 / 0.06	0.0	0.5	204,418
5-20-54	25	Rinse	19	12,440	7.8	368 / 18.4	81 / 6.70	3570 / 155	25 / 0.60	0 / 0	244 / 3.99	90 / 1.88	4150 / 117.2	6 / 0.10	0.3	0.4	8,126

MINERAL ANALYSES OF WATER SOFTENER REGENERATION WASTES[a]
(Continued)

Date sampled	Time from beginning of cycle, in minutes	Stage in cycle	Flow gpm	$EC \times 10^6$ at 25° C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids, ppm
						Mineral Constituents in parts per million / equivalents per million											
						Privately-Owned Domestic Softener (continued)											
5-20-54	45	Rinse	19	2,740	8.4	-- / --	-- / --	-- / --	-- / --	3 / 0.10	249 / 4.09	-- / --	680 / 19.20	-- / --	--	--	--
5-20-54	60	Rinse	19	1,320	8.3	-- / --	-- / --	-- / --	-- / --	4 / 0.12	236 / 3.87	-- / --	244 / 6.87	-- / --	--	--	--

a. Data from "Investigation of Waste Discharges from Water Softening Units Los Angeles Region", 1955(5).
b. Composite of two samples.
c. Composite of four samples.

Waste discharges from ion exchange type water softening units were investigated and reported upon to the Los Angeles Regional Water Pollution Control Board (No. 4), in 1955, by the former Division of Water Resources.(5) In this investigation, it was found that there are four central regeneration plants discharging wastes which could ultimately affect the quality of water supplies. Two plants, the Culligan Soft Water Service in Santa Paula and Ojai, discharge to the Santa Paula and Ojai sewage treatment plants. As previously stated, discharges from these sewage treatment plants percolate to economically important ground water bodies. The other two central regeneration plants dispose of wastes in areas where percolation to usable ground water does not appear probable.

Recent ordinances passed by the cities of Ojai and Santa Paula restrict the discharges of water softener wastes to the respective sewerage systems. These ordinances were drafted and adopted in order to reduce the mineral content in the effluent from each of the sewage treatment plants to meet the Regional Water Pollution Control Board requirements.

Pertinent data concerning central regeneration plant discharges in Ventura County are presented in Table 17 "Significant Industrial Waste Disposals, Ventura County". Regeneration wastes from privately-owned softeners, both domestic and industrial, are usually discharged to the sewage disposal system used for other wastes, either cesspool, septic tank, or a community sewerage system.

Estimates of the quantities of salt in regeneration wastes discharged annually to areas where deep percolation to economically important ground water bodies is possible are presented in Table 19, entitled "Estimated Quantities of Water Softener Regeneration Wastes Effectively Discharged to Land in Ventura County". These estimates were based upon sales by salt companies, reports from central regeneration plants, and specifications for regeneration of softeners, combined with statistics obtained from census reports and previous surveys of water softener density.

TABLE 19

ESTIMATED QUANTITIES OF WATER SOFTENER REGENERATION WASTES EFFECTIVELY DISCHARGED TO LAND IN VENTURA COUNTY[a]

Stream system	Salt as NaCl used for regeneration, in tons per year			
	Central regeneration plants	Domestic units	Industrial units	Totals
Ventura River above Foster Park	96	70-155	20	186-271
Santa Clara River above Oxnard Plain Basin	108	195-440	134[b]	437-682
Calleguas Creek	0	60-135	40	100-175
TOTALS	204	325-730	194	723-1,128

a. From report "Investigation of Waste Discharge from Water Softener Units. Los Angeles Region, 1955(5).
b. Includes four tons per year used by State institution.

Walnut Packing Plants. Walnut packing plants in Ventura County process approximately 10,000 tons of walnuts annually. Nuts received from the field are graded, cleaned, bleached, dried, and sacked prior to shipping. The agent used for cleaning and bleaching is a sodium hypochlorite solution containing 1.6 per cent, by weight, of available chlorine. Liquid waste from walnut packing plants consists of the spent cleaning and bleaching solution. Disposal of the liquid waste, which is sodium chloride in character, is by discharge to seepage ponds, cesspools, streams, or sewers.

Waste disposal practices of walnut packing plants were investigated and reported upon by the Los Angeles Regional Water Pollution Control Board (No. 4) in January, 1953.[18] At the time of the survey, there were six walnut packing plants in operation in Ventura County, with ultimate discharge of waste to land areas subject to percolation. The quantity of waste and method of discharge of each plant is given in Table 17. Location of discharge points is shown on Plate 12. It was indicated that about 13.6 tons of sodium chloride per year is contained in the waste from walnut packing plants.

Refuse Disposal. One of the common means of disposal for solid, semi-solid, and liquid wastes is dumping in areas essentially unsuited for alternate development to dump sites. Wastes range from solid inert materials, such as earth and concrete, to noxious industrial liquid wastes containing high concentrations of dissolved salts, acids and caustics. Wastes include the combustible and noncombustible refuse and rubbish produced from households and commercial establishments. It is apparent that, if waters of the State are to be protected from pollution by such wastes, care must be taken in the selection of dump sites and in the proper operation of dumps.

Dump sites have been classified by the Department of Water Resources on the basis of the geology, hydrology, and topography. Based upon recommendations made by the former Division of Water Resources, in 1952, the Los Angeles Regional Water Pollution Control Board (No. 4), in August, 1953, adopted "Tentative Objectives for Prevention and Control of Water Pollution with Respect to Disposal of Wastes on Land in Ventura County within Los Angeles Water Pollution Control Region". The tentative objectives classified dump sites as follows:

> "Class I - DISPOSAL SITES
>
> Sites located on nonwater-bearing rocks or underlain by isolated bodies of unusable ground water, which are protected from surface runoff and where surface drainage can be restricted to the site or discharged to a suitable wasteway, and where safe limitations exist with respect to the potential radius of percolation.
>
> CLASS II - DISPOSAL SITES
>
> Sites underlain by usable, confined, or free ground water when the minimum elevation of the dump can be maintained above anticipated high ground water elevation, and which are protected from surface runoff and where surface drainage can be restricted to the site or discharged to a suitable wasteway.
>
> CLASS III - DISPOSAL SITES
>
> Sites so located as to afford little or no protection to usable waters of the State."

The Regional Water Pollution Control Board designated typical wastes which could be disposed of in each class of disposal site. In general, all types of waste may be disposed of in Class I sites. Class II sites may receive ordinary household refuse and rubbish and all materials approved for disposal in Class III sites. Garbage may also be accepted at Class II sites, provided such disposal does not conflict with local public health laws. The only materials suitable for disposal in Class III sites are innocuous, relatively inert, wastes such as dirt, concrete, and plaster.

Dump sites in Ventura County were investigated by the Los Angeles Regional Water Pollution Control Board (No. 4), in September, 1952. It was found that nine dumps in the county are either owned or operated by the County of Ventura. These include the Ojai, Saticoy, [illegible], [illegible], [illegible], [illegible], Camarillo, [illegible], and Piru dumps. In addition, four disposal sites are operated by the cities of Ventura, Oxnard, Santa Paula, and Fillmore. No private dump sites were found during the survey.

Information concerning the classification of these sites and the materials [illegible] disposed of is presented in Table 17, and site locations are delineated on Plate 12. It was found that all dumps receive both [illegible] [illegible] refuse and that the major portion of the waste comprised these two classes of material. All dumps practice burning to reduce the volume of waste material. Disposal of garbage was practiced only at the City of Oxnard dump site. A county ordinance prohibits the disposal of garbage to county owned or operated dumps.

Miscellaneous Waste Discharges. This category includes a relatively small number of discharges, such as hog farm wastes, metal cleaning wastes, fruit and vegetable processing wastes, and ammonia manufacturing wastes. Information concerning these discharges is presented in Table 17, and locations of points of disposal are delineated on Plate 12.

Sea-Water Intrusion

The quality of the water contained in a coastal ground water basin may be adversely affected by the intrusion and admixture of sea water. Intrusion may take place when water-bearing deposits along the seaward or bayward margins of ground water basins are in direct contact with the ocean or bay floor at the shore line, or extend beneath the ocean floor.

Intrusion can occur only when the pressure head of sea water exceeds that of the fresh ground water, a condition usually resulting when ground water levels are lowered to or below sea level by excessive pumping of wells. When the hydraulic gradient within a ground water basin slopes seaward, ground water movement is toward the ocean; conversely, with a landward slope, inland movement of sea water occurs. The slope and direction of the hydraulic gradient is established by measurements of the depth to water in observation wells.

It has been shown that mineral analyses of certain of the wells in the Oxnard Plain Basin in the vicinity of Port Hueneme evidenced higher concentrations of chloride and dissolved solids than found in other waters of the Oxnard aquifer. Wells affected in summer, 1957, included Nos. 1N/22W-19H1, 20E1, 20N1, 20R1, 21L1, 21L2, 28D1, 29A2, and 29C1. Complete mineral analyses of samples collected from these wells are presented in Appendix B. Partial mineral analyses are presented in Appendix C.

A thorough study of this portion of the aquifer reduced the probable sources of chloride degradation in the ground water to one or more of the following:

1. Sea-water intrusion through the Oxnard aquifer.
2. Percolation or leakage through poorly constructed wells, defective casings, or abandoned wells, by
    a. Irrigation return water and other poor quality waters from the semiperched ground water body.
    b. Sea water which has intruded into the semiperched ground water body.

To differentiate between sea water and semiperched water, Plate 13, entitled "Mineral Character of Ground Water in the Vicinity of Port Hueneme and Point Mugu", has been prepared. Anion constituents only were used on this chart, since cation constituents are subject to character changing influences, such as cation exchange. This plate shows the anion constituents, expressed in per cent, in the degraded water and in the two apparent sources of degradation. Anion constituents in ground water from these wells prior to degradation are also plotted on this plate. The indicated source of degradation of ground water pumped from wells in the vicinity of Port Hueneme and Point Mugu was sea water. The character of the anion constituents in the degraded water plots almost in direct line between water samples representative of the native water and sea water. There is no apparent influence of the semiperched waters.

In an effort to distinguish between the methods by which sea water is enabled to enter the aquifer, consideration was given to the hydrologic and geologic conditions existing in the area of intrusion. As described in Chapter II, the Oxnard aquifer appears to outcrop in the submarine canyon near Port Hueneme. Furthermore, the semiperched zone extends under the coastal sand dunes to the ocean. Thus, from the geologic standpoint, sea water may enter either of the water-bearing zones. Before sea-water intrusion can occur, however, the hydraulic head of sea water must be greater than that prevailing in the aquifer.

Information obtained from the studies of Division of Soils of the University of California at Los Angeles is of significance in analyzing the data available regarding the semiperched water body. It is indicated that the elevation of the semiperched water table throughout the Oxnard Plain is above sea level, with the hydraulic gradient sloping toward the ocean, thus precluding sea-water intrusion in this zone.

A trough of piezometric water pressure levels depressed below sea level has existed continuously in the Oxnard aquifer since 1949, a condition conducive to sea-water intrusion. The correlation between below sea level piezometric elevations in the Oxnard aquifer and saline intrusion, is indicated by Plate 14, entitled "Chloride Ion Increase - Well 1N/22W-29A2". On this plate, the hydrograph of well 1N/22W-20R1 is plotted, together with the average weekly chloride concentration in well 1N/22W-29A2, both perforated in the Oxnard aquifer.

Inspection of this plate will show that during the period when the water level in well 20R1 was lowest, the rate of increase in chloride concentration in the ground water was greatest, once degradation became initiated. As an example, during the period from September 1,to December 13, 1951, water levels in well 20R1 slowly rose from about 14 feet to about two feet below sea level, and the increase in chloride concentration in well 29A2 averaged 3.9 parts per million per day. In the subsequent period, December 13, 1951, to March 19, 1952, water levels were slightly above sea level and the increase in chloride concentration was reduced to about 1.5 parts per million per day.

Although it appears contradictory that the chloride concentration should have increased while the water level in the key well was slightly above sea level, this condition exists because the top of the Oxnard aquifer is between 80 and 120 feet below sea level. At this depth, because of the difference in density, the elevation of fresh water must be more than two feet higher than sea level in order to effect a balanced condition. Since there exists a seaward hydraulic slope in the semiperched ground water body, it appears from the correlation between water levels in the Oxnard aquifer and the increase in chloride ion concentration, that sea water is entering directly into the Oxnard aquifer through ocean floor outcrops.

As of December, 1954, about 930 acres in the Oxnard Plain were underlain by waters degraded to 100 ppm chloride by sea water. By the summer of 1957, this area had increased to 1,550 acres. The extent of saline intrusion in the Oxnard aquifer is shown on Plate 15, entitled "Areal Extent of Sea-Water Intrusion, Vicinity of Port Hueneme". The advance of sea-water intrusion into the Oxnard aquifer, as estimated by the detection of 100 parts per million chloride in wells, has averaged approximately 1,200 feet per year in a northerly direction, and 700 feet per year in an easterly direction since 1951.

Prevention of sea-water intrusion in this aquifer may be accomplished by reversal of the hydraulic gradient, either by decreased pumping or by increased recharge, or both.

Salt Balance in Ground Water Basins

The use of ground water storage capacity in conserving and regulating both local and imported water supplies, particularly those supplies intended to be used consumptively by irrigated agriculture, requires a consideration of the salt balance involved in the use and re-use of the available supplies. Salt balance refers to that desirable condition wherein the amount of soluble salts entering a basin is balanced by the amount of salt leaving the basin -- either by natural disposal, sewage outflow, or by pumping for export, waste disposal, or drainage.

As man develops an area he disturbs the existing salt balance by changing the natural regimen of ground water flow and by adding salts in wastes permitted to percolate. If the change in the natural regimen results in a condition of adverse salt balance, the total tons of dissolved solids in the ground water will increase. This increase in total salt content will, in time, be compensated by an increase in the quantity of salts leaving a basin through pumping or natural drainage, and the basin will eventually reach equilibrium, although at a greater average salt content.

The problem of salt balance exists in most of the developed ground water basins of California, and must be considered if the basins are to retain their important place in conservation and utilization of the water in the State. The solution involves induced drainage of water from the basins in amounts sufficient to maintain satisfactory mineral quality therein. The amount of water so drained away will constitute a demand on the developed water supply.

Practically all natural waters contain mineral salts of calcium, magnesium, sodium, and potassium in varying amounts, present in the waters in the form of carbonates, sulfates, nitrates, and chlorides. After application of water on the land, that part which is not consumptively used and which does not drain off on the surface, will percolate to the main body of ground water in free ground water basins. Minor amounts of salt compounds will be utilized in plant growth and conversely, percolating water will dissolve or absorb other salt compounds in passing through the soil between the surface and the water table.

Under natural conditions most ground water basins tend to fill with water and to overflow in the lower portions, thereby flushing out soluble salts contained in water originating on the tributary watershed and overlying lands. When aquifers in the basin are tapped by wells, the pumping draft lowers ground water levels to such an extent that in many cases the natural flushing of the basin ceases. Since the pumped water is largely used on overlying lands, soluble salts accumulate within the basin and tend to degrade the quality of the ground water in storage. If the situation is such that no discharge of water from the area, either surface or subsurface, occurs, the concentration of salt compounds in the remaining water will become so great in the course of time as to inhibit its use as a source of water supply. This is particularly true in the case of irrigation supplies, as crops generally have rather low tolerance for dissolved salts.

In general, a favorable salt balance can be established in the given area by deliberately inducing outflow of water from the area in such amount that the total quantity of mineral salt exported is equal or greater than the quantity imported. Under these conditions, the long time mean quantity of salts is maintained relatively constant. The maintenance of such balance, or the removal of a total amount of salt from an area exceeding the salt input to the area (termed "favorable salt balance") does not necessarily imply lack of damage to the lands and crops. It is also important to determine whether a favorable salt balance is being maintained in the root zone of the irrigated crops, as accumulations of salt compounds in that zone will prevent the successful culture of many irrigated crops.

In previous portions of this chapter various sources which may contribute concentrated salt solutions to surface and ground waters have been enumerated. The cumulative effect of these contributions is dependent upon the relative concentrations in the waters forming the mixture. The usual result is an increase in the concentration of the various mineral constituents in the receiving waters. When discharged into a surface stream, salts are rapidly carried away. However, since ground water moves slowly, contributed salts are not so rapidly discharged or diluted. It is also possible for salts to be contributed to ground water at a rate greater than the capability of the aquifer to transmit, dilute, and discharge them.

Safe ground water yield is defined as the maximum rate of extraction of water from a ground water basin which, if continued over an indefinitely long period of time, would result in maintenance of certain desirable fixed conditions. One of these conditions is, that water levels are not so lowered as to cause permanent accumulation and concentration of salts or pollutants, whether from surface percolation of wastes or from subsurface intrusion of water of undesirable quality. Overdraft is defined as a condition of development under which extractions from the ground water reservoir produce an adverse effect or series of effects. If development of a basin occurred to the extent that an adverse salt balance results in the accumulation and concentration of salts and pollutants, an overdraft condition would exist. Thus, overdraft for any particular ground water basin must be defined in terms of the conditions existing for that basin at a specific time.

In Chapter V, data were presented indicating that ground waters in many of the basins of Ventura County were of marginal quality for many of the prevailing beneficial uses. Furthermore, in basins where sufficient antecedent data were available to compare with recent analyses, it is indicated that there has been, during recent periods, a measurable deterioration in quality. It would appear that an adverse salt balance may exist in these basins.

Identification of the source of such adverse balance, the quantity and rate of accretion, the quantitative expression of foreseeable results, and the formulation of recommendations for correcting or alleviating the effect of adverse salt balance, will require the maintenance of detailed records of mineral quality of water for a considerable period of time.

Santa Felicia Dam on Piru Creek was completed in 1955, and Casitas Dam now under construction is scheduled to begin storing water during the winter season of 1958-59. Numerous other plans for the development of water supplies in Ventura County have been advanced. These works, when constructed, will alter the natural regimen of surface streams and ground water basins and may affect the maintenance of salt balance.

Summary

The surface and ground waters of Ventura County are, in the course of their movement to the ocean, subject to degradation from natural sources and to pollution from sewage and industrial wastes. Furthermore, development of water supplies has altered the regimen of many of the basins and in some instances resulted in deterioration of water quality.

The surface waters of Ventura County are subject to degradation by highly mineralized waters flowing from hot springs and by poor quality effluent ground water. Runoff from rainfall on certain of the geologic deposits in Ventura County contains high concentrations of boron. This has affected the quality of certain streams, with particular reference to low flows, to the point of becoming marginal for irrigation use. Natural degradation of ground water is accomplished primarily through deep percolation of poor quality surface waters and by the subsurface movement of highly saline waters from marine deposits of Tertiary age.

As the result of man's development of the surface and ground waters of Ventura County, deterioration and/or pollution has occurred. A large portion of Ventura County has been developed for irrigated agriculture. Irrigation return water with high mineral concentrations has commingled with native ground waters and resulted in increased salt concentrations. Numerous industries have been developed in Ventura County. Certain of these industries discharge wastes as a result of their processes. These can, upon commingling with ground waters, result in excessive degradation. Included among these wastes are oil industry wastes; fruit, nut, and vegetable packing wastes; and water softener wastes. Commercial and domestic rubbish and refuse are disposed to dump sites, together with certain of the more noxious industrial wastes. If these wastes are disposed of in an improper manner, salts may be leached, resulting in a degrading effect on ground waters. Waste discharges from many of these sources have been investigated by the Department of Water Resources for the Los Angeles Regional Water Pollution Control Board (No. 4). In many instances measures have been taken to correct improper discharge practices.

Continued pumping of large quantities of water, in excess of safe yield, from the Oxnard aquifer of the Oxnard Plain Basin has resulted in the depression of piezometric levels below sea level in portions of the basin and the intrusion of sea water into the aquifer. As of summer, 1957, the area underlain by sea water was about 1,550 acres. It was estimated that during the period 1951 to 1957, in the vicinity of Port Hueneme, the saline front advanced at the rate of about 1,200 feet per year in a northerly direction and about 700 feet per year in an easterly direction.

Improperly constructed and abandoned wells may be a factor in transmission of pollution or degradation to usable ground water. Such wells may serve as a conduit for poor quality surface or drainage waters, leaching effluent from cesspools and septic tanks, surface wastes, or poor quality perched or connate waters, permitting contacts with, or intrusion into, aquifers utilized as a source of water supply.

The integrated effect of all sources of deterioration and pollution of ground waters is indicated by the salt balance prevailing in a ground water basin. Analyses made during the past 20 years indicate considerable deterioration in water quality in the Fillmore and Santa Paula Basins. If deterioration should continue over a protracted period, it could result in the loss of the ground water resources for beneficial purposes.

Future studies of salt balance problems in Ventura County, and the formulation of policies and recommendations for the alleviation of adverse salt balance conditions will be facilitated through the use of data collected since 1952 by the Department of Water Resources in the State-wide Surface and Ground Water Sampling Programs.

CHAPTER VII. RECLAMATION OF WATER FROM SEWAGE

Plant effluents are generally available for re-use unless discharged to saline water or lost through evapo-transpiration. In Ventura County, incidental reclamation or the recovery of waste waters for beneficial use results from the disposal of effluents from the City of Santa Paula, Camarillo State Hospital, and Camarillo Sanitary District through their use for irrigation during a portion of the year. The recovery of waste waters which have lost their identity through mixing with natural stream flow or ground water in the process of final disposal is termed involuntary reclamation. Examples in Ventura County are the discharges to stream channels from the City of Ojai and discharges from the Saticoy Sanitary District and the City of Fillmore to percolation lagoons. In addition, effluent from the City of Santa Paula is discharged to the Santa Clara River when not used for irrigation.

The above discharges constitute the principal inland disposals of domestic sewage in Ventura County. With the exception of the discharge from Camarillo State Hospital to Calleguas Creek during intervals when the effluent is not being used for irrigation, all of these effluents are susceptible to involuntary or incidental reclamation. The flow from these sewage treatment plants, serving a combined population of some 28,000 persons, was approximately 2.5 million gallons per day, or about 2,800 acre-feet during the fiscal year 1956-57.

During 1957, the Montalvo Sanitary District discharged about 170 acre-feet to percolation ponds. Effluent from these ponds seeps to an apparently unused shallow ground water zone that is essentially isolated from the deeper productive zones.

Planned reclamation of water from sewage refers to the salvage of waste water which would otherwise be lost. During fiscal year 1956-57, 7.5 million gallons a day, equivalent to 8,400 acre-feet per year, was discharged to the Pacific Ocean by the Cities of Ventura and Oxnard, the Port Hueneme Sanitary District, and the Port Hueneme and Point Mugu Naval Reservations. The discharges from the Cities of Ventura and Oxnard constitute about 80 per cent of this quantity and consequently appear to offer the best opportunity for planned reclamation.

In-plant reclamation of waste water by industry is frequently overlooked, although it is a phase of reclamation which can result in substantial reduction in water consumption and subsequent waste discharge. Re-use frequently requires partial purification of the water and this treatment may not be economically justifiable solely on the basis of water reclamation. Additional benefits which may accrue from such practices include:

1. Reduction of the hydraulic load on the waste treatment plant.
2. Enhancement of the possibility of by-product recovery, due to concentration.
3. Salvage of heat and chemicals contained in the waste water.
4. Better public relations in communities suffering from water shortages.
5. Better public relations in communities with waste disposal problems.

Recycling of white water from a paper-making machine, for example, results in savings of water and heat, and effects reclamation of useful chemicals and materials.

Prior Studies of Water Reclamation in Ventura County

The City of Ventura and Shell Oil Company with its subsidiary, Shell Chemical Corporation, entered into an agreement whereby the company would study the feasibility of reclaiming the effluent from the City's sewage treatment plant for industrial use. Pilot plant studies were initiated to ascertain the feasibility of utilizing reclaimed water, primarily for cooling tower make-up and boiler feed, in an ammonia plant and for other industrial purposes in the Ventura Avenue Oil Field. However, as yet no positive action has been taken to further the possibility of water reclamation.

Utilization of wastes discharged to the ocean by the City of Oxnard was the subject of a report prepared by V. M. Freeman, Engineer, Santa Clara Water Conservation District.[13] In this report, it was proposed to pump effluents from the Oxnard secondary and Port Hueneme primary treatment plants to oxidation lagoons for polishing treatment. After a 10-day retention period the lagoon effluent would be pumped a distance of 42,500 feet to a proposed Ditch Road Spreading Ground or as an alternate plan 57,000 feet to the Saticoy Spreading Ground. On the basis of 1949 prices, it was estimated that the cost of water reclaimed by this method would range from $17 to $21 and $15 to $19 per acre-foot, respectively. As of this date, no action has been taken on the findings of this report.

Plans for Reclamation of Water from City of Oxnard Sewage Treatment Plant Effluent

The possible markets for water reclaimed from City of Oxnard sewage include direct industrial use, recharge of ground water basins, supply for injection wells to prevent sea-water intrusion, and direct irrigation use. The successful use of reclaimed water for each of the above purposes is contingent upon the quality of the sewage. This section discusses the quality of the effluent from the City of Oxnard sewage treatment plant, the possibilities for industrial use, direct irrigation use, recharge of ground water basins, and supply for injection wells to prevent sea-water intrusion.

Quality of Effluent from the City of Oxnard Sewage Treatment Plant

The mineral quality of effluent from the Oxnard sewage treatment plant is poor. Available mineral analyses, which are presented in Appendix D, indicate the following ranges and averages in mineral quality characteristics: total dissolved solids, 1,351 to 2,120, averaging 1,583 parts per million; effective salinity, 13.4 to 25.3, averaging 16.2 epm; boron, 0.6 to 1.5, averaging 1.0 ppm; and chloride, 174 to 500, averaging 231 ppm. The character of the effluent is generally sodium-calcium sulfate with total hardness ranging from 572 to 688, averaging 629 ppm.

Sanitary analyses of the effluent from the Oxnard sewage treatment plant are presented in Appendix D. A new activated-sludge type treatment plant was put into operation on June 23, 1956. The old sewage treatment plant, now abandoned, is a trickling-filter type plant. Since the new plant has been in operation, the biochemical oxygen demand (B. O. D.) of the effluent has ranged from 30 to 77, averaging 58 ppm. The analyses also show the effluent from the new plant to have a most probable number of coliform bacteria (MPN) ranging from 24,000 to 240,000, with a median value of 70,000.

The poor quality of water supplied to the area sewered by the City of Oxnard is a major contributing factor to the poor mineral quality of the sewage. However, there is also an abnormally large mineral increment, particularly in chlorides, when compared to normal ranges as presented in a report published by the California State Water Pollution Control Board.(9) This relationship is summarized below:

Item	Effective salinity, epm	Total dissolved solids, ppm	Chloride, ppm	Boron, ppm
Quality of supply water[a]	8.83	1,165	54	0.6
Quality of sewage[b]	16.75	1,516	235	0.9
Mineral increment	7.92	351	181	0.3
Normal increase in mineral content (9)	---	100-300	20-50	0.1-0.4

a. Average analyses of water from four wells collected May 8, 1958. These wells constituted the source of supply water during the month. The analyses were weighted in proportion to the approximate production from each well.

b. Sixteen-hour composite sample collected on May 14, 1958.

The principal causes for this abnormally large mineral increase are the infiltration of highly mineralized shallow ground waters into the sewers and the discharge of highly mineralized wastes from industries and home water softeners. The diversion of highly mineralized waste discharges from the domestic sewer to the industrial waste sewer would improve the mineral quality of the sewage treatment plant effluent.

Industrial Use

As indicated by the above water quality discussion, water reclaimed from the City of Oxnard sewage could be utilized by industry. However, the effluent from the treatment plant would probably have to be given additional sanitary treatment before being acceptable for industrial use. For most industrial uses, waters with relatively low B.O.D., turbidity, and color are required.

At the present time, there is no large-scale potential industrial market for water reclaimed from sewage known to exist in the Oxnard area. A pulp and paper manufacturing plant, located close to the City of Oxnard sewage treatment plant, has considerable potential as an industrial market for reclaimed water. However, the present water requirement for this plant is only about 800-1100 acre-feet per year. Also, some additional treatment of the effluent would be necessary to render it suitable for some of the major uses in the plant. No complete cost estimate, which would include distribution costs, has been made for industrial use of water reclaimed from the City of Oxnard sewage.

Recharge of Ground Water Basins

As noted in a previous section of this chapter, detailed engineering studies have been made of the use of sewage effluents for recharge of ground water basins of the Oxnard area.[13] The recent completion of Santa Felicia Dam, however, making additional quantities of natural surface waters available for spreading, has detracted from the desirability of spreading reclaimed water.

In addition, the recycling of sewage by means of ground water recharge appears undesirable because of the prevailing water quality problems in the ground water basins of the area.

Repulsion of Sea-Water Intrusion

The California State Water Pollution Control Board sponsored a 44-month field study of direct recharge into underground formations. The work was performed by the University of California at its engineering field station at Richmond. The results were published as California State Water Pollution Control Board Publication No. 11, "Report on the Investigation of Travel of Pollution", 1954.

Fresh water was recharged into a pressure aquifer for which the permeability was about 1,900 gallons per square foot per day, over long periods of time with no operational difficulties. The addition of sewage plant effluents at the same rate, however, caused clogging of the well at a rate which was proportional to the amount of solids injected. Under permissible well head pressure buildup, a liquid waste equivalent to the final effluent from secondary sewage treatment could be injected for about eight or nine days. After that time, redevelopment of the injection well was necessary. Chlorine injection, followed by a half day of contact and three or four hours of pumping at a rate equal to twice the injection rate, re-established the ability of the aquifer to receive injected water.

As a result of research reported in the California State Water Pollution Control Board Publication No. 11, it was concluded that the reclamation of sewage effluent by direct recharge into sand aquifers is not limited by public health concern over bacterial contamination.

In regard to public health consideration, Section 4458 of the California State Health and Safety Code specifically prohibits the construction, maintenance, or use of any sewer well extending to or into a subterranean water-bearing stratum that is used or intended to be used as, or is suitable for, a source of water supply for domestic purposes. The same section defines a sewer well as any hole dug or drilled into the ground, used or intended to be used for the disposal of sewage. The legal use of sewage treatment plant effluent in injection wells to establish a barrier to sea-water intrusion in producing aquifers may require revision of the California State Health and Safety Code.

The use of effluent in injection wells to establish a barrier to sea-water intrusion in the producing aquifer of the Oxnard area would result in the re-use of a portion of such water for beneficial purposes. Because of the water quality problems of the area, and since injected water would eventually be subject to domestic use, it would be desirable to use waters with dissolved mineral content conforming to the United States Public Health Service drinking water standards.

Direct Irrigation Use

Water reclaimed from the City of Oxnard sewage would be generally unsuitable for continued irrigation use because of its poor mineral quality. If, however, such water were combined with waters of the Oxnard aquifer in the ratio of about two parts of ground water to one part reclaimed water, the resulting mixture would have a total dissolved solids concentration of about 1,100 ppm and an effective salinity of about 10 epm. This mixture would be of a quality that could be utilized for irrigation purposes under conditions which exist in the tile-drained areas of the Oxnard plain.

In addition to meeting mineral quality requirements, waters reclaimed for irrigation use must conform with certain sanitary standards which are set forth in a Special Bulletin No. 59 of the California State Department of Public Health entitled, "Regulation of Use of Sewage for Irrigating Crops", May, 1933. Briefly, these standards provide that no raw or untreated sewage shall be used for irrigating crops; partially treated effluent may be used on fodder crops, field crops, and some orchard crops; well oxidized and thoroughly disinfected effluents may be used without restriction if bacterial standards approximating the United States Public Health Service drinking water standards are continually met, and no plumbing cross connections are permitted with any domestic water system.

On the basis of data presented in this chapter, it appears undesirable to use water reclaimed from the City of Oxnard sewage for recharge of ground water basins, supply for injection wells to prevent sea-water intrusion, or direct irrigation. While reclaimed water could be diluted with ground water and then used for irrigation, the mechanics of such a procedure may be complex and may necessitate duplication of facilities. In addition to the foregoing, it seems probable that there will be an aesthetic reaction against using water reclaimed from sewage for direct irrigation.

The effluent from the City of Oxnard sewage treatment plant is of suitable mineral quality for certain industrial uses. Presently, however, only a small potential industrial market for water reclaimed from sewage exists in the Oxnard area. Therefore, an additional industrial need should be manifested before further consideration is given to any plan to reclaim water from the City of Oxnard sewage treatment plant effluent.

CHAPTER VIII. WATER QUALITY ASPECTS OF WATER RESOURCES DEVELOPMENT

As a result of the comprehensive investigation which culminated in the preparation of State Water Resources Board Bulletin No. 12, entitled "Ventura County Investigation", it was concluded that current water resource problems in Ventura County include perennial and progressive lowering of ground water levels, overdraft on ground water supplies, sea-water intrusion into pumped aquifers and degradation of ground water quality. Recently completed studies of water requirements indicate that the supplemental water requirements will be about 85,000 acre-feet per year in 1960 and 236,000 acre-feet in the year 2020.

The investigation resulted in further conclusions to the effect that local supplemental water could be made available by conservation of runoff which presently wastes to the ocean from the Ventura and Santa Clara River watersheds, by construction of surface storage reservoirs and further development of ground water storage. Mean seasonal runoff to the ocean from the Ventura and Santa Clara River watersheds averaged about 230,000 acre-feet per season during the period 1936-37 to 1950-51. It is therefore apparent that even with complete regulation of runoff from these watersheds, additional supplemental water would have to be imported to meet ultimate requirements. Possible sources of such water include the Colorado River, through facilities of the Metropolitan Water District of Southern California, and waters from northern California, through facilities of the authorized Feather River Project.

As previously stated, alteration of the natural regimen of flow in any hydrologic system which includes both surface streams and ground water basins will probably result in a change in quality of water. In the following paragraphs, there is presented a brief review of projects recently completed or under construction together with estimates of the effect of such developments on the quality of waters.

Development of Local Water Supplies

Ventura River Drainage System

Development of the Ventura River drainage system is centered around Casitas Dam and reservoir, which is now under construction by the United States Department of Interior, Bureau of Reclamation. This dam is on Coyote Creek at a point about two miles upstream of the confluence with the Ventura River. The reservoir will have a capacity of 250,000 acre-feet and will permit conservation of flood waters from Coyote Creek. In addition, the reservoir will store waters diverted from Ventura River.

In operation of the project, water will be pumped to the Ojai Valley and Upper Ventura River Service areas. Since the stored flood waters are of better quality than present ground waters of Ojai Valley, the effect of the project would be to improve ground water quality in Ojai Valley.

The new water made available by the Casitas Project will be derived from flood flows that presently waste to the ocean. As in most southern California streams, the quality of water in Coyote Creek and Ventura River is better at time of flood runoff than normal low flow or summer runoff. The conservation of flood runoff will probably result in improvement in the quality of water in the Ventura River at Foster Park.

Santa Clara River Drainage System

Santa Felicia Dam, on Piru Creek with a reservoir storage capacity of 100,000 acre-feet, was completed in 1955. The present plans of the United Water Conservation District are to release water from the dam to the natural stream channel, with subsequent diversion from Santa Clara River for percolation in spreading grounds or delivery to Oxnard Plain Basin via conduits.

Santa Felicia Dam will impound a major portion of the discharge from Piru Creek. Future flows in Piru Creek will consist of runoff originating from the drainage area below the dam, reservoir releases to the natural channel, and spill when the reservoir is full. The over-all quality of water in Piru Creek is considerably better than that found in the Santa Clara River above the confluence of the two streams.

Since waters to be impounded behind Santa Felicia Dam are essentially flood runoff of good quality, their net effect on the waters of the Santa Clara River system should be one of quality improvement.

Effect of Importation of Supplemental Water on Water Quality

Prior investigations resulted in the conclusion that the water resources of Ventura County are insufficient to meet estimated ultimate requirements. Importation of supplemental water supplies from either the Colorado River or Northern California is presently being given serious consideration. These two possible sources were studied to determine the effect of such importation on quality of waters in the county.

The Colorado River Aqueduct

Local interests have considered annexation of portions of Ventura County to the Metropolitan Water District for the purpose of obtaining supplemental water. On the assumption that the area included in the Calleguas Creek system would probably be the first to receive imported supplies, the relationship between the quality of Colorado River water and that in the various aquifers is indicated in Table 20.

Data given in the table represent an analysis of untreated Colorado River water and the maximum and minimum values for the individual constituents in water derived from the alluvium and other aquifers. In general, the value of each constituent in untreated Colorado River water lies between the minimum and the maximum values for the same constituent in the ground waters found in the Calleguas Creek system. This is not true, however, in the Tierra Rejada Basin, where certain of the maximum values are below the values for the same constituent in untreated Colorado River water. Since the quality of Colorado River water is, in general, comparable to that presently applied in the ground water basins of the Calleguas Creek system, quality of the return irrigation water would not be significantly different from that which presently returns to the ground water by deep percolation.

No studies were made to determine the effect of importing Colorado River water into other portions of Ventura County. The mineral character of untreated Colorado River water is similar to most waters found in Ventura County. Therefore, the utilization of untreated Colorado River water in Ventura County will not create any additional difficulties or problems of base exchange in the soils.

TABLE 20

COMPARISON OF UNTREATED COLORADO RIVER WATER AND MAXIMUM AND MINIMUM VALUES
OF CONSTITUENTS IN GROUND WATERS IN CALLEGUAS CREEK DRAINAGE SYSTEM

Water-bearing formation		$ECx10^6$ at $25^{\circ}C$	pH	Mineral constituents in parts per million											Total dissolved solids ppm	Effective salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
Untreated Colorado River Water Average for Year Ending June 30, 1957																	
------		1,260	8.4	96	35	121	5	1	146	364	109	1.1	0.4	0.2	815	8.3	40
Simi Basin																	
Recent and Pleist-	Min.	918	7.1	66	28	60	1	0	60	94	43	0	0.1	Tr.	614	4.2	20
ocene alluvium	Max.	3,077	8.1	368	186	670	7	0	506	1,850	554	28	2.2	2.7	4,098	44.1	46
East and West Las Posas Basins																	
Recent and Pleist-	Min	2,355	7.2	112	25	80	4	0	222	112	70	0	0.1	Tr.	755	6.4	18
ocene alluvium	Max.	3,184	7.8	500	951	696	29	0	736	2,200	725	117	2.3	2.6	4,927	50.9	66
Fox Canyon	Min.	409	7.6	47	8	20	1.8	0	157	58	13	Tr.	0.2	0.0	265	1.5	19
Aquifer	Max.	1,689	8.1	155	52	161	5	2	301	548	117	85	0.7	0.8	1,276	11.4	38
Conejo Basin																	
Recent and Pleist-	Min.	No available analyses from alluvium															
ocene alluvium	Max.																
Volcanics	Min.	680	7.1	14	10	28	Tr.	0	136	23	21	0	0.1	0.0	353	2.0	10
		3,100	8.4	271	237	262	14	5.4	505	1,690	346	42	0.4	0.8	2,808	28.1	77
Tierra Rejada Basin																	
Volcanics	Min.	528	7.5	27	18	20	0.8	0	153	17	23	0	0.1	0.0	218	1.2	17
	Max.	990	7.9	63	60	56	2	0	298	213	69	17	0.8	0.4	792	6.2	24
Arroyo Santa Rosa Valley																	
Alluvium	Min.	No available analyses from alluvium															
	Max.																
Fox Canyon and	Min.	870	7.6	45	43	48	1	0	282	40	79	1.9	0.0	Tr.	528	3.8	22
other San Pedro formations	Max.	1,240	8.2	77	72	96	2.2	1	429	139	193	57	0.5	0.5	842	7.7	38

The use of treated Colorado River water in Ventura County might create problems of base exchange in soils as the softened water has a high per cent sodium. Agricultural use of this water on certain soils could result in reduction of soil workability and crop production. Its use for ground water recharge might cause reduction in percolation rates in spreading grounds or leaching areas. However, treated water would probably have limited agricultural use due to economic considerations and it is believed that these problems would have a minimal occurrence.

San Joaquin Valley - Southern California Aqueduct

As stated in Chapter V, "Water Quality in Ventura County," the water to be delivered to southern California via the aqueduct will be calcium bicarbonate in character. The mean annual values of total dissolved solids will be less than 200 ppm, chlorides less than 40 ppm and total hardness less than 150 ppm. No water quality problems are anticipated if northern California water is imported as a supplemental supply for Ventura County. Because of its low mineral content, water from this source would tend to reduce the average concentration and salt content in the ground water basins of the County.

CHAPTER IX. CONCLUSIONS AND RECOMMENDATIONS

The results of this investigation of the water quality and water quality problems in Ventura County are summarized in the conclusions and recommendations presented in this chapter.

Conclusions

1. The principal sources of water supply presently available to Ventura County are direct precipitation on the valley floors and runoff from tributary drainage areas. Historically, the major regulation of surface runoff has been accomplished through percolation to ground water storage.

2. The principal water-bearing formations of Ventura County are the alluvial deposits covering the valley floors and aquifers of the San Pedro and Santa Barbara formations of Pleistocene Age. However, fractured Miocene volcanic rocks are important sources of water in Santa Rosa and Tierra Rejada Basins.

3. Beneficial uses of water in Ventura County include domestic and municipal, irrigation, industrial, recreation, and propagation of fish and wildlife. Surface and ground waters also serve as a means for the disposal of wastes.

4. In general the surface waters of Ventura County are suitable for nearly all beneficial uses during periods of high flow. However, during periods of low flow, waters from Canada Larga, Arroyo Simi, Hopper and Tapo Creeks, and Santa Clara River at Blue Cut contain sufficient concentrations of dissolved salts to render them marginal or unsuitable for many uses.

Matilija, Sespe and Piru Creeks contain high concentrations of boron during low flow.

5. Waters of good mineral quality are generally produced from the Miocene volcanics in Conejo, Tierra Rejada, and Santa Rosa Basins. In Ojai and Upper Ojai Basins ground waters produced from Recent and Plesitocene deposits are of good mineral quality. In other basins the preponderance of ground water produced from alluvial deposits ranges from suitable to marginal or unsatisfactory for prevailing beneficial uses. Ground waters of such poor quality that they are essentially unusable include the waters in the Recent alluvial deposits of the Lower Ventura River Basin and the semiperched ground waters found in the Oxnard Plain Basin. In addition, there are localized areas within the various ground water basins of the County where the ground water is of very poor quality. Included among these are the semiperched zone near the west end of Simi Basin, the area south of the Oak Ridge fault in Fillmore Basin, and the extreme easterly portion of Upper Ojai Basin.

6. In areas where sufficient antecedent data are available it is indicated that the quality of ground water has deteriorated measurably during the past 20 years. Included among these areas are Ojai, Fillmore, Santa Paula, Piru, and Oxnard Forebay Basins, and the Oxnard aquifer of the Oxnard Plain Basin. There are insufficient data available to permit determination of quality trends in basins of the Calleguas Creek drainage system.

7. Surface waters of Ventura County are subject to degradation by highly mineralized waters from hot springs and by effluent ground water of poor quality. Runoff from certain areas tributary to Matilija, Sespe, and Piru Creeks contains high concentrations of boron and other salts dissolved from geologic deposits with which it comes in contact.

8. The principal ground water bodies have been degraded by deep penetration of surface waters of poor quality; by sea water intrusion; by subsurface inflow from semipermeable formations containing waters of poor quality; and by ingress of poor quality semiperched waters by slow percolation through tight materials underlying the water body, movement around discontinuous clay lenses which may serve to support the zone, and interconnection of aquifers through broken casings, improperly constructed or abandoned wells or through wells with gravel envelopes.

9. Basins where proper well construction and abandonment is considered important include Santa Paula, Oxnard Plain, Pleasant Valley, Mound, Simi, and East and West Los Posas Basins.

10. Ground waters are subject to deterioration by the disposal of sewage to cesspools, septic tanks, and sewage treatment plants with land disposal of final effluent. With respect to sewage treatment plants with land disposal of effluent, available data do not indicate any deterioration of ground water from discharges of the Saticoy Sanitary District, and the Camarillo State Hospital. However, there is evidence to indicate localized deterioration of ground water as the result of discharges from the Santa Paula and Ojai sewage treatment plants.

11. The principal industrial wastes which may impair or pollute surface and ground waters in Ventura County include discharges to land by the oil industry, citrus packing plants, and walnut packing plants. Water softener regeneration wastes, which are not restricted to industrial sources, and disposal to dump sites may also be sources of impairment. Waste discharges from many of these sources have been the subject of investigations by the Department of Water Resources and the Los Angeles Regional Water Pollution Control Board (No. 4). In many instances, measures have

been taken to correct those discharge practices which would otherwise have an unfavorable effect on the quality of water supplies in Ventura County.

12. Excessive pumping from the Oxnard aquifer of the Oxnard Plain Basin has resulted in the depression of piezometric levels below sea level in portions of the basin and the intrusion of sea water into the aquifer at Point Mugu and Port Hueneme. In the summer of 1957, the area underlain by sea water amounted to about 1550 acres. The rate of saline encroachment during the period October, 1951, to summer, 1957, averaged approximately 1200 feet per year in a northerly direction and 700 feet per year in an easterly direction in the vicinity of Port Hueneme and Oxnard.

13. It is feasible, from an engineering standpoint, to reclaim water from sewage discharged to the ocean by the City of Oxnard for cooling and other industrial purposes. In view of the poor mineral quality of the effluent, a major industrial market for direct use would have to be found before reclamation of water from the Oxnard sewage treatment plant effluent would be feasible.

14. The development of surface water supplies by the Santa Felicia Project on the Santa Clara River system and the Casitas Project on the Ventura River system will have a minor but beneficial effect on the mineral quality of surface and ground waters of the respective river systems.

15. In general, Colorado River water is similar in character and as good in quality as many of the ground waters presently found in Ventura County. Consequently, if Colorado River water were imported and used in Ventura County, it would have no detrimental effect on quality of local water provided favorable salt balance conditions are maintained by the importation of adequate quantities of water to assure the leaching and removal of salts from the several ground water basin systems.

16. Northern California water is of excellent mineral quality and of similar cation character to the water supplies of Ventura County. Importation of water from this source will have a beneficial effect on mineral quality if properly mixed with local supplies.

Recommendations

1. That in the operation of surface and ground water reservoirs in Ventura County, due consideration be given to the problem of salt balance so that the mineral quality of ground water supplies will be maintained and improved where necessary.

2. That the current programs of the responsible local agencies to halt the intrusion of sea water into the fresh water aquifers underlying the Oxnard Plain be fully supported and implemented as rapidly as possible.

3. That water well construction standards and abandonment procedures designed to prevent pollution and degradation of ground water by the interconnection of aquifers, be adopted and enforced.

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

AREA OF INVESTIGATION

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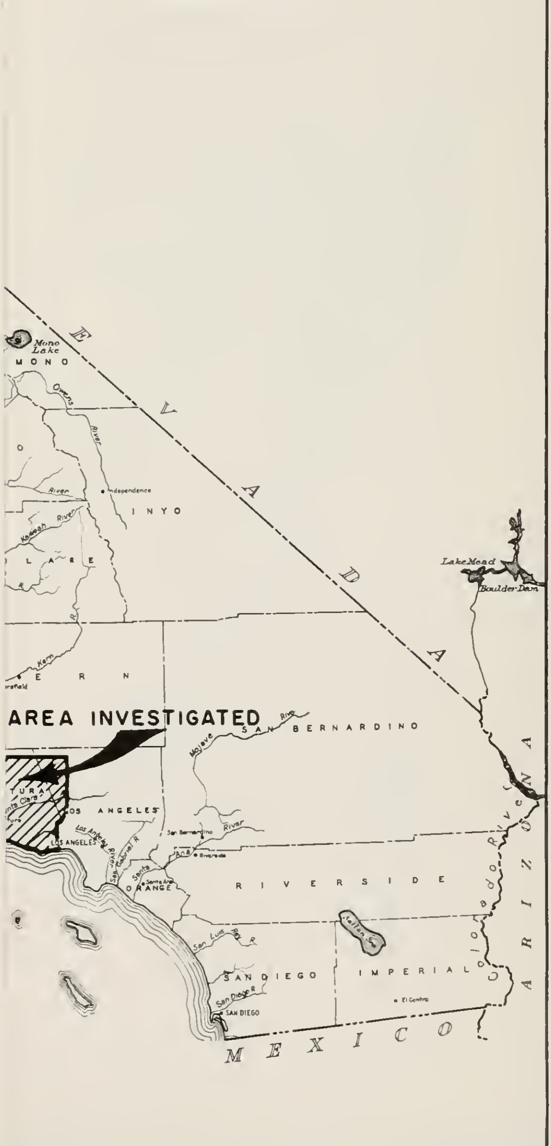

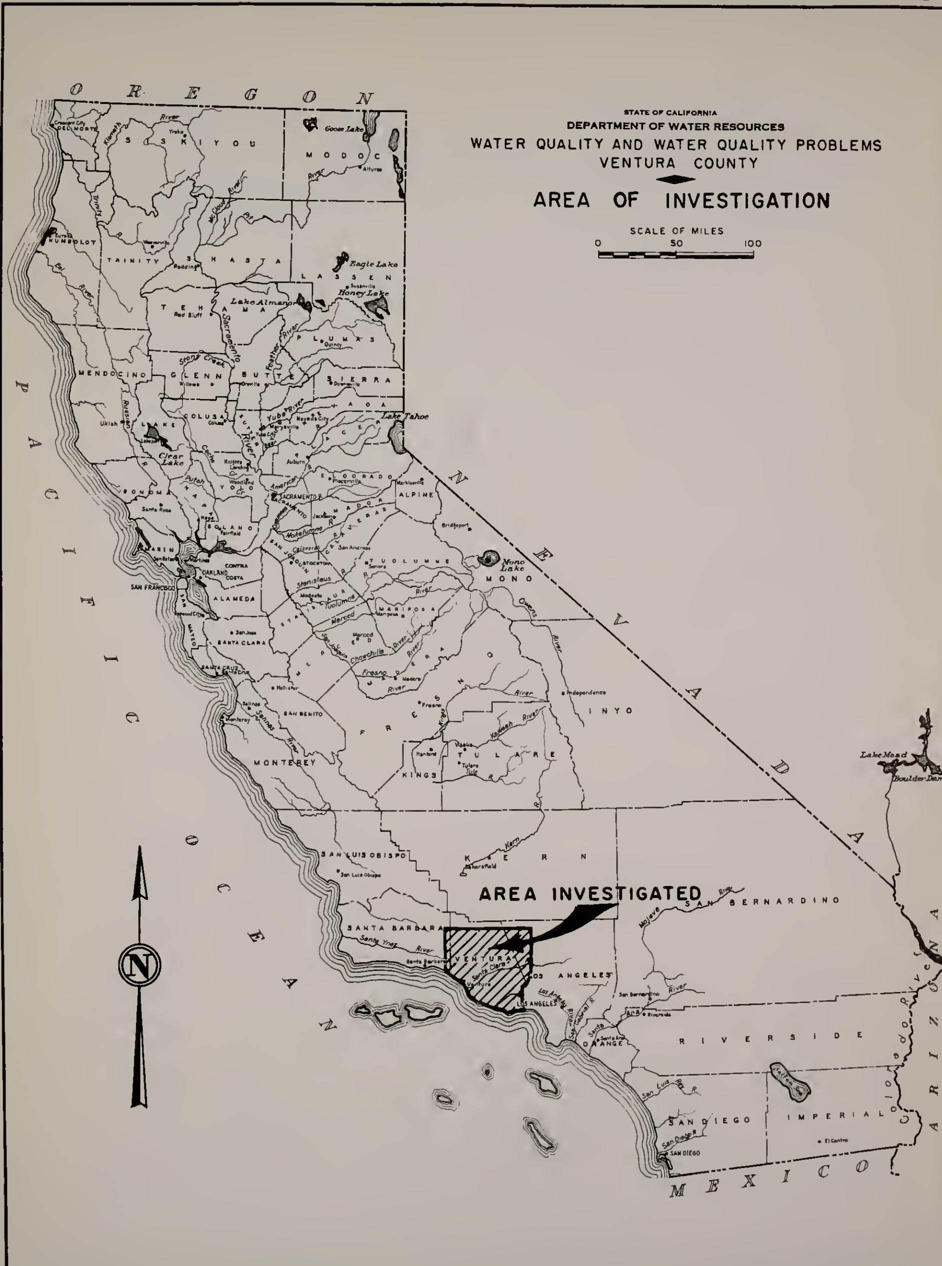
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY
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TULARE
KINGS
FRESNO
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SOLANO
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SANTA CRUZ
MARIPOSA
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TUOLUMNE
Lake Tahoe
Mono Lake
Clear Lake
Eagle Lake
Honey Lake
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Lake Mead
Boulder Dam
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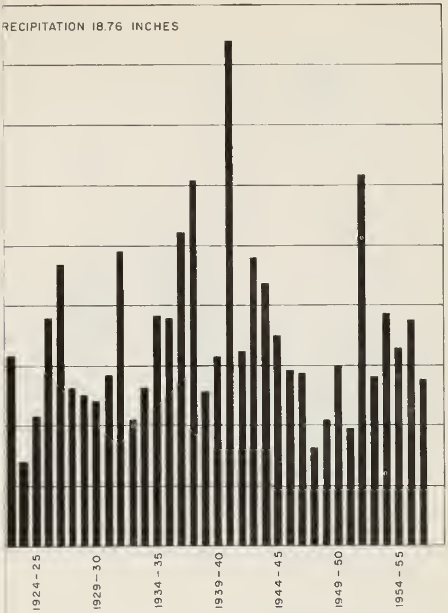
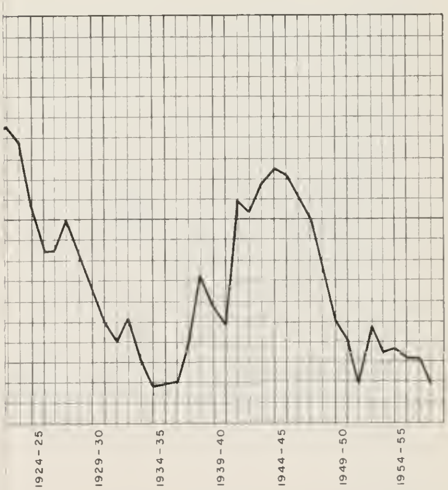


PRECIPITATION AT OJAI



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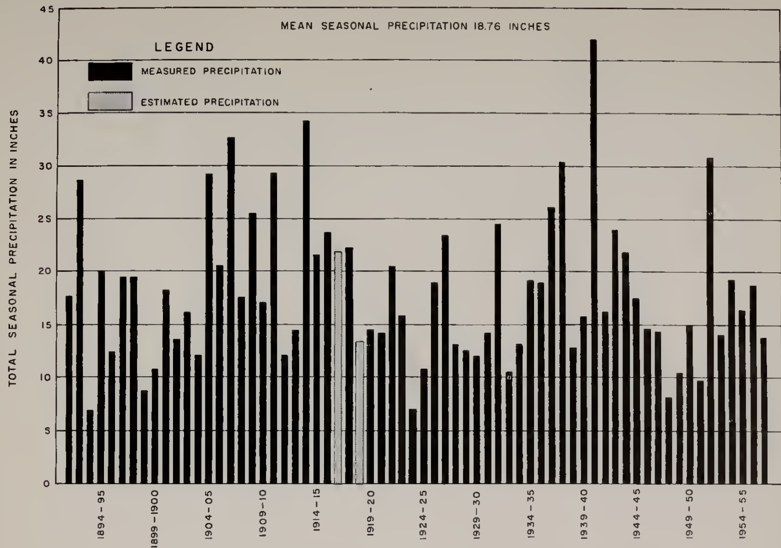
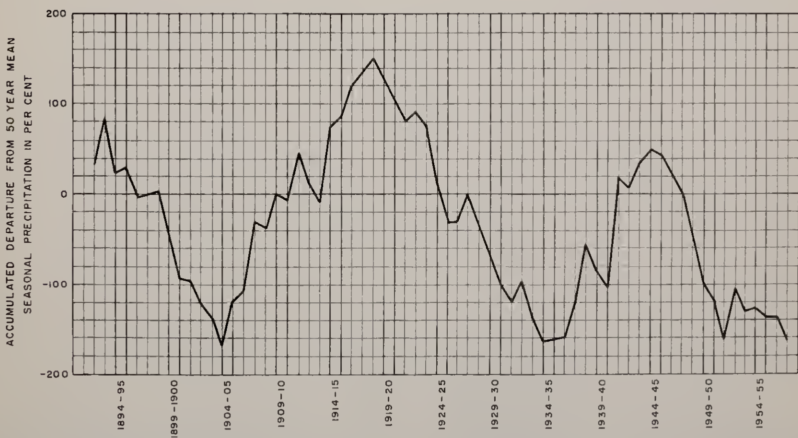
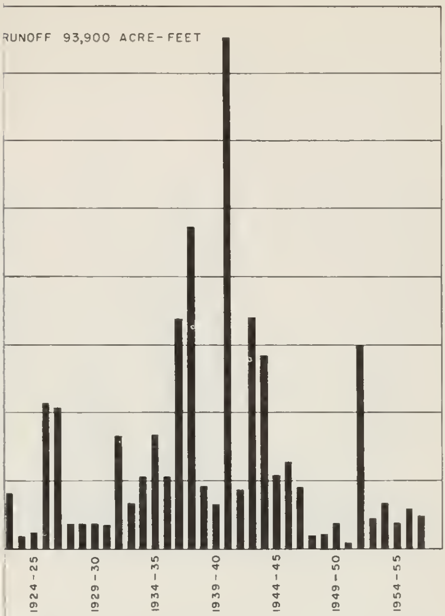


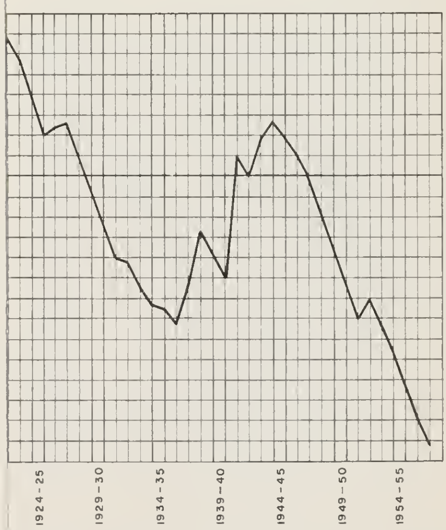
RECORDED SEASONAL PRECIPITATION AT OJAI



ACCUMULATED DEPARTURE FROM MEAN SEASONAL PRECIPITATION AT OJAI



IOFF OF SESPE CREEK NEAR FILLMORE



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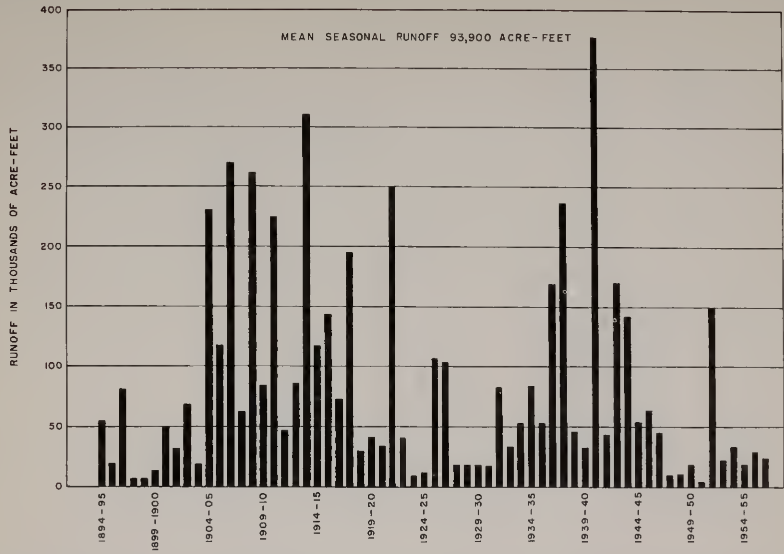

ESTIMATED SEASONAL NATURAL RUNOFF OF SESPE CREEK NEAR FILLMORE

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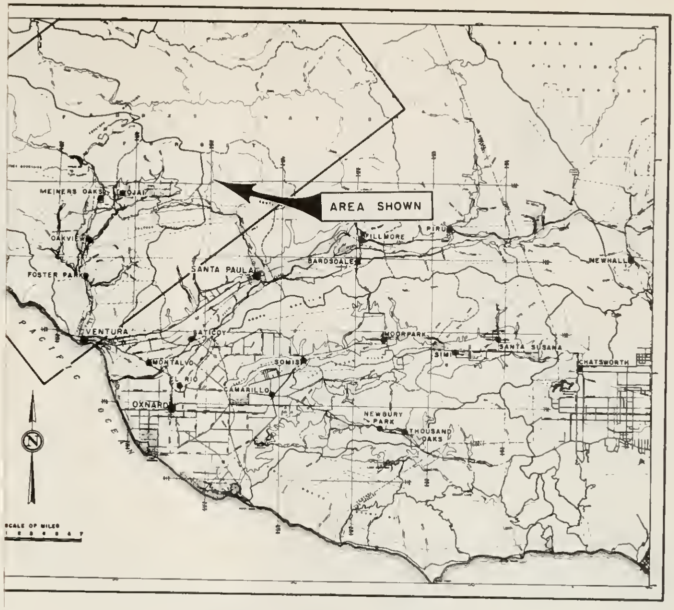
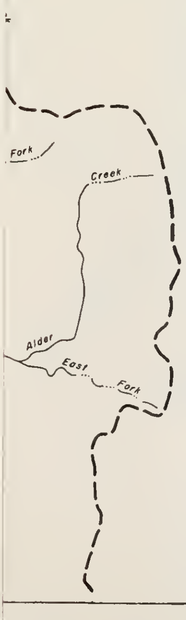
NATURAL RUNOFF OF SESPE CREEK NEAR FILLMORE



LOCATION MAP



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- MAJOR DRAINAGE BOUNDARY
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- ▲ SURFACE WATER SAMPLING STATION
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STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

LOCATION OF SURFACE
AND
DRAINAGE-WATER SAMPLING STATIONS
1958

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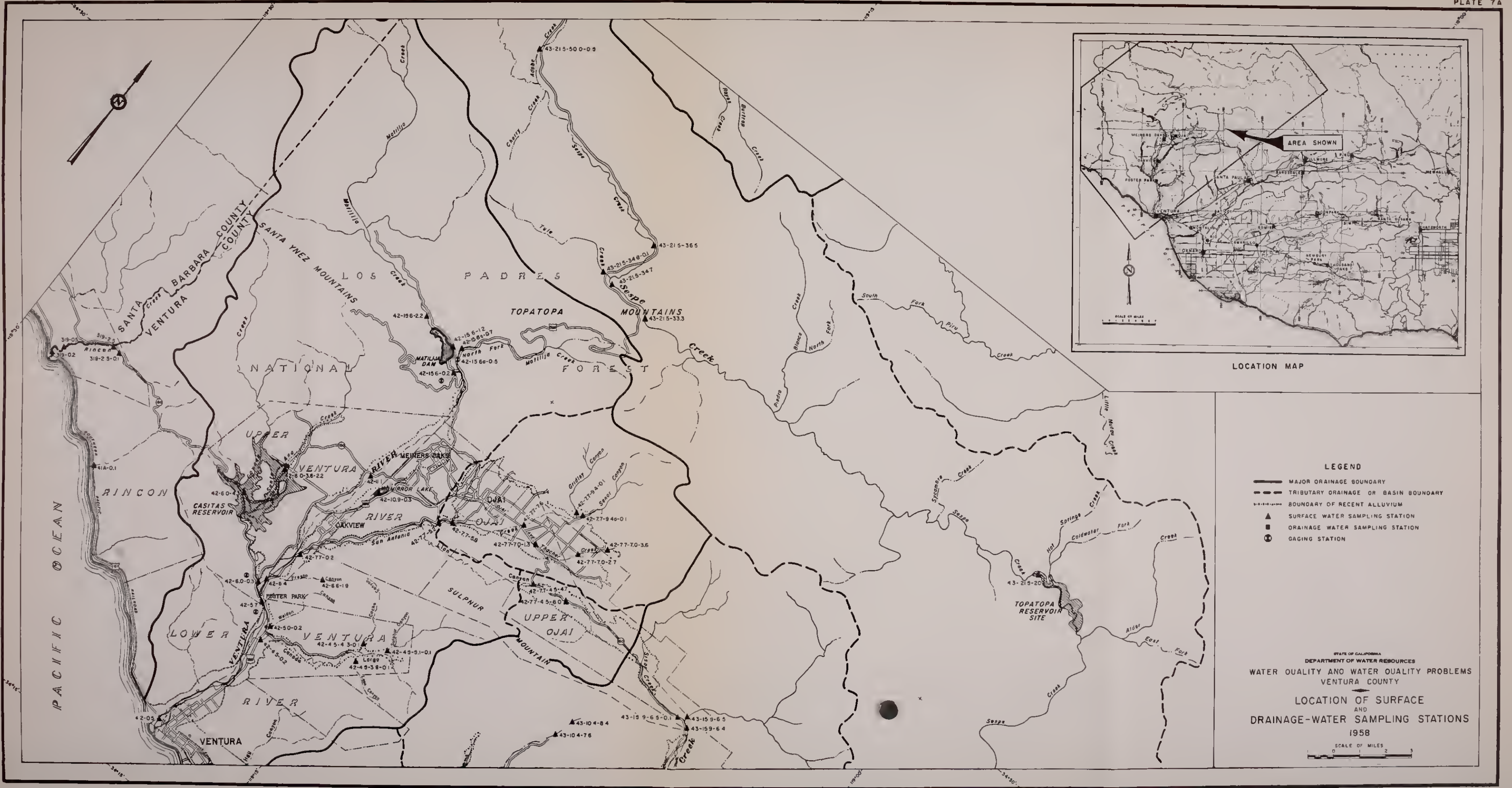

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VENTURA COUNTY

LOCATION OF SURFACE AND DRAINAGE-WATER SAMPLING STATIONS
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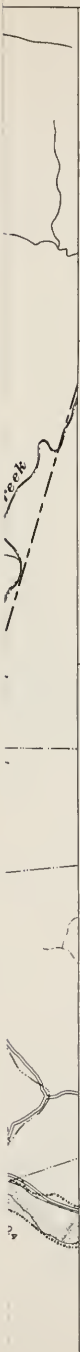

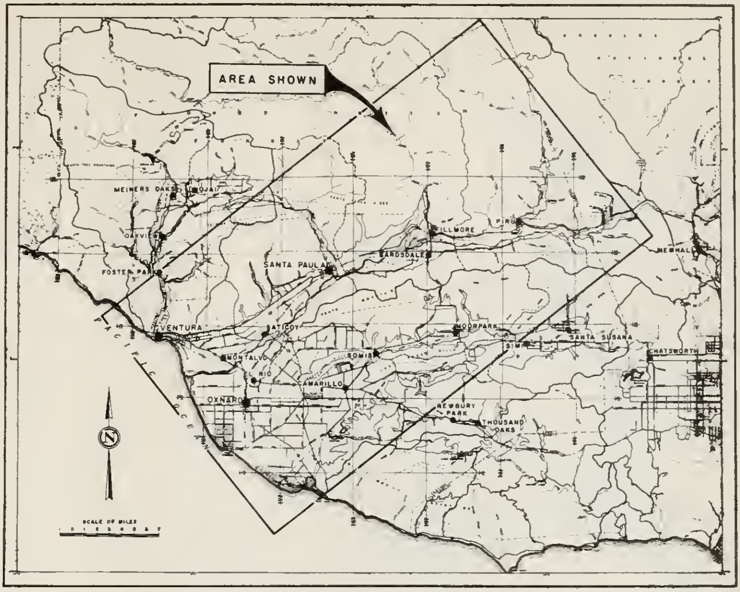

LOCATION MAP

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LOCATION OF SURFACE
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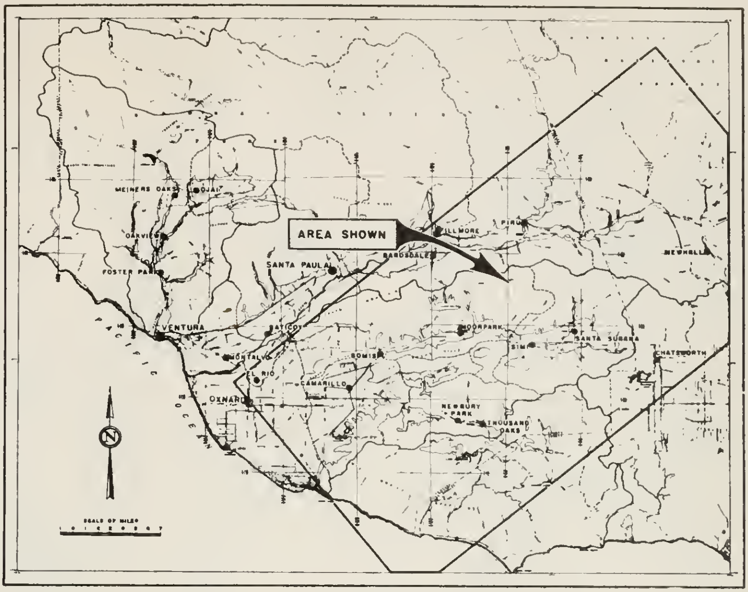

LOCATION MAP

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VENTURA COUNTY

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SANTA ROSA
TIERRA REJADA
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NEWBURY PARK
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SANTA SUSANA
SIMI HILLS
POINT MUGU
SANTA MONICA MOUNTAINS
PACIFIC OCEAN
LAKE SHERWOOD
MALIBU LAKE
CHATSWORTH
CHATSWORTH RES
OAK RIDGE
SANTA CLARA RIVER
PIRU
SANTA FELICIA RESERVOIR
ANGELES NATIONAL FOREST
NEWHALL
VENTURA COUNTY
LOS ANGELES COUNTY
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WATER QUALITY AND WATER QUALITY PROBLEMS
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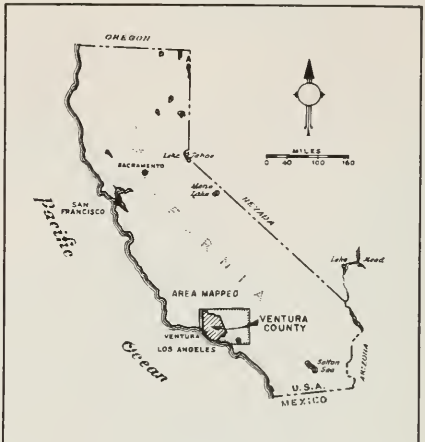

LOCATION MAP

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

AREAL GEOLOGY

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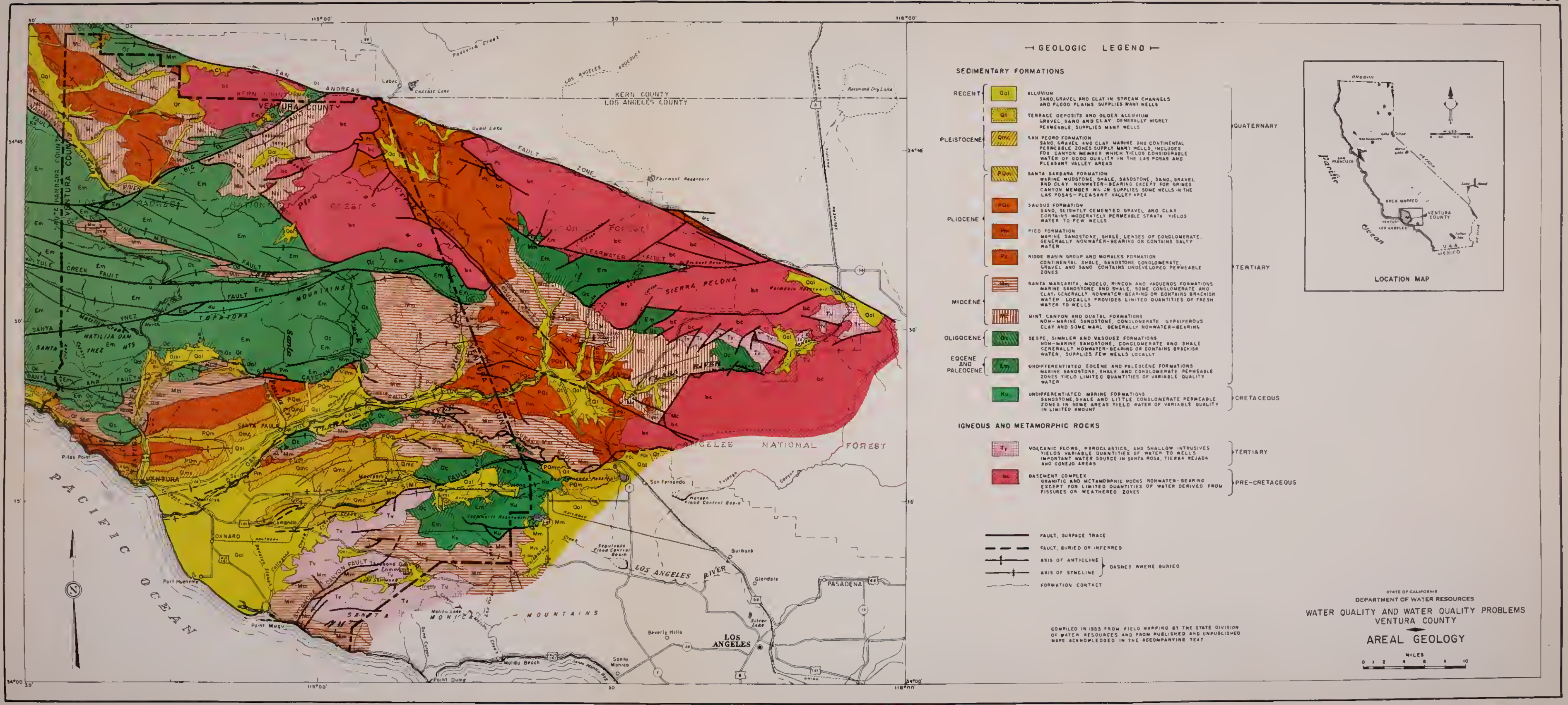
PLATE 8


GEOLOGIC LEGEND
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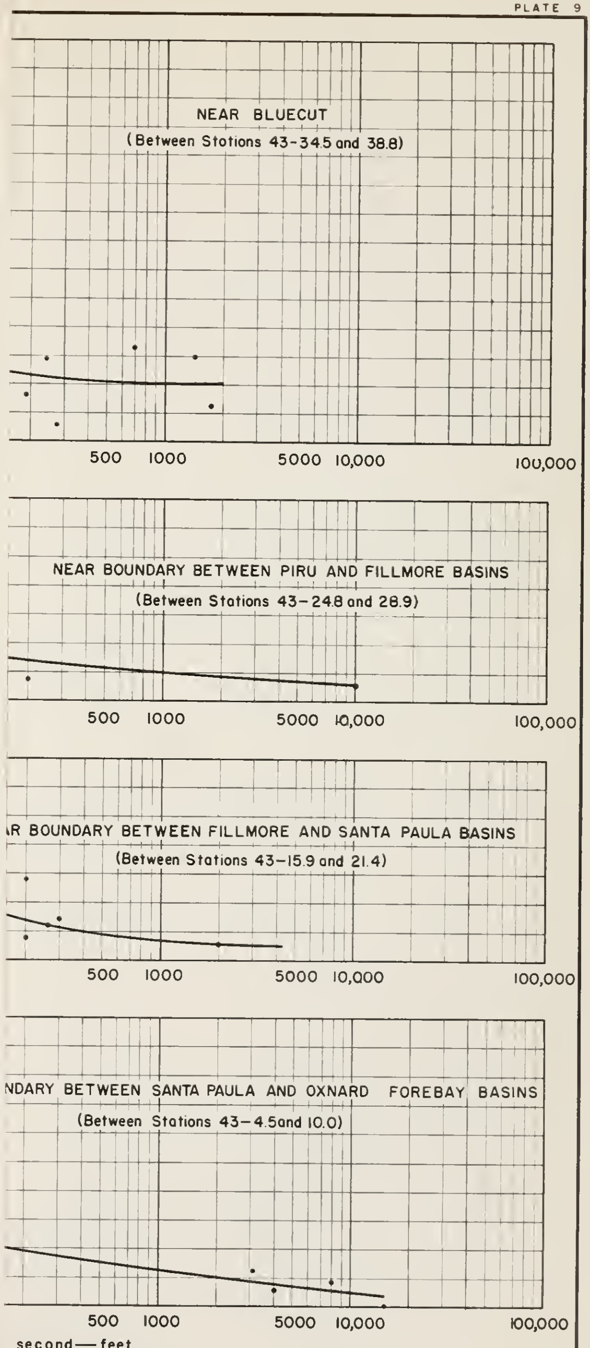
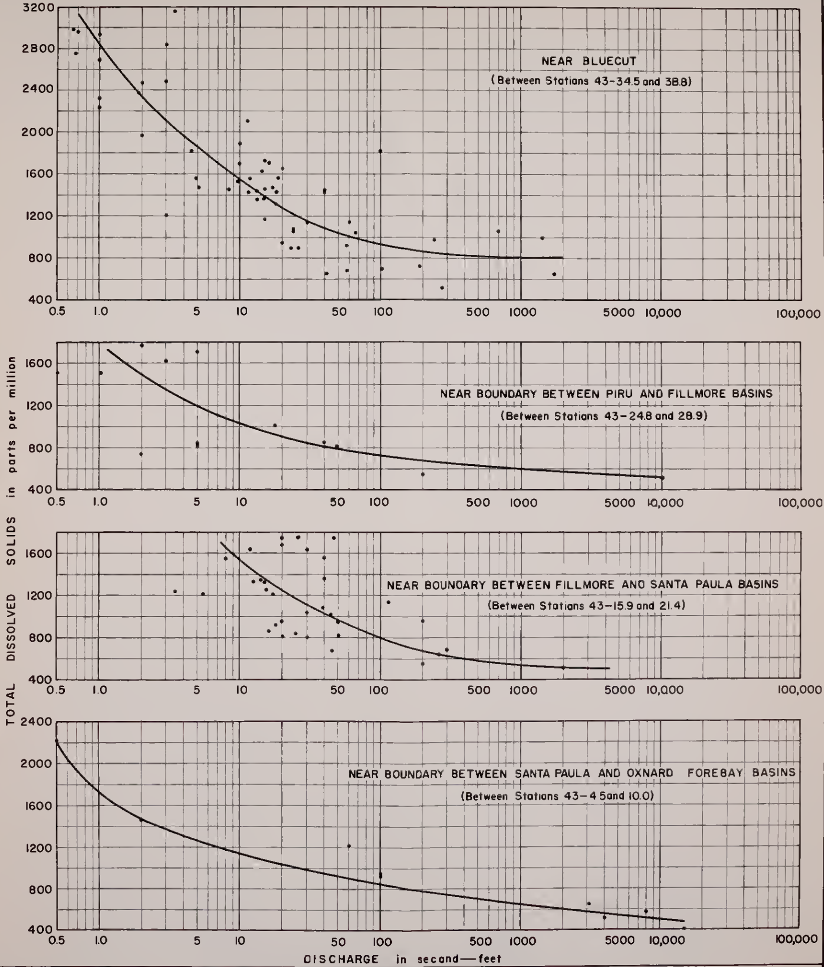
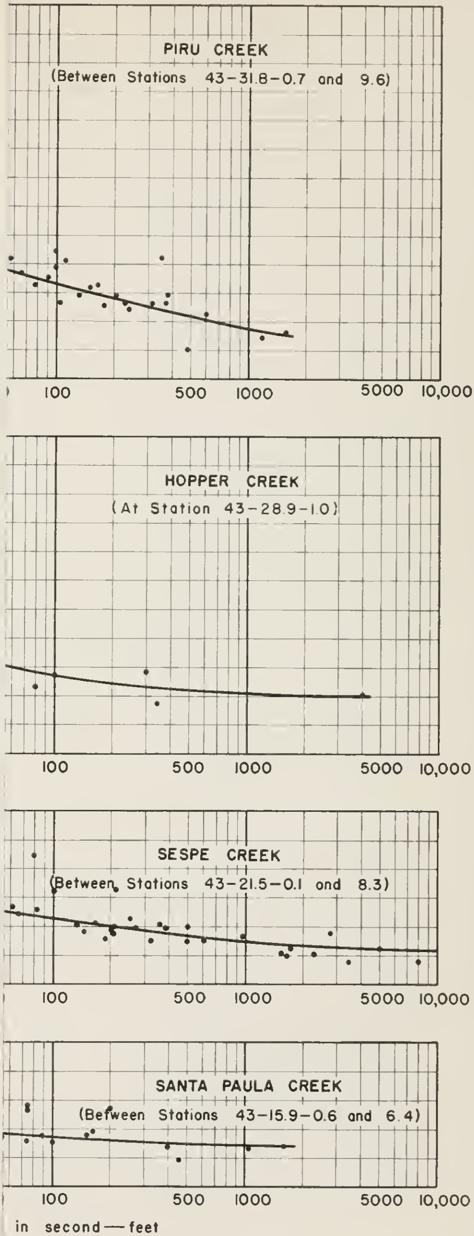
SAND, GRAVEL AND CLAY IN STREAM CHANNELS AND FLOOD PLAINS SUPPLIES MANY WELLS
Qt
TERRACE DEPOSITS AND OLDER ALLUVIUM
GRAVEL, SAND AND CLAY GENERALLY HIGHLY PERMEABLE, SUPPLIES MANY WELLS
PLEISTOCENE
Qmc
SAN PEDRO FORMATION
SAND, GRAVEL AND CLAY MARINE AND CONTINENTAL PERMEABLE ZONES SUPPLY MANY WELLS, INCLUDES FOX CANYON MEMBER WHICH YIELDS CONSIDERABLE WATER OF GOOD QUALITY IN THE LAS POSAS AND PLEASANT VALLEY AREAS
QUATERNARY
PQm
SANTA BARBARA FORMATION
MARINE MUDSTONE, SHALE, SANDSTONE, SAND, GRAVEL AND CLAY NONWATER-BEARING EXCEPT FOR GRIMES CANYON MEMBER WHICH SUPPLIES SOME WELLS IN THE LAS POSAS-PLEASANT VALLEY AREA
PLIOCENE
PQc
SAUGUS FORMATION
SAND, SLIGHTLY CEMENTED GRAVEL AND CLAY CONTAINS MODERATELY PERMEABLE STRATA YIELDS WATER TO FEW WELLS
Pm
PICO FORMATION
MARINE SANDSTONE, SHALE, LENSES OF CONGLOMERATE, GENERALLY NONWATER-BEARING OR CONTAINS SALTY WATER
Pc
RIDGE BASIN GROUP AND MORALES FORMATION
CONTINENTAL SHALE, SANDSTONE CONGLOMERATE, GRAVEL AND SAND CONTAINS UNDEVELOPED PERMEABLE ZONES
MIOCENE
Mm
SANTA MARGARITA, MODELO, RINCON AND VAQUEROS FORMATIONS
MARINE SANDSTONE AND SHALE, SOME CONGLOMERATE AND CLAY. GENERALLY NONWATER-BEARING OR CONTAINS BRACKISH WATER LOCALLY PROVIDES LIMITED QUANTITIES OF FRESH WATER TO WELLS
Mc
MINT CANYON AND QUATAL FORMATIONS
NON-MARINE SANDSTONE, CONGLOMERATE GYPSIFEROUS CLAY AND SOME MARL GENERALLY NONWATER-BEARING
TERTIARY
OLIGOCENE
Oc
SESPE, SIMMLER AND VASQUEZ FORMATIONS
NON-MARINE SANDSTONE, CONGLOMERATE AND SHALE GENERALLY NONWATER-BEARING OR CONTAINS BRACKISH WATER, SUPPLIES FEW WELLS LOCALLY
EOCENE AND PALEOCENE
Em
UNDIFFERENTIATED EOCENE AND PALEOCENE FORMATIONS
MARINE SANDSTONE, SHALE AND CONGLOMERATE PERMEABLE ZONES YIELD LIMITED QUANTITIES OF VARIABLE QUALITY WATER
Ku
UNDIFFERENTIATED MARINE FORMATIONS
SANDSTONE, SHALE AND LITTLE CONGLOMERATE PERMEABLE ZONES IN SOME AREAS YIELD WATER OF VARIABLE QUALITY IN LIMITED AMOUNT
CRETACEOUS
IGNEOUS AND METAMORPHIC ROCKS
Tv
VOLCANIC FLOWS, PYROCLASTICS, AND SHALLOW INTRUSIVES YIELDS VARIABLE QUANTITIES OF WATER TO WELLS IMPORTANT WATER SOURCE IN SANTA ROSA, TIERRA REJADA AND CONEJO AREAS
TERTIARY
bc
BASEMENT COMPLEX
GRANITIC AND METAMORPHIC ROCKS NONWATER-BEARING EXCEPT FOR LIMITED QUANTITIES OF WATER DERIVED FROM FISSURES OR WEATHERED ZONES
PRE-CRETACEOUS
FAULT, SURFACE TRACE
FAULT, BURIED OR INFERRED
AXIS OF ANTICLINE
AXIS OF SYNCLINE
DASHED WHERE BURIED
FORMATION CONTACT
LOCATION MAP
Pacific Ocean
VENTURA COUNTY
AREA MAPPED
COMPILED IN 1953 FROM FIELD MAPPING BY THE STATE DIVISION OF WATER RESOURCES AND FROM PUBLISHED AND UNPUBLISHED MAPS ACKNOWLEDGED IN THE ACCOMPANYING TEXT
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY
AREAL GEOLOGY
MILES
0 1 2 4 6 8 10
KERN COUNTY
LOS ANGELES COUNTY
VENTURA COUNTY
SAN ANDREAS FAULT ZONE
ANGELES NATIONAL FOREST
SIERRA PELONA
PACIFIC OCEAN
VENTURA
OXNARD
Port Hueneme
Point Mugu
Pitas Point
San Fernando
Burbank
Glendale
PASADENA
LOS ANGELES
Beverly Hills
Santa Monica
LOS ANGELES RIVER
SANTA MONICA MOUNTAINS
TOPATOPA
Malibu Beach
Point Dume



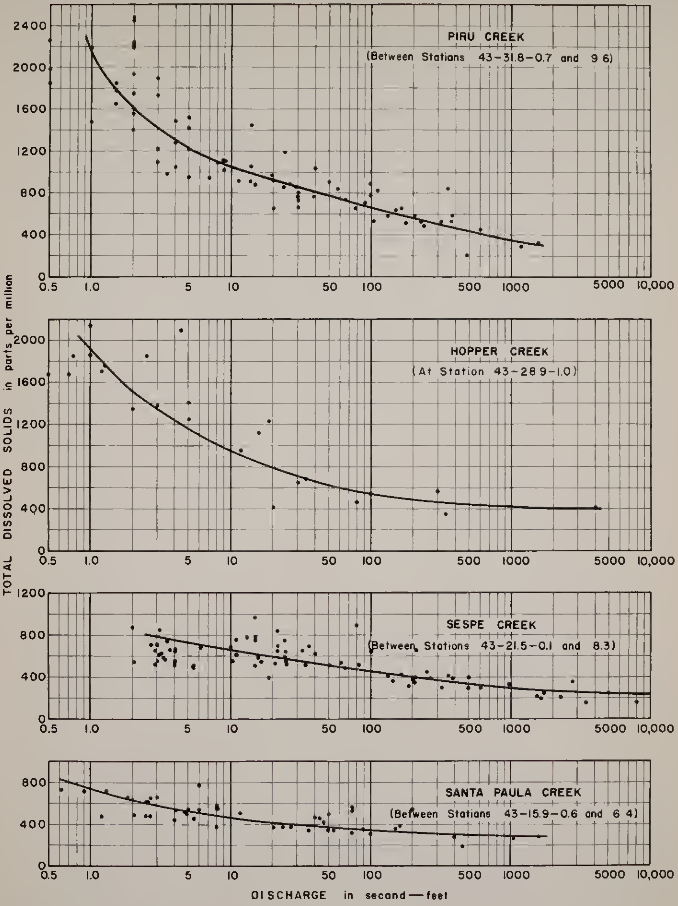
'WEEN DISCHARGE
ICENTRATION IN SANTA CLARA RIVER



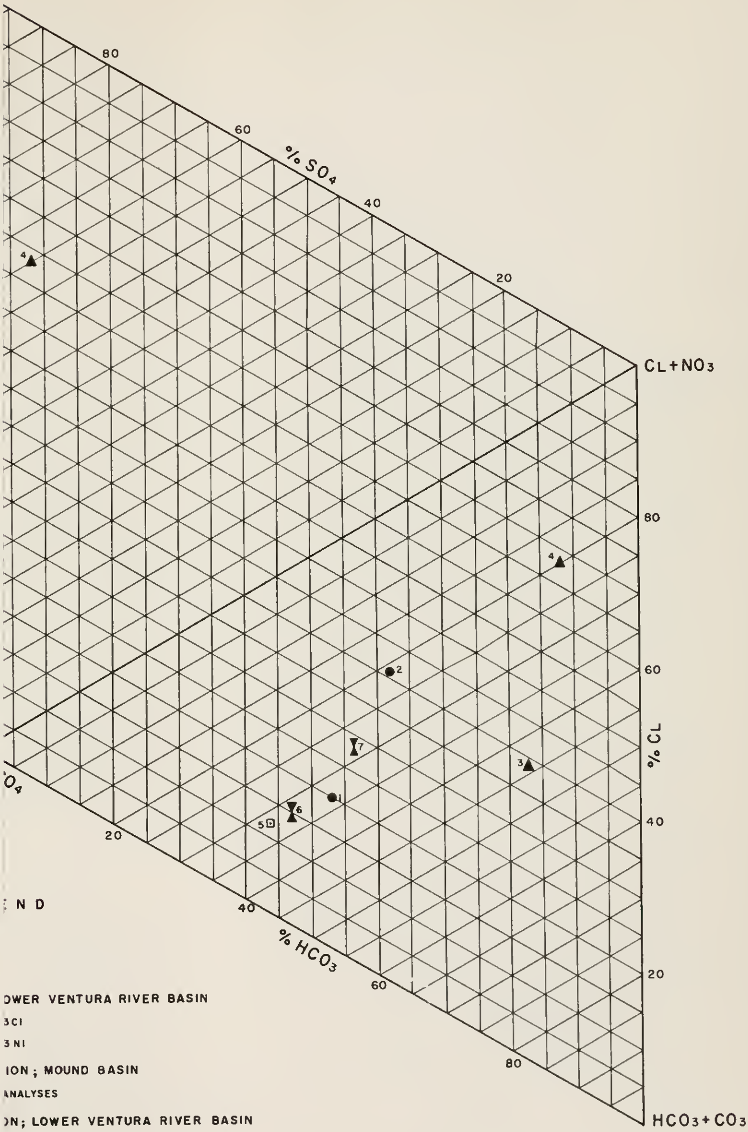
RELATIONSHIP BETWEEN DISCHARGE
AND TOTAL DISSOLVED SOLIDS CONCENTRATION IN SANTA CLARA RIVER



TWEEN DISCHARGE
SOLIDS CONCENTRATION
TO THE SANTA CLARA RIVER



RELATIONSHIP BETWEEN DISCHARGE AND TOTAL DISSOLVED SOLIDS CONCENTRATION FOR PRINCIPAL TRIBUTARIES TO THE SANTA CLARA RIVER



E N D

OWER VENTURA RIVER BASIN

3CI

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ION; MOUND BASIN

ANALYSES

ON; LOWER VENTURA RIVER BASIN

LI

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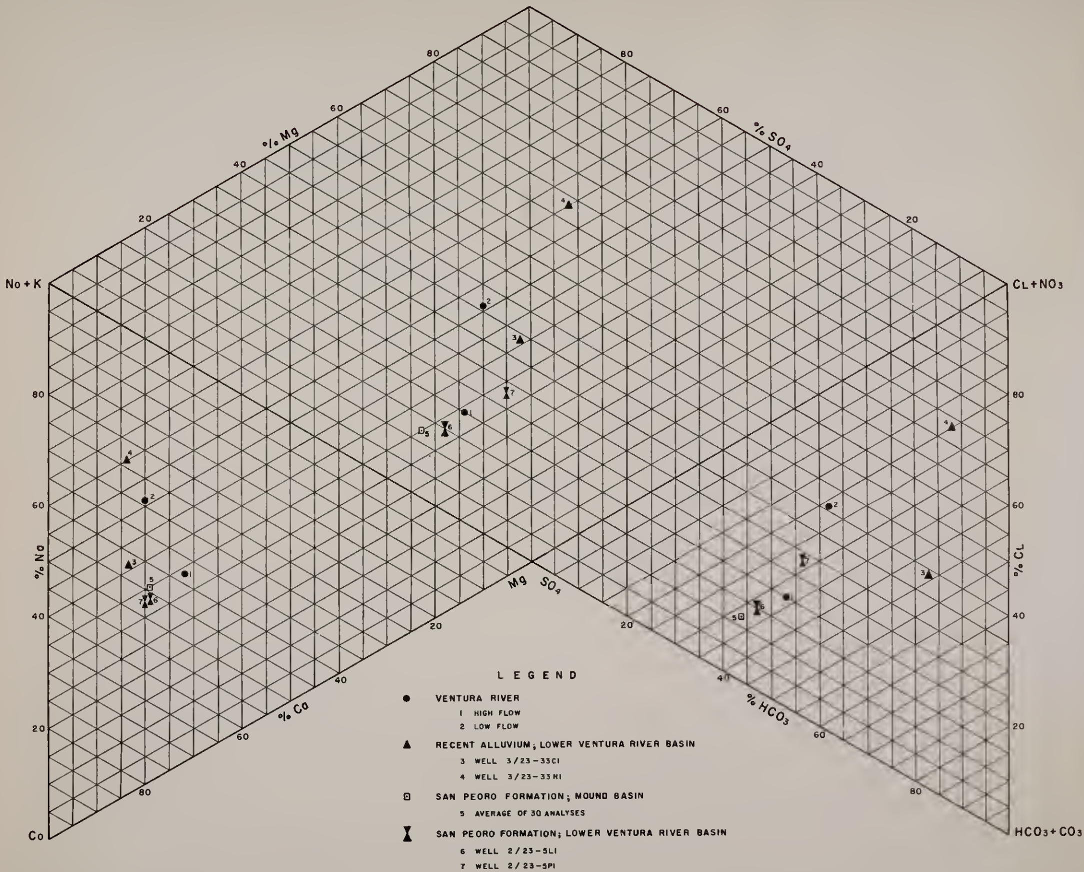
R OF GROUND WATERS

ENTURA RIVER BASINS



MINERAL CHARACTER OF GROUND WATERS

MOUND AND LOWER VENTURA RIVER BASINS

VENTURA RIVER DRAINAGE SYSTEM

	Ojai Sewage Treatment Plant
	Culligan Soft Water Service
	Ojai Orange Association
1	Ventura County Ojai Dump - Class II
2	Ventura Citrus Association
3	Cardox Corporation
4	Shell Chemical Corporation
5	Wason Hog Ranch
6	Hopkins Hog Ranch

SANTA CLARA RIVER DRAINAGE SYSTEM

	Saticoy Sewage Treatment Plant
	Culbertson Lemon Association
	City of Santa Paula Sewage Treatment Plant
	Mupu Citrus Association
	American Fruit Growers
	Santa Paula Citrus Fruit Association
	Santa Paula Orange Association
	Briggs Lemon Association
	Santa Paula Walnut Association
	Master Craft Laundry
	Culligan Soft Water Service
7	Piru Citrus Association
8	Ventura County Piru Dump - Class II
9	Teague - McKevett Association
10	Ventura County Citrus Association
11	Fillmore Citrus Association No. 1
12	Fillmore Citrus Association No. 2
13	Fillmore Lemon Association
14	Ventura County Orange and Lemon Association
15	Rancho Sespe
16	City of Fillmore Dump - Class II
17	Limoneira Fruit Growers
18	Upton and Williams Incorporated
19	Saticoy Walnut Growers Association
20	City of Santa Paula Dump - Class II
21	Saticoy Lemon Association
22	Ventura County Orange and Lemon Association
23	Ventura Pacific Company
24	Ventura County Citrus Association
25	Ventura County Saticoy Dump - Class II
26	City of Ventura Dump - Class I
27	California Vegetable Concentrates Inc.
28	Vactron Corporation
29	Ventura County Oxnard Dump - Class I
30	City of Oxnard Dump - Class I
31	Culligan Soft Water Service - El Rio
32	Camarillo Citrus Association
33	Walnut Growers Association Ventura County
34	Ventura County Camarillo Dump - Class II

CALLEGUAS CREEK DRAINAGE SYSTEM

35	Tapo Citrus Association
36	Simi Valley Walnut Growers Association
37	Ventura County Santa Susana Dump - Class II
38	Moorpark Walnut Growers Association
39	Ventura County Moorpark Dump - Class II
40	Ventura County Somis Dump - Class II
41	Paige Turkey Ranch
42	Butchke and Company Ranch
43	Ventura County Thousand Oaks Dump - Class II

LEGEND

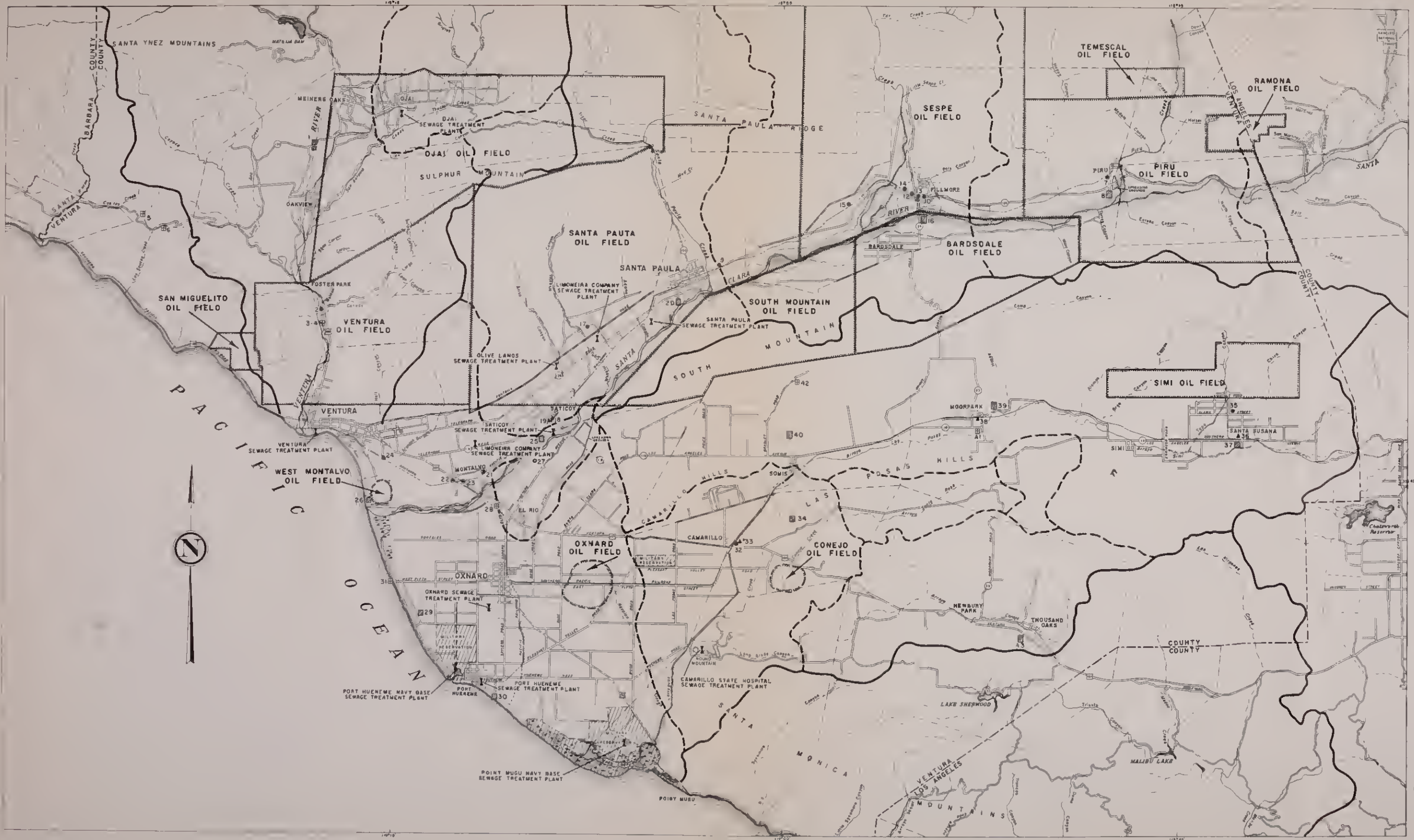
- MAJOR DRAINAGE BOUNDARY
- TRIBUTARY DRAINAGE OR BASIN BOUNDARY
- DUMPSITE
- OIL FIELD BOUNDARY
- OIL FIELD BOUNDARY (DASHED WHERE UNDEFINED)
- CITRUS PROCESSING
- VEGETABLE PROCESSING
- WALNUT PROCESSING
- SEWAGE TREATMENT PLANT
- MISCELLANEOUS DISPOSAL

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

OIL FIELDS AND WASTE DISPOSAL LOCATIONS
1954

SCALE OF MILES



VENTURA RIVER DRAINAGE SYSTEM

Ojai Sewage Treatment Plant
- Culligan Soft Water Service
- Ojai Orange Association

1 Ventura County Ojai Dump - Class II
2 Ventura Citrus Association
3 Cardox Corporation
4 Shell Chemical Corporation
5 Wason Hog Ranch
6 Hopkins Hog Ranch

SANTA CLARA RIVER DRAINAGE SYSTEM

Saticoy Sewage Treatment Plant
- Culbertson Lemon Association

City of Santa Paula Sewage Treatment Plant
- Mupu Citrus Association
- American Fruit Growers
- Santa Paula Citrus Fruit Association
- Santa Paula Orange Association
- Briggs Lemon Association
- Santa Paula Walnut Association
- Master Craft Laundry
- Culligan Soft Water Service

7 Piru Citrus Association
8 Ventura County Piru Dump - Class II
9 Teague - McKevett Association
10 Ventura County Citrus Association
11 Fillmore Citrus Association No. 1
12 Fillmore Citrus Association No. 2
13 Fillmore Lemon Association
14 Ventura County Orange and Lemon Association
15 Rancho Sespe
16 City of Fillmore Dump - Class II
17 Limoneira Fruit Growers
18 Upton and Williams Incorporated
19 Saticoy Walnut Growers Association
20 City of Santa Paula Dump - Class II
21 Saticoy Lemon Association
22 Ventura County Orange and Lemon Association
23 Ventura Pacific Company
24 Ventura County Citrus Association
25 Ventura County Saticoy Dump - Class II
26 City of Ventura Dump - Class I
27 California Vegetable Concentrates Inc.
28 Vactron Corporation
29 Ventura County Oxnard Dump - Class I
30 City of Oxnard Dump - Class I
31 Culligan Soft Water Service - El Rio
32 Camarillo Citrus Association
33 Walnut Growers Association Ventura County
34 Ventura County Camarillo Dump - Class II

CALLEGUAS CREEK DRAINAGE SYSTEM

35 Tapo Citrus Association
36 Simi Valley Walnut Growers Association
37 Ventura County Santa Susana Dump - Class II
38 Moorpark Walnut Growers Association
39 Ventura County Moorpark Dump - Class II
40 Ventura County Somis Dump - Class II
41 Faige Turkey Ranch
42 Butchke and Company Ranch
43 Ventura County Thousand Oaks Dump - Class II

LEGEND

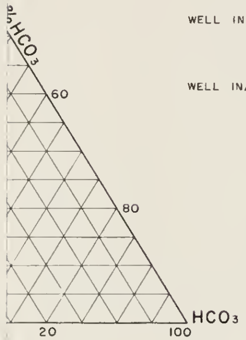
- MAJOR DRAINAGE BOUNDARY
- TRIBUTARY DRAINAGE OR BASIN BOUNDARY
- DUMPSITE
- OIL FIELD BOUNDARY
- OIL FIELD BOUNDARY (DASHED WHERE UNDEFINED)
- CITRUS PROCESSING
- VEGETABLE PROCESSING
- WALNUT PROCESSING
- SEWAGE TREATMENT PLANT
- MISCELLANEOUS DISPOSAL

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

OIL FIELDS AND WASTE DISPOSAL LOCATIONS
1954

SCALE OF MILES

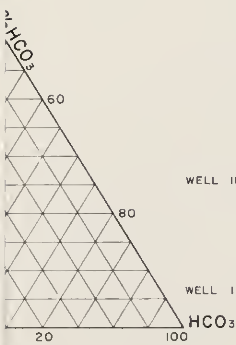


	POINT NUMBER	DATE SAMPLED	
CHART A			
WELL IN/22W-20NI	NI	4-3-31	
	N2	9-4-31	
	N3	6-3-32	
	N4	3-3-33	
	•N5	7-21-36	
	N6	12-20-39	
	N7	9-27-45	
	N8	4-30-48	
	N9	7-16-48	
	NIO	10-7-49	
	NII	10-8-49	
	NI2	3-23-50	
WELL IN/22W-21LI	LI	9-30-52	
	L2	8-25-53	
	L3	6-27-54	
	L4	4-16-58	
WELL IN/22W-28DI	DI	6-5-31	
	D2	6-9-31	
	D3	6-26-31	(Low Tide)
	D4	6-26-31	(High Tide)
	D5	6-3-32	
	D6	3-3-33	

LEGEND

- ● WELLS PERFORATED IN OXNARD AQUIFER ONLY
- ▲ GROUND WATER DRAINAGE
- × SEA WATER

			LOCATION
CHART A AND B			
SEA WATER	S.W	5-1-53	
DRAINAGE DITCHES			
	1	6-4-52	IN/22 W-7J
	2	1-14-53	IN/22 W-7J
	3	1-14-53	IN/22 W-18A
	4	8-4-52	IN/22 W-18B
	5	8-4-52	IN/22 W-21B
	6	6-6-52	IN/22 W-21F
	7	1-14-53	IN/22 W-21F
	8	8-4-52	IN/22 W-21D
	9	6-6-52	IN/22 W-27C
	10	8-4-52	IN/22 W-27C
	11	1-14-53	IN/22 W-27C



	POINT NUMBER	DATE SAMPLED
CHART B		
WELL IN/22W-29A2	AI	3-31-47
	A2	5-5-49
	A3	5-25-51
	A4	7-25-51
	A5	9-4-51
	A6	11-27-51
	A7	3-28-52
	A8	6-6-52
WELL IS/21W-8HI	GI	9-5-31
	G2	1-28-32
	G3	6-3-32
	G4	3-3-33

R OF GROUND WATERS

ENEME AND POINT MUGU

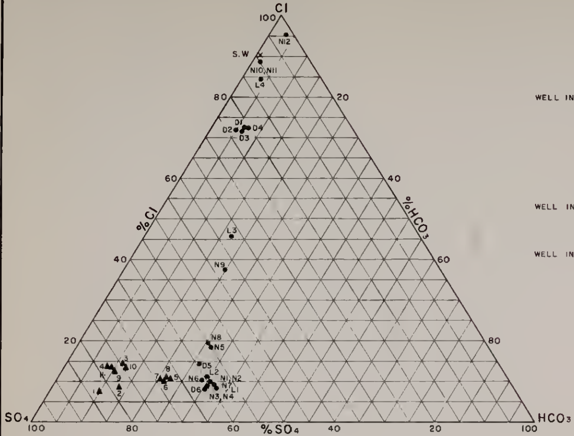


CHART A CLASSIFICATION OF ANION CONSTITUENTS

	POINT NUMBER	DATE SAMPLED	
	CHART A		
WELL 1N/22W-20N1	N1	4-3-31	
	N2	9-4-31	
	N3	6-3-32	
	N4	3-3-33	
	•N5	7-21-36	
	N6	12-20-39	
	N7	9-27-45	
	N8	4-30-48	
	N9	7-16-48	
	N10	10-7-49	
	N11	10-8-49	
	N12	3-23-50	
WELL 1N/22W-21L1	L1	9-30-52	
	L2	8-25-53	
	L3	6-27-54	
	L4	4-16-56	
WELL 1N/22W-28D1	D1	6-5-31	
	D2	6-9-31	
	D3	6-26-31	(Low Tide)
	D4	6-26-31	(High Tide)
	D5	6-3-32	
	D6	3-3-33	

LEGEND

- ● WELLS PERFORATED IN OXNARD AQUIFER ONLY
- ▲ GROUND WATER DRAINAGE
- × SEA WATER

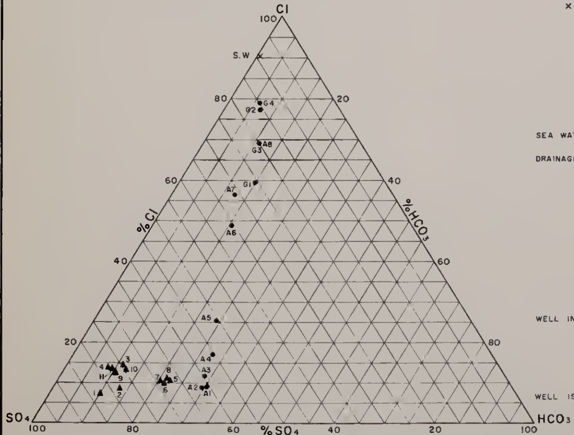
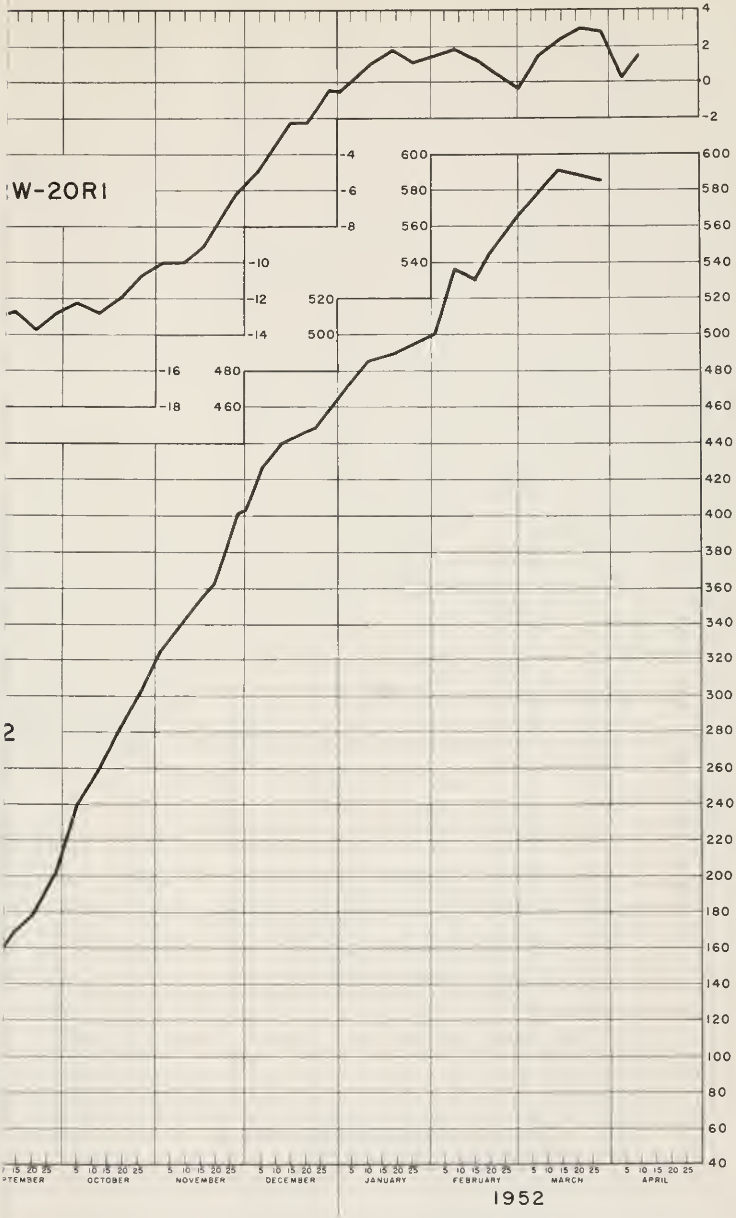


CHART B CLASSIFICATION OF ANION CONSTITUENTS

			LOCATION
	CHART A AND B		
SEA WATER	SW	5-1-53	
DRAINAGE DITCHES	1	6-4-52	1N/22W-7J
	2	1-14-53	1N/22W-7J
	3	1-14-53	1N/22W-18A
	4	8-4-52	1N/22W-18B
	5	8-4-52	1N/22W-21B
	6	6-6-52	1N/22W-21F
	7	1-14-53	1N/22W-21F
	8	8-4-52	1N/22W-21Q
	9	6-6-52	1N/22W-27C
	10	8-4-52	1N/22W-27C
	11	1-14-53	1N/22W-27C

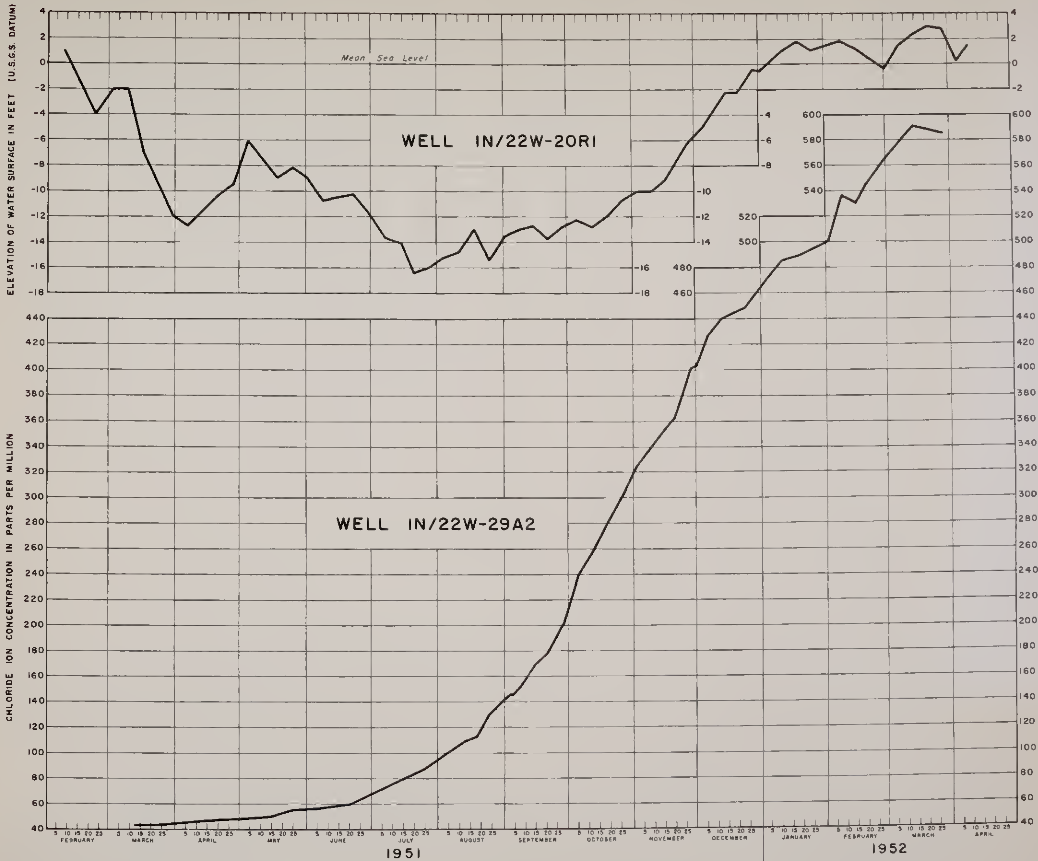
	POINT NUMBER	DATE SAMPLED
	CHART B	
WELL 1N/22W-29A2	A1	3-31-47
	A2	5-5-49
	A3	5-25-51
	A4	7-25-51
	A5	9-4-51
	A6	11-27-51
	A7	3-28-52
	A8	6-6-52
WELL 1S/21W-8H1	G1	9-5-31
	G2	1-28-32
	G3	6-3-32
	G4	3-3-33

MINERAL CHARACTER OF GROUND WATERS
IN VICINITY OF PORT HUENEME AND POINT MUGU



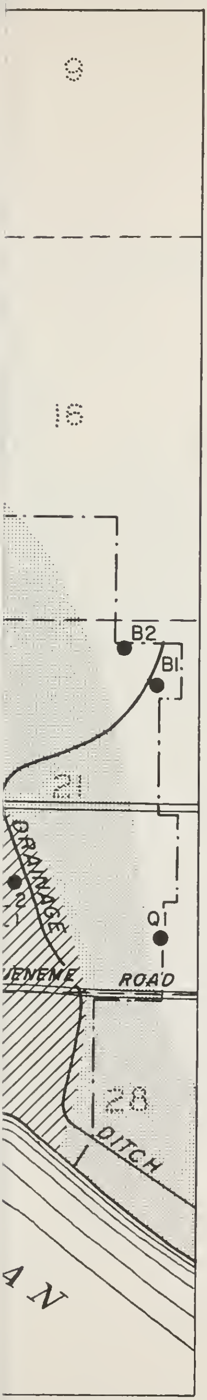
N INCREASE

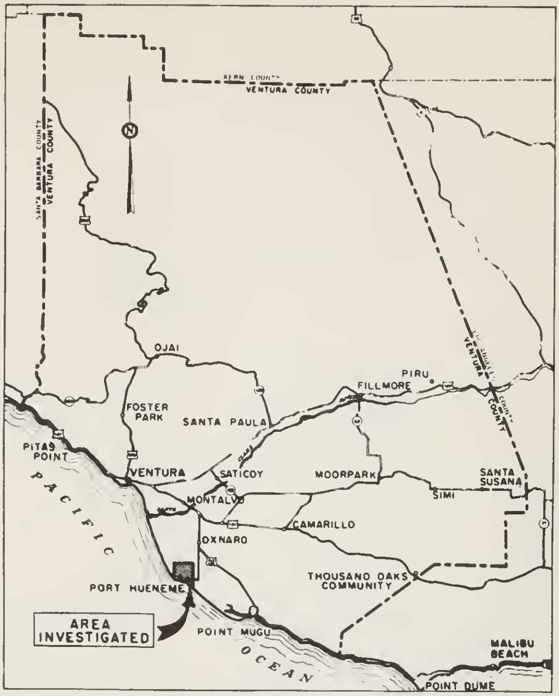
/22W-29A2



CHLORIDE ION INCREASE

WELL IN/22W-29A2





LOCATION MAP

LEGEND

● NI WATER WELLS

PROBABLE EXTENT OF SEA WATER INTRUSION DECEMBER, 1954

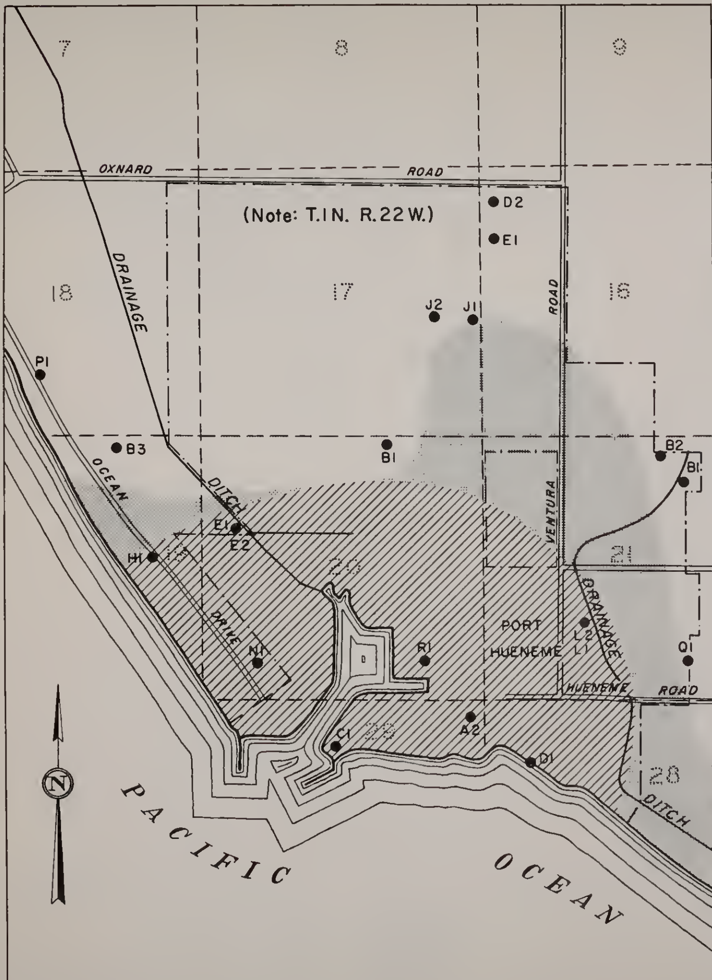
PROBABLE EXTENT OF SEA WATER INTRUSION SUMMER, 1957

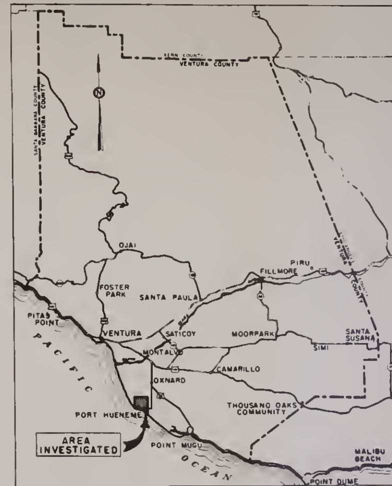
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

AREAL EXTENT OF SEA WATER INTRUSION
VICINITY OF PORT HUENEME

SCALE OF MILES

0 1/2 1





LOCATION MAP

LEGEND

● N1 WATER WELLS

PROBABLE EXTENT OF SEA WATER INTRUSION DECEMBER, 1954

PROBABLE EXTENT OF SEA WATER INTRUSION SUMMER, 1957

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
WATER QUALITY AND WATER QUALITY PROBLEMS
VENTURA COUNTY

AREAL EXTENT OF SEA WATER INTRUSION
VICINITY OF PORT HUENEME

SCALE OF MILES
0 1/2 1

WATEF

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STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

BULLETIN No. 75

WATER QUALITY
AND
WATER QUALITY PROBLEMS, VENTURA COUNTY

VOLUME II
APPENDIXES

EDMUND G. BROWN
Governor

HARVEY O. BANKS
Director of Water Resources

February, 1959

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
DIVISION OF RESOURCES PLANNING

BULLETIN No. 75

WATER QUALITY
AND
WATER QUALITY PROBLEMS, VENTURA COUNTY

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EDMUND G. BROWN
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Director of Water Resources

February, 1959

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APPENDIX A

MINERAL ANALYSES OF SURFACE WATERS, VENTURA COUNTY

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APPENDIX A

MINERAL ANALYSES OF SURFACE WATERS, VENTURA COUNTY

Presented in this appendix are mineral analyses of surface waters derived from streams in Ventura County. Included in Tables A1 through A4 are all analyses of samples collected by the Division of Water Resources prior to May 1953, (and data procured from other agencies), except those published in Bulletin 46A of the Division of Water Resources 1933. All mineral analyses of surface waters which became available subsequent to 1952 are presented in Appendix G.

The analyses are tabulated according to drainage areas and in order of the stream sampling point number within these groups. The stream sampling point number is derived as follows: The State is divided into seven major hydrographic areas and into major stream basins of the State as defined in Bulletin No. 1, State Water Resources Board 1951. The first digit in the stream sampling point number designates the hydrographic unit in which the stream is located. The second digit (or two digits) designates the stream basin number within the major hydrographic unit. These basins are numbered, beginning with 1, at the most northerly basin in the unit, consecutively in a southerly direction. Thus 43 indicates the third major stream basin from the northern boundary of the fourth major hydrographic unit. Where a major stream basin applies to a group of streams instead of a single stream, a letter is assigned to each stream beginning with the northernmost stream and lettering consecutively southward. In a similar manner when a stream basin contained minor streams draining to the ocean, in addition to the principal stream, each of the minor streams is assigned a letter beginning in the north. Thus, 43A is the northerly stream of the stream group in major stream basin 3 or it is the northerly minor stream draining to the ocean in major stream basin 3 which also contains major stream 3.

A sampling point on a stream is designated by the stream mile of the point above the mouth of the stream. A point on a tributary is designated by the stream mile of the major stream at the confluence of the tributary and the stream mile at the sampling point on the tributary above the confluence.

Examples:

43-3.0 - Santa Clara River, three miles upstream from mouth.

43-17.1-0.1 - Santa Paula Creek, one-tenth of a mile above its mouth which is 17.1 miles above mouth of Santa Clara River.

41D-2.5 - Padre Juan Canyon Creek, two and one-half miles above mouth.

All analyses in this appendix were conducted by the Department of Water Resources unless otherwise noted. All constituents in analyses run by the Department of Water Resources; U. S. Geological Survey, Water Quality Branch, Sacramento; Pacific Chemical Consultants; and Terminal Testing Laboratories, were determined using procedures given in Standard Methods for the Examination of Water and Sewage, American Public Health Association 1955 with the following exceptions: The Versenate method is used for calcium and magnesium determinations by all the laboratories. The Devarda Method has been used for nitrate by all laboratories except Terminal Testing Laboratory, and the United States Geological Survey.

Analyses obtained from the Santa Clara Water Conservation District and the Farmer's Irrigation Company reported the constituents in parts per million only, and the equivalents per million shown in the table were calculated by Department of Water Resources.

TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-0.5	4- 2-52[a] 1200	75[b]	1155	8.4	59/2.94	66/5.45	89/3.88	--	13/0.43	220/3.61	285/5.94	80/2.26	5/0.08	--	0.3	760	32
		8- 1-52[a] 1100	--	1805	7.9	132/6.62	64/5.30	209/9.07	6/0.15	0/0	241/3.96	490/10.20	219/6.17	4/0.07	--	0.7	1335	43
		1- 8-53[a] 1000	35[b]	1145	7.7	114/5.70	39/3.20	112/4.87	4/0.12	0/0	277/4.54	336/7.00	84/2.38	Tr.	--	0.6	853	35
		2-25-53 0835	10[b]	2583	7.6	145/7.24	46/3.78	360/15.7	6/0.16	0/0	373/6.12	352/7.34	490/13.8	0/0	--	1.90	1619	59
Canada Larga Cr.	42-4.5-0.2	1-16-52 0930	300[b]	1618	7.7	188/9.38	69/5.66	139/6.09	10/0.26	0/0	227/3.72	698/14.55	68/1.92	19/0.30	0.1	0.44	1444	29
		3-20-52[a] 0930	20[b]	3328	8.3	--	--	--	--	--	495/8.11	--	155/4.37	--	--	0.9	2340	--
		8- 1-52[a] 1000	0.5[b]	3062	8.2	164/8.21	160/13.19	424/18.40	11/0.28	0/0	327/5.36	1400/29.20	211/5.94	6/0.09	--	1.2	2775	46
		1- 8-53 0945	25[b]	4032	8.0	228/11.4	156/12.8	560/24.4	14/0.35	0/0	439/7.20	1665/34.7	300/8.46	15/0.24	--	1.10	3298	50
Leon Canyon Cr.	42-4.5-3.9-0.1	4- 9-52[a] 1440	1.5	5380	8.0	368/18.40	234/19.28	840/36.50	--	0/0	452/7.40	3140/65.50	118/3.32	2/0.04	--	1.20	5138	49
Coche Canyon Cr.	42-4.5-4.3-0.1	4- 9-52[a] 1450	1.0	4370	8.0	253/12.65	256/21.02	495/21.50	--	0/0	619/10.16	1996/41.55	15/4.28	18/0.29	--	1.50	3487	38
Sulphur Canyon Cr.	42-4.5-5.1-0.1	4- 9-52 1425	2[b]	3910	8.2	267/13.36	162/13.36	234/10.28	--	0/0	530/8.68	1281/26.70	98/2.74	11/0.18	--	1.25	2340	28
Weldon Canyon Cr.	42-5.0-0.2	4-16-52 1130	0.25[b]	6420	8.1	316/15.80	283/23.32	995/43.20	--	0/0	430/7.05	3000/62.35	490/13.81	22/0.36	--	2.7	5494	52
Ventura River	42-5.7	5-17-51 1300	Ponded	1529	7.0	166/8.30	41/3.37	119/5.19	--	0/0	364/5.96	310/6.46	134/3.78	0/0	--	0.54	1037	31
		6-18-51 1450	--	1980	7.1	--	--	--	--	0/0	352/5.76	--	260/7.33	--	--	--	----	--
		7-17-51 1545	0	1572	7.3	--	--	--	--	0/0	263/4.32	--	188/5.30	--	--	--	----	--
		1- 7-52 0950	--	----	---	--	--	--	--	--	345/5.66	--	81-/2.28	--	--	--	----	--

a Analyzed by Pacific Chemical Consultants.
b Estimated.

TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second Feet	$ECx10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Ventura River	42-5.7	1- 9-52 1745	Ponded	1223	7.8	--	--	--	--	0 / 0	291 / 4.77	--	103 / 2.90	--	--	--	----	--
		2- 6-52 0855	80	806	8.3	112 / 5.58	34 / 2.79	37 / 1.61	2 / 0.06	0 / 0	250 / 4.09	212 / 4.43	31 / 0.87	11 / 0.18	0.4	0.25	597	16
		2-20-52 1000	60	820	8.2	--	--	--	--	0 / 0	259 / 4.24	--	40 / 1.13	--	--	--	----	--
		3- 7-52[a] 1340	800[b]	658	8.0	77 / 3.84	25 / 2.06	32 / 1.39	--	--	184 / 3.01	170 / 3.54	25 / 0.71	8 / 0.13	--	0.1	429	19
		3-15-52[a] 1100	Flood Flow	385	8.1	52 / 2.62	10 / 0.81	10 / 0.45	--	--	115 / 1.89	87 / 1.82	8 / 0.23	1 / 0.02	--	0.0	259	12
		3-18-52 1000	735	719	8.1	--	--	--	--	0 / 0	208 / 3.40	--	20 / 0.56	--	--	--	----	--
		4-15-52 1400	117	834	8.1	--	--	--	--	0 / 0	239 / 3.92	--	19 / 0.54	--	--	--	----	--
		5- 7-52[d] 1200	5[b]	903	8.1	105 / 5.24	33 / 2.71	46 / 2.00	2 / 0.05	0 / 0	238 / 3.90	249 / 5.18	32 / 0.90	4 / 0.07	0.4	0.38	----	20
		5-25-52[a] 1115	40[b]	888	7.9	80 / 4.00	42 / 3.42	46 / 2.00	--	0 / 0	209 / 3.43	240 / 5.00	33 / 0.92	12 / 0.20	--	0.4	611	21
		6-17-52 1240	13	862	8.1	--	--	--	--	5 / 0.16	246 / 4.04	--	57 / 1.61	--	--	--	----	--
		7-15-52 1310	4.6	916	8.1	--	--	--	--	--	278 / 4.56	--	50 / 1.41	--	--	--	----	--
		8-13-52 1430	4.2	985	7.9	--	--	--	--	0 / 0	290 / 4.76	--	52 / 1.46	--	--	--	----	--
		9-10-52 1330	2.6	1016	8.0	--	--	--	--	0 / 0	283 / 4.64	--	55 / 1.55	--	--	--	----	--
		10-14-52 1230	6.5	845	7.8	125 / 6.24	34 / 2.79	46 / 2.00	2 / 0.04	0 / 0	276 / 4.52	230 / 4.80	39 / 1.10	2 / 0.02	0.8	0.42	668	18
		11-10-52 1300	5	984	8.2	--	--	--	--	--	268 / 4.40	--	40 / 1.13	--	--	--	----	--
		12- 8-52 1200	21	781	8.0	--	--	--	--	0 / 0	280 / 4.60	--	39 / 1.10	--	--	--	----	--

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TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEMS

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	ECx10⁶ at 25 C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-5.7	1- 5-53 1415	40	938	8.1	--	--	--	--	0/0	268/4.40	--	43/1.21	--	--	--	----	--
		1- 8-53[a] 1000	30[b]	902	8.35	109/5.43	35/2.89	43/1.88	3/0.07	4/0.12	251/4.12	226/4.70	38/1.07	6/0.10	--	0.2	590	18
Coyote Creek	42-6.0-0.3	9-30-49[c]	--	---	7.1	118/5.89	55/4.53	94/4.09	2/0.05	--	348/5.70	292/6.08	92/2.60	--	--	--	840	28
		2- 8-51[d] 1040	--	1170	7.8	135/6.74	41/3.37	70/3.04	1/0.02	0/0	314/5.15	274/5.70	78/2.20	1/0.01	--	0.27	767	23
		2- 6-52 0910	15[b]	807	8.3	114/5.69	31/2.56	42/1.82	2/0.05	0/0	290/4.76	176/3.67	46/1.30	6/0.10	0.4	0.16	614	18
		3- 7-52[a] 1400	7[b]	626	8.0	73/3.64	22/1.82	32/1.38	--	--	223/3.66	122/2.54	27/0.76	4/0.07	--	0.0	342	20
		3-16-52[a]	200[b]	452	7.75	54/2.70	15/1.25	15/0.65	--	0/0	152/2.49	82/1.71	18/0.51	1/0.01	--	0.1	272	14
		3-20-52[a] 0950	200[b]	717	8.5	--	--	--	--	--	247/4.05	--	27/0.76	--	--	0.1	--	--
		5-25-52[a] 1130	10[b]	1026	7.9	115/5.77	32/2.62	61/2.67	--	0/0	270/4.42	249/5.18	55/1.56	0/0	--	0.2	719	24
		8- 1-52 1215	3[b]	658	7.5	83/4.14	27/2.22	33/1.43	2/0.04	0/0	251/4.12	143/2.97	17/0.48	2/0.04	--	0.05	457	18
		1- 8-53[a] 1030	25	840	8.2	97/4.85	28/2.28	46/2.02	3/0.08	0/0	276/4.53	180/3.75	36/1.01	5/0.08	--	0.1	500	22
Santa Ana Cr.	42-6.0-3.6-2.2	2-25-53 1030	1[b]	741	7.8	93/4.64	28/2.30	33/1.44	1/0.03	0/0	300/4.92	143/2.98	15/0.42	0/0	--	0.02	492	17
Coyote Cr.	42-6.0-4.3	2- 6-52 0930	8	594	8.3	76/3.79	27/2.22	35/1.52	2/0.05	0/0	263/4.31	85/1.77	38/1.07	8/0.13	0.2	0.29	418	20
		5-25-52[a] 1145	2[b]	780	8.2	79/3.96	23/1.91	52/2.28	--	Tr.	293/4.80	104/2.17	44/1.22	4/0.06	--	0.5	481	28
		8- 1-52[a] 1200	0.3[b]	865	7.8	94/4.72	33/2.73	53/2.28	2/0.04	0/0	311/5.10	133/2.78	60/1.69	1/0.02	--	0.3	561	23
		1- 8-53 1300	20[b]	730	7.7	75/3.75	23/1.89	47/2.04	7/0.18	0/0	293/4.80	65/1.36	55/1.55	4/0.06	--	0.28	440	26

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TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Discharge: Second: Feet	$ECx10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Coyote Creek	42-6.0-4.3	2-25-53[a] 1020	2[b]	815	8.0	116 / 5.73	11 / 0.89	50 / 2.15	1 / 0.03	0 / 0	290 / 4.75	103 / 2.14	64 / 1.79	4 / 0.07	--	0.3	492	24
Ventura River	42-6.4	9-30-49[c]	--	---	7.2	109 / 5.45	47 / 3.85	46 / 2.00	2 / 0.05	--	289 / 4.73	264 / 5.50	48 / 1.35	--	--	--	674	18
Fresno Canyon	42-6.6-1.9	4- 9-52[a] 1200	0.5[b]	3420	8.2	350 / 17.52	171 / 14.15	367 / 15.96	--	0 / 0	411 / 5.73	1834 / 38.11	113 / 3.19	6 / 0.10	--	1.4	3396	34
San Antonio Cr.	42-7.7-0.2	2-26-52 0945	4	1418	8.0	200 / 9.98	53 / 4.36	78 / 3.39	4 / 0.10	0 / 0	346 / 5.68	381 / 7.93	122 / 3.44	35 / 0.56	0.5	0.53	1209	19
		3- 7-52[a] 1415	35	711	7.7	86 / 4.32	24 / 2.02	42 / 1.81	--	--	149 / 2.44	216 / 4.50	40 / 1.13	11 / 0.18	--	0.2	458	22
		3-15-52[a] 1200	Flood Flow	302	8.2	39 / 1.97	11 / 0.93	7 / 0.30	--	0 / 0	102 / 1.68	64 / 1.34	7 / 0.20	5 / 0.08	--	0.2	226	9
		5-25-52[a] 1100	1[b]	1545	7.5	197 / 9.85	49 / 4.00	87 / 3.78	--	0 / 0	329 / 5.40	451 / 9.38	105 / 2.95	17 / 0.27	--	0.2	1195	21
		1- 8-53	25[b]	1562	7.9	191 / 9.55	53 / 4.36	90 / 3.91	3 / 0.08	0 / 0	354 / 5.80	415 / 8.65	119 / 3.36	10 / 0.16	--	0.43	1135	22
		2-25-53[a] 1625	2[b]	2010	7.9	153 / 7.67	50 / 4.15	83 / 3.61	2 / 0.05	0 / 0	266 / 4.37	397 / 8.27	105 / 2.97	11 / 0.18	--	0.5	998	23
Lion Canyon Cr.	42-7.7-4.5-4.7	8-20-52 1200	0.4[b]	1000	7.9	104 / 5.19	36 / 2.96	90 / 3.91	2 / 0.06	0 / 0	366 / 6.00	163 / 3.39	95 / 2.68	4 / 0.06	--	0.27	732	32
		1-12-53 1350	0.4[b]	1206	7.7	127 / 6.34	38 / 3.12	87 / 3.78	2 / 0.06	0 / 0	410 / 6.72	194 / 4.04	96 / 2.71	8 / 0.13	--	0.16	772	28
		2-26-53[a] 1030	0.2[b]	1025	7.9	103 / 5.13	34 / 2.81	90 / 3.87	2 / 0.04	0 / 0	361 / 5.92	170 / 3.54	90 / 2.55	4 / 0.06	--	0.3	674	33
San Antonio Cr.	42-7.7-5.2	12-30-51[a]	---	606	7.9	75 / 3.76	20 / 1.68	18 / 0.78	--	--	130 / 2.12	173 / 3.60	13.0 / 0.37	12 / 0.19	Tr.	0.2	348	13
		2- 6-52 1010	1[b]	1556	7.5	262 / 13.07	56 / 4.60	49 / 2.15	4 / 0.10	0 / 0	341 / 5.58	497 / 10.36	72 / 2.03	56 / 0.91	0.2	0.12	1280	11
		3-20-52[a] 1600	20[b]	757	8.3	--	--	--	--	--	223 / 3.66	--	18 / 0.51	--	--	0.1	---	--
		4- 8-52 1350	5[b]	----	---	--	--	--	--	--	296 / 4.86	--	51 / 1.44	--	--	--	---	--
		4-24-52 0855	3[b]	----	---	--	--	--	--	--	320 / 5.24	--	66 / 1.86	--	--	--	---	--

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TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second Feet	ECx10^6 at 25 C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
San Antonio Cr.	42-7.7-5.2	5-22-52[a] 1620	1[b]	1319	7.6	195 / 9.68	88 / 3.11	51 / 2.21	--	0 / 0	340 / 5.57	390 / 8.13	46 / 1.31	9 / 0.15	--	0.3	968	15
Thacher Cr.	42-7.7-7.0-2.7	3-20-52[a] 1220	8[b]	847	8.4	--	--	--	--	--	191 / 3.14	--	14 / 0.39	--	--	0.1	---	--
	42-7.7-7.0-3.6	3-20-52[a] 1145	15[b]	849	8.2	--	--	--	--	--	462 / 7.59	--	12 / 0.34	--	--	0	---	--
San Antonio Cr.	42-7.7-7.6	3- 7-52[a] 1525	8[b]	443	7.8	53 / 2.66	12 / 1.01	26 / 1.13	--	--	114 / 1.87	120 / 2.50	13 / 0.37	6 / 0.10	--	0	308	24
		3-15-52[a] 1200	300[b]	251	8.1	33 / 1.65	11 / 0.93	5 / 0.20	--	0 / 0	94 / 1.55	54 / 1.13	7 / 0.20	0 / 0	--	0	175	7
		4- 8-52 1410	0.1[b]	---	---	--	--	--	--	--	206 / 3.38	--	28 / 0.79	--	--	--	---	--
		4-15-52[a] 1500	1.5	1505	7.7	210 / 10.52	60 / 4.92	51 / 2.20	--	0 / 0	220 / 3.61	513 / 10.68	110 / 3.11	8 / 0.13	--	0.5	1148	12
Gridley Cr.	42-7.7-9.4-0.1	1- 7-52 1245	--	---	---	--	--	--	--	--	324 / 5.32	--	42 / 1.18	--	--	--	---	--
		3-20-52[a] 1345	25[b]	627	8.3	--	--	--	--	--	217 / 3.56	--	12 / 0.34	--	--	0.1	---	--
		2-25-53 1550	0.25[b]	990	7.9	137 / 6.84	34 / 2.79	36 / 1.57	1 / 0.03	0 / 0	320 / 5.24	252 / 5.24	23 / 0.65	0 / 0	--	0.04	690	14
Senor Canyon Cr.	42-7.7-9.4a-0.1	3-20-52[a] 1350	15[b]	665	8.4	--	--	--	--	--	215 / 3.53	--	13 / 0.37	--	--	0.1	---	--
		5-22-52[a] 1545	1[b]	745	8.4	90 / 4.48	27 / 2.22	34 / 1.49	--	5 / 0.18	159 / 2.61	242 / 5.04	13 / 0.36	0 / 0	--	0.2	554	18
Ventura River	42-11.1	5-27-52[a] 1000	3[b]	824	8.1	96 / 4.80	28 / 2.27	44 / 1.93	--	0 / 0	178 / 2.92	269 / 5.62	16 / 0.45	0 / 0	--	0.3	665	21
		2-25-53[a] 1045	8[b]	907	8.1	87 / 4.37	43 / 3.57	50 / 2.19	2 / 0.05	0 / 0	219 / 3.60	288 / 6.00	23 / 0.66	1 / 0.02	--	0.3	699	22
Matilija Cr.	42-15.6-0.2	2- 7-51[d] 1515	--	1190	8.1	131 / 6.54	36 / 2.96	80 / 3.48	2 / 0.06	0 / 0	255 / 4.18	302 / 6.29	92 / 2.59	2 / 0.03	--	2.10	789	27
		4-11-51 1100	--	1209	7.6	--	--	--	--	0 / 0	242 / 3.96	--	108 / 3.05	--	--	--	---	--

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MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Matilija Creek	42-15.6-0.2	5- 1-51 1410	9.6	1238	7.6	117 / 5.84	32 / 2.63	94 / 4.10	--	0 / 0	234 / 3.84	284 / 5.93	109 / 3.08	0 / 0	--	2.63	892	33
		6-19-51 1000	---	1344	7.7	--	--	--	--	0 / 0	261 / 4.28	--	117 / 3.30	--	--	--	---	--
		7-12-51 1200	---	1222	7.7	--	--	--	--	0 / 0	250 / 4.08	--	108 / 3.05	--	--	--	---	--
		8-21-51 1300	---	1401	7.7	--	--	--	--	0 / 0	288 / 4.72	--	128 / 3.61	--	--	--	---	--
		9-11-51 1200	0.4	1366	7.6	130 / 6.50	44 / 3.62	98 / 4.26	--	0 / 0	288 / 4.72	273 / 5.68	128 / 3.61	1 / 0.02	0.66	2.35	893	30
		10-10-51 1500	---	1387	7.8	--	--	--	--	0 / 0	344 / 5.64	--	131 / 3.69	--	--	--	---	--
		12- 5-51[a]	---	1528	8.1	148 / 7.40	34 / 2.80	94 / 4.08	--	--	244 / 4.00	317 / 6.60	141 / 3.98	Tr.	--	2.6	924	29
		12-12-51 1330	---	1587	7.4	--	--	--	--	0 / 0	279 / 4.58	--	172 / 4.85	--	--	--	---	--
		1- 9-52 1530	---	1552	8.0	--	--	--	--	0 / 0	265 / 4.35	--	187 / 5.27	--	--	--	---	--
		2- 6-52 1050	40[b]	533	8.1	83 / 4.12	18 / 1.50	17 / 0.74	2 / 0.06	0 / 0	168 / 2.76	168 / 3.51	11 / 0.31	4 / 0.06	0.4	0.14	424	12
		2-14-52 1500	45.9	610	7.7	--	--	--	--	0 / 0	179 / 2.94	--	15 / 0.42	--	--	--	---	--
		3- 5-52 1330	---	733	8.2	--	--	--	--	0 / 0	205 / 3.36	--	15 / 0.42	--	--	--	---	--
		3- 7-52[a] 1450	---	720	8.2	70 / 3.47	40 / 3.31	28 / 1.22	--	--	202 / 3.31	216 / 4.50	12 / 0.34	4 / 0.06	--	0.3	473	15
		3-15-52[a]	High Flow	788	8.25	99 / 4.96	32. / 2.62	21 / 0.90	--	10 / 0.34	184 / 3.01	225 / 4.68	17 / 0.48	1 / 0.02	--	0.2	545	11
		3-20-52[a] 1020	180[b]	631	8.4	--	--	--	--	--	186 / 3.05	--	13 / 0.37	--	--	0.1	---	--
		4- 1-52 1930	90	621	8.2	--	--	--	--	0 / 0	193 / 3.16	--	9 / 0.25	--	--	--	---	--
		5-14-52[d] 0900	30[b]	801	8.3	97 / 4.84	33 / 2.71	29 / 1.26	2 / 0.06	0 / 0	202 / 3.31	258 / 5.37	10 / 0.27	Tr.	0.4	0.30	---	14

a Analyzed by Pacific Chemical Consultants.
b Estimated.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

[illegible]

TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Discharge: Second-Feet	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Matilija Cr.	42-15.6-0.2	6-18-52 0900	---	766	8.1	--	--	--	--	0 / 0	220 / 3.60	--	18 / 0.51	--	--	--	---	--
		7- 9-52 0900	---	639	8.0	--	--	--	--	--	200 / 3.28	--	16 / 0.45	--	--	--	---	--
		8- 6-52 0900	15.5	662	8.1	--	--	--	--	0 / 0	208 / 3.40	--	11 / 0.31	--	--	--	---	--
		9- 4-52 0900	7	669	7.6	--	--	--	--	0 / 0	210 / 3.44	--	17 / 0.48	--	--	--	---	--
		10- 8-52 0900	7[b]	771	7.8	111 / 5.54	31 / 2.55	34 / 1.48	2 / 0.06	0 / 0	207 / 3.40	266 / 5.54	17 / 0.48	6 / 0.09	0.8	0.34	589	15
		11- 7-52 1025	5[b]	910	8.1	--	--	--	--	--	222 / 3.64	--	24 / 0.68	--	--	--	---	--
		12- 5-52 1400	15[b]	866	7.6	--	--	--	--	0 / 0	217 / 3.56	--	25 / 0.70	--	--	--	---	--
		1- 8-53 1200	---	930	8.0	119 / 5.95	32 / 2.63	44 / 1.91	2 / 0.06	0 / 0	234 / 3.84	283 / 5.90	27 / 0.76	0 / 0	--	0.50	668	18
		1-12-53 1340	26	926	7.9	--	--	--	--	0 / 0	224 / 3.68	--	26 / 0.73	--	--	--	---	--
Matilija Cr.	42-15.6-2.2	12- 5-51[a]	1.5	1780	8.1	166 / 8.32	437 / 3.58	154 / 6.70	--	--	268 / 4.40	305 / 6.35	276 / 7.77	1 / 0.02	--	6.4	1240	36
		3-20-52[a] 1030	60[b]	724	8.5	--	--	--	--	--	217 / 3.57	--	11 / 0.31	--	--	0.1	----	--
North Fork Matilija Cr.	42-15.6a-0.7	2- 7-51[d] 1455	---	1027	8.1	107 / 5.34	33 / 2.71	77 / 3.35	2 / 0.05	0 / 0	277 / 4.54	283 / 5.89	32 / 0.90	0.4 / 0.01	--	0.75	691	29
		2- 6-52 1030	10[b]	839	8.1	125 / 6.23	38 / 3.12	40 / 1.74	2 / 0.06	0 / 0	259 / 4.24	280 / 5.83	13 / 0.36	5 / 0.09	0.5	0.28	671	16
		3-15-52[a] 1200	Flood Flow	278	8.1	40 / 1.98	11 / 0.89	2 / 0.10	--	--	99 / 1.63	58 / 1.20	6 / 0.17	1 / 0.01	--	--	210	3
		3-20-52[a] 1000	60[b]	736	8.5	--	--	--	--	--	226 / 3.71	--	16 / 0.45	--	--	0.1	---	--
		2-25-53 1450	12[b]	926	7.8	105 / 5.24	32 / 2.63	55 / 2.39	2 / 0.05	0 / 0	239 / 3.92	279 / 5.81	16 / 0.45	0 / 0	--	0.29	655	23

a Analyzed by Pacific Chemical Consultants.
b Estimated.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE A 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second-Feet	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Rincon Cr.	319-0.2	5-25-52[a] 1230	0.5[b]	1419	8.1	98 / 4.88	53 / 4.35	146 / 6.33	-- / --	0 / 0	366 / 6.01	315 / 6.56	115 / 3.25	2 / 0.04	--	0.5	1010	41
	319-0.5	1-14-53 0850	4[b]	704	8.0	83 / 4.14	24 / 1.97	44 / 1.91	2 / 0.05	0 / 0	278 / 4.56	128 / 2.67	31 / 0.88	6 / 0.09	--	0.10	474	24
		2-25-53 0940	Tr.	2262	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	544 / 8.92	-- / --	192 / 5.41	-- / --	--	--	--	--
	319-2.5	5-25-52[a] 1210	1.5[b]	652	8.2	53 / 2.66	26 / 2.13	51 / 2.22	-- / --	2 / 0.08	244 / 3.99	93 / 1.94	34 / 0.95	1 / 0.02	--	0.1	412	32
		2-25-53 0950	1[b]	837	8.1	82 / 4.09	30 / 2.47	62 / 2.70	2 / 0.04	0 / 0	378 / 6.20	90 / 1.87	46 / 1.30	0 / 0	--	0.22	516	29
Casitas Cr.	319-2.5-0.1	1-14-53 0900	0.5	1569	8.1	160 / 7.98	77 / 6.33	115 / 5.00	3 / 0.07	0 / 0	376 / 6.16	538 / 11.2	80 / 2.26	4 / 0.07	--	0.64	1244	26
Los Sauces Cr.	41A-0.1	5-25-52[a] 1245	1[b]	8410	7.7	195 / 9.77	174 / 14.30	1452 / 63.20	0 / 0	0 / 0	437 / 7.17	1040 / 21.65	2110 / 59.50	33 / 0.53	--	7.2	5413	73
		1-14-53 0835	1[b]	3571	7.6	170 / 8.48	96 / 7.89	460 / 20.0	13 / 0.34	0 / 0	507 / 8.32	624 / 13.0	565 / 15.9	21 / 0.34	--	1.86	2330	55
		2-25-53 0920	0.5[b]	16666	7.7	303 / 15.1	151 / 12.4	4000 / 174	31 / 0.90	0 / 0	878 / 14.4	562 / 11.7	6175 / 174	0 / 0	--	21.6	11375	85
		5-25-53[a] 1245	1[b]	8410	7.7	195 / 9.77	174 / 14.30	1452 / 63.20	-- / --	0 / 0	437 / 7.17	1040 / 21.65	2110 / 59.50	33 / 0.53	--	7.2	5413	73
		5- 9-58[e] 1430	1.5[b]	4636	7.8	212 / 10.60	148 / 12.20	644 / 28.00	23 / 0.60	0 / 0	464 / 7.60	1076 / 22.40	790 / 22.25	0 / 0	1.18	1.5	3164	55
		5- 9-58[e] 1330	1.3[b]	2487	7.6	231 / 11.55	127 / 10.45	200 / 8.70	4.9 / 0.13	0 / 0	421 / 6.90	1017 / 21.18	100 / 2.81	5.6 / 0.09	1.34	0.5	1639	28

a. Analyzed by Pacific Chemical Consultants.
b. Estimated.
c. Analyzed by Pomeroy & Associates Consultants.
d. Analyzed by U. S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second-Feet	$ECx10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Santa Clara River	43-2.9	4-22-53[a] 1010	--	2480	7.3	278 13.90	89 7.40	195 8.48	7 0.18	0 0	313 5.13	1045 21.75	105 2.97	2 0.04	--	0.7	2006	28
Santa Clara River	43-4.2	4-22-53[a] 0900	--	2770	8.8	71 3.56	58 4.80	480 20.90	7 0.18	12 0.40	289 4.73	893 18.60	194 5.48	4 0.06	--	1.0	1867	71
Santa Clara River	43-4.5	1-15-52 1200	--	578	7.6	70 3.47	16 1.34	39 1.69	4 0.11	0 0	146 2.40	176 3.66	19 0.54	3 0.05	0.6	0.16	440	26
		3- 7-52[a] 1400	--	978	7.95	81 4.03	50 4.07	58 2.52	--	--	152 2.49	354 7.37	25 0.71	1 0.02	--	--	713	24
		4- 8-52 1330	--	----	---	--	--	--	--	--	181 2.97	--	45 1.27	--	--	--	----	--
		4-21-52 1430	--	----	---	--	--	--	--	--	227 3.72	--	51 1.44	--	--	--	----	--
		8- 5-52[a] 1240	0.5[b]	2700	7.7	259 12.93	95 7.85	325 14.15	10 0.26	0 0	270 4.44	1305 27.20	100 2.91	0 0	--	0.6	1903	40
		1-14-53 1015	100[b]	1397	8.0	138 6.90	44 3.62	120 5.22	4 0.12	0 0	261 4.28	440 9.17	62 1.75	4 0.07	--	0.61	1022	33
		2-27-53[a] 0845	0	2370	8.2	187 9.35	90 7.39	290 12.60	8 0.19	Tr.	256 4.20	1110 23.20	96 2.70	6 0.09	--	0.9	2018	43
		4- 6-53[a] 1705	--	1785	8.1	130 6.51	53 4.42	200 8.69	8 0.22	0 0	237 3.89	650 13.55	88 2.47	4 0.06	--	0.8	1342	44
Santa Clara River	43-8.3	6- 4-51 1100	0.1	6360	8.0	285 14.22	240 19.74	1110 48.27	6 0.16	0 0	408 6.69	3190 66.41	340 9.59	24 0.39	2.0 0.11	1.5	5420	59
		4-21-52	--	----	---	--	--	--	--	--	226 3.71	--	50 1.41	--	--	--	----	--
Aliso Cr.	43-9.3-2.3	1-12-53 1455	0.5[b]	3367	7.8	120 6.00	106 8.71	520 22.6	15 0.38	0 0	366 6.00	960 20.0	427 12.0	4 0.06	--	2.04	2309	60
		2-26-53 0920	0.25	3289	7.9	106 5.29	112 9.21	600 26.1	13 0.33	0 0	354 5.80	961 20.0	515 14.5	0 0	--	2.20	2498	64
Aliso Cr.	43-9.3-3.9	1-15-51	450[b]	755	7.8	66 3.29	19 1.56	80 3.48	6 0.14	0 0	170 2.75	231 4.81	39 1.10	9 0.15	0.6	0.29	580	41
		4- 8-52 0910	5[b]	----	---	--	--	--	--	--	420 6.88	--	170 4.78	--	--	--	----	--

a Analyzed by Pacific Chemical Consultants.
b Estimated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Dis-charge: Second-Feet	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Per Cent Na
						Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B		
Aliso Cr.	43-9.3-3.9	4-16-52 1310	3[b]	2551	8.1	166 8.28	129 10.60	345 15.00	11 0.28	0 0	322 5.28	1039 21.66	220 6.20	17 0.27	--	0.38	2212	44
Santa Clara River	43-10.0	12- 5-51[a]	---	1480	8.1	144 7.20	52 4.32	165 7.17	--	--	264 4.32	552 11.50	78 2.20	9 0.15	0.6	0.7	1212	38
		12-12-51[a]	---	1620	8.0	161 8.04	58 4.76	113 4.89	--	--	263 4.32	560 11.67	74 2.09	6 0.09	0.6	0.8	1191	28
		3-14-52[a]	---	1018	8.3	--	--	--	--	--	237 3.89	--	21 0.59	--	--	0.4	--	--
		8- 5-52 1150	2[b]	1770	7.9	184 9.18	77 6.33	180 7.82	6 0.16	0 0	278 4.56	770 16.0	105 2.96	2 0.02	--	0.81	1540	33
		1-12-53 1600	100[b]	1347	8.0	146 7.30	46 3.78	92 4.00	4 0.10	0 0	283 4.64	433 9.02	55 1.55	6 0.10	--	0.74	981	26
Wheeler Canyon Cr.	43-10.4-3.1	4-22-52[a] 1715	0.4	2570	7.8	190 9.48	108 8.95	316 13.75	--	0 0	446 7.30	965 20.13	174 4.91	16 0.26	--	1.2	2200	43
		1-12-53 1445	0.5[b]	1992	7.5	174 8.68	81 6.66	185 8.04	6 0.16	0 0	390 6.40	657 13.7	127 3.58	4 0.06	--	0.42	1484	34
		2-26-53[a] 0925	0.5[b]	2670	7.65	201 10.05	124 10.02	308 13.39	7 0.18	0 0	448 7.35	975 20.30	188 5.31	6 0.10	--	0.9	2188	40
Wheeler Canyon Cr.	43-10.4-3.3	4- 8-52 0930	4[b]	----	---	--	--	--	--	--	510 8.36	--	185 5.22	--	--	--	----	--
		4-16-52 1255	1[b]	2551	7.8	196 9.78	122 10.03	320 13.89	10 0.26	0 0	478 7.84	972 20.25	202 5.70	16 0.26	--	0.91	2221	41
Wheeler Canyon Cr.	43-10.4-7.3	4-17-52[a] 1300	0.2	3382	7.8	244 12.20	182 15.00	357 15.53	--	0 0	625 10.26	1412 29.40	138 3.89	6 0.09	--	1.7	2990	36
Wheeler Canyon Cr.	43-10.4-8.4	8- 4-52[a]	0.4[b]	3145	7.7	201 10.05	125 10.30	385 16.72	8 0.21	0 0	498 8.18	1110 23.10	215 6.05	5 0.08	--	1.0	2476	45
Adams Canyon Cr.	43-13.1-1.8	4-22-52[a] 1700	0.5	4930	8.3	110 5.49	96 7.88	908 39.50	--	12 0.40	510 8.35	1216 25.37	676 19.04	10 0.16	--	4.2	3432	75
Santa Clara River	43-15.9	2- 8-51[c] 0850	17.15	1630	8.0	170 8.48	64 5.26	121 5.26	6 0.14	0 0	282 4.62	623 12.97	59 1.66	2 0.04	--	0.80	1210	27
		3- 7-52[a] 1630	10,000[b]	832	7.9	81 4.03	45 3.71	44 1.92	--	--	157 2.58	312 6.51	21 0.59	4 0.07	--	0.1	648	20

a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second-Foot	ECx10[6] at 25° C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-15.9	3-15-52[a] 1100	15,000[b]	720	8.15	56 2.82	34 2.82	59 2.56	--	--	134 2.19	258 5.38	24 0.68	2 0.03	--	--	542	31
		8- 5-52[a] 1045	3[b]	1610	8.0	172 8.62	62 5.12	125 5.45	6 0.15	0 0	294 4.82	610 12.70	62 1.73	1 0.02	--	0.6	1243	28
Santa Paula Cr.	43-15.9-0.6	3-14-52[a] 1200	50[b]	713	8.5	--	--	--	--	--	178 2.92	--	33 0.93	--	--	0.2	--	--
		1-12-53 1240	8[b]	840	7.9	90 4.50	23 1.89	58 2.52	2 0.04	0 0	217 3.56	202 4.21	32 0.90	0 0	--	0.08	564	28
Mud Cr.	43-15.9-3.7-0.1	3-20-52[a] 1615	1.5[b]	6130	7.7	273 13.65	258 21.32	946 41.17	--	0 0	381 6.24	3270 68.05	105 2.96	35 0.56	--	0.98	5108	54
		11-10-52 1200	0.2	3745	8.2	27 1.35	71 5.84	750 32.6	12 0.31	42 1.44	1015 16.6	965 20.1	160 4.51	0 0	--	2.16	2663	81
Mud Cr.	43-15.9-3.7-0.5	9-24-52[a]	0.5	4430	8.9	4 0.18	86 7.12	990 43.00	13 0.33	58 1.92	1330 21.92	1158 24.10	115 3.25	13 0.21	--	3.1	3085	85
Santa Paula Cr.	43-15.9-3.8	9-13-33[d]	2.52	970	--	107 5.35	28 2.30	72 3.13	--	--	322 5.27	206 4.29	42 1.19	--	--	0.34	----	29
		7-14-34[d]	4.68	830	--	81 4.05	27 2.22	66 2.87	--	--	244 4.00	194 4.04	37 1.04	--	--	0.30	----	31
		4- 2-35[d]	20.09	598	--	76 3.80	18 1.48	27 1.17	--	--	200 3.28	136 2.83	12 0.34	--	--	0.12	----	18
		9-19-36[d]	2.68	765	--	75 3.75	23 1.39	58 2.52	--	4 0.13	192 3.14	191 3.98	32 0.90	--	--	0.25	----	31
		9- 2-37[d]	5.50	724	--	78 3.90	25 2.06	44 1.91	--	--	192 3.14	196 4.08	23 0.65	--	--	0.18	----	24
		3-15-39[d]	27.00	601	--	73 3.65	17 1.40	31 1.35	--	--	188 3.08	139 2.90	15 0.42	--	--	0.12	----	21
		9- 1-39[d]	1.20	800	--	69 3.45	24 1.97	65 2.83	--	0 0	188 3.08	193 4.02	39 1.11	--	--	0.34	----	34
		11- 8-39[d]	5.00	880	--	98 4.90	27 2.22	57 2.48	--	--	275 4.50	193 4.02	37 1.04	--	--	0.25	----	26
		8- 6-40[d]	2.50	790	--	72 3.60	21 1.73	66 2.87	--	--	210 3.44	184 3.83	33 0.93	--	--	0.29	----	35

a Analyzed by Pacific Chemical Consultants.
b Estimated.
d Obtained from the Santa Paula Water Works, Ltd., Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Paula Cr.	43-15.9-3.8	4-16-41[d]	150[b]	590	--	68 / 3.40	20 / 1.65	24 / 1.04	--	--	170 / 2.78	146 / 3.04	8 / 0.23	1 / 0.01	--	0.07	----	17
		11- 5-47[d]	2.60	---	--	86 / 4.30	32 / 2.63	83 / 3.61	--	--	247 / 4.05	236 / 4.92	55 / 1.55	Tr.	--	0.25	----	34
		12-12-51[a]	6[b]	2700	7.5	309 / 15.44	98 / 8.08	213 / 9.25	--	--	283 / 4.64	1288 / 26.85	63 / 1.78	4 / 0.06	0.7	0.8	2216	28
		1-15-52 1100	1050	328	7.7	46 / 2.29	10 / 0.79	17 / 0.74	3 / 0.07	0 / 0	104 / 1.68	74 / 1.55	13 / 0.36	6 / 0.10	0.4	0.07	266	20
		2- 6-52 1125	46	577	8.2	81 / 4.04	26 / 2.13	28 / 1.19	1 / 0.02	0 / 0	189 / 3.05	164 / 3.41	16 / 0.45	4 / 0.06	0.4	0.07	427	16
		3- 7-52[a] 1600	88	557	8.0	67 / 3.35	18 / 1.49	32 / 1.32	--	--	149 / 2.44	152 / 3.16	15 / 0.42	4 / 0.07	--	0.1	347	21
		3-15-52[a] 1040	1600[b]	402	8.2	52 / 2.62	9 / 0.77	16 / 0.68	--	--	113 / 1.85	95 / 1.98	9 / 0.25	1 / 0.01	--	0.3	282	17
		3-20-52[a] 1625	160	580	8.2	39 / 1.97	38 / 3.16	27 / 1.20	--	0 / 0	171 / 2.80	154 / 3.20	15 / 0.42	3 / 0.05	--	0	386	19
		8- 4-52 1410	8[b]	955	7.8	106 / 5.31	26 / 2.19	52 / 2.26	2 / 0.05	0 / 0	265 / 4.34	216 / 4.50	33 / 0.92	1 / 0.02	--	0.1	575	23
		11-10-52 1200	5.2	834	7.7	--	--	--	--	--	249 / 4.08	--	38 / 1.07	--	--	0.20	--	--
		2-26-53 0955	8[b]	847	7.7	98 / 4.89	26 / 2.14	54 / 2.35	2 / 0.04	0 / 0	258 / 4.24	203 / 4.23	31 / 0.87	0 / 0	--	0.12	565	25
Santa Paula Cr.	43-15.9-6.4	1-15-52 1200	450[b]	214	7.5	34 / 1.69	6 / 0.49	7 / 0.34	1 / 0.02	0 / 0	87 / 1.41	36 / 0.75	5 / 0.14	5 / 0.08	0.3	0.04	188	13
Santa Paula Cr.	43-15.9-6.5	8-20-52 1300	4[b]	568	8.0	89 / 4.44	20 / 1.64	26 / 1.13	1 / 0.03	0 / 0	195 / 3.20	180 / 3.74	11 / 0.31	2 / 0.04	--	0.05	442	16
		1-12-53 1340	8[b]	611	7.9	76 / 3.79	16 / 1.32	21 / 0.91	1 / 0.02	0 / 0	139 / 2.88	7 / 0.20	151 / 3.15	0	--	0.16	377	15
		2-26-53[a] 1010	2[b]	906	7.9	115 / 5.75	35 / 2.85	39 / 1.68	1 / 0.03	0 / 0	273 / 4.48	245 / 5.10	24 / 0.69	2 / 0.03	--	0.1	638	16
		2-26-53 1015	5[b]	579	8.0	--	--	--	--	0 / 0	193 / 3.16	--	11 / 0.31	--	--	--	----	--
Sisar Cr.	43-15.9-6.5-0.1	12-12-51[a]	---	562	7.7	72 / 3.60	14 / 1.20	23 / 1.00	--	--	151 / 2.48	161 / 3.35	3 / 0.08	6 / 0.10	0.1	0.1	372	17

a Analyzed by Pacific Chemical Consultants.
b Estimated.
d Obtained from the Santa Paula Water Works, Ltd., Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second-Feet	EC x10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Sisar Cr.	43-15.9-6.5-0.1	1-12-53[a] 1355	4[b]	902	8.2	121 / 6.05	37 / 3.06	36 / 1.55	2 / 0.04	0 / 0	269 / 4.41	255 / 5.31	26 / 0.74	4 / 0.06	--	Tr.	554	15
Santa Clara River	43-16.0	1-12-53 1430	50[b]	1179	7.8	132 / 6.59	41 / 3.37	82 / 3.57	4 / 0.10	0 / 0	273 / 4.48	372 / 7.76	43 / 1.21	8 / 0.13	--	0.52	815	26
		2-26-53[a] 1110	30[b]	1420	7.8	136 / 6.82	58 / 4.77	104 / 4.52	4 / 0.10	0 / 0	253 / 4.15	500 / 10.40	54 / 1.52	6 / 0.10	--	0.7	1034	28
Santa Clara River	43-17.0	4-17-51 1650	1.0	1736	8.2	--	--	--	--	0 / 0	300 / 4.92	--	75 / 2.11	--	--	--	----	--
		5-17-51 1600	15	1727	7.9	171 / 8.55	68 / 5.59	122 / 5.32	--	0 / 0	293 / 4.80	571 / 11.88	70 / 1.97	0 / 0	--	0.66	1325	27
		6-18-51 1640	5.1	1736	8.0	--	--	--	--	0 / 0	300 / 4.92	--	73 / 2.06	--	--	--	----	--
		7-17-51 1410	4.0	1560	7.7	--	--	--	--	0 / 0	276 / 4.52	--	62 / 1.75	--	--	--	----	--
		8-15-51 1620	5.0	1623	8.1	--	--	--	--	0 / 0	305 / 5.00	--	57 / 1.61	--	--	--	----	--
		9-19-51 1610	5.5	1543	7.9	162 / 8.10	61 / 5.01	104 / 4.53	--	0 / 0	298 / 4.88	526 / 10.96	55 / 1.55	3 / 0.04	0.37	0.60	1212	26
		10-18-51 1515	5.0	1560	8.1	--	--	--	--	0 / 0	315 / 5.16	--	56 / 1.58	--	--	--	----	--
		11- 7-51 1600	5.0	1513	7.7	--	--	--	--	0 / 0	325 / 5.32	--	56 / 1.58	--	--	--	----	--
		12- 2-51 1530	10.1	1587	8.3	--	--	--	--	0 / 0	310 / 5.08	--	58 / 1.64	--	--	--	----	--
		12- 6-51[a]	44.1	1502	8.1	145 / 7.24	46 / 3.76	112 / 4.87	--	--	234 / 3.84	452 / 9.40	83 / 2.34	2 / 0.04	--	1.4	1018	31
		1- 9-52 1615	----	1745	7.8	--	--	--	--	0 / 0	293 / 4.81	--	76 / 2.14	--	--	--	----	--
		2-20-52 1145	82.5	1299	8.0	--	--	--	--	0 / 0	271 / 4.43	--	56 / 1.58	--	--	--	----	--
		3-18-52 1300	1000[b]	1170	7.9	--	--	--	--	0 / 0	220 / 3.60	--	40 / 1.13	--	--	--	----	--

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TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-17.0	4-15-52 1300	300[b]	1610	8.1	--	--	--	--	10 / 0.32	288 / 4.72	--	90 / 2.54	--	--	--	----	--
		4-18-52 1507	---	----	--	--	--	--	--	--	227 / 3.72	--	44 / 1.24	--	--	--	----	--
		5- 7-52[c] 1050	200	1320	8.1	136 / 6.79	50 / 4.11	98 / 4.26	5 / 0.12	0 / 0	228 / 3.74	484 / 10.08	50 / 1.41	4 / 0.06	0.7 / 0.04	0.80	----	28
		6-17-52 1130	50	1915	7.9	--	--	--	--	0 / 0	288 / 4.72	--	110 / 3.10	--	--	--	----	--
		7-15-52 1210	30[b]	1953	7.6	--	--	--	--	0 / 0	322 / 5.28	--	110 / 3.10	--	--	--	----	--
		8-13-52 1320	25[b]	1886	8.0	--	--	--	--	0 / 0	316 / 5.18	--	89 / 2.51	--	--	--	----	--
		9-10-52 1230	25[b]	2173	7.7	--	--	--	--	0 / 0	317 / 5.20	--	110 / 3.10	--	--	--	----	--
		10-14-52 1100	20[b]	1912	7.8	225 / 11.2	90 / 7.40	160 / 6.96	6 / 0.16	0 / 0	334 / 5.48	819 / 17.1	98 / 2.76	8 / 0.13	1.0	0.80	1675	26
		11-10-52 1130	20[b]	1821	8.0	--	--	--	--	0 / 0	268 / 4.40	--	75 / 2.12	--	--	--	----	--
		12- 8-52 1045	100[b]	1852	8.1	--	--	--	--	0 / 0	324 / 5.32	--	84 / 2.37	--	--	--	----	--
		1- 5-53 1245	120[b]	1876	7.9	--	--	--	--	0 / 0	322 / 5.28	--	81 / 2.28	--	--	--	----	--
Santa Clara River	43-21.4	3- 4-52[a] 1615	---	834	8.3	--	--	--	--	--	181 / 2.97	--	35 / 0.99	--	--	0.7	----	--
		3-14-52[a] 1220	200[b]	785	8.3	--	--	--	--	--	189 / 3.10	--	17 / 0.48	--	--	0.4	----	--
Sespe Cr.	43-21.5-0.1	1-12-53 1225	40[b]	937	8.4	109 / 5.47	32 / 2.67	54 / 2.35	2 / 0.06	4 / 0.12	215 / 3.53	281 / 5.85	34 / 0.95	4 / 0.07	--	0.6	619	22
Sespe Cr.	43-21.5-2.7	3- 8-46[e]	---	---	--	109 / 5.45	32 / 2.63	60 / 2.61	--	--	219 / 3.59	294 / 6.12	33 / 0.93	--	--	0.83	----	25
		3-27-46[e]	---	---	--	90 / 4.50	24 / 1.97	49 / 2.13	--	--	176 / 2.88	243 / 5.07	27 / 0.76	--	--	0.48	----	25
		6- 4-46[e]	---	---	--	86 / 4.30	26 / 2.14	49 / 2.13	--	Tr.	154 / 2.52	251 / 5.23	33 / 0.93	--	--	0.87	----	25

a Analyzed by Pacific Chemical Consultants.
b Estimated.
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e Obtained from the Farmers Irrigation Co., Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second Feet	$ECx10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Sespe Cr.	43-21.5-2.7	3-14-52[a] 1340	50[b]	808	8.2	--	--	--	--	--	213 / 3.49	--	32 / 0.90	--	--	0.4	---	--
		3-15-52 1130	7500[b]	344	8.1	44 / 2.13	9 / 0.7[illegible]	11 / 0.46	--	0 / 0	89 / 1.46	88 / 1.84	8 / 0.23	1 / 0.01	--	0.1	238	14
		5- 6-52[a] 0930	25[b]	760	8.2	90 / 4.48	24 / 2.00	39 / 1.72	--	0 / 0	191 / 3.13	225 / 4.68	21 / 0.60	1 / 0.02	--	0.3	516	21
		2-26-53 1200	15[b]	1087	8.2	117 / 5.84	33 / 2.71	85 / 3.70	3 / 0.07	0 / 0	244 / 4.00	316 / 6.58	52 / 1.47	2 / 0.02	--	1.04	750	30
Sespe Cr.	43-21.5-6.0	2- 7-51[c] 1045	3.1	1550	8.1	113 / 5.64	28 / 2.30	136 / 5.91	3 / 0.07	0 / 0	210 / 3.44	236 / 5.95	160 / 4.51	1 / 0.01	--	4.06	348	42
		2- 6-52	170[b]	714	8.3	104 / 5.19	26 / 2.15	34 / 1.48	2 / 0.05	0 / 0	203 / 3.32	230 / 4.80	22 / 0.62	3 / 0.06	0.3	0.39	526	17
		3- 4-52[a]	80[b]	906	8.4	--	--	--	--	--	207 / 3.40	--	31 / 0.87	--	--	0.7	---	--
		5- 6-52[a] 1000	25[b]	744	[illegible].4	95 / 4.74	19 / 1.55	38 / 1.66	--	10 / 0.33	173 / 2.84	206 / 4.27	20 / 0.57	1 / 0.01	--	0.5	544	21
		8- 4-52[a] 1445	10[b]	1145	[illegible].1	96 / 4.31	30 / 2.52	100 / 4.32	3 / 0.08	0 / 0	218 / 3.57	282 / 5.87	77 / 2.17	3 / 0.05	--	1.3	684	37
		11-10-52 1050	5.2	1200	8.0	--	--	--	--	--	234 / 3.84	--	91 / 2.57	--	--	1.30	---	--
		1-12-53 1200	50[b]	905	[illegible]	108 / 5.40	27 / 2.22	55 / [illegible]	2 / [illegible]	0 / 0	234 / 3.84	256 / 5.33	36 / 1.01	1 / 0.01	--	0.6[illegible]	654	24
Little Sespe Cr.	43-21.5-6.0-0.4	5- 7-52[a] 1400	--	2020	7.7	337 / 16.84	54 / 4.44	138 / 6.00	--	0 / 0	209 / 3.43	1110 / 23.10	19 / 0.52	1 / 0.01	--	0.3	197[illegible]	22
Little Sespe Cr.	43-21.5-6.0-1.6	2-26-53[a] 1215	1[b]	2000	7.5	276 / 13.80	75 / 6.19	148 / [illegible].43	6 / 0.14	0 / 0	305 / 5.00	1020 / 21.22	26 / 0.72	4 / 0.06	--	0.3	1822	24
Sespe Cr.	43-21.5-6.9	12-26-45[f]	203	----	--	29 / 1.45	18 / 1.48	78 / 3.39	--	0 / 0	166 / 2.72	176 / 3.67	14 / 0.39	0 / 0	--	0.34	---	54
		3-19-46[f]	82	----	--	92 / 4.60	24 / 1.97	45 / 1.96	--	0 / 0	180 / 2.95	235 / 4.90	29 / 0.82	0	--	0.70	---	23
		3-29-46[f]	189	----	--	57 / 2.85	14 / 1.15	25 / 1.09	--	0 / 0	137 / 2.24	133 / 2.77	15 / 0.42	0 / 0	--	0.36	---	21
		3-30-46[f]	8000	----	--	36 / 1.80	8 / 0.66	6 / 0.26	--	0 / 0	108 / 1.77	40 / 0.83	5 / 0.14	0 / 0	--	0.04	---	10

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b Estimated.
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f Obtained from the Santa Clara Water Conservation District, Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Sespe Cr.	43-21.5-6.9	3-31-46[f]	1750	----	--	53 / 2.65	13 / 1.07	13 / 0.57	--	0 / 0	131 / 2.15	91 / 1.90	7 / 0.20	0 / 0	--	--	---	13
		4- 1-46[f]	965	----	--	66 / 3.30	18 / 1.48	18 / 0.78	--	0 / 0	169 / 2.77	132 / 2.75	9 / 0.25	0 / 0	--	0.11	---	14
		4- 5-46[f]	500	----	--	80 / 4.00	20 / 1.65	24 / 1.04	--	0 / 0	195 / 3.20	165 / 3.44	11 / 0.31	0 / 0	--	0.15	---	16
		4- 6-46[f]	359	----	--	82 / 4.10	25 / 2.06	24 / 1.04	--	0 / 0	196 / 3.21	168 / 3.50	12 / 0.34	0 / 0	--	0.21	---	14
		4-12-46[f]	270	----	--	78 / 3.90	21 / 1.73	25 / 1.09	--	0 / 0	186 / 3.05	155 / 3.23	11 / 0.31	0 / 0	--	0.14	---	1[illegible]
		4-20-46[f]	144	----	--	72 / 3.60	20 / 1.65	26 / 1.13	--	0 / 0	169 / 2.77	146 / 3.04	14 / 0.39	0 / 0	--	0.27	---	1[illegible]
		11-14-46[f]	205	----	--	64 / 3.20	15 / 1.23	29 / 1.26	--	0 / 0	101 / 1.66	168 / 3.50	18 / 0.51	2 / 0.03	--	0.29	---	22
		11-20-46[f]	2300	----	--	40 / 2.00	9 / 0.74	17 / 0.74	--	0 / 0	95 / 1.56	35 / 1.77	10 / 0.23	1 / 0.01	--	0.19	---	21
		11-21-46[f]	325	----	--	56 / 2.80	14 / 1.15	25 / 1.09	--	0 / 0	118 / 1.93	130 / 2.71	13 / 0.37	1 / 0.01	--	0.15	---	22
		11-22-46[f]	165	----	--	82 / 4.10	21 / 1.73	31 / 1.35	--	0 / 0	163 / 2.67	191 / 3.93	18 / 0.51	Tr.	--	0.45	---	19
		11-23-46[f]	1650	----	--	36 / 1.80	9 / 0.74	16 / 0.70	--	0 / 0	87 / 1.43	76 / 1.58	8 / 0.23	1 / 0.01	--	0.29	---	22
		11-25-46[f]	200	----	--	75 / 3.75	19 / 1.56	26 / 1.13	--	0 / 0	159 / 2.60	165 / 3.44	13 / 0.37	1 / 0.01	--	0.22	---	13
		12-26-46[f]	1550	----	--	44 / 2.20	11 / 0.90	13 / 0.57	--	0 / 0	110 / 1.80	81 / 1.69	6 / 0.17	Tr.	--	0.05	---	1[illegible]
		12-28-46[f]	616	----	--	63 / 3.15	17 / 1.40	20 / 0.87	--	0 / 0	157 / 2.57	114 / 2.38	9 / 0.25	Tr.	--	0.13	---	16
		12-30-46[f]	303	----	--	81 / 4.05	21 / 1.73	27 / 1.17	--	0 / 0	195 / 3.20	172 / 3.58	12 / 0.34	Tr.	--	0.27	---	17
Sespe Cr.	43-21.5-8.3	5- 6-52[a] 1230	15[b]	660	8.5	87 / 4.35	22 / 1.86	39 / 1.69	--	10 / 0.33	165 / 2.79	204 / 4.20	18 / 0.52	1 / 0.02	--	0.4	507	21

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b Estimated.
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TABLE A 2

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Discharge: Second Feet	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Tar Cr.	43-21.5-10.2-3.3	5- 9-52[a] 1000	0.5[b]	1360	8.2	183 / 9.17	50 / 4.08	70 / 3.06	--	2 / 0.07	305 / 5.00	487 / 10.17	30 / 0.86	3 / 0.05	--	0.3	1126	19
Sespe Cr.	43-21.5-10.3	5- 9-52[a]	---	683	8.2	87 / 4.35	21 / 1.77	40 / 1.72	--	0 / 0	186 / 3.04	215 / 4.49	20 / 0.55	1 / 0.02	--	0.5	439	22
Sespe Cr.	43-21.5-20	12-22-51[a]	---	2070	8.3	98 / 4.92	23 / 1.02	310 / 13.47	--	--	183 / 3.00	438 / 9.15	272 / 7.68	4 / 0.07	2.2	11.6	1087	66
		11-20-52[a] 1215	5[b]	1392	7.9	148 / 7.39	45 / 3.74	99 / 4.30	3 / 0.08	0 / 0	256 / 4.20	488 / 10.17	40 / 1.13	Tr.	--	1.4	842	28
Sespe Cr.	43-21.5-40.0	4-27-52[a] 1045	90	1170	7.9	138 / 6.88	42 / 3.42	53 / 2.31	--	0 / 0	238 / 3.91	398 / 8.30	20 / 0.56	2 / 0.04	--	0.1	834	18
Tule Cr.	43-21.5-40.0-0.1	4-27-52[a] 1005	30[b]	527	8.0	75 / 3.73	19 / 1.60	23 / 1.02	--	0 / 0	210 / 3.44	131 / 2.73	5 / 0.14	2 / 0.04	--	Tr.	361	16
		2-25-53 1155	2[b]	658	8.1	91 / 4.54	23 / 1.89	27 / 1.17	1 / 0.03	0 / 0	251 / 4.12	153 / 3.19	8 / 0.23	0 / 0	--	0.0	444	15
Adobe Cr.	43-21.5-50.0-0.5	2-25-53[a] 1400	0.3[b]	2170	7.5	285 / 14.25	70 / 5.80	196 / 8.52	4 / 0.09	0 / 0	325 / 5.33	1055 / 21.96	53 / 1.50	2 / 0.04	--	0.3	1960	30
Santa Clara River	43-24.1	3- 8-46[e]	---	----	--	165 / 8.25	69 / 5.68	98 / 4.26	--	Tr.	298 / 4.88	587 / 12.21	40 / 1.13	4 / 0.07	--	0.67	----	23
		3-27-46[e]	---	----	--	163 / 8.15	67 / 5.52	98 / 4.26	--	--	303 / 4.97	576 / 12.00	42 / 1.18	3 / 0.05	--	0.66	----	24
		6- 4-46[e]	17.88	----	--	170 / 8.50	65 / 5.34	99 / 4.30	--	--	300 / 4.92	573 / 11.93	43 / 1.21	4 / 0.07	--	0.78	----	33
		3-15-52[a] 1230	10,000[b]	732	7.8	88 / 4.40	40 / 3.26	7 / 0.31	--	0 / 0	131 / 2.15	271 / 5.64	7 / 0.20	5 / 0.08	--	0.0	528	4
Pole Cr.	43-24.8-0.6	1-15-52	30[b]	----	--	--	--	--	--	--	173 / 2.84	--	21 / 0.60	--	--	--	----	--
		4- 8-52 1020	1.5[b]	----	--	--	--	--	--	--	361 / 5.91	--	32 / 0.90	--	--	--	----	--
		5-22-52[a] 1355	0.2[b]	1820	8.0	200 / 10.00	102 / 8.38	97 / 4.20	--	0 / 0	278 / 4.55	863 / 17.96	15 / 0.43	2 / 0.04	--	0.4	1632	19
		1-12-53 1140	1[b]	1842	7.7	177 / 8.85	104 / 8.55	125 / 5.43	4 / 0.10	0 / 0	396 / 6.48	748 / 15.6	20 / 0.56	0 / 0	--	0.14	1493	24

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b Estimated.
e Obtained from the Farmers Irrigation Co., Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Santa Clara River	43-26.1	5-22-52 1430	5[b]	1852	7.4	258 / 12.9	103 / 8.47	110 / 4.78	6 / 0.14	0 / 0	349 / 5.72	880 / 18.3	44 / 1.24	36 / 0.58	--	0.95	1710	19
		6- 2-52[a] 1520	--	1800	7.7	211 / 10.57	84 / 6.93	108 / 4.68	--	0 / 0	324 / 5.32	764 / 15.90	38 / 1.08	21 / 0.34	--	1.1	1437	21
		1-12-53 1130	3[b]	1968	7.5	240 / 12.0	93 / 7.65	105 / 4.57	5 / 0.14	0 / 0	356 / 5.84	797 / 16.6	46 / 1.30	29 / 0.46	--	0.85	1617	19
Santa Clara River	43-27.9	4-17-52 1340	--	----	--	--	--	--	--	--	291 / 4.76	--	45 / 1.27	--	--	----	----	--
		2-26-53 1310	0.5[b]	2025	7.9	105 / 5.27	97 / 7.98	248 / 10.80	5 / 0.13	0 / 0	493 / 8.08	716 / 14.90	44 / 1.25	3 / 0.05	--	0.4	1520	45
Wiley Canyon Cr.	43-28.8-0.4	4- 8-52 1120	0.25[b]	----	--	--	--	--	--	--	385 / 6.30	--	228 / 6.43	--	--	----	----	--
Hopper Cr.	43-28.9-0.6	2- 7-51[c] 1005	----	3060	8.0	151 / 7.55	64 / 5.26	540 / 23.48	8 / 0.20	0 / 0	944 / 15.47	842 / 17.53	130 / 3.67	Tr.	--	0.70	2217	64
		5-15-52[a] 1715	0.7	2095	7.9	140 / 7.02	106 / 8.70	215 / 9.36	--	0 / 0	301 / 4.93	911 / 18.97	42 / 1.17	1 / 0.02	--	0.2	1676	37
Hopper Cr.	43-28.9-1.0	12-12-51[a]	----	1020	8.1	72 / 3.60	31 / 2.56	95 / 4.15	--	--	263 / 4.32	261 / 5.44	30 / 0.85	6 / 0.09	0.1	0.3	646	40
		12-16-51[c]	----	2440	8.3	93 / 4.64	87 / 7.15	410 / 17.83	9 / 0.22	0 / 0	616 / 10.10	759 / 15.80	100 / 2.82	1 / 0.01	0.5	0.49	1780	60
		2- 6-52	----	2178	7.9	243 / 12.13	126 / 10.36	176 / 7.66	6 / 0.16	0 / 0	417 / 6.84	1074 / 22.38	47 / 1.33	4 / 0.06	0.8	0.25	2120	25
		3-14-52	----	1885	8.3	--	--	--	--	--	433 / 7.11	--	48 / 1.35	--	--	0.2	--	--
		3-15-52[a] 1150	4000[b]	517	7.7	87 / 4.36	14 / 1.15	8 / 0.37	--	0 / 0	105 / 1.72	190 / 3.96	8 / 0.23	1 / 0.01	--	0.0	411	6
		5-15-52[a] 1700	0.75[b]	2200	7.9	144 / 7.[illegible]2	96 / 7.96	247 / 10.71	--	0 / 0	366 / 6.00	903 / 18.80	55 / 1.55	0 / 0	--	0.6	1850	42
		5-22-52[a] 1345	2.5[b]	2060	8.2	161 / 8.06	100 / 8.28	226 / 9.73	--	0 / 0	370 / 6.06	925 / 19.23	47 / 1.32	2 / 0.03	--	0.4	1850	38
		8- 4-52[a] 1510	3[b]	1800	8.0	104 / 5.22	89 / 7.32	204 / 8.87	6 / 0.14	0 / 0	332 / 5.45	727 / 15.15	36 / 1.02	0 / 0	--	0.3	1373	41

a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Hopper Cr.	43-28.9-1.0	11-10-52 1500	1[b]	2049	8.0	--	--	--	--	--	476 / 7.30	--	57 / 1.61	--	--	0.30	--	--
		1-12-53 1120	5[b]	1869	7.3	145 / 7.25	84 / 6.90	185 / 8.05	5 / 0.13	0 / 0	505 / 8.28	615 / 12.3	40 / 1.13	0 / 0	--	0.16	1404	36
Hopper Cr.	43-28.9-1.7	5-13-52[a] 1000	1[b]	2103	8.0	181 / 9.06	101 / 8.35	189 / 8.25	--	0 / 0	374 / 6.13	906 / 18.87	34 / 0.97	0 / 0	--	0.2	1705	32
Hopper Cr.	43-28.9-2.3	5-14-52[a] 1100	1[b]	2060	7.5	170 / 8.52	98 / 8.06	185 / 8.05	--	0 / 0	335 / [illegible].43	889 / 18.50	35 / 0.98	1 / 0.02	--	0.4	1758	33
Hopper Cr.	43-28.9-2.9	5-14-52[a] 1130	3[b]	3510	7.4	284 / 14.20	241 / 19.95	309 / 13.46	--	0 / 0	793 / 13.00	1624 / 33.83	23 / 0.66	12 / 0.20	--	0.9	3387	28
Hopper Cr.	43-28.9-4.5	5-14-52[a] 1200	2.0[b]	1710	7.4	143 / 7.14	76 / 6.32	143 / [illegible].20	--	0 / 0	291 / 4.76	688 / 14.31	30 / 0.86	1 / 0.02	--	0.3	1344	32
Hopper Cr.	43-28.9-4.9	5-14-52[a] 1600	1[b]	1645	8.2	165 / 8.25	79 / 6.53	101 / 4.37	--	0 / 0	243 / 4.07	697 / 14.52	26 / 0.72	1 / 0.02	--	0.3	1326	23
Torrey Cr.	43-30.9-0.3	4- 8-52 1130	0.1[b]	-----	--	--	--	--	--	--	518 / 8.50	--	1740 / 49.07	--	--	--	----	--
Santa Clara River	43-31.5	4-17-52 1225	--	----	--	--	--	--	--	--	198 / 3.25	--	34 / 0.94	--	--	--	----	--
Santa Clara River	43-31.8	4-17-52 1200	50[b]	----	--	--	--	--	--	--	193 / 3.16	--	35 / 0.99	--	--	--	----	--
Piru Cr.	43-31.8-0.7	3-18-52 1345	50[b]	1049	8.2	126 / 6.29	51 / 4.19	90 / 3.91	3 / 0.08	0 / 0	227 / 3.72	436 / 9.09	19 / 0.54	6 / 0.09	--	0.75	897	27
		11-10-52 1515	5[b]	1587	7.9	--	--	--	--	--	290 / 4.76	--	64 / 1.80	--	--	1.92	----	--
		1-12-53 1040	20[b]	1161	8.1	129 / 6.44	51 / 4.19	85 / 3.70	4 / 0.10	0 / 0	259 / 4.24	426 / 8.88	32 / 0.90	0 / 0	--	1.50	918	26
Piru Cr.	43-31.8-1.1	5-22-52[a] 1420	100[b]	1055	8.1	107 / 5.36	46 / 3.77	78 / 3.38	--	0 / 0	238 / 3.90	384 / 8.00	30 / 0.33	4 / 0.06	--	1.3	875	27
		8- 4-52[a] 1550	5[b]	1610	7.9	133 / 6.63	67 / 5.56	144 / 6.27	6 / 0.15	0 / 0	264 / 4.34	605 / 12.60	60 / 1.70	0 / 0	--	1.6	1219	34
		2-26-53[a] 1425	15[b]	1440	7.9	125 / 6.25	63 / 5.18	112 / 4.35	4 / 0.10	0 / 0	271 / 4.44	514 / 10.70	49 / 1.37	Tr.	--	1.5	1442	30

a Analyzed by Pacific Chemical Consultants.
b Estimated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Piru Cr.	43-31.8-1.3	12-26-45[f]	99	---	--	122 / 6.10	43 / 3.54	64 / 2.78	--	0 / 0	218 / 3.57	412 / 8.57	21 / 0.59	0 / 0	--	1.44	---	22
		3-19-46[f]	77	---	--	98 / 4.90	38 / 3.13	62 / 2.70	--	0 / 0	201 / 3.30	322 / 6.70	21 / 0.59	0 / 0	--	1.37	---	25
		3-29-46[f]	65	---	--	110 / 5.50	44 / 3.62	74 / 3.22	--	0 / 0	228 / 3.74	373 / 7.35	24 / 0.68	0 / 0	--	1.31	---	26
		3-30-46[f]	1570	---	--	51 / 2.55	18 / 1.48	27 / 1.17	--	0 / 0	132 / 2.16	150 / 3.12	9 / 0.25	0 / 0	--	0.10	---	23
		3-31-46[f]	504	---	--	72 / 3.60	26 / 2.14	36 / 1.56	--	0 / 0	150 / 2.46	218 / 4.53	10 / 0.28	Tr.	--	0.77	---	21
		4- 1-46[f]	364	---	--	84 / 4.20	30 / 2.47	42 / 1.83	--	0 / 0	189 / 3.10	271 / 5.64	12 / 0.34	0 / 0	--	0.90	---	22
		4- 3-46[f]	315	---	--	90 / 4.50	30 / 2.47	42 / 1.83	--	0 / 0	183 / 3.00	268 / 5.58	11 / 0.31	Tr.	--	0.90	---	21
		4- 6-46[f]	238	---	--	84 / 4.20	27 / 2.22	36 / 1.56	--	0 / 0	165 / 2.70	246 / 5.12	12 / 0.34	Tr.	--	0.72	---	20
		4-12-46[f]	177	---	--	87 / 4.35	31 / 2.55	40 / 1.74	--	0 / 0	186 / 3.05	246 / 5.12	13 / 0.37	0 / 0	--	0.77	---	20
		4-20-46[f]	110	---	--	88 / 4.40	33 / 2.72	44 / 1.91	--	0 / 0	197 / 3.23	249 / 5.18	14 / 0.39	0 / 0	--	0.81	---	21
		11-14-46[f]	150	---	--	101 / 5.05	30 / 2.47	60 / 2.61	--	0 / 0	165 / 2.70	335 / 6.97	21 / 0.59	3 / 0.05	--	1.24	---	26
		11-20-46[f]	225	---	--	89 / 4.45	25 / 2.06	46 / 2.00	--	0 / 0	134 / 2.20	286 / 5.95	13 / 0.37	1 / 0.02	--	0.67	---	23
		11-21-46[f]	200	---	--	84 / 4.20	24 / 1.97	35 / 1.52	--	0 / 0	139 / 2.28	254 / 5.29	12 / 0.34	1 / 0.02	--	1.01	---	20
		11-22-46[f]	90	---	--	113 / 5.65	39 / 3.21	57 / 2.48	--	0 / 0	194 / 3.18	374 / 7.78	19 / 0.54	1 / 0.02	--	1.41	---	22
		11-23-46[f]	350	---	--	142 / 7.10	44 / 3.62	61 / 2.65	--	0 / 0	160 / 2.62	504 / 10.50	16 / 0.45	1 / 0.02	--	0.93	---	20
		11-25-46[f]	130	---	--	91 / 4.55	35 / 2.88	48 / 2.09	--	0 / 0	182 / 2.98	299 / 6.23	15 / 0.42	1 / 0.02	--	1.21	---	22
		12-26-46[f]	1180	---	--	51 / 2.55	17 / 1.40	24 / 1.04	--	0 / 0	115 / 1.89	135 / 2.81	Tr.	Tr.	--	0.37	---	21

f Obtained from the Santa Clara Water Conservation District, Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second Feet	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Piru Cr.	43-31.3-1.3	12-28-46[f]	376	----	--	77 / 3.85	28 / 2.30	39 / 1.70	--	0 / 0	167 / 2.74	237 / 4.93	11 / 0.31	Tr.	--	0.64	----	22
		12-30-46[f]	202	----	--	91 / 4.55	35 / 2.88	48 / 2.09	--	0 / 0	206 / 3.38	285 / 5.93	14 / 0.39	Tr.	--	0.73	---	22
		3-14-52 1430	100[b]	1268	8.5	--	--	--	--	--	239 / 3.92	--	30 / 0.85	--	--	0.8	---	--
Piru Cr.	43-31.8-2.7	5-15-52[a] 1415	30[b]	1025	8.2	95 / 4.75	38 / 3.11	69 / 3.00	--	6 / 0.20	207 / 3.40	333 / 6.93	22 / 0.63	0 / 0	--	0.3	722	28
Modelo Canyon Cr.	43-31.8-2.7-0.1	5-20-52[a] 0900	0.1[b]	4970	7.8	374 / 18.68	234 / 19.32	643 / 27.92	--	0 / 0	445 / 7.29	2745 / 57.20	98 / 2.75	1 / 0.02	--	1.3	4576	42
Modelo Canyon Cr.	43-31.8-2.7-2.0	5-19-52 1700	0.1[b]	3703	7.8	354 / 17.66	53 / 4.36	650 / 28.26	13 / 0.33	0 / 0	708 / 11.6	1681 / 35.03	208 / 5.87	3 / 0.05	--	0.78	3420	56
Modelo Canyon Cr.	43-31.8-2.7-2.4	5-19-52 1630	0.1[b]	4048	7.2	251 / 12.52	137 / 11.26	825 / 35.8	15 / 0.37	0 / 0	1281 / 21.00	1608 / 33.49	146 / 4.12	2 / 0.03	--	3.34	3715	60
Piru Cr.	43-31.8-3.2	2- 7-51[c] 0935	5.0	1880	8.0	173 / 8.63	81 / 6.66	170 / 7.39	5 / 0.12	0 / 0	342 / 5.60	726 / 15.11	70 / 1.97	1 / 0.02	--	2.07	1420	32
		2- 6-52 1200	110[b]	943	8.2	119 / 5.94	44 / 3.61	55 / 2.39	4 / 0.10	0 / 0	200 / 3.28	350 / 7.30	25 / 0.71	4 / 0.07	1.0	1.19	838	20
		3-15-52[a] 1210	1000[b]	975	8.0	106 / 5.32	54 / 4.43	29 / 1.26	--	--	132 / 2.15	403 / 8.41	11 / 0.31	9 / 0.15	--	0.2	768	11
		3-26-52 1500	4	----	---	--	--	--	--	--	153 / 2.51	--	25 / 0.70	--	--	--	----	--
Holser Canyon Cr.	43-31.8-4.5-0.6	2-26-53[a] 1330	0.2[b]	7430	7.8	474 / 23.70	472 / 38.80	902 / 39.20	16 / 0.41	0 / 0	477 / 7.84	4120 / 85.80	258 / 7.28	4 / 0.06	--	2.5	7080	38
Lime Canyon Cr.	43-31.8-5.1-0.1	2-26-53 1350	0.5[b]	2618	8.0	66 / 3.29	71 / 5.84	530 / 23.0	9 / 0.22	0 / 0	1220 / 20.0	534 / 11.13	24 / 0.68	4 / 0.06	--	0.22	1840	71
Lime Canyon Cr.	43-31.8-5.1-0.5	5-21-52[a] 1000	0.1[b]	1988	7.6	200 / 9.98	124 / 10.19	180 / 7.82	4 / 0.11	0 / 0	351 / 5.76	1007 / 20.97	21 / 0.59	Tr.	--	0.12	1884	28
Lime Canyon Cr.	43-31.8-5.1-1.0	5-20-52[a] 1400	0.1[b]	2430	7.8	250 / 12.50	107 / 8.80	246 / 10.70	--	0 / 0	597 / 9.78	1073 / 22.34	23 / 0.66	Tr.	--	0.3	2238	34
Piru Cr.	43-31.8-6.6	5-21-52 1600	30[b]	809	8.2	86 / 4.29	41 / 3.37	66 / 2.87	3 / 0.07	0 / 0	166 / 2.72	329 / 6.86	37 / 1.04	2 / 0.03	--	1.10	660	27

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TABLE A 2

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Dis-charge: Second-Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Piru Cr.	43-31.8-9.6	5-20-52[a] 1000	20[b]	915	8.2	90 / 4.52	37 / 3.06	57 / 2.43	--	0 / 0	197 / 3.22	302 / 6.28	21 / 0.60	Tr.	--	1.2	656	25
		8- 4-52[a] 1530	5[b]	1270	7.8	121 / 6.04	50 / 4.14	104 / 4.52	4 / 0.12	0 / 0	218 / 3.58	470 / 9.80	46 / 1.30	1 / 0.02	--	1.5	945	31
		1-12-53 1005	30[b]	1105	8.1	130 / 6.50	40 / 3.29	62 / 2.70	3 / 0.07	0 / 0	244 / 4.00	374 / 7.80	27 / 0.76	2 / 0.02	--	1.24	800	21
		2-26-53[a] 1405	15[b]	1160	8.0	104 / 5.22	56 / 4.59	89 / 3.89	4 / 0.09	0 / 0	235 / 3.36	422 / 8.78	38 / 1.08	2 / 0.04	--	1.8	883	28
Eureka Cr.	43-31.9-0.7	6-11-52 1400	0.1[b]	5618	7.7	256 / 12.8	418 / 34.4	1075 / 46.8	19 / 0.49	0 / 0	1390 / 22.8	2680 / 55.8	410 / 11.5	0 / 0	--	4.94	5750	50
Santa Clara River	43-34.5	2- 1-32[f]	272	----	--	75 / 3.75	24 / 1.97	58 / 2.52	--	--	102 / 1.67	290 / 6.04	18 / 0.51	--	--	0.22	----	31
		3- 9-32[f]	30	1510	--	--	--	--	--	--	320 / 5.24	--	18 / 0.51	--	--	0.45	----	--
		4-12-46[f]	---	----	--	130 / 6.50	50 / 4.12	118 / 5.13	--	--	269 / 4.41	457 / 9.52	54 / 1.52	--	--	0.46	----	33
		12- 6-51[a]	---	3080	7.3	308 / 15.40	169 / 13.80	395 / 17.15	--	--	188 / 3.08	1810 / 37.7	167 / 4.70	1 / 0.01	--	1.3	3157	37
		1-27-52[a] 1020	100[b]	2226	7.8	226 / 11.32	97 / 7.96	199 / 8.66	--	0 / 0	354 / 5.80	929 / 19.37	96 / 2.70	4 / 0.07	--	0.6	1816	31
		3-26-52 1305	140[b]	----	--	--	--	--	--	--	252 / 4.13	--	65 / 1.83	--	--	--	----	--
		4-17-52 1040	--	----	--	--	--	--	--	--	344 / 5.63	--	92 / 2.59	--	--	--	----	--
		1-12-53 1030	20[b]	2109	7.8	187 / 9.33	97 / 7.99	195 / 8.48	6 / 0.15	0 / 0	366 / 6.00	802 / 16.7	81 / 2.28	4 / 0.07	--	0.62	1659	33
		2-26-53[a] 1435	15[b]	2145	7.8	18 / 9.18	88 / 7.22	200 / 8.70	6 / 0.14	0 / 0	348 / 5.70	831 / 17.30	85 / 2.39	7 / 0.12	--	0.6	1731	34
North Tapo Canyon Cr.	43-35.7-0.1	3-26-52 1100	2[b]	----	--	--	--	--	--	--	749 / 12.25	--	222 / 6.27	--	--	--	----	--
		6- 9-52 1330	0.1[b]	4000	7.6	264 / 13.17	258 / 21.20	600 / 26.08	8 / 0.20	0 / 0	588 / 9.64	2041 / 42.53	284 / 8.00	46 / 0.74	1.1	2.70	4086	43
Santa Clara River	43-36.1	3-14-52 1450	60[b]	1651	8.5	--	--	--	--	--	338 / 5.54	--	75 / 2.11	--	--	0.4	----	--

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b Estimated.
f Obtained from the Santa Clara Water Conservation District, Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 2

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Stream Name	Station Number	Date Time	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-36.5	10-18-51 1300	--	3922	7.8	--	--	--	--	0/0	437/7.16	--	185/5.22	--	--	--	----	--
		11- 7-51 1430	0.5	3610	7.8	--	--	--	--	0/0	426/6.99	--	188/5.30	--	--	--	----	--
		12- 2-51 1700	4.6	3846	8.2	--	--	--	--	0/0	396/6.49	--	187/5.27	--	--	--	----	--
		1- 9-52 1500	---	2183	7.9	--	--	--	--	0/0	336/5.50	--	89/2.51	--	--	--	----	--
		2-20-52 1330	---	1905	8.0	--	--	--	--	0/0	366/6.00	--	96/2.71	--	--	--	----	--
		3-18-52 1400	300[b]	1075	7.9	--	--	--	--	0/0	214/3.52	--	37/1.04	--	--	--	----	--
		3-26-52 1045	142[b]	----	--	--	--	--	--	--	270/4.43	--	65/1.83	--	--	--	----	--
		4-15-52 1130	50[b]	1479	8.1	--	--	--	--	5/0.16	329/5.40	--	80/2.26	--	--	--	----	--
		5- 7-52 0930	40[b]	1655	7.9	210/10.48	57/4.69	160/6.95	5/0.13	0/0	315/5.16	687/14.32	80/2.26	3/0.05	--	0.20	1453	31
		6-17-52 1030	10[b]	2105	8.2	--	--	--	--	0/0	368/6.04	--	102/2.38	--	--	--	----	--
		7-15-52 1110	10[b]	2232	8.0	--	--	--	--	0/0	359/5.88	--	114/3.21	--	--	--	----	--
		8-13-52 1115	12[b]	2531	7.9	--	--	--	--	0/0	380/6.24	--	119/3.36	--	--	--	----	--
		9-10-52 1125	3[b]	3257	7.9	--	--	--	--	0/0	400/6.56	--	152/4.29	--	--	--	----	--
		10-14-52 1000	3[b]	3236	7.8	293/14.6	163/13.4	320/13.9	7/0.19	0/0	388/6.36	1470/30.7	158/4.46	2/0.04	1.2	0.96	2835	33
		11-10-52 0950	8[b]	2547	7.9	--	--	--	--	--	337/5.52	--	112/3.16	--	--	--	----	--
Salt Cr.	43-37.0-0.4	3-18-52 1350	5[b]	4854	8.0	457/22.8	460/37.8	480/20.8	14/0.35	0/0	362/5.92	3510/73.1	60/1.69	15/0.24	--	0.72	5755	25
		5- 7-52 0830	0.25[b]	7246	8.2	517/25.8	691/56.8	1000/43.5	18/0.47	0/0	520/8.52	5400/112.6	143/4.03	13/0.21	--	0.14	8539	34

b Estimated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-37.5	4-17-51 1820	5.0	2169	7.9	--	--	--	--	0 / 0	361 / 5.92	--	102 / 2.88	--	--	--	----	--
		5- 1-51 0830	8.5[b]	1831	7.6	173 / 8.64	73 / 6.00	157 / 6.84	--	0 / 0	337 / 5.52	633 / 13.18	78 / 2.21	0 / 0	--	0.36	1455	32
		5-17-51 1015	5.1	1923	7.4	161 / 8.04	51 / 4.19	170 / 7.39	--	0 / 0	334 / 5.48	612 / 12.74	90 / 2.54	2 / 0.03	--	0.40	1480	38
		6-18-51 1755	3.0	2538	7.9	--	--	--	--	0 / 0	332 / 5.44	--	129 / 3.64	--	--	--	----	--
		7-17-51 1145	2.0	2475	7.6	--	--	--	--	0 / 0	342 / 5.64	--	116 / 3.27	--	--	--	----	--
		8-15-51 1135	1.0	3067	7.9	--	--	--	--	0 / 0	329 / 5.40	--	190 / 5.36	--	--	--	----	--
		9-19-51 1100	0.7	3623	7.8	247 / 12.35	157 / 12.91	198 / 8.60	--	0 / 0	303 / 4.96	1152 / 24.08	230 / 6.48	1 / 0.01	0.58	1.02	2960	25
		10-18-51 1215	3[b]	3509	7.9	--	--	--	--	0 / 0	322 / 5.28	--	230 / 6.49	--	--	--	----	--
		11- 7-51 1030	0.96	5155	7.9	--	--	--	--	0 / 0	315 / 5.17	--	245 / 6.91	--	--	--	----	--
		12- 3-51 1800	1.1	3663	8.1	--	--	--	--	0 / 0	380 / 6.23	--	217 / 6.12	--	--	--	----	--
		1- 9-52 1415	12.4	2028	8.0	--	--	--	--	0 / 0	342 / 5.61	--	83 / 2.34	--	--	--	----	--
		2-20-52 1430	20.5	1748	8.0	--	--	--	--	0 / 0	364 / 5.96	--	90 / 2.54	--	--	--	----	--
		3-18-52 1500	200[b]	1053	7.9	--	--	--	--	0 / 0	212 / 3.48	--	40 / 1.13	--	--	--	----	--
		3-26-52 1200	151.5	----	--	--	--	--	--	0	256 / 4.20	--	62 / 1.76	--	--	--	----	--
		4-15-52 1130	50	1401	8.2	--	--	--	--	14 / 0.48	322 / 5.28	--	85 / 2.40	--	--	--	----	--
		5- 7-52 0900	40[b]	1655	8.0	187 / 9.33	69 / 5.67	156 / 6.78	4 / 0.12	0 / 0	346 / 5.68	666 / 13.87	82 / 2.31	4 / 0.06	--	0.34	1444	31
		6-17-52 1000	7[b]	1672	7.9	--	--	--	--	0 / 0	383 / 6.28	--	110 / 3.10	--	--	--	----	--
		7-15-52 1050	7.2	2000	7.8	--	--	--	--	0 / 0	359 / 5.88	--	112 / 3.16	--	--	--	----	--

b Estimated.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Discharge: Second-Feet	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Santa Clara River	43-37.5	8-13-52 1035	8	2133	7.9	--	--	--	--	0/0	376/6.16	--	116/3.28	--	--	--	----	--
		9-10-52 1100	2	2610	7.8	--	--	--	--	0/0	366/6.00	--	169/4.77	--	--	--	----	--
		10-14-52 0925	1.9	2617	7.9	245/12.2	120/9.86	300/13.0	7/0.17	0/0	381/6.24	1185/24.6	167/4.71	1/0.02	1.2	0.92	2380	37
		11-10-52 0900	5.1	2141	7.8	--	--	--	--	0/0	356/5.84	--	104/2.93	--	--	--	----	--
		12- 8-52 0945	10[b]	1724	8.2	--	--	--	--	12/0.40	339/5.56	--	72/2.03	--	--	--	----	--
		1- 5-53 1145	20[b]	1760	8.1	--	--	--	--	10/0.32	378/6.20	--	74/2.09	--	--	--	----	--
Santa Clara River	43-38.8	9-12-51[c]	3[b]	1660	8.0	156/7.78	61/5.02	153/6.65	6/0.14	0/0	372/6.10	576/11.99	55/1.55	Tr.	0.7	0.56	1210	34
		3- 3-53 0900	15[b]	1432	7.8	170/8.48	54/4.44	120/5.22	4/0.12	0/0	351/5.76	509/10.6	55/1.55	3/0.05	--	0.38	1186	29
Potrero Cr.	43-38.9-0.2	5- 1-51 1045	0.1[b]	8000	7.7	478/23.85	525/43.20	1173/51.0	--	0/0	617/10.12	4934/102.81	220/6.21	2/0.04	--	2.68	8496	43
		9-12-51[c]	0.01[b]	9660	8.2	461/23.00	639/52.55	1700/73.92	22/0.56	0/0	474/7.77	6290/130.95	230/6.49	6/0.09	2.0	3.1	9610	49
		3- 3-53 0935	---	7519	7.8	468/23.4	484/39.8	1175/51.1	11/0.29	0/0	624/10.2	4661/97.1	186/5.25	6/0.09	--	1.97	7660	45
Santa Clara River	43-39.0	5- 1-51 1030	4.5	1524	7.8	159/7.95	32/2.63	131/5.71	--	0/0	334/5.48	488/10.17	52/1.47	0/0	--	0.36	1168	35
San Martinez Grande Cn. Cr.	43-39.5-0.2	1-27-52[a] 1020	4[b]	8725	8.2	--	--	--	--	--	397/6.50	--	960/27.08	--	--	5.6	----	--
		9- 4-52 1200	0.03	7270	7.7	716/35.80	242/20.20	1120/48.65	--	--	268/4.40	3930/81.97	617/17.4	2/0.04	--	3.85	----	46
		3- 3-53 1015	0.05	6803	7.8	493/24.6	343/28.1	950/41.3	11/0.28	0/0	410/6.72	3331/69.4	600/16.9	0/0	--	2.74	6320	44
San Martinez Grande Cn. Cr.	43-39.5-1.0	2-26-53 1520	0.3[b]	5882	7.9	428/21.4	304/25.0	825/35.9	10/0.26	0/0	410/6.72	2900/60.4	535/15.1	0/0	--	2.58	5557	44

a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
San Martinez Grande Cn. Cr.	43-39.5-2.0	9-12-51[c]	0.1[b]	8610	7.4	455 / 22.70	562 / 46.22	1300 / 56.53	24 / 0.61	0 / 0	408 / 6.69	5380 / 112.01	268 / 7.56	1 / 0.01	1.6	3.2	8200	45
		3- 3-53 1040	0.05	9708	7.6	563 / 28.1	500 / 41.1	1700 / 74.0	24 / 0.62	0 / 0	672 / 11.0	4373 / 91.1	1335 / 37.6	6 / 0.10	--	6.58	9790	51
San Martinez Chiquita Cr.	43-40.4-0.4	1-27-52[a] 1030	---	7100	8.2	--	--	--	--	--	704 / 11.55	--	1455 / 41.3	--	--	1.7	----	--
Castaic Cr.	43-42.0-0.6	1-27-52[a] 1430	0.5[b]	953	8.2	97 / 4.84	33 / 2.68	49 / 2.12	--	0 / 0	215 / 3.52	238 / 4.97	42 / 1.18	11 / 0.18	--	0.3	631	22
		4-27-52[a] 1540	20[b]	980	8.4	93 / 4.67	31 / 2.53	73 / 3.18	--	6 / 0.20	232 / 3.80	242 / 5.04	42 / 1.18	7 / 0.11	--	0.4	618	31
Santa Clara River	43-45.1	5- 1-51 1110	0.3[b]	2415	7.5	290 / 14.48	104 / 8.53	145 / 6.32	--	0 / 0	481 / 7.88	878 / 18.29	113 / 3.18	8 / 0.14	--	0.74	2004	22
		9-12-51[c]	0.1[b]	2450	7.6	268 / 13.37	124 / 10.20	176 / 7.65	6 / 0.14	0 / 0	484 / 7.93	989 / 20.59	105 / 2.96	4 / 0.07	0.7	0.94	1940	24
		1-27-52[a] 2240	3[b]	2010	8.2	232 / 11.60	84 / 6.88	115 / 4.98	--	10 / 0.34	296 / 4.85	782 / 16.30	80 / 2.25	5 / 0.08	--	0.7	1700	21
		12-31-52[a] 0830	4	1333	7.6	152 / 7.59	54 / 4.41	77 / 3.36	5 / 0.12	0 / 0	344 / 5.64	412 / 8.57	47 / 1.32	10 / 0.16	--	0.2	801	22
		2-26-53 1500	3[b]	1859	8.0	231 / 11.5	67 / 5.51	130 / 5.66	5 / 0.14	0 / 0	427 / 7.00	662 / 13.8	64 / 1.80	0 / 0	--	0.54	1465	25
		3- 4-53 1335	0.2	2320	7.7	293 / 14.6	106 / 8.71	210 / 9.14	7 / 0.17	0 / 0	483 / 7.92	1027 / 21.4	113 / 3.19	2 / 0.04	--	0.78	2161	28
San Francisquito Cr.	43-45.8-5.5	1-27-52 1150	5[b]	762	8.4	--	--	--	--	--	269 / 4.41	--	31 / 0.87	--	--	0.8	----	--
Pico Canyon Cr.	43-46.8-1.8-3.0	4- 3-52[a] 1030	3[b]	4200	8.3	344 / 17.20	305 / 25.05	384 / 16.71	--	31 / 1.03	349 / 5.72	2394 / 49.80	67 / 1.89	1 / 0.20	--	1.01	3865	28
		9- 4-52 1200	0.2[b]	4040	7.6	452 / 22.6	166 / 13.9	437 / 19.00	--	--	421 / 6.9	2140 / 44.70	103 / 2.9	11 / 0.18	--	1.15	----	34
Towsley Cn. Cr.	43-46.8-4.6	1-27-52[a] 1100	10[b]	2918	8.3	--	--	--	--	--	283 / 4.63	--	115 / 3.24	--	--	0.7	----	--
Newhall Cr.	43-46.9-1.3	3-18-52[a] 1500	40[b]	2372	8.2	241 / 12.05	135 / 11.12	146 / 6.34	--	--	242 / 3.96	1127 / 23.51	45 / 1.27	15 / 0.24	--	0.3	1645	22

a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE A 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date / Time	Discharge: Second Feet	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Newhall Cr.	43-46.9-3.2	1-27-52[a] 1115	3[b]	535	8.2	--	--	--	--	--	157 / 2.57	--	33 / 0.93	--	--	0.5	--	--
		3-18-52[a] 1430	15[b]	577	8.1	68 / 3.38	22 / 1.77	29 / 1.25	--	--	166 / 2.71	144 / 2.99	29 / 0.82	1 / 0.01	--	0.1	415	20
Dry Canyon Cr.	43-47.4-0.5-0.1	3-18-52[a] 1545	60[b]	362	8.2	26 / 1.29	10 / 0.77	28 / 1.66	--	--	150 / 2.45	37 / 0.78	22 / 0.62	Tr.	--	0.3	241	45
Bouquet Canyon Cr.	43-47.4-2.2	1-27-52[a] 1130	0.5[b]	307	8.2	--	--	--	--	--	146 / 2.40	--	21 / 0.59	--	--	0.6	--	--
Santa Clara River	43-47.7	3-18-52[a] 1530	90[b]	354	8.2	27 / 1.37	8 / 0.69	37 / 1.62	--	--	147 / 2.41	29 / 0.60	24 / 0.68	1 / 0.01	--	0.2	226	44
Arundell Barranca	43A-4.3	1-14-53 0950	0.5[b]	2358	7.7	106 / 5.30	54 / 4.43	360 / 15.7	11 / 0.28	0 / 0	246 / 4.04	850 / 17.7	146 / 4.12	8 / 0.14	--	0.48	1711	61

a Analyzed by Pacific Chemical Consultants.
b Estimated.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
d Obtained from the Santa Paula Water Works, Ltd., Santa Paula. Constituents in equivalents per million were calculated.
e Obtained from the Farmers Irrigation Co., Santa Paula. Constituents in equivalents per million were calculated.
f Obtained from the Santa Clara Water Conservation District, Santa Paula. Constituents in equivalents per million were calculated.

TABLE A 3

MINERAL ANALYSES OF SURFACE WATERS CALLEGUAS CREEK SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second-Feet	$ECx10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Revlon Slough	44-2.1-1.7	1-14-53 1135	6[a]	7874	8.0	266 / 13.3	243 / 20.0	1600 / 69.6	8 / 0.22	0 / 0	439 / 7.20	3725 / 77.6	645 / 18.2	10 / 0.17	--	5.06	7109	68
		2-27-53[b] 1145	10[a]	8480	8.1	302 / 15.10	235 / 19.30	1728 / 75.15	4 / 0.12	0 / 0	433 / 7.10	404 / 84.20	592 / 16.65	25 / 0.40	--	5.3	7270	69
Calleguas Cr.	44-6.5	1- 7-52[b] 0955	2[a]	1975	8.2	--	--	--	--	--	471 / 7.72	--	200 / 5.67	--	--	0.6	----	--
		3- 7-52[b] 0945	130[a]	1313	7.0	191 / 9.54	42 / 3.48	52 / 2.25	--	0 / 0	197 / 3.23	548 / 11.40	32 / 0.90	4 / 0.07	--	0.32	1058	15
		3- 7-52[b] 1310	175[a]	748	7.6	90 / 4.48	20 / 1.61	35 / 1.52	--	--	120 / 1.96	236 / 4.92	28 / 0.79	9 / 0.14	--	0	440	20
		3-15-52[b] 1040	2500	644	7.9	87 / 4.36	23 / 1.93	24 / 1.03	--	--	129 / 2.11	230 / 4.76	20 / 0.56	1 / 0.02	--	0.1	506	14
Conejo Cr.	44-7.9-3.0	2- 6-52	No Flow	191	7.4	19 / 0.95	11 / 0.94	9 / 0.39	2 / 0.06	0 / 0	88 / 1.44	19 / 0.40	11 / 0.31	6 / 0.10	0.4	0.08	164	17
		3- 7-52[b] 1250	27	404	7.8	36 / 1.82	16 / 1.33	24 / 1.04	--	--	106 / 1.74	82 / 1.71	26 / 0.73	6 / 0.10	--	0	234	25
		3-15-52[b] 1140	1500[a]	208	8.1	26 / 1.29	20 / 1.61	2 / 0.10	--	--	107 / 1.76	48 / 1.00	9 / 0.25	--	--	--	185	3
		4- 8-52 0940	----	----	--	--	--	--	--	--	141 / 2.31	--	95 / 2.68	--	--	--	----	--
		12- 2-52[b] 1220	4[a]	243	7.4	20 / 0.98	8 / 0.67	19 / 0.84	1 / 0.03	0 / 0	100 / 1.64	14 / 0.30	14 / 0.39	11 / 0.18	--	0.2	214	33
Conejo Cr.	44-7.9-8.8	6- 6-52[b] 1030	0.3	1361	7.8	114 / 5.68	68 / 5.51	86 / 3.72	--	0 / 0	376 / 6.17	264 / 5.50	117 / 3.30	6 / 0.10	--	0.8	951	25
North Fork Conejo Cr.	44-7.9-9.3-3.8	4-16-52 1120	0.1[a]	----	--	--	--	--	--	--	275 / 4.50	--	60 / 1.69	--	--	--	----	--
Conejo Cr.	44-7.9-12.8	3-19-52 1450	2[a]	974	8.4	--	--	--	--	--	247 / 4.05	--	69 / 1.95	--	--	0.2	----	--
		4- 8-52 0955	0.3[a]	----	--	--	--	--	--	--	391 / 6.41	--	195 / 5.50	--	--	--	----	--
		4-16-52 1135	0.3[a]	1927	8.0	218 / 10.88	119 / 9.78	110 / 4.78	4 / 0.12	0 / 0	334 / 5.48	646 / 13.45	215 / 6.06	8 / 0.13	--	0.15	1747	19

a Estimated.
b Analyzed by Pacific Chemical Consultants.

TABLE A 3

MINERAL ANALYSES OF SURFACE WATERS CALLEGUAS CREEK SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Tapo Cr.	44-12.2-5.8-11.7-2.8	4- 8-52 1050	0.5[a]	----	--	--	--	--	--	--	506 / 8.28	--	435 / 12.27	--	--	--	----	--
		4-16-52 1040	0.3[a]	3773	7.6	431 / 21.51	115 / 9.45	460 / 20.01	22 / 0.57	0 / 0	508 / 8.32	1413 / 29.44	485 / 13.68	6 / 0.10	--	4.32	3470	39
		1- 7-53[b] 1215	3.5	2440	7.8	262 / 13.12	80 / 6.62	258 / 11.20	12 / 0.31	0 / 0	483 / 7.94	792 / 16.50	228 / 6.42	11 / 0.18	--	1.8	1954	36
West Fork of Tapo Cr.	44-12.2-5.8-11.7-4.8-0.3	3- 8-52[b] 1345	0.2[a]	1530	8.4	--	--	--	--	--	505 / 8.29	--	71 / 2.00	--	--	0.5	----	--
Las Llagas Cr.	44-12.2-5.8-14.6-0.8	4- 8-52 1125	1[a]	----	--	--	--	--	--	--	352 / 5.77	--	195 / 5.50	--	--	--	----	--
Chivo Cr.	44-12.2-5.8-14.6-2.1	4-16-52 1020	0.5[a]	2778	7.8	331 / 16.52	131 / 10.77	280 / 12.18	7 / 0.17	0 / 0	346 / 5.68	1296 / 27.00	220 / 6.20	7 / 0.12	--	1.86	2648	31
		12- 2-52[b] 1505	0.5[a]	2120	7.8	221 / 11.07	99 / 8.12	226 / 9.82	6 / 0.14	0 / 0	374 / 6.13	904 / 18.85	144 / 4.05	2 / 0.04	--	1.6	2018	34

a Estimated.
b Analyzed by Pacific Chemical Consultants.

TABLE A 4

MINERAL ANALYSES OF SURFACE WATERS MALIBU CREEK SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second: Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Big Sycamore Canyon Cr.	45B-0.1	1-14-53 1115	0.2[b]	1217	7.4	117 / 5.85	54 / 4.43	66 / 2.86	1 / 0.03	0 / 0	398 / 6.52	166 / 3.45	99 / 2.80	0 / 0	--	0.10	805	22
Little Sycamore Canyon Cr.	45D-0.1	1-14-53 1055	2[b]	1079	8.0	110 / 5.49	63 / 5.18	65 / 2.83	2 / 0.05	0 / 0	351 / 5.76	279 / 5.82	91 / 2.56	5 / 0.08	--	0.16	809	21

b Estimated.

APPENDIX B

MINERAL ANALYSES OF GROUND WATERS, VENTURA COUNTY

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APPENDIX B

MINERAL ANALYSES OF GROUND WATERS, VENTURA COUNTY

Presented in this appendix are tables of mineral analyses of ground water samples collected from wells and springs in Ventura County. Tables B1 through B17 contain all data available prior to May 1953, including analyses of samples collected by the then Division of Water Resources and data obtained from other agencies. Data published in Bulletin 46A, Division of Water Resources, 1933, are not included. Tables B1 to B16, inclusive, present mineral analyses by ground water basin for each of the 16 basins in Ventura County arranged according to State well number. Table B17 presents available data on "Trace Constituents in Ground Water" for the entire county. All mineral analyses of ground water which became available subsequent to 1952 are presented in Appendix H.

All analyses are by the Division or Department of Water Resources unless otherwise noted. Methods of analysis are the same as shown in Appendix A, page A-2, except for those analyses presented in Table B17. Analyses in this table by the City of Los Angeles, Department of Water and Power, were determined by emission spectrograph and are accurate to plus or minus 50 per cent of the values shown. Data from U. S. Geological Survey, Water Quality Branch, Sacramento, were analyzed by procedures presented in Standard Methods for the Examination of Water and Sewage, American Public Health Association 1946[22] except as follows: Copper - Bis-Hydroxyethyl-Dithiocarbamate; Lead - Dithizone; and Zinc - Dithizone.

Data obtained from the Santa Clara Water Conservation District and a portion of that obtained from the Ventura County Farm Advisor reported constituents in parts per million only. Equivalents per million for these analyses were calculated by the Division of Water Resources.

In Tables B1 through B17 analyses from wells in the Ventura and Santa Clara River Hydrologic Units, located within the watershed boundary of a ground water basin, but outside of the boundary of the more prominent aquifers, were placed at the end of the table and classified as tributary to the ground water basin. In Tables BB1 through BB17 analyses from all wells located within the watershed boundary of a ground water basin are included as wells in the ground water basin. Classification of wells as to aquifer or aquifers of production is by the Department of Water Resources, based upon well logs and water analyses.

TABLE B 1

MINERAL ANALYSES OF GROUND WATERS UPPER OJAI VALLEY BASIN NO. 4-1

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/21W-18C4	10-26-51	843	7.8	108 5.49	34 2.79	30 1.30	--	0 0	252 4.13	224 4.66	9 0.25	2 0.04	--	Tr.	594	4.1	14
4N/22W- 9P1	8- 4-52[a]	1513	7.5	194 9.70	56 4.63	82 3.54	1 0.02	0 0	561 9.20	339 7.07	51 1.43	12 0.20	0.2	0.4	1069	8.2	20
9R4	8- 4-52[a]	1790	7.5	177 8.84	74 6.13	146 6.37	1 0.03	0 0	644 10.54	380 7.92	83 2.35	27 0.44	0.3	0.7	1249	10.8	30
10K2	8- 4-52[a]	883	7.8	96 4.78	21 1.72	70 3.04	Tr. 0.01	0 0	379 6.22	91 1.90	52 1.46	2 0.04	0.5	0.1	612	3.3	32
11M2	8- 4-52[a]	642	7.0	58 2.92	17 1.43	62 2.69	2 0.06	0 0	350 5.73	Tr. Tr.	50 1.42	0 0	0.1	0.0	438	2.8	38
11P1	12-21-51[a]	1280	7.8	109 5.44	37 3.04	113 4.89	--	--	507 8.32	27 0.56	129 3.64	37 0.60	0.1	1.5	788	5.1	37
11R1	8- 4-52[a]	1110	6.8	82 4.08	28 2.29	134 5.85	2 0.04	0 0	546 8.95	18 0.38	86 2.44	35 0.56	0.1	1.2	616	5.9	48
12F1	1-11-52[bc]	730	8.2	93 4.64	25 2.06	31 1.35	2 0.06	0 0	228 3.74	198 4.12	8 0.23	1 0.02	0.2	Tr.	497	3.5	17
	11-26-52[bc]	794	7.7	108 5.39	29 2.38	27 1.17	1 0.04	0 0	224 3.67	244 5.08	4 0.13	0 0	0.2	Tr.	540	3.6	13
12F3	8- 4-52[a]	744	7.1	109 5.45	32 2.61	26 1.15	2 0.04	0 0	234 3.83	239 4.98	10 0.27	1 0.02	0.2	0.2	542	3.8	12
12J8	10-25-51	723	7.3	93 4.65	31 2.55	21 0.92	--	0 0	224 3.67	188 3.92	6 0.17	3 0.05	--	Tr.	494	3.5	11
12Q1	8- 4-52[a]	4550	7.1	312 15.62	63 5.16	696 30.20	4 0.12	0 0	1220 20.00	6 0.12	1090 30.70	1 0.02	0.0	2.4	2849	31.1	59
12R1	10-26-51	735	7.3	93 4.65	29 2.38	20 0.87	--	0 0	224 3.67	167 3.48	5 0.14	2 0.04	--	Tr.	483	3.2	11
12R2	6- 5-51	2012	7.3	118 5.90	32 2.63	260 11.28	--	0 0	444 7.28	35 0.74	416 11.73	0 0	--	0.7	1167	12.5	57
	10-26-51	2032	7.2	111 5.55	34 2.79	250 10.9	--	0 0	454 7.46	43 0.90	422 11.9	6 0.10	--	0.7	1123	11.8	56
12R3	6- 5-51	3559	7.0	154 7.70	37 3.04	593 25.75	--	0 0	894 14.64	23 0.48	790 22.28	0 0	--	2.0	2494	25.8	70

a Analyzed by Pacific Chemical Consultants.
b Analyzed by U. S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
c For analysis of heavy metal constituents, see Table B-17.

[illegible]

TABLE B 2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/22W-5G1	2-22-39[a]	---	---	58 / 2.90	49 / 4.02	59 / 2.56	--	--	304 / 4.99	125 / 2.61	65 / 1.83	0 / 0	--	0.2	660	4.5	27
5J1	8-20-52[b]	676	7.1	105 / 5.25	25 / 2.06	23 / 1.00	1 / 0.03	0 / 0	251 / 4.12	144 / 3.00	16 / 0.45	18 / 0.29	0.3	Tr.	520	3.1	12
5J5	8- 1-52	714	7.3	108 / 5.39	27 / 2.22	28 / 1.22	1 / 0.03	0 / 0	256 / 4.20	167 / 3.48	14 / 0.39	28 / 0.45	0.4	Tr.	548	3.5	14
5L1[c]	8- 1-52[d]	788	7.4	105 / 5.23	24 / 1.97	32 / 1.39	1 / 0.03	0 / 0	249 / 4.09	169 / 3.52	24 / 0.69	16 / 0.26	0.3	<0.1	513	3.4	16
6D3	8- 1-52[d]	728	7.4	100 / 4.99	25 / 2.10	24 / 1.02	2 / 0.05	0 / 0	205 / 3.37	211 / 4.40	10 / 0.29	1 / 0.02	0.4	0.1	473	3.2	12
6H1	8- 1-52[d]	905	7.3	113 / 5.67	27 / 2.20	43 / 1.86	1 / 0.02	0 / 0	249 / 4.08	180 / 3.75	60 / 1.69	1 / 0.02	0.1	0.1	609	4.1	19
6J3	8- 1-52[d]	810	7.3	94 / 4.72	20 / 1.61	64 / 2.79	1 / 0.02	0 / 0	289 / 4.73	176 / 3.66	30 / 0.85	2 / 0.04	0.4	0.0	549	4.4	30
6K2	9-17-28[f]	---	---	118 / 5.90	25 / 2.06	258[e] / 11.21	--	--	244 / 4.00	385 / 8.02	213 / 6.00	--	--	--	1243	13.3	58
6L1	8- 1-52[d]	995	7.1	99 / 4.95	28 / 2.28	71 / 3.14	1 / 0.03	0 / 0	291 / 4.77	113 / 2.36	114 / 3.21	10 / 0.17	0.5	0.1	591	5.4	30
6N1	8- 4-52[d]	940	7.3	103 / 5.13	27 / 2.24	78 / 3.37	1 / 0.02	0 / 0	299 / 4.90	224 / 4.66	34 / 0.96	13 / 0.21	0.3	0.1	620	5.6	31
6Q1	1-16-52[bg]	711	8.2	92 / 4.59	22 / 1.81	25 / 1.09	3 / 0.08	0 / 0	208 / 3.41	137 / 2.85	21 / 0.59	35 / 0.56	0.1	Tr.	461	3.0	14
7B1	8-20-52[b]	826	7.0	128 / 6.40	32 / 2.63	31 / 1.35	2 / 0.04	0 / 0	286 / 4.68	175 / 3.64	34 / 0.96	43 / 0.70	0.2	Tr.	648	4.0	13
7B5	8- 1-52[d]	917	7.4	125 / 6.26	31 / 2.57	33 / 1.43	1 / 0.03	0 / 0	309 / 5.07	182 / 3.79	27 / 0.75	32 / 0.51	0.0	0.0	632	4.0	14
7C1	8- 1-52	658	7.0	95 / 4.75	23 / 1.89	35 / 1.52	1 / 0.03	0 / 0	249 / 4.08	140 / 2.92	24 / 0.68	2 / 0.03	0.3	0.1	500	3.4	19
9B1	1- 4-52[bg]	1490	8.2	208 / 10.38	56 / 4.61	68 / 2.96	4 / 0.11	0 / 0	560 / 9.18	357 / 7.43	50 / 1.41	Tr.	0.7	0.1	1040	7.7	16

a Analyzed by Fruit Growers Laboratory, Inc.
b For analysis of heavy metal constituents see Table B 17.
c Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
d Analyzed by Pacific Chemical Consultants.
e Na + K.
f Analysis obtained from Ventura County Farm Advisors.
g Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.

TABLE B 2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/23W- 1R2	7- 6-34[a]	---	--	145 / 7.25	45 / 3.69	64 / 2.78	--	--	286 / 4.69	393 / 8.19	36 / 1.02	--	--	0.4	969	6.5	20
	6-27-45[a]	---	--	75 / 3.75	17 / 1.42	52 / 2.26	--	--	298 / 4.89	96 / 2.00	17 / 0.48	Tr.	--	Tr.	555	2.5	30
2B1	8-20-52[b]	763	7.0	101 / 5.05	36 / 2.96	30 / 1.30	1 / 0.03	0 / 0	347 / 5.66	63 / 1.32	45 / 1.27	29 / 0.46	0.1	0.0	558	3.7	14
12K2	8- 4-52[d]	1339	7.5	223 / 11.14	44 / 3.68	54 / 2.35	2 / 0.05	0 / 0	335 / 5.50	493 / 10.28	37 / 1.04	24 / 0.38	0.2	<0.1	1123	6.1	14
12K3	11-26-52[bg]	839	7.2	113 / 5.64	25 / 2.06	38 / 1.65	1 / 0.03	0 / 0	280 / 4.59	186 / 3.87	18 / 0.51	19 / 0.31	0.4	0.1	561	3.7	18
5N/22W-32J2	10-17-51[d]	1120	7.[illegible]	180 / 9.00	15 / 1.24	110 / 4.78	--	--	293 / 4.81	276 / 5.76	145 / 4.07	3 / 0.06	0.6	0.3	841	6.0	32
	8- 1-52[d]	1213	7.2	148 / 7.41	268 / 2.20	80 / 3.48	2 / 0.04	0 / 0	291 / 4.77	296 / 6.17	83 / 2.34	4 / 0.06	0.4	0.C	704	5.7	27
32J3	10-17-51[d]	2160	7.7	139 / 6.94	191 / 1.56	180 / 7.84	--	--	210 / 3.44	38 / 0.80	405 / 11.4	Tr.	--	0.1	1138	12.1	48
33J1	10-31-35[a]	---	--	146 / 7.30	30 / 2.46	48 / 2.90	--	0 / 0	295 / 4.84	337 / 7.03	11 / 0.31	--	--	0.1	867	4.6	18
33M1	8- 1-52[d]	805	7.0	115 / 5.76	24 / 2.00	32 / 1.39	1 / 0.02	0 / 0	234 / 3.84	183 / 3.81	33 / 0.93	26 / 0.42	0.3	0.1	496	3.4	15
34N1	3-28-50[a]	---	--	110 / 5.50	25 / 2.05	40 / 1.74	8[h] / 0.22	0 / 0	263 / 4.31	225 / 4.69	16 / 0.45	4 / 0.06	--	0.1	691	4.0	18

a Analyzed by Fruit Growers Laboratory, Inc.
b For analysis of heavy metal constituents see Table B 17.
c Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
d Analyzed by Pacific Chemical Consultants.
e Na + K.
f Analysis obtained from Ventura County Farm Advisors.
g Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
h Calculated by difference.

TABLE B 3

MINERAL ANALYSES OF GROUND WATERS VENTURA RIVER VALLEY BASIN NO. 4-3

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	EC$\times10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/23W- 5H1	8- 1-52[a]	966	7.6	131/6.55	28/2.32	43/1.88	2/0.05	0/0	281/4.61	245/5.10	40/1.12	9/0.14	0.3	0.3	612	4.3	17
6D1	8- 1-52[a]	1700	7.5	232/11.61	60/4.98	80/3.50	2/0.06	0/0	423/6.93	472/9.85	102/2.87	33/0.53	0.3	0.4	1344	8.5	17
6R2	8-20-52	1179	7.7	100/5.00	37/3.04	95/4.13	2/0.04	0/0	242/3.96	261/5.43	97/2.74	12/0.20	0.5	0.4	763	7.2	34
9M1	8- 1-52	813	7.8	113/5.64	35/2.88	47/2.04	2/0.06	0/0	263/4.32	227/4.73	35/0.99	4/0.07	0.6	0.4	620	5.0	19
12D1	7-14-50[b]	5200	7.8	276/13.8	215/17.8	440/19.1	--	--	560/9.2	1575/32.8	310/8.7	--	--	1.8	---	36.9	38
	8- 1-52[a]	2980	7.2	245/12.26	113/9.37	340/14.80	8/0.20	0/0	496/8.13	1128/23.50	154/4.35	39/0.63	0.9	1.2	2460	24.4	40
33C1	4-14-52[a]	478	7.5	38/1.92	9/0.76	43/1.87	--	0/0	129/2.11	36/0.76	60/1.69	8/0.14	0.3	0.2	254	2.4	41
33N1	2-23-53[c]	1934	7.5	116/5.79	22/1.81	290/12.62	7/0.17	0/0	373/6.12	151/3.15	397/11.17	12/0.20	0.4	1.4	1206	14.3	62
	2-23-53[d]	4016	7.8	185/9.23	156/12.58	625/27.19	8/0.21	0/0	578/9.48	281/5.85	1186/33.42	27/0.44	0.4	3.4	2913	39.7	55
	2-23-53[e]	4424	7.7	243/12.13	88/7.23	725/31.54	8/0.22	0/0	610/10.00	271/5.65	1290/36.38	32/0.52	0.4	3.6	3165	39.0	62
	2-23-53[f]	4524	7.5	234/11.68	93/7.64	725/31.54	9/0.22	0/0	468/7.68	289/6.03	1395/39.34	37/0.60	0.4	4.4	3237	39.4	62
4N/23W- 3M1	8- 4-52[a]	1238	7.4	157/7.85	40/3.32	66/2.85	1/0.03	0/0	492/8.06	137/2.86	95/2.67	27/0.44	0.1	0.2	773	6.0	20
3Q1	8- 4-52[a]	715	7.9	48/2.41	47/3.85	46/1.98	1/0.03	0/0	359/5.88	75/1.56	22/0.63	7/0.12	0.6	0.0	394	2.4	24
9B1	5- 1-53[a]	926	7.6	114/5.70	36/2.98	51/2.20	2/0.05	0/0	297/4.87	209/4.36	54/1.53	20/0.32	0.4	0.5	684	5.2	20
10J1	6-22-48[b]	870	6.3	75/3.7	35/2.9	60/2.7	--	--	200/3.3	200/4.2	55/1.6	--	--	0.2	---	5.6	29

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Well sampled at 20 ft. depth.
d Well sampled at 30 ft. depth.
e Well sampled at 40 ft. depth.
f Well sampled at 50 ft. depth.

TABLE B 3

MINERAL ANALYSES OF GROUND WATERS VENTURA RIVER VALLEY BASIN NO. 4-3

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number	Date Sampled	ECx10⁶ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/23W-11D1	5- 1-53[a]	517	7.4	40 / 2.00	16 / 1.29	47 / 2.04	Tr.	0 / 0	228 / 3.74	27 / 0.57	32 / 0.90	16 / 0.26	0.4	<0.1	370	2.0	38
15D2	5- 1-53[a]	565	7.4	49 / 2.45	11 / 0.89	57 / 2.47	Tr.	0 / 0	207 / 3.40	52 / 1.08	44 / 1.23	14 / 0.22	0.4	0.0	400	2.5	42
16C4	6- 5-52[a]	875	7.6	107 / 5.33	25 / 2.04	47 / 2.06	--	0 / 0	271 / 4.43	200 / 4.17	29 / 0.82	6 / 0.10	0.5	0.6	594	4.1	22
16M1	6- 5-52[a]	888	7.4	106 / 5.29	28 / 2.31	51 / 2.20	--	0 / 0	252 / 4.13	206 / 4.30	41 / 1.16	6 / 0.09	0.3	0.5	603	4.5	22
20J2	8-28-52[a]	877	8.5	104 / 5.18	34 / 2.84	44 / 1.92	2 / 0.05	6 / 0.05	249 / 4.08	233 / 4.85	29 / 0.81	6 / 0.09	0.9	0.2	590	4.8	19
21C8	5- 1-53[a]	880	7.2	81 / 4.06	17 / 1.43	81 / 3.52	Tr.	0 / 0	325 / 5.33	65 / 1.36	87 / 2.46	6 / 0.09	0.6	0.0	588	3.5	39
22B1	8-28-52	1916	7.9	228 / 11.4	62 / 5.10	125 / 5.44	3 / 0.07	0 / 0	327 / 5.36	538 / 11.2	184 / 5.19	1 / 0.02	1.1	0.6	1420	10.6	25
28M1	8- 1-52[a]	722	7.4	39 / 1.95	11 / 0.89	120 / 5.22	2 / 0.05	0 / 0	353 / 5.79	21 / 0.43	54 / 1.52	19 / 0.30	0.5	0.5	408	5.2	65
28P3	8- 1-52	1235	7.5	208 / 10.4	46 / 3.78	70 / 3.04	2 / 0.05	0 / 0	468 / 7.68	332 / 6.90	63 / 1.78	7 / 0.11	0.4	0.2	1050	6.8	18
28Q1	5- 1-53[a]	1720	7.3	222 / 11.10	55 / 4.54	124 / 5.45	2 / 0.05	0 / 0	489 / 8.02	458 / 9.56	132 / 3.72	5 / 0.08	0.3	0.6	1363	10.0	26
29F2	8- 1-52[a]	875	7.4	122 / 6.12	25 / 2.06	45 / 1.94	2 / 0.05	0 / 0	272 / 4.47	235 / 4.90	30 / 0.85	3 / 0.05	0.5	0.4	633	4.0	19
32B1	8-28-52	921	7.9	101 / 5.04	37 / 3.03	45 / 1.96	2 / 0.05	0 / 0	256 / 4.20	212 / 4.41	34 / 0.90	8 / 0.13	0.6	0.4	628	5.0	19
32J1	8-28-52[a]	938	7.9	114 / 5.70	30 / 2.47	48 / 2.07	2 / 0.05	0 / 0	278 / 4.56	223 / 4.65	34 / 0.95	9 / 0.15	0.5	0.4	663	4.6	20
33M1	4-15-52[a]	1635	7.7	216 / 10.80	57 / 4.72	97 / 4.23	--	0 / 0	327 / 5.37	545 / 11.35	106 / 2.99	13 / 0.21	0.7	0.5	1240	9.0	21
4N/24W - 13J3	8-28-52[a]	885	7.3	102 / 5.09	35 / 2.88	39 / 1.69	Tr.	0 / 0	350 / 5.74	137 / 2.86	33 / 0.92	22 / 0.36	0.2	<0.1	565	3.9	18
24H1	8-28-52[a]	807	7.0	115 / 5.76	32 / 2.66	36 / 1.56	1 / 0.03	0	361 / 5.92	166 / 3.46	223 / 0.63	2 / 0.03	0.1	0.2	573	4.1	16

a Analyzed by Pacific Chemical Consultants.
c Well sampled at 20 ft. depth.
d Well sampled at 30 ft. depth.
e Well sampled at 40 ft. depth.
f Well sampled at 50 ft. depth.

[illegible]

TABLE B 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	EC x10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
4N/18W- 3Q1	2-19-34[a]	1690	--	150 / 7.48	69 / 5.70	166[bc] / 7.22	--	--	482 / 7.90	493 / 10.26	78 / 2.20	2 / 0.04	--	1.4	1439	12.5	35
3Q2	2-19-34[a]	1910	--	181 / 9.01	80 / 6.66	179[bc] / 7.80	--	--	545 / 8.93	604 / 12.58	70 / 1.96	Tr.	--	1.4	1670	14.5	33
12P1	8-23-52	6370	7.7	544 / 27.2	425 / 34.9	700 / 30.6	12 / 0.30	0 / 0	344 / 5.64	3270 / 68.2	580 / 16.4	14 / 0.22	3.5	1.1	6220	75.8	33
19P1[d]	7-10-43[e]	----	--	159 / 7.95	72 / 5.91	111 / 4.82	7[b] / 0.17	--	316 / 5.17	594 / 12.36	43 / 1.21	7 / 0.11	--	1.4	1309	10.9	26
	1- 9-52[fg]	1570	8.2	165 / 8.23	70 / 5.76	116 / 5.04	4 / 0.10	0 / 0	304 / 4.98	609 / 12.68	41 / 1.16	8 / 0.13	0.7	1.0	1190	10.9	26
19P2	5-16-50[e]	----	7.4	206 / 10.30	78[b] / 6.39	124 / 5.39	--	--	275 / 4.51	788 / 16.41	41 / 1.16	--	--	0.9	1512	11.8	24
	6-16-50[e]	----	--	221 / 11.05	85[b] / 6.99	130 / 5.65	--	--	253 / 4.15	879 / 18.30	44 / 1.24	--	--	--	1612	12.6	24
	5-26-52[h]	1588	7.8	161 / 8.04	69 / 5.65	117 / 5.09	--	0 / 0	301 / 4.97	605 / 12.59	49 / 1.38	9 / 0.14	1.5	0.8	1426	10.7	27
19R1[d]	8-29-34[e]	----	--	140 / 7.00	62 / 5.08	99 / 4.30	--	0 / 0	269 / 4.41	532 / 11.08	41 / 1.16	--	--	0.8	1143	9.4	26
	8-30-35[e]	----	--	155 / 7.75	62 / 5.08	105 / 4.55	--	0 / 0	272 / 4.46	559 / 11.65	45 / 1.27	--	--	0.8	1198	9.6	26
	6-15-39[e]	----	--	134 / 6.70	53 / 4.35	95 / 4.13	--	0 / 0	260 / 4.27	491 / 10.01	30 / 0.04	3 / 0.04	--	1.0	1056	8.5	27
	8-11-41[e]	----	--	147 / 7.35	57 / 4.67	104 / 4.53	--	--	284 / 4.66	508 / 10.58	40 / 1.13	4 / 0.06	--	0.9	1144	9.2	27
	5-26-52[h]	1588	7.5	169 / 8.45	62 / 5.11	121 / 5.26	--	0 / 0	288 / 4.72	603 / 12.56	56 / 1.58	6 / 0.09	1.4	0.9	1316	10.4	28
20M2	10-23-51[h]	1340	7.8	178 / 8.40	69 / 5.68	115 / 5.00	--	--	244 / 4.00	635 / 13.22	49 / 1.38	4 / 0.07	1.5	1.0	1278	10.7	26
	5-26-52[gh]	1586	7.8	171 / 8.57	66 / 5.42	105 / 4.67	--	0 / 0	277 / 4.55	580 / 12.08	55 / 1.55	8 / 0.13	1.4	1.3	1323	10.1	25

a Analysis obtained from Ventura County Farm Advisors.
b Calculated by difference
c Na+K.
d Additional analyses published in Bulletin No. 46-A.(2) For cross index of well numbers, see Appendix E.
e Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
g For analysis of heavy metal constituents, see Table B 17.
h Analyzed by Pacific Chemical Consultants.

TABLE B 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/18W-27B1	10-23-51[h]	2020	7.5	322 / 16.12	152 / 12.68	311 / 13.50	--	--	392 / 6.43	1455 / 30.30	133 / 3.74	42 / 0.67	1.3	1.5	2909	26.2	32
	5-26-52[h]	2680	7.5	262 / 13.10	118 / 9.70	235 / 10.20	--	0 / 0	287 / 6.35	1124 / 23.41	107 / 3.01	36 / 0.58	1.5	0.8	2333	19.9	31
	8-25-52	2584	7.6	265 / 13.2	117 / 9.62	220 / 9.57	7 / 0.17	0 / 0	371 / 6.08	1074 / 22.4	98 / 2.76	34 / 0.54	1.1	0.6	2170	19.4	29
27G1	5-26-52[h]	1760	7.6	165 / 8.27	63 / 5.32	172 / 7.47	--	0 / 0	292 / 4.79	673 / 14.00	66 / 1.86	7 / 0.11	1.1	0.3	1392	12.8	36
	8-25-52	1961	7.1	181 / 9.05	85 / 6.99	145 / 6.30	6 / 0.15	0 / 0	327 / 5.36	710 / 14.8	74 / 2.08	6 / 0.10	0.9	0.5	1510	13.4	28
28C1	5-26-52[h]	2008	7.6	204 / 10.22	73 / 6.04	176 / 7.65	--	0 / 0	343 / 5.61	767 / 16.00	74 / 2.09	15 / 0.24	1.3	0.4	1600	13.7	32
29P2	11- 5-51[h]	2950	7.2	428 / 21.40	190 / 17.00	158 / 6.87	--	--	412 / 7.56	1630 / 34.0	77 / 2.17	36 / 0.58	--	0.7	2878	23.9	15
	5-26-52[h]	3190	7.5	408 / 20.41	199 / 16.34	204 / 8.87	--	0 / 0	432 / 7.08	1695 / 35.30	80 / 2.26	40 / 0.64	1.3	1.2	3386	25.2	19
30D1	5-26-52[h]	1775	6.8	222 / 11.12	75 / 6.14	99 / 4.30	--	0 / 0	288 / 4.73	737 / 15.35	35 / 0.99	28 / 0.45	0.9	1.3	1613	10.4	20
	8-22-52	2137	7.1	266 / 13.3	105 / 8.63	100 / 4.35	6 / 0.14	0 / 0	332 / 5.44	917 / 19.1	41 / 1.16	45 / 0.72	1.1	1.0	1800	13.1	16
30G1	10-25-51[h]	1330	8.5	178 / 8.40	62 / 5.12	102 / 4.44	--	--	244 / 4.00	561 / 11.70	58 / 1.91	14 / 0.22	1.2	0.9	1180	9.6	25
	5-26-52[gh]	1509	8.0	159 / 7.94	76 / 6.26	119 / 5.18	--	0 / 0	283 / 4.64	625 / 12.90	63 / 1.78	10 / 0.16	1.2	0.4	1258	11.4	27
30J1	5-26-52[h]	1377	7.0	150 / 7.51	51 / 4.23	96 / 4.16	--	0 / 0	262 / 4.30	492 / 10.26	42 / 1.18	6 / 0.09	0.9	1.0	1144	8.4	26
31C1[d]	4-25-33[e]	----	--	149 / 7.45	69 / 5.66	110[b] / 4.75	--	0 / 0	243 / 3.99	604 / 12.57	46 / 1.30	--	--	0.3	1221	10.4	27
	8-29-34[e]	----	--	217 / 10.85	104 / 8.53	119 / 5.18	--	0 / 0	271 / 4.45	897 / 18.68	52 / 1.47	--	--	0.6	1660	13.7	21

b Calculated by difference.
d Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
e Analyzed by Fruit Growers Laboratory, Inc.
g For analysis of heavy metal constituents, see Table B 17.
h Analyzed by Pacific Chemical Consultants.

TABLE B 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/18W-31C1[d]	8-30-35[e]	----	--	128 / 6.40	62 / 5.08	91 / 3.96	--	0 / 0	234 / 3.84	508 / 10.57	35 / 0.99	--	--	0.6	1058	9.0	26
	6-10-39[e]	----	--	111 / 5.55	46 / 3.77	74 / 3.22	10[b] / 0.26	Tr.	229 / 3.76	393 / 8.18	29 / 0.82	3 / 0.04	--	0.7	895	7.2	25
	8-11-41[e]	----	--	123 / 6.15	50 / 4.09	76 / 3.30	5[b] / 0.12	0 / 0	215 / 3.53	443 / 9.23	30 / 0.85	3 / 0.05	--	0.5	945	8.5	24
	10-19-45[e]	----	--	154 / 7.70	63 / 5.16	75 / 3.26	33[b] / 0.84	0 / 0	257 / 4.22	566 / 11.52	41 / 1.16	4 / 0.06	--	0.6	1193	9.3	19
	5-26-52[h]	1041	7.7	84 / 4.22	50 / 4.10	75 / 3.26	--	0 / 0	212 / 3.48	365 / 7.59	27 / 0.75	2 / 0.04	1.5	0.7	804	7.4	28
31D1	5-26-52[gh]	1032	8.2	86 / 4.31	47 / 3.86	75 / 3.27	--	0 / 0	193 / 3.17	358 / 7.46	24 / 0.69	2 / 0.04	1.7	0.4	778	7.1	29
	8-20-52	926	7.9	99 / 4.94	45 / 3.70	80 / 3.48	3 / 0.08	0 / 0	214 / 3.52	351 / 7.32	25 / 0.70	4 / 0.06	1.0	0.5	757	7.3	29
4N/19W-25A1[d]	7-23-34[a]	3120	--	464 / 23.12	169 / 14.08	159 / 6.93	--	--	473 / 7.95	1550 / 32.32	59 / 1.65	53 / 0.86	--	1.4	2942	21.0	14
25C1[d]	10-25-51[h]	2040	7.1	524 / 26.20	151 / 12.60	146 / 6.35	--	--	439 / 7.20	1550 / 32.30	85 / 2.40	153 / 2.46	1.0	1.1	3121	19.0	14
	5-26-52[h]	2935	7.3	386 / 19.32	130 / 10.70	198 / 8.60	--	0 / 0	460 / 7.53	1300 / 27.10	71 / 2.01	99 / 1.60	1.3	0.4	2586	19.3	22
	8-22-52	2786	7.5	346 / 17.3	123 / 10.1	175 / 7.60	7 / 0.18	0 / 0	383 / 6.28	1216 / 25.3	70 / 1.97	97 / 1.56	0.9	0.6	2430	17.9	22
25E1	4-26-34[e]	----	--	253 / 12.65	100 / 8.20	148 / 6.13	--	--	451 / 7.40	902 / 18.77	40 / 1.13	--	--	0.6	1894	14.4	23
25M1	4-28-48[e]	----	7.9	156 / 7.80	61 / 5.00	85 / 3.69	4[b] / 0.10	0 / 0	298 / 4.89	518 / 10.78	28 / 0.79	8 / 0.13	--	1.0	1158	8.8	22
25M2	4-25-40[e]	----	--	124 / 6.20	52 / 4.26	81 / 3.53	5[b] / 0.13	0 / 0	258 / 4.23	429 / 8.93	32 / 0.90	4 / 0.06	--	0.7	985	7.9	25
	5-26-52[h]	1145	7.6	108 / 5.42	41 / 3.41	80 / 3.48	--	0 / 0	226 / 3.71	369 / 7.69	31 / 0.87	4 / 0.06	2.2	0.9	852	6.9	28

a Analyzed by Pacific Chemical Consultants.
b Calculated by difference.
d Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
e Analyzed by Fruit Growers Laboratory, Inc.
g For analysis of heavy metal constituents, see Table B 17.
h Analyzed by Pacific Chemical Consultants.

TABLE B 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/19W-25M2	8-22-52	1130	7.4	106/5.30	47/3.86	77/3.35	4/0.10	0/0	212/3.48	375/7.81	46/1.30	4/0.06	1.1	0.5	813	7.3	27
26J1	12-14-33[e]	----	--	233/11.65	103/8.45	132[b]/5.72	--	--	482/7.91	813/16.92	35/0.99	0/0	--	0.5	1798	14.2	22
26J3[d]	5-26-52[h]	1278	7.7	127/6.35	49/4.08	85/3.68	--	0/0	249/4.08	435/9.06	35/0.99	8/0.13	2.2	0.6	900	7.8	26
	8-22-52	1290	7.7	133/6.65	54/4.44	85/3.70	4/0.12	0/0	239/3.92	433/9.02	47/1.32	8/0.12	1.0	0.6	948	8.2	25
26Q1	6- 3-38[e]	----	--	180/9.00	81/6.64	111/4.83	11[b]/0.29	--	292/4.79	706/14.71	35/0.99	17/0.27	--	0.92	1433	11.8	23
	5-26-52[h]	1890	7.4	211/10.56	86/7.05	111/4.84	--	0/0	348/5.72	727/15.18	38/1.07	11/0.18	2.4	1.0	1583	11.9	22
	8-22-52	1852	7.5	198/9.90	93/7.65	60/2.61	5/0.13	0/0	326/5.32	696/14.5	49/1.38	20/0.32	--	1.0	1455	10.4	13
27P1	5-26-52[gh]	1853	7.6	204/10.21	91/7.51	116/5.04	--	0/0	384/6.30	756/15.72	35/0.98	6/0.10	1.7	0.7	1576	12.6	22
33C1[d]	5-27-52[h]	1343	7.4	135/6.75	31/2.58	144/6.24	--	0/0	283/4.64	459/9.57	30/0.85	15/0.24	1.0	1.0	1028	8.8	40
33D3	5-27-52[gh]	1280	7.7	132/6.62	52/4.31	91/3.96	--	0/0	267/4.38	468/9.75	28/0.80	11/0.18	1.4	0.8	1040	8.3	27
33D4	10-25-51[h]	1170	8.0	123/6.16	53/4.44	90/3.91	--	--	224/3.68	458/9.55	31/0.88	9/0.14	0.7	1.0	966	8.4	27
33E1	8-25-52	1370	7.9	143/7.15	52/4.28	82/3.56	4/0.10	0/0	232/3.80	480/10.0	30/0.84	14/0.23	1.0	0.6	1000	8.0	24
33J1[d]	2-29-44[e]	----	--	173/8.65	55/4.51	103/4.47	23[b]/0.71	0/0	293/4.80	588/12.25	39/1.10	12/0.19	--	--	1286	9.7	24
	5-26-52[h]	2210	7.6	283/14.13	92/7.65	130/5.65	--	0/0	356/5.82	883/18.40	78/2.18	36/0.59	1.4	0.9	1952	13.3	21
	8-25-52	1942	8.0	249/12.4	65/5.35	110/4.78	5/0.14	0/0	344/5.48	740/15.4	59/1.66	56/0.91	1.0	0.9	1630	10.3	21

b Calculated by difference.
d Additional analyses published in Bulletin No. 46-A. [2] For cross index of well numbers, see Appendix E.
e Analyzed by Fruit Growers Laboratory, Inc.
g For analysis of heavy metal constituents, see Table B 17.
h Analyzed by Pacific Chemical Consultants.

TABLE B 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/19W-33K4	10-23-51[h]	1490	7.4	192 / 9.60	79 / 6.56	102 / 4.44	--	--	237 / 3.88	677 / 14.10	68 / 1.91	28 / 0.45	1.3	1.3	1747	11.0	22
33K5[d]	2-29-44[e]	----	--	146 / 7.30	58 / 4.75	98 / 4.26	10[b] / 0.26	0 / 0	258 / 4.23	523 / 11.10	39 / 1.10	9 / 0.14	--	--	1141	9.3	26
33M3	5-26-52[h]	1468	7.6	149 / 7.46	59 / 4.88	110 / 4.77	--	0 / 0	286 / 4.68	507 / 10.54	58 / 1.64	16 / 0.25	1.5	0.7	1196	9.6	28
34B1	5-26-52[h]	2037	7.5	240 / 12.01	95 / 7.82	118 / 5.12	--	0 / 0	398 / 6.54	823 / 17.17	41 / 1.16	29 / 0.47	2.1	0.8	1693	12.9	21
34C2	10-29-51	2822	7.8	322 / 16.12	155 / 12.68	122 / 5.31	--	--	332 / 5.45	1300 / 27.05	44 / 1.24	38 / 0.62	--	0.8	2279	18.0	16
	5-26-52[h]	2530	7.2	329 / 16.45	129 / 10.62	137 / 5.96	--	0 / 0	465 / 7.61	1095 / 22.80	49 / 1.38	41 / 0.66	2.3	0.6	2137	16.6	18
34K1	10-12-31[e]	----	--	178 / 8.90	69 / 5.66	117[b] / 5.08	--	0 / 0	345 / 5.66	616 / 12.82	41 / 1.16	--	--	--	1366	10.7	26
	5-26-52[h]	1515	7.5	164 / 8.22	62 / 5.11	93 / 4.03	--	0 / 0	264 / 4.34	544 / 11.35	40 / 1.13	14 / 0.22	2.1	0.8	1174	9.1	23
35K2	12-27-34[e]	----	--	186 / 9.30	76 / 6.23	92 / 4.00	--	--	216 / 3.54	710 / 14.80	52 / 1.47	--	--	0.8	1332	10.2	20
	10-23-51[h]	1230	7.4	160 / 8.00	58 / 4.88	85 / 3.70	--	--	217 / 3.56	562 / 11.70	37 / 1.04	15 / 0.24	1.2	1.0	1170	8.6	22
	5-26-52[h]	1120	7.5	115 / 5.74	38 / 3.16	90 / 3.89	--	0 / 0	193 / 3.17	417 / 8.68	22 / 0.63	7 / 0.11	1.5	0.6	834	7.0	30
35L1	1- 8-52[fg]	1530	8.4	170 / 8.48	72 / 5.92	85 / 3.70	5 / 0.14	0 / 0	252 / 4.13	611 / 12.72	40 / 1.13	15 / 0.24	0.9	0.7	1150	9.8	20
35L2	5-26-52[gh]	1554	7.8	170 / 8.49	67 / 5.54	99 / 4.30	--	0 / 0	249 / 4.08	617 / 12.85	44 / 1.23	17 / 0.27	1.4	0.8	1390	9.8	24
	8-25-52	1435	8.3	153 / 7.65	47 / 3.86	90 / 3.92	4 / 0.12	0 / 0	251 / 4.12	512 / 10.7	31 / 0.87	12 / 0.19	1.0	0.8	1120	7.9	25

a Analysis obtained from Ventura County Farm Advisors.
b Calculated by difference.
c Na + K.
d Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
e Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
g For analysis of heavy metal constituents, see Table B 17.
h Analyzed by Pacific Chemical Consultants.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/19W-6D1[a]	8-29-34[c]	----	--	117 / 5.85	51 / 4.18	95[b] / 4.12	--	--	283 / 4.64	402 / 8.38	40 / 1.13	--	--	0.4	988	8.3	29
	8-30-35[c]	----	--	115 / 5.75	49 / 4.04	90 / 3.92	--	--	281 / 4.61	396 / 8.26	41 / 1.16	--	--	0.4	972	8.0	29
	6- 2-39[c]	----	--	114 / 5.70	47 / 3.85	97 / 4.21	--	--	275 / 4.51	392 / 8.07	37 / 1.04	2 / 0.03	--	0.4	964	8.1	31
	8-11-41[c]	----	--	117 / 5.85	49 / 4.02	103 / 4.48	--	--	281 / 4.61	408 / 8.51	39 / 1.10	4 / 0.06	--	0.4	1001	8.5	31
	10-12-42[c]	----	--	114 / 5.70	46 / 3.77	95 / 4.13	17[b] / 0.44	--	270 / 4.43	408 / 8.51	37 / 1.04	4 / 0.06	--	0.5	991	8.3	29
	10-12-45[e]	----	--	114 / 5.69	46 / 1.90	95[d] / 4.13	--	--	270 / 4.43	408 / 8.51	37 / 1.05	4 / 0.06	--	0.5	989	6.C	35
	3-12-48[e]	----	7.8	120 / 6.00	48 / 3.93	91 / 3.96	--	--	266 / 4.37	402 / 8.37	37 / 1.04	3 / 0.05	--	0.2	967	7.9	28
	10-23-51[f]	1275	7.6	114 / 5.68	48 / 3.92	95 / 4.12	--	--	254 / 4.16	397 / 8.27	42 / 1.18	8 / 0.12	0.8	0.5	982	8.0	30
	5-28-52[f]	1284	7.5	116 / 5.82	46 / 3.82	98 / 4.25	--	0 / 0	278 / 4.56	372 / 7.75	42 / 1.18	19 / 0.31	2.0	0.5	900	8.1	31
3N/20W-1C3	5-28-52[f]	1458	7.0	152 / 7.60	70 / 5.73	94 / 4.08	--	0 / 0	307 / 5.03	526 / 10.95	48 / 1.35	9 / 0.14	0.7	0.7	1150	9.8	23
1E1	2-26-36[c]	----	--	400 / 20.00	121 / 9.91	77[b] / 3.35	--	0 / 0	326 / 5.34	673 / 14.02	392 / 11.05	177 / 2.85	--	0.2	2166	13.9	10
	5-28-52[f]	1835	7.0	262 / 13.10	53 / 4.40	84 / 3.64	--	0 / 0	393 / 6.45	583 / 12.15	54 / 1.52	44 / 0.69	0.4	0.9	1516	8.0	17
1F1	8-27-52	1228	8.1	114 / 5.69	52 / 4.27	100 / 4.34	4 / 0.11	0 / 0	244 / 4.00	408 / 8.50	41 / 1.16	8 / 0.13	0.8	0.5	951	8.7	30
1G1	10-23-51[f]	1210	7.7	136 / 6.80	55 / 4.56	976 / 4.25	--	--	261 / 4.28	475 / 9.88	46 / 1.29	6 / 0.10	1.0	0.7	1003	8.8	27
1J1	7-30-47[c]	----	---	124 / 6.20	40 / 3.28	89 / 3.87	14 / 0.37	--	304 / 4.99	350 / 7.30	48 / 1.35	5 / 0.08	--	--	974	7.5	28

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
d Na + K.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Residual Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
3N/20W-1J1	5-28-52[f]	2830	7.5	294 / 14.72	79 / 6.54	277 / 12.05	--	0 / 0	349 / 5.72	914 / 19.02	273 / 7.70	35 / 0.56	2.0	0.9	2161	18.6	36
1L1	8-27-52[f]	263	8.2	29 / 1.46	4 / 0.37	14 / 0.62	1 / 0.02	Tr.	96 / 1.58	24 / 0.50	12 / 0.33	6 / 0.09	0.3	0.0	202	0.9	25
1L2	8-27-52	1367	7.6	126 / 6.29	60 / 4.93	92 / 4.00	3 / 0.08	0 / 0	349 / 5.72	397 / 8.28	33 / 0.93	3 / 0.05	0.6	0.8	991	9.0	26
2A2	5-28-52[fh]	1170	8.2	117 / 5.86	43 / 3.51	92 / 4.02	--	0 / 0	252 / 4.12	399 / 8.31	27 / 0.75	14 / 0.23	1.3	0.6	932	7.5	30
2F3	8-27-52	1585	8.2	187 / 9.35	60 / 4.93	90 / 3.92	4 / 0.12	0 / 0	327 / 5.36	538 / 11.2	47 / 1.33	36 / 0.58	0.8	0.6	1210	9.0	21
2N1	5-28-52[f]	2420	7.5	221 / 11.05	78 / 6.44	225 / 9.78	--	0 / 0	370 / 6.07	791 / 16.50	160 / 4.51	30 / 0.49	2.3	1.0	1843	16.2	36
3D1[a]	7-10-37[c]	----	--	129 / 6.45	34 / 2.79	79 / 3.43	2[b] / 0.04	0 / 0	287 / 4.64	330 / 6.88	41 / 1.16	2 / 0.03	--	0.9	904	6.3	27
	9-27-38[c]	----	--	131 / 6.55	42 / 3.44	73 / 3.18	16[b] / 0.42	0 / 0	271 / 4.45	388 / 8.09	36 / 1.02	2 / 0.03	--	0.5	959	7.0	23
	9-27-38[c]	----	--	130 / 6.50	40 / 3.28	77 / 3.35	12[b] / 0.30	0 / 0	272 / 4.46	379 / 7.90	37 / 1.04	2 / 0.03	--	0.6	949	6.9	25
	5-28-52[f]	1240	7.6	137 / 6.85	39 / 3.20	91 / 3.95	--	0 / 0	284 / 4.67	386 / 8.04	43 / 1.21	20 / 0.33	1.2	0.4	940	7.2	28
3D2[a]	3-14-34[c]	----	--	132 / 6.60	44 / 3.61	92[b] / 4.01	--	0 / 0	275 / 4.51	418 / 8.72	35 / 0.99	--	--	0.5	996	7.6	28
	7-10-37[c]	----	--	131 / 6.55	43 / 3.53	88 / 3.82	2[b] / 0.05	0 / 0	272 / 4.46	405 / 8.44	36 / 1.02	3 / 0.03	--	0.6	980	7.4	27
	5-28-52[f]	1283	7.5	131 / 6.57	41 / 3.37	85 / 3.68	--	0 / 0	289 / 4.73	354 / 7.37	43 / 1.21	12 / 0.19	2.0	0.6	904	7.0	27
3D3	3-14-34[c]	----	--	134 / 6.70	44 / 3.61	92[b] / 3.98	--	0 / 0	273 / 4.47	422 / 8.80	36 / 1.02	--	--	0.5	1001	7.6	28
	7-10-37[c]	----	--	134 / 6.70	42 / 3.44	83 / 3.60	51[b] / 1.31	0 / 0	280 / 4.59	376 / 7.84	88 / 2.48	9 / 0.14	--	0.6	1063	8.4	24
3J1	5-29-52[f]	1600	7.6	171 / 8.53	61 / 5.06	102 / 4.42	--	0 / 0	322 / 5.29	529 / 11.03	50 / 1.41	25 / 0.40	1.9	0.7	1183	9.5	24

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by Pacific Chemical Consultants.
h For analysis of heavy metal constituents, see Table B 17.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/20W-3N2	1- 8-52[g,h]	1510	8.2	165 / 8.23	66 / 5.43	90 / 3.91	6 / 0.15	0 / 0	308 / 5.05	525 / 10.93	50 / 1.41	15 / 0.24	0.7	0.7	1100	9.5	22
4E2	5-28-52[f]	1297	7.4	144 / 7.20	42 / 3.51	91 / 3.95	--	0 / 0	279 / 4.58	422 / 8.80	43 / 1.21	7 / 0.12	1.6	0.5	956	7.5	27
4N1	1-18-43[c]	----	--	180 / 9.00	61 / 5.00	93 / 4.08	5[b] / 0.13	0 / 0	343 / 5.62	530 / 11.05	45 / 1.27	17 / 0.27	--	0.8	1274	9.2	22
5C2	7-11-27[c]	----	--	100 / 4.97	23 / 1.89	38 / 1.65	--	--	325 / 5.33	137 / 2.85	11 / 0.31	--	--	0.2	634	3.2	19
	7-18-33[c]	----	--	106 / 5.27	30 / 2.47	35 / 1.52	--	--	338 / 5.54	156 / 3.25	17 / 0.48	--	--	0.2	682	3.7	16
	7-26-43[c]	----	--	116 / 5.77	33 / 2.72	35 / 1.52	14 / 0.36	--	328 / 5.37	183 / 3.81	33 / 0.93	16 / 0.26	--	0.2	758	4.6	15
	5-15-47[c]	----	--	120 / 6.00	34 / 2.79	29 / 1.26	--	--	335 / 5.49	171 / 3.57	20 / 0.56	24 / 0.39	--	0.1	733	4.0	12
5D1	9-16-46[j]	----	--	105 / 5.25	30 / 2.50	30 / 1.31	--	--	333 / 5.55	139 / 2.90	15 / 0.42	12 / 0.19	--	--	664	3.5	14
5D2[a]	7-16-52	1039	7.6	140 / 6.98	36 / 2.98	37 / 1.60	2 / 0.05	0 / 0	319 / 5.23	240 / 5.00	23 / 0.66	50 / 0.80	0.5	0.8	791	4.6	14
5L1[a]	7-16-52	1251	7.8	141 / 7.07	42 / 3.51	82 / 3.58	4 / 0.09	0 / 0	280 / 4.60	418 / 8.73	38 / 1.06	8 / 0.13	0.7	1.5	946	7.2	25
6G1[a]	5-26-43[c]	3390	--	164 / 8.28	59 / 4.85	45 / 1.96	--	--	317 / 5.19	289 / 6.01	85 / 2.40	42 / 0.68	--	0.1	1001	6.8	13
	7-30-43[c]	3400	--	168 / 8.38	63 / 5.18	46 / 2.00	--	--	327 / 5.36	294 / 6.13	92 / 2.59	--	--	--	----	7.2	13
	8-31-43[c]	3390	--	168 / 8.38	66 / 5.43	49 / 2.13	--	--	328 / 5.37	312 / 6.49	89 / 2.51	--	--	--	----	7.6	13
	9-28-43[c]	3390	--	173 / 8.63	45 / 3.70	48 / 2.08	--	--	329 / 5.40	316 / 6.59	86 / 2.42	--	--	--	----	5.8	14
	11- 8-43[c]	3390	--	170 / 8.48	48 / 3.95	46 / 2.00	--	--	330 / 5.41	322 / 6.70	86 / 2.42	--	--	--	----	6.0	14

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by Pacific Chemical Consultants.
g Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision
h For analysis of heavy metal constituents, see Table B 17.
j Analysis obtained from Department of Public Health, State of Calif.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/20W- 6G1[a]	4-21-44[c]	3390	--	167 / 8.35	59 / 4.83	45 / 2.00	--	--	325 / 5.32	306 / 6.37	88 / 2.47	62 / 1.0	--	--	----	6.8	13
6L1	11-28-45[c]	----	--	152 / 7.60	43 / 3.52	82 / 3.56	9[b] / 0.24	0 / 0	292 / 4.71	429 / 8.93	44 / 1.24	3 / 0.04	--	0.5	1054	7.3	24
6N1[a]	9- 8-45[c]	----	--	138 / 6.90	41 / 3.63	79 / 3.43	1[b] / 0.02	--	277 / 4.54	377 / 7.87	43 / 1.21	6 / 0.09	--	0.6	962	6.8	25
6P1	1- 5-34[c]	----	--	131 / 6.55	41 / 3.36	87 / 3.78	--	--	264 / 4.33	395 / 8.23	39 / 1.10	--	--	0.6	957	7.1	28
8B1	5-29-52[f]	2940	7.0	302 / 15.12	117 / 9.62	267 / 11.60	--	0 / 0	370 / 6.06	1249 / 25.50	161 / 4.54	37 / 0.60	1.0	1.5	2661	21.2	32
8F2	10-23-51[f]	1470	7.4	192 / 9.60	82 / 6.88	150 / 6.53	--	--	290 / 4.76	747 / 15.55	74 / 2.08	11 / 0.18	1.0	1.1	1589	13.4	28
9G1[a]	1-18-43[c]	----	--	665 / 33.25	300 / 24.60	567[b] / 24.64	--	0 / 0	535 / 8.77	3132 / 65.15	228 / 6.43	133 / 2.14	--	2.4	5560	49.2	30
	5-29-52[f]	2671	7.6	266 / 13.32	108 / 8.88	231 / 10.05	--	0 / 0	332 / 5.45	1041 / 21.67	148 / 4.16	41 / 0.66	1.6	0.9	2334	18.9	31
9L1	1-18-43[c]	----	--	449 / 22.45	158 / 12.95	672 / 29.29	3[b] / 0.07	0 / 0	427 / 7.00	2369 / 49.35	266 / 7.50	51 / 0.82	--	3.0	4395	42.2	45
10D2	10-23-51[f]	1800	8.0	248 / 12.40	96 / 8.00	299 / 9.55	--	--	327 / 5.36	975 / 20.30	133 / 3.47	34 / 0.56	1.2	1.6	2005	17.6	32
	5-29-52[f]	2445	7.4	239 / 11.94	82 / 6.75	227 / 9.89	--	0 / 0	390 / 6.39	893 / 18.61	99 / 2.79	36 / 0.58	2.0	1.0	1880	16.6	35
10F2[a]	5-29-52[f]	1760	7.5	197 / 9.86	65 / 5.34	135 / 5.87	--	0 / 0	328 / 5.39	629 / 13.10	69 / 1.95	26 / 0.42	1.3	0.8	1408	11.2	28
	8-27-52	4237	7.3	392 / 19.6	132 / 10.8	530 / 23.0	11 / 0.29	0 / 0	400 / 6.56	1910 / 39.8	146 / 4.12	135 / 2.18	1.2	1.7	3740	34.1	43
11A1[a]	11-16-36[c]	----	--	220 / 11.00	56 / 4.59	130 / 5.65	5[b] / 0.17	--	259 / 4.25	444 / 9.25	265 / 7.47	27 / 0.44	--	--	1406	10.4	26
11B1[a]	11-12-36[c]	----	--	202 / 10.10	57 / 4.67	179 / 7.79	--	0 / 0	280 / 4.59	460 / 9.59	276 / 7.79	37 / 0.59	--	--	1477	12.5	34
11D4	8-27-52	2023	7.5	177 / 8.83	70 / 5.75	200 / 8.70	6 / 0.15	0 / 0	303 / 4.96	739 / 15.4	84 / 2.37	40 / 0.64	1.2	0.8	1583	14.6	37

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b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by Pacific Chemical Consultants.

TABLE B 5

MINERAL ANALYSIS OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/20W-12D1	5-28-52[f]	1625	7.5	218 / 10.89	50 / 4.13	102 / 4.43	--	0 / 0	334 / 5.48	550 / 11.45	59 / 1.66	36 / 0.58	0.9	0.9	1224	8.6	23
	8-27-52	1626	7.3	224 / 11.2	51 / 4.19	85 / 3.70	3 / 0.07	0 / 0	344 / 5.64	518 / 10.8	75 / 2.12	39 / 0.63	0.6	0.6	1255	8.0	19
3N/21W- 1P1	6-26-34[c]	----	--	138 / 6.90	45 / 3.69	50 / 2.17	--	--	340 / 5.58	238 / 4.96	63 / 1.78	--	--	0.2	874	5.9	17
12E1[a]	3- 3-23[e]	----	--	105 / 5.24	41 / 3.37	58 / 2.52	--	--	280 / 4.59	237 / 4.93	25 / 0.70	--	--	--	710	5.9	23
	9- 9-45[c]	----	--	193 / 9.65	56 / 4.60	117 / 5.09	--	--	380 / 6.23	504 / 10.50	96 / 2.70	8 / 0.13	--	0.4	1364	9.7	26
	7-21-52[f]	1148	7.6	150 / 7.52	40 / 3.32	56 / 2.43	2 / 0.06	0 / 0	286 / 4.68	354 / 7.39	38 / 1.06	12 / 0.20	0.6	0.3	923	5.3	18
4N/19W-29L2	5-27-52[f]	2202	6.9	309 / 15.47	51 / 4.18	127 / 5.50	--	0 / 0	424 / 6.96	824 / 17.15	46 / 1.30	14 / 0.23	0.9	0.8	1866	9.7	22
29L3	10-25-51[f]	1320	7.8	144 / 7.20	56 / 4.60	117 / 5.08	--	0 / 0	274 / 4.48	538 / 11.20	42 / 1.19	7 / 0.11	1.2	0.7	1148	9.7	30
	5-27-52[f]	1421	7.2	142 / 7.11	52 / 4.32	114 / 4.95	--	0 / 0	302 / 4.94	493 / 10.24	38 / 1.07	4 / 0.06	0.8	0.6	1134	9.3	30
30H1	5-27-52[f]	1462	6.8	141 / 7.03	62 / 5.10	112 / 4.87	--	0 / 0	302 / 4.95	488 / 10.16	45 / 1.27	2 / 0.04	0.9	0.6	1155	10.0	29
30K1	12-16-48[e]	1480	8.1	142 / 7.10	56 / 4.58	93 / 4.03	--	--	311 / 5.10	478 / 9.95	45 / 1.27	--	--	Tr.	----	8.6	26
30P2	1-12-38[c]	----	--	275 / 13.75	112 / 9.19	126 / 5.48	20 / 0.51	--	555 / 9.10	852 / 17.75	68 / 1.92	10 / 0.16	--	0.5	2018	15.2	19
	5-27-52[f]	2275	7.2	272 / 13.62	108 / 8.93	118 / 5.11	--	0 / 0	464 / 7.61	835 / 17.40	72 / 2.03	19 / 0.30	2.1	0.6	1815	14.0	18
	8-25-52	1996	7.3	236 / 11.8	71 / 5.83	127 / 5.52	5 / 0.12	0 / 0	544 / 8.92	591 / 12.3	80 / 2.23	9 / 0.14	0.8	0.4	1570	11.5	24
30P3	8- 6-36[c]	----	--	206 / 10.30	82 / 6.71	116 / 3.51	65 / 1.66	--	369 / 6.05	689 / 14.36	55 / 1.55	14 / 0.22	--	--	1596	11.9	16
	9-14-40[c]	----	7.8	206 / 10.3	54 / 4.44	229[b] / 9.99	--	0 / 0	394 / 6.45	800 / 16.65	58 / 1.63	--	--	--	----	14.4	40

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b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	EC x 10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/19W-30P3	5-27-52[f]	1733	7.3	195 / 9.73	68 / 5.60	119 / 4.73	--	0 / 0	327 / 5.37	660 / 13.75	42 / 1.17	13 / 0.21	0.8	0.7	1525	10.3	24
	8-25-52	1739	7.6	174 / 8.70	64 / 5.26	116 / 5.05	4 / 0.11	0 / 0	420 / 6.88	500 / 10.4	68 / 1.92	7 / 0.11	0.8	0.4	1330	10.4	26
30P4[a]	8-29-34[c]	----	--	181 / 9.03	76 / 6.25	109 / 4.74	--	--	343 / 5.63	642 / 13.35	36 / 1.01	--	--	0.6	1387	11.0	24
	8-30-35[c]	----	--	183 / 9.13	75 / 6.16	121 / 5.26	--	--	351 / 5.76	655 / 13.62	39 / 1.10	--	--	0.6	1424	11.4	26
	6- 2-39[c]	----	--	200 / 9.98	81 / 6.66	105 / 4.57	--	--	358 / 5.87	685 / 14.25	42 / 1.18	9 / 0.14	--	0.7	1490	11.2	22
	8-11-41[c]	----	--	210 / 10.48	86 / 7.07	123 / 5.35	--	--	398 / 6.53	700 / 14.56	57 / 1.61	6 / 0.10	--	0.6	1580	12.4	23
	10-12-45[c]	----	--	192 / 9.58	80 / 6.58	111 / 4.83	--	--	382 / 6.26	652 / 13.56	54 / 1.52	4 / 0.06	--	0.6	1493	11.4	25
31D2[a]	10-25-51[f]	1650	7.2	237 / 11.84	94 / 7.84	135 / 5.87	--	--	393 / 6.44	774 / 16.10	79 / 2.22	22 / 0.35	0.9	1.0	1672	13.7	23
31L1	6-27-52[f]	1216	7.6	111 / 5.55	49 / 4.00	99 / 4.30	--	0 / 0	267 / 4.37	390 / 8.13	41 / 1.15	1 / 0.01	1.5	0.5	950	8.3	31
31R1[a]	2-20-34[c]	----	--	185 / 9.25	72 / 5.91	122[b] / 5.28	--	--	365 / 5.99	618 / 12.87	56 / 1.58	--	--	0.6	1418	11.2	26
	8-26-52	2041	7.7	253 / 12.7	94 / 7.73	103 / 4.48	6 / 0.15	0 / 0	347 / 5.68	758 / 15.8	57 / 1.61	102 / 1.64	1.0	0.8	1670	12.4	18
32F2	1-31-51[c]	----	--	117 / 5.85	44 / 3.61	84 / 3.65	6[b] / 0.15	--	276 / 4.52	368 / 7.67	38 / 1.07	0 / 0	--	0.6	933	7.4	28
32J1	5-26-52[f]	1530	7.5	153 / 7.65	70 / 5.77	94 / 4.08	--	0 / 0	264 / 4.33	547 / 11.39	45 / 1.26	53 / 0.86	1.7	0.6	1272	9.3	23
	8-25-52	1408	7.7	143 / 7.15	58 / 4.77	88 / 3.82	4 / 0.10	0 / 0	237 / 3.88	485 / 10.1	42 / 1.19	31 / 0.50	1.0	0.8	1050	8.7	24
32K2	5- 6-49[c]	----	--	116 / 5.80	41 / 3.36	80 / 3.48	2[b] / 0.04	--	236 / 3.87	382 / 7.96	30 / 0.85	Tr.	--	0.7	887	6.9	27
	10-23-51[f]	1160	7.5	132 / 6.60	49 / 4.12	67 / 2.91	--	--	222 / 3.64	447 / 9.33	31 / 0.88	2 / 0.03	1.0	0.8	961	7.0	21
	5-28-52[f]	1323	7.4	142 / 7.11	51 / 4.18	92 / 4.02	--	0 / 0	266 / 4.37	487 / 10.16	33 / 0.92	10 / 0.16	1.5	0.6	1054	8.2	26

a Additional analyses published in Bulletin No. 46-A.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by Pacific Chemical Consultants.

( ) For cross index of well numbers, see

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/19W-32K2	8-25-52	1328	7.8	139 / 6.95	54 / 4.44	80 / 3.48	4 / 0.11	0 / 0	259 / 4.24	470 / 9.80	30 / 0.85	10 / 0.16	1.1	0.6	1000	8.0	23
32K3	6-18-33[c]	----	--	123 / 6.15	46 / 3.77	74[b] / 3.22	--	0 / 0	246 / 4.04	403 / 8.40	25 / 0.70	--	--	0.7	917	7.0	24
	6- 6-49[c]	----	8.2	119 / 5.95	44 / 3.61	80 / 3.48	5[b] / 0.13	0 / 0	236 / 3.86	404 / 8.41	30 / 0.85	3 / 0.05	--	0.6	921	7.2	26
32K5	6-15-33[c]	----	--	116 / 5.80	47 / 3.85	68[b] / 2.95	--	0 / 0	245 / 4.02	378 / 7.68	25 / 0.70	--	--	0.7	879	6.9	23
	6- 6-49[c]	----	8.2	109 / 5.45	42 / 3.44	75 / 3.26	1[b] / 0.02	0 / 0	232 / 3.81	359 / 7.48	30 / 0.85	2 / 0.03	--	0.6	850	6.7	27
32M1	5-27-52[fh]	1220	7.4	119 / 5.95	50 / 4.13	85 / 3.70	--	0 / 0	272 / 4.46	404 / 8.42	34 / 0.95	0 / 0	1.6	0.5	930	7.8	27
	8-25-52	1464	7.4	164 / 8.20	59 / 4.85	94 / 4.08	5 / 0.12	0 / 0	312 / 5.12	517 / 10.8	33 / 0.93	0 / 0	1.1	0.5	1130	9.1	24
32Q2	5-27-52[f]	1040	7.6	65 / 3.24	68 / 5.55	68 / 2.97	--	0 / 0	204 / 3.35	366 / 7.63	27 / 0.75	16 / 0.26	1.3	0.5	852	8.4	25
32R1	8-25-52	1695	7.8	196 / 9.80	68 / 5.59	100 / 4.35	5 / 0.13	0 / 0	320 / 5.24	566 / 11.8	75 / 2.12	44 / 0.71	1.2	0.9	1300	10.1	22
33D1	5-27-52[f]	2350	7.7	274 / 13.70	136 / 11.19	130 / 5.65	--	0 / 0	316 / 5.18	1152 / 24.00	44 / 1.23	32 / 0.52	1.3	0.5	2120	16.8	18
4N/20W-12Q1	5-28-52[f]	1100	7.6	114 / 5.68	31 / 2.53	84 / 3.65	--	0 / 0	308 / 5.06	240 / 5.00	40 / 1.12	36 / 0.58	1.3	1.4	808	6.2	31
23J1	5-28-52[f]	955	7.3	131 / 6.57	25 / 2.04	37 / 1.59	--	0 / 0	228 / 3.74	196 / 4.08	60 / 1.69	49 / 0.79	0.6	0.5	703	3.6	16
23L1	8-26-52	685	7.8	75 / 3.75	19 / 1.55	42 / 1.82	2 / 0.04	0 / 0	263 / 4.32	68 / 1.41	32 / 0.90	21 / 0.34	1.0	0.1	443	2.8	26
23N1[a]	6-25-34[c]	----	--	76 / 3.80	15 / 1.23	39 / 1.70	--	--	261 / 4.28	93 / 1.94	26 / 0.73	--	--	0.2	510	2.4	25
	5-28-52[f]	730	7.5	85 / 4.27	15 / 1.21	47 / 2.05	--	0 / 0	223 / 3.66	115 / 2.40	34 / 0.96	21 / 0.34	1.7	0.2	516	3.3	27

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
f Analyzed by Pacific Chemical Consultants.
h For analysis of heavy metal constituents, see Table B 17.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
4N/20W-23N1[a]	8-26-52	717	7.5	89 / 4.45	17 / 1.40	40 / 1.74	2 / 0.04	0 / 0	236 / 3.88	107 / 2.23	37 / 1.04	26 / 0.42	0.8	0.1	466	3.2	23
23Q1	5- 2-44[c]	---	--	164[b] / 8.19	25[b] / 2.04	58 / 2.52	--	--	256 / 4.19	297 / 6.19	84 / 2.37	--	--	--	884	4.6	20
24D1	3-10-45[e]	---	--	147 / 7.35	32 / 2.62	54 / 2.34	10 / 0.25	--	288 / 4.72	273 / 5.68	67 / 1.88	18 / 0.29	--	0.3	889	5.2	19
	5-28-52[f]	1205	7.2	162 / 8.09	31 / 2.53	48 / 2.10	--	0 / 0	327 / 5.37	250 / 5.20	67 / 1.89	31 / 0.51	0.7	0.8	914	4.6	16
25D1	8- 2-47[c]	---	7.7	114 / 5.70	30 / 2.46	61 / 2.65	2[b] / 0.04	--	247 / 4.05	282 / 5.87	31 / 0.87	4 / 0.06	--	0.8	771	5.2	24
	5-28-52[f]	1000	7.6	91 / 4.53	43 / 3.56	64 / 2.78	--	0 / 0	235 / 3.86	274 / 5.70	48 / 1.35	10 / 0.16	1.5	0.9	741	6.3	26
25P3	12-30-33[c]	---	--	121 / 6.05	50 / 4.10	84 / 3.65	--	--	265 / 4.34	415 / 8.65	37 / 1.04	--	--	0.8	972	7.8	26
	8-26-52	1742	7.9	192 / 9.60	78 / 6.42	108 / 4.70	4 / 0.10	0 / 0	295 / 4.84	590 / 12.3	72 / 2.04	76 / 1.22	0.8	0.7	1390	11.2	23
25Q2	5-27-52[fh]	2010	7.6	227 / 11.36	94 / 7.73	126 / 5.48	--	0 / 0	371 / 6.09	765 / 15.93	59 / 1.66	34 / 0.54	1.5	0.4	1722	13.2	22
26A2[a]	5- 1-34[c]	---	--	140 / 7.00	36 / 2.95	108[b] / 4.70	--	--	275 / 4.51	388 / 8.08	73 / 2.06	--	--	1.0	1020	7.6	32
	5-28-52[f]	1172	7.4	135 / 6.75	32 / 2.66	74 / 3.23	--	0 / 0	297 / 4.86	277 / 5.77	52 / 1.47	24 / 0.38	2.0	0.9	846	5.9	26
	8-26-52	1109	7.7	118 / 5.90	24 / 1.97	88 / 3.82	3 / 0.08	0 / 0	256 / 4.20	281 / 5.86	62 / 1.75	18 / 0.30	1.0	0.9	760	5.9	32
26B1	5-20-37[c]	----	--	162 / 8.10	41 / 3.36	87 / 3.78	12[b] / 0.31	--	330 / 5.41	300 / 6.25	88 / 3.46	27 / 0.43	--	1.3	1047	7.4	24
26D1	2-15-45[ck]	----	--	93[b] / 4.63	14[b] / 1.15	40 / 1.74	--	0 / 0	220 / 3.61	159 / 3.32	21 / 0.59	--	--	--	547	2.9	23
	2-17-45[ck]	----	--	98[b] / 4.90	15[b] / 1.22	31 / 1.35	--	0 / 0	217 / 3.56	155 / 3.23	24 / 0.68	--	--	--	540	2.6	18

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.
h For analysis of heavy metal constituents, see Table B 17.
k Well sampled during drilling operation.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/20W-26D1	2-21-45[ck]	----	--	105 / 5.26	16 / 1.31	40[b] / 1.74	--	0 / 0	225 / 3.69	174 / 3.63	35 / 0.99	0 / 0	--	--	595	3.0	21
	2-27-45[ck]	----	--	87[b] / 4.36	13[b] / 1.09	47 / 2.04	--	0 / 0	225 / 3.69	139 / 2.90	32 / 0.90	--	--	--	543	3.1	27
	2-27-45[ck]	----	--	92[b] / 4.59	14[b] / 1.14	49 / 2.12	--	0 / 0	234 / 3.83	146 / 3.04	35 / 0.98	0 / 0	--	--	570	3.3	27
	3- 2-45[ck]	----	--	95[b] / 4.73	14[b] / 1.18	50 / 2.17	--	0 / 0	237 / 3.88	149 / 3.10	38 / 1.10	0 / 0	--	--	583	3.4	27
	4-24-45[c]	----	--	106 / 5.30	19 / 1.56	40 / 1.74	--	0 / 0	258 / 4.23	149 / 3.11	34 / 0.96	18 / 0.29	--	--	624	3.3	20
	5-28-52[f]	787	7.7	94 / 4.71	19 / 1.60	48 / 2.08	--	0 / 0	234 / 3.84	183 / 3.81	25 / 0.70	1 / 0.02	1.7	0.3	579	3.7	25
26E1	10-25-51[f]	986	7.5	124 / 6.20	24 / 1.96	41 / 1.78	--	--	232 / 3.80	215 / 4.47	43 / 1.21	25 / 0.41	0.5	0.7	639	3.7	18
	5-28-52[f]	924	7.4	137 / 6.87	20 / 1.64	46 / 2.00	--	0 / 0	264 / 4.33	198 / 4.13	48 / 1.35	36 / 0.58	0.8	0.2	612	3.6	19
26F1	10-25-51[f]	1080	7.8	185 / 9.24	4 / 0.36	62 / 2.70	--	--	249 / 4.08	256 / 5.34	68 / 1.92	32 / 0.51	0.8	1.0	799	3.1	21
26H3	5-28-52[f]	1019	7.6	113 / 5.65	37 / 3.06	63 / 2.72	--	0 / 0	238 / 3.91	287 / 5.97	48 / 1.35	12 / 0.20	1.5	0.9	788	5.8	24
26H4	5-28-52[f]	901	7.6	113 / 5.65	23 / 1.91	48 / 2.09	--	0 / 0	245 / 4.02	228 / 4.75	27 / 0.75	11 / 0.17	1.6	0.5	614	4.0	22
	8-26-52	990	7.2	118 / 5.90	33 / 2.71	50 / 2.18	2 / 0.06	0 / 0	249 / 4.08	268 / 5.58	39 / 1.10	8 / 0.13	1.0	0.6	685	5.0	20
27Q1	11- 6-50[e]	----	--	118 / 5.90	33 / 2.71	94 / 4.08	--	--	309 / 5.06	321 / 6.68	29 / 0.82	6 / 0.10	--	0.1	910	6.8	32
	8-26-52	862	7.8	109 / 5.45	22 / 1.81	48 / 2.09	2 / 0.04	0 / 0	239 / 3.92	197 / 4.10	29 / 0.82	17 / 0.27	0.8	0.3	584	3.9	22
	4-26-45[c]	----	--	131[b] / 6.54	20[b] / 1.63	54 / 2.34	--	--	371 / 6.09	174 / 3.63	28 / 0.79	--	--	--	778	4.0	22

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.
k Well sampled during drilling operations.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/20W-31H1	6- 4-45[c]	----	--	113 / 5.65	34 / 2.77	46 / 1.99	--	--	369 / 6.05	193 / 4.02	18 / 0.51	4 / 0.06	--	0.1	777	4.4	19
32H1	5-28-52[f]	793	7.9	86 / 4.31	21 / 1.77	57 / 2.48	--	0 / 0	286 / 4.68	115 / 2.40	25 / 0.71	36 / 0.58	2.2	0.2	602	3.9	29
32P2	9-16-46[e]	----	--	107 / 5.35	24 / 2.00	48 / 2.09	--	--	289 / 4.81	191 / 3.98	12 / 0.34	1 / 0.02	--	--	672	4.1	22
32Q1[a]	5-28-52[f]	987	7.4	116 / 5.82	26 / 2.18	63 / 2.74	--	0 / 0	338 / 5.55	192 / 4.00	25 / 0.71	26 / 0.42	1.6	0.2	684	4.9	26
33B1	1-29-47[ck]	----	--	75[b] / 3.77	31[b] / 2.50	65 / 2.83	--	--	318 / 5.11	147 / 3.06	33 / 0.93	--	--	--	669	4.0	31
	3-31-47[c]	----	--	158 / 7.90	38 / 3.12	64 / 2.78	--	--	349 / 5.72	331 / 6.89	28 / 0.79	22 / 0.35	--	0.1	990	5.9	20
33C1	10-30-50[c]	----	7.8	118 / 5.90	33 / 2.71	94 / 4.09	--	0 / 0	309 / 5.07	321 / 6.68	29 / 0.82	6 / 0.10	--	0.1	910	6.3	32
	5-28-52[f]	1063	7.5	108 / 5.42	25 / 2.09	83 / 3.60	--	0 / 0	312 / 5.12	237 / 4.95	29 / 0.82	11 / 0.18	1.7	0.2	745	5.7	32
33G1	3- 9-45[e]	----	--	293 / 14.65	68 / 5.67	166 / 7.21	7 / 0.18	--	301 / 5.03	999 / 20.81	39 / 1.10	49 / 0.79	--	0.26	1922	12.8	26
34R1[a]	5-28-52[f]	1233	7.2	132 / 6.62	45 / 3.69	87 / 3.80	--	0 / 0	296 / 4.86	358 / 7.45	49 / 1.38	19 / 0.30	0.8	0.8	922	7.5	27
35H2	5-27-52[f]	1778	7.6	189 / 9.46	83 / 6.80	114 / 4.96	--	0 / 0	261 / 5.92	607 / 12.62	64 / 1.81	45 / 0.72	1.4	0.6	1596	11.8	23
36C2	2-20-34[c]	----	--	233 / 11.65	92 / 7.54	138[b] / 5.99	--	--	428 / 7.02	769 / 16.02	76 / 2.14	--	--	0.6	1736	13.5	24
	5-27-52[f]	2195	7.6	260 / 13.00	92 / 7.64	120 / 5.21	--	0 / 0	415 / 6.80	703 / 14.68	89 / 2.51	97 / 1.59	2.0	0.5	1681	12.8	20
36D1	8-26-52	1770	7.7	224 / 11.2	82 / 6.74	80 / 3.48	4 / 0.11	0 / 0	376 / 6.16	566 / 11.8	72 / 2.03	74 / 1.20	0.9	0.7	1390	10.3	16
36K1	3-12-48[c]	----	7.7	130 / 6.50	51 / 4.18	82 / 3.56	3[b] / 0.07	0 / 0	260 / 4.27	432 / 9.00	35 / 0.99	3 / 0.05	--	0.4	996	7.8	25
	5-28-52[f]	1248	7.4	103 / 5.16	51 / 4.22	103 / 4.48	--	0 / 0	286 / 4.68	379 / 7.90	45 / 1.27	1 / 0.02	0.7	0.5	912	8.7	32

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.
k Well sampled during drilling operation.

TABLE B 5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/20W-36P2[a]	12- 2-37[c]	----	--	133 / 6.65	49 / 4.02	96 / 4.18	Tr. / 0.01	0 / 0	271 / 4.45	439 / 9.15	36 / 1.02	15 / 0.24	--	0.7	1039	8.2	28
	3-19-48[e]	----	--	133 / 6.65	49 / 4.02	82[d] / 3.57	--	--	262 / 4.30	432 / 9.00	34 / 0.96	4 / 0.06	--	0.4	998	7.6	25
36Q1	5-28-52[fh]	1290	7.9	123 / 6.13	48 / 3.99	110 / 4.79	--	0 / 0	311 / 5.10	408 / 8.50	46 / 1.29	7 / 0.11	1.3	0.3	934	8.8	32
	11-25-52[gh]	1280	7.5	123 / 6.14	52 / 4.28	95 / 4.13	7 / 0.19	0 / 0	286 / 4.69	411 / 8.56	40 / 1.13	6 / 0.09	0.7	0.3	906	8.6	28

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Calculated by difference.
c Analyzed by Fruit Growers Laboratory, Inc.
d Na + K.
e Analysis obtained from Santa Clara Water Conservation District, Santa Paula.
f Analyzed by Pacific Chemical Consultants.
g Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
h For analysis of heavy metal constituents see Table B 17.
j Analysis obtained from Department of Public Health, State of Calif.
k Well sampled during drilling operations.

[illegible]

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W- 2C1[a]	10-14-34[b]	2020	--	230 / 11.48	69 / 5.77	157 / 6.82	--	--	378 / 6.30	725 / 15.13	106 / 2.89	4 / 0.06	--	0.7	1675	12.6	28
2K1	9- 2-49[d]	----	7.3	115 / 5.80	28 / 2.29	85 / 3.69	10[c] / 0.26	0 / 0	312 / 5.12	284 / 5.91	36 / 1.01	0 / 0	--	0.3	870	6.2	31
2K2	12- 4-52	1140	7.8	122 / 6.09	37 / 3.04	85 / 3.69	3 / 0.03	0 / 0	317 / 5.20	293 / 6.10	40 / 1.13	1 / 0.01	0.6	0.3	800	6.8	29
2K3[a]	6- 2-52[e]	1513	7.5	141 / 7.06	48 / 3.91	139 / 6.02	--	0 / 0	323 / 5.28	479 / 9.98	56 / 1.58	3 / 0.04	0.5	0.6	1121	9.9	35
3F2	9- 5-52	1812	7.4	197 / 9.85	62 / 5.10	130 / 5.65	4 / 0.11	0 / 0	332 / 5.44	600 / 12.5	102 / 2.88	1 / 0.02	0.6	0.4	1385	10.9	27
3M1[a]	1-14-47[f]	----	--	141 / 7.06	57 / 4.75	102 / 4.43	--	--	340 / 5.67	415 / 8.65	70 / 1.97	--	--	0.5	1125	9.2	27
3M2	1-14-47[f]	----	--	120 / 6.00	49 / 4.09	101 / 4.39	--	--	321 / 5.35	369 / 7.70	51 / 1.44	--	--	0.6	1011	8.5	30
3Q2	7-15-52[e]	1395	7.8	140 / 6.98	39 / 3.24	122 / 5.25	5 / 0.12	0 / 0	286 / 4.68	441 / 9.18	64 / 1.81	4 / 0.06	0.1	0.1	1045	8.6	34
3N/21W- 3H1[a]	3-15-49[d]	----	--	98 / 4.90	55 / 4.51	228 / 9.92	14 / 0.36	--	414 / 6.79	519 / 10.81	72 / 2.03	4 / 0.06	--	0.4	1404	12.9	50
7J1[a]	4-21-43[d]	----	--	60 / 3.00	45 / 3.69	41 / 1.73	--	--	247 / 4.09	121 / 2.52	58 / 1.63	9 / 0.14	--	Tr.	581	4.3	20
	5- 3-49[d]	----	--	127 / 6.32	60 / 4.93	119 / 5.18	--	--	455 / 7.47	335 / 6.98	70 / 1.98	--	--	--	1166	9.0	32
9K1	1- 3-36[d]	----	--	98 / 4.90	28 / 2.30	77 / 3.35	--	0 / 0	332 / 5.44	201 / 4.19	35 / 0.99	0 / 0	--	0.3	771	5.1	32
9K3	11-22-38[d]	----	--	133 / 6.65	31 / 2.54	77 / 3.35	21[c] / 0.53	0 / 0	331 / 5.43	317 / 6.60	37 / 1.04	0 / 0	--	0.3	1014	6.4	26
9Q1[a]	7-15-52[e]	1120	8.1	131 / 6.54	35 / 2.92	82 / 3.56	4 / 0.09	0 / 0	310 / 5.08	334 / 6.97	37 / 1.05	3 / 0.05	0.3	0.6	889	6.6	27
9R3[a]	10- 1-31[g]	1090	--	127 / 6.36	31 / 2.54	81 / 3.52	--	--	330 / 5.41	295 / 6.14	29 / 0.82	--	--	0.4	893	6.1	28
	7-14-33[g]	1090	--	124 / 6.20	31 / 2.54	78 / 3.39	--	--	310 / 5.09	295 / 6.14	31 / 0.87	--	--	0.5	869	5.9	28

a Additional analyses published in Bulletin No. 46-A.
b Analysis obtained from Ventura County Farm Advisors.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by Pacific Chemical Consultants.
f Analysis obtained from SantaClara Water Conservation District.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

(2) For cross index of well numbers, see Appendix E.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W- 9R3[a]	6-27-34[g]	1080	--	126 / 6.30	32 / 2.62	70 / 3.04	--	--	306 / 5.02	292 / 6.08	31 / 0.87	--	--	0.4	857	5.7	25
	7- 6-35[g]	1080	--	124 / 6.20	32 / 2.62	72 / 3.13	--	--	312 / 5.12	286 / 5.96	31 / 0.87	--	--	0.4	857	5.8	26
	7- 9-36[g]	1070	--	122 / 6.10	30 / 2.46	70 / 3.04	--	--	310 / 5.09	287 / 5.98	30 / 0.85	--	--	0.4	856	5.5	26
	9-19-36[g]	1080	--	125 / 6.25	31 / 2.54	77 / 3.35	--	--	314 / 5.15	292 / 6.08	32 / 0.90	--	--	0.4	871	5.9	28
	7- 8-37[g]	1100	--	123 / 6.15	31 / 2.54	78 / 3.39	--	--	315 / 5.17	286 / 5.96	32 / 0.90	--	--	0.4	865	5.9	28
	8-19-38[g]	1080	--	125 / 6.25	32 / 2.62	73 / 3.18	--	--	315 / 5.17	290 / 6.04	30 / 0.85	--	--	0.4	866	5.3	26
	5-12-39[g]	1080	--	125 / 6.25	33 / 2.70	65 / 2.83	--	--	315 / 5.17	277 / 5.78	29 / 0.82	--	--	0.4	845	5.5	24
	7-31-40[g]	1100	--	125 / 6.25	30 / 2.46	76 / 3.31	--	--	321 / 5.26	285 / 5.94	29 / 0.82	--	--	0.4	866	5.8	28
	9-23-42[g]	1087	--	126 / 6.30	34 / 2.79	76 / 3.31	--	--	319 / 5.23	295 / 6.14	35 / 0.99	--	--	0.4	885	6.1	27
	-24-44[g]	1107	--	125 / 6.25	33 / 2.70	71 / 3.09	--	--	312 / 5.12	288 / 6.00	33 / 0.93	--	--	0.4	862	5.8	26
	9- 6-45[d]	----	--	126 / 6.30	31 / 2.54	83 / 3.61	5 / 0.13	--	311 / 5.10	312 / 6.50	37 / 1.04	--	--	0.4	905	6.3	29
	8- 8-46[d]	----	--	128 / 6.40	30 / 2.46	82 / 3.57	8 / 0.20	--	310 / 5.09	311 / 6.48	33 / 1.07	--	--	0.4	907	6.2	28
	11-19-48[d]	----	--	125 / 6.25	35 / 2.87	80 / 3.48	4 / 0.10	--	307 / 5.03	320 / 6.67	35 / 0.99	--	--	0.4	907	6.4	27
	11-28-50[d]	----	--	129 / 6.45	33 / 2.70	83 / 3.61	--	--	302 / 4.95	323 / 6.74	36 / 1.01	--	--	--	906	6.3	28
	8- 6-51[g]	----	--	129 / 6.45	30 / 2.46	84 / 3.65	--	--	304 / 4.98	314 / 6.54	35 / 0.99	--	--	--	896	6.1	29
10A1[a]	9-11-29[h]	1210	--	146 / 7.30	22 / 1.80	102 / 4.44	--	0 / 0	336 / 5.50	318 / 6.63	49 / 1.38	--	--	0.4	973	6.2	33

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.
h Analysis obtained from Santa Paula Water Works, Ltd.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO$_3$	HCO$_3$	SO$_4$	Cl	NO$_3$	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-10A1[a]	3-15-38[h]	1170	--	138 / 6.90	34 / 2.79	75 / 3.26	--	0 / 0	348 / 5.71	280 / 5.83	41 / 1.15	15 / 0.24	--	0.3	931	6.0	25
	8-22-38[h]	1150	--	138 / 6.90	37 / 3.03	74 / 3.22	--	0 / 0	344 / 5.64	294 / 6.13	41 / 1.15	10 / 0.16	--	0.3	938	6.2	24
	6- 6-39[h]	1170	--	138 / 6.90	36 / 2.95	75 / 3.26	--	0 / 0	351 / 5.75	291 / 6.06	40 / 1.13	10 / 0.16	--	0.3	941	6.2	25
	9- 2-39[h]	1170	--	140 / 7.00	34 / 2.79	78 / 3.39	--	0 / 0	360 / 5.90	284 / 5.92	42 / 1.18	10 / 0.16	--	0.3	949	6.2	26
	8- 6-40[h]	1180	--	138 / 6.90	32 / 2.62	82 / 3.56	--	0 / 0	360 / 5.90	285 / 5.94	38 / 1.07	11 / 0.18	--	0.3	946	6.2	27
	9-23-42[h]	1196	--	143 / 7.15	41 / 3.36	69 / 3.00	--	--	356 / 5.84	300 / 6.25	43 / 1.21	12 / 0.19	--	0.3	964	6.4	22
	7-24-45[h]	----	--	145 / 7.25	35 / 2.87	86 / 3.74	4 / 0.10	--	357 / 5.85	319 / 6.65	44 / 1.24	12 / 0.19	--	0.3	1002	6.7	27
	8- 8-46[h]	----	--	142 / 7.10	36 / 2.95	90 / 3.91	--	--	355 / 5.82	322 / 6.71	46 / 1.30	7 / 0.11	--	0.4	998	6.9	28
	11- 5-47[h]	----	--	148 / 7.40	35 / 2.87	85 / 3.70	3 / 0.08	--	345 / 5.66	331 / 6.90	42 / 1.18	11 / 0.18	--	0.3	997	6.6	26
	5-15-48[h]	----	--	143 / 7.15	35 / 2.87	87 / 3.79	--	--	338 / 5.54	332 / 6.91	41 / 1.15	8 / 0.13	--	--	984	6.7	27
	11-20-48[h]	----	--	141 / 7.05	35 / 2.87	84 / 3.65	9 / 0.23	--	340 / 5.58	335 / 6.98	40 / 1.13	7 / 0.11	--	0.3	991	6.8	26
	4-17-49[h]	----	--	140 / 7.00	32 / 2.62	86 / 3.74	--	--	234 / 3.84	318 / 6.63	40 / 1.13	5 / 0.08	--	--	855	6.4	28
	8-13-51[h]	----	--	144 / 7.20	35 / 2.87	84 / 3.64	4 / 0.10	--	339 / 5.56	332 / 6.91	41 / 1.15	12 / 0.19	--	--	991	6.6	26
11D1[a]	10- 1-31[h]	1100	--	126 / 6.30	32 / 2.62	83 / 3.61	--	--	336 / 5.51	289 / 6.02	35 / 0.99	--	--	0.4	901	6.2	29
	7-14-34[h]	1210	--	131 / 6.55	35 / 2.87	89 / 3.85	--	--	337 / 5.52	306 / 6.37	48 / 1.35	--	--	0.4	946	6.7	29
	8-25-36[h]	1190	--	133 / 6.65	35 / 2.87	81 / 3.52	--	--	341 / 5.59	293 / 6.10	47 / 1.32	--	--	0.4	930	6.4	27
	9-19-36[h]	1180	--	131 / 6.55	35 / 2.87	79 / 3.43	--	--	335 / 5.50	292 / 6.08	45 / 1.27	--	--	0.4	917	6.3	27

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
h Analyses obtained from Santa Paula Water Works, Ltd.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Mineral Constituents in parts per million / equivalents per million

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-11D1[a]	8-23-38[h]	1135	--	117 / 5.85	34 / 2.79	85 / 3.69	--	--	334 / 5.48	255 / 5.31	39 / 1.10	24 / 0.39	--	0.3	888	6.5	30
	9-13-39[h]	1090	--	124 / 6.20	37 / 3.03	74 / 3.22	--	0 / 0	325 / 5.33	275 / 5.73	40 / 1.13	14 / 0.23	--	0.4	889	6.2	26
	8- 6-40[h]	1150	--	126 / 6.30	31 / 2.54	85 / 3.70	--	--	341 / 5.59	277 / 5.77	36 / 1.01	10 / 0.16	--	0.4	907	6.2	30
	9-23-42[h]	1160	--	130 / 6.50	38 / 3.11	72 / 3.13	--	--	340 / 5.58	278 / 5.79	41 / 1.15	13 / 0.21	--	0.4	912	6.2	25
	7-24-45[d]	----	--	139 / 6.95	36 / 2.95	90 / 3.91	--	--	335 / 5.50	312 / 6.50	45 / 1.27	20 / 0.32	--	0.4	977	6.9	28
	8-11-46[d]	----	--	119 / 5.95	33 / 2.70	87 / 3.78	--	--	297 / 4.86	300 / 6.25	42 / 1.18	9 / 0.15	--	0.5	887	6.5	30
	11- 5-47[d]	----	--	106 / 5.30	34 / 2.79	87 / 3.78	15 / 0.38	--	276 / 4.52	305 / 6.36	40 / 1.13	13 / 0.21	--	0.3	876	7.0	31
	5-15-48[d]	----	--	126 / 6.30	34 / 2.79	90 / 3.91	--	--	340 / 5.57	287 / 5.98	38 / 1.07	15 / 0.24	--	--	930	6.7	30
	11-20-48[h]	----	--	125 / 6.25	32 / 2.62	83 / 3.61	6 / 0.15	--	315 / 5.16	295 / 6.15	38 / 1.07	15 / 0.24	--	0.4	909	6.4	29
	4-29-49[d]	----	--	130 / 6.50	34 / 2.79	94 / 4.08	--	--	336 / 5.51	293 / 6.11	45 / 1.27	28 / 0.45	--	--	960	6.9	31
	12-11-50[d]	----	--	137 / 6.85	33 / 2.70	91 / 3.96	1 / 0.03	--	325 / 5.33	324 / 5.31	45 / 1.25	12 / 0.19	--	--	968	6.7	29
	3- 6-51[h]	----	--	135 / 6.75	33 / 2.70	91 / 3.96	2 / 0.05	--	333 / 5.46	312 / 5.11	43 / 1.21	19 / 0.31	--	--	968	6.7	29
11E1[a]	10- 1-31[g]	1260	--	156 / 7.30	41 / 3.36	82 / 3.56	--	--	324 / 5.31	401 / 8.36	36 / 1.01	--	--	0.5	1040	6.0	24
	7-14-33[g]	1210	--	143 / 7.15	38 / 3.11	66 / 2.87	--	--	312 / 5.12	332 / 6.92	38 / 1.07	--	--	0.5	930	6.0	22
	6-27-34[g]	1160	--	138 / 6.90	39 / 3.19	59 / 2.56	--	--	306 / 5.02	318 / 6.63	36 / 1.01	--	--	0.5	896	5.8	20

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers see Appendix E.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.
h Analysis obtained from Santa Paula Water Works, Ltd.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-11E1[a]	7- 6-35[g]	1000	--	111 / 5.55	32 / 2.62	59 / 2.56	--	--	295 / 4.84	244 / 5.08	28 / 0.79	--	--	0.3	769	5.2	24
	7- 9-36[g]	1040	--	118 / 5.91	34 / 2.79	66 / 2.37	--	--	302 / 4.95	274 / 5.71	31 / 0.87	--	--	0.4	825	5.7	25
	9-19-36[g]	1100	--	129 / 6.45	36 / 2.95	67 / 2.91	--	--	310 / 5.08	299 / 6.23	34 / 0.96	--	--	0.4	875	5.9	24
	7- 8-37[g]	1040	--	117 / 5.35	32 / 2.62	62 / 2.69	--	--	296 / 4.85	258 / 5.38	33 / 0.93	--	--	0.4	798	5.3	24
	8-19-38[g]	1020	--	121 / 6.05	35 / 2.37	55 / 2.39	--	--	298 / 4.88	265 / 5.52	31 / 0.87	2 / 0.03	--	0.3	807	5.3	21
	5- 9-39[g]	1060	--	122 / 6.10	36 / 2.95	53 / 2.30	--	--	291 / 4.77	264 / 5.50	33 / 0.93	8 / 0.13	--	0.3	808	5.2	20
	5-29-40[g]	1100	--	128 / 6.40	36 / 2.95	59 / 2.56	--	--	306 / 5.02	275 / 5.73	35 / 0.99	10 / 0.16	--	0.4	849	5.5	21
	9-23-42[g]	1182	--	141 / 7.05	43 / 3.52	58 / 2.52	--	--	315 / 5.16	310 / 6.46	42 / 1.18	10 / 0.16	--	0.4	919	6.[illegible]	19
	6-24-44[g]	1220	--	143 / 7.15	41 / 3.36	65 / 2.82	--	--	332 / 5.44	305 / 6.36	44 / 1.24	17 / 0.28	--	0.4	948	6.2	21
	9-18-46[g]	----	--	150 / 7.50	41 / 3.36	77 / 3.35	7 / 0.18	--	326 / 5.34	362 / 7.54	50 / 1.41	5 / 0.08	--	0.4	1018	6.9	23
	3-31-49[d]	----	--	170 / 8.50	45 / 3.69	90 / 3.91	--	0 / 0	318 / 5.21	417 / 8.69	66 / 1.36	18 / 0.29	--	--	1124	7.6	24
	12-13-5[illegible][d]	----	--	198 / 9.90	52 / 4.26	99 / 4.31	1[c] / 0.02	0 / 0	329 / 5.40	484 / 10.08	97 / 2.74	17 / 0.27	--	--	1277	8.6	23
	8- 6-51[g]	----	--	173 / 8.65	46 / 3.77	84 / 3.65	5 / 0.13	--	317 / 5.20	440 / 9.16	59 / 1.66	14 / 0.23	--	--	1138	7.6	23
11E2[a]	10- 1-31[g]	1180	--	141 / 7.05	38 / 3.12	73 / 3.18	--	--	342 / 5.61	318 / 6.62	39 / 1.10	--	--	0.4	951	6.3	24
	7-14-33[g]	1030	--	117 / 5.85	31 / 2.55	59 / 2.56	--	--	294 / 4.32	252 / 5.26	30 / 0.84	--	--	0.3	783	5.1	23
	6-27-34[g]	1010	--	115 / 5.75	33 / 2.72	55 / 2.39	--	--	285 / 4.67	256 / 5.33	30 / 0.84	--	--	0.3	774	5.1	22

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-11E2[a]	7-18-35[g]	897	--	98 / 4.90	28 / 2.30	56 / 2.43	--	--	280 / 4.59	210 / 4.38	23 / 0.65	--	--	0.2	695	4.7	25
	7- 9-36[g]	935	--	106 / 5.30	31 / 2.55	57 / 2.48	--	--	279 / 4.57	238 / 4.96	27 / 0.76	--	--	0.2	738	5.0	24
	9-19-36[g]	976	--	111 / 5.55	31 / 2.55	58 / 2.52	--	--	283 / 4.64	246 / 5.13	30 / 0.84	--	--	0.3	759	5.1	24
	7- 8-37[g]	960	--	105 / 5.25	30 / 2.47	59 / 2.56	--	--	287 / 4.70	232 / 4.84	26 / 0.73	--	--	0.3	739	5.0	25
	8-20-38[g]	990	--	114 / 5.70	33 / 2.71	61 / 2.65	--	--	305 / 5.00	251 / 5.22	27 / 0.76	1 / 0.01	--	0.3	792	5.4	24
	6-13-39[g]	1020	--	114 / 5.70	33 / 2.71	59 / 2.56	--	--	296 / 4.85	247 / 5.15	29 / 0.82	7 / 0.11	--	0.3	785	5.3	23
	5-29-40[g]	1050	--	119 / 5.95	34 / 2.80	59 / 2.56	--	--	299 / 4.90	259 / 5.40	30 / 0.85	10 / 0.16	--	0.3	810	5.4	23
	9-23-42[g]	1185	--	142 / 7.10	40 / 3.29	61 / 2.65	--	--	316 / 5.18	303 / 6.31	47 / 1.32	16 / 0.25	--	0.3	925	5.9	20
	6-24-44[g]	1230	--	143 / 7.15	38 / 3.12	75 / 3.26	--	--	348 / 5.70	310 / 6.45	38 / 1.07	17 / 0.28	--	0.3	970	6.4	24
	9- 6-45[g]	----	--	148 / 7.40	39 / 3.20	81 / 3.52	2 / 0.05	--	337 / 5.53	338 / 7.05	47 / 1.32	15 / 0.24	--	0.3	1008	6.8	25
	8- 8-46[g]	----	--	128 / 6.40	39 / 3.20	81 / 3.52	--	--	284 / 4.65	335 / 6.99	43 / 1.21	7 / 0.11	--	0.3	917	6.7	27
	8-14-46[d]	----	--	143 / 7.15	51 / 4.18	57 / 2.48	--	0 / 0	365 / 5.98	304 / 6.34	48 / 1.35	7 / 0.11	--	0.4	975	6.7	18
	11-19-48[d]	----	--	147 / 7.35	40 / 3.28	78 / 3.34	--	0 / 0	359 / 5.39	312 / 6.50	45 / 1.27	15 / 0.24	--	0.3	996	6.6	24
	12-12-50[g]	----	--	181 / 9.05	47 / 3.86	93 / 4.04	4 / 0.10	--	328 / 5.38	447 / 9.31	71 / 2.00	22 / 0.35	--	--	1193	8.0	24
	12-29-50[d]	----	7.3	151 / 7.55	42 / 3.44	81 / 3.52	2[c] / 0.06	0 / 0	351 / 5.75	352 / 7.34	48 / 1.35	8 / 0.13	--	--	1035	7.0	24
	8- 6-51[g]	----	--	175 / 8.75	46 / 3.78	89 / 3.87	--	--	333 / [illegible]	415 / [illegible]	63 / [illegible]	24 / 0.39	--	--	1148	[illegible]	24

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Mineral constituents in parts per million / equivalents per million (each cell: ppm/epm)

Well Number S.B.B.&M.	Date Sampled	EC x 10^6 at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-11F2[a]	10- 1-31[g]	1260	--	154/7.70	43/3.54	75/3.26	--	--	353/5.46	376/7.82	41/1.15	--	--	0.4	1022	6.8	22
	7-14-33[g]	1060	--	122/6.10	34/2.80	59/2.56	--	--	298/4.88	273/5.68	30/0.85	--	--	0.4	816	5.4	22
	6-27-34[g]	1040	--	123/6.15	36/2.96	49/2.13	--	--	282/4.62	275/5.73	30/0.85	--	--	0.4	795	5.1	19
	7- 6-35[g]	910	--	104/5.20	31/2.55	50/2.17	--	--	284/4.65	222/4.63	22/0.62	--	--	0.3	713	4.7	22
	7- 9-36[g]	955	--	110/5.50	33/2.71	52/2.26	--	--	271/4.44	254/5.30	25/0.70	--	--	0.3	745	5.0	22
	9-19-36[g]	1010	--	117/5.85	34/2.79	59/2.56	--	--	285/4.66	271/5.65	31/0.87	--	--	0.4	797	5.4	23
	7- 8-37[g]	930	--	105/5.25	30/2.46	55/2.39	--	--	270/4.43	240/5.00	23/0.65	--	--	0.3	723	4.8	24
	8-19-38[g]	1005	--	120/6.00	36/2.96	48/2.08	--	--	275/4.51	272/5.67	27/0.76	4/0.06	--	0.3	781	5.0	19
	5- 9-39[g]	1075	--	133/6.63	40/3.28	45/1.96	--	--	312/5.11	267/5.57	35/0.99	14/0.22	--	0.2	846	5.2	17
	5-29-40[g]	1160	--	139/6.95	40/3.28	54/2.35	--	--	311/5.10	295/6.14	38/1.07	16/0.26	--	0.3	894	5.6	19
	8-29-41[g]	1046	--	122/6.10	35/2.87	59/2.56	--	--	304/4.99	267/5.57	30/0.85	8/0.13	--	0.3	825	5.4	22
	9-23-42[g]	1306	--	160/8.00	47/3.85	67/2.91	--	--	325/5.32	364/7.58	58/1.64	14/0.23	--	0.4	1036	6.8	20
	6-24-44[g]	1300	--	158/7.90	45/3.69	66/2.86	--	--	335/5.50	346/7.20	49/1.38	24/0.38	--	0.3	1023	6.6	20
	10-18-46[d]	----	--	164/8.20	45/3.69	78/3.39	--	0/0	318/5.21	390/8.12	62/1.75	10/0.16	--	0.4	1067	7.1	22
	10-28-46[d]	----	--	168/8.40	47/3.85	83/3.61	--	0/0	322/5.28	416/8.67	62/1.75	9/0.15	--	0.4	1107	7.5	23
	11-19-48[d]	----	--	179/8.95	52/4.27	89/3.87	5[c]/0.12	0/0	321/5.26	447/9.32	83/2.34	18/0.29	--	0.4	1194	8.3	22

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10⁶ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-11F2[a]	4- 5-49[d]	----	7.4	190 9.50	51 4.18	90 3.92	14[c] 0.37	0 0	336 5.51	473 9.85	77 2.17	27 0.44	--	--	1258	8.5	22
	7-19-49[d]	----	7.2	202 10.10	64 5.24	94 4.08	--	0 0	348 5.71	509 10.60	88 2.48	16 0.26	--	0.3	1321	9.3	21
	8- 6-50[d]	----	--	203 10.15	56 4.61	92 4.00	--	--	324 5.32	510 10.62	81 2.28	20 0.32	--	--	1286	8.6	21
	12-10-50[d]	----	7.2	210 10.50	57 4.76	97 4.21	--	0 0	330 5.41	535 11.10	90 2.53	18 0.29	--	--	1337	9.[illegible]	[illegible]
11H2[a]	11- 6-51[e]	1195	7.8	142 7.08	41 3.40	70 3.04	--	--	264 4.32	354 7.37	41 1.16	11 0.18	0.8	0.7	950	6.4	22
11J1[a]	8-11-37[d]	----	--	138 6.90	40 3.28	75 3.26	--	--	273 4.48	345 7.19	54 1.52	9 0.15	--	0.3	934	6.5	24
	3-29-51[d]	----	8.3	295 14.75	118 9.68	233 10.12	--	--	365 5.95	1166 24.30	145 4.09	14 0.23	--	1.7	2330	19.[illegible]	29
12E2	4-17-33[f]	----	--	128 6.40	39 3.21	90[j] 3.91	--	--	270 4.42	384 8.00	37 1.04	--	--	0.6	----	7.1	29
	11- 6-51[e]	1145	8.0	128 6.40	44 3.68	90 3.91	--	--	254 4.16	399 8.31	42 1.18	9 0.14	0.7	0.6	890	7.6	28
15C1[a]	10- 2-31[h]	1250	--	156 7.80	42 3.45	78 3.38	--	--	349 5.72	366 7.65	45 1.27	--	--	0.4	1036	[illegible].8	23
	7-14-33[h]	1370	--	173 8.65	48 3.95	65 2.82	--	--	322 5.28	418 8.71	50 1.41	--	--	0.4	1076	6.8	18
	7-14-34[h]	1370	--	172 8.60	49 4.03	72 3.14	--	--	340 5.58	419 8.74	49 1.38	--	--	0.4	1101	7.2	20
	8-21-36[h]	1360	--	175 8.75	50 4.11	77 3.34	--	--	372 6.10	418 8.71	49 1.38	--	--	0.4	1141	7.4	21
	9-26-36[h]	1390	--	175 8.75	50 4.11	61 2.65	--	--	357 5.85	397 8.27	47 1.33	--	--	0.4	1087	[illegible].8	17

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by Pacific Chemical Consultants.
f Analysis obtained from Santa Clara Water Conservation District.
h Analysis obtained from Santa Paula Water Works, Ltd.
j Na + K.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10⁶ at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-15C1[a]	7-8-37[h]	1390	--	171 / 8.55	48 / 3.95	69 / 3.00	--	--	368 / 6.03	386 / 8.05	49 / 1.38	--	--	0.5	1091	7.0	19
	9-5-38[h]	1315	--	161 / 8.[illegible]	46 / [illegible].78	69 / 3.00	--	--	363 / 5.95	368 / 7.66	41 / 1.1[illegible]	2 / 0.03	--	0.4	1050	[illegible]	[illegible]
	9-1-39[h]	1310	--	185 / 9.25	33 / 2.71	70 / 3.04	--	--	376 / 6.13	348 / 7.25	4[illegible] / 1.3[illegible]	14 / 0.22	--	0.5	1073	5.8	20
	11-8-39[h]	1[illegible]	--	153 / 7.[illegible]	45 / 3.70	73 / 3.17	--	--	367 / 6.01	346 / 7.21	48 / 1.35	--	--	0.5	1046	[illegible]	21
	8-6-40[h]	1290	--	158 / 7.90	42 / 3.45	75 / 3.2[illegible]	--	--	381 / 6.25	330 / 6.87	44 / 1.24	14 / 0.22	--	0.5	1044	[illegible].7	22
	7-24-45[h]	----	--	156 / 7.80	42 / 3.46	80 / 3.48	--	--	363 / 5.95	345 / 7.19	49 / 1.33	10 / 0.16	--	0.5	1045	6.9	24
	8-[illegible]-46[h]	----	--	156 / 7.80	42 / 3.46	81 / 3.52	9 / 0.23	--	354 / 5.80	364 / 7.58	52 / 1.47	--	--	0.4	1065	7.2	23
	11-5-47[h]	----	--	167 / 8.35	44 / 3.63	82 / 3.56	--	--	357 / 5.85	385 / 8.02	53 / 1.50	10 / 0.16	--	0.4	1098	7.2	23
	5-12-48[h]	----	--	169 / 8.45	45 / 3.70	83 / 3.60	2 / 0.05	--	365 / 5.98	390 / 8.12	50 / 1.41	18 / 0.29	--	0.4	1122	7.[illegible]	23
	11-20-48[h]	----	--	163 / 8.15	45 / 3.70	81 / 3.52	6 / 0.15	--	352 / 5.77	391 / 8.15	51 / 1.44	7 / 0.11	--	0.4	1096	7.4	25
	4-22-49[h]	----	--	169 / 8.45	43 / 3.55	84 / 3.65	--	--	348 / 5.70	397 / 8.26	51 / 1.44	6 / 0.10	--	--	1098	7.2	23
	8-6-51[h]	----	--	179 / 8.95	48 / 3.95	84 / 3.65	--	--	345 / 5.66	435 / 9.06	58 / 1.64	10 / 0.16	--	0.4	1158	7.6	22
15C2	11-25-52[km]	1340	7.3	154 / 7.68	48 / 3.95	85 / 3.70	5 / 0.13	0 / 0	284 / 4.65	428 / 8.91	54 / 1.52	8 / 0.13	0.4	0.4	952	7.8	24
15C4[a]	7-14-33[h]	1380	--	172 / 8.60	50 / 4.10	66 / 2.86	--	--	304 / 4.98	443 / 9.22	46 / 1.30	--	--	0.5	1081	7.0	18
	7-13-34[h]	1340	--	166 / 8.30	48 / 3.95	73 / 3.17	--	--	308 / 5.05	435 / 9.05	45 / 1.27	--	--	0.5	1075	7.1	21
	7-18-35[h]	1400	--	175 / 8.75	51 / 4.20	70 / 3.05	--	--	327 / 5.36	444 / 9.25	48 / 1.35	--	--	0.5	1115	7.2	19

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
h Analysis obtained from Santa Paula Water Works, Ltd.
k Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
m For analysis of heavy metal constituents, see Table B 17.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10⁶ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million												Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B				
3N/21W-15C4[a]	8-22-36[h]	1360	--	171 / 8.55	50 / 4.10	74 / 3.21	--	--	329 / 5.39	440 / 9.16	45 / 1.27	--	--	0.5		1109	7.3	20
	9-19-36[h]	1370	--	171 / 8.55	49 / 4.03	71 / 3.09	--	--	326 / 5.35	432 / 9.00	46 / 1.30	--	--	0.5		1095	7.1	20
	7- 8-37[h]	1400	--	170 / 8.50	48 / 3.95	76 / 3.30	--	--	344 / 5.64	416 / 8.66	49 / 1.38	--	--	0.5		1104	7.2	21
	8-19-38[h]	1370	--	171 / 8.55	50 / 4.11	67 / 2.91	--	--	356 / 5.34	405 / 8.44	43 / 1.21	1 / 0.02	--	0.5		1093	7.0	19
	6- 6-39[h]	1350	--	161 / 8.05	48 / 3.95	79 / 3.44	--	--	358 / 5.86	388 / 8.08	46 / 1.30	--	--	0.6		1088	7.4	22
	11- 8-39[h]	1350	--	159 / 7.95	48 / 3.95	72 / 3.13	--	--	345 / 5.65	379 / 7.90	46 / 1.30	9 / 0.15	--	0.5		1058	7.1	21
	3- 6-40[h]	1330	--	158 / 7.90	43 / 3.53	78 / 3.39	--	--	357 / 5.85	367 / 7.65	41 / 1.15	10 / 0.16	--	0.5		1054	6.9	23
	9-23-42[h]	1340	--	162 / 8.10	47 / 3.86	77 / 3.35	--	--	363 / 5.96	371 / 7.73	51 / 1.44	11 / 0.18	--	0.5		1082	7.2	22
	7-24-45[d]	----	7.8	144 / 7.20	43 / 3.53	79 / 3.43	--	0 / 0	274 / 4.49	376 / 7.83	47 / 1.33	11 / 0.18	--	0.5		974	7.0	24
	8-16-46[d]	----	--	159 / 7.95	43 / 3.53	84 / 3.65	--	0 / 0	333 / 5.46	395 / 8.23	49 / 1.38	5 / 0.08	--	0.5		1068	7.2	24
	5-18-48[d]	----	--	166 / 8.30	44 / 3.61	87 / 3.78	--	0 / 0	332 / 5.44	410 / 8.55	47 / 1.33	5 / 0.08	--	--		1091	7.4	24
	4-20-49[d]	----	7.4	163 / 8.15	43 / 3.53	89 / 3.83	10[c] / 0.26	0 / 0	330 / 5.41	431 / 8.98	48 / 1.35	5 / 0.08	--	--		1119	7.7	24
16A1[a]	7-14-33[g]	1230	--	146 / 7.30	40 / 3.29	68 / 2.96	--	0 / 0	324 / 5.31	338 / 7.04	41 / 1.15	--	--	0.4		957	6.2	22
	6-27-34[g]	1250	--	152 / 7.60	42 / 3.45	65 / 2.83	--	0 / 0	328 / 5.38	347 / 7.22	44 / 1.24	--	--	0.4		978	6.3	20
	7- 6-35[g]	1270	--	153 / 7.65	41 / 3.37	67 / 2.91	--	0 / 0	341 / 5.59	340 / 7.08	44 / 1.24	--	--	0.3		986	6.3	21

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.
h Analysis obtained from Santa Paula Water Works, Ltd.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-16A1[a]	7- 9-36[g]	1280	--	156 / 7.80	43 / 3.53	66 / 2.87	--	0 / 0	333 / 5.46	362 / 7.54	43 / 1.21	--	--	0.4	1003	6.4	20
	9-19-36[g]	1300	--	159 / 7.95	45 / 3.70	71 / 3.09	--	0 / 0	347 / 5.69	369 / 7.68	47 / 1.33	--	--	0.4	1038	6.8	21
	7- 8-37[g]	1300	--	154 / 7.70	42 / 3.45	77 / 3.35	--	0 / 0	348 / 5.70	356 / 7.42	47 / 1.33	--	--	0.4	1024	6.9	23
	8-21-38[g]	1255	--	152 / 7.60	42 / 3.45	69 / 3.00	--	0 / 0	353 / 5.78	337 / 7.02	40 / 1.13	2 / 0.03	--	0.4	995	6.4	21
	5- 7-39[g]	1230	--	148 / 7.40	41 / 3.37	68 / 2.96	--	--	359 / 5.89	313 / 6.52	42 / 1.18	7 / 0.11	--	0.4	979	6.3	22
	7-31-40[g]	1250	--	149 / 7.45	39 / 3.21	73 / 3.17	--	--	368 / 6.03	310 / 6.46	38 / 1.07	10 / 0.16	--	0.4	988	6.4	23
	9-23-42[g]	1237	--	145 / 7.25	40 / 3.29	74 / 3.22	--	--	370 / 6.06	295 / 6.15	45 / 1.27	16 / 0.26	--	0.4	985	6.5	23
	6-24-44[g]	1220	--	143 / 7.15	41 / 3.37	67 / 2.91	--	--	360 / 5.90	290 / 6.04	42 / 1.18	20 / 0.31	--	0.4	963	6.3	22
	8-14-46[g]	----	--	143 / 7.15	51 / 4.19	57 / 2.48	--	--	365 / 5.98	304 / 6.33	48 / 1.35	7 / 0.11	--	0.4	975	6.7	18
	11-19-48[g]	----	--	147 / 7.35	40 / 3.29	78 / 3.39	--	--	359 / 5.88	312 / 6.50	45 / 1.27	15 / 0.24	--	0.3	996	6.7	24
	12-29-50[g]	----	--	151 / 7.55	42 / 3.46	81 / 3.52	2 / 0.05	--	351 / 5.75	352 / 7.33	48 / 1.35	8 / 0.13	--	--	1035	7.0	24
	8- 8-51[g]	----	--	155 / 7.75	39 / 3.21	77 / 3.35	--	--	352 / 5.77	342 / 7.12	48 / 1.35	13 / 0.21	--	--	1026	6.6	23
16H1[a]	11- 9-51[e]	3540	8.1	256 / 12.80	134 / 11.00	420 / 18.22	--	--	398 / 6.52	1221 / 25.20	371 / 10.50	1 / 0.02	--	2.1	2776	29.2	43
	8-27-52	4545	7.4	257 / 12.9	143 / 11.8	650 / 28.2	7 / 0.17	0 / 0	471 / 7.72	1530 / 31.9	545 / 15.4	3 / 0.05	1.0	2.8	3580	40.2	53
16K1[a]	7-14-33[g]	1460	--	176 / 8.80	52 / 4.27	78 / 3.39	--	0 / 0	369 / 6.05	405 / 8.43	68 / 1.92	--	--	0.5	1148	7.7	21
	6-27-34[g]	1570	--	195 / 9.75	63 / 5.18	73 / 3.18	--	0 / 0	386 / 6.33	460 / 9.57	77 / 2.17	--	--	0.5	1255	8.4	18

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
e Analyzed by Pacific Chemical Consultants.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10⁶ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-16K1[a]	7- 6-35[g]	1580	--	196 / 9.80	61 / 5.02	80 / 3.48	--	0 / 0	399 / 6.54	454 / 9.46	80 / 2.26	--	--	0.5	1270	8.5	19
	7- 2-36[g]	1610	--	192 / 9.60	59 / 4.85	90 / 3.92	--	0 / 0	387 / 6.35	468 / 9.75	78 / 2.20	--	--	0.6	1275	8.8	21
	9-29-36[g]	1660	--	204 / 10.20	63 / 5.18	89 / 3.87	--	0 / 0	395 / 6.47	501 / 10.44	82 / 2.31	--	--	0.5	1335	9.0	20
	8-21-37[g]	1630	--	199 / 9.95	59 / 4.86	103 / 4.48	--	0 / 0	402 / 6.60	476 / 9.93	78 / 2.20	--	--	0.6	1328	9.3	23
	8-30-38[g]	1610	--	199 / 9.95	62 / 5.10	91 / 3.96	--	0 / 0	395 / 6.47	489 / 10.18	80 / 2.26	2 / 0.03	--	0.5	1318	9.1	21
	5-28-39[g]	1580	--	192 / 9.60	61 / 5.02	82 / 3.57	--	0 / 0	382 / 6.26	466 / 9.70	76 / 2.15	2 / 0.03	--	0.6	1261	8.6	20
	7-31-40[g]	1610	--	192 / 9.60	57 / 4.69	90 / 3.92	--	0 / 0	393 / 6.44	471 / 9.82	68 / 1.92	2 / 0.03	--	0.6	1273	8.6	22
	9-23-42[g]	1560	--	191 / 9.55	63 / 5.18	83 / 3.61	--	--	389 / 6.38	469 / 9.77	76 / 2.14	2 / 0.04	--	0.6	1274	8.8	20
	11-19-48[d]	----	--	155 / 7.75	48 / 3.94	92 / 4.00	11[c] / 0.27	--	342 / 5.60	427 / 8.90	50 / 1.41	3 / 0.05	--	0.5	1128	8.2	25
	8- 6-51[g]	----	--	161 / 8.05	47 / 3.87	98 / 4.26	--	--	334 / 5.47	436 / 9.08	47 / 1.32	3 / 0.04	--	--	1126	8.1	26
16K2[a]	7-14-33[g]	1780	--	217 / 10.85	64 / 5.26	100 / 4.35	--	0 / 0	411 / 6.73	545 / 11.35	82 / 2.31	--	--	0.7	1420	9.6	21
	7-18-35[g]	1880	--	219 / 10.95	67 / 5.51	119 / 5.17	--	0 / 0	434 / 7.11	575 / 11.97	88 / 2.48	--	--	0.7	1503	10.7	24
	7- 2-36[g]	1880	--	218 / 10.90	69 / 5.67	116 / 5.04	--	--	426 / 6.99	578 / 12.04	90 / 2.54	--	--	0.7	1498	10.7	23
	9-29-36[g]	1880	--	220 / 11.00	68 / 5.60	133 / 5.77	--	0 / 0	448 / 7.35	591 / 12.30	93 / 2.62	--	--	0.8	1554	11.4	26
	7- 8-37[g]	1880	--	195 / 9.75	62 / 5.10	159 / 6.92	--	0 / 0	451 / 7.40	555 / 11.55	97 / 2.74	--	--	0.8	1520	12.0	32

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-16K2[a]	9- 5-38[g]	1810	--	203 / 10.15	63 / 5.18	142 / 6.17	--	0 / 0	454 / 7.45	550 / 11.45	90 / 2.54	0.5 / 0.01	--	0.8	1503	11.4	29
	9-13-39[g]	1740	--	198 / 9.90	66 / 5.43	124 / 5.39	--	0 / 0	443 / 7.26	521 / 10.86	89 / 2.51	0.8 / 0.01	--	0.8	1443	10.8	26
	11-16-50[d]	----	7.4	167 / 8.35	51 / 4.20	131 / 5.70	5[c] / 0.13	--	351 / 5.75	525 / 10.94	60 / 1.69	--	--	--	1290	10.0	31
	8- 9-51[g]	----	--	183 / 9.15	55 / 4.52	126 / 5.48	--	--	352 / 5.77	555 / 11.55	64 / 1.81	--	--	0.7	1335	10.0	29
16P1	11-30-34[d]	----	--	245 / 12.25	78 / 6.39	150 / 6.52	--	0 / 0	362 / 5.92	751 / 15.65	126 / 3.56	Tr.	--	0.7	1712	12.9	26
16Q1[a]	8- 6-51[g]	----	--	188 / 9.40	58 / 4.76	133 / 5.78	--	--	329 / 5.39	591 / 12.32	78 / 2.20	--	--	--	1377	10.5	29
16R2[a]	7-14-33[g]	1490	--	177 / 8.85	53 / 4.36	82 / 3.57	--	0 / 0	318 / 5.21	472 / 9.84	60 / 1.69	--	--	0.6	1163	7.9	21
	6-27-34[g]	1550	--	190 / 9.50	57 / 4.69	80 / 3.48	--	0 / 0	313 / 5.13	512 / 10.68	64 / 1.81	--	--	0.6	1217	8.2	20
	7- 6-35[g]	1530	--	191 / 9.55	58 / 4.77	89 / 3.87	--	0 / 0	321 / 5.26	528 / 11.00	66 / 1.36	--	--	0.6	1254	8.6	21
	7- 2-36[g]	1610	--	192 / 9.60	58 / 4.77	87 / 3.79	--	0 / 0	318 / 5.21	525 / 10.93	69 / 1.94	--	--	0.6	1250	8.6	21
	[illegible]-29-36[g]	1650	--	200 / 10.00	61 / 5.01	98 / 4.26	--	0 / 0	324 / 5.31	571 / 11.90	71 / 2.00	--	--	0.7	1326	9.3	22
	7- 8-37[g]	1640	--	193 / 9.65	59 / 4.85	97 / 4.22	--	0 / 0	335 / 5.50	534 / 11.13	72 / 2.03	--	--	0.7	1291	9.1	23
	9-13-38[g]	1620	--	195 / 9.75	59 / 4.85	100 / 4.35	--	0 / 0	343 / 5.62	538 / 11.21	74 / 2.08	--	--	0.6	1310	9.2	23
	7-31-40[g]	1650	--	196 / 9.80	58 / 4.77	97 / 4.22	--	0 / 0	356 / 5.83	522 / 10.88	72 / 2.03	--	--	0.6	1302	9.0	22
	9-20-51[g]	----	--	179 / 8.95	52 / 4.23	110 / 4.78	--	--	318 / 5.21	517 / 10.77	71 / 2.00	--	--	--	1247	9.1	27
17D1	3-15-51[d]	----	--	59 / 2.95	16 / 1.31	196 / 8.53	18 / 0.46	--	414 / 6.79	113 / 2.35	145 / 4.11	--	--	--	961	9.0	64

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F		Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-17P1	5- 2-49[b]	2050	6.7	205 / 10.25	45 / 3.70	230 / 10.00	--	--	385 / 6.31	710 / 14.30	90 / 2.54	--	--	1.1	-----	13.5	42
19L1	9-13-48[d]	----	8.3	122 / 6.10	30 / 2.46	90 / 3.92	6[c] / 0.16	Tr.	295 / 4.83	325 / 6.77	37 / 1.04	--	--	0.4	905	6.5	31
	10-26-48[d]	----	7.4	119 / 5.95	34 / 2.78	81 / 3.43	--	--	273 / 4.47	316 / 6.57	39 / 1.10	--	--	0.4	862	6.2	28
19M1	9-13-48[d]	----	8.5	75 / 3.75	38 / 3.11	183 / 7.95	4[c] / 0.11	--	232 / 3.38	388 / 8.08	105 / 2.96	--	--	0.7	1025	11.0	53
	10-26-48[d]	----	7.7	78 / 3.90	45 / 3.69	177 / 7.70	--	--	225 / 3.69	411 / 8.56	108 / 3.08	--	--	0.7	1044	11.4	50
20F1[a]	7-12-32[d]	----	--	158 / 7.90	50 / 4.10	53[c] / 2.29	--	0 / 0	290 / 4.75	387 / 8.07	52 / 1.47	--	--	0.4	990	6.4	16
20J2	7-16-52	1878	7.1	236 / 11.80	66 / 5.47	154 / 6.68	6 / 0.14	0 / 0	437 / 7.16	680 / 14.18	99 / 2.78	0 / 0	0.4	0.8	1510	12.5	28
20M1[a]	7- 5-32[g]	1060	--	117 / 5.85	32 / 2.63	82 / 3.57	--	--	339 / 5.55	267 / 5.56	32 / 0.90	--	--	0.4	869	6.2	30
	12- 3-32[g]	1080	--	121 / 6.05	30 / 2.47	74 / 3.22	--	--	308 / 5.05	277 / 5.77	32 / 0.90	--	--	0.4	842	5.7	27
	4-17-33[g]	1070	--	121 / 6.05	26 / 2.14	84 / 3.65	--	--	310 / 5.08	274 / 5.71	35 / 0.99	--	--	0.4	850	5.8	31
	7-14-33[g]	1070	--	120 / 6.00	31 / 2.55	72 / 3.13	--	--	300 / 4.92	279 / 5.81	32 / 0.90	--	--	0.4	834	5.7	27
	6-28-34[g]	1070	--	124 / 6.20	34 / 2.80	67 / 2.91	--	--	306 / 5.02	284 / 5.91	34 / 0.96	--	--	0.4	849	5.7	24
	7- 6-35[g]	1070	--	120 / 6.00	32 / 2.63	75 / 3.26	--	--	310 / 5.08	280 / 5.84	33 / 0.93	--	--	0.4	850	5.9	27
	7- 9-36[g]	1070	--	121 / 6.05	30 / 2.47	80 / 3.48	--	--	310 / 5.08	286 / 5.96	33 / 0.93	--	--	0.4	860	6.0	29
	9-19-36[g]	1090	--	124 / 6.20	31 / 2.55	78 / 3.39	--	--	310 / 5.08	290 / 6.04	35 / 0.99	--	--	0.4	868	5.9	28

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Analysis obtained from Ventura County Farm Advisors.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-20M1[a]	7- 9-37[g]	1110	--	126 / 6.30	33 / 2.71	72 / 3.13	--	--	312 / 5.12	288 / 6.00	36 / 1.01	--	--	0.5	867	5.8	26
	8-19-38[g]	1090	--	126 / 6.30	31 / 2.55	76 / 3.30	--	--	307 / 5.03	295 / 6.15	33 / 0.93	--	--	0.4	868	5.8	27
	5-10-39[g]	1070	--	122 / 6.10	32 / 2.63	71 / 3.09	--	--	303 / 4.96	278 / 5.78	35 / 0.99	--	--	0.4	841	5.7	26
	7-31-40[g]	1110	--	124 / 6.20	30 / 2.47	82 / 3.57	--	--	321 / 5.26	287 / 5.98	34 / 0.96	--	--	0.4	878	6.0	29
	9-23-42[g]	1103	--	124 / 6.20	34 / 2.80	75 / 3.26	--	--	318 / 5.21	285 / 5.94	38 / 1.07	--	--	0.4	870	6.1	27
	10-20-44[g]	1103	--	124 / 6.20	32 / 2.63	74 / 3.22	--	--	309 / 5.07	285 / 5.94	36 / 1.01	--	--	0.4	860	5.8	27
	8- 8-46[g]	----	--	106 / 5.30	29 / 2.38	81 / 3.52	6 / 0.15	--	252 / 4.13	295 / 6.15	38 / 1.07	Tr.	--	0.4	807	6.0	31
	11-16-50[g]	----	--	122 / 6.10	28 / 2.30	81 / 3.52	--	--	304 / 4.98	297 / 6.19	37 / 1.04	--	--	--	869	5.8	30
	8- 6-51[g]	----	--	128 / 6.40	30 / 2.47	79 / 3.44	4 / 0.10	--	308 / 5.05	303 / 6.31	36 / 1.01	--	--	--	888	6.0	28
	7-15-52[e]	1317	7.6	158 / 7.90	46 / 3.82	82 / 3.56	3 / 0.08	0 / 0	322 / 5.28	406 / 8.46	50 / 1.41	7 / 0.11	0.5	0.2	1004	7.5	23
21A2	5-13-38[d]	----	--	180 / 9.00	60 / 4.91	126 / 5.48	4[c] / 0.09	0 / 0	322 / 5.28	583 / 12.14	73 / 2.06	Tr.	--	0.7	1348	10.5	28
21F2	7-16-52[e]	2075	7.3	211 / 10.57	70 / 5.75	178 / 7.73	6 / 0.15	0 / 0	428 / 7.03	615 / 12.82	153 / 4.30	3 / 0.04	0.6	1.3	1534	13.6	32
28M1	7-16-52[e]	2900	7.0	288 / 14.42	110 / 9.10	286 / 12.42	11 / 0.28	0 / 0	453 / 7.42	1018 / 21.20	258 / 7.28	3 / 0.05	0.7	1.4	2505	21.8	34
31C1[a]	7-16-52[e]	2580	7.2	316 / 15.79	95 / 7.88	197 / 8.57	6 / 0.14	0 / 0	437 / 7.16	1094 / 22.80	96 / 2.72	Tr.	0.4	0.6	2337	16.6	26
3N/22W- 2G2	8-27-52	3236	7.7	190 / 9.48	128 / 10.52	425 / 18.50	10 / 0.25	0 / 0	586 / 9.60	1070 / 22.30	250 / 7.05	6 / 0.07	1.2	1.3	2510	29.1	48
11H1[a]	8-27-52	3257	7.8	223 / 11.15	118 / 9.70	390 / 17.0	7 / 0.18	0 / 0	581 / 9.52	1085 / 22.60	226 / 6.37	29 / 0.47	1.5	0.9	2530	26.9	45

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by Pacific Chemical Consultants.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.

TABLE B 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/22W-24R1	9-13-48[d]	----	8.1	236 / 11.80	89 / 7.30	252 / 10.95	10[c] / 0.26	--	454 / 7.42	962 / 20.04	76 / 2.14	44 / 0.71	--	0.8	2123	18.5	36
	10-26-48[d]	----	7.3	205 / 10.25	85 / 6.96	235 / 10.21	4[c] / 0.11	--	462 / 7.57	840 / 17.50	72 / 2.11	22 / 0.35	--	0.72	1928	17.3	37
	9- 5-52	2304	7.7	190 / 9.48	82 / 5.92	220 / 9.56	4 / 0.12	0 / 0	344 / 5.64	823 / 17.1	79 / 2.23	49 / 0.78	0.8	0.6	1772	15.6	38
34H2	6- 9-47[d]	----	--	137 / 6.85	63 / 5.16	226 / 9.82	--	0 / 0	415 / 6.80	565 / 11.77	112 / 3.16	3 / 0.04	--	0.9	1521	15.0	45
	6- 3-48[d]	----	7.6	137 / 6.85	60 / 4.91	227 / 9.88	3[c] / 0.07	0 / 0	414 / 6.79	567 / 11.72	110 / 3.10	6 / 0.10	--	0.8	1519	14.9	46
34Q2	7-16-52	1664	7.8	198 / 9.90	54 / 4.48	110 / 4.76	5 / 0.12	0 / 0	329 / 5.40	572 / 11.90	81 / 2.29	2 / 0.03	0.2	1.2	1288	9.4	25
35P1[a]	7-15-52[e]	2880	7.8	362 / 18.08	104 / 8.62	227 / 9.87	6 / 0.15	0 / 0	374 / 6.13	1310 / 27.30	110 / 3.10	1 / 0.02	0.4	0.8	2542	18.6	27
35R1	6- 9-34[d]	----	--	204 / 10.20	59 / 4.84	121[c] / 5.25	--	--	337 / 5.53	588 / 12.25	89 / 2.51	--	--	0.5	1398	10.1	26
36J1	3- 6-47[d]	----	--	256 / 12.30	70 / 5.73	113 / 4.91	3[c] / 0.08	--	355 / 5.82	709 / 14.76	102 / 2.88	4 / 0.06	--	0.3	1612	10.7	21
	7-16-52[e]	1850	8.0	236 / 11.80	56 / 4.58	138 / 6.00	4 / 0.12	0 / 0	364 / 5.96	666 / 13.88	93 / 2.61	10 / 0.17	0.4	0.8	1678	10.7	27
								Tributary to Santa Paula Basin									
3N/22W-23F2[a]	5- 1-53[e]	2170	7.7	180 / 8.98	67 / 5.52	236 / 10.25	9 / 0.23	0 / 0	587 / 9.62	621 / 12.95	88 / 2.49	7 / 0.11	0 / 0	0.5	1583	15.4	41

a Additional analyses published in Bulletin No. 46-A.(2) For cross index of well numbers, see Appendix E.
b Analysis obtained from Ventura County Farm Advisors.
c Calculated by difference.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by Pacific Chemical Consultants.
f Analysis obtained from Santa Clara Water Conservation District.
g Analysis obtained from Farmers Irrigation Co., Santa Paula.
h Analysis obtained from Santa Paula Water Works, Ltd.
j Na + K.
k Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
m For analysis of heavy metal constituents, see Table B 17

TABLE B 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W- 7R2	7-15-52[a]	1560	7.7	168 / 8.40	50 / 4.13	126 / 5.48	6 / 0.15	0 / 0	353 / 5.79	480 / 10.00	72 / 2.04	17 / 0.28	0.3	0.5	1154	9.8	30
9K3[c]	7-15-52[a]	1398	7.6	138 / 6.90	44 / 3.60	119 / 5.17	5 / 0.12	0 / 0	343 / 5.62	404 / 8.43	60 / 1.69	Tr.	0.5	0.2	1051	8.9	33
9K4[c]	2-14-34[d]	----	--	139 / 6.95	45 / 3.69	112 / 4.87	--	--	350 / 5.74	391 / 8.15	66 / 1.86	--	--	0.4	1103	8.6	31
9L2	8-12-35[b]	1670	--	164 / 8.20	51 / 4.18	157 / 6.82	--	--	395 / 6.48	508 / 10.59	88 / 2.49	0 / 0	--	0.7	1364	11.0	35
10N1	7-15-52[a]	1160	7.8	129 / 6.45	31 / 2.59	92 / 4.00	5 / 0.12	0 / 0	333 / 5.46	312 / 6.51	41 / 1.15	Tr.	0.4	0.3	812	6.7	30
10R1	6- 2-52[a]	1455	7.6	133 / 6.66	36 / 2.82	136 / 5.90	--	0 / 0	268 / 4.39	462 / 9.60	57 / 1.61	0 / 0	0.6	0.6	1057	8.7	38
10R2	6- 4-52[a]	1102	7.6	92 / 4.62	30 / 2.49	115 / 5.00	--	0 / 0	229 / 3.76	345 / 7.18	32 / 0.90	4 / 0.07	0.8	0.6	788	7.5	41
16C1	8- 6-47[b]	1890	7.3	170 / 8.5	60 / 5.0	175 / 7.7	--	--	300 / 4.9	695 / 14.5	65 / 1.8	--	--	0.7	1315	12.7	36
17G1	8-21-52	1511	7.7	145 / 7.25	39 / 3.20	145 / 6.30	5 / 0.13	0 / 0	249 / 4.08	500 / 10.42	90 / 2.54	1 / 0.02	0.4	0.3	1100	9.6	37
	11-28-52[ef]	1510	7.6	155 / 7.73	36 / 2.96	140 / 6.09	4 / 0.09	0 / 0	243 / 3.98	521 / 10.85	72 / 2.03	0 / 0	0.4	0.4	1090	9.1	36
17L1	6-23-52[a]	3090	7.4	354 / 17.72	100 / 8.22	284 / 12.35	--	0 / 0	306 / 5.02	1320 / 27.50	175 / 4.93	56 / 0.91	0.6	0.6	2599	20.6	32
17N2[c]	6-25-52[a]	1453	7.6	139 / 6.94	40 / 3.32	135 / 5.86	6 / 0.14	0 / 0	242 / 3.96	494 / 10.30	81 / 2.27	3.1 / 0.05	0.4	0.2	1124	9.3	36
	9- 5-52	----	--	145 / 7.25	41 / 3.37	122 / 5.30	5 / 0.13	0 / 0	320 / 5.24	433 / 9.02	72 / 2.03	3 / 0.05	0.7	0.2	1060	8.8	33
17Q1	5- 5-49[g]	----	--	130 / 6.50	41 / 3.36	115 / 5.00	3 / 0.08	--	235 / 3.85	464 / 9.67	50 / 1.41	--	--	--	1038	8.4	34

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Additional analyses published in Bulletin No. 46-A.(2) For cross index of well numbers, see Appendix E.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
f For analysis of heavy metal constituents, see Table B 17.
g Analysis obtained from Santa Clara Water Conservation District.

TABLE B 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10⁶ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
2N/22W-19J1[c]	6-26-52[a]	1367	7.8	139 6.95	39 3.18	122 5.30	5 0.12	0 0	260 4.26	465 9.69	55 1.54	1 0.02	0.6	0.4	1079	8.6	34
20L1	5- 2-47[g]	----	--	133 6.65	42 3.44	105 4.57	14 0.36	--	271 4.45	442 9.20	49 1.38	Tr.	--	0.5	1056	8.0	30
20M1[c]	7-21-36[g]	----	--	137 6.85	41 3.37	119 5.17	21 0.54	0 0	273 4.47	447 9.32	53 1.49	Tr.	--	--	1121	9.1	32
	9-27-45[g]	----	--	133 6.65	41 3.37	119 5.17	7 0.18	12 0.40	245 4.02	459 9.56	49 1.38	--	--	0.6	1065	8.7	34
2N/23W- 5L1	4- 2-52	1546	7.8	175 8.73	46 3.78	140 6.09	7 0.18	0 0	373 6.12	484 10.08	101 2.85	5 0.09	0.4	0.5	1261	10.0	32
5P1[c]	8- 1-52[a]	1710	7.2	187 9.35	50 4.17	154 6.68	6 0.14	0 0	379 6.21	450 9.38	161 4.53	7 0.11	0.3	0.4	1354	11.0	33
10R1	4-25-48[g]	----	--	155 7.75	44 3.62	124 5.40	9 0.23	--	230 3.77	476 9.92	59 1.66	--	--	0.5	1097	9.2	32
	12- 9-48[g]	----	--	166 8.30	45 3.70	142 6.18	18 0.46	--	361 5.92	510 10.62	78 2.20	Tr	--	--	1320	10.3	33
	6-27-49[g]	----	--	162 8.10	49 4.03	149 6.48	--	--	360 5.90	496 10.33	78 2.20	--	--	--	1294	10.6	35
	2- 5-51	1667	7.3	160 8.00	47 3.87	147 6.40	--	0 0	361 5.92	481 10.03	78 2.20	3 0.05	--	0.4	1193	10.3	35
14K1[c]	7-21-36[g]	----	--	164 8.20	47 3.86	164 7.13	12 0.31	0 0	404 6.62	512 10.66	78 2.20	--	--	--	1381	11.3	37
	4-16-47[g]	----	--	159 7.95	42 3.46	155 6.74	13 0.33	--	401 6.57	468 9.75	75 2.11	Tr.	--	0.6	1313	10.5	36
	7-20-48[d]	----	7.6	160 8.00	40 3.27	169 7.35	--	0 0	402 6.59	483 10.06	70 1.97	0 0	--	0.6	1324	10.6	39
	5- 5-49[g]	----	--	144 7.20	40 3.29	157 6.84	9 0.23	--	351 5.75	467 9.73	73 2.06	1 0.02	--	--	1242	10.4	39

a Analyzed by Pacific Chemical Consultants.
c Additional analyses published in Bulletin No. 46-A.(2) For cross index of well numbers, see Appendix E.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Santa Clara Water Conservation District.

TABLE B 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$ECx10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/23W-14K1[c]	8- 1-52[a]	1500	7.5	161/8.05	36/2.96	158/6.87	5/0.13	0/0	405/6.64	444/9.25	71/2.01	2/0.03	0.4	0.4	1113	10.0	38
	10- 6-52[g]	----	--	161/8.05	40/3.29	156/6.78	--	--	398/6.52	452/9.42	70/1.97	--	--	0.6	1277	10.1	37
14L1	7-22-47[g]	----	--	168/8.40	44/3.62	158/6.87	6/0.15	--	412/6.75	488/10.15	74/2.09	--	--	0.6	1350	10.6	36
	2-28-48[g]	----	--	168/8.40	48/3.95	160/6.96	--	--	410/6.72	493/10.27	76/2.14	--	--	0.6	1355	10.9	36
	3- 2-51[g]	----	--	167/8.35	43/3.54	163/7.08	--	--	411/6.73	486/10.12	75/2.11	Tr.	--	--	1345	10.6	37
14M1	2- 3-49[d]	----	--	158/7.90	43/3.54	150/6.52	16/0.41	--	395/6.47	467/9.73	77/2.17	--	--	0.5	1306	10.5	36
	7- 1-49[d]	----	--	160/8.00	47/3.87	155/6.74	--	--	375/6.15	486/10.12	75/2.11	--	--	--	1298	10.6	36
	2- 5-51	1449	7.4	146/7.30	41/3.40	138/6.00	--	0/0	373/6.12	403/8.40	68/1.92	3/0.04	--	0.4	1080	9.4	36
23C1	3- 8-48[g]	----	7.6	157/7.85	42/3.45	130/5.65	15/0.38	--	339/5.56	480/10.00	63/1.78	--	--	0.4	1226	9.5	33
	3- 9-48[g]	----	8.1	148/7.40	42/3.45	138/6.00	--	--	331/5.43	477/9.95	62/1.75	--	--	0.3	1198	9.4	36
	3-11-48[g]	----	--	163/8.15	42/3.45	148/6.44	13/0.33	--	373/6.12	484/10.01	77/2.17	--	--	0.5	1300	10.2	35
	3-26-48[g]	----	7.7	151/7.55	44/3.45	151/6.56	--	--	366/6.00	448/9.34	68/1.92	--	--	--	1226	10.0	37
	3-30-48[g]	----	--	160/8.00	44/3.62	141/6.13	4/0.10	--	371/6.08	468/9.75	71/2.00	--	--	0.5	1259	9.8	34
	1- 3-49[g]	----	--	140/7.00	40/3.29	136/5.91	7/0.18	--	364/5.97	425/8.85	69/1.95	--	--	0.5	1181	9.4	36
	7- 1-49[g]	----	--	151/7.55	41/3.37	145/6.30	--	--	379/6.21	430/8.96	67/1.89	--	--	--	1213	9.7	37
	2- 5-51	1429	7.5	145/7.25	44/3.62	140/6.09	--	0/0	356/5.84	398/8.30	69/1.95	2/0.02	--	0.4	1040	9.7	36
23H2	6-20-48[g]	----	--	161/8.05	45/3.70	167/7.26	--	--	280/4.59	504/10.50	76/2.14	--	--	0.5	1233	11.0	38

a Analyzed by Pacific Chemical Consultants.
c Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
d Analyzed by Fruit Growers Laboratory, Inc.
g Analysis obtained from Santa Clara Water Conservation District.

TABLE B 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/23W-23H2	7- 1-48[g]	----	--	169/8.45	51/4.20	167/7.26	--	--	375/6.15	537/11.19	85/2.39	--	--	--	1384	11.5	36
24G1	7- 2-48[g]	----	--	143/7.15	43/3.54	118/5.13	3/0.08	0/0	335/5.49	422/8.78	56/1.58	--	--	0.5	1120	8.8	32
	1- 3-49[g]	----	--	142/7.10	41/3.37	118/5.13	--	--	335/5.49	410/8.54	56/1.58	--	--	0.5	1102	8.5	33
	5- 5-49[g]	----	--	147/7.35	40/3.29	128/5.56	11/0.28	--	337/5.53	444/9.25	60/1.69	1/0.02	--	--	1168	9.1	34
	1-19-51[g]	----	--	148/7.40	42/3.45	123/5.35	5/0.13	--	340/5.57	432/9.00	63/1.78	--	--	--	1153	8.9	33
	11-15-52[g]	----	--	148/7.40	41/3.37	121/5.26	--	--	338/5.54	412/8.60	59/1.66	--	--	0.6	1120	8.6	33
24K1[c]	3- 9-33[g]	----	--	140/7.00	40/3.29	135/5.86	--	--	335/5.49	436/9.08	55/1.55	--	--	0.5	1141	9.2	36
	7-21-36[g]	----	--	146/7.30	41/3.37	120/5.22	22/0.56	0/0	331/5.43	439/9.15	64/1.80	5/0.08	--	--	1168	9.2	32
	5-21-49[g]	----	--	197/9.85	61/5.02	144/6.26	--	--	286/4.68	620/12.92	105/2.96	25/0.43	--	--	1438	11.3	30
	10- 6-52[g]	----	--	142/7.10	40/3.29	118/5.13	--	--	272/4.46	452/9.41	51/1.44	--	--	0.5	1075	8.4	33
24K3	7-14-52[a]	1527	7.6	153/7.66	44/3.60	127/5.50	5/0.14	0/0	340/5.57	454/9.46	65/1.84	5/0.08	0.7	0.3	1121	9.2	33
3N/23W-31N1	10-18-48[h]	----	7.3	88/4.40	46/3.83	297/12.90	--	0/0	622/10.38	330/6.88	142/4.00	--	--	--	1525	12.9	61
							Tributary to Mound Pressure Area										
2N/23W- 2K1	8- 1-52	1020	9.0	8/0.40	34/2.79	180/7.82	8/0.20	31/1.04	102/1.68	285/5.94	102/2.88	6/0.10	0.2	0.3	700	9.5	70

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors. (2) For cross index of well numbers, see Appendix E.
c Additional analyses published in Bulletin No. 46-A.
d Analyzed by Fruit Growers Laboratory, Inc.
e Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
f For analysis of heavy metal constituents, see Table B 17.
g Analysis obtained from Santa Clara Water Conservation District.
h Analysis obtained from City of Ventura Water Department.

TABLE B 8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.08

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/21W- 7N1	3- 3-48[a]	----	7.9	170 / 8.50	58 / 4.75	118 / 5.14	--	--	270 / 4.43	567 / 11.80	76 / 2.14	2 / 0.03	--	0.7	1261	9.9	28
2N/22W- 2R2	9- 2-49[a]	----	7.3	152 / 7.60	50 / 4.10	137 / 5.96	15 / 0.39	--	303 / 4.97	547 / 11.39	60 / 1.69	Tr.	--	0.5	1264	10.4	33
11A2[b]	9- 2-49[a]	----	7.2	165 / 8.25	58 / 4.76	179 / 7.79	10 / 0.25	--	328 / 5.37	652 / 13.57	75 / 2.11	Tr.	--	0.5	1467	12.8	37
	7-15-52[c]	1655	8.0	162 / 8.08	54 / 4.48	158 / 6.87	6 / 0.14	0 / 0	363 / 5.96	549 / 11.42	62 / 1.75	12 / 0.19	0.3	0.6	1251	11.5	35
11R1	11-28-52[de]	1200	7.5	113 / 5.64	37 / 3.04	110 / 4.78	4 / 0.10	0 / 0	266 / 4.36	385 / 8.02	32 / 0.90	3 / 0.05	0.7	0.6	838	7.9	35
12D1	9- 2-49[a]	----	7.5	196 / 9.80	61 / 5.00	161 / 7.00	11 / 0.29	--	307 / 5.04	702 / 14.60	84 / 2.37	3 / 0.05	--	0.6	1525	12.3	32
12G1	7-15-52[c]	1190	8.2	110 / 5.49	40 / 3.31	100 / 4.35	5 / 0.12	0 / 0	258 / 4.23	378 / 7.88	39 / 1.09	3 / 0.05	0.6	0.6	939	7.8	33
	8-27-52	1424	7.8	137 / 6.85	49 / 4.03	120 / 5.22	4 / 0.12	0 / 0	271 / 4.44	473 / 9.85	57 / 1.61	8 / 0.13	0.8	0.6	1045	9.4	32
12J1[b]	9-10-36[f]	----	--	126 / 6.30	48 / 3.95	106 / 4.60	--	--	255 / 4.18	436 / 9.06	48 / 1.35	1 / 0.02	--	0.8	1020	8.6	31
	8-16-37[f]	----	--	120 / 6.00	42 / 3.45	87 / 3.79	--	--	228 / 3.74	386 / 8.04	41 / 1.16	17 / 0.27	--	0.6	921	7.2	29
	6-30-38[f]	----	--	123 / 6.15	43 / 3.54	80 / 3.48	5 / 0.13	--	227 / 3.72	409 / 8.52	36 / 1.02	2 / 0.03	--	0.6	925	7.2	26
	6- 2-39[f]	----	--	138 / 6.90	47 / 3.87	91 / 3.96	--	--	250 / 4.10	452 / 9.42	40 / 1.13	3 / 0.05	--	0.6	1021	7.8	27
	6-27-40[f]	----	--	137 / 6.85	50 / 4.11	93 / 4.05	--	--	232 / 3.80	464 / 9.66	50 / 1.41	2 / 0.03	--	0.8	1028	8.2	27
	8- 8-41[f]	----	--	106 / 5.30	37 / 3.04	88 / 3.83	4 / 0.10	--	223 / 3.65	369 / 7.13	30 / 0.85	3 / 0.05	--	0.5	860	7.0	31
12R1	10-17-33[a]	----	--	152 / 7.60	52 / 4.26	122[g] / 5.30	--	0 / 0	280 / 4.59	523 / 10.88	60 / 1.69	--	--	0.7	1189	9.6	31

a Analyzed by Fruit Growers Laboratory, Inc.
b Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Analyzed by Pacific Chemical Consultants.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents, see Table B 17.
f Analysis obtained from Santa Clara Water Conservation District.
g Calculated by difference.

TABLE B 8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-13L2	6-23-52[c]	1665	7.2	177 8.87	58 4.80	114 4.97	--	0 0	285 4.67	565 11.75	74 2.09	27 0.44	1.3	0.5	1370	9.8	27
14A1	1- 8-52[de]	2030	8.3	198 9.88	72 5.92	190 8.26	5 0.13	0 0	336 5.51	764 15.94	90 2.54	9 0.14	0.6	0.7	1520	14.3	34
14A4	7-14-52[c]	1525	8.2	123 6.15	45 3.74	159 6.92	5 0.13	1 0.03	268 4.40	526 10.95	57 1.61	10 0.16	0.7	0.4	1144	10.8	41
14L2	8-20-52[c]	1775	7.4	207 10.35	71 5.83	150 6.52	6 0.15	0 0	302 4.94	754 15.68	74 2.07	7 0.11	1.7	0.8	1415	12.5	28
14P1	12-12-51[c]	2020	7.9	226 11.28	76 6.32	134 5.83	--	--	281 4.60	763 15.89	98 2.76	20 0.33	0.5	0.8	1940	12.2	25
15Q1	6-23-52[ce]	1478	7.7	129 6.45	69 5.69	110 4.79	--	0 0	269 4.42	516 10.72	69 1.95	16 0.26	1.4	0.3	1242	10.5	28
22N1	6- 6-52[c]	1442	8.0	144 7.20	59 4.84	104 4.57	--	0 0	280 4.58	480 10.00	54 1.52	13 0.21	1.2	0.4	1148	9.4	28
23J1	11-28-52[ce]	1582	8.0	173 8.64	68 5.61	100 4.34	5 0.13	0 0	284 4.66	566 11.30	70 1.99	0 0.15	0.7	0.7	1216	10.1	23
23Q1	6-23-52[c]	1668	7.2	181 9.06	64 5.24	105 4.57	--	0 0	298 4.88	574 11.94	70 1.98	14 0.22	1.4	0.3	1292	9.8	24
26F1	11-10-50[a]	----	--	305 15.25	106 8.70	149 6.48	19[g] 0.49	0 0	350 5.74	1097 22.84	80 2.26	5 0.08	--	1.1	2111	15.7	21
27J4	6-10-48[h]	1620	7.2	170 8.50	55 4.53	130 5.65	--	--	340 5.57	535 11.15	65 1.83	--	--	0.4	1125	10.1	30
27L1	8-20-52[c]	1535	7.5	174 8.68	53 4.39	110 4.77	5 0.13	0 0	322 5.28	502 10.42	58 1.63	41 0.56	0.6	0.5	1262	9.3	27
	11-25-52[de]	1470	7.6	157 7.83	56 4.61	105 4.57	6 0.15	0 0	304 4.98	473 9.85	53 1.49	35 0.56	0.7	0.6	1070	9.3	27

a Analyzed by Fruit Growers Laboratory, Inc.
b Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
c Analyzed by Pacific Chemical Consultants.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents see Table B 17.
f Analysis obtained from Santa Clara Water Conservation District.
g Calculated by difference.
h Analysis obtained from Ventura County Farm Advisors.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1N/21W- 4D1	Undifferentiated Quaternary	6- 6-52[a]	954	7.9	95 4.75	24 2.00	77 3.36	--	0 0	253 4.15	212 4.42	62 1.75	Tr.	0.5	0.4	672	5.4	33
4M2	Fox Canyon	8-20-52[a]	1073	7.8	114 5.68	33 2.74	101 4.39	3 0.07	0 0	257 4.22	310 6.45	74 2.07	5 0.08	0.3	0.2	745	7.2	34
5P1	Oxnard	6-25-52[a]	1142	7.4	106 5.29	32 2.62	106 4.61	--	0 0	319 5.22	260 5.42	64 1.81	1 0.02	1.0	0.4	776	7.2	37
7H2	---	12-27-33[b]	1140	--	117 5.83	39 3.22	86 3.75	12 0.32	--	293 4.80	332 6.92	52 1.48	--	--	0.7	932	7.3	29
7J1	Oxnard	1- 5-34[b]	---	--	117 5.85	35 2.87	99[c] 4.30	--	--	276 4.53	339 7.07	50 1.41	--	--	0.5	916	7.2	33
7P1	Oxnard	6- 6-52	1136	7.4	97 4.84	55 4.51	90 3.91	4 0.10	0 0	278 4.56	338 7.05	49 1.38	2 0.04	0.8	0.4	830	8.5	29
8D1	Oxnard	6-25-52[a]	1137	7.3	97 4.84	30 2.48	108 4.69	--	0 0	293 4.80	278 5.78	57 1.61	4 0.07	0.6	0.2	828	7.2	39
8D2	Undifferentiated Quaternary	5-15-52[a]	4090	7.7	263 13.13	142 11.70	654 28.40	--	0 0	412 6.75	1810 37.70	270 7.61	42 0.68	1.6	2.0	3640	40.1	53
9M1	Undifferentiated Quaternary & Fox Canyon	5- 2-47[d]	---	--	73 3.65	22 1.81	92 4.00	18 0.46	--	294 4.82	171 3.56	54 1.52	Tr.	--	0.2	724	5.1	40
		6-30-50[d]	---	--	75 3.75	25 2.06	99 4.31	3 0.08	--	299 4.90	182 3.79	54 1.52	--	--	--	937	5.3	42
		5- 1-53[a]	921	7.8	75 3.74	23 1.87	102 4.42	6 0.14	0 0	308 5.05	169 3.52	53 1.50	7 0.12	0.7	0.1	1051	5.1	44
16M2	---	9- 5-52	1295	7.8	110 5.49	55 3.70	100 4.35	3 0.07	0 0	290 4.76	343 7.15	73 2.06	4 0.07	0.8	0.6	929	8.1	32
17H1[e]	Oxnard & Undifferentiated Quaternary	7-14-52[a]	1354	7.5	125 6.26	40 3.28	119 5.17	4 0.10	0 0	286 4.68	349 7.28	99 2.78	1 0.02	0.4	0.5	968	8.6	35
18A1	Oxnard	3-26-34[f]	---	--	117 5.85	38 3.12	91[c] 3.94	--	--	275 4.51	337 7.02	49 1.38	--	--	0.5	907	7.1	30

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analyzed by Fruit Growers Laboratory, Inc.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-18F1	---	3- 4-33[f]	---	--	23 / 1.15	52 / 4.26	366[g] / 15.87	--	0 / 0	1000 / 16.40	115 / 2.40	88 / 2.48	--	--	1.6	1644	15.9	75
18L1	Oxnard	1- 4-34[b]	---	--	123 / 6.15	36 / 2.95	89 / 3.87	--	--	264 / 4.33	355 / 7.40	43 / 1.21	--	--	0.6	910	6.8	30
	Oxnard	7-14-52[a]	1187	7.6	122 / 6.08	37 / 3.05	86 / 3.74	4 / 0.11	0 / 0	268 / 4.38	348 / 7.25	42 / 1.17	2. / 0.03	0.6	0.3	854	6.9	29
19C1	Oxnard	7-14-52[a]	1110	8.0	125 / 6.25	34 / 2.82	93 / 4.02	4 / 0.12	0 / 0	262 / 4.30	358 / 7.46	42 / 1.17	4 / 0.07	0.5	0.6	893	7.0	30
19L1	Oxnard & Undiffer-entiated Quaternary	7-14-52[a]	1110	8.0	195 / 6.23	33 / 2.73	92 / 4.00	4 / 0.12	0 / 0	279 / 4.57	338 / 7.04	45 / 1.26	6 / 0.10	0.5	0.7	886	6.8	31
20C4	Oxnard	6-25-52[a]	1226	7.6	123 / 6.13	33 / 2.75	108 / 4.70	--	0 / 0	295 / 4.84	319 / 6.65	60 / 1.68	16 / 0.26	0.6	1.1	914	7.4	35
20D1	Oxnard	6-25-52[a]	1165	7.6	133 / 6.63	31 / 2.53	92 / 4.00	--	0 / 0	256 / 4.19	368 / 7.67	43 / 1.20	4 / 0.06	0.7	0.3	866	6.5	30
20K1	Fox Canyon	6-24-52[a]	1083	7.3	94 / 4.71	27 / 2.22	108 / 4.69	--	0 / 0	274 / 4.50	233 / 4.86	75 / 2.12	6 / 0.10	0.6	0.1	744	6.9	40
28C1	Undiffer-entiated Quaternary	5-15-47[d]	---	--	64 / 3.20	36 / 2.96	115 / 5.00	--	--	316 / 5.18	169 / 3.52	75 / 2.11	Tr.	--	0.3	775	6.0	45
		9- 3-52	998	7.7	55 / 2.74	27 / 2.22	110 / 4.78	4 / 0.11	0 / 0	312 / 5.12	154 / 3.20	70 / 1.99	2 / 0.03	0.4	0.3	618	4.9	49
28G2[e]	Undiffer-entiated Quaternary	9- 3-52	1515	7.6	131 / 6.54	49 / 3.21	125 / 5.43	4 / 0.08	0 / 0	305 / 5.00	370 / 7.70	120 / 3.38	2 / 0.03	0.4	0.4	1046	8.7	35
29B3	Oxnard & Undiffer-entiated Quaternary	8-20-52[a]	1192	7.6	123 / 6.13	37 / 3.01	91 / 4.02	3 / 0.08	0 / 0	299 / 4.90	327 / 6.80	57 / 1.60	6 / 0.09	0.5	0.5	867	7.1	30
29B4	Oxnard	9- 5-52[ah]	1193	7.4	113 / 5.66	40 / 3.27	93 / 4.04	5 / 0.12	0 / 0	293 / 4.81	330 / 6.87	50 / 1.40	5 / 0.08	0.4	0.5	836	7.4	31

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analyzed by Fruit Growers Laboratory, Inc.
g Calculated by difference.
h For analysis of heavy metal constituents, see Table B 17.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$ECx10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million equivalents per million													
1N/21W-29D1	Oxnard	4-22-47[d]	---	--	112 5.60	30 2.47	94 4.08	12 0.31	--	267 4.38	317 6.59	49 1.38	--	--	0.4	881	6.8	33
		3-19-51[d]	---	--	118 5.90	33 2.71	91 3.96	3 0.08	--	269 4.41	336 7.00	43 1.21	--	--	--	893	6.8	31
		9-30-52[d]	---	7.6	121 6.05	34 2.79	89 3.87	--	--	270 4.43	323 6.72	43 1.21	--	0.4	0.5	880	7.1	30
29D2	Oxnard	9-30-52[d]	---	7.3	133 6.64	33 2.71	89 3.87	--	--	271 4.44	358 7.46	41 1.16	--	0.5	0.5	925	6.6	29
29K1	---	1-13-34[b]	---	--	108 5.40	33 2.70	91 3.95	--	--	247 4.05	240 5.00	105 2.96	--	--	0.2	824	6.6	33
29R2	Undiffer-entiated Quaternary	6-25-52[a]	1183	7.6	112 5.60	40 3.29	100 4.35	--	0 0	298 4.89	330 6.37	59 1.66	4 0.06	0.6	0.6	932	7.6	33
29R3	Undiffer-entiated Quaternary	4-22-47[d]	---	--	111 5.55	45 3.70	152 6.60	21 0.54	0 0	304 4.98	371 7.72	131 3.70	--	--	0.4	1135	10.8	40
		5-14-48[d]	---	--	109 5.45	52 4.28	186 8.09	--	--	298 4.89	392 8.15	162 4.54	Tr.*	--	--	1199	12.4	45
		5- 5-49[d]	---	--	105 5.24	57 4.69	302 13.21	--	--	286 4.68	462 9.61	305 8.60	1 0.02	--	--	1518	17.9	57
		10-25-49[d]	---	--	131 6.54	53 4.36	414 18.00	--	--	298 4.88	560 11.65	439 12.38	--	--	--	1895	22.4	62
		11- 3-49[d]	---	--	121 6.03	87 7.15	528 22.98	--	--	346 5.66	641 13.35	600 16.91	--	--	--	2323	30.1	64
		11-18-49[d]	---	--	113 5.65	63 5.17	290 12.60	--	--	315 5.16	475 9.90	292 8.23	--	--	--	1548	17.8	54
29R4	Undiffer-entiated Quaternary	12- 6-50[d]	---	--	160 8.00	67 5.51	333 14.47	17 0.44	--	307 5.03	535 11.14	430 12.12	--	--	--	1849	19.7	51
		9-30-52[d]	---	7.5	119 5.95	45 3.69	99 4.30	--	--	296 4.85	338 7.04	56 1.58	--	0.5	0.7	853	8.0	31
30A1	Undiffer-entiated Quaternary & Fox Canyon	6-25-52[a]	1125	7.6	107 5.33	31 2.58	104 4.52	--	0 0	292 4.79	300 6.26	41 1.15	20 0.32	0.4	0.4	820	7.1	36

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
d Analysis obtained from Santa Clara Water Conservation District.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-31A1	Undifferentiated Quaternary	1- 4-52[hj]	1220	8.4	124 / 6.19	39 / 3.21	95 / 4.13	4 / 0.09	0 / 0	270 / 4.42	352 / 7.33	65 / 1.83	2 / 0.03	0.2	0.6	851	7.4	30
31J1	Undifferentiated Quaternary, Fox Canyon & Santa Barbara	2-15-49[d]	---	--	74 / 3.70	36 / 2.96	136 / 5.91	4 / 0.10	--	332 / 5.44	198 / 4.13	110 / 3.10	--	--	--	890	7.2	47
		12-27-49[d]	---	--	95 / 4.75	35 / 2.88	90 / 3.92	8 / 0.20	--	284 / 4.66	287 / 5.98	39 / 1.10	Tr.	--	0.5	838	7.0	33
		11-17-50[d]	---	--	88 / 4.40	32 / 2.63	116 / 5.04	11 / 0.28	--	308 / 5.05	249 / 5.19	75 / 2.11	--	--	--	879	7.3	41
		12-16-50[d]	---	--	87 / 4.35	35 / 2.88	138 / 6.00	2 / 0.05	--	327 / 5.37	226 / 4.71	113 / 3.18	--	--	--	928	7.9	45
		1- 8-51[d]	---	--	93 / 4.65	32 / 2.63	101 / 4.39	5 / 0.13	--	293 / 4.80	260 / 5.42	55 / 1.55	--	--	--	839	7.0	37
		1- 9-51[d]	---	--	88 / 4.40	34 / 2.80	118 / 5.13	12 / 0.31	--	300 / 4.92	255 / 5.31	85 / 2.39	--	--	--	892	7.7	40
		3-24-51[d]	---	--	96 / 4.80	34 / 2.80	92 / 4.00	5 / 0.13	--	281 / 4.60	286 / 5.95	41 / 1.15	--	--	--	835	6.9	35
		7-18-52[a]	1025	7.8	92 / 4.58	33 / 2.73	96 / 4.19	6 / 0.14	0 / 0	268 / 4.38	253 / 5.27	68 / 1.90	4 / 0.07	0.2	0.3	748	6.9	36
31L1	---	7-18-52	952	7.6	94 / 4.69	36 / 2.96	90 / 3.91	4 / 0.11	0 / 0	280 / 4.60	266 / 5.55	42 / 1.18	7 / 0.11	0.4	0.4	724	7.0	33
32G1	Oxnard	2- 9-48[d]	---	--	118 / 5.90	37 / 3.04	92 / 4.00	--	--	281 / 4.61	333 / 6.94	47 / 1.32	--	--	0.4	908	7.0	31
		7-24-52[a]	1068	8.1	87 / 4.36	36 / 3.02	86 / 3.76	4 / 0.10	0 / 0	179 / 2.93	350 / 7.30	43 / 1.22	1 / 0.02	0.1	0.6	700	6.9	33
32K1	Undifferentiated Quaternary	2- 9-48[d]	---	7.6	90 / 4.50	43 / 3.54	117 / 5.09	--	--	254 / 4.16	333 / 6.93	68 / 1.92	--	--	0.3	905	8.6	39
		7-24-52[a]	1205	8.2	91 / 4.54	40 / 3.32	114 / 4.94	6 / 0.15	0 / 0	454 / 4.17	327 / 6.82	67 / 1.89	3 / 0.04	0.2	0.3	880	8.4	38

a Analyzed by Pacific Chemical Consultants.
d Analysis obtained from Santa Clara Water Conservation District.
h For analysis of heavy metal constituents, see Table B 17.
j Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-32M1	---	7- 3-50[d]	--	--	127 / 6.35	36 / 2.95	89 / 3.86	--	--	273 / 4.47	356 / 7.42	39 / 1.10	1 / 0.02	--	--	921	6.8	29
1N/22W- 1D1	Oxnard	6- 6-52[a]	1285	8.0	133 / 6.66	54 / 4.44	104 / 4.52	--	0 / 0	243 / 3.99	471 / 9.81	56 / 1.58	2 / 0.03	1.3	0.6	1035	9.0	29
1M1	Oxnard	2-21-34[f]	--	--	128 / 6.40	40 / 3.28	124[g] / 5.39	--	--	256 / 4.20	424 / 8.84	72 / 2.03	--	--	0.6	1044	8.7	36
		6- 6-52[a]	1131	7.4	123 / 6.17	39 / 3.24	95 / 4.13	--	0 / 0	256 / 4.20	386 / 8.04	38 / 1.06	5 / 0.08	1.3	0.4	940	7.4	30
2A2	Oxnard	9- 3-52[hj]	1280	8.1	137 / 6.84	42 / 3.45	107 / 4.65	4 / 0.10	0 / 0	249 / 4.08	440 / 9.16	46 / 1.30	1 / 0.01	0.7	0.8	933	8.2	31
2P1	Oxnard	6-25-52[a]	1201	7.6	127 / 6.36	36 / 2.98	90 / 3.92	--	0 / 0	251 / 4.11	378 / 7.88	47 / 1.32	4 / 0.07	1.2	0.6	888	6.9	30
3F4[e]	Oxnard	7-21-36[d]	--	--	130 / 6.50	45 / 3.70	94 / 4.09	12 / 0.31	--	256 / 4.20	432 / 9.00	46 / 1.30	5 / 0.08	--	--	1020	8.1	28
		9- 1-39[d]	1340	--	185 / 9.25	25 / 2.06	85 / 3.70	--	--	268 / 4.39	436 / 9.08	49 / 1.38	6 / 0.10	--	0.7	1054	5.8	25
		9-12-41[d]	--	--	155 / 7.75	51 / 4.18	98 / 4.26	4 / 0.10	--	268 / 4.40	488 / 10.17	58 / 1.63	6 / 0.10	--	0.6	1128	8.6	26
		9-27-45[d]	--	--	146 / 7.30	50 / 4.11	92 / 4.00	--	--	265 / 4.35	427 / 8.90	46 / 1.30	4 / 0.06	--	0.7	1030	8.1	26
		3-31-47[d]	--	--	159 / 7.95	54 / 4.44	100 / 4.35	--	--	295 / 4.83	495 / 10.30	57 / 1.61	8 / 0.13	--	0.6	1173	8.8	26
3J1	Oxnard	4- 7-34[b]	--	--	133 / 6.65	49 / 4.01	99[c] / 4.30	--	--	251 / 4.11	460 / 9.58	44 / 1.23	--	--	0.6	1036	8.3	29
3K11	Oxnard	9- 2-52	1513	7.8	163 / 8.15	55 / 4.52	100 / 4.35	5 / 0.11	0 / 0	266 / 4.36	523 / 10.90	64 / 1.80	6 / 0.10	0.8	0.5	1152	9.0	25
4C1	---	5- 1-53[a]	1201	7.5	135 / 6.77	43 / 3.93	93 / 4.04	4 / 0.12	0 / 0	256 / 4.20	443 / 9.24	52 / 1.47	2 / 0.03	0.7	0.5	987	8.1	27
5H1	Oxnard	6-25-52[a]	1443	7.8	155 / 7.74	47 / 3.91	108 / 4.67	--	0 / 0	282 / 4.62	470 / 9.80	55 / 1.55	17 / 0.27	1.3	0.5	1056	8.6	29

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analyzed by Fruit Growers Laboratory, Inc.
g Calculated by difference.
h For analysis of heavy metal constituents, see Table B 17.
j Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/22W- 5M1	Oxnard	6-25-52[a]	1322	7.6	134 / 6.71	45 / 3.73	100 / 4.35	--	0 / 0	261 / 4.28	442 / 9.20	53 / 1.49	8 / 0.12	1.3	0.6	1077	8.1	29
6A1	Oxnard	6- 4-52[a]	1134	8.2	128 / 6.40	40 / 3.33	94 / 4.11	--	2 / 0.08	235 / 3.86	407 / 8.48	47 / 1.32	6 / 0.09	1.3	0.5	876	7.4	30
6R1	Oxnard	1-29-48[b]	1240	8.4	125 / 6.25	50 / 4.11	85 / 3.70	--	--	250 / 4.10	415 / 8.65	45 / 1.27	--	--	0.6	970	7.9	26
		6- 4-52[a]	1316	7.8	140 / 6.98	42 / 3.46	99 / 4.28	--	0 / 0	251 / 4.12	437 / 9.10	59 / 1.66	4 / 0.06	1.3	0.6	957	7.7	29
7A1	Oxnard	1-29-48[b]	1270	8.4	130 / 6.50	50[g] / 4.11	85 / 3.70	--	--	245 / 4.02	415 / 8.65	60 / 1.69	--	--	0.8	985	8.0	26
		8-13-52	1228	7.7	118 / 5.89	45 / 2.89	95 / 4.16	4 / 0.10	0 / 0	246 / 4.04	396 / 8.26	41 / 1.16	2 / 0.03	1.0	0.6	895	7.2	32
7D1[e]	Oxnard	7-21-36[d]	---	--	122 / 6.10	43 / 3.54	90 / 3.91	18 / 0.46	0 / 0	247 / 4.05	417 / 8.70	43 / 1.21	2 / 0.03	--	--	982	7.9	28
		7- 3-50[d]	---	--	122 / 6.10	39 / 3.20	95 / 4.13	--	--	243 / 3.99	397 / 8.27	38 / 1.07	Tr.	--	--	934	7.3	31
		6- 4-52[a]	1190	7.7	128 / 6.39	34 / 2.84	94 / 4.09	--	0 / 0	246 / 4.03	387 / 8.06	41 / 1.15	1 / 0.02	0.5	0.5	837	6.9	31
		6-25-52[a]	1192	8.2	121 / 6.03	39 / 3.24	90 / 3.89	5 / 0.12	0 / 0	249 / 4.08	394 / 8.20	39 / 1.10	4 / 0.07	0.5	0.7	831	7.2	29
		9-30-52[d]	---	7.7	127 / 6.35	39 / 3.20	87 / 3.78	--	--	244 / 4.00	407 / 8.48	39 / 1.10	--	0.9	0.7	943	7.0	28
7J1	Oxnard	4-30-53[a]	1217	7.6	121 / 6.06	43 / 3.52	92 / 4.00	5 / 0.12	0 / 0	253 / 4.15	407 / 8.47	43 / 1.20	2 / 0.03	0.6	0.3	910	7.6	29
8D1	Oxnard	9-22-50[d]	---	--	138 / 6.90	46 / 3.77	98 / 4.25	--	--	265 / 4.35	438 / 9.15	49 / 1.38	3 / 0.05	--	--	1037	8.0	28
8K3	Oxnard	6- 4-52[a]	1231	8.2	129 / 6.44	41 / 3.38	95 / 4.14	--	0 / 0	256 / 4.20	410 / 8.54	46 / 1.29	6 / 0.09	1.5	0.6	902	7.5	30
9C1	---	1-22-34[b]	----	--	121 / 6.05	39 / 3.19	100[c] / 4.34	--	--	252 / 4.13	399 / 8.31	40 / 1.12	--	--	0.6	951	7.5	32

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A.[(2)] For cross index of well numbers, see Appendix E.
g Calculated by difference.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10⁶ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1N/22W- 9L1	Oxnard	8-20-52[a]	1408	7.7	165 8.27	46 3.76	95 4.14	5 0.12	0 0	270 4.43	502 10.42	53 1.48	11 0.18	0.7	0.5	1190	8.0	25
10H1	Oxnard	9- 9-48[b]	1600	8.0	150 7.3	45 3.8	110 4.9	--	25 0.8	100 1.7	545 11.4	75 2.1	--	--	0.9	1050	8.7	31
11A1	Oxnard	7-14-52[a]	1455	7.6	161 8.04	50 4.13	101 4.40	5 0.12	0 0	254 4.17	526 10.92	54 1.52	Tr.	0.6	0.8	1115	8.6	26
11C1	Oxnard	6- 6-52[a]	1589	7.8	180 9.00	52 4.26	102 4.44	--	0 0	269 4.42	562 11.70	63 1.78	1 0.01	1.3	0.6	1157	8.7	25
11C2	Oxnard	6-26-52[a]	2140	7.3	230 11.50	80 6.59	165 7.18	6 0.14	0 0	301 4.94	873 18.19	83 2.35	7 0.11	0.6	1.0	1700	13.9	28
11E1	---	12-30-33[b]	--	--	133 6.67	44 3.60	104[c] 4.52	--	--	257 4.21	444 9.25	45 1.27	--	--	0.7	1027	8.1	31
11E2	---	4-15-48[b]	1500	8.2	165 8.25	45[g] 3.70	100 4.35	--	--	265 4.35	500 10.40	60 1.69	--	--	0.9	1135	8.2	27
12P2	Oxnard	1- 4-52[hj]	1240	8.2	132 6.59	43 3.54	88 3.83	3 0.07	0 0	252 4.13	412 8.58	45 1.27	0.6 0.01	0.6	0.6	882	7.4	27
13D2	Oxnard	6- 6-52[a]	1271	7.4	141 7.06	38 3.15	89 3.86	--	0 0	246 4.03	427 8.90	40 1.12	3 0.05	1.3	0.3	1002	7.0	27
13J2	---	1-11-34[f]	--	--	123 6.15	36 2.95	92 4.00	--	0 0	255 4.18	364 7.58	40 1.13	--	--	0.6	910	7.0	30
13L1	Oxnard	9- 5-52[ah]	1228	7.7	126 6.30	41 3.37	85 3.69	5 0.12	0 0	254 4.17	383 7.97	43 1.22	4 0.06	0.8	0.6	977	7.2	27
13Q1	Oxnard	6- 6-52[a]	1242	8.1	123 6.14	34 2.84	84 3.65	--	0 0	254 4.16	354 7.37	46 1.29	2 0.03	1.2	0.7	856	6.5	29
14C2	Oxnard	6- 6-52[a]	1436	7.5	158 7.91	48 3.96	105 4.57	--	0 0	261 4.28	514 10.70	55 1.55	1 0.02	1.3	0.6	1088	8.5	28
15A1	---	9-22-50[d]	--	--	135 6.75	42 3.44	93 4.04	3 0.08	--	260 4.26	418 8.72	47 1.31	Tr.	--	--	998	7.6	28
15B1	Oxnard	6- 4-52[a]	1187	7.6	143 7.15	26 2.13	89 3.86	--	0 0	254 4.16	374 7.80	46 1.29	1 0.02	1.2	0.7	845	6.0	29

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
f Analyzed by Fruit Growers Laboratory, Inc.
g Calculated by difference.
h For analysis of heavy metal constituents, see Table B 17.
j Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-15D1	Oxnard	10-30-52[h j]	1320	8.1	139 / 6.94	49 / 4.03	92 / 4.00	6 / 0.15	0 / 0	260 / 4.26	440 / 9.16	46 / 1.30	9 / 0.15	0.7	0.6	943	8.2	26
15M1	Oxnard	6-24-52[a]	1195	7.8	127 / 6.35	43 / 3.52	83 / 3.61	4 / 0.12	0 / 0	254 / 4.17	391 / 8.14	40 / 1.14	3 / 0.05	0.6	0.2	909	7.2	26
16G1[e]	Oxnard	4-30-53[a]	1130	7.6	123 / 6.16	36 / 2.96	82 / 3.56	4 / 0.12	0 / 0	280 / 4.58	341 / 7.10	43 / 1.20	4 / 0.06	0.5	0.4	730	6.6	28
17J2	Oxnard	9- 3-52[a]	1218	7.6	122 / 6.08	43 / 3.56	87 / 3.82	4 / 0.12	0 / 0	257 / 4.22	403 / 8.40	41 / 1.16	2 / 0.03	0.6	0.7	789	7.5	28
18E1[e]	Oxnard	7-21-36[d]	--	--	128 / 6.39	43 / 3.54	95 / 4.13	12 / 0.31	--	250 / 4.09	431 / 8.97	45 / 1.27	--	--	--	1004	8.0	29
		12-20-39[d]	--	--	134 / 6.69	42 / 3.45	90 / 3.91	--	--	244 / 4.00	419 / 8.72	43 / 1.21	1 / 0.02	--	0.6	973	7.4	28
		9-27-45[d]	--	--	128 / 6.39	44 / 3.62	92 / 4.00	--	14 / 0.47	225 / 3.69	409 / 8.52	44 / 1.23	1 / 0.02	--	0.7	957	7.6	29
		9-30-52[d]	--	7.9	129 / 6.45	41 / 3.36	87 / 3.78	--	--	259 / 4.24	400 / 8.32	42 / 1.18	--	0.9	0.7	958	7.1	28
19H1	Undifferentiated Quaternary	3-14-51[d]	--	--	120 / 6.00	39 / 3.21	93 / 4.04	5 / 0.13	--	250 / 4.09	375 / 7.81	52 / 1.47	--	--	--	934	7.4	30
		6- 4-52	1212	7.6	130 / 6.48	38 / 3.11	87 / 3.84	--	0 / 0	254 / 4.16	390 / 8.13	46 / 1.29	2 / 0.03	1.4	0.6	872	7.0	29
		9-30-52[d]	--	7.3	120 / 6.00	36 / 2.95	85 / 3.70	--	--	246 / 4.03	385 / 8.02	42 / 1.19	--	0.9	0.6	914	6.6	29
20B1	Oxnard	9- 3-52[a]	1057	7.6	119 / 5.94	37 / 3.06	85 / 3.69	6 / 0.14	0 / 0	254 / 4.17	348 / 7.26	40 / 1.13	6 / 0.10	0.5	0.7	730	6.9	29
20E1	Oxnard	3-14-51[d]	--	--	139 / 6.94	50 / 4.11	116 / 5.05	5 / 0.13	--	253 / 4.15	401 / 8.35	132 / 3.72	--	--	--	1096	9.3	31
		4-11-51[d]	--	--	188 / 9.38	85 / 7.00	252 / 10.95	13 / 0.33	--	286 / 4.68	386 / 8.04	530 / 14.95	--	--	--	1740	18.3	40
		4-29-51[d]	--	--	131 / 6.54	47 / 3.86	103 / 4.48	--	--	252 / 4.12	393 / 8.18	85 / 2.40	--	--	--	1011	8.3	30

a Analyzed by Pacific Chemical Consultants.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analysis published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
h For analysis of heavy metal constituents, see Table B 17.
j Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.

[illegible]

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/22W-20E1	Oxnard	9- 2-52[ah]	1142	7.8	122 / 6.10	43 / 3.53	88 / 3.80	4 / 0.12	0 / 0	249 / 4.08	392 / 8.17	42 / 1.19	2 / 0.04	0.7	0.3	917	7.4	28
		9-30-52[d]	--	7.3	129 / 6.45	44 / 3.61	85 / 3.70	--	--	234 / 3.84	392 / 8.17	42 / 1.19	--	0.3	0.6	809	7.3	27
20N1[e]	Oxnard	7-21-36[d]	--	--	138 / 6.89	48 / 3.95	100 / 4.35	12 / 0.31	--	248 / 4.06	408 / 8.50	103 / 2.90	--	--	--	1057	8.6	28
		12-20-39[d]	--	--	125 / 6.24	41 / 3.38	88 / 3.82	--	--	232 / 3.80	395 / 8.22	49 / 1.33	--	--	0.6	930	7.2	28
		9-27-45[d]	--	--	123 / 6.14	40 / 3.30	89 / 3.87	--	14 / 0.47	229 / 3.75	377 / 7.85	43 / 1.22	--	--	0.6	915	7.2	29
		4-30-48[d]	--	--	137 / 6.84	42 / 3.46	106 / 4.60	15 / 0.38	--	242 / 3.80	400 / 8.33	106 / 2.99	--	--	--	1048	8.4	30
		7-16-48[d]	--	--	157 / 7.83	52 / 4.28	173 / 7.52	--	--	248 / 3.90	399 / 8.31	257 / 7.25	--	--	--	1286	11.3	38
		10- 7-49[d]	--	--	2023 / 101.95	710 / 58.39	2928 / 127.31	--	--	204 / 3.34	1365 / 28.42	8946 / 252.36	--	--	--	16176	255.1	44
		10- 8-49[d]	--	--	1828 / 91.22	608 / 50.00	2905 / 126.31	--	--	208 / 3.41	1276 / 26.57	8379 / 236.29	--	--	--	15204	237.6	47
		3-23-50[d]	--	--	1005 / 50.15	151 / 12.42	1400 / 60.87	26 / 0.66	--	213 / 3.49	68 / 1.42	4225 / 119.14	--	--	--	7088	113.6	49
20R1	Oxnard	9- 2-52[h]	5464	7.4	413 / 20.7	149 / 12.2	530 / 23.0	9 / 0.24	0 / 0	242 / 3.96	518 / 10.8	1510 / 42.5	1 / 0.01	0.8	0.7	4070	41.4	41
		12- 2-52[a]	7770	7.6	504 / 25.18	174 / 14.37	1020 / 44.40	14 / 0.37	0 / 0	246 / 4.03	668 / 13.90	2339 / 65.90	4 / 0.07	0.4	0.9	5675	66.4	53
21K1	Oxnard	6- 6-52[a]	1210	7.5	118 / 5.90	32 / 2.62	93 / 4.05	--	0 / 0	257 / 4.21	346 / 7.20	44 / 1.23	1 / 0.02	1.4	0.6	952	6.7	32
21L1	Oxnard	9-30-52[d]	--	7.8	128 / 6.40	38 / 3.12	85 / 3.70	--	--	262 / 4.29	376 / 7.83	41 / 1.16	--	0.3	0.6	930	6.8	28
21L2	---[k]	4-21-52[a]	1263	7.8	110 / 5.51	37 / 3.02	121 / 5.27	--	0 / 0	246 / 4.04	412 / 8.57	44 / 1.24	2 / 0.03	0.9	0.7	920	8.3	38
	---[m]	4-24-52[a]	1445	7.6	37 / 1.87	18 / 1.51	242 / 10.55	--	0 / 0	432 / 7.09	233 / 4.86	44 / 1.24	60 / 0.97	0.4	0.9	892	10.6	76

a Analyzed by Pacific Chemical Consultants.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
h For analysis of heavy metal constituents, see Table B 17.
k Bailed sample while drilling. Collected at 500 foot depth, probably from Oxnard aquifer.
m Bailed sample while drilling. Collected at 600 foot depth. Aquifer unknown.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/22W-21L2	Oxnard	6- 6-52[a]	1200	7.5	126 / 6.32	37 / 3.02	92 / 4.00	--	0 / 0	255 / 4.19	390 / 8.12	43 / 1.21	1 / 0.02	1.3	0.4	886	7.0	30
		11- 6-52[d]	--	--	126 / 6.30	35 / 2.86	84 / 3.65	--	--	262 / 4.28	346 / 7.20	40 / 1.13	--	--	0.7	893	6.5	28
22C1	Oxnard	1-13-34[b]	--	--	82 / 4.10	25 / 2.04	68[c] / 2.95	--	--	180 / 2.95	253 / 5.27	32 / 0.90	--	--	0.4	640	5.0	32
22J1	Oxnard	6-25-52	1042	7.2	124 / 6.20	40 / 3.29	75 / 3.26	4 / 0.10	0 / 0	262 / 4.28	355 / 7.40	45 / 1.27	5 / 0.08	0.8	0.5	845	6.6	25
22N1	Oxnard	9- 5-52[ah]	1200	8.3	121 / 6.06	41 / 3.36	87 / 3.78	4 / 0.12	1 / 0.04	244 / 4.00	389 / 8.10	43 / 1.22	1 / 0.02	0.7	0.6	862	7.3	28
23A1	Oxnard	9- 2-52[ah]	1232	7.7	128 / 6.38	40 / 3.32	86 / 3.74	4 / 0.12	0 / 0	254 / 4.17	394 / 8.21	43 / 1.22	0 / 0	0.7	0.5	890	7.2	28
23A2	Oxnard	6- 6-52[a]	1216	7.5	133 / 6.66	35 / 2.98	93 / 4.05	--	0 / 0	256 / 4.20	391 / 8.14	47 / 1.32	2 / 0.04	1.3	0.6	904	7.0	30
23N1	Oxnard	1-20-49[f]	--	7.3	278 / 13.90	70 / 5.74	172 / 7.47	--	--	347 / 5.69	814 / 16.95	144 / 4.06	23 / 0.37	--	0.5	1848	13.2	28
24A1	Oxnard	7-14-52[a]	1140	8.2	126 / 6.31	41 / 3.41	83 / 3.60	4 / 0.12	0 / 0	286 / 4.69	345 / 7.19	45 / 1.26	5 / 0.08	0.5	1.0	895	7.1	27
24K1	Oxnard	12-19-49[b]	1160	7.4	80 / 3.9	35 / 3.0	85 / 3.7	--	--	260 / 4.2	245 / 5.1	45 / 1.3	--	--	0.8	---	6.4	35
25B1	Oxnard	8-13-52	1179	7.3	122 / 6.10	36 / 2.96	80 / 3.48	4 / 0.10	0 / 0	274 / 4.48	332 / 6.90	44 / 1.24	3 / 0.05	0.8	0.5	832	6.5	28
25C2	Oxnard	8-13-52	1090	8.0	114 / 5.69	45 / 2.89	85 / 3.70	4 / 0.10	0 / 0	254 / 4.16	365 / 7.61	40 / 1.13	2 / 0.03	1.0	0.7	854	6.7	30
26A1[e]	Oxnard	4-22-47[d]	--	--	126 / 6.29	34 / 2.80	86 / 3.74	21 / 0.54	--	251 / 4.11	383 / 7.96	45 / 1.27	--	--	0.6	946	7.1	28
		5- 5-49[d]	--	--	125 / 6.24	34 / 2.80	90 / 3.91	--	--	255 / 4.18	361 / 7.51	44 / 1.24	--	--	--	909	6.7	30
		6- 6-52[a]	1181	7.7	134 / 6.71	28 / 2.35	89 / 3.87	--	0 / 0	254 / 4.17	366 / 7.63	45 / 1.26	9 / 0.14	1.2	0.6	754	6.2	30

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analyzed by Fruit Growers Laboratory, Inc.
h For analysis of heavy metal constituents, see Table B 17.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1N/22W-26A1[e]	Oxnard	9-30-52[d]	--	7.6	127 6.35	42 3.43	84 3.65	--	--	254 4.17	375 7.81	42 1.19	--	0.6	0.6	924	7.1	27
26K2	--	6-13-50[d]	--	--	125 6.24	34 2.80	86 3.74	6 0.15	--	264 4.32	362 7.53	44 1.24	--	--	--	921	6.7	29
26M1	--	11-26-52[ah]	1362	8.1	136 6.81	46 3.78	91 3.94	5 0.13	0 0	233 3.82	369 7.69	116 3.27	5 0.08	0.6	0.6	838	7.8	27
26R1	Oxnard	5-31-50[d]	--	--	119 5.94	36 2.96	89 3.87	--	--	270 4.43	353 7.35	39 1.10	--	--	0.6	913	6.8	30
		6- 6-52[a]	1072	8.0	122 6.08	26 2.18	82 3.56	--	0 0	280 4.59	296 6.16	41 1.15	2 0.03	1.2	0.6	770	5.7	30
		9-30-52[d]	--	--	113 5.64	37 3.04	78 3.39	--	--	283 4.64	296 6.16	39 1.10	--	--	0.5	846	6.4	28
27F1	Oxnard	4-30-53[a]	1171	7.4	127 6.35	26 2.94	84 3.65	4 0.12	0 0	253 4.15	377 7.85	45 1.26	4 0.06	0.6	0.4	786	6.7	28
28A1	Oxnard	4-27-53[a]	1163	7.7	117 5.87	39 3.21	85 3.70	8 0.22	0 0	256 4.20	375 7.81	42 1.20	2 0.03	0.7	0.6	894	7.1	28
28A2	--	5- 5-49[d]	--	--	147 7.34	44 3.62	121 5.26	--	--	255 4.17	490 10.02	56 1.58	--	--	0.6	1113	8.9	32
		9-30-52[d]	--	--	125 6.24	35 2.88	87 3.78	--	--	257 4.21	377 7.85	41 1.16	--	--	0.6	922	6.7	29
29A2[e]	Oxnard	7-21-36[d]	--	--	121 6.04	42 3.46	94 4.08	17 0.44	0 0	250 4.09	417 8.69	43 1.21	1 0.02	--	--	985	8.0	29
		12-20-39[d]	--	--	129 6.44	42 3.46	90 3.91	5 0.13	--	224 3.67	408 8.50	55 1.55	3 0.05	--	0.5	956	7.5	28
		9-27-45[d]	--	--	119 5.94	40 3.29	86 3.74	--	14 0.46	223 3.65	359 7.48	42 1.18	2 0.03	--	0.6	885	7.0	29
		3-31-47[d]	--	--	124 6.20	41 3.38	89 3.87	7 0.18	0 0	253 4.15	395 8.23	42 1.19	3 0.03	--	0.5	954	7.4	28
		5- 5-49[d]	--	--	124 6.20	40 3.28	95 4.13	4 0.10	--	249 4.08	405 8.44	41 1.16	2 0.03	--	--	960	7.5	30
		5-25-51[d]	--	--	129 6.45	46 3.77	82 3.56	15 0.37	--	249 4.08	406 8.46	56 1.58	2 0.03	--	--	985	7.7	25

a Analyzed by Pacific Chemical Consultants.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
h For analysis of heavy metal constituents, see Table B 17.

[illegible]

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-29A2[e]	Oxnard	7-25-51[d]	--	--	138 / 6.90	47 / 3.85	91 / 3.95	--	--	247 / 4.05	386 / 8.04	88 / 2.48	2 / 0.03	--	--	999	7.8	27
		9- 4-51[d]	--	7.3	156 / 7.80	52 / 4.27	97 / 4.22	2 / 0.06	0 / 0	244 / 4.01	393 / 8.19	146 / 4.12	2 / 0.03	--	--	1092	8.6	26
		11-27-51[d]	--	--	242 / 12.10	77 / 6.31	116 / 5.04	--	0 / 0	225 / 3.69	394 / 8.21	402 / 11.34	1 / 0.01	--	--	1457	11.6	22
		3-19-52[d]	--	7.4	309 / 15.45	103 / 3.36	127 / 5.52	--	0 / 0	223 / 3.65	433 / 9.02	585 / 16.47	0 / 0	--	--	1780	11.7	23
		6- 6-52	3086	7.3	411 / 20.5	142 / 11.7	130 / 5.65	7 / 0.18	0 / 0	234 / 3.84	365 / 7.60	940 / 26.6	2 / 0.02	0.6	0.5	3200	26.6	15
29C1	Oxnard	9- 2-52	3817	7.2	425 / 21.2	139 / 11.4	165 / 7.13	8 / 0.22	0 / 0	195 / 3.20	325 / 6.78	1070 / 30.2	0 / 0	0.8	0.5	3020	30.2	18
36K1	Oxnard	7-15-47[d]	--	--	126 / 6.28	38 / 3.13	85 / 3.70	--	--	275 / 4.51	354 / 7.36	41 / 1.16	--	--	0.5	919	6.8	28
		5- 5-49[d]	--	--	119 / 5.94	32 / 2.63	94 / 4.09	--	--	265 / 4.35	335 / 6.98	45 / 1.27	1 / 0.02	--	--	891	6.7	32
		9-30-52[d]	--	7.7	123 / 6.15	38 / 3.12	87 / 3.78	--	--	276 / 4.53	319 / 6.65	58 / 1.64	--	0.6	0.6	901	6.9	29
36N1[e]	--	4-30-53[a]	1258	7.8	84 / 4.18	29 / 2.36	141 / 6.13	6 / 0.15	0 / 0	392 / 6.43	21 / 0.44	211 / 5.94	Tr.	0.6	0.2	718	6.4	48
1N/23W- 1A1	Oxnard	6- 4-52[a]	1078	7.9	101 / 5.03	32 / 2.66	100 / 4.35	--	0 / 0	345 / 5.66	247 / 5.15	42 / 1.18	2 / 0.03	1.1	0.7	702	6.4	36
2N/21W-18H1	Oxnard	11- 4-36[d]	--	--	133 / 6.64	51 / 4.20	143 / 6.22	19 / 0.49	0 / 0	327 / 5.35	480 / 10.00	74 / 2.04	5 / 0.08	--	0.5	1232	10.9	36
		8-11-37[d]	--	--	133 / 6.64	50 / 4.11	131 / 5.70	11 / 0.28	--	307 / 5.03	470 / 9.80	63 / 1.78	7 / 0.11	--	0.6	1172	10.1	34
		6-30-38[d]	--	--	128 / 6.38	45 / 3.70	109 / 4.74	11 / 0.28	--	290 / 4.75	433 / 9.02	48 / 1.35	4 / 0.06	--	0.6	1068	8.7	31
		6- 3-39[d]	--	--	130 / 6.49	49 / 4.03	122 / 5.30	4 / 0.12	Tr.	282 / 4.62	464 / 9.66	55 / 1.55	4 / 0.06	--	0.6	1110	9.4	33
		7- 3-40[d]	--	--	149 / 7.44	51 / 4.20	121 / 5.26	9 / 0.23	--	303 / 4.96	502 / 10.45	58 / 1.64	4 / 0.06	--	0.7	1197	9.7	31

a Analyzed by Pacific Chemical Consultants.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
2N/21W-18H1	Oxnard	8-12-41[d]	--	--	150 / 7.48	54 / 4.45	122 / 5.30	--	--	308 / 5.05	500 / 10.41	57 / 1.61	9 / 0.15	--	0.7	1200	9.8	31
18H4	Oxnard	6-23-52[a]	1570	7.7	157 / 7.85	60 / 4.92	119 / 5.17	6 / 0.14	0 / 0	307 / 5.03	518 / 10.80	78 / 2.21	11 / 0.18	0.5	<0.1	1253	10.2	29
19A1	Oxnard	9- 3-52[a]	1830	8.1	182 / 9.10	65 / 5.40	156 / 6.78	6 / 0.15	0 / 0	307 / 5.03	666 / 13.88	87 / 2.44	6 / 0.10	0.4	0.9	1188	12.3	32
19A2	Oxnard	1- 5-34[f]	--	--	208 / 10.40	68 / 5.57	139 / 6.05	--	0 / 0	342 / 5.60	654 / 13.62	92 / 2.59	--	--	0.7	1503	11.6	28
20E1	Oxnard	6-23-52[a]	1280	7.6	117 / 5.86	39 / 3.24	108 / 4.70	--	0 / 0	307 / 5.03	286 / 5.95	84 / 2.38	17 / 0.28	0.8	0.5	880	7.9	34
20Q3	Fox Canyon	9- 3-52[a]	1120	7.8	94 / 4.68	34 / 2.84	122 / 5.30	6 / 0.14	0 / 0	280 / 4.60	325 / 6.78	55 / 1.55	7 / 0.12	0.1	0.9	816	8.3	41
29L1	Oxnard	6-24-52[a]	1190	7.8	111 / 5.55	38 / 3.14	96 / 4.17	4 / 0.10	0 / 0	333 / 5.45	226 / 4.70	96 / 2.72	9 / 0.15	0.4	0.1	845	7.4	31
29P1	Oxnard	7-14-52[a]	1160	8.0	112 / 5.58	32 / 2.69	104 / 4.53	4 / 0.10	0 / 0	319 / 5.24	279 / 5.81	67 / 1.89	5 / 0.08	0.4	0.7	867	7.3	31
31R1	Oxnard	6-25-52[a]	1455	7.6	153 / 7.63	41 / 3.37	127 / 5.55	--	0 / 0	385 / 4.67	483 / 10.08	66 / 1.86	1 / 0.02	1.0	0.6	1120	8.9	34
2N/22W-25L2	Oxnard	7-14-52[a]	1362	7.2	169 / 8.44	52 / 4.30	112 / 4.85	6 / 0.14	0 / 0	283 / 4.64	540 / 11.27	56 / 1.58	4 / 0.06	0.7	0.4	1076	9.3	27
25P1	Oxnard	8-20-52[h]	1511	7.6	167 / 8.35	52 / 4.28	115 / 5.00	5 / 0.13	0 / 0	280 / 4.60	530 / 11.0	71 / 2.00	1 / 0.01	0.8	0.5	1145	9.4	28
26J1	Oxnard	7-14-52[a]	2440	7.8	275 / 13.73	94 / 7.74	214 / 9.32	8 / 0.20	0 / 0	301 / 4.94	1096 / 22.87	86 / 2.41	10 / 0.17	0.7	0.7	2071	17.3	30
27M2	Oxnard	6-26-52[a]	1560	7.9	177 / 8.87	68 / 5.58	122 / 5.30	6 / 0.14	0 / 0	277 / 4.55	614 / 12.80	64 / 1.79	34 / 0.54	0.5	0.7	1233	11.0	27
27N3	Oxnard	12-28-33[b]	--	--	182 / 9.10	64 / 5.24	110 / 4.78	--	--	287 / 4.70	617 / 12.85	55 / 1.55	--	--	0.7	1315	10.0	25
28A2	Oxnard	6- 6-52[a]	1435	8.0	138 / 6.88	58 / 5.64	103 / 4.48	--	0 / 0	293 / 4.80	488 / 10.18	52 / 1.46	22 / 0.36	1.2	0.4	1040	10.1	26
28L1	Oxnard	6-25-52[a]	1390	7.6	149 / 7.46	43 / 3.57	99 / 4.31	--	0 / 0	274 / 4.50	462 / 9.63	49 / 1.38	11 / 0.18	1.2	0.4	1040	7.9	28

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
d Analysis obtained from Santa Clara Water Conservation District.
f Analyzed by Fruit Growers Laboratory, Inc.
h For analysis of heavy metal constituents, see Table B 17.

[illegible]

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-28P1	--	2-10-50[f]	--	--	81 4.05	28 2.29	302 13.14	Tr.[g] 0.01	0 0	480 7.75	239 4.97	240 6.77	0 0	--	0.7	1370	13.2	67
30J1	Oxnard	6- 4-52[a]	2058	7.6	249 12.47	60 4.93	140 6.09	--	0 0	266 4.37	700 14.58	133 3.73	82 1.32	0.7	0.3	1595	11.0	26
31A1	Oxnard	6- 4-52[a]	1232	8.1	130 6.48	37 3.06	92 4.02	--	0 0	256 4.20	388 8.08	48 1.35	4 0.06	1.3	0.5	911	7.1	30
31R1	Oxnard	9- 2-52[ah]	1480	7.6	155 7.74	53 4.38	104 4.52	4 0.12	0 0	249 4.08	525 10.92	59 1.67	6 0.09	0.6	0.6	1124	9.0	27
32A1	Oxnard	4-30-53[a]	1363	7.9	143 7.17	50 4.10	95 4.14	4 0.12	0 0	288 4.72	458 9.55	48 1.35	15 0.24	0.7	0.5	1078	8.4	27
32C1	--	4-24-47[f]	--	--	134 6.70	48 3.93	93 4.04	--	0 0	253 4.15	433 9.02	53 1.49	2 0.03	--	0.5	1016	8.0	28
		5-31-50[d]	--	--	127 6.34	46 3.77	92 4.00	--	--	255 4.18	417 8.68	43 1.21	3 0.05	--	0.6	983	7.8	28
	--	9-30-52[d]	--	7.6	134 6.70	46 3.77	86 3.74	--	--	254 4.17	404 8.42	43 1.21	3 0.05	0.9	0.6	970	7.5	26
32C2	Oxnard	7-16-35[f]	--	--	120 6.00	41 3.36	83 3.60	--	--	234 3.83	402 8.38	38 1.07	--	--	0.6	918	7.0	28
32R1	Oxnard	8-20-52[a]	1405	7.6	156 7.82	50 4.12	98 4.23	5 0.13	0 0	278 4.55	493 10.26	52 1.45	16 0.26	0.6	0.4	953	8.5	26
33F1	Oxnard	9- 2-52[ah]	1480	7.7	154 7.70	54 4.47	102 4.42	5 0.13	0 0	278 4.56	500 10.40	44 1.52	20 0.33	0.8	0.6	1134	9.0	26
33M1	--	1-22-34[b]	--	--	138 6.90	46 3.77	104[c] 4.52	--	--	254 4.16	445 9.27	62 1.74	--	--	0.6	1049	8.3	30
33M2	Oxnard	6-25-52[a]	1460	7.7	158 7.92	50 4.08	112 4.87	--	0 0	270 4.42	497 10.35	54 1.52	21 0.34	1.4	0.5	1130	9.0	29
33N2	Oxnard	1-22-34[b]	--	--	136 6.80	46 3.77	101[c] 4.39	--	--	275 4.50	440 9.16	45 1.26	--	--	0.6	1043	8.2	29
34B3	Oxnard	4- 9-51[b]	1400	7.3	155 7.8	50 4.0	105 4.5	--	--	285 4.6	495 10.4	50 1.4	--	--	0.4	1448	8.5	28

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
f Analyzed by Fruit Growers Laboratory, Inc.
g Calculated by difference.
h For analysis of heavy metal constituents, see Table B 17.

TABLE B 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-34D2	Oxnard	3-26-36[b]	1330	--	176 / 8.77	57 / 4.72	85 / 3.59	--	--	280 / 4.58	511 / 10.62	53 / 1.49	11 / 0.18	--	0.6	1173	8.3	21
34E1	--	2-12-34[b]	--	--	147 / 7.33	50 / 4.11	90[c] / 3.91	--	--	273 / 4.47	457 / 9.52	47 / 1.32	--	--	0.6	1064	8.0	26
34K1	Oxnard	9- 3-52[ah]	1558	7.5	179 / 8.96	62 / 5.17	118 / 5.12	6 / 0.14	0 / 0	327 / 5.36	580 / 12.10	62 / 1.76	19 / 0.31	0.8	0.6	1275	10.4	26
34M1	Oxnard	5- 1-53[a]	1695	7.3	200 / 10.02	66 / 5.47	106 / 4.62	6 / 0.14	0 / 0	317 / 5.20	647 / 13.50	62 / 1.74	17 / 0.27	0.7	0.4	1430	10.2	23
34M2	Oxnard	3- 3-34[b]	--	--	139 / 6.95	49 / 4.00	88[c] / 3.82	--	--	272 / 4.45	433 / 9.02	46 / 1.29	--	--	--	1027	7.8	26
35B1	Oxnard	8-13-52	1942	7.4	261 / 13.0	84 / 6.90	170 / 7.40	7 / 0.18	0 / 0	300 / 4.92	945 / 19.7	82 / 2.32	12 / 0.19	0.8	0.8	1840	14.5	27
36L1	Oxnard	8-14-52	1227	7.8	122 / 6.10	45 / 3.70	80 / 3.48	4 / 0.10	0 / 0	254 / 4.16	332 / 6.92	57 / 1.61	1 / 0.02	0.8	0.5	875	7.3	26
2N/23W-25H1	Oxnard	6- 4-52[a]	1417	7.4	139 / 6.93	37 / 3.02	131 / 5.72	--	0 / 0	264 / 4.33	468 / 9.76	62 / 1.75	6 / 0.10	0.3	0.2	998	8.7	37
25Q1	Oxnard	6- 4-52[a]	1370	8.1	136 / 6.82	33 / 2.75	122 / 5.30	--	0 / 0	262 / 4.28	429 / 8.95	57 / 1.61	6 / 0.09	0.9	0.5	1001	8.0	36
36A1	Oxnard	6- 4-52[a]	1337	7.7	123 / 6.17	41 / 3.38	114 / 4.95	--	0 / 0	254 / 4.16	427 / 8.90	56 / 1.58	2 / 0.04	0.9	0.3	942	8.3	34
36C2[e]	Oxnard	7-21-36[d]	--	--	134 / 6.69	40 / 3.29	131 / 5.70	18 / 0.46	0 / 0	262 / 4.29	488 / 10.18	57 / 1.61	4 / 0.06	--	--	1134	9.4	35
		9-27-45[d]	--	--	133 / 6.64	38 / 3.12	121 / 5.26	2 / 0.05	11 / 0.37	225 / 3.68	454 / 9.45	54 / 1.52	2 / 0.03	--	0.6	1040	8.4	35
		5- 5-49[d]	--	--	148 / 7.39	46 / 3.78	121 / 5.26	5 / 0.13	--	258 / 4.23	516 / 10.75	57 / 1.61	Tr.	--	--	1151	9.2	32
1S/21W- 4J1	--	4-27-53[a]	1072	9.2	53 / 2.67	41 / 3.38	134 / 5.82	8 / 0.22	8 / 0.27	122 / 2.00	347 / 7.24	92 / 2.61	6 / 0.10	0.4	0.4	850	9.4	48

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Na + K.
d Analysis obtained from Santa Clara Water Conservation District.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analyzed by Fruit Growers Laboratory, Inc.
g Calculated by difference.
h For analysis of heavy metal constituents, see Table B 17.
j Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
k Bailed sample while drilling. Collected at 500 foot depth, probably from Oxnard aquifer.
m Bailed sample while drilling. Collected at 600 foot depth. Aquifer unknown.

TABLE B 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	EC x 10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/17W- 4N1	Martinez Fm.	7-25-52[a]	1970	7.3	201 / 10.05	71 / 5.87	153 / 6.65	2 / 0.05	0 / 0	320 / 5.25	534 / 11.12	170 / 4.78	83 / 1.34	0.8	0.3	1526	12.6	29
6G1	Alluvium	7-28-52[a]	2825	7.2	290 / 14.52	120 / 9.90	176 / 7.66	5 / 0.12	0 / 0	309 / 5.06	1043 / 21.75	188 / 5.28	8 / 0.13	1.0	1.2	2122	17.7	24
6N1	Alluvium	4-19-33[b]	2160	--	259 / 12.97	85 / 7.02	150 / 6.51	6 / 0.13	--	266 / 4.35	924 / 19.24	91 / 2.57	34 / 0.54	--	1.0	1850	13.7	24
6R1	Alluvium & Santa Susana-Martinez Fm.	7-25-52[a]	1185	7.4	115 / 5.76	37 / 3.05	93 / 4.04	1 / 0.02	0 / 0	297 / 4.86	244 / 5.08	89 / 2.50	36 / 0.58	1.2	0.2	844	7.1	31
7D1	Alluvium	7-25-52	1524	7.4	145 / 7.25	67 / 5.50	154 / 6.70	3 / 0.06	0 / 0	308 / 5.04	415 / 8.65	174 / 4.90	13 / 0.22	0.7	0.4	1210	12.3	34
7H1	Alluvium & Lower Llajas Fm.	10-18-51[a]	1330	7.6	84 / 4.20	29 / 2.40	200 / 8.70	--	--	320 / 5.24	192 / 4.00	201 / 5.64	1 / 0.02	1.0	0.3	893	10.1	57
		7-25-52[a]	1622	7.5	74 / 3.68	33 / 2.73	260 / 11.30	2 / 0.05	0 / 0	386 / 6.34	86 / 1.78	338 / 9.52	0 / 0	0.9	0.2	1013	11.4	64
8A1	--	7-25-52[a]	1645	7.1	169 / 8.45	64 / 5.25	135 / 5.87	2 / 0.04	0 / 0	353 / 5.79	357 / 7.43	226 / 6.39	16 / 0.25	0.7	0.1	1261	11.2	30
8C1	--	4-24-51[a]	1535	8.1	81 / 4.02	317 / 2.60	118 / 5.13	--	--	242 / 3.96	278 / 5.80	65 / 1.83	14 / 0.23	--	0.3	691	7.7	44
8F1	--	7-28-52[a]	975	7.3	109 / 5.45	28 / 2.33	96 / 4.18	1 / 0.02	0 / 0	301 / 4.94	233 / 4.85	66 / 1.87	21 / 0.34	0.7	0.2	754	6.5	35
8J3	Alluvium & Martinez Fm.	7-25-52[a]	1825	7.2	61 / 3.04	21 / 1.84	301 / 13.10	2 / 0.04	0 / 0	323 / 5.29	68 / 1.42	399 / 11.24	1 / 0.02	1.0	0.0	984	13.1	73
8K1	Alluvium	7-28-52[a]	1033	7.6	90 / 4.48	39 / 3.18	97 / 4.23	1 / 0.01	0 / 0	506 / 8.30	94 / 1.96	60 / 1.70	Tr.	0.9	0.2	638	4.2	36
8Q1	Santa Susana-Martinez Fm.	7-28-52[a]	1142	7.6	91 / 4.54	44 / 3.68	98 / 4.24	3 / 0.08	0 / 0	333 / 5.46	276 / 5.75	45 / 1.26	1 / 0.02	0.2	0.1	747	7.1	34
9F1	Cretaceous Rocks	7-25-52[a]	833	7.4	56 / 2.81	15 / 1.21	100 / 4.34	2 / 0.05	0 / 0	247 / 4.04	91 / 1.89	90 / 2.54	4 / 0.06	0.6	0.1	425	4.4	52

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.

TABLE B 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/17W- 9G3	Cretaceous Rocks	4-24-51	1277	7.8	91 / 4.55	52 / 4.27	100 / 4.35	--	0 / 0	264 / 4.33	249 / 5.18	114 / 3.22	4 / 0.07	--	0.2	894	8.6	33
9N3	Alluvium & Cretaceous Rocks	7-25-52[a]	4970	7.2	440 / 22.00	150 / 12.40	327 / 14.20	2 / 0.04	0 / 0	480 / 7.87	171 / 3.56	1265 / 35.60	70 / 1.13	0.2	0.2	3087	37.2	29
9Q3	Cretaceous Rocks	7-28-52	2415	7.4	115 / 5.75	13 / 1.07	420 / 18.2	3 / 0.07	0 / 0	232 / 3.80	12 / 0.24	775 / 21.8	0 / 0	3.0	0.3	1630	21.0	73
9Q6	Cretaceous Rocks	7-28-52[a]	2038	7.8	221 / 11.05	107 / 8.82	124 / 5.39	2 / 0.05	0 / 0	265 / 4.34	657 / 13.70	173 / 4.87	127 / 2.05	0.8	<0.1	1762	14.3	21
15D2	Alluvium & Cretaceous Rocks	7-28-52[a]	964	8.2	71 / 3.54	35 / 2.86	119 / 5.18	3 / 0.08	0 / 0	419 / 6.86	151 / 3.14	55 / 1.55	5 / 0.08	0.6	<0.1	654	5.3	44
16D1	Alluvium & Cretaceous Rocks	7-25-52[a]	996	7.4	58 / 2.90	28 / 2.29	138 / 6.01	4 / 0.09	0 / 0	369 / 6.05	158 / 3.30	62 / 1.75	Tr.	0.7	0.0	631	6.1	53
2N/18W- 1M1	Alluvium	4-30-53[a]	2401	7.2	253 / 12.63	92 / 7.61	200 / 8.70	7 / 0.17	0 / 0	356 / 5.83	909 / 18.95	149 / 4.20	26 / 0.42	0.5	1.3	2017	16.5	30
1M3	Alluvium	7-28-52[a]	2830	7.3	291 / 14.57	118 / 9.78	230 / 10.00	7 / 0.18	0 / 0	387 / 6.34	1100 / 22.90	186 / 5.21	8 / 0.14	0.6	1.7	2345	20.0	29
3L1	--	7-28-52[a]	1748	7.4	181 / 9.05	38 / 3.10	162 / 7.04	3 / 0.08	0 / 0	338 / 5.54	512 / 10.68	105 / 2.96	18 / 0.29	0.6	0.9	1175	10.2	36
3L2	Alluvium & Older Fms.	10-19-51[a]	1619	7.8	176 / 8.80	42 / 3.40	172 / 7.50	--	--	310 / 5.08	523 / 10.90	107 / 3.01	16 / 0.26	--	1.0	1270	11.2	38
4N2	Alluvium	10-19-51[a]	1730	7.6	225 / 11.24	76 / 6.36	185 / 8.05	--	--	325 / 5.32	780 / 16.30	139 / 3.90	11 / 0.18	0.6	1.5	1774	14.4	31
4P2	Alluvium	7-29-52[a]	2375	7.3	239 / 11.93	86 / 7.12	205 / 8.91	6 / 0.15	0 / 0	372 / 6.10	843 / 17.55	152 / 4.29	16 / 0.26	0.1	1.4	1630	16.2	32
7F4	Volcanics	7-30-52	757	7.4	71 / 3.54	56 / 4.60	25 / 1.09	1 / 0.02	0 / 0	234 / 3.84	144 / 2.99	66 / 1.86	21 / 0.34	0.2	Tr.	625	5.4	12
7R1	Sespe Fm.	7-29-52[a]	1268	7.7	102 / 5.09	86 / 7.07	72 / 3.15	2 / 0.04	0 / 0	432 / 7.07	241 / 5.02	125 / 3.52	1 / 0.02	0.0	<0.1	980	8.3	20
8E2	Alluvium	7-29-52[a]	2258	7.5	262 / 13.10	100 / 8.25	159 / 6.92	4 / 0.12	0 / 0	377 / 6.18	857 / 17.87	145 / 4.08	1 / 0.02	0.6	0.8	1854	15.3	24
8F5	Alluvium	10-19-51[a]	2920	8.0	368 / 18.40	186 / 15.40	670 / 28.70	--	--	490 / 8.04	1850 / 38.50	554 / 15.60	Tr.	2.2	2.7	4098	44.1	46

a Analyzed by Pacific Chemical Consultants.

TABLE B 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Residual Salinity epm	Per Cent Na
2N/18W- 8F6	Alluvium	10-19-51[a]	1920	7.6	260 / 13.00	103 / 8.40	210 / 9.14	--	--	323 / 5.28	994 / 20.70	157 / 4.43	2 / 0.03	0.8	1.2	2078	17.5	30
8G3	Alluvium	7-29-52[a]	2240	7.2	247 / 12.35	79 / 6.55	182 / 7.82	6 / 0.14	0 / 0	369 / 6.05	805 / 16.77	149 / 4.18	6 / 0.09	0.5	0.6	1757	14.5	29
8J1	Alluvium	11-28-52[cd]	2250	7.3	247 / 12.33	83 / 6.83	180 / 7.83	5 / 0.13	0 / 0	352 / 5.77	793 / 16.51	155 / 4.37	11 / 0.18	0.7	0.9	1700	14.8	29
8P3[e]	Alluvium	7-29-52	1695	7.3	218 / 10.9	71 / 5.84	138 / 6.00	4 / 0.11	0 / 0	356 / 5.84	580 / 12.10	115 / 3.24	3 / 0.04	0.6	0.2	1540	11.9	26
8Q1	Alluvium	7-29-52[a]	2480	7.2	339 / 16.93	91 / 7.54	144 / 6.26	5 / 0.12	0 / 0	428 / 7.02	964 / 20.08	137 / 3.87	0 / 0	0.4	0.4	2098	13.9	20
9H1[e]	Alluvium	7-29-52[a]	2005	7.4	219 / 10.93	73 / 6.01	150 / 6.53	4 / 0.10	0 / 0	307 / 5.03	730 / 15.20	113 / 3.19	12 / 0.20	0.7	0.6	1554	12.5	28
9M1	Alluvium	7-29-52[a]	1898	7.3	222 / 11.08	72 / 5.97	150 / 6.52	5 / 0.12	0 / 0	323 / 5.28	719 / 14.99	122 / 3.43	9 / 0.14	0.6	1.0	1604	12.6	28
10D3	Alluvium	7-29-52[a]	1985	7.3	221 / 11.06	74 / 6.14	131 / 5.72	4 / 0.10	0 / 0	307 / 5.04	544 / 11.32	228 / 6.44	9 / 0.12	0.6	0.8	1611	12.0	25
10H1	Alluvium	4-24-51[a]	2362	7.9	242 / 12.04	90 / 7.36	156 / 6.79	--	--	288 / 4.72	870 / 18.10	124 / 3.50	16 / 0.25	--	1.5	1756	14.2	26
11K1	Alluvium	4-24-51	1572	7.6	168 / 8.40	52 / 4.27	98 / 4.25	--	0 / 0	229 / 3.76	491 / 10.23	82 / 2.31	25 / 0.42	--	0.2	1244	8.5	25
11K2	Alluvium	7-25-52[a]	1460	7.6	186 / 9.31	53 / 4.36	102 / 4.43	2 / 0.05	0 / 0	281 / 4.60	519 / 10.81	83 / 2.34	20 / 0.32	0.4	0.5	1152	8.8	24
12B1	Alluvium	7-28-52	1587	7.1	192 / 9.60	72 / 5.92	129 / 5.61	3 / 0.08	0 / 0	288 / 4.72	580 / 12.10	115 / 3.24	18 / 0.30	0.8	0.6	1390	11.6	26
12L3	--	7-25-52[a]	1262	7.4	133 / 6.67	39 / 3.19	89 / 3.87	2 / 0.05	0 / 0	268 / 4.38	339 / 7.06	71 / 2.01	20 / 0.32	0.5	0.4	874	7.1	28
12L7	Alluvium	10-18-51[a]	1275	7.9	122 / 6.08	36 / 2.92	73 / 3.17	--	--	312 / 5.13	244 / 5.08	76 / 2.14	5 / 0.08	--	Tr.	757	6.1	26
14D2	Upper Llajas Fm.	7-28-52[a]	2225	7.2	150 / 7.49	94 / 7.75	210 / 9.15	5 / 1.13	0 / 0	502 / 8.22	364 / 7.58	323 / 9.10	Tr.	1.3	0.3	1548	17.3	36

a Analyzed by Pacific Chemical Consultants.
c Analyzed by U.S. Geological Survey, Water Quality Branch.
d For analysis of heavy metal constituents, see Table B 17.
e Addition analyses published in Bulletin No. 46-A.(2) For cross index of well numbers, see Appendix E.

TABLE B 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm.	Effective Salinity epm	Per Cent Na
2N/18W-14D2	Upper Llajas Fm.	10-31-52[cd]	2920	7.1	152/7.58	109/8.96	300/13.05	8/0.19	0/0	328/5.38	421/8.76	528/16.02	3/0.05	1.2	0.6	1750	22.2	44
15B4	Alluvium	7-28-52[a]	--	7.6	191/9.55	51/4.20	104/4.52	4/0.10	0/0	278/4.55	517/10.68	100/2.81	2/0.03	0.6	0.2	1210	8.8	25
15C2	Alluvium	7-29-52[a]	1494	7.4	181/9.04	49/4.04	90/3.93	2/0.05	0/0	320/5.24	420/8.75	102/2.87	Tr.	0.4	0.3	1078	8.0	23
15F1	Alluvium & Sespe Fm.	7-29-52[a]	1250	7.3	122/6.12	38/3.10	110/4.78	4/0.10	0/0	423/6.94	212/4.42	102/2.87	Tr.	0.6	0.1	820	7.2	34
15J5	Sespe Fm.	7-29-52[a]	1455	7.4	177/8.84	56/4.62	80/3.47	3/0.08	0/0	322/5.28	462/9.62	78/2.21	4/0.06	0.9	0.1	1061	8.2	20
16D3	Alluvium	7-29-52[a]	1758	7.8	238/11.89	68/5.61	113/4.91	3/0.08	0/0	345/5.66	651/13.57	109/3.08	0/0	0.4	0.5	1587	10.6	22
16G2	Alluvium	7-29-52[a]	1617	7.6	209/10.43	55/4.53	86/3.76	2/0.05	0/0	332/5.45	524/10.90	86/2.42	0/0	0.5	0.3	1199	8.3	20
16J3	Alluvium & Sespe Fm.	7-29-52[a]	3130	7.5	398/19.92	135/11.22	216/9.40	4/0.12	0/0	391/6.42	1420/29.60	142/3.97	0/0	0.6	0.5	2721	20.7	23
					Tributary to Simi Valley													
2N/17W- 4A1	Cretaceous Rocks	10-18-51[a]	1222	8.4	61/3.04	43/3.56	102/4.45	--	--	210/3.44	224/4.67	102/2.88	1/0.01	--	1.4	657	7.6	40
2N/18W- 2C1	Lower Llajas Fm.	7-25-52	2105	7.2	145/7.25	54/4.45	340/14.80	5/0.14	0/0	336/5.52	860/17.90	110/3.10	5/0.07	1.5	0.9	1750	19.4	56
15L1	Sespe Fm.	7-29-52[a]	848	7.4	133/6.67	16/1.34	34/1.49	3/0.08	0/0	176/2.89	271/5.65	34/0.95	0/0	2.4	0.0	632	2.9	16
15Q2	Upper Llajas Fm.	10-19-51[a]	1275	8.3	97/4.84	47/3.88	66/2.87	--	--	232/3.80	299/6.23	52/1.47	1/0.02	--	0.5	718	6.8	25
		7-29-52[a]	971	7.1	100/5.00	42/3.45	77/3.36	3/0.08	0/0	252/4.13	284/5.92	70/1.98	1/0.02	1.2	0.0	797	6.9	28
18F1	Sespe Fm.	7-29-52[a]	644	7.6	54/2.72	28/2.28	42/1.82	2/0.04	0/0	286/4.68	42/0.87	45/1.26	5/0.08	0.6	0.1	340	2.2	26
18H1	Sespe Fm.	7-29-52[a]	930	7.5	100/5.00	35/2.87	55/2.41	6/0.15	0/0	215/3.53	250/5.20	54/1.53	3/0.05	0.4	0.1	670	5.4	23
3N/17W-19M2	Santa Barbara Fm.	4-30-53[a]	825	7.9	98/4.90	32/2.67	55/2.39	5/0.12	0/0	294/4.83	222/4.42	29/0.81	4/0.06	0.2	<0.1	600	5.2	24

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
d For analysis of heavy metal constituents, see Table B 17.

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Residual Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/19W- 1J1	Recent Alluvium	11-28-52[ab]	2840	8.1	235 / 11.73	84 / 6.91	330 / 14.35	6 / 0.17	0 / 0	286 / 4.69	864 / 17.99	345 / 9.73	1 / 0.01	0.7	2.4	2040	21.4	43
1L2	Recent Alluvium	7-30-52[c]	3230	7.7	194 / 9.72	101 / 8.35	512 / 22.30	6 / 0.14	0 / 0	398 / 6.56	1125 / 23.50	357 / 10.05	Tr.	1.4	2.4	2633	30.8	55
1R1	Alluvium	7-30-52[c]	5470	7.4	500 / 24.99	248 / 20.42	696 / 30.30	8 / 0.19	0 / 0	736 / 12.05	2200 / 45.80	621 / 17.50	1 / 0.02	0.6	2.3	4927	50.9	40
2C2	Alluvium	7-30-52[c]	4010	7.5	307 / 15.34	143 / 11.76	480 / 20.82	6 / 0.17	0 / 0	462 / 7.57	1465 / 30.50	338 / 9.53	0 / 0	0.8	1.9	3207	32.8	43
		11-28-52[c]	3610	7.2	194 / 9.70	120 / 9.88	513 / 22.30	4 / 0.09	0 / 0	341 / 5.58	1265 / 26.38	319 / 9.00	15 / 0.24	0.9	1.6	2674	32.3	53
2F2	--	10-31-52[d]	935	7.7	24 / 1.20	13 / 1.07	150 / 6.52	3 / 0.08	0 / 0	278 / 4.56	138 / 2.87	56 / 1.58	5 / 0.08	0.4	0.1	552	6.6	74
4K1	San Pedro Fm.	7-18-52[c]	1956	7.9	113 / 5.65	58 / 4.77	246 / 10.70	5 / 0.13	0 / 0	276 / 4.52	588 / 12.24	157 / 4.41	1 / 0.01	0.1	0.8	1319	15.6	50
4Q1	Alluvium & San Pedro Fm.	10-19-51[c]	1928	7.8	104 / 5.20	88 / 7.20	174 / 7.60	--	--	181 / 2.84	660 / 13.75	136 / 3.84	1 / 0.01	--	0.4	1327	14.8	38
5J2	Alluvium	10-19-51[c]	1970	7.6	280 / 14.00	97 / 8.00	180 / 7.83	--	--	222 / 3.64	845 / 17.59	243 / 6.85	66 / 1.06	0.9	0.9	1999	15.8	26
5J3	San Pedro Fm.	10-31-52[ab]	1740	7.7	157 / 7.83	48 / 3.95	172 / 7.48	4 / 0.10	0 / 0	244 / 4.00	547 / 11.39	114 / 3.22	26 / 0.42	0.4	0.5	1220	11.5	39
5K5	Alluvium, San Pedro Fm. & Fox Canyon	7-18-52[c]	1975	7.9	202 / 10.10	67 / 5.53	180 / 7.83	4 / 0.12	0 / 0	218 / 3.58	720 / 15.00	171 / 4.83	32 / 0.51	0.3	0.6	1547	13.5	33
6N2	San Pedro Fm.	7-21-52[c]	2930	7.6	237 / 11.85	105 / 8.68	370 / 16.10	6 / 0.15	0 / 0	332 / 5.45	1200 / 25.00	228 / 6.43	7 / 0.12	0.7	1.3	2454	24.9	44
6N3[e]	--	7-18-52[c]	1200	7.5	132 / 6.58	49 / 4.03	100 / 4.35	5 / 0.13	0 / 0	388 / 4.72	384 / 8.02	70 / 1.98	22 / 0.36	0.4	0.3	1104	8.5	29
6R1	Alluvium	10-21-31[f]	2350	--	267 / 13.3	75 / 6.14	208[g] / 9.02	--	--	305 / 5.00	895 / 18.62	144 / 4.05	49 / 0.79	--	0.9	1943	15.2	32

a Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
d Developed spring.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analysis obtained from Ventura County Farm Advisors.
g Calculated by difference.

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/19W-6R2	Alluvium	7-18-52[c]	3080	7.3	344 / 17.20	112 / 9.25	238 / 10.33	4 / 0.12	0 / 0	417 / 6.83	1120 / 23.30	226 / 6.38	45 / 0.73	0.3	0.6	2974	19.7	28
7A3	Alluvium	10-19-51[c]	2518	7.8	364 / 18.20	951 / 7.80	222 / 9.65	--	--	381 / 6.25	112 / 23.20	203 / 5.72	41 / 0.66	--	1.3	2335	17.4	27
7B1	--	7-18-52[c]	2495	7.7	258 / 12.92	80 / 6.62	221 / 9.62	4 / 0.10	0 / 0	280 / 4.60	924 / 19.25	167 / 4.71	38 / 0.61	0.1	1.0	1884	16.3	33
7C1	Alluvium	7-21-52[c]	2700	7.4	349 / 17.47	90 / 7.43	194 / 8.43	4 / 0.12	0 / 0	410 / 6.72	951 / 19.80	174 / 4.91	117 / 1.89	0.1	0.2	2286	16.0	25
7M1	--	7-18-52[c]	2535	8.2	141 / 7.04	72 / 5.92	341 / 14.82	4 / 0.12	0 / 0	252 / 4.13	564 / 11.77	413 / 11.65	6 / 0.10	0.4	0.8	1841	20.9	53
8A1[e]	--	5-21-34[f]	3420	--	264 / 13.13	113 / 9.28	428[g] / 18.63	--	--	320 / 5.24	1340 / 27.33	278 / 7.33	9 / 0.14	--	1.6	2752	27.9	45
8B2	Alluvium	7-21-52[c]	2580	7.6	269 / 13.45	89 / 7.35	224 / 9.74	4 / 0.12	0 / 0	286 / 4.68	919 / 19.13	230 / 6.48	27 / 0.44	0.3	0.7	2179	17.[illegible]	32
8R1	--	7-18-52[c]	1072	8.0	100 / 4.99	38 / 3.14	104 / 4.52	2 / 0.05	0 / 0	254 / 4.17	287 / 5.97	71 / 2.01	20 / 0.33	0.4	0.3	752	7.7	36
9C3	Alluvium & Fox Canyon	7-21-52[c]	2740	7.4	204 / 10.21	106 / 8.73	367 / 15.92	5 / 0.12	0 / 0	311 / 5.10	1070 / 22.40	230 / 6.48	16 / 0.25	0.5	1.3	2240	24.8	46
9F2[e]	--	7-18-52	3068	7.7	197 / 9.85	97 / 8.05	371 / 16.14	6 / 0.15	0 / 0	332 / 5.45	1085 / 22.60	229 / 6.46	9 / 0.15	0.5	1.7	2589	24.3	47
2N/20W- 1M1[e]	Fox Canyon	7-18-52[c]	827	7.9	89 / 4.47	20 / 1.64	59 / 2.56	4 / 0.12	0 / 0	234 / 3.83	200 / 4.17	27 / 0.75	2 / 0.03	0.3	0.1	547	4.3	29
1Q1[e]	San Pedro Fm.	7-18-52[c]	973	7.8	102 / 5.09	32 / 2.66	64 / 2.77	2 / 0.05	0 / 0	307 / 5.03	198 / 4.13	38 / 1.07	26 / 0.42	0.0	<0.1	702	5.5	26
3K1	San Pedro Fm.	7-17-52[c]	1188	7.8	139 / 6.95	39 / 3.20	54 / 2.36	2 / 0.05	0 / 0	228 / 3.74	244 / 5.09	78 / 2.21	84 / 1.36	0.4	0.1	948	5.6	19
4F1	Fox Canyon & Grimes Canyon	7-17-52[c]	497	7.6	59 / 2.95	14 / 1.16	29 / 1.24	4 / 0.09	0 / 0	198 / 3.24	82 / 1.72	15 / 0.43	0 / 0	0.3	0.0	302	2.2	23
		10-27-52[ab]	505	8.2	60 / 2.99	12 / 0.99	32 / 1.39	3 / 0.07	0 / 0	191 / 3.13	90 / 1.87	14 / 0.39	1 / 0.02	0.4	1.0	337	2.3	25

a Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analysis obtained from Ventura County Farm Advisors.
g Calculated by difference.

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO.

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/20W- 6B1	Alluvium & San Pedro Fm.	7-17-52[c]	961	7.0	75 / 3.77	33 / 2.76	86 / 3.73	5 / 0.13	0 / 0	351 / 5.75	129 / 2.70	62 / 1.75	14 / 0.22	0.6	0.3	554	4.6	36
8H1	Fox Canyon & Grimes Canyon	9-10-49[h]	--	7.7	49 / 2.45	12 / 0.98	38 / 1.65	1[g] / 0.02	0 / 0	198 / 3.25	63 / 1.31	19 / 0.54	Tr.	--	0.1	380	1.3	32
		7-17-52[c]	486	8.0	52 / 2.59	12 / 1.02	30 / 1.33	2 / 0.06	0 / 0	193 / 3.19	67 / 1.40	16 / 0.46	1 / 0.02	0.2	0.1	348	1.8	27
9F1	Fox Canyon	11- 3-49[h]	--	7.5	50 / 2.50	10 / 0.82	40 / 1.74	1 / 0.03	0 / 0	185 / 3.03	79 / 1.64	15 / 0.42	0 / 0	--	0.1	380	2.1	34
		1-12-53[bc]	687	8.0	70 / 3.51	17 / 1.38	52 / 2.27	4 / 0.09	0 / 0	225 / 3.70	134 / 2.80	27 / 0.75	4 / 0.06	0.4	0.1	346	3.6	31
9J2	Fox Canyon	8-10-49[h]	--	7.5	85 / 4.25	22 / 1.64	74 / 3.22	12[g] / 0.31	Tr.	243 / 3.98	175 / 3.65	60 / 1.69	6 / 0.10	--	0.1	677	5.2	34
9R1	Fox Canyon	6-15-44[h]	--	--	173 / 8.65	52 / 4.26	180 / 7.83	21[g] / 0.54	0 / 0	277 / 4.54	607 / 12.65	142 / 4.01	5 / 0.08	--	0.6	1457	12.6	36
		10-19-51[c]	1275	8.0	117 / 5.84	39 / 3.16	109 / 4.74	--	--	234 / 3.85	364 / 7.61	72 / 2.02	Tr.	--	0.8	868	7.9	34
		7-18-52[c]	1720	7.8	155 / 7.75	48 / 3.94	158 / 6.87	4 / 0.12	0 / 0	272 / 4.47	527 / 11.09	117 / 3.30	6 / 0.10	0.3	0.5	1226	10.9	37
10C1	Fox Canyon	7-17-52[c]	633	8.1	71 / 3.54	16 / 1.30	46 / 2.02	4 / 0.12	0 / 0	213 / 3.49	137 / 2.86	21 / 0.60	3 / 0.05	0.2	0.5	517	3.4	29
10G1	Fox Canyon	5-11-48[h]	--	7.6	65 / 3.25	14 / 1.15	59 / 2.57	4 / 0.09	0 / 0	218 / 3.59	140 / 2.94	19 / 0.53	Tr.	--	0.1	519	3.5	38
10J1[e]	--	4-24-51[c]	2750	7.8	209 / 10.44	112 / 9.16	335 / 14.52	--	--	398 / 6.52	921 / 19.20	299 / 8.43	1 / 0.01	--	1.6	2103	23.7	42
12F4	Alluvium	7-25-36[f]	3280	--	270 / 13.43	107 / 8.78	376 / 16.35	--	--	314 / 5.14	1130 / 23.54	321 / 9.05	46 / 0.75	--	1.3	2564	25.1	43
12G1	--	7-18-52[c]	2303	7.6	264 / 13.20	76 / 6.30	229 / 9.95	4 / 0.12	0 / 0	361 / 5.92	898 / 18.75	137 / 3.87	64 / 1.04	0.3	0.7	2093	16.4	34

b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbere, see Appendix E.
f Analysis obtained from Ventura County Farm Advisors.
g Calculated by difference.
h Analyzed by Fruit Growers Laboratory, Inc.

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/20W-12J1	San Pedro Fm.	7-18-52[c]	1505	8.2	108 / 5.40	59 / 4.86	171 / 7.43	3 / 0.09	0 / 0	236 / 3.88	429 / 8.95	155 / 4.38	17 / 0.28	0.0	0.4	1202	12.4	42
16C1[e]	Fox Canyon	8-20-29[f]	1320	--	126 / 6.29	47 / 3.85	97 / 4.21	--	--	226 / 3.70	391 / 8.15	89 / 2.50	--	--	0.4	975	8.1	29
		4-24-51	995	7.7	91 / 4.55	27 / 2.22	80 / 3.48	--	0 / 0	232 / 3.80	215 / 4.47	62 / 1.75	2 / 0.04	--	0.1	699	5.7	34
18A1	Fox Canyon & Grimes Canyon	7-17-52[c]	372	7.4	58 / 2.89	13 / 1.05	34 / 1.46	3 / 0.07	0 / 0	192 / 3.15	86 / 1.79	18 / 0.52	6 / 0.10	0.3	0.1	306	2.3	27
2N/21W- 1J1	Fox Canyon	7-17-52[c]	897	7.0	66 / 3.31	30 / 2.49	78 / 3.41	3 / 0.08	0 / 0	268 / 4.40	101 / 2.10	56 / 1.58	85 / 1.37	0.7	0.2	564	4.9	37
11J1	Fox Canyon	7-21-52[c]	685	8.2	77 / 3.86	22 / 1.75	58 / 2.52	3 / 0.08	2 / 0.08	242 / 3.97	117 / 2.44	48 / 1.34	18 / 0.29	0.2	0.4	528	4.2	31
12G1	Fox Canyon	7-17-52[c]	824	7.2	94 / 4.69	33 / 2.76	59 / 2.56	4 / 0.11	0 / 0	301 / 4.94	202 / 4.22	30 / 0.83	6 / 0.10	0.2	0.1	578	5.2	25
15C2	San Pedro Fm.	7-17-52[c]	2938	7.7	373 / 18.63	107 / 8.80	223 / 9.70	5 / 0.12	0 / 0	286 / 4.68	1233 / 25.70	121 / 3.42	216 / 3.48	0.1	0.6	2530	18.6	26
15P1	Grimes Canyon	7-17-52	1320	7.8	126 / 6.30	39 / 3.20	118 / 5.12	5 / 0.14	0 / 0	286 / 4.68	368 / 7.68	82 / 2.32	1 / 0.02	0.1	0.4	1030	8.5	35
16J1	Alluvium & San Pedro Fm.	7-17-52[c]	1575	7.5	191 / 9.53	61 / 5.07	111 / 4.80	3 / 0.08	0 / 0	268 / 4.38	487 / 10.15	88 / 2.49	138 / 2.23	0.1	0.2	1363	10.0	25
16R2	--	7-17-52[c]	1000	8.0	82 / 4.09	30 / 2.48	90 / 3.89	5 / 0.12	0 / 0	283 / 4.64	222 / 4.62	53 / 1.49	0 / 0	0.0	0.1	652	5.9	37
21H1	Grimes Canyon	3- 50[h]	--	8.0	84 / 4.20	34 / 2.79	72 / 3.13	6 / 0.15	--	295 / 4.84	215 / 4.47	34 / 0.96	--	--	0.2	740	5.4	31
21K1	Grimes Canyon	11-26-52[ab]	931	7.7	87 / 4.34	32 / 2.63	74 / 3.22	5 / 0.13	0 / 0	288 / 4.72	225 / 4.68	31 / 0.87	Tr.	0.2	0.5	638	5.6	31
21M1[e]	Grimes Canyon	1- 4-40[h]	--	--	144 / 7.20	50 / 4.10	126 / 5.48	1[f] / 0.02	--	288 / 4.72	502 / 10.46	56 / 1.58	3 / 0.04	--	0.7	1170	9.6	33
		7-21-52[c]	975	7.9	50 / 2.48	18 / 1.48	137 / 6.00	4 / 0.12	0 / 0	339 / 5.57	143 / 2.99	51 / 1.44	4 / 0.06	0.1	0.1	602	6.1	60
28A1	Grimes Canyon	8- -46[h]	--	--	114 / 5.7	45 / 3.69	90 / 3.92	13 / 0.33	--	294 / 4.82	322 / 6.71	75 / 2.11	--	--	0.2	953	7.9	30

a Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analysis obtained from Ventura County Farm Advisors.
h Analyzed by Fruit Growers Laboratory, Inc.

[illegible]

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/21W-28A1	Grimes Canyon	9- 3-52	1379	7.5	118 / 5.88	40 / 3.29	95 / 4.13	5 / 0.14	0 / 0	293 / 4.80	325 / 6.78	75 / 2.13	2 / 0.03	0.6	0.1	914	7.6	31
3N/18W-28N1	Alluvium	7-17-52	966	7.8	112 / 5.60	27 / 2.22	80 / 3.40	29 / 0.74	0 / 0	312 / 5.12	206 / 4.30	70 / 1.98	13 / 0.22	0.8	Tr.	755	6.4	18
3N/19W-28F1	Epworth Gravels	7-18-52	356	7.2	42 / 2.10	7 / 0.57	16 / 0.70	1 / 0.02	0 / 0	144 / 2.36	12 / 0.24	19 / 0.54	20 / 0.33	0.1	Tr.	255	1.0	21
29E2	Epworth Gravels	7-18-52[c]	280	6.8	23 / 1.13	10 / 0.81	23 / 1.01	2 / 0.04	0 / 0	113 / 1.86	5 / 0.10	22 / 0.62	22 / 0.36	0.5	0.1	206	1.1	34
29F3[e]	Epworth Gravels	7-18-52[c]	290	7.4	28 / 1.41	7 / 0.54	25 / 1.07	1 / 0.02	0 / 0	96 / 1.57	10 / 0.22	25 / 0.76	31 / 0.50	0.4	0.1	207	1.5	35
29L3	Epworth Gravels	11-25-52[bc]	327	8.0	31 / 1.56	6 / 0.45	25 / 1.09	1 / 0.03	0 / 0	112 / 1.84	6 / 0.12	25 / 0.71	32 / 0.51	0.3	0.1	242	1.3	35
30E3	Fox Canyon	7-18-52[c]	388	7.6	58 / 2.88	8 / 0.63	20 / 0.85	2 / 0.05	0 / 0	157 / 2.58	58 / 1.22	16 / 0.45	3 / 0.05	0.3	0.0	265	1.5	19
31M2	San Pedro Fm.	7-21-52[c]	416	8.1	53 / 2.63	7 / 0.54	29 / 1.27	1 / 0.02	0 / 0	197 / 3.23	10 / 0.20	24 / 0.68	17 / 0.28	0.2	0.1	225	1.3	28
33N2	San Pedro Fm.	7-21-52	625	7.3	40 / 2.00	18 / 1.48	70 / 3.04	2 / 0.04	0 / 0	303 / 4.96	13 / 0.28	49 / 1.38	14 / 0.22	0.4	0.1	372	3.1	46
33P2	San Pedro Fm.	7-18-52	458	7.8	44 / 2.22	14 / 1.20	34 / 1.49	1 / 0.03	0 / 0	179 / 2.94	37 / 0.77	30 / 0.86	19 / 0.31	0.1	0.1	300	2.0	30
35N1	Alluvium	7-18-52[c]	3225	7.8	238 / 11.89	110 / 9.11	362 / 15.75	6 / 0.15	0 / 0	441 / 7.23	1007 / 21.00	312 / 8.81	1 / 0.02	0.8	0.8	2772	25.0	43
3N/20W-23H1	Santa Barbara Fm.	11-28-52[ab]	806	7.5	101 / 5.04	36 / 2.96	28 / 1.22	5 / 0.12	0 / 0	371 / 6.08	124 / 2.58	17 / 0.48	Tr.	0.7	0.2	514	3.3	18
27M1	San Pedro Fm.	11-28-52[ab]	596	7.8	52 / 2.59	18 / 1.48	44 / 1.91	2 / 0.05	0 / 0	257 / 4.21	11 / 0.23	46 / 1.30	16 / 0.26	1.2	0.2	351	2.0	32
32H1[e]	--	7-17-52[c]	672	8.4	52 / 2.59	16 / 1.30	74 / 3.21	4 / 0.10	5 / 0.16	277 / 4.53	31 / 0.65	58 / 1.63	22 / 0.35	0.5	0.5	484	3.4	45
33M1	Fox Canyon	7-17-52[c]	539	7.9	62 / 3.09	16 / 1.35	34 / 1.48	3 / 0.08	0 / 0	223 / 3.66	84 / 1.75	16 / 0.45	2 / 0.04	0.4	0.0	402	2.3	25
34F1	Fox Canyon	7-17-52[c]	556	8.0	72 / 3.59	17 / 1.39	32 / 1.39	5 / 0.13	0 / 0	202 / 3.32	133 / 2.77	15 / 0.43	4 / 0.06	0.3	0.4	470	2.9	21

a Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.

[illegible]

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10⁶ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
3N/20W-34K1	Fox Canyon	10-22-52[ab]	604	8.1	66 / 3.29	14 / 1.15	42 / 1.83	2 / 0.06	0 / 0	200 / 3.28	116 / 2.42	22 / 0.62	4 / 0.06	0.2	0.1	396	3.0	29
34L1	Fox Canyon	6-14-38[h]	650	7.4	80 / 4.00	21 / 1.72	23 / 1.00	--	--	214 / 3.51	137 / 2.68	14 / 0.39	--	--	0.0	489	2.7	15

a Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records subject to revision.
b For analysis of heavy metal constituents, see Table B 17.
c Analyzed by Pacific Chemical Consultants.
d Developed spring.
e Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
f Analysis obtained from Ventura County Farm Advisors.
g Calculated by difference.
h Analyzed by Fruit Growers Laboratory, Inc.

TABLE B 12

MINERAL ANALYSES OF GROUND WATERS TIERRA REJADA VALLEY BASIN NO. 4-15

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/19W-12P1	7-30-52[a]	349	7.8	27 / 1.36	18 / 1.48	20 / 0.86	1 / 0.02	0 / 0	153 / 2.51	17 / 0.36	23 / 0.65	14 / 0.22	0.4	0.0	218	1.2	23
14D1	7-30-52[a]	720	7.5	59 / 2.95	44 / 3.59	32 / 1.39	1 / 0.01	0 / 0	252 / 4.13	101 / 2.10	53 / 1.50	8 / 0.13	0.4	0.1	503	3.8	18
15B1	7-30-52[a]	765	7.4	63 / 3.13	43 / 3.54	36 / 1.57	1 / 0.02	0 / 0	260 / 4.26	101 / 2.11	57 / 1.61	17 / 0.27	0.4	0.1	504	4.2	19
15F1	7-21-52[a]	832	7.9	62 / 3.08	43 / 3.56	45 / 1.95	1 / 0.03	0 / 0	247 / 4.04	116 / 2.43	69 / 1.95	14 / 0.22	0.3	0.1	664	4.6	23
15H2	10-14-37[b]	479	--	40 / 2.00	24[c] / 1.96	26 / 1.13	--	--	209 / 3.43	37 / 0.77	27 / 0.75	9 / 0.14	--	0.1	371	1.7	22
	7-21-52[a]	505	8.2	44 / 2.22	26 / 2.11	22 / 0.96	1 / 0.03	0 / 0	226 / 3.71	31 / 0.64	33 / 0.92	14 / 0.22	0.2	0.4	434	1.6	18
15M1	7-21-52[a]	702	7.7	53 / 2.63	41 / 3.40	40 / 1.73	2 / 0.04	0 / 0	286 / 4.69	86 / 1.80	41 / 1.16	3 / 0.04	0.2	0.0	487	3.1	22

a Analyzed by Pacific Chemical Consultants.
b Analysis obtained from Ventura County Farm Advisors.
c Calculated by difference.

[illegible]

TABLE B 13

MINERAL ANALYSES OF GROUND WATERS ARROYO SANTA ROSA BASIN NO. 4-7

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/19W-19R2[a]	Volcanics	7-21-52[b]	820	8.2	50 2.72	55 4.54	69 3.00	2 0.04	0 0	359 5.88	92 1.91	67 1.89	28 0.46	0.2	0.4	658	4.4	29
20K1[a]	Volcanics	7-21-52[b]	820	8.1	51 2.54	39 3.23	75 3.27	2 0.05	0 0	325 5.33	74 1.54	61 1.72	34 0.55	0.1	0.6	582	3.8	36
2N/20W-23Q1	San Pedro Fm.	7-22-52[b]	1050	7.9	73 3.63	57 4.70	70 3.02	1 0.02	0 0	392 6.41	68 1.42	96 2.71	57 0.92	0.3	0.1	679	5.0	26
23R1	Alluvium & San Pedro Fm.	7-22-52[b]	1185	7.4	81 4.04	63 5.24	83 3.61	1 0.03	0 0	411 6.73	136 2.83	96 2.72	46 0.74	0.1	0.6	719	6.2	28
24Q1[a]	Alluvium & San Pedro Fm.	7-22-52[b]	1154	7.2	85 4.27	66 5.47	72 3.13	1 0.02	0 0	405 6.64	109 2.28	94 2.63	73 1.17	0.1	<0.1	716	6.2	24
24R1	--	11-26-52[cd]	1060	7.9	64 3.19	59 4.85	77 3.35	3 0.07	0 0	374 6.13	95 1.98	86 2.43	50 0.81	0.1	0.2	673	5.3	29
25L1	Alluvium & Volcanics	4-30-53[b]	1320	7.5	93 4.67	69 5.70	127 5.53	1 0.02	0 0	400 6.55	270 5.62	129 3.63	9 0.15	0.1	<0.1	946	9.4	35
							Tributary to Arroyo Santa Rosa Valley											
2N/19W-19L1	San Pedro Fm.	7-22-52[b]	1082	7.7	77 3.87	70 5.80	72 3.12	2 0.04	0 0	429 7.03	139 2.90	93 2.62	25 0.40	0.0	0.1	842	5.8	24
21F2	Volcanics	7-21-52	790	8.0	274 1.37	31 2.58	98 4.28	1 0.03	0 0	286 4.68	120 2.50	42 1.20	3 0.05	0.1	0.2	528	4.3	52
21H1	Volcanics	8-21-52	870	7.8	15 0.75	10 0.82	165 7.18	5 0.14	0 0	288 4.72	127 2.64	62 1.75	8 0.12	0.1	0.1	565	7.3	81
2N/20W-22H1	Upper San Pedro Fm. & Fox Canyon	7-22-52	769	7.2	70 3.50	43 3.53	48 2.05	1 0.02	0 0	324 5.32	40 0.83	79 2.23	10 0.17	0.2	0.1	552	3.8	22
22L3	San Pedro Fm.	7-22-52[b]	920	8.3	52 2.61	54 4.50	62 2.70	2 0.04	1 0.04	353 5.79	72 1.49	85 2.39	7 0.11	0.1	0.1	600	4.1	27
22Q1	San Pedro Fm.	7-21-52[b]	912	8.1	54 2.68	52 4.30	70 3.04	1 0.03	0 0	348 5.71	82 1.70	94 2.64	6 0.10	0.3	0.4	662	4.3	30
23A1	Fox Canyon	7-22-52[b]	1032	7.8	62 3.09	44 3.59	96 4.17	2 0.06	0 0	314 5.15	119 2.47	114 3.22	2 0.03	0.4	0.2	608	5.8	38
24E1	San Pedro Fm. & Fox Canyon	7-22-52	862	7.3	49 2.45	55 4.52	60 2.61	2 0.04	0 0	327 5.36	41 0.86	102 2.88	8 0.14	0.3	Tr.	568	4.3	27

a Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
b Analyzed by Pacific Chemical Consultants.
c Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
d For analysis of heavy metal constituents, see table B 17.

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TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/20W- 6J1	San Pedro Fm. & Volcanics	8-20-52[a]	2630	7.4	187 / 9.35	114 / 9.37	246 / 10.70	3 / 0.08	0 / 0	450 / 7.37	605 / 12.60	321 / 9.06	15 / 0.24	0.1	0.2	1819	20.2	36
6R2	--	3-28-45[b]	--	--	308 / 15.20	138 / 11.32	466 / 20.25	14[c] / 0.37	--	254 / 4.1C	1540 / 32.10	386 / 10.88	0 / 0	--	0.9	3102	31.9	43
6R3	--	9- 3-52[a]	807	7.2	44 / 2.21	35 / 2.88	76 / 3.28	1 / 0.02	0 / 0	312 / 5.12	51 / 1.07	74 / 2.09	6 / 0.09	0.0	0.2	565	3.3	39
1N/21W- 1A1	Alluvium	6-24-52[a]	3422	7.4	328 / 16.40	116 / 9.60	252 / 10.97	--	0 / 0	351 / 5.75	1038 / 21.60	338 / 9.53	41 / 0.66	0.5	0.7	2594	20.6	30
1F1	--	6-24-52[a]	1840	7.8	165 / 8.25	49 / 4.04	172 / 7.48	--	0 / 0	345 / 5.66	408 / 8.52	212 / 5.96	4 / 0.06	0.4	0.5	1250	11.5	38
2K1	Alluvium & San Pedro Fm.	8-20-52[a]	1377	7.9	134 / 6.68	46 / 3.76	114 / 4.95	3 / 0.08	0 / 0	260 / 4.26	382 / 7.96	98 / 2.75	29 / 0.46	0.3	0.1	962	8.8	32
3L1	Alluvium, San Pedro Fm., & Fox Canyon	8-20-52[a]	1385	7.7	106 / 5.32	29 / 2.42	165 / 7.17	5 / 0.12	0 / 0	322 / 5.28	274 / 5.70	133 / 3.76	4 / 0.06	0.2	0.4	869	9.7	48
		9- 5-52	1410	7.5	99 / 4.95	31 / 2.54	155 / 6.74	5 / 0.12	0 / 0	317 / 5.20	269 / 5.60	138 / 3.89	2 / 0.03	0.4	0.3	916	9.2	47
		11-26-52[de]	1110	7.6	114 / 5.69	33 / 2.71	89 / 3.87	3 / 0.07	0 / 0	255 / 4.18	300 / 6.25	61 / 1.72	Tr.	0.3	0.5	765	6.6	31
11C1	--	5- 1-53[a]	1165	7.9	111 / 5.57	31 / 2.58	100 / 4.35	4 / 0.09	0 / 0	251 / 4.12	296 / 6.16	84 / 2.37	9 / 0.14	0.4	0.1	834	7.0	35
11R1[f]	Alluvium	6-25-52[a]	3160	7.4	272 / 13.59	128 / 10.56	285 / 12.38	--	0 / 0	412 / 6.76	870 / 18.12	409 / 11.51	0 / 0	0.2	0.8	2452	22.9	34
12C1	Volcanics	9- 3-52[de]	2740	7.9	216 / 10.78	120 / 9.87	250 / 10.87	3 / 0.09	0 / 0	338 / 5.54	826 / 17.20	330 / 9.31	4 / 0.07	0.2	0.8	1960	20.8	34
		10-22-52	2825	7.8	243 / 12.1	146 / 12.0	240 / 10.4	4 / 0.09	0 / 0	403 / 6.60	840 / 17.5	340 / 9.60	4 / 0.06	0.4	0.5	2280	22.5	30
14A1[f]	Alluvium	6-25-52[a]	3110	7.4	236 / 11.78	153 / 12.60	290 / 12.61	--	0 / 0	411 / 6.74	890 / 18.53	411 / 11.57	5 / 0.08	0.4	0.7	2725	25.2	34

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Laboratory, Inc.
c Calculated by difference.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents, see Table B 17.
f Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.

TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-14C1	Alluvium, San Pedro Fm. & Fox Canyon	11-15-51[g]	--	7.6	220 / 11.00	69 / 5.65	240 / 10.43	1 / 0.02	80 / 2.66	180 / 2.95	670 / 13.95	280 / 7.8[illegible]	Tr.	--	--	1905	16.1	39
14F1	San Pedro Fm. & Volcanics	12-14-51[g]	--	7.2	140 / 7.00	47 / 3.87	155 / 6.74	5 / 0.13	0 / 0	332 / 5.44	375 / 7.81	160 / 4.51	Tr.	--	--	1134	10.7	38
14J2	Alluvium & Volcanics	9- 3-52	1773	7.8	148 / 7.39	70 / 5.75	135 / 5.81	3 / 0.06	0 / 0	354 / 5.80	377 / 7.86	180 / 5.08	9 / 0.15	0.4	0.4	1228	11.6	31
15C1	Alluvium, San Pedro Fm. & Fox Canyon	7-14-52[a]	1695	7.0	166 / 8.28	54 / 4.47	157 / 6.83	3 / 0.08	0 / 0	291 / 4.77	485 / 10.10	161 / 4.53	6 / 0.10	0.2	0.5	1270	11.4	35
15H1	Fox Canyon	6-25-52[a]	1938	7.6	175 / 8.75	56 / 4.67	184 / 7.99	--	0 / 0	338 / 5.57	522 / 10.88	173 / 5.02	5 / 0.08	0.5	0.6	1330	12.7	37
15Q1	Alluvium, San Pedro Fm. & Fox Canyon	4- 8-49[h]	--	--	56 / 2.80	54 / 4.44	289 / 12.57	9 / 0.23	--	579 / 9.49	98 / 2.04	301 / 8.48	--	--	--	1386	12.8	63
		2-15-51[h]	--	--	100 / 5.00	49 / 4.02	144 / 6.26	--	--	300 / 4.92	319 / 6.65	131 / 3.69	--	--	--	1043	10.3	41
		4-11-51[h]	--	--	128 / 6.40	52 / 4.27	165 / 7.17	5 / 0.13	--	323 / 5.29	377 / 7.85	170 / 4.79	--	--	--	1220	11.6	40
		7-14-52[a]	1360	8.2	93 / 4.63	48 / 3.94	148 / 6.44	6 / 0.15	4 / 0.14	294 / 4.82	310 / 6.46	130 / 3.67	4 / 0.07	0.2	0.4	1012	10.3	42
22K1	--	3-28-49[b]	--	--	94 / 4.70	25 / 2.05	138 / 6.00	17[c] / 0.45	0 / 0	302 / 4.95	263 / 5.46	99 / 2.79	0 / 0	--	0.4	938	8.2	46
		7-10-50[b]	--	7.6	103 / 5.15	28 / 2.30	152 / 6.61	--	0 / 0	314 / 5.15	272 / 5.67	110 / 3.10	0 / 0	--	--	979	8.9	47
		4-30-53[a]	1545	9.8	111 / 5.55	17 / 1.38	132 / 5.73	6 / 0.14	0 / 0	331 / 5.42	161 / 3.35	144 / 4.05	6 / 0.10	--	0.1	803	7.2	45
26K1	Alluvium & Volcanics	9- 3-52	1825	7.4	148 / 7.40	79 / 6.50	132 / 5.74	1 / 0.03	0 / 0	439 / 7.20	305 / 6.36	212 / 5.98	24 / 0.38	0.4	0.1	1260	12.3	29
27H2	--	4-30-53[a]	1414	7.3	131 / 6.55	42 / 3.50	124 / 5.39	4 / 0.10	0 / 0	317 / 5.20	350 / 7.30	113 / 3.18	5 / 0.08	0.3	0.1	1142	9.0	35
2N/20W-19M3	--	7-17-52[a]	1039	7.4	71 / 3.54	17 / 1.39	148 / 6.43	4 / 0.12	0 / 0	258 / 4.23	265 / 5.52	63 / 1.78	3 / 0.05	0.5	0.2	710	7.2	56

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Laboratory, Inc.
c Calculated by difference.
g Analyzed by Division of Highways.
h Analysis obtained from Santa Clara Water Conservation District.

TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.& M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/20W-20E1	--	5- 1-53[a]	--	--	114 / 5.71	44 / 3.65	113 / 4.92	4 / 0.12	0 / 0	258 / 4.24	372 / 7.74	92 / 2.61	6 / 0.10	0.4	<0.1	980	8.7	34
20M2	--	2-13-45[b]	--	--	128 / 6.40	55 / 4.51	191 / 8.52	3[c] / 0.08	Tr.	295 / 4.84	525 / 10.94	132 / 3.73	0 / 0	--	0.5	1329	13.1	44
		11-19-45[b]	--	--	134 / 6.70	56 / 4.59	207 / 9.00	13[c] / 0.34	0 / 0	277 / 4.54	572 / 11.91	148 / 4.18	0 / 0	--	0.6	1407	13.9	44
28A2	--	7-22-52[a]	1605	7.6	104 / 5.21	86 / 7.15	146 / 6.36	2 / 0.05	0 / 0	527 / 8.65	263 / 5.48	138 / 3.90	36 / 0.58	0.0	0.1	1097	10.1	34
28M4	--	7-22-52[a]	2038	7.8	100 / 4.99	96 / 7.97	240 / 10.43	1 / 0.02	0 / 0	648 / 10.62	375 / 7.81	157 / 4.44	46 / 0.74	0.4	0.3	1323	12.8	44
29Q1	--	7-22-52	2020	7.3	102 / 5.10	125 / 10.3	230 / 10.00	2 / 0.05	0 / 0	689 / 11.30	379 / 7.89	197 / 5.55	99 / 1.59	0.4	0.4	1530	14.1	39
30H1	Fox Canyon	9-20-52[a]	--	7.5	94 / 4.68	66 / 5.39	246 / 10.70	8 / 0.19	0 / 0	369 / 6.05	352 / 7.34	257 / 7.23	1 / 0.02	0.4	0.5	1282	14.9	51
31F1	Alluvium	8-20-52[a]	2172	7.3	209 / 10.43	84 / 6.95	218 / 9.47	5 / 0.12	0 / 0	358 / 5.87	682 / 14.18	235 / 6.63	8 / 0.13	0.2	0.4	1708	16.5	35
33R2	Alluvium	7-23-52[a]	1220	7.3	80 / 4.01	68 / 5.63	76 / 3.31	Tr.	0 / 0	452 / 7.41	84 / 1.76	102 / 2.89	60 / 0.96	0.0	0.3	746	5.5	26
2N/21W-23L1	Fox Canyon	6-24-52[a]	617	7.9	66 / 3.28	11 / 0.93	51 / 2.19	--	0 / 0	209 / 3.43	113 / 2.36	26 / 0.72	4 / 0.06	0.9	0.1	460	3.0	34
23R1[f]	--	7-17-52[a]	892	7.6	95 / 4.76	24 / 2.02	70 / 3.02	3 / 0.06	0 / 0	260 / 4.26	154 / 3.22	63 / 1.78	30 / 0.48	0.5	0.2	585	5.1	31
24N1	Alluvium & Fox Canyon	6-24-52[a]	1340	7.9	142 / 7.11	36 / 2.93	110 / 4.78	--	0 / 0	235 / 3.86	350 / 7.30	98 / 2.75	46 / 0.74	0.5	0.4	934	7.7	32
24Q1	Alluvium	6-24-52[a]	2179	7.5	273 / 13.63	66 / 5.46	198 / 8.60	--	0 / 0	251 / 4.12	865 / 18.00	169 / 4.76	1 / 0.02	0.4	0.5	1846	14.1	31
24R2	--	6-24-52[a]	1780	7.8	202 / 10.12	57 / 4.71	158 / 6.87	5 / 0.13	0 / 0	221 / 3.62	632 / 13.18	158 / 4.46	32 / 0.52	0.2	0.5	1525	11.7	32
25K2	Fox Canyon	5-18-46[b]	--	--	279 / 13.95	79 / 6.47	200 / 8.70	--	0 / 0	262 / 4.30	891 / 18.66	206 / 5.81	9 / 0.15	--	0.7	1926	15.2	30

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Lab., Inc.
c Calculated by difference.
f Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.

TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.& M.	Producing Aquifer	Date Sampled	ECx10[6] at 25° C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/21W-25K2	Fox Canyon	3-30-48[b]	--	--	124/2.62	32/3.78	87/3.78	--	0/0	242/3.97	273/5.69	82/2.31	27/0.44	--	0.3	867	6.4	30
		6-24-52[a]	1890	7.6	159/7.94	60/4.94	197/8.57	6/0.15	0/0	316/5.19	557/11.60	168/4.73	3/0.05	0.1	0.2	1492	13.7	40
26F2	Alluvium & San Pedro Fm.	6-25-52[a]	1440	7.8	106/5.32	32/2.66	200/8.70	--	0/0	308/5.06	371/7.73	126/3.56	10/0.16	0.7	0.6	1071	11.4	52
26J1	Alluvium	5- 1-53[a]	2681	7.4	286/14.28	72/5.97	256/11.10	3/0.06	0/0	300/4.93	901/18.80	213/6.00	133/1.83	0.4	0.1	3062	17.1	35
26N3	--	4-30-53[a]	1019	7.3	103/5.14	28/2.36	80/3.48	4/0.09	0/0	230/3.78	269/5.60	64/1.80	7/0.11	0.3	0.1	741	5.9	31
26R1	Alluvium	10-24-50[b]	--	--	148/7.40	40/3.28	91/3.96	14[c]/0.36	--	320/5.25	398/8.28	52/1.47	Tr.	--	0.4	1063	7.6	26
27F4	Fox Canyon	6-24-52[a]	1102	7.4	108/5.42	27/2.22	98/4.28	--	0/0	306/5.02	237/4.93	66/1.86	6/0.10	0.5	0.0	796	6.5	36
28M1	--	7-14-52[a]	2625	7.7	321/16.07	114/9.43	178/7.78	7/0.19	0/0	358/5.87	1150/23.95	107/3.01	5/0.08	0.6	0.6	2280	17.4	25
28Q2	Fox Canyon	2-10-50[b]	--	--	81/4.02	28/2.29	302/13.14	--	--	480/7.75	239/4.97	240/6.77	--	--	0.7	1370	13.2	68
33A1	Alluvium	8-20-52[a]	3318	7.7	378/18.90	102/8.39	360/15.65	2/0.06	0/0	273/4.47	1740/36.20	64/1.80	24/0.38	1.0	1.5	2878	24.1	36
		9- 3-52[ae]	3390	7.6	367/18.35	87/7.22	368/16.00	2/0.05	0/0	270/4.43	1700/35.20	65/1.84	28/0.45	1.1	1.7	2878	23.3	38
		3- 3-53	3012	7.4	346/17.30	76/6.25	330/14.35	3/0.06	0/0	293/4.80	1421/29.60	90/2.54	26/0.42	1.3	1.3	2560	20.7	38
33C2	--	11-25-52[de]	873	7.6	85/4.24	26/2.14	64/2.78	2/0.06	0/0	251/4.11	128/2.66	78/2.20	6/0.09	0.3	0.5	549	5.0	30
34D1	Fox Canyon	2-10-50[b]	--	--	81/4.02	28/2.29	302/13.14	Tr.	0/0	480/7.75	239/4.97	240/6.77	0/0	--	0.7	1370	13.1	68
		7-14-52[ae]	932	7.7	65/3.26	33/2.76	92/4.00	5/0.12	0/0	283/4.64	190/3.96	53/1.49	5/0.08	0.3	0.3	626	5.5	39
34H1	San Pedro Fm. & Fox Canyon	7-14-52[a]	1420	8.2	111/5.54	43/3.53	152/6.60	6/0.15	0/0	239/3.92	409/8.52	119/3.36	1/0.02	0.3	0.6	1086	10.3	42

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Laboratory, Inc.
c Calculated by difference.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents, see Table B 17.
f Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.

TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10⁶ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/21W-34J1	Alluvium	1- 8-52[de]	1490	8.4	168/8.38	60/4.93	90/3.91	2/0.06	0/0	324/5.31	449/9.35	55/1.55	59/0.95	0.5	0.6	1070	8.9	23
35B1	--	5- 1-53[a]	1691	7.4	137/6.87	44/3.52	194/8.43	6/0.14	0/0	316/5.18	499/10.40	132/3.72	3/0.04	0.3	0.2	1253	12.2	44
35J1	Alluvium, San Pedro Fm. & Fox Canyon	6-25-52[a]	2190	7.2	224/11.[illegible]2	72/5.[illegible]1	169/7.35	--	0/0	265/4.34	690/14.37	199/5.62	17/0.28	0.6	0.2	1772	13.3	30
35K1	Fox Canyon	7-14-52[ae]	1950	7.4	146/7.32	54/4.42	227/9.87	6/0.16	0/0	327/5.36	501/10.41	199/5.62	6/0.10	0.3	0.6	1330	14.4	45
35Q1	San Pedro Fm.	7-14-52[a]	850	7.6	87/4.37	31/2.55	74/3.24	2/0.06	0/0	242/3.97	214/4.47	54/1.52	3/0.05	0.3	0.3	608	5.8	32
36A1	San Pedro Fm. & Fox Canyon	6-24-52[a]	1827	7.9	151/7.54	52/4.30	187/8.13	--	0/0	340/5.57	455/9.47	176/4.97	6/0.10	0.9	0.5	1288	12.4	41
36L1	Alluvium	6-14-34[b]	--	--	262/13.10	85/6.97	244/10.61	--	0/0	303/4.97	950/19.80	203/5.73	--	--	0.7	2047	17.6	34
36L2	San Pedro Fm. & Fox Canyon	5- 3-47[h]	--	--	122/6.10	62/5.10	217/9.44	14/0.36	--	369/6.04	398/8.29	235/6.62	--	--	0.4	1417	14.9	45
		6-25-52[a]	2070	7.2	147/7.34	51/4.17	250/10.87	--	0/0	353/5.79	451/9.38	246/6.95	4/0.06	0.7	0.6	1405	15.0	48
36N1	Alluvium & San Pedro Fm.	6-24-52[a]	2422	7.3	252/12.60	69/5.70	250/10.85	--	0/0	268/4.38	875/18.24	208/5.85	35/0.56	0.6	0.4	2034	16.6	37
36N4	San Pedro Fm.	7-14-52[a]	2100	7.0	122/6.10	68/5.65	230/10.00	8/0.20	0/0	351/5.75	442/9.22	240/6.77	2/0.03	0.3	0.6	1384	15.8	46
							Tributary to Pleasant Valley											
2N/20W-21B1	San Pedro Fm. & Fox Canyon	7- 9-46[b]	--	7.6	49/2.45	40/3.29	370/16.10	--	--	723/11.86	341/7.10	103/2.90	Tr.	--	1.2	1626	16.3	73
		6-21-49[b]	--	8.3	8/0.40	5/0.41	400/17.40	--	11/0.37	378/6.20	138/7.81	377/3.89	Tr.	--	1.2	1321	17.4	96
21J1	San Pedro Fm.	11-26-52[de]	914	7.8	42/2.10	49/4.03	84/3.65	3/0.07	0/0	344/5.64	76/1.58	90/2.54	Tr.	0.2	0.2	594	4.2	37

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Laboratory, Inc.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents, see Table B-17.
h Analysis obtained from Santa Clara Water Conservation District.

TABLE B 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/20W-21J3	San Pedro Fm.	7-22-52[a]	986	7.9	53 2.63	45 3.72	77 3.33	3 0.06	0 0	356 5.84	66 1.37	90 2.52	3 0.05	0.2	0.1	568	3.9	34
21L2	Fox Canyon	4- 1-47[b]	--	7.4	72 3.58	48 3.95	30 1.30	--	--	244 4.00	78 1.85	89 2.50	--	--	0.2	635	4.8	15
21M1	--	7-22-52[a]	1097	7.7	47 2.34	52 4.28	107 4.64	4 0.10	0 0	389 6.39	101 2.11	109 3.07	0 0	0.0	0.1	674	5.0	41
21R1	San Pedro Fm.	8- 6-46[b]	--	8.0	75 3.75	81 6.64	165 7.17	--	--	520 8.53	240 5.01	135 3.81	--	--	0.3	1216	9.0	41
		10-30-47[b]	--	8.5	67 3.35	72 5.90	161 7.00	--	--	473 7.75	183 3.82	160 4.51	Tr.	--	0.2	1116	8.5	43
		6-21-49[b]	--	7.5	50 2.50	66 5.40	173 7.51	--	--	426 6.98	70 1.45	198 5.59	--	--	0.2	1065	8.4	49
22M1	--	2-12-47[b]	--	--	59 2.95	50 4.10	53 2.30	--	--	308 5.05	65 1.35	98 2.74	6 0.10	--	0.1	638	4.3	25
		6-21-49[b]	--	7.6	46 2.30	52 4.26	84 3.69	--	--	352 5.77	76 1.59	96 2.71	--	--	0.2	706	4.5	36
22M2	San Pedro Fm.	5-31-50[b]	--	7.4	58 2.90	49 4.04	50 2.18	--	--	312 5.10	67 1.41	88 2.51	7 0.11	--	0.1	633	4.0	24
28C1	San Pedro Fm.	7-22-52[a]	1633	7.7	70 3.50	89 7.38	160 6.94	2 0.05	0 0	509 8.35	240 5.01	151 4.27	17 0.28	0.2	0.2	1036	9.5	39
2N/21W-23M1	Grimes Canyon	5- 2-49[b]	--	--	120 6.00	43 3.53	110 4.79	--	--	293 4.78	353 7.35	78 2.20	--	--	0.3	997	8.3	33

a Analyzed by Pacific Chemical Consultants.
b Analyzed by Fruit Growers Laboratory, Inc.
c Calculated by difference.
d Analyzed by U.S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
e For analysis of heavy metal constituents, see Table B 17.
f Additional analyses published in Bulletin No. 46-A. (2) For cross index of well numbers, see Appendix E.
g Analyzed by Division of Highways.
h Analysis obtained from Santa Clara Water Conservation District.

TABLE B 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.& M	Producing Aquifer	Date Sampled	ECx10[6] at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Residual Salinity epm	Per Cent Na
1N/19W- 2L1	Modelo Fm.	7-24-52[a]	1042	7.7	116 5.80	50 4.13	58 2.52	2 0.06	0 0	402 6.60	194 4.05	58 1.64	5 0.08	0.9	<0.1	726	5.9	20
5F1	Topanga Fm.	7-24-52[a]	726	7.4	104 5.22	17 1.38	31 1.36	2 0.06	0 0	314 5.15	82 1.72	36 1.01	2 0.04	0.5	0.0	404	2.8	17
7F1	--	7-23-52[a]	1233	7.5	110 5.49	64 5.34	66 2.88	Tr. 0.01	0 0	468 7.67	152 3.17	78 2.19	38 0.62	<0.1	0.1	737	6.0	21
7R3	Volcanics	7-24-52	1244	7.1	143 7.15	90 7.40	33 1.65	2 0.04	0 0	322 5.28	431 8.98	50 1.41	0 0	0.3	Tr.	1065	9.1	[illegible]
8G1	Topanga Fm.	7-24-52[a]	1560	7.4	132 6.58	96 7.97	92 4.00	2 0.06	0 0	356 5.84	478 9.95	94 2.66	1 0.02	0.3	<0.1	1355	12.0	22
		8-21-52	1562	7.7	119 5.95	98 8.05	100 4.35	3 0.07	0 0	342 5.60	470 9.80	113 3.13	1 0.02	0.3	0.1	1230	12.5	24
9G1	Modelo Fm.	7-22-52	1515	7.7	135 6.74	109 8.96	115 5.00	3 0.08	0 0	337 5.52	517 10.8	124 3.50	4 0.06	0.4	0.1	1370	14.0	24
9H3	Modelo Fm.	7-24-52[a]	1670	7.4	121 6.04	85 7.04	170 7.40	4 0.12	0 0	472 7.75	453 9.45	115 3.25	4 0.06	0.1	0.1	1217	12.9	36
9K1	Alluvium & Modelo Fm.	8- 2-52	1770	7.4	129 6.44	93 7.62	220 9.57	10 0.25	0 0	547 8.96	528 11.0	123 3.46	7 0.11	0.1	0.2	1440	14.9	40
9K4	Modelo Fm.	7-24-52[a]	2540	7.2	206 10.30	117 9.70	250 10.87	13 0.33	0 0	582 9.55	820 17.10	161 4.63	12 0.20	0.2	0.2	2064	20.9	35
14K3	Alluvium & Topanga Fm.	7-24-52	1629	7.4	124 6.20	107 8.80	94 4.09	4 0.10	0 0	310 5.08	480 10.0	124 3.50	1 0.02	0.3	0.1	1260	13.0	21
15B1	Volcanics	7-24-52[a]	794	7.3	88 4.40	45 3.72	28 1.22	2 0.05	0 0	258 4.22	209 4.35	21 0.59	4 0.06	0.2	0.0	619	5.0	13
18B10	Volcanics	7-24-52[a]	1202	8.1	67 3.36	91 7.50	60 2.61	6 0.14	0 0	343 5.62	274 5.71	71 2.01	4 0.07	0.2	<0.1	822	8.0	19
18H15	Volcanics	7-24-52[a]	--	6.9	130 6.50	95 7.80	76 3.28	1 0.02	0 0	364 5.96	57 1.18	346 9.75	32 0.52	0.1	<0.1	1118	11.1	19
1N/20W- 3J1	Volcanics	7-23-52[a]	804	8.3	56 2.82	51 4.22	45 1.95	Tr. 0.01	4 0.13	366 6.00	60 1.26	47 1.33	15 0.24	0.1	0.1	511	3.0	22
11C2	Volcanics	7-23-52	671	7.9	14 0.70	10 0.82	115 5.00	1 0.02	0 0	283 4.64	25 0.52	40 1.13	14 0.23	0.1	0.2	408	5.0	76
12D2	Alluvium & Older Fms.	11-26-52[a]	760	8.3	51 2.54	31 2.54	64 2.76	1 0.03	6 0.20	269 4.42	39 0.81	66 1.85	34 0.55	0.2	0.0	446	3.4	35

a Analyzed by Pacific Chemical Consultants.

TABLE B 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B.&M.	Producing Aquifer	Date Sampled	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/20W-12N1	Volcanics	7-24-52[a]	1010	7.4	94 / 4.72	49 / 4.08	54 / 2.35	1 / 0.03	0 / 0	420 / 6.36	83 / 1.73	65 / 1.84	42 / 0.68	0.2	0.0	662	4.3	21
13E1	Volcanics	7-24-52	606	7.6	55 / 2.75	27 / 2.22	32 / 1.39	1 / 0.02	0 / 0	268 / 4.40	23 / 0.48	40 / 1.13	6 / 0.09	0.2	Tr.	353	2.0	22
15F2	Volcanics	4-30-53[a]	698	7.5	39 / 1.96	40 / 3.29	54 / 2.36	Tr. / 0.01	0 / 0	310 / 5.08	43 / 0.89	62 / 1.74	3 / 0.05	0.4	<0.1	424	2.5	31
15R1	Volcanics	7-23-52[a]	692	7.8	74 / 3.72	30 / 2.51	46 / 2.01	Tr. / 0.01	0 / 0	307 / 5.03	71 / 1.47	48 / 1.36	19 / 0.31	0.2	0.0	449	3.2	24
17K1	Volcanics	7-23-52[a]	698	8.2	39 / 1.95	37 / 3.05	61 / 2.65	1 / 0.02	0 / 0	396 / 4.85	42 / 0.38	63 / 1.77	1 / 0.02	0.2	<0.1	450	2.8	35
22K1	Volcanics	7-23-52[a]	--	7.2	59 / 2.95	24 / 2.91	56 / 2.43	Tr. / 0.01	0 / 0	296 / 4.36	58 / 1.21	72 / 2.04	5 / 0.08	0.1	0.0	480	3.4	29

a Analyzed by Pacific Chemical Consultants.

TABLE B 16

MINERAL ANALYSES OF GROUND WATERS MALIBU HYDROLOGIC UNIT

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Mineral constituents in parts per million / equivalents per million (upper figure ppm, lower figure epm).

Well Number S.B.B.&M.	Date Sampled	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/19W-20E1	7-23-52[a]	437	7.0	48 2.40	17 1.43	20 0.89	1 0.02	0 0	197 3.23	39 0.61	18 0.50	11 0.18	0.2	0.0	277	1.5	19
23K1	4-30-53[a]	1075	7.5	93 4.67	57 4.72	68 2.96	5 0.12	0 0	426 6.97	220 4.58	32 0.90	6 0.10	0.0	<0.1	762	5.5	24
24M2	7-24-52[a]	1613	7.6	64 3.21	11 0.94	325 14.1[illegible]	5 0.13	0 0	606 9.94	306 6.38	55 1.56	16 0.25	0.4	0.0	1115	14.2	77
24P1	7-24-52	2967	7.2	336 16.8	185 15.2	300 13.0	3 0.07	0 0	480 7.88	1360 28.3	220 6.20	63 1.02	0.6	0.4	2880	28.2	30
26C1	8-21-52	649	7.6	42 2.10	32 2.63	60 2.60	2 0.04	0 0	276 4.52	83 1.73	32 0.90	1 0.02	0.1	Tr.	420	2.8	35
28G1	7-23-52[a]	1078	7.3	140 7.00	38 3.18	56 2.43	1 0.01	0 0	337 5.53	251 5.23	64 1.81	1 0.01	0.2	<0.1	732	5.6	19
28L1	7-23-52[a]	960	7.3	132 6.58	33 2.74	62 2.68	1 0.02	0 0	207 3.40	338 7.05	45 1.27	3 0.05	0.2	<0.1	776	5.4	22
29D2	7-23-52	617	7.0	68 3.40	26 2.14	36 1.56	1 0.02	0 0	300 4.92	29 0.61	38 1.07	17 0.27	0.1	Tr.	390	2.2	22
29H3	7-23-52[a]	935	7.1	107 5.36	26 2.19	64 2.80	1 0.02	0 0	293 4.80	214 4.46	40 1.13	9 0.14	0.1	0.1	592	5.0	27
30F1	7-23-52[a]	900	7.3	82 4.08	45 3.68	66 2.85	1 0.01	0 0	340 5.57	51 1.06	123 3.48	28 0.45	0.1	0.1	510	5.0	27
1N/20W-24H1	7-23-52[a]	688	7.3	81 4.03	22 1.84	38 1.67	2 0.05	0 0	366 6.00	20 0.41	37 1.05	1 0.02	0.3	0.1	405	1.7	22
25C2	7-23-52[a]	1018	7.1	131 6.54	41 3.40	60 2.61	2 0.05	0 0	416 6.82	145 3.03	90 2.54	5 0.08	0.1	0.1	707	5.8	21

a Analyzed by Pacific Chemical Consultants.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well number S.B.B.&M.	Date sampled	Mineral constituents in parts per million															
		Fe	Al	Mn	Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Upper Ojai Valley (4-1)									
4N/22W-12F1	1-11-52[a]	0.05	--	0.04	0.00	0.00	0.00	0.00	26	0.000	--	--	--	--	--	--	--
	11-26-52[a]	0.16	0.0	0.08	0.00	0.32	0.0	0.00	16	0.00	--	--	--	--	--	--	--
								Ojai Valley (4-2)									
4N/22W- 5J1	8-20-52[a]	0.00	0.0	0.00	0.00	0.00	0.0	0.00	--	0.00	--	--	--	--	--	--	--
6Q1	1-16-52[a]	0.00	--	0.00	0.00	0.00	0.00	0.00	23	0.00	--	--	--	--	--	--	--
7B1	8-20-52[a]	0.00	0.0	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	--	--	--	--	--
9B1	1- 4-52[a]	0.00	--	0.08	0.00	0.00	0.00	0.00	22	0.00	--	--	--	--	--	--	--
4N/23W- 2B1	8-20-52[a]	0.02	0.0	0.00	0.00	0.00	0.0	0.00	--	0.00	--	--	--	--	--	--	--
12K3	11-26-52[a]	0.0	0.00	0.00	0.00	0.00	0.00	0.00	23	0.00	--	--	--	--	--	--	--
								Piru Basin (4-4.06)									
4N/18W-19P1	1- 9-52[a]	0.00	--	0.03	0.00	4.5	0.00	0.00	29	0.00	--	--	--	--	--	--	--
20M2	5-26-52[b]	0.03	0.1	--	--	--	0.05	--	22	--	1.0	0.4	0.05	0.006	0.3	0.05	--
30G1	5-26-52[b]	0.01	0.14	--	--	--	0.03	--	21	--	0.2	0.6	0.02	--	0.3	0.05	--
31D1	5-26-52[b]	0.01	0.1	--	--	--	0.07	--	13	--	0.5	0.4	0.02	--	0.2	0.03	--
4N/19W-27P1	5-26-52[b]	0.01	0.1	0.2	--	--	0.02	--	25	--	1.0	0.3	0.006	0.01	0.2	0.3	--
33D3	5-27-52[b]	0.02	0.1	--	--	--	0.02	--	10	--	0.9	0.4	0.02	--	0.1	0.04	--
35L1	1- 8-52[a]	0.00	--	0.00	0.00	0.65	0.00	0.00	26	0.00	--	--	--	--	--	--	--
35L2	5-26-52[b]	0.02	0.2	--	--	--	0.02	--	25	--	1.0	0.5	0.02	0.006	0.2	0.06	--
								Fillmore Basin (4-4.05)									
3N/20W- 2A2	5-28-52[b]	0.01	0.07	--	--	--	0.02	--	15	--	0.7	0.6	0.007	0.002	0.09	0.1	--
3N2	1- 8-52[a]	0.00	--	0.00	0.00	0.00	0.00	0.00	29	0.000	--	--	--	--	--	--	--
4N/19W-32M1	5-27-52[b]	0.03	0.10	0.05	--	--	0.006	--	9	--	1.5	0.14	--	0.009	0.05	0.016	0.019

a Analyzed by U. S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
b Analyzed by City of Los Angeles, Department of Water and Power.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well number S.B.B.&M.	Date sampled	Mineral constituents in parts per million															
		Fe	Al	Mn	Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
							Fillmore Basin (4-4.05) (continued)										
4N/20W-25Q2	5-27-52[b]	0.02	0.09	--	0.01	--	0.015	--	10	--	3.7	0.14	--	--	0.1	0.07	0.03
36Q1	5-28-52[b]	0.01	0.1	--	--	--	0.02	--	16	--	0.6	0.6	0.02	--	0.1	0.04	--
	11-25-52[a]	0.08	0.0	0.00	0.00	0.0	0.0	0.00	30	0.01	--	--	--	--	--	--	--
							Santa Paula Basin (4-4.04)										
3N/21W-15C2	11-25-52[a]	0.00	0.1	0.00	0.00	0.00	0.0	0.00	30	0.00	--	--	--	--	--	--	--
							Mound Pressure Area (4-4.03)										
2N/22W-17G1	11-28-52[a]	0.4	0.00	0.30	0.00	0.00	0.00	0.00	39	0.00	--	--	--	--	--	--	--
							Oxnard Plain Forebay Area (4-4.02)										
2N/22W-11R1	11-28-52[a]	0.1	0.00	0.00	0.00	0.60	0.00	0.00	22	0.00	--	--	--	--	--	--	--
14A1	1- 8-52[a]	0.00	--	0.00	0.00	0.00	0.00	0.00	27	0.00	--	--	--	--	--	--	--
15Q1	6-23-52[b]	0.04	0.04	--	--	--	0.007	--	16	--	1.0	0.5	--	--	0.2	0.05	--
23J1	11-28-52[b]	0.009	0.07	--	--	--	0.004	--	9	--	1.9	0.04	--	--	0.06	0.02	0.01
27L1	11-25-52[a]	0.00	0.0	0.00	0.00	0.00	0.0	0.00	31	0.00	--	--	--	--	--	--	--
							Oxnard Plain Pressure Area (4-4.01)										
1N/21W-29B4	9- 5-52[b]	0.03	0.07	0.35	--	--	0.009	--	11	--	1.4	0.08	--	--	0.05	0.02	0.02
31A1	1- 4-52[a]	0.10	--	0.32	0.00	0.00	0.00	0.00	37	0.00	--	--	--	--	--	--	--
1N/22W- 2A2	9- 3-52[a]	0.00	0.16	0.00	0.00	0.00	0.00	0.00	33	0.01	--	--	--	--	--	--	--
12P2	1- 4-52[a]	0.00	--	0.10	0.00	0.00	0.00	0.00	34	0.00	--	--	--	--	--	--	--
13L1	9- 5-52[b]	0.02	0.09	--	--	--	0.006	--	18	--	2.1	0.37	--	--	0.1	0.03	0.03
15D1	10-30-52[a]	0.00	0.1	0.00	0.00	0.00	0.0	0.00	33	0.00	--	--	--	--	--	--	--

a Analyzed by U. S. Geological Survey, Water Quality Branch: unpublished records, subject to revision.
b Analyzed by City of Los Angeles, Department of Water and Power.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well number S.B.B.&M.	Date sampled	Mineral constituents in parts per million															
		Fe	Al	Mn	Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
							Oxnard Plain Pressure Area (4-4.01)(Continued)										
1N/22W-20E1	9- 2-52[b]	0.015	0.10	0.036	--	--	0.02	--	10	--	1.5	0.10	--	--	0.05	0.02	0.03
20R1	9- 2-52[b]	--	0.03	0.7	--	--	0.01	--	4	--	1.4	0.04	--	--	0.06	--	0.08
22N1	9- 5-52[b]	0.015	0.09	0.35	--	--	0.007	--	13	--	1.6	0.22	--	--	0.05	0.02	0.02
23A1	9- 2-52[b]	0.025	0.09	--	--	--	0.005	--	11	--	1.8	0.16	--	--	0.06	0.02	0.02
26M1	11-26-52[b]	0.08	0.04	0.09	--	--	0.002	--	9	--	1.7	0.05	--	0.01	0.06	0.02	0.02
2N/22W-25P1	8-20-52[a]	0.00	0.1	0.00	0.00	0.00	0.0	0.00	--	0.00	--	--	--	--	--	--	--
31R1	9- 2-52[b]	0.01	0.05	0.29	--	--	0.07	--	7	--	1.9	0.19	--	0.009	0.08	0.03	0.03
33F1	9- 2-52[b]	0.03	0.11	--	--	--	0.005	--	10	--	1.7	0.075	--	--	0.04	0.014	0.035
34K1	9- 3-52[b]	0.02	0.24	--	--	--	0.009	--	10	--	2.7	0.20	--	--	0.07	0.03	0.03
							Simi Valley (4-9)										
2N/18W- 8J1	11-28-52[a]	0.0	0.00	0.09	0.00	0.60	0.00	0.00	48	0.00	--	--	--	--	--	--	--
14D2	10-31-52[a]	1.0	0.2	0.32	0.00	0.00	0.0	0.00	25	0.00	--	--	--	--	--	--	--
							Las Posas Valley (4-8)										
2N/19W- 1J1	11-28-52[a]	0.00	0.15	0.01	0.00	0.09	0.00	0.00	29	0.00	--	--	--	--	--	--	--
5J3	10-31-52[a]	0.00	0.1	0.01	0.00	0.00	0.0	0.00	33	0.00	--	--	--	--	--	--	--
2N/20W- 4F1	10-27-52[a]	0.00	0.41	0.01	0.00	0.00	0.00	0.00	30	0.01	--	--	--	--	--	--	--
9F1	1-12-53[b]	0.03	0.15	0.1	--	--	0.035	--	22	--	1.7	0.45	--	--	0.06	0.07	0.02
2N/21W-21K1	11-26-52[a]	0.01	0.14	0.04	0.00	0.00	0.00	0.00	42	0.00	--	--	--	--	--	--	--
3N/19W-29L3	11-25-52[b]	0.009	0.03	--	0.002	--	0.003	--	14	--	0.18	0.24	0.01	--	0.01	0.009	0.05
3N/20W-23H1	11-28-52[a]	0.2	0.00	0.30	0.00	1.00	0.00	0.00	20	0.00	--	--	--	--	--	--	--

a Analyzed by U. S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
b Analyzed by City of Los Angeles, Department of Water and Power.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well number S.B.B.&M.	Date sampled	Fe	Al	Mn	Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
		Mineral constituents in parts per million															
Las Posas Valley (4-3) (continued)																	
3N/20W-27M1	11-28-52[a]	0.2	0.00	0.10	0.00	0.15	0.00	0.00	34	0.00	--	--	--	--	--	--	--
34K1	10-22-52[a]	0.00	0.0	0.00	0.00	0.00	0.0	0.00	31	0.00	--	--	--	--	--	--	--
Arroyo Santa Rosa Valley (4-7)																	
2N/20W-24R1	11-26-52[a]	0.00	0.12	0.00	0.00	0.40	0.00	0.00	55	0.00	--	--	--	--	--	--	--
Pleasant Valley (4-6)																	
1N/21W- 3L1	11-26-52[a]	0.01	0.10	0.00	0.00	0.00	0.00	0.00	39	0.00	--	--	--	--	--	--	--
12C1	9- 3-52[a]	0.00	0.44	0.31	0.00	0.00	0.00	0.00	43	0.00	--	--	--	--	--	--	--
2N/21W-33A1	9- 3-52[b]	--	0.17	3.5	--	--	0.01	--	11	--	3.5	0.06	--	--	0.2	0.5	0.09
33C2	11-25-52[a]	0.00	0.08	0.11	0.00	0.80	0.00	0.00	36	0.00	--	--	--	--	--	--	--
34D1	7-14-52[b]	0.14	0.13	0.03	--	--	0.015	0.04	13	--	0.9	0.32	0.018	--	0.04	0.12	0.02
34J1	1- 6-52[a]	0.00	--	0.00	0.00	0.60	0.00	0.00	31	0.00	--	--	--	--	--	--	--
35K1	7-14-52[b]	0.003	0.19	--	--	--	0.01	--	10	--	1.3	0.11	0.02	0.004	0.05	0.01	0.02
Tributary to Pleasant Valley																	
2N/20W-21J1	11-26-52[a]	0.01	0.12	0.00	0.00	0.01	0.00	0.00	80	0.01	--	--	--	--	--	--	--

a Analyzed by U. S. Geological Survey, Water Quality Branch; unpublished records, subject to revision.
b Analyzed by City of Los Angeles, Department of Water and Power.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER FROM SELECTED WELLS

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER FROM SELECTED WELLS WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/21W-15Q1	6-24-50	--	--	--	334
	7-26-50	--	--	--	118
	8-23-50	--	--	--	143
	9-25-50	--	--	--	133
	3-12-51	--	--	--	71
	4-11-51	--	--	--	171
	6-22-51	--	--	--	133
	7-25-51	--	--	--	124
	8-28-51	--	--	--	131
	7-14-52[b]	1360	8.3	294	130
	7-24-52[c]	--	--	--	139
	3-24-53[c]	--	--	--	131
	6-27-54[b]	1410	7.4	300	130
	8-31-54[c]	--	--	297	128
28C1	5-15-47	--	--	316	75
	5-31-50	--	--	--	79
	7-26-50	--	--	--	74
	8-23-50	--	--	--	74
	9-25-50	--	--	--	75
	3-12-51	--	--	--	70
	4-11-51	--	--	--	70
	6-29-51	--	--	--	93
	7-25-51	--	--	--	69
	3-24-52	--	--	--	68
	7-24-52	--	--	--	64
	9- 5-52[b]	998	7.7	312	70
	3-24-53[c]	--	--	--	68
	4-30-53[c]	--	--	--	83
	6-12-53[c]	--	--	--	65
	7- 3-53[c]	--	--	--	65

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/21W-28C1	7- 8-54[c]	--	--	--	67
	8- 3-54[c]	--	--	--	65
	8-31-54[c]	--	--	314	64
	10-29-54[c]	--	--	--	68
	4- 2-55[c]	--	--	--	70
	7-23-55[c]	--	--	--	70
	8-20-55[c]	--	--	--	71
	12-21-55[b]	1045	7.7	311	73
	6- 8-56[b]	971	7.6	310	68
	12-18-56[b]	1176	7.4	300	123
29D1	4-22-47	--	--	267	49
	5-15-47	--	--	--	45
	6-16-47	--	--	--	41
	7-15-47	--	--	--	45
	8-15-47	--	--	--	42
	9-15-47	--	--	--	42
	10-15-47	--	--	--	40
	11-17-47	--	--	--	46
	3-15-48	--	--	--	45
	4-15-48	--	--	--	45
	6-29-48	--	--	--	48
	8- 2-48	--	--	--	46
	6-15-49	--	--	--	45
	7-29-49	--	--	--	42
	8-29-49	--	--	--	44
	7-26-50	--	--	--	44
	3-19-51	--	--	259	43
	4-11-51	--	--	--	44
	6-20-51	--	--	--	42
	7-25-51	--	--	--	43

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO₃ ppm	Cl ppm
1N/21W-29D1	10-24-51	--	--	--	43
	3-24-52[c]	--	--	--	44
	7-24-52[c]	--	--	--	43
	9-30-52[c]	--	7.6	270	43
	4-30-53[c]	--	--	--	41
	6-12-53[c]	--	--	--	41
	7-31-53[c]	--	--	--	41
	8-31-53[c]	--	--	--	41
	7- 8-54[c]	--	--	--	41
	8- 3-54[c]	--	--	--	43
	4- 2-55[c]	--	--	--	42
29D2	5-31-50	--	--	--	44
	7-26-50	--	--	--	44
	8-23-50	--	--	--	43
	9-25-50	--	--	--	44
	11- 6-50	--	--	--	44
	12-30-50	--	--	--	43
	3-12-51	--	--	--	44
	4-11-51	--	--	--	41
	5-15-51	--	--	--	42
	6-20-51	--	--	--	43
	7-25-51	--	--	--	41
	8-28-51	--	--	--	42
	9-27-51	--	--	--	41
	10-24-51	--	--	--	41
	7-24-52	--	--	--	41
	8-25-52	--	--	--	42
	9-30-52[c]	--	7.3	271	41
	11- 6-52[c]	--	--	--	41
	3-24-53[c]	--	--	--	43

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO₃	Cl ppm
1N/21W-29D2	6-12-53[c]	--	--	--	40
	7- 3-53[c]	--	--	--	41
	7-31-53[c]	--	--	--	41
	8-31-53[c]	--	--	--	41
	10- 5-53[c]	--	--	260	42
	11- 3-53[c]	--	--	--	41
	5- 3-54[c]	--	--	--	39
	6- 1-54[c]	--	--	--	38
	7- 8-54[c]	--	--	--	39
	8- 3-54[c]	--	--	--	41
	8-31-54[c]	--	--	273	42
	10- 1-54[c]	--	--	--	41
	10-29-54[c]	--	--	--	42
	4- 2-55[c]	--	--	--	41
	7-23-55[c]	--	--	--	43
	5-16-57[b]	1260	8.0	284	43
	6-19-58[c]	--	--	--	46
29R3	4-22-47	--	--	304	131
	5-15-47	--	--	--	100
	6-16-47	--	--	--	85
	7-15-47	--	--	--	69
	8-15-47	--	--	--	66
	9-15-47	--	--	--	74
	10-15-47	--	--	--	62
	11-17-47	--	--	--	58
	3-15-48	--	--	--	179
	3-19-48	--	--	--	215
	3-26-48	--	--	--	183
	4- 2-48	--	--	--	135
	4- 9-48	--	--	--	98

a. Analysis obtained from the Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by the Department of Water Resources.
c. Analyzed by the Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/21W-29R3	4-15-48	--	--	--	142
	4-23-48	--	--	--	143
	4-30-48	--	--	--	236
	5- 7-48	--	--	--	466
	5- 8-48	--	--	--	350
	5-14-48	--	--	298	162
	5-21-48	--	--	--	61
	5-28-48	--	--	--	278
	6- 4-48	--	--	--	200
	6-11-48	--	--	--	154
	6-21-48	--	--	--	164
	6-25-48	--	--	--	140
	7- 2-48	--	--	--	200
	7- 9-48	--	--	--	140
	7-16-48	--	--	--	91
	7-24-48	--	--	--	144
	7-30-48	--	--	--	578
	8- 6-48	--	--	--	98
	8-16-48	--	--	--	147
	8-20-48	--	--	--	339
	8-27-48	--	--	--	178
	9- 3-48	--	--	--	201
	9-17-48	--	--	--	166
	9-24-48	--	--	--	331
	10- 1-48	--	--	--	78
	10- 8-48	--	--	--	568
	10-15-48	--	--	--	163
	10-22-48	--	--	--	802
	5- 5-49	--	--	286	305
	6-15-49	--	--	--	382

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/21W-29R3	7-25-49	--	--	--	275
	8-29-49	--	--	--	167
	9-26-49	--	--	--	193
	10-25-49	--	--	298	439
	11- 3-49	--	--	346	600
	11-18-49	--	--	315	292
	3-24-50	--	--	--	215
	5-17-50	--	--	--	434
	7- 3-50	--	--	--	128
	7-26-50	--	--	--	134
	8-23-50	--	--	--	190
	9-25-50	--	--	--	55
	11- 6-50	--	--	--	82
29R4	12-30-50	--	--	--	275
	3-22-51	--	--	--	330
	4-11-51	--	--	--	186
	5-15-51	--	--	--	116
	6-20-51	--	--	--	97
	7-25-51	--	--	--	78
	8-28-51	--	--	--	72
	9-27-51	--	--	--	82
	10-24-51	--	--	--	61
	7-24-52	--	--	--	57
	8-25-52	--	--	--	57
	9-30-52[c]	--	7.5	296	56
	11- 6-52[c]	--	--	--	55
	3-24-53[c]	--	--	--	60
	10- 5-53[c]	--	--	255	54
31L1	2-15-49	--	--	332	110
	12-27-49	--	7.8	284	39

a. Analysis obtained from the Santa Clara Water Conservation District, unless otherwise noted.
c. Analyzed by the Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO₃ ppm	Cl ppm
1N/21W-31L1	4-18-50	--	--	--	40
	5-29-50	--	--	--	41
	7- 3-50	--	--	--	42
	7-26-50	--	--	--	42
	8-23-50	--	--	--	41
	11- 6-50	--	--	--	92
	11-17-50	--	7.7	308	75
	12- 6-50	--	--	--	61
	12-16-50	--	--	327	113
	12-26-50	--	--	--	81
	1- 8-51[e]	--	--	--	63
	1- 8-51	--	--	--	60
	1- 8-51	--	--	--	62
	1- 8-51	--	--	--	80
	1- 8-51	--	--	--	84
	1- 9-51	--	--	300	83
	1- 9-51	--	--	--	85
	3-12-51[f]	--	--	--	42
	3-22-51	--	--	--	41
	3-22-51	--	--	--	41
	3-22-51	--	--	--	41
	3-23-51	--	--	--	40
	3-23-51	--	--	--	41
	3-23-51	--	--	--	41
	3-23-51	--	--	--	40
	3-24-51	--	--	--	41
	3-24-51	--	--	281	41
	3-25-51[b]	--	--	--	41
	7-18-52	952	7.6	280	42
	7-24-52	--	--	--	40

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO₃ ppm	Cl ppm
1N/21W-31L1	11- 6-52[c]	--	--	--	57
	4- 9-53[c]	--	--	--	47
	4-30-53[c]	--	--	--	42
	6-12-53[c]	--	--	--	57
	7- 3-53[c]	--	--	--	41
	7-31-53[c]	--	--	--	40
	8-26-53[b]	992	7.9	259	42
	9- 1-53[c]	--	--	--	39
	10- 5-53[c]	--	--	--	41
	11- 3-53[c]	--	--	--	41
	7- 9-54[b]	1220	7.6	314	83
	12-16-54[b]	1218	7.7	294	97
	6-11-56[bg]	1000	8.2	183	63
	5-20-58[b]	910	8.3	312	60
32G1	2- 9-48	--	7.5	281	47
	3-19-48	--	--	--	43
	4-15-48	--	--	--	45
	5-21-48	--	--	--	44
	6-29-48	--	--	--	45
	8- 2-48	--	--	--	45
	11- 1-48	--	--	--	45
	2-15-49	--	--	--	44
	6- 8-51[c]	--	7.5	--	41
	7-24-52[c]	1068	8.1	179	43
	4- 9-53[c]	--	--	--	65
	6-11-56[bh]	1070	7.4	222	53
	5-20-58[bj]	1078	8.2	204	70
32K1	2- 9-48	--	7.6	254	68
	3-19-48	--	--	--	66
	6-29-48	--	--	--	67

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
e. Pump started 0800 January 1, 1951 and pumped continuously for 24 hours. A sample was collected every four hours.
f. Pump started 0800 March 22, 1951 and pumped continuously for 42 hours. A sample was collected every six hours.
g. Sampled after pumping 12 minutes.
h. Sampled after pumping 10 minutes.
j. Sampled from storage tank; well not pumped for one week.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS - VENTURA COUNTY [a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/21W-31L1	8- 2-48	---	---	---	67
	11- 1-48	---	---	---	65
	6- 8-51c	---	7.6	---	66
	11-19-51c	---	---	---	68
	6-13-52c	---	---	---	70
	7-24-52[b]	1205	8.2	454	67
	4- 9-53[c]	---	---	---	66
	6-11-56[b]	1080	7.6	246	67
	5-20-58[b]	1144	8.3	196	71
32M1	7-26-50	---	---	---	42
	7-30-50	---	---	273	39
	8-23-50	---	---	---	40
	9-25-50	---	---	---	39
	11- 6-50	---	---	---	39
	12- 6-50	---	---	---	45
	12-30-50	---	---	---	40
	3-12-51	---	---	---	39
	5-11-51	---	---	---	42
	6-12-51[c]	---	8.3	---	68
1N/22W-3F4	4-13-30	1320	---	268	41
	5- 6-30	1260	---	256	43
	4- 3-31	1260	---	253	44
	5- 7-31	1250	---	256	43
	6- 3-31	1250	---	268	39
	7-25-31	1240	---	250	41
	9- 4-31	---	---	260	48
	10- 6-31	---	---	263	45
	3- 3-33	---	---	256	43
	5- 1-33	---	---	---	43
	6- 1-33	---	---	---	43

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-3F4	7- 6-33	---	---	---	42
	8- 1-33	---	---	---	42
	8-30-33	---	---	---	43
	10- 3-33	---	---	---	44
	11- 1-33	---	---	---	43
	9-10-35	---	---	---	45
	7-21-36	---	---	256	46
	9- 7-37	---	---	---	48
	9- 1-39	1340	---	268	49
	9-12-41[c]	---	---	268	58
	9-27-45[c]	---	---	265	46
	3-31-47[c]	---	---	295	57
	8-25-53[b]	1360	7.5	289	55
	6-29-54[b]	1410	7.4	276	51
	12-17-54[b]	1385	7.8	205	53
	5-25-55[bk]	1360	7.7	280	48
	10-25-55[e]	1400	7.7	278	49
	6- 8-56[b]	1408	7.4	298	53
	12-18-56[bk]	1420	7.5	292	58
	4- 4-57[b]	1665	7.7	307	62
	10-16-57[b]	1406	7.5	272	57
	4- 8-58[c]	1616	7.3	313	57
	4-22-58[bk]	1622	7.7	308	61
1N/22W-7D1	4- 3-31	1220	---	232	35
	5- 6-31	1120	---	238	41
	6- 3-31	1240	---	247	41
	7- 2-31	1220	---	244	39
	7-25-31	1210	---	238	39
	9- 4-31	---	---	250	42
	10- 5-31	---	---	256	42

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
e. Pump started 0800 January 1, 1951, and pumped continuously for 24 hours. A sample was collected every four hours.
k. Sampled after pumping 5 minutes.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS - VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx106 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-7D1	11- 4-31	--	--	251	42
	12- 1-31	--	--	247	42
	6- 3-32	--	--	249	42
	7- 5-32	--	--	251	47
	8- 5-32	--	--	246	43
	3- 3-32	--	--	250	41
	4- 3-33	--	--	--	40
	5- 1-33	--	--	--	40
	6- 1-33	--	--	--	40
	7- 6-33	--	--	--	42
	8- 1-33	--	--	--	40
	8-30-33	--	--	--	41
	10- 3-33	--	--	--	41
	11- 1-33	--	--	--	41
	7- 5-34	--	--	--	41
	8- 2-34	--	--	--	41
	9- 8-34	--	--	--	42
	9-10-35	--	--	--	40
	7-21-36	--	--	247	43
	8-22-36	--	--	--	40
	9- 7-37	--	--	--	41
	7- 3-50	--	--	243	38
	7-26-50	--	--	--	38
	8-23-50	--	--	--	39
	9-25-50	--	--	--	39
	11- 6-50	--	--	--	40
	12- 6-50	--	--	--	39
	12-30-50	--	--	--	38
	3-12-51	--	--	--	39
	4-11-51	--	--	--	38

Well Number S.B.B. & M.	Date	ECx106 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-7D1	5-15-51	--	--	--	39
	6-20-51	--	--	--	38
	7-25-51	--	--	--	38
	8-28-51	--	--	--	38
	9-27-51	--	--	--	38
	10-24-51	--	--	--	37
	6- 4-52[b]	1190	7.7	246	40
	6-25-52[b]	1192	8.2	249	39
	7-24-52[c]	--	--	--	38
	8-25-52[c]	--	--	--	38
	9-30-52[c]	--	7.7	244	39
	11- 6-52[c]	--	--	--	38
	3-24-53[c]	--	--	--	39
	4-30-53[c]	--	--	--	38
	6-12-53[c]	--	--	--	39
	7- 3-53[c]	--	--	--	39
	7-31-53[c]	--	--	--	39
	8-25-53[b]	1168	7.4	249	39
	9- 1-53[c]	--	--	245	39
	10- 5-53[c]	--	--	245	39
	11- 3-53[c]	--	--	--	39
	5- 3-54[c]	--	--	--	36
	6- 2-54[c]	--	--	--	37
	6-29-54[b]	1180	7.7	242	39
	7- 8-54[c]	--	--	--	38
	8- 3-54[c]	--	--	--	39
	8-31-54[c]	--	--	240	40
	10- 2-54[c]	--	--	--	39
	10-29-54[c]	--	--	--	40
	4- 2-55[c]	--	--	--	39

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS - VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-7D1	4-23-55[c]	--	--	--	39
	5-24-55[c]	--	--	--	39
	7-23-55[c]	--	--	--	41
	8-20-55[c]	--	--	--	42
	12-22-55[b]	1208	7.6	250	41
	9-14-56[b]	1190	7.5	244	37
	12-18-56[b]	1150	7.7	250	48
	5-16-57[b]	1255	8.1	259	43
	12-11-57[b]	1066	7.6	239	45
	4-22-58[b]	1253	7.5	247	48
	6-19-58[d]	--	--	--	41
1N/22W-18E1	4- 3-31	1240	--	284	46
	5- 6-31	1260	--	244	43
	6- 3-31	1270	--	250	43
	7- 2-31	1230	--	253	43
	7-25-31	1250	--	244	44
	9- 4-31	--	--	258	45
	10- 5-31	--	--	256	46
	11- 5-31	--	--	255	45
	12- 2-31	--	--	251	46
	6- 3-32	--	--	255	45
	7- 5-32	--	--	258	49
	8- 5-32	--	--	254	45
	3- 3-33	--	--	256	43
	3- 4-33	--	--	--	42
	5- 1-33	--	--	--	42
	6- 1-33	--	--	--	44
	7- 6-33	--	--	--	44
	8- 1-33	--	--	--	43
	8-30-33	--	--	--	42

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-18E1	10- 3-33	--	--	--	43
	11- 1-33	--	--	--	44
	7- 5-34	--	--	--	45
	8- 2-34	--	--	--	45
	9- 8-34	--	--	--	43
	9-10-35	--	--	--	44
	7-21-36	--	--	250	45
	8-22-36	--	--	--	44
	9- 7-37	--	--	--	44
	12-20-39	--	--	244	43
	8-23-40	--	--	--	43
	9-27-45	--	--	225	44
	8- 2-46	--	--	--	43
	4-16-47	--	--	--	44
	5-15-47	--	--	--	42
	6-16-47	--	--	--	42
	7-15-47	--	--	--	42
	8-15-47	--	--	--	42
	9- 1-47	--	--	--	42
	9-15-47	--	--	--	43
	10-15-47	--	--	--	42
	11-17-47	--	--	--	41
	2- 9-48	--	--	--	41
	3-15-48	--	--	--	43
	4-15-48	--	--	--	42
	6-29-48	--	--	--	42
	8- 2-48	--	--	--	42
	11- 1-48	--	--	--	42
	3-27-49	--	--	--	43
	4- 9-49	--	--	--	44

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained from United Water Conservation District.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS - VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-18E1	5- 5-49	--	--	250	44
	6-15-49	--	--	250	43
	7-25-49	--	--	--	42
	8-29-49	--	--	--	43
	9-26-49	--	--	--	42
	10- 8-49	--	--	--	41
	10-14-49	--	--	--	41
	10-25-49	--	--	--	42
	3-24-50	--	--	--	43
	5-17-50	--	--	--	43
	7- 3-50	--	--	--	43
	7-26-50	--	--	--	43
	8-23-50	--	--	--	44
	9-25-50	--	--	--	40
	11- 6-50	--	--	--	43
	12- 6-50	--	--	--	44
	12-30-50	--	--	--	43
	3-12-51	--	--	--	43
	4-11-51	--	--	--	43
	5-15-51	--	--	--	43
	6-20-51	--	--	--	42
	7-25-51	--	--	--	42
	8-28-51	--	--	--	42
	9-27-51	--	--	--	41
	10-24-51	--	--	--	42
	7-24-52	--	--	--	41
	8-25-52	--	--	--	42
	9-30-52	--	7.9	259	42
	11- 6-52	--	--	--	43
	3-24-53	--	--	--	42

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-18E1	4-30-53[c]	--	--	--	43
	6-12-53[c]	--	--	--	42
	7- 3-53[c]	--	--	--	42
	7-31-53[c]	--	--	--	42
	8-25-53[b]	1230	7.5	249	44
	9- 1-53[c]	--	--	--	42
	10- 5-53[c]	--	--	254	42
	11- 3-53[c]	--	--	--	42
	5- 3-54[c]	--	--	--	40
	6- 2-54[c]	--	--	--	40
	7- 9-54[b]	1155	7.5	256	37
	8- 3-54[c]	--	--	--	42
	8-31-54[c]	--	--	253	43
	9- 2-54[c]	--	--	--	42
	10-29-54[c]	--	--	--	43
	4- 2-55[c]	--	--	--	42
	4-23-55[c]	--	--	--	43
	5-24-55[c]	--	--	--	42
	5-25-55[b]	1220	7.5	253	41
	7-23-55[c]	--	--	--	43
	8-20-55[c]	--	--	--	45
	5-17-56[b]	1240	7.8	249	43
	12-18-56[b]	1145	8.4	139	53
	12-11-57[b]	1087	7.7	242	48
	4-23-58[b]	1225	7.6	250	48
	6-19-58[d]	--	--	--	44
1N/22W-18P1	10-14-49	--	--	--	44
	10-25-49	--	--	--	43
	3-24-50	--	--	--	42
	5-17-50	--	--	--	43

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained from United Water Conservation District.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC\times10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-18P1	7- 3-50	--	--	--	45
	7-26-50	--	--	--	44
	8-23-50	--	--	--	44
	9-25-50	--	--	--	43
	11- 6-50	--	--	--	45
	12-30-50	--	--	--	43
	3-12-51	--	--	--	44
	4-11-51	--	--	--	44
	5-15-51	--	--	--	46
	6-20-51	--	--	--	43
	7-25-51	--	--	--	44
	8-28-51	--	--	--	44
	9-27-51	--	--	--	44
	10-24-51	--	--	--	42
	7-24-51	--	--	--	42
	8-25-52	--	--	--	43
	9-30-52[c]	--	7.8	251	43
	11- 6-52[c]	--	--	--	43
	3-24-53[c]	--	--	--	43
	4-30-53[c]	--	--	--	43
	6-12-53[c]	--	--	--	43
	7- 3-53[c]	--	--	--	43
	7-31-53[c]	--	--	--	42
	9- 1-53[c]	--	--	--	43
	10- 5-53[c]	--	--	--	43
	11- 3-53[c]	--	--	--	43
	5- 3-54[c]	--	--	--	40
	6- 2-54[c]	--	--	--	42
	7- 8-54[c]	--	--	--	42
	8- 3-54[c]	--	--	--	44

Well Number S.B.B. & M.	Date	$EC\times10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-18P1	8-31-54[c]	--	--	253	43
	10- 2-54[c]	--	--	--	43
	10-29-54[c]	--	--	--	44
	4- 2-55[c]	--	--	--	42
	4-23-55[c]	--	--	--	44
	5-25-55[c]	--	--	--	43
	7-23-55[c]	--	--	--	44
	8-20-55[c]	--	--	--	45
	5-16-57[b]	1250	7.6	259	45
19H1	8-29-49	--	--	--	43
	9-26-49	--	--	--	42
	10- 8-49	--	--	--	42
	10-14-49	--	--	--	43
	10-25-49	--	--	--	43
	3-24-50	--	--	--	43
	5-17-50	--	--	--	42
	7- 3-50	--	--	--	43
	7-26-50	--	--	--	43
	8-23-50	--	--	--	42
	11- 6-50	--	--	--	42
	12- 6-50	--	--	--	42
	12-30-50	--	--	--	43
	3-14-51	--	--	250	52
	4-11-51	--	--	--	42
	4-21-51	--	--	--	49
	6-20-51	--	--	--	42
	7-25-51	--	--	--	52
	9-27-51	--	--	--	41
	10-24-51[c]	--	--	--	41
	6- 4-52[b]	1212	7.6	254	46

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$ECx10^6$ at 25^oC	pH	HCO_3 ppm	Cl ppm
1N/22W-19H1	7- 4-52[c]	--	--	--	50
	7-24-52[c]	--	--	--	50
	9-30-52[c]	--	7.3	246	42
	11- 6-52[c]	--	--	--	42
	3-24-53[c]	--	--	--	42
	6-12-53[c]	--	--	--	41
	7- 3-53[c]	--	--	--	42
	7-31-53[c]	--	--	--	42
	9- 1-53[c]	--	--	--	42
	10- 5-53[c]	--	--	245	43
	11- 3-53[c]	--	--	--	43
	5- 3-54[c]	--	--	--	46
	6- 2-54[c]	--	--	--	47
	7- 8-54[c]	--	--	--	63
	7- 9-54[b]	1134	7.4	251	59
	8- 3-54[c]	--	--	--	68
	8-31-54[c]	1328	--	248	82
	9- 9-54[c]	--	--	--	60
	9-14-54[c]	--	--	--	57
	10-29-54[c]	--	--	--	197
	11- 3-54[c]	--	--	--	218
	11-11-54[c]	--	--	--	249
	11-17-54[c]	--	--	--	279
	11-24-54[c]	--	--	--	297
	12- 1-54[c]	--	--	235	338
	12- 8-54[cm]	--	--	--	320
	12-16-54[b]	1520	7.5	228	158
	12-22-54[c]	--	--	--	69
	12-30-54[c]	--	--	--	170
	1- 7-55[c]	--	--	--	341

Well Number S.B.B. & M.	Date	$ECx10^6$ at 25^oC	pH	HCO_3 ppm	Cl ppm
1N/22W-19H1	2- 4-55[c]	--	--	--	437
	4-23-58[b]	1325	7.8	12	388
20E1	3-14-51	--	--	253	132
	3-25-51	--	--	--	115
	4-11-51	--	--	286	530
	4-21-51	--	--	--	82
	4-29-51	--	--	--	83
	4-29-51	--	--	252	85
	6- 4-51	--	--	--	68
	6-20-51	--	--	--	248
	7-25-51	--	--	--	49
	8-28-51	--	--	--	46
	10-24-51	--	--	--	43
	2-25-52	--	--	--	41
	7-24-52	--	--	--	42
	8-25-52	--	--	--	42
	9- 2-52[b]	1142	7.8	249	42
	9-30-52[c]	--	7.8	234	42
	11- 6-52[c]	--	--	--	51
	3-24-53[c]	--	--	--	43
	4-30-53[c]	--	--	--	41
	6-12-53[c]	--	--	--	41
	7- 3-53[c]	--	--	--	41
	7-31-53[c]	--	--	--	41
	9- 1-53[c]	--	--	--	42
	10- 5-53[c]	--	--	193	43
	11- 3-53[c]	--	--	--	43
	5- 3-53[c]	--	--	--	45
	6- 2-54[c]	--	--	--	50
	7- 8-54[c]	--	--	--	51

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources
c. Analyzed by Fruit Growers Laboratory, Incorporated.
m. Sampled after pumping 17 hours.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-20E1	7- 9-54[b]	1242	7.8	226	51
	8- 3-54[c]	--	--	--	67
	8-31-54[c]	1328	--	241	82
	9- 9-54[c]	--	--	--	85
	9-14-54[c]	--	--	--	91
	9-22-54[c]	--	--	--	98
	9-29-54[c]	--	--	--	109
	10- 6-54[c]	--	--	--	94
	10-13-54[c]	--	--	--	162
	10-20-54[c]	--	--	--	177
	10-27-54[c]	--	--	--	166
	11-17-54[c]	--	--	--	201
	11-24-54[c]	--	--	--	183
	11-24-54[cn]	--	--	--	172
	12- 1-54[c]	--	--	--	179
	12- 8-54[c]	--	--	229	165
	12-15-54[c]	--	--	--	164
	12-16-54[b]	1520	7.5	228	158
	12-22-54[c]	--	--	--	166
	12-29-54[c]	--	--	--	168
	1-14-55[c]	--	--	--	168
	1-21-55[c]	--	--	--	164
	2-11-55[c]	--	--	--	169
	2-17-55[c]	--	--	--	173
	2-25-55[c]	--	--	--	168
	3- 3-55[c]	--	--	--	168
	3-10-55[c]	--	--	--	174
	3-17-55[c]	--	--	--	175
	3-24-55[c]	--	--	--	193
	4- 2-55[c]	--	--	--	220
1N/22W-20E1	4- 7-55[c]	--	--	--	230
	4-14-55[c]	--	--	--	259
20N1	4- 3-31	1180	--	247	43
	5- 6-31	1170	--	250	39
	6- 3-31	1160	--	244	41
	7- 2-31	1180	--	256	37
	7-25-31	1170	--	256	39
	9- 4-31	--	--	252	45
	10- 5-31	--	--	252	42
	11- 4-31	--	--	254	42
	12- 1-31	--	--	248	42
	6- 3-32	--	--	250	43
	7- 5-32	--	--	251	47
	8- 5-32	--	--	248	43
	3- 3-33	--	--	249	41
	4- 3-33	--	--	--	41
	5- 1-33	--	--	--	48
	6- 1-33	--	--	--	45
	7- 6-33	--	--	--	44
	8- 1-33	--	--	--	46
	8-30-33	--	--	--	48
	10- 3-33	--	--	--	45
	11- 3-33	--	--	--	43
	7- 5-34	--	--	--	59
	8- 2-34	--	--	--	71
	9- 8-34	--	--	--	71
	9-10-35	--	--	--	122
	7-21-36	--	--	248	103
	8-22-36	--	--	--	154
	9-7 -37	--	--	--	78

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
n. Sampled after pumping 5 hours.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-20N1	12-20-39	--	--	232	49
	8-23-40	--	--	--	42
	9-27-45	--	--	229	43
	8- 2-46	--	--	--	56
	4-16-47	--	--	--	49
	5-15-47	--	--	--	45
	5-23-47	--	--	--	45
	6-16-47	--	--	--	45
	7-15-47	--	--	--	58
	8-15-47	--	--	--	92
	9- 1-47	--	--	--	80
	9-15-47	--	--	--	50
	10-15-47	--	--	--	47
	11-17-47	--	--	--	43
	2- 9-48	--	--	--	45
	3-15-48	--	--	--	94
	3-19-48	--	--	--	105
	3-26-48	--	--	--	95
	4- 2-48	--	--	--	107
	4- 9-48	--	--	--	118
	4-15-48	--	--	--	110
	4-23-48	--	--	--	110
	4-30-48	--	--	242	106
	5- 7-48	--	--	--	92
	5-21-48	--	--	--	118
	5-28-48	--	--	--	120
	6- 4-48	--	--	--	112
	6-11-48	--	--	--	122
	5-14-48	--	--	--	98
	6-18-48	--	--	--	132

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-20N1	6-25-48	--	--	--	166
	7- 2-48	--	--	--	191
	7- 9-48	--	--	--	205
	7-16-48	--	--	248	257
	7-24-48	--	--	--	257
	7-30-48	--	--	--	262
	8- 6-48	--	--	--	142
	8-16-48	--	--	--	120
	8-20-48	--	--	--	152
	8-27-48	--	--	--	225
	9- 3-48	--	--	--	91
	9-10-48	--	--	--	97
	9-17-48	--	--	--	77
	9-24-48	--	--	--	240
	10- 1-48	--	--	--	116
	10- 8-48	--	--	--	96
	10-15-48	--	--	--	102
	10-22-48	--	--	--	144
	2-15-49	--	--	--	42
	3-27-49	--	--	--	107
	4- 9-49	--	--	--	77
	5- 5-49	--	--	--	42
	6-15-49	--	--	--	861
	6-23-49	--	--	--	287
	6-25-49	--	--	--	146
	6-26-49	--	--	--	250
	6-27-49	--	--	--	168
	6-28-49	--	--	--	111
	6-29-49	--	--	--	85
	6-30-49	--	--	--	67
	7- 1-49	--	--	--	94
	7-25-49	--	--	--	65
	8-29-49	--	--	--	57
	10- 7-49p	--	--	--	1225
	10- 7-49q	--	--	204	8946

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
p. Sampled after pumping 2 minutes.
q. Sampled after pumping 15 minutes.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10[6] at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-20N1	10- 7-49	--	--	--	8443
	10- 7-49	--	--	--	8410
	10- 7-49	--	--	--	8378
	10- 7-49	--	--	--	8349
	10- 7-49	--	--	--	8359
	10- 8-49	--	--	--	8379
	10-25-49	--	--	--	9475
	11-18-49	--	--	--	10700
	12-20-49	--	--	--	11375
	2-22-50	--	--	--	10860
	3-23-50	--	--	213	4225
21L1	9- 7-51[b]	890	--	--	52
	12-31-51[b]	705	--	253	71
	1- 7-52[b]	686	8.2	256	71
	1-14-52[b]	728	8.2	249	71
	1-21-52[b]	712	--	255	92
	1-28-52[b]	682	--	256	57
	2- 4-52[b]	637	--	270	54
	2-11-52[b]	658	--	265	65
	2-18-52[b]	637	--	261	55
	2-25-52[b]	640	--	272	57
	3- 2-52[b]	--	--	180	--
	3- 4-52[b]	759	--	268	62
	3-10-52[b]	759	--	253	63
	3-14-52[c]	--	--	--	39
	3-17-52[b]	759	--	277	55
	4- 6-52[b]	--	--	221	--
	4-21-52[b]	--	--	258	--
	8-25-52[c]	--	--	--	40
	9-30-52[c]	--	7.8	262	41

Well Number S.B.B. & M.	Date	ECx10[6] at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-21L1	11- 6-52[c]	--	--	--	40
	3-24-53[c]	--	--	--	41
	4-30-53[c]	--	--	--	44
	6-12-53[c]	--	--	--	43
	7- 3-53[c]	--	--	--	55
	7-31-53[c]	--	--	--	60
	8- 6-53[c]	--	--	--	67
	8-13-53[c]	--	--	--	69
	8-20-53[c]	--	--	--	57
	8-25-53[bk]	1234	7.5	249	56
	8-27-53[c]	--	--	--	52
	9- 3-53[c]	--	--	--	78
	10- 5-53[c]	--	--	--	111
	10-15-53[c]	--	--	--	133
	10-22-53[c]	--	--	--	95
	10-29-53[c]	--	--	--	163
	11- 6-53[c]	--	--	--	161
	11-12-53[c]	--	--	--	162
	11-19-53[c]	--	--	--	163
	11-30-53[c]	--	--	--	171
	12- 3-53[c]	--	--	--	138
	12-12-53[c]	--	--	--	147
	12-17-53[c]	--	--	--	181
	12-24-53[c]	--	--	--	170
	12-31-53[c]	--	--	--	205
	1- 7-54[c]	--	--	--	205
	1-14-54[c]	--	--	--	218
	1-21-54[c]	--	--	--	216
	1-28-54[c]	--	--	--	184
	2- 4-54[c]	--	--	--	192

a. Analysis obtained from the Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by the Department of Water Resources
c. Analyzed by the Fruit Growers Laboratory, Incorporated.
k. Sampled after pumping 5 minutes.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-21L1	2-11-54[c]	--	--	--	201
	2-18-54[c]	--	--	--	193
	2-25-54[c]	--	--	--	196
	3- 4-54[c]	--	--	--	201
	3-11-54[c]	--	--	--	293
	3-26-54[c]	--	--	--	86
	4- 1-54[c]	--	--	--	209
	4- 2-54[c]	--	--	--	153
	4- 8-54[c]	--	--	--	261
	4- 9-54[c]	--	--	--	165
	4-15-54[c]	--	--	--	276
	4-22-54[ck]	--	--	--	97
	4-29-54[cr]	--	--	--	333
	4-29-54[c]	--	--	--	180
	5- 6-54[c]	--	--	--	83
	5-13-54[c]	--	--	--	465
	5-20-54[c]	--	--	--	134
	5-27-54[ck]	--	--	--	324
	6- 3-54[c]	--	--	--	523
	6- 3-54[c]	--	--	--	284
	6-10-54[c]	--	--	--	309
	6-17-54[c]	--	--	--	522
	6-24-54[c]	--	--	--	226
	6-27-54[b]	2024	8.1	222	354
	7- 8-54[c]	--	--	--	371
	8- 5-54[c]	--	--	--	1080
	4-16-58[bk]	7360	7.1	180	2278
	4-16-58[bs]	11925	7.0	235	3829
	4-16-58[dt]	--	--	--	3800
	4-16-58[du]	--	--	--	3775

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-26A1	4-15-31	1140	--	253	41
	5- 6-31	1150	--	262	37
	6- 4-31	1130	--	256	37
	7- 3-31	1250	--	247	39
	9- 9-31	--	--	271	43
	10- 5-31	--	--	264	42
	4-22-47	--	--	251	45
	5-15-47	--	--	--	45
	6-16-47	--	--	--	44
	7-15-47	--	--	--	45
	8-15-47	--	--	--	47
	9-15-47	--	--	--	45
	10-15-47	--	--	--	44
	11-17-47	--	--	--	42
	3-15-48	--	--	--	44
	4-15-48	--	--	--	43
	6-29-48	--	--	--	43
	5- 5-49	--	--	255	44
	6-15-49	--	--	--	44
	7-25-49	--	--	--	44
	9-26-49	--	--	--	45
	3-24-50	--	--	--	44
	5-17-50	--	--	--	43
	7-26-50	--	--	--	43
	8-23-50	--	--	--	44
	11- 6-50	--	--	--	45
	12-30-50	--	--	--	44
	3-12-51	--	--	--	43
	4-11-51	--	--	--	43
	5-15-51	--	--	--	44

a. Analysis obtained from the Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by the Fruit Growers Laboratory, Incorporated.
d. Analysis obtained by United Water Conservation District.
k. Sampled after pumping 5 minutes.
r. Sampled after pumping 3 hours.
s. Sampled after pumping 25 minutes.
t. Sampled after pumping 20 minutes.
u. Sampled after pumping 1 hour and 30 minutes.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$ECx10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-26A1	6-20-51	--	--	--	42
	7-25-51	--	--	--	42
	8-28-51	--	--	--	41
	9-27-51	--	--	--	42
	10-24-51	--	--	--	42
	6- 6-52[b]	1181	7.7	254	45
	7-24-52[c]	--	--	--	42
	8-25-52[c]	--	--	--	43
	9-30-52[c]	--	7.6	254	45
	11- 6-52[c]	--	--	--	41
	3-24-53[c]	--	--	--	42
	4-30-53[c]	--	--	--	42
	6-12-53[c]	--	--	--	41
	7- 3-53[c]	--	--	--	42
	7-31-53[c]	--	--	--	42
	8-25-53[b]	1250	7.7	251	43
	9- 1-53[c]	--	--	--	41
	10- 5-53[c]	--	--	255	42
	11- 3-53[c]	--	--	--	42
	5- 3-54	--	--	--	39
	6- 2-54[c]	--	--	--	39
	6-27-54[b]	1185	7.8	252	44
	7- 8-54[c]	--	--	--	40
	8- 3-54[c]	--	--	--	42
	8-31-54[c]	--	--	253	43
	10- 2-54[c]	--	--	--	42
	10-29-54[c]	--	--	--	42
	4- 2-55[c]	--	--	--	41
	7-23-55[c]	--	--	--	43
	12-22-55[b]	1145	7.8	262	39
1N/22W-26A1	6- 8-56[b]	1042	7.7	264	40
	12- 8-56[b]	1090	7.3	256	48
	12-11-57[b]	1029	7.7	249	46
26K2	6-13-50	--	--	264	44
	7-26-50	--	--	260	42
	9-25-50	--	--	--	42
	3-12-51	--	--	--	42
	6-20-51	--	--	--	41
	7-25-51	--	--	--	41
	8-28-51	--	--	--	40
	9-27-51	--	--	--	40
	10-24-51	--	--	--	41
	8-25-52[c]	--	--	--	41
	3-24-53[c]	--	--	--	42
	4-30-53[c]	--	--	--	41
	8- 3-53[c]	--	--	--	41
	10- 5-53[c]	--	--	257	42
	6- 2-54[c]	--	--	--	40
	7-31-54[c]	--	--	--	44
	8-28-54[c]	--	--	263	45
	4- 1-55[c]	--	--	--	38
	7-23-55[c]	--	--	--	51
26R1	5-31-50	--	--	270	39
	8-23-50	--	--	--	40
	9-25-50	--	--	--	39
	3-12-51	--	--	--	40
	4-11-51	--	--	--	40
	6-20-51	--	--	--	39
	7-25-51	--	--	--	38
	8-28-51	--	--	--	38

a. Analysis obtained from the Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by the Department of Water Resources.
c. Analyzed by the Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO3 ppm	Cl ppm
1N/22W-26R1	10-24-51	--	--	--	39
	6- 6-52[b]	1072	8.0	280	41
	7-24-52[c]	--	--	--	39
	8-25-52[c]	--	--	--	39
	9-30-52[c]	--	7.4	283	39
	11- 6-52[c]	--	--	--	39
	3-24-53[c]	--	--	--	39
	6-16-53[c]	--	--	--	37
	7- 3-53[c]	--	--	--	39
	7-31-53[c]	--	--	--	39
	9- 1-53[c]	--	--	--	38
	10- 5-53[c]	--	--	286	39
	11- 3-53[c]	--	--	--	39
	7- 8-54[c]	--	--	--	38
	8- 3-54[c]	--	--	--	39
	8-31-54[c]	--	--	300	40
	10- 2-54[c]	--	--	--	39
	10-29-54[c]	--	--	--	40
	4- 2-55[c]	--	--	--	40
	5-24-55[c]	--	--	--	41
	7-23-55[c]	--	--	--	40
	8-20-55[c]	--	--	--	41
	5-17-57[b]	1010	7.8	331	43
28A2	5- 5-49	--	--	255	56
	5-31-50	--	--	--	44
	7-26-50	--	--	--	43
	8-23-50	--	--	--	44
	9-25-50	--	--	--	42
	11- 6-50	--	--	--	43
	12-30-50	--	--	--	42

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO3 ppm	Cl ppm
1N/22W-28A2	3-12-51	--	--	--	43
	4-11-51	--	--	--	42
	5-15-51	--	--	--	42
	6-20-51	--	--	--	41
	7-25-51	--	--	--	42
	8-28-51	--	--	--	41
	9-27-51	--	--	--	40
	10-24-51	--	--	--	41
	7-24-52	--	--	--	40
	8-25-52	--	--	--	41
	9-30-52	--	7.4	257	41
	11- 6-52	--	--	--	42
	3-24-53	--	--	--	41
	8-25-53[b]	1288	7.6	254	42
	10- 1-53[c]	--	--	245	42
	6-27-54[b]	1200	7.6	258	44
	8-31-54[c]	--	--	261	42
	12-16-54[b]	1198	7.8	253	40
	5-25-55[b]	1000	7.8	256	41
	10-25-55[1]	1140	8.0	262	36
	5-17-56[b]	1180	8.0	264	43
	12-18-56[b]	1200	7.7	262	49
	12-11-57[b]	1131	7.1	262	71
	4-16-58[b]	1130	7.5	278	43
29A2	2-27-28	--	--	249	40
	4- 3-31	1210	--	241	44
	5- 6-31	1210	--	250	43
	6- 3-31	1210	--	253	41
	7- 2-31	1200	--	253	41
	7-25-31	1200	--	250	43

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
1. Analyzed by United States Geological Survey.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	9- 4-31	--	--	255	44
	10- 5-31	--	--	250	45
	11- 4-31	--	--	254	43
	12- 1-31	--	--	253	43
	6- 3-32	--	--	250	47
	7- 5-32	--	--	251	50
	8- 5-32	--	--	252	45
	3- 3-33	--	--	245	52
	4- 3-33	--	--	--	51
	5- 1-33	--	--	--	47
	6- 1-33	--	--	--	45
	7- 6-33	--	--	--	46
	8- 1-33	--	--	--	44
	8-30-33	--	--	--	43
	10- 3-33	--	--	--	43
	11- 1-33	--	--	--	44
	7- 5-34	--	--	--	44
	8- 2-34	--	--	--	43
	9- 8-34	--	--	--	42
	9-10-35	--	--	--	42
	7-21-36	--	--	250	43
	8-22-36	--	--	--	42
	9- 7-37	--	--	--	42
	12-20-39	--	--	224	55
	8-23-40	--	--	--	41
	9-27-45	--	--	223	42
	8- 2-46	--	--	--	42
	3-31-47	--	--	253	42
	4-16-47	--	--	--	41
	5-15-47	--	--	--	40

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	6-16-47	--	--	--	41
	7-15-47	--	--	--	40
	8-15-47	--	--	--	41
	9- 1-47	--	--	--	39
	9-15-47	--	--	--	43
	10-15-47	--	--	--	40
	11-17-47	--	--	--	39
	2- 9-48	--	--	--	40
	3-15-48	--	--	--	40
	4-15-48	--	--	--	42
	5-21-48	--	--	--	40
	6-29-48	--	--	--	40
	8- 2-48	--	--	--	41
	9- 1-48	--	--	--	40
	11- 1-48	--	--	--	40
	2-15-49	--	--	--	40
	3-27-49	--	--	--	40
	4- 9-49	--	--	--	42
	5- 5-49	--	--	249	41
	6-15-49	--	--	--	42
	6-23-49	--	--	--	42
	7-25-49	--	--	--	40
	8-29-49	--	--	--	43
	9-26-49	--	--	--	43
	10- 8-49	--	--	--	42
	10-14-49	--	--	--	44
	11- 6-49	--	--	--	45
	3-24-50	--	--	--	42
	5-17-50	--	--	--	42
	7- 3-50	--	--	--	43

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	7-26-50	--	--	--	42
	8-23-50	--	--	--	43
	9-25-50	--	--	--	40
	11- 6-50	--	--	--	42
	12- 6-50	--	--	--	43
	12-30-50	--	--	--	42
	3-12-51	--	--	--	44
	3-25-51	--	--	--	44
	4-11-51	--	--	--	47
	4-21-51	--	--	--	48
	4-29-51	--	--	--	49
	5-15-51	--	--	--	51
	5-25-51	--	--	249	56
	6- 4-51	--	--	--	57
	6-20-51	--	--	--	60
	7-25-51	--	--	247	88
	8-13-51	--	--	--	110
	8-17-51	--	--	--	116
	8-24-51	--	--	--	131
	8-31-51	--	--	--	142
	9- 4-51	--	7.3	244	146
	9- 7-51	--	--	244	151
	9- 7-51[b]	1090	--	--	166
	9- 8-51[b]	1070	--	--	163
	9-10-51[b]	1060	--	--	172
	9-11-51[b]	1355	--	--	176
	9-12-51[b]	1345	--	--	171
	9-13-51[b]	1366	--	--	190
	9-14-51	--	--	--	165
	9-14-51[b]	1355	--	--	173

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	9-15-51[b]	1355	--	--	171
	9-17-51[b]	1395	--	--	187
	9-18-51[b]	1342	--	--	188
	9-19-51[b]	1330	--	--	180
	9-20-51[b]	1250	--	--	168
	9-21-51[b]	1112	--	--	200
	9-21-51	--	--	--	181
	9-24-51[b]	1092	--	--	202
	9-24-51[b]	1136	--	--	207
	9-26-51[b]	1136	--	--	205
	9-27-51[b]	1148	--	--	210
	9-28-51[b]	1162	--	--	220
	9-28-51	--	--	--	199
	9-29-51[b]	1140	--	--	304
	10- 1-51[b]	1166	--	--	238
	10- 2-51[b]	1128	--	--	247
	10- 3-51[b]	1120	--	--	256
	10- 4-51[b]	1120	--	--	252
	10- 5-51	--	--	--	223
	10- 5-51[b]	1184	--	--	248
	10- 6-51[b]	1178	--	--	248
	10- 8-51[b]	1177	--	--	241
	10- 9-51[b]	1170	--	--	227
	10-10-51[b]	1184	--	--	262
	10-11-51[b]	1224	--	--	255
	10-12-51	--	--	--	255
	10-12-51[b]	1211	--	--	269
	10-13-51[b]	1178	--	--	284
	10-15-51[b]	1148	--	--	276
	10-16-51[b]	1178	--	--	291

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	10-17-51[b]	1172	--	--	284
	10-18-51[b]	1185	--	--	291
	10-19-51	--	--	--	274
	10-19-51[b]	1211	--	--	305
	10-22-51[b]	1089	--	244	298
	10-23-51[b]	1048	--	238	298
	10-24-51[b]	1119	--	241	312
	10-25-51[b]	1089	--	234	305
	10-26-51	--	--	--	295
	10-26-51[b]	1035	--	234	298
	10-29-51[b]	1069	--	234	340
	10-30-51[b]	1097	--	237	340
	10-31-51[b]	1035	--	238	333
	11- 1-51[b]	1111	--	243	340
	11- 2-51	--	--	--	297
	11- 2-51[b]	1042	--	236	333
	11- 9-51	--	--	--	323
	11-11-51[b]	--	--	237	--
	11-15-51[b]	1120	--	239	362
	11-16-51	--	--	--	357
	11-16-51[b]	1188	--	237	355
	11-19-51[b]	1198	--	238	368
	11-20-51[b]	734	--	253	106
	11-23-51[b]	673	--	260	64
	11-26-51[b]	1222	--	237	284
	11-27-51	--	--	225	402
	11-27-51[b]	1292	7.7	236	411
	11-28-51[b]	1309	7.7	228	418
	11-29-51[b]	1272	--	233	426
	11-30-51	--	--	--	394

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	11-30-51[b]	1285	--	228	426
	12- 3-51[b]	1292	8.1	262	418
	12- 4-51[b]	1490	6.4	234	426
	12- 5-51[b]	1393	6.5	234	426
	12- 6-51[b]	1393	6.5	231	440
	12- 7-51[b]	1405	6.5	232	440
	12-10-51[b]	1312	6.5	234	461
	12-11-51[b]	1323	6.4	232	447
	12-12-51[b]	1285	8.1	231	454
	12-13-51[b]	--	6.5	234	468
	12-14-51	--	--	225	387
	12-14-51[b]	1323	6.5	234	447
	12-17-51[b]	1315	7.7	231	440
	12-18-51[b]	1315	--	234	454
	12-19-51[b]	1326	--	233	454
	12-20-51[b]	1312	7.7	231	468
	12-21-51[b]	1320	7.8	232	468
	12-24-51[c]	--	--	--	417
	12-24-51[b]	1313	7.8	234	468
	12-26-51[b]	1295	8.0	237	454
	12-27-51[b]	1356	7.7	242	454
	12-28-51	--	--	--	456
	12-28-51[b]	--	--	236	475
	12-31-51[b]	1344	6.5	244	468
	1- 2-52[b]	--	6.4	236	475
	1- 4-52	--	--	--	473
	1- 5-52[b]	--	--	233	--
	1- 7-52[b]	1343	6.4	228	496
	1- 8-52[b]	1302	6.4	232	489
	1- 9-52[b]	1312	--	238	475

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	1-10-52[b]	1312	6.4	233	496
	1-11-52	--	--	--	472
	1-11-52[b]	1419	6.5	227	496
	1-14-52[b]	1322	6.5	234	489
	1-15-52[b]	1302	--	--	496
	1-16-52[b]	1322	6.5	209	496
	1-17-52[b]	1302	6.4	232	489
	1-18-52	--	--	--	478
	1-18-52[b]	1322	--	237	503
	1-21-52[b]	1331	6.5	239	496
	1-22-52[b]	1348	--	229	525
	1-21-52	--	--	--	406
	1-25-52	--	--	--	406
	1-28-52[b]	1375	6.3	238	504
	1-29-52[b]	1304	--	232	482
	1-30-52[b]	--	6.5	237	518
	1-31-52[b]	--	6.3	227	525
	2- 1-52	--	--	--	488
	2- 1-52[b]	1167	--	234	537
	2- 4-52[b]	1167	--	--	570
	2- 5-52[b]	1120	--	247	534
	2- 6-52[b]	1159	--	--	532
	2- 7-52[b]	1151	--	--	540
	2- 8-52[b]	1184	--	--	540
	2- 9-52	--	--	--	508
	2-11-52[b]	1167	--	--	542
	2-12-52[b]	1184	--	--	544
	2-13-52[b]	1214	--	245	532
	2-14-52[b]	1175	--	--	532
	2-15-52	--	--	--	505

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-29A2	2-15-52[b]	1183	--	246	542
	2-18-52[b]	1197	--	--	537
	2-19-52[b]	1105	--	--	553
	2-21-52[b]	1214	--	--	568
	2-22-52	--	--	--	527
	2-22-52[b]	1200	--	232	579
	2-23-52[b]	1090	--	230	565
	2-25-52[b]	1318	--	--	542
	2-28-52[b]	1653	--	229	605
	2-29-52[b]	1440	--	--	593
	3- 1-52	--	--	--	536
	3- 2-52[b]	--	--	145	--
	3- 3-52[b]	1680	--	245	565
	3- 4-52[b]	1493	--	--	638
	3- 5-52[b]	1602	--	200	592
	3- 7-52	--	--	--	552
	3- 8-52[b]	1493	--	--	599
	3- 9-52[b]	1708	--	234	572
	3-10-52[b]	1444	--	233	592
	3-11-52[b]	1468	--	--	600
	3-12-52[b]	1680	--	198	587
	3-14-52	--	--	--	591
	3-14-52[b]	1493	--	--	603
	3-15-52[b]	1708	--	228	637
	3-17-52[b]	1544	--	--	664
	3-17-52[b]	--	--	239	--
	3-17-52[b]	--	--	234	--
	3-18-52[b]	1493	--	--	621
	3-19-52	--	7.4	223	585
	3-19-52[b]	--	--	237	--

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10⁶ at 25°C	pH	HCO3 ppm	Cl ppm
1N/22W-29A2	3-21-52[b]	--	--	--	298
	3-31-52[b]	--	--	203	--
	4-12-52[b]	--	--	--	234
	4-19-52[b]	--	--	--	237
	4-21-52[b]	--	--	--	230
	6- 6-52[b]	3086	7.3	234	940
	4-29-54[cv]	--	--	--	11050
	4-29-54[cr]	--	--	--	9500
36K1	7-15-47	--	--	275	45
	8-15-47	--	--	--	42
	9-15-47	--	--	--	42
	10-15-47	--	--	--	42
	11-17-47	--	--	--	43
	3-15-48	--	--	--	54
	4-15-48	--	--	--	46
	6-29-48	--	--	--	45
	8- 2-48	--	--	--	41
	11- 1-48	--	--	--	45
	4- 9-49	--	--	--	45
	5- 5-49	--	--	265	45
	6-15-49	--	--	--	49
	7-25-49	--	--	--	46
	8-29-49	--	--	--	46
	9-26-49	--	--	--	50
	10-25-49	--	--	--	50
	3-24-50	--	--	--	54
	5-17-50	--	--	--	47
	7- 3-50	--	--	--	53
	7-26-50	--	--	--	50
	8-23-50	--	--	--	50
1N/22W-36K1	9-25-50	--	--	--	51
	11- 6-50	--	--	--	48
	12- 6-50	--	--	--	49
	12-30-50	--	--	--	47
	3-12-51	--	--	--	53
	4-11-51	--	--	--	57
	5-15-51	--	--	--	52
	6-20-51	--	--	--	61
	7-25-51	--	--	--	61
	8-28-51	--	--	--	67
	9-27-51	--	--	--	53
	10-24-51	--	--	--	51
	7-24-52[c]	--	--	--	61
	8-25-52[c]	--	--	--	67
	9-30-52[c]	--	7.7	276	58
	11- 6-52[c]	--	--	--	57
	3-24-53[c]	--	--	--	65
	4-30-53[c]	--	--	--	67
	6-12-53[c]	--	--	--	59
	7- 3-53[c]	--	--	--	65
	7-31-53[c]	--	--	--	57
	9- 1-53[c]	--	--	--	59
	10- 5-53[c]	--	--	265	67
	10-15-53[c]	--	--	--	65
	11- 3-53[c]	--	--	--	116
	11- 6-53[c]	--	--	--	64
	5- 3-54[c]	--	--	--	84
	6- 2-54[c]	--	--	--	82
	7- 8-54[c]	--	--	--	88
	8- 3-54[c]	--	--	--	88

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
r. Sampled after pumping 3 hours.
v. Sampled after pumping 1 hour and 15 minutes.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
1N/22W-36K1	8-31-54[c]	--	--	266	84
	10- 2-54[c]	--	--	--	77
	10-29-54[c]	--	--	--	75
	4- 2-55[c]	--	--	--	157
	4-11-55[c]	--	--	--	92
	4-23-55[c]	--	--	--	179
	5- 2-55[c]	--	--	--	92
	5-28-55[c]	--	--	--	81
	8- 6-55[c]	--	--	--	85
	3-17-55[b]	1265	7.6	268	88
	5-17-57[b]	1360	7.8	273	110
	6-20-58[d]	--	--	--	208
2N/22W-17Q1	5-15-47	--	--	--	48
	6-16-47	--	--	--	54
	7-15-47	--	--	--	49
	8-15-47	--	--	--	50
	9-15-47	--	--	--	53
	10-15-47	--	--	--	53
	11-17-47	--	--	--	41
	3-15-48	--	--	--	48
	4-15-48	--	--	--	55
	6-29-48	--	--	--	48
	5- 5-49	--	--	235	50
	6-15-49	--	--	--	51
	8-29-49	--	--	--	53
	9-26-49	--	--	--	53
	5-17-50	--	--	--	51
	12-30-50	--	--	--	51
	3-12-51	--	--	--	60
	4-11-51	--	--	--	55

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
2N/22W-17Q1	5-15-51	--	--	--	53
	6-20-51	--	--	--	51
	7-25-51	--	--	--	51
	8-28-51	--	--	--	52
	9-27-51	--	--	--	51
	7-24-52[c]	--	--	--	49
	8-25-52[c]	--	--	--	55
	3-24-53[c]	--	--	--	48
	10- 5-53[c]	--	--	243	54
	9-23-54[c]	--	--	284	59
20M1	4- 4-31	1390	--	262	50
	5- 5-31	1450	--	268	55
	6-10-31	1350	--	265	51
	7- 2-31	1460	--	275	59
	7-25-31	1340	--	265	57
	9- 3-31	--	--	270	52
	10- 2-31	--	--	270	50
	4- 3-33	--	--	--	53
	5- 1-33	--	--	--	51
	7- 6-33	--	--	--	53
	8- 1-33	--	--	--	51
	8-30-33	--	--	--	50
	10- 3-33	--	--	--	50
	11- 1-33	--	--	--	50
	6-30-34	--	--	--	50
	8- 2-34	--	--	--	53
	9- 8-34	--	--	--	50
	9-10-35	--	--	--	51
	7-21-36	--	--	273	53
	8-22-36	--	--	--	50

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained by United Water Conservation District.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS

WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25^oC	pH	HCO_3 ppm	Cl ppm
2N/22W-20M1	9- 8-37	--	--	--	50
	9-27-45	--	--	245	49
	4-16-47	--	--	--	78
32C1	4-24-47[c]	--	--	253	53
	5-31-50	--	--	255	43
	7-26-50	--	--	--	44
	8-23-50	--	--	--	43
	11- 6-50	--	--	--	44
	5-15-51	--	--	--	43
	6-20-51	--	--	--	42
	7-25-51	--	--	--	42
	8-28-51	--	--	--	44
	9-27-51	--	--	--	41
	10-24-51	--	--	--	41
	7-24-52[d]	--	--	--	41
	9-30-52[d]	--	7.7	254	43
	10- 6-52[d]	--	--	--	41
	3-24-53[d]	--	--	--	41
	4-30-53[c]	--	--	--	41
	6-12-53[c]	--	--	--	41
	7- 3-53[c]	--	--	--	41
	7-31-53[c]	--	--	--	41
	9- 1-53[c]	--	--	--	41
	10- 5-53[c]	--	--	353	41
	11- 3-53[c]	--	--	--	40
	5- 3-54[c]	--	--	--	39
	6- 2-54[c]	--	--	--	40
	7- 8-54[c]	--	--	--	40
	8- 3-54[c]	--	--	--	41
	8-31-54[c]	--	--	253	42

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25^oC	pH	HCO_3 ppm	Cl ppm
2N/22W-20M1	10- 2-54[c]	--	--	--	41
	10-29-54[c]	--	--	--	42
	4- 2-55[c]	--	--	--	42
	4-23-55[c]	--	--	--	40
	5-24-55[c]	--	--	--	42
	7-23-55[c]	--	--	--	43
	8-20-55	--	--	--	42
	5-16-57[b]	1260	7.8	256	45
	6-19-58[d]	--	--	--	41
2N/23W-10R1	4-25-48	--	--	230	59
	5- 3-48[w]	--	7.3	340	70
	8- 2-48	--	--	--	61
	12- 9-48	--	--	361	78
	6-27-49	--	--	360	78
	8- 3-49	--	--	--	61
	9-30-49	--	--	--	62
	11- 2-49	--	--	--	76
	7- 2-50	--	--	--	61
	12- 1-50	--	--	--	60
	2- 1-51	--	--	--	78
	2- 5-51[bk]	1667	7.3	361	78
	3- 1-51	--	--	--	77
	7- 2-51	--	--	--	75
	8-28-51[w]	--	7.5	371	71
	9- 1-51	--	--	--	75
14K1	4- 3-33	--	--	420	75
	5- 6-33	--	--	--	77
	8- 1-33	--	--	--	75
	8-30-33	--	--	--	75
	12- 1-33	--	--	--	74

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained from United Water Conservation District.
k. Sampled after pumping 5 minutes.
w. Analyzed by Montgomery & Pomeroy.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$ECx10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-14K1	7- 5-34	--	--	--	76
	8- 2-34	--	--	--	76
	9-16-35	--	--	--	77
	7-21-36	--	--	404	78
	8-22-36	--	--	--	76
	4-16-47	--	--	401	75
	5-26-47	--	--	--	72
	8-15-47	--	--	--	71
	9-15-47	--	--	--	72
	10-15-47	--	--	--	71
	2- 4-48	--	--	--	71
	3-15-48	--	--	--	70
	6-28-48	--	--	--	73
	7-20-48	--	7.6	402	70
	8- 2-48	--	--	--	71
	5- 5-49	--	--	351	73
	6-15-49	--	--	--	73
	7-25-49	--	--	--	71
	8-29-49	--	--	--	71
	9- 3-49	--	--	--	72
	10-25-49	--	--	--	72
	5-17-50	--	--	--	72
	7-20-50	--	--	--	71
	8-23-50	--	--	--	71
	9-25-50	--	--	--	72
	12-30-50	--	--	--	70
	3-12-51	--	--	--	72
	4-11-51	--	--	--	72
	7-25-51	--	--	--	70
	10-24-51	--	--	--	68

Well Number S.B.B. & M.	Date	$ECx10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-14K1	8- 1-52[b]	1500	7.5	405	71
	10- 6-52[c]	--	--	398	70
	11- 6-52[c]	--	--	--	69
	3-24-53[c]	--	--	--	67
	8- 6-53[c]	--	--	--	68
	8-31-53[c]	--	--	410	68
	4- 2-55[c]	--	--	--	67
14L1	4- 3-31	1600	--	372	67
	5- 5-31	1290	--	314	50
	7- 2-31	1370	--	320	44
	7-25-31	1620	--	400	71
	9- 3-31	--	--	296	55
	10- 5-31	--	--	264	59
	11- 7-31	--	--	223	57
	12- 1-31	--	--	290	48
	7- 8-32	--	--	398	73
	8- 8-32	--	--	290	48
	7-22-47	--	--	412	72
	7-31-47	--	--	--	74
	2-28-48	--	--	410	76
	6-24-49	--	--	--	75
	7-29-49	--	--	--	74
	9- 9-49	--	--	--	77
	6-16-50	--	--	--	75
	3- 2-51	--	--	411	75
	4-11-51	--	--	--	75
	7-25-51	--	--	--	73
	8-28-51	--	--	--	101
	9-20-51	--	--	--	74
	10-26-51	--	--	--	73

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO3 ppm	Cl ppm
2N/23W-14L1	7-24-52[c]	--	--	--	72
	3-24-53[c]	--	--	--	74
	7-23-53[c]	--	--	--	73
	8-25-53[b]	1650	7.4	405	74
	5-27-54[c]	--	--	--	70
	9-23-54[c]	--	--	408	75
	10-29-54[c]	--	--	--	76
	3-31-55[c]	--	--	--	74
	7-23-55[c]	--	--	--	73
	6-19-58[d]	--	--	--	72
14M1	2- 3-49	--	--	395	77
	2- 7-49[w]	--	--	387	82
	7- 1-49	--	--	375	75
	8- 3-49	--	--	--	68
	9- 1-49	--	--	--	77
	12- 1-49	--	--	--	76
	12-19-49	--	7.3	356	81
	8- 2-50	--	--	--	78
	9-25-50	--	--	--	77
	2- 5-51[bk]	1449	7.4	373	68
	3-31-51	--	--	--	78
	8-25-51[b]	--	7.4	392	71
	8-25-53[b]	1510	7.5	373	78
	7-18-56[b]	1650	7.7	383	82
	12-19-56[b]	1590	7.4	400	83
	5-27-57[b]	1575	7.6	384	78
	12-11-57[b]	1429	7.4	377	81
	12-18-57[b]	1637	7.5	366	82
23D1	3- 8-48	--	7.6	339	63
	3- 9-48	--	8.1	331	62

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO3 ppm	Cl ppm
2N/23W-23D1	3-11-48	--	--	373	77
	3-26-48	--	7.7	366	68
	3-30-48	--	--	371	71
	5-31-48	--	--	--	72
	8- 4-48	--	--	--	67
	1- 3-49	--	--	364	69
	7- 1-49	--	--	379	67
	8- 3-49	--	--	--	68
	9- 1-49	--	--	--	68
	1- 6-50	--	--	--	69
	6- 1-50	--	--	--	67
	9- 1-50	--	--	--	70
	10- 6-50	--	--	--	67
	2- 5-51[bk]	1429	7.5	356	69
	3-31-51	--	--	--	69
	4-30-51	--	--	--	69
	6- 1-51	--	--	--	69
	10-1- 51	--	--	--	66
	11- 1-51	--	--	--	66
	1- 1-52	--	--	--	67
	8-22-53	--	7.6	345	66
24G1	7- 2-48	--	--	335	56
	1- 3-49	--	--	335	56
	5- 5-49	--	--	337	60
	6-15-49	--	--	--	63
	7-25-49	--	--	--	63
	8- 3-49	--	--	--	64
	8-29-49	--	--	--	64
	9-26-49	--	--	--	63
	10-25-49	--	--	--	64

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained from United Water Conservation District.
k. Sampled after pumping 5 minutes.
w. Analyzed by Montgomery & Pomeroy.

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-23D1	5-17-50	--	--	--	61
	7-26-50	--	--	--	64
	12- 6-50	--	--	--	60
	1- 9-51	--	--	340	63
	3-12-51	--	--	--	64
	4-11-51	--	--	--	65
	5-15-51	--	--	--	66
24G1	6-22-51	--	--	--	65
	7-25-51	--	--	--	66
	8-28-51	--	--	--	66
	9-27-51	--	--	--	65
	8- 1-52[c]	--	--	--	62
	11-15-52[c]	--	--	338	59
	4- 3-53[c]	--	--	--	63
	10- 1-53[c]	--	--	292	67
	8-31-54[c]	--	--	335	69
	5-16-57[b]	1585	7.8	342	78
	6-19-58[d]	--	--	--	79
24K1	4- 3-31	1360	--	335	39
	5- 5-31	1370	--	354	57
	6- 3-31	1380	--	342	57
	7- 2-31	1380	--	348	51
	7-25-31	1380	--	357	55
	9- 3-31	--	--	366	57
	10- 5-31	--	--	354	56
	3- 9-33	--	--	335	55
	4- 3-33	--	--	--	58
	5- 1-33	--	--	--	57
	6- 1-33	--	--	--	56
	7- 6-33	--	--	--	60

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-24K1	8- 1-33	--	--	--	61
	8-30-33	--	--	--	61
	10- 3-33	--	--	--	58
	11- 1-33	--	--	--	56
	12- 1-34	--	--	--	60
	7- 5-34	--	--	--	64
	8- 2-34	--	--	--	62
	9- 8-34	--	--	--	64
	9-19-35	--	--	--	85
	7-21-36	--	--	331	64
	8-22-36	--	--	--	58
	9- 7-37	--	--	--	58
	8- 2-46	--	--	--	63
	4-16-47	--	--	--	74
	5-15-47	--	--	--	71
	6-16-47	--	--	--	64
	7-15-47	--	--	--	71
	9-15-47	--	--	--	55
	10-15-47	--	--	--	60
	11-17-47	--	--	--	67
	1- 3-48	--	--	--	74
	2- 4-48	--	--	--	62
	3-15-48	--	--	--	73
	6-29-48	--	--	--	74
	8- 2-48	--	--	--	81
	5-21-49	--	--	286	105
	9- 3-49	--	--	--	82
	10-25-49	--	--	--	51
	5- 2-50	--	--	--	61
	7-26-50	--	--	--	70

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
d. Analysis obtained from United Water Conservation District.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS--VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-24K1	6-20-51	--	--	--	74
	7-25-51	--	--	--	74
	10-24-51	--	--	--	81
	8- 1-52[c]	--	--	--	76
	9- 6-52[c]	--	7.0	272	51
	10- 6-52[c]	--	--	272	51
	11-15-52[c]	--	--	--	61
	3-31-53[c]	--	--	--	109
36C2	4- 3-31	1370	--	256	50
	5- 6-31	1460	--	287	59
	6- 3-31	1360	--	268	53
	7- 2-31	1370	--	259	50
	7-25-31	1370	--	268	55
	9- 4-31	--	--	269	55
	10- 5-31	--	--	265	55
	11- 4-31	--	--	270	60
	12- 1-31	--	--	265	54
	6- 3-32	--	--	265	54
	7- 5-32	--	--	266	62
	8- 5-32	--	--	266	56
	3- 3-33	--	--	265	54
	4- 3-33	--	--	--	53
	5- 1-33	--	--	--	54
	6- 1-33	--	--	--	55
	7- 6-33	--	--	--	55
	8- 1-33	--	--	--	54
	8-30-33	--	--	--	55
	10- 3-33	--	--	--	55
	11- 1-33	--	--	--	55
	7- 5-34	--	--	--	55

Well Number S.B.B. & M.	Date	ECx10^6 at 25°C	pH	HCO_3 ppm	Cl ppm
2N/23W-36C2	8- 2-34	--	--	--	55
	9- 8-34	--	--	--	55
	9-10-35	--	--	--	56
	7-21-36	--	--	262	57
	8-22-36	--	--	--	55
	9- 7-37	--	--	--	53
	9-27-45	--	--	225	54
	8- 2-46	--	--	--	55
	4-16-47	--	--	--	55
	5-15-47	--	--	--	55
	6-16-47	--	--	--	55
	7-15-47	--	--	--	54
	8-15-47	--	--	--	50
	9-15-47	--	--	--	54
	10-15-47	--	--	--	54
	11-17-47	--	--	--	54
	2-13-48	--	--	--	54
	3-15-48	--	--	--	47
	4-15-48	--	--	--	52
	6-29-48	--	--	--	47
	8- 2-48	--	--	--	46
	11- 1-48	--	--	--	52
	4- 9-49	--	--	--	58
	5- 5-49	--	--	258	57
	6-15-49	--	--	--	60
	7-25-49	--	--	--	55
	8-29-49	--	--	--	54
3N/21W-11F2	8-10-29[y]	1180	--	320	45
	9-10-29[y]	1160	--	314	43
	10-10-29[y]	1150	--	311	41

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
y. Analysis obtained from Farmers Irrigation Co.

APPENDIX C

PARTIAL MINERAL ANALYSES OF GROUND WATER
FROM SELECTED WELLS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY[a]
(continued)

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
3N/21W-11F2	11-12-29[y]	1150	--	308	37
	3-13-30[y]	1170	--	311	42
	4-26-30[y]	1200	--	308	43
	6- 4-30[y]	1180	--	300	41
	7-19-30[y]	1220	--	320	41
	9- 9-30[y]	--	--	307	45
	12-13-30[y]	1210	--	318	43
	3-14-31[y]	1220	--	340	52
	6-30-31[y]	1270	--	315	51
	8-20-31[y]	1260	--	334	44
	10- 1-31[y]	1260	--	333	41
	5- 2-32[y]	1150	--	344	35
	7-20-32[y]	1090	--	317	30
	9-14-32[y]	1120	--	304	34
	12- 3-32[y]	1200	--	305	38
	7-14-33[y]	1060	--	298	30
	6-27-34[y]	1040	--	282	30
	7- 6-35[y]	910	--	284	22
	7- 9-36[y]	965	--	271	25
	9-19-36[y]	1010	--	285	31
	7- 8-37[y]	930	--	270	23
	8-19-38[y]	1005	--	275	27
	5- 9-39[y]	1075	--	312	35
	5-29-40[y]	1160	--	311	38
	8-29-41[y]	1046	--	304	30
	9-23-42[y]	1306	--	325	58
	6-24-44[y]	1300	--	335	49
	9-18-46[y]	--	--	318	62
	10-28-46[y]	--	--	322	62
	11-19-48[y]	--	--	321	83
	4- 5-49[y]	--	--	336	77
	7-19-49[y]	--	7.2	348	88
	7-26-49[y]	--	--	--	86
	8- 1-49[y]	--	--	--	87
	8- 8-49[y]	--	--	--	86

Well Number S.B.B. & M.	Date	$EC \times 10^6$ at 25°C	pH	HCO_3 ppm	Cl ppm
3N/21W-11F2	8-15-49[y]	--	--	--	85
	8-22-49[y]	--	--	--	85
	8-30-49[y]	--	--	--	85
	9- 6-49[y]	--	--	--	88
	9-12-49[y]	--	--	--	87
	9-20-49[y]	--	--	--	93
	9-27-49[y]	--	--	--	94
	10- 4-49[y]	--	--	--	88
	10-11-49[y]	--	--	--	88
	10-17-49[y]	--	--	--	86
	10-25-49[y]	--	--	--	86
	11- 1-49[y]	--	--	--	87
	11- 8-49[y]	--	--	--	85
	11-29-49[y]	--	--	--	88
	8- 6-50	--	--	324	81
	12-10-50	--	7.2	330	90
	7-13-53[c]	--	--	320	80
	6-25-54[b]	1452	7.3	321	78
4N/19W-30P4	5- 5-30	1560	--	345	28
	5-19-30	1550	--	345	35
	6- 3-30	1550	--	329	37
	6-16-30	1580	--	329	35
	6-30-30	1560	--	335	35
	7-14-30	1570	--	345	37
	7-28-30	1570	--	335	37
	8-25-30	1580	--	335	34
	12-29-30	1500	--	335	32
	4-19-33	--	--	354	37
	8-29-34	--	--	343	36
	8-30-35	--	--	351	39
	11- 9-35	--	--	--	38
	11-29-35	--	--	--	39
	12-27-35	--	--	--	38
	6- 2-39	--	--	358	42
	8-11-41	--	--	398	57
	10-12-45	--	--	382	54

a. Analysis obtained from Santa Clara Water Conservation District, unless otherwise noted.
b. Analyzed by Department of Water Resources.
c. Analyzed by Fruit Growers Laboratory, Incorporated.
y. Analysis obtained from Farmers Irrigation Co.

TABLE OF CONTENTS

MINERAL AND SANITARY ANALYSES
OF EFFLUENT FROM SEWAGE TREATMENT
PLANTS, VENTURA COUNTY

APPENDIX D

MINERAL AND SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS, VENTURA COUNTY

Presented herein are detailed mineral analyses of sewage effluents discharged from treatment facilities in Ventura County. Analyses are tabulated in descending order with respect to plant location and elevation within each hydrographic unit, that is, analyses for the upstream plants are entered first. For plants located on the Oxnard plain near the ocean, analyses for the most northerly plants are presented first.

All analyses are by the Department of Water Resources unless otherwise noted. Methods of analysis used by the Department and Pacific Chemical Consultants are the same as shown in Appendix A, page A-2. The type of sample analyzed is identified as either grab or time composite. A grab sample is one sample taken at one momentary interval of time and is representative of conditions and composition for only the time at which it is taken. A series of grab samples may be combined (usually in proportion to the rate of flow) to form a composite sample which is usually more representative of the average composition.

Tabulated values have been rounded off in some instances from the original reported values. For the constituents calcium through nitrate, values in parts per million have been rounded off to the nearest whole number and values in equivalents per million have been rounded off to the nearest hundredth. Fluoride concentration in parts per million has been rounded off to the nearest tenth. Trace (Tr) in Table D1 indicates a reported value less than five-tenths part per million or less than five-thousandths equivalent per million.

Each analysis of trace constituents presented in Table D2 was determined on the same sample for which a mineral analysis appears in Table D1. All of the trace analyses in Table D2 were performed by the California State Department of Public Health.

The time of sampling is given in Pacific Standard Time using a 24-hour system.

TABLE D1

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness as $CaCO_3$ ppm	Effective Salinity epm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million														
City of Ojai	7-19-47[a]	Grab	--	--	--	89/4.45	20/1.64	43/1.87	11/0.29	--/--	212/3.49	173/3.61	39/1.10	3/0.05	--	--	591	328	3.8	23
	10-30-52[b] 1100	Grab	--	--	7.8	151/7.55	52/4.28	324/14.19	22/0.56	--/--	358/5.86	202/4.21	582/16.40	--/--	2.0	0.9	1743	493	19.0	53
	5-21-52[b] 2400	Grab	--	--	7.1	150/7.50	43/3.54	216/9.39	13/0.33	--/--	268/4.40	223/4.64	372/10.49	66/1.06	0.1	0.6	1395	552	13.3	47
	5-22-52[d] 1530	Grab	0.65[c]	1765	7.7	149/7.46	39/3.20	161/7.00	--/--	0/0	288/4.72	222/4.63	283/7.97	35/0.56	--	0.4	1185	533	10.2	40
	11-21-52[b]	8-hour Composite	--	--	7.35	122/6.10	40/3.29	319/13.88	9/0.23	--/--	320/5.24	206/4.29	376/10.60	5/0.08	0.9	0.8	1380	468	17.4	59
	2-25-53 1610	Grab	0.65[c]	1720	6.9	138/6.91	38/3.11	178/7.73	10/0.27	0/0	312/5.12	250/5.22	254/7.14	54/0.88	--	0.7	1202	501	11.1	43
	3-13-53 through 3-19-53	7-day Composite	0.25	1567	7.1	116/5.79	33/2.71	160/6.96	13/0.33	--/--	351/5.76	203/4.22	200/5.64	25/0.41	--	0.9	961	425	10.0	39
	5-14-53[b]	8-hour Composite	--	--	7.0	74/3.69	33/2.71	175/7.61	12/0.31	0/0	330/5.41	200/4.16	190/5.36	22/0.35	0.5	0.1	950	320	8.9	53
	12-1-53[b]	8-hour Composite	--	--	7.5	8/4.40	44/3.62	168/7.31	15/0.38	--/--	366/6.00	192/4.00	258/7.28	0/0	1.0	0.4	1047	400	9.7	43
	5-12-54[b]	8-hour Composite	--	--	7.3	117/5.84	38/3.11	208/9.05	12/0.31	--/--	444/7.28	175/3.64	260/7.34	0/0	1.0	0.8	1181	448	11.0	46

a. Analyzed by Fruit Growers Laboratory, Incorporated.
b. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.
c. Estimated flow at time sample was collected.
d. Analyzed by Pacific Chemical Consultants.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
City of Ojai	11- 4-54[a]	8-hour Composite	--	--	6.7	134 / 6.69	32 / 2.63	236 / 10.26	13 / 0.33	0 / 0	303 / 4.97	220 / 4.58	360 / 10.15	1 / 0.02	0.8	0.7	1127	466	13.2	52
	6- 2-55[a]	8-hour Composite	--	--	6.8	136 / 6.79	29 / 2.38	236 / 10.26	13 / 0.33	0 / 0	333 / 5.45	167 / 3.48	442 / 12.46	2 / 0.03	0.4	0.5	1414	458	13.0	52
	11-16-55[a]	8-hour Composite	--	--	7.2	108 / 5.39	40 / 3.29	270 / 11.74	15 / 0.38	0 / 0	379 / 6.21	191 / 3.98	422 / 11.90	2 / 0.03	1.2	1.8	1386	434	14.6	56
	5-17-56[a]	8-hour Composite	--	--	7.2	116 / 5.79	40 / 3.29	216 / 9.39	15 / 0.38	0 / 0	252 / 4.13	236 / 4.91	356 / 10.04	19 / 0.31	0.6	0.8	1304	454	13.1	50
	11-14-56[a]	8-hour Composite	--	--	7.3	110 / 5.49	43 / 3.54	245 / 10.65	15 / 0.38	0 / 0	311 / 5.09	220 / 4.58	416 / 11.73	3 / 0.05	1.0	0.9	1399	452	14.6	53
	5-15-57[a]	8-hour Composite	--	--	7.2	101 / 5.04	49 / 4.03	255 / 11.09	10 / 0.26	0 / 0	379 / 6.21	211 / 4.39	392 / 11.05	1 / 0.02	0.20	0.9	1344	454	14.2	54
	11-26-57[a]	8-hour Composite	--	--	7.1	108 / 5.39	51 / 4.19	224 / 9.74	12 / 0.31	0 / 0	245 / 4.01	275 / 5.72	374 / 10.55	3 / 0.05	0.8	1.2	1255	479	14.2	50
	5-14-58[a]	8-hour Composite	0.8	--	7.7	124 / 6.19	42 / 3.45	154 / 6.70	6 / 0.15	0 / 0	373 / 6.11	278 / 5.79	210 / 5.92	1 / 0.02	1.2	0.8	994	482	10.3	41
City of Ventura	10- 5-51 1045	Grab	2.80	2801	7.4	130 / 6.49	59 / 4.85	333 / 14.47	-- / --	0 / 0	1243 / 20.39	18 / 0.37	330 / 9.30	0 / 0	--	1.2	1591	567	14.5	56
	11- 5-51[a] through 11- 6-51	24-hour Composite	--	--	6.7	60 / 3.00	26 / 2.17	456 / 19.8	168 / 4.30	-- / --	648 / 10.62	534 / 11.12	252 / 7.10	--	0.3	2.2	1944	259	24.1	69

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million														
City of Ventura	5-20-52[a]	7-hour Composite	--	--	7.5	88 / 4.40	47 / 3.87	358 / 15.56	23 / 0.59	-- / --	420 / 6.88	334 / 6.96	338 / 9.53	1 / 0.02	0	3.2	1407	414	17.3	64
	11-21-52[a]	8-hour Composite	--	--	6.9	52 / 2.60	43 / 3.54	450 / 19.55	28 / 0.72	-- / --	481 / 7.88	318 / 6.63	242 / 6.82	0 / 0	2.1	3.8	1310	308	20.3	73
	5-14-53[a]	16-hour Composite	--	--	6.9	31 / 1.55	44 / 3.62	285 / 12.39	22 / 0.56	0 / 0	514 / 8.42	420 / 8.74	150 / 4.23	0 / 0	1.7	0.9	1210	258	13.0	68
	12- 1-53[a]	16-hour Composite	--	--	7.1	48 / 2.40	30 / 2.47	378 / 16.43	27 / 0.69	-- / --	556 / 9.11	422 / 8.58	204 / 5.75	0 / 0	2.0	1.3	1450	244	17.1	69
	5-12-54[a]	16-hour Composite	--	--	7.2	29 / 1.45	47 / 3.87	340 / 14.79	25 / 0.64	-- / --	415 / 6.80	350 / 7.28	250 / 7.05	0 / 0	2.0	1.5	1325	264	15.4	69
	11- 4-54[a]	14-hour Composite	--	--	7.3	64 / 3.19	26 / 2.14	396 / 17.22	13 / 0.33	0 / 0	549 / 9.00	430 / 8.95	168 / 4.74	1 / 0.02	1.8	1.2	1371	266	17.5	75
	6- 2-55[a]	16-hour Composite	--	--	7.2	55 / 2.74	16 / 1.32	152 / 6.61	28 / 0.72	0 / 0	516 / 8.46	340 / 7.08	176 / 4.96	2 / 0.03	1.0	0.7	1373	205	7.5	58
	11-16-55[a]	18-hour Composite	--	--	7.3	44 / 2.20	29 / 2.38	370 / 16.09	26 / 0.66	0 / 0	563 / 9.22	403 / 8.39	188 / 5.30	1 / 0.02	1.6	0.8	1453	229	16.8	75
	5-17-56[a]	14-hour Composite	2.0	--	7.0	56 / 2.79	40 / 3.29	312 / 13.57	26 / 0.66	0 / 0	455 / 7.45	400 / 8.33	180 / 5.08	1 / 0.02	2.2	1.2	1318	304	14.2	67
	11-14-56[a]	14-hour Composite	--	--	7.4	66 / 3.29	43 / 3.54	430 / 18.70	25 / 0.64	0 / 0	606 / 9.94	520 / 10.83	264 / 7.44	Tr. / --	1.8	1.1	1720	342	19.3	71

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

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

Treatment	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
City of Ventura	5-15-57[b]	14-hour Composite	--	--	7.2	42 / 2.10	44 / 3.62	400 / 17.39	29 / 0.74	0 / 0	504 / 8.26	555 / 11.56	244 / 6.88	0 / 0	1.5	1.8	2548	286	18.1	73
	11-26-57[b]	14-hour Composite	--	--	7.4	46 / 2.30	49 / 4.03	500 / 21.74	20 / 0.51	0 / 0	572 / 9.38	499 / 10.39	370 / 10.43	0 / 0	0.8	1.9	1616	316	22.2	76
	5-14-58[b]	14-hour Composite	--	--	7.4	56 / 2.79	61 / 5.02	344 / 14.96	20 / 0.51	0 / 0	483 / 7.92	397 / 8.26	308 / 8.69	0 / 0	1.2	1.2	1380	390	15.5	64
City of Santa Paula	3-14-40[a]	Grab	--	--	--	102 / 5.10	31 / 2.54	188 / 8.17	-- / --	-- / --	304 / 4.98	281 / 5.86	158 / 4.46	53 / 0.85	--	0.6	1130	386	10.7	51
	6-27-51[a]	Grab	--	--	7.51	179 / 8.95	54 / 4.45	336 / 14.62	16 / 0.40	-- / --	435 / 7.13	494 / 10.28	380 / 10.72	17 / 0.27	--	3.8	1911	669	19.4	52
	11- 5-51[b]	8-hour Composite	--	--	7.0	165 / 8.25	53 / 4.34	263 / 11.43	0 / 0	-- / --	395 / 6.48	438 / 9.13	294 / 8.29	-- / --	1.2	2.1	1862	631	15.8	47
	4-21-52[a]	Grab	--	--	--	175 / 8.75	56 / 4.59	219 / 9.54	26 / 0.67	-- / --	392 / 6.42	558 / 11.65	178 / 5.08	2 / 0.03	--	1.2	1606	663	14.8	40
	5-20-52[b]	7-hour Composite	--	--	7.7	118 / 5.90	44 / 3.62	292 / 12.70	13 / 0.33	-- / --	434 / 7.12	387 / 8.06	280 / 7.89	1 / 0.02	0.4	1.2	1420	474	15.4	56
	7-15-52[a]	Grab	--	--	6.8	152 / 7.60	48 / 3.94	261 / 11.36	25 / 0.64	-- / --	490 / 8.05	436 / 9.08	246 / 6.93	--	--	2.0	1658	575	15.5	48
	11-21-52[b]	8-hour Composite	--	--	7.5	116 / 5.80	30 / 2.47	340 / 14.79	10 / 0.26	-- / --	332 / 5.44	323 / 6.73	300 / 8.46	12 / 0.19	1.2	1.3	1350	464	17.5	63

a. Analyzed by Fruit Growers Laboratory, Incorporated.
b. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million														
City of Santa Paula	3-12-53 through 3-18-53	7-day Composite	0.78	1996	7.3	105 / 5.24	41 / 3.37	245 / 10.66	15 / 0.38	0 / 0	376 / 6.16	285 / 5.93	274 / 7.73	25 / 0.41	--	1.3	1223	431	13.5	54
	5-14-53[a]	12-hour Composite	--	--	7.6	147 / 7.34	30 / 2.47	340 / 14.78	13 / 0.33	0 / 0	446 / 7.31	440 / 9.16	335 / 9.45	36 / 0.58	0.5	0.9	1615	490	17.6	59
	12- 1-53[a]	12-hour Composite	--	--	7.4	109 / 5.44	41 / 3.37	256 / 11.13	16 / 0.40	-- / --	500 / 8.20	330 / 6.87	240 / 6.77	0 / 0	1.0	1.8	1337	440	12.1	50
	5-12-54[a]	8-hour Composite	--	--	7.5	86 / 4.29	18 / 1.48	228 / 9.92	13 / 0.33	-- / --	415 / 6.80	267 / 5.56	124 / 3.50	27 / 0.44	1.0	1.2	1216	292	10.2	58
	11- 4-54[a]	8-hour Composite	--	--	7.4	166 / 8.28	41 / 3.37	292 / 12.70	12 / 0.31	0 / 0	436 / 7.15	410 / 8.54	285 / 8.04	4 / 0.06	1.6	2.9	1447	582	16.4	52
	6- 2-55[a]	9-hour Composite	--	--	7.5	186 / 9.28	31 / 2.55	328 / 14.26	14 / 0.36	0 / 0	509 / 8.34	455 / 9.47	338 / 9.53	32 / 0.52	0.8	1.5	1785	592	17.2	54
	11-16-55[a]	8-hour Composite	--	--	7.5	172 / 8.58	47 / 3.86	245 / 10.65	14 / 0.36	0 / 0	489 / 8.02	360 / 7.50	280 / 7.90	1 / 0.02	0.9	0.3	1569	622	14.9	45
	5-17-56[a]	8-hour Composite	--	--	7.2	90 / 4.49	37 / 3.04	240 / 10.44	15 / 0.38	0 / 0	247 / 4.05	310 / 6.45	260 / 7.33	78 / 1.26	0.8	0.4	1237	376	13.9	57
	11-14-56[a]	8-hour Composite	--	--	7.7	149 / 7.44	50 / 4.11	295 / 12.83	13 / 0.33	0 / 0	455 / 7.45	423 / 8.81	362 / 10.21	12 / 0.19	1.2	1.1	1708	578	17.3	52
	5-15-57[a]	9-hour Composite	--	--	7.8	91 / 4.54	55 / 4.52	280 / 12.17	14 / 0.36	0 / 0	491 / 8.04	364 / 7.58	272 / 7.67	10 / 0.16	0.5	0.8	1401	453	13.6	56

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average: Daily Dis-charge mgd	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dis-solved Solids ppm	Total Hard-ness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
City of Santa Paula	11-26-57[a]	8-hour Com-posite	--	--	7.5	112/5.59	68/5.59	236/10.26	12/0.31	0/0	423/6.93	435/9.06	214/6.03	12/0.19	0.5	2.1	1413	559	14.8	47
	5-14-58[a]	8-hour Com-posite	0.88	--	7.9	110/5.49	55/4.52	272/11.83	12/0.31	0/0	440/7.21	460/9.58	250/7.05	8/0.13	2.6	1.3	1416	500	14.9	53
Saticoy Sanitation District	10-24-50[b]	Grab	--	--	7.21	154/7.70	112/9.08	583/25.35	15/0.38	33/1.10	528/8.67	1060/22.08	378/10.66	--/--	--	--	2863	834	32.7	60
	10-24-50[b]	Grab	--	--	9.42	137/6.85	203/16.62	1045/45.40	--/--	171/5.78	245/4.03	2607/54.30	135/3.81	--/--	--	--	4543	1170	59.1	66
	10-31-51[a] 1400	Grab	--	--	6.8	147/7.35	85/7.02	516/22.43	134/3.42	--/--	624/10.22	1025/21.35	304/8.58	--/--	1.0	1.3	2340	719	30.0	56
	5-21-52[a] 1300	Grab	--	--	7.5	164/8.20	201/16.54	1076/46.76	13/0.33	--/--	722/11.84	2355/48.95	468/13.20	Tr.	0.7	1.6	4957	1236	60.0	65
	5-26-52[b]	Grab	--	--	8.02	230/11.50	328/26.90	1600/69.50	--/--	30/1.00	737/12.08	3811/79.20	586/16.52	--/--	--	2.3	7322	1910	95.0	64
	7-21-52[b]	Grab	--	--	7.52	245/12.26	158/12.95	790/34.35	--/--	--/--	597/9.78	1848/38.50	385/10.85	--	--	0.8	4023	1255	47.3	58
	11-21-52[ac]	Grab	--	--	9.2	160/8.00	228/18.76	1400/60.85	21/0.54	77/2.56	268/4.40	1800/37.50	576/16.26	0/0	1.9	2.5	5950	1340	80.2	69
	5-14-53[a]	Grab	--	--	7.4	176/8.78	184/15.13	1020/44.35	16/0.41	0/0	795/13.03	2160/44.97	410/11.56	0/0	1.4	1.5	4490	1196	55.6	65

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.
b. Analyzed by Fruit Growers Laboratory, Incorporated.
c. Sample collected from oxidation-percolation pond.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million														
Saticoy Sanitation District	12- 1-53[a]	Grab	--	--	7.5	198/9.89	99/8.14	500/21.74	20/0.51	--/--	800/13.12	1120/23.30	330/9.30	0/0	1.0	1.2	2780	904	27.2	50
	5-12-54[a]	Grab	--	--	7.5	144/7.20	152/12.50	780/33.92	15/0.38	--/--	665/10.90	1825/38.00	290/8.18	0/0	1.5	3.2	4011	988	43.1	63
	11- 4-54[a]	Grab	--	--	7.3	232/11.58	39/3.21	328/14.26	27/0.69	0/0	707/11.58	820/17.07	128/3.61	Tr.	0.8	1.0	1781	740	18.2	48
	6- 2-55[a]	Grab	--	--	7.4	307/15.32	64/5.26	650/28.26	14/0.36	0/0	783/12.83	1755/36.54	264/7.44	1/0.02	0.6	0.6	3629	1029	33.9	57
	11-16-55[a]	Grab	--	--	7.4	194/9.68	52/4.28	400/17.39	20/0.51	0/0	564/9.24	913/19.01	236/6.66	Tr.	0.8	0.8	2357	698	22.2	55
	5-17-56[a]	Grab	--	--	7.7	148/7.38	131/10.77	690/30.00	21/0.54	0/0	526/8.62	1730/36.02	220/6.20	3/0.05	1.0	1.6	3388	908	40.1	62
	11-14-56[a]	Grab	--	--	7.5	159/7.93	76/6.25	320/13.91	18/0.46	0/0	567/9.30	864/17.99	178/5.02	Tr.	1.2	1.0	2070	709	19.2	49
	5-15-57[a]	Grab	--	--	7.9	128/6.39	102/8.39	510/22.17	14/0.36	0/0	632/10.36	1085/22.59	184/5.19	1/0.02	0.50	0.9	1604	739	27.0	59
	11-26-57[a]	Grab	--	--	7.6	126/6.29	84/6.91	260/11.30	10/0.26	0/0	572/9.38	778/16.20	136/3.84	0/0	0.4	1.2	1652	660	15.4	46
	5-14-58[a]	Grab	--	--	7.6	206/10.28	168/13.82	760/33.04	16/0.41	0/0	593/9.72	1999/41.62	280/7.90	0	0.9	1.9	3898	1205	47.3	57

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million														
City of Oxnard	5-14-58[a]	16-hour Composite	3.8	--	7.9	124 / 6.19	73 / 6.00	280 / 12.17	12 / 0.31	0 / 0	483 / 7.92	560 / 11.66	235 / 6.63	0 / 0	1.2	0.9	1516	610	16.8	49
Oxnard Industrial Sewer	10-5-51	Grab	1.4	4525	11.9	252 / 12.57	4 / 0.30	449 / 19.56	-- / --	495 / 16.50	281 / 4.62	466 / 9.71	153 / 4.31	70 / 1.14	--	0.7	4695	644	20.7	60
Port Hueneme Construction Battalion Center Port Hueneme Naval Station	10-8-51 1305	Grab	1.00	4167	7.3	84 / 4.19	126 / 10.36	659 / 28.68	-- / --	0 / 0	620 / 10.16	785 / 16.35	715 / 20.16	0 / 0	--	1.4	2844	727	34.4	66
Port Hueneme Sanitary District	10-8-51 1000	Grab	0.30	2336	7.1	120 / 5.98	77 / 6.33	200 / 8.70	-- / --	0 / 0	517 / 8.47	447 / 9.35	250 / 7.05	0 / 0	--	1.0	1486	616	12.5	41
	11- 5-51[a]	8-hour Composite	--	--	6.7	175 / 8.75	66 / 5.46	259 / 11.27	31 / 0.79	-- / --	407 / 6.68	475 / 9.90	341 / 9.61	-- / --	0.2	1.6	1589	710	17.5	43
	5-20-52[a]	5-hour Composite	--	--	7.6	224 / 11.20	90 / 7.41	300 / 13.04	15 / 0.38	-- / --	541 / 8.88	332 / 6.91	510 / 14.38	Tr.	0.3	1.0	2190	928	20.8	41
	11-21-52[a]	8-hour Composite	--	--	7.5	130 / 6.50	55 / 4.52	185 / 8.04	12 / 0.31	-- / --	439 / 7.20	495 / 10.31	20 / 0.56	0 / 0	1.2	1.5	1240	552	12.2	41
	5-14-53	8-hour Composite	--	--	7.3	115 / 5.74	45 / 3.70	265 / 11.52	15 / 0.38	0 / 0	569 / 9.32	470 / 9.78	120 / 3.38	0 / 0	1.0	0.8	1275	472	12.02	54
	12- 1-53[a]	8-hour Composite	--	--	8.0	135 / 6.74	46 / 3.78	200 / 8.70	20 / 0.51	-- / --	495 / 3.02	430 / 8.95	174 / 4.90	0 / 0	1.0	0.7	1417	524	13.0	40
	5-12-54[a]	Grab	--	--	8.4	144 / 7.20	55 / 4.52	288 / 12.53	15 / 0.38	-- / --	549 / 3.33	450 / 9.37	324 / 9.14	0 / 0	1.5	1.0	1593	588	17.4	48

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

MINERAL ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Type of Sample	Average Daily Discharge mgd	$EC\times10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Total Hardness ($CaCO_3$) ppm	Effective Salinity epm	Per Cent Na
Port Hueneme Sanitary District	11- 4-54[a]	4-hour Composite	--	--	7.7	173 / 8.63	37 / 3.04	292 / 12.70	15 / 0.38	0 / 0	532 / 8.72	500 / 10.41	254 / 7.16	Tr.	0.9	1.1	1496	584	16.0	51
	6- 2-55[a]	8-hour Composite	--	--	8.0	208 / 10.38	18 / 1.48	260 / 11.30	16 / 0.41	0 / 0	599 / 9.82	480 / 9.99	214 / 6.03	1 / 0.02	0.5	0.7	1606	593	13.2	48
	11-16-55[a]	8-hour Composite	--	--	7.8	120 / 5.99	44 / 3.62	225 / 9.78	16 / 0.41	0 / 0	570 / 9.34	350 / 7.29	164 / 4.62	1 / 0.02	0.4	0.8	1314	480	10.5	49
	5-17-56[a]	8-hour Composite	--	--	7.3	180 / 8.98	29 / 2.38	248 / 10.78	17 / 0.43	0 / 0	403 / 6.61	645 / 13.43	204 / 5.75	2 / 0.03	1.0	1.3	1616	568	13.6	48
	11-14-56[a]	8-hour Composite	--	--	7.8	172 / 8.58	66 / 5.43	245 / 10.65	14 / 0.36	0 / 0	506 / 8.30	640 / 13.32	236 / 6.66	Tr.	1.0	1.6	1696	700	16.4	43
	5-15-57[a]	8-hour Composite	--	--	7.3	158 / 7.88	30 / 2.47	240 / 10.44	9 / 0.23	0 / 0	390 / 6.39	552 / 11.49	164 / 4.62	1 / 0.02	0.5	1.0	1450	518	13.1	50
	11-26-57[a]	10-hour Composite	--	--	5.8	150 / 7.48	55 / 4.52	272 / 11.83	8 / 0.20	0 / 0	230 / 3.77	720 / 14.99	192 / 5.41	0 / 0	0.3	3.4	1800	600	16.6	49
	5-14-58[a]	8-hour Composite	1.4	--	6.6	130 / 6.49	44 / 3.62	248 / 10.78	8 / 0.20	0 / 0	220 / 3.61	603 / 12.55	170 / 4.79	0 / 0	1.0	2.6	1282	506	14.6	51
Point Mugu Naval Station	10- 8-51 1545	Grab	0.15	1883	7.2	34 / 1.71	47 / 3.87	241 / 10.48	-- / --	0 / 0	529 / 8.66	270 / 5.62	166 / 4.67	0 / 0	--	3.7	1168	270	12.8	66
Port Hueneme Naval Base	11- 4-54[a]	16-hour Composite	--	--	7.3	148 / 7.38	54 / 4.44	530 / 23.04	11 / 0.28	0 / 0	591 / 9.68	745 / 15.51	396 / 11.17	Tr.	1.2	1.7	2080	591	25.5	66
Camarillo State Hospital	3-13-53 through 3-19-53	7-day Composite	1.33	1942	7.4	101 / 5.04	48 / 3.94	250 / 10.88	17 / 0.42	0 / 0	356 / 5.84	363 / 7.57	216 / 6.09	60 / 0.98	--	0.6	1271	449	14.4	54

a. Analyzed by California State Department of Public Health. Equivalents per million calculated. NO_3 calculated from N. TDS determined by subtracting suspended solids from total solids. HCO_3 calculated from total alkalinity. For analysis of trace constituents, see Table D2.

TABLE D2

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
City of Ojai	10-31-51[b] 1100	0.04	--	--	0.0	--	--	--	--	--
	5-21-52[b] 2400	0.50	0.05[a]	0.10[a]	0.22	0.16	0	0	0	0.02
	5-14-53[b]	0.6	0.06	0	0	0.08	0	0	0	0.14
	12- 1-53[b]	2.4	0.06	0.08	0	0	0	0	0.1	0.04
	5-12-54[b]	1.4	0.05[a]	0.05	0	0.02[a]	0	0.02[a]	0	0.04
	11- 4-54[b]	2.8	0.05[a]	0.1	0.01[a]	0.14	0.01[a]	0.01[a]	0.01[a]	0
	6- 2-55[b]	0.5	0.01	0.1	0	0.08	0	0	0.02	0
	11-16-55[b]	1.8	0.01	0.11	0	0.02	0	0	0	0
	5-17-56[b]	0.95	0.01	0.13	0.12	0.05	0	0	0	0.005
	11-14-56[b]	2.3	0.08	0.18	0.10	0.08	0	0	0	0.01
	5-15-57[b]	0.76	0.07	0.12	0.02	0.06	0	0	0	0.04
	11-26-57[b]	1.2	0.03	0.20	0.10	0.15	0	0	0	0
	5-14-58[b]	1.5	0.025	0.280	0.05	0.04	0	0	0	0
City of Ventura	11- 5-51[b] through 11- 6-51	0.95	--	--	0.0	--	--	--	--	--

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
City of Ventura	5-20-52[b]	2.0	0.05[a]	0.10[a]	0.12	0.30	0	0	0	0.80
	11-21-52[b]	1.6	0.13	0.05[a]	Tr.	0.24	0	0	0	0.16
	5-14-53[b]	0.9	0.15	0.06	0	0.10	0	0	0.04	0.2
	12- 1-53[b]	5.5	0.01	0.6	0	0.08	0	0	0.1	0
	5-12-54[b]	0.2	0.12	0.3	0	0.08	0	0.02	0	0
	11- 4-54[b]	1.0	0.14	0.8	0.01[a]	0.1	0.01[a]	0.01[a]	0.01[a]	0.06
	6- 2-55[b]	1.0	0.23	0.45	0	0.1	0	0.005	0.05	0.12
	11-16-55[b]	2.5	0.10	0.53	0	0.16	0	0	0	0
	5-17-56[b]	1.6	0.08	0.48	0.15	0.13	0	0	0	0.03
	11-14-56[b]	2.7	0.08	0.74	0.10	0.29	0	0.002	0	0
	5-15-57[b]	2.0	0.19	0.60	0.10	0.13	0	0.002	0.10	0.14
	11-26-57[b]	1.6	0.09	0.90	0.10	0.27	0	0.002	0	0.11
	5-14-58[b]	1.4	0.045	0.590	0.05	0.09	0	0	0.06	0.12
City of Santa Paula	11- 5-51[b]	0.5	--	--	0.0	--	--	--	--	--

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
City of Santa Paula	5-20-52[b]	1.2	0.05[a]	0.10[a]	0.10	0.20	0	0	0	0.02
	11-21-52[b]	1.0	Tr.	0.05[a]	0	6.8	0	0	0	0
	5-14-53[b]	0.7	0.01	0	0	0.09	0	0	0	0
	12- 1-53[b]	0.5	0.01	0.5	0	0.1	0	0	0.14	0
	5-12-54[b]	0.2	0.05	0.08	0	0.02	0	0.02	0	0.03
	11- 4-54[b]	0.2	0.05[a]	0.3	0.01[a]	0.08	0.01[a]	0.01[a]	0.01[a]	0.05
	6- 2-55[b]	0.25	0.02	0.2	0	0.08	0	0	0.02	0
	11-16-55[b]	1.5	0.01	0.27	0	0.08	0	0	0	0
	5-17-56[b]	0.71	0.07	0.08	0.07	0.07	0	0	0	0.01
	11-14-56[b]	0.72	0.08	0.20	0	0	0	0	0	0.01
	5-15-57[b]	0.76	0.12	0.18	0	0.07	0	0	0	0.11
	11-26-57[b]	0.48	0.05	0.20	0.05	0.15	0	0	0	0
	5-14-58[b]	0.75	0.035	0.590	0.05	0.03	0	0	0	0
Saticoy Sanitation District	10-31-51[b] 1400	1.3	--	--	0.0	--	--	--	--	--

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
Saticoy Sanitation District	5-21-52[b] 1300	1.2	0.05[a]	0.10[a]	0.22	0.24	0	0	0	0.04
	11-21-52[bc]	1.0	0.06	0.05[a]	Tr.	0.10	0	0.02	0	0
	5-14-53[b]	0.2	0.02	0.06	0.1	0.11	0	0	0	0
	12- 1-53[b]	4.5	0.06	0.7	0	0	0	0	0.12	0.06
	5-12-54[b]	1.8	0.05[a]	0.32	0.4	0.02[a]	0	0.02[a]	0	0.05
	11- 4-54[b]	1.0	0.05[a]	0.5	0.01[a]	0.1	0.01[a]	0.01[a]	0.01[a]	0
	6- 2-55[b]	1.2	0.02	0.5	0.04	0.2	0	0	0.03	0
	11-16-55[b]	5.0	0.02	1.05	0	0.20	0	0	0	0.10
	5-17-56[b]	1.5	0.01	0.40	0.30	0.09	0	0	0	0
	11-14-56[b]	3.2	0.06	0.18	0.10	0.48	0	0	0	0.01
	5-15-57[b]	2.6	0.15	0.31	0	0.11	0	0	0.05	--
	11-26-57[b]	1.2	0.08	0.22	0.02	0.09	0	0	0	0.09
	5-14-58[b]	2.3	0.035	0.460	0.20	0.07	0	0	0.02	1.00
City of Oxnard	11- 5-51[b]	0.7	--	--	0.0	--	--	--	--	--

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.
c. Sample collected from oxidation-percolation pond.

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
City of Oxnard	5-20-52[b]	0.90	0.05[a]	0.10[a]	0.06	0.24	0	0	0	0.02
	11-21-52[b]	1.0	0	0.05[a]	0	0.07	0	0	0	0.04
	5-14-53[b]	0.6	0.01[a]	0	0	0.02	0	0	0	0
	12- 1-53[b]	1.4	0.01[a]	0.4	0	0.04	0	0	0.04	0
	5-12-54[b]	0.9	0.12[a]	0.12	0	0.02[a]	0	0.02[a]	0	0
	11- 4-54[b]	0.3	0.05[a]	0.3	0.01[a]	0.1	0.01[a]	0.01[a]	0.01[a]	0.04
	6- 2-55[b]	0.3	0.02	0.2	0	0.1	0	0	0.04	0
	11-16-55[b]	0.40	0.05	0.28	0	0.06	0	0	0	0
	5-17-56[b]	0.64	0.02	0.17	0	0.07	0	0	0	0.015
	11-14-56[b]	0.60	0.10	0.38	0	0	0	0	0	0.005
	5-15-57[b]	0.72	0.08	0.11	0	0.06	0	0	0	0.90
	11-26-57[b]	0.76	0.05	0.24	0.10	0.20	0	0.010	0	0.10
	5-14-58[b]	0.40	0.025	0.230	0.02	0.03	0	0	0	0.40
Port Hueneme Sanitary District	11- 5-51[b]	0.11	--	--	0.0	--	--	--	--	--

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.

MINERAL ANALYSES OF TRACE CONSTITUENTS IN EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date and Time	Mineral Constituents in parts per million								
		Fe	Pb	Zn	Mn	Cu	Cr hexa-valent	As	CN	Phenols
Port Hueneme Sanitary District	5-20-52[b]	0.88	0.05[a]	0.10[a]	0.30	0.32	0	0	0	0.01
	11-21-52[b]	1.2	0	0.05[a]	0.1	0.1	0	0	0	0.8
	5-14-53[b]	0.5	0.07	0.02	0	0.06	0	0	0.05	0.08
	12- 1-53[b]	0.2	0.29	0.1	0	0	0	0	0.1	0
	5-12-54[b]	0.3	0.12	0.04	0	0.02	0	0.02	0.01	0.07
	11- 4-54[b]	0.5	0.05[a]	0.08	0.2	0.16	0.01[a]	0.01[a]	0.01[a]	0.03
	6- 2-55[b]	0.2	0.01	0.04	0.04	0.04	0	0	0.03	0
	11-16-55[b]	1.1	0.01	0.11	0	0.06	0	0	0	0
	5-17-56[b]	1.1	0.01	0.18	0.30	0.05	0	0	0	0.01
	11-14-56[b]	1.3	0.08	0.80	0.10	0.02	0	0	0	0.09
	5-15-57[b]	1.7	0.12	0.35	0.30	0.06	0	0.002	0.03	0.13
	11-26-57[b]	1.3	0.09	0.80	0.05	0.20	0.05	0	0	1.7
	5-14-58[b]	3.6	0.010	0.650	0.25	0.07	0	0	0.04	0.18
Port Hueneme Naval Station	11- 4-54[b]	0.8	0.05[a]	0.07	0.2	0.18	0.01[a]	0.01[a]	0.01[a]	0.01

a. Less than value shown.
b. Sample analyzed by the California State Department of Public Health.

TABLE D3

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Treatment Plant	Date / Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen Ammonia ppm	Nitrogen Organic ppm
City of Ojai	10-31-51[a] 2300	Grab	0.06	2.0	--	1760	--	17.2	--	276	15	
	5-21-52[a] 2400	Grab	70+	3.0	2.6	1400	--	5	--	320	7.0	5.0
	11-21-52[a]	8-hour Composite	45[b]	36	4	1390	--	10	--	252	14	5
	5-14-53[a]	8-hour Composite	0.45[b]	20	4.5	990	--	40	--	230	16	4
	12- 1-53[a]	8-hour Composite	0.45[b]	35	4	1060	0.05	13	8	--	20	30
	5-12-54[a]	8-hour Composite	7,000+	19	3	1210	0.1[b]	29	26	--	20	2.2
	11- 4-54[a]	8-hour Composite	4.5[b]	13	4	1165	0.1[b]	38	24	--	2	24.6
	6- 2-55[a]	8-hour Composite	45[b]	50	6	1460	0.2	46	36	--	28	7.8
	11-16-55[a]	8-hour Composite	62 and 230	40	3	1416	0.01[b]	30	26	--	18.5	16
	5-17-56[a]	8-hour Composite	0.45[b]	30	2	1324	0.05	20	14	--	16.5	3.0
	11-14-56[a]	8-hour Composite	0.45[b]	42	4	1440	0.05	41	27	--	21.0	4.1
	5-15-57[a]	8-hour Composite	0.45[b]	65	8	1370	0.05	26	22	--	22	9.9

a. Analyzed by California State Department of Public Health.
b. Less than value shown.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20 C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen Ammonia ppm	Nitrogen Organic ppm
City of Ojai	11-26-57[a]	8-hour Composite	0.45	71	11	1294	0	39	27	--	20	7
	5-14-58[a]	8-hour Composite	1.3	23	6	1045	0.35	51	23	--	11	12
City of Ventura	11- 1-51 through 11- 2-51	24-hour Composite	210,000	432	--	2106	--	152	--	490	27.5	--
	5-22-52 through 5-23-52	24-hour Composite	700,000+	295	1.6	1630	--	223	--	170	12	14
	11-21-52[a]	8-hour Composite	70,000+	270	34	1480	--	170	--	332	18	22
	5-14-53[a]	16-hour Composite	700,000	260	4	1320	--	110	--	290	30	20
	12- 1-53[a]	16-hour Composite	2,400,000	315	18	1620	1.2	170	130	--	27	23
	5-12-54[a]	16-hour Composite	2,400,000	270	--	1500	1.0	175	149	--	17.5	12.3
	11- 4-54[a]	14-hour Composite	2,400,000	230	10	1500	1.2	129	100	--	10	27.8
	6- 2-55[a]	16-hour Composite	70,000,000+	240	11	1498	0.5	125	96	--	27	9.5
	11-16-55[a]	18-hour Composite	620,000	235	15	1620	1.9	167	143	--	26	21.5

a. Analyzed by California State Department of Public Health.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen Ammonia ppm	Nitrogen Organic ppm
City of Ventura	5-17-56[a]	14-hour Composite	6,200,000	300	37	1488	0.5	170	137	--	32.8	8.6
	11-14-56[a]	14-hour Composite	700,000	280	67	1950	2.00	230	183	--	28.2	8.3
	5-15-57[a]	14-hour Composite	700,000+	460	85	2830	6.0	282	250	--	16	14
	11-26-57[a]	14-hour Composite	700,000+	300	20	1820	2.0	204	146	--	27	12
	5-14-58[a]	14-hour Composite	700,000+	217	31	1520	0.8	140	112	--	16	4
City of Santa Paula	11- 5-51[a]	8-hour Composite	6,000	37	--	1900	--	38	--	564	10[b]	--
	5-20-52[a]	7-hour Composite	45[c]	70	5.0	1500	--	80	--	250	5	22
	11-21-52[a]	8-hour Composite	--	50	8	1390	--	40	--	273	18	10
	5-14-53[a]	12-hour Composite	4.5[c]	37	2	1720	--	105	--	285	20	8
	12- 1-53[a]	12-hour Composite	6.2	65	9	1400	0.3	73	53	--	27	23
	5-12-54[a]	8-hour Composite	23	45	17	1280	1.0	64	55	--	17.5	5

a. Analyzed by California State Department of Public Health.
b. Ammonia and Organic Nitrogen reported together.
c. Less than value shown.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date / Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen	
											Ammonia ppm	Organic ppm
City of Santa Paula	11- 4-54[a]	8-hour Composite	.45[b] and 2.3	50	5	1500	0.4	53	39	--	6	21.3
	6- 2-55[a]	9-hour Composite	620	45	6	1835	0.8	50	30	--	20	2.8
	11-16-55[a]	8-hour Composite	23,000	37	5	1662	1.5	93	61	--	15.5	19
	5-17-56[a]	8-hour Composite	45[b]	68	3	1251	0.1	14	10	--	7.6	2.2
	11-14-56[a]	8-hour Composite	0.46	18	7	1780	0.01	72	42	--	14.0	5.3
	5-15-57[a]	9-hour Composite	62	33	3	1430	0	29	27	--	16	3.7
	11-26-57[a]	8-hour Composite	0.45[b]	43	8	1460	0.15	47	30	--	19	6
	5-14-58[a]	8-hour Composite	2.3	19	30	1460	0.03	44	25	--	16	3
Saticoy Sanitation District	10-31-51[a] 1400	Grab	70,000+	255	--	2452	--	112	--	500	27.5	--
	5-21-52[a] 1300	Grab	700,000	265	8.8	5140	--	183	--	810	25	19
	11-21-52[ac]	Grab	45	37	9	6060	--	110	--	709	6	3

a. Analyzed by California State Department of Public Health.
b. Less than value shown.
c. Sample collected from oxidation-percolation pond.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen	
											Ammonia ppm	Organic ppm
Saticoy Sanitation District	5-14-53[a]	Grab	700+	370	3	4630	--	140	--	660	24	26
	12- 1-53[a]	Grab	70,000	105	61	2960	1.1	180	120	--	50	40
	5-12-54[a]	Grab	600	230	6	4180	--	169	131	--	25	4.8
	11- 4-54[a]	Grab	7,000	165	13	1930	1.1	149	97	--	16	31.9
	6- 2-55[a]	Grab	6,200	15	10	3724	0.7	95	55	--	40	4.2
	11-16-55[a]	Grab	13,000 and 24,000	56	6	2483	0.9	126	86	--	20.5	40
	5-17-56[a]	Grab	230,000	85	58	3538	0.4	150	113	--	40	1.4
	11-14-56[a]	Grab	240,000	140	130	2570	6.0	500	337	--	38.1	11.5
	5-15-57[a]	Grab	600	99	55	1820	0.5	216	206	--	26	16
	11-26-57[a]	Grab	7,000	38	15	1788	0.05	136	95	--	48	13
	5-14-58[a]	Grab	70,000+	138	54	4050	0.1	152	120	--	13	1
City of Oxnard	11- 5-51[a]	8-hour Composite	240,000	184	2	1776	--	75	--	278	15[b]	--
	5-20-52[a]	7-hour Composite	450	8.0	4.6	1610	--	30	--	250	4.6	7.0
	11-21-52[a]	18-hour Composite	6,200	70	6	1560	--	30	--	285	12	12

a. Analyzed by California State Department of Public Health.
b. Ammonia and Organic Nitrogen reported together.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen Ammonia ppm	Nitrogen Organic ppm
City of Oxnard	5-14-53[a]	16-hour Composite	60	27	2	2160	--	40	--	330	10	10
	12- 1-53[a]	16-hour Composite	2.3	30	3	1600	0.4	54	36	--	15	21
	5-12-54[a]	16-hour Composite	240	5	8	1610	0.4	30	25	--	5	1.6
	11- 4-54[a]	14-hour Composite	23;62	23	2	1380	0.5	29	22	--	2	17.6
	6- 2-55[a]	13-hour Composite	450[b]	25	5	1540	0.3	34	22	--	13	4.4
	11-16-55[a]	15-hour Composite	7,000	65	3	1567	1.4	98	72	--	7	23
	5-17-56[a]	16-hour Composite	7,000+	35	4	1650	0.4	35	24	--	16.7	1.9
	11-14-56[a]	24-hour Composite	24,000	30	3	1610	0.01[b]	41	30	--	21.3	3.5
	5-15-57[a]	24-hour Composite	70,000+	77	7	1660	0.02	55	49	--	20	7.2
	11-26-57[a]	24-hour Composite	62,000	72	6	1548	0.05	47	36	--	30	8
	5-14-58[a]	16-hour Composite	240,000	51	4	1580	0.0	64	33	--	21	5
Port Hueneme Sanitary District	11- 5-51[a]	8-hour Composite	700,000	120	--	1628	--	39	--	368	25[c]	--

a. Analyzed by California State Department of Public Health.
b. Less than value shown.
c. Ammonia and Organic Nitrogen reported together.

SANITARY ANALYSES OF EFFLUENT FROM SEWAGE TREATMENT PLANTS
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Treatment Plant	Date / Time	Type of Sample	Coliform MPN/ml	5 day B.O.D. at 20°C ppm	Oil and Grease ppm	Total Solids (by Evaporation) ppm	Settleable Solids ml/hr	Suspended Solids ppm	Volatile Suspended Solids ppm	Volatile Solids ppm	Nitrogen: Ammonia ppm	Nitrogen: Organic ppm
Port Hueneme Sanitary District	5-20-52[a]	5-hour Composite	450	85	0.2	2260	--	70	--	580	20	9
	11-21-52[a]	8-hour Composite	70,000+	150	10	1310	--	70	--	259	20	16
	5-14-53[a]	8-hour Composite	62,000	125	1	1314	--	65	--	205	24	10
	12- 1-53[a]	8-hour Composite	4,500	20	4	1500	0.3	83	79	--	27	33
	5-12-54[a]	16-hour Composite	240	5	8	1610	0.4	30	25	--	5	1.6
	11- 4-54[a]	4-hour Composite	6,200; 23,000	90	3	1550	0.2	54	45	--	20	25.9
	6- 2-55[a]	8-hour Composite	70,000,000	60	5	1656	0	50	42	--	30	4.8
	11-16-55[a]	8-hour Composite	62,000	53	3	1368	0.01	54	44	--	15.5	20
	5-17-56[a]	8-hour Composite	230,000	115	18	1749	0.1	133	90	--	40	3.1
	11-14-56[a]	8-hour Composite	700,000	126	20	1800	0.30	104	83	--	31.6	3.4
	5-15-57[a]	8-hour Composite	700,000	240	15	1650	14	200	180	--	14	4.1
	11-26-57[a]	10-hour Composite	700,000+	500	35	2014	4.5	214	160	--	15	7
	5-14-58[a]	8-hour Composite	240,000	360	3	1710	38	428	337	--	16	2
Port Hueneme Naval Station	11- 4-54[a]	16-hour Composite	--	135	3	2130	0.2	50	44	--	16	10.9

a. Analyzed by California State Department of Public Health.

APPENDIX E

CROSS INDEX

State Well Number to Ventura County Well Number

APPENDIX E

CROSS INDEX STATE WELL NUMBER TO VENTURA COUNTY WELL NUMBER*
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

State well number S.B.B.&M.	Ventura County well number*	State well number S.B.B.&M.	Ventura County well number*
1S/21W- 5H1	11-X-13	1N/19W- 7K5	17-U-16
8H1	11-X- 1	7K6	17-U-18
1S/22W- 1B1	10-X-13	7K7	17-U-19
1N/19W- 1C1	10-X- 1	7K8	17-U-54
2B1	19-U-34	7K9	17-U-42
2C1	19-U-33	7K10	17-U-14
2L1	19-U- 1	7K11	17-U- 2
2N1	19-U- 2	7K12	17-U-22
2R1	19-U-32	7K13	17-U-23
3F1	18-U-80	7K14	17-U-12
3L1	18-U-81	7L1	17-U-24
3M1	18-U-79	7L2	17-U-17
3N1	18-U-82	7L3	17-U-39
4L1	18-T-12	7L4	17-U-20
4P1	18-U-78	7M1	16-U-15
5B1	17-U-38	7M2	16-U-53
5L1	17-U-41	7P1	17-V-13
5M1	17-U-35	7Q1	17-U-21
5N1	17-U-34	7Q2	17-U-27
5P1	17-U-32	7Q3	17-U-26
5P2	17-U-33	7Q4	17-U-52
6M1	17-U-40	7R1	17-U- 6
6M2	16-U-55	7R2	17-U- 7
6Q1	17-U-56	7R3	17-U-48
7C1	17-U-29	7R4	17-U- 8
7C2	17-U-28	7R5	17-V- 2
7D1	16-U-13	8C1	17-U-53
7E1	16-U-49	8F1	17-U-46
7E2	16-U-14	8G1	17-U-43
7F1	17-U-25	8G2	17-U-45
7J2	17-U-51	8G3	17-U-36
7J3	17-U- 4	8G4	17-U-37
7J4	17-U-10	8G5	17-U-44
7J5	17-U- 3	8J1	17-U-30
7J6	17-U- 5	8J2	17-U-31
7J7	17-U-11	8J3	17-U-55
7K1	17-U-15	8K1	17-U-50
7K2	17-U-49	8L1	17-U-47
7K3	17-U-13	9B1	18-U- 4
7K4	17-U- 1	9G1	18-U-77

*From State Division of Water Resources Bulletin 46. "Ventura County Investigation".

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/19W- 9G2	18-U- 5	1N/19W-10L3	18-U-34
9G3	18-U-85	10L4	18-U-49
9G4	18-U-84	10L5	18-U-45
9G5	18-U- 7	10M1	18-U-28A
9H1	18-U-28	10M2	18-U-29
9H2	18-U- 3	10M3	18-U-31
9H3	18-U- 2	10M4	18-U-32
9H4	18-U-1	10M5	18-U-36
9H5	18-U-86	10M6	18-U-37
9H6	18-U- 6	10N1	18-U-35
9J1	18-U-13	10N2	18-U-38
9K2	18-U- 8	10N3	18-U-39
9K3	18-U- 9	10N4	18-U-42
9K4	18-U-10	10N5	18-U-56
9K5	18-U-11	10N6	18-V- 1
9K6	18-U-83	10N7	18-V- 8
9K7	18-U-12	10N8	18-U-89
9Q1	18-U-14	10P2	18-U-54
9Q2	18-U-15	10P3	18-U-40
9Q3	18-U-16	10P4	18-U-43
9Q4	18-U-17	10P5	18-U-46
9Q5	18-U-18	10P6	18-U-58
9R1	18-U-22	10P7	18-U-44
9R4	18-U-21	10P8	18-U-52
9R5	18-U-24	10P9	18-U-53
9R6	18-U-23	10P10	18-U-47
10E1	18-U-25	10P11	18-U-50
10E2	18-U-27	10P12	18-U-48
10F1	18-U-26	10P13	18-U-41
10G1	18-U-61	10P14	18-U-51
10G2	18-U-60	10P15	18-U-57
10H1	18-U-59	10Q1	18-U-55
10H2	18-U-62	10Q2	18-U-68
10J1	18-U-63	10Q3	18-U-69
10J2	18-U-65	10Q4	18-U-71
10J3	18-U-64	10Q5	18-U-70
10K1	18-U-66	10Q6	18-U-74
10K2	18-U-67	10Q7	18-U-75
10L1	18-U-30	10Q8	18-U-76
10L2	18-U-33	10Q9	18-V- 2

CROSS INDEX STATE WELL NUMBER TO VENTURA COUNTY WELL NUMBER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/19W-10R1	18-U-72	1N/19W-12Q1	19-U-35
10R2	18-U-73	13B1	19-V-91
10R4	18-V- 4	14A1	19-V-23
10R5	18-V- 3	14A2	19-V-24
10R6	18-V- 5	14A3	19-V-25
11C1	19-U- 3	14A4	19-V-28
11E1	19-U- 4	14A5	19-V-29
11E2	19-U- 5	14B1	19-V- 6
11E3	19-U- 6	14B2	19-V-22
11E4	19-U- 7	14B3	19-V-21
11E5	19-U- 8	14B4	19-V-14
11M1	19-U- 9	14B5	19-V-20
11M2	19-U-10	14B6	19-V-32
11M3	19-U-12	14B7	19-V-37
11M4	19-U-13	14B8	19-V-30
11M5	19-U-14	14B9	19-V-39
11M6	19-U-11	14B10	19-V-38
11N1	19-U-15	14C1	19-V-19
11N2	19-U-16	14C2	19-V-31
11N3	19-U-17	14C3	19-V-86
11N4	19-U-19	14C4	19-V-33
11N5	19-U-20	14C5	19-V-18
11N6	19-U-18	14C6	19-V-87
11N7	19-U- 3	14D1	19-V-13
11N8	19-U-31	14D2	19-V-12
11N9	19-V- 2	14D3	19-V-11
11N10	19-U-30	14D4	19-V-16
11P1	19-U-21	14D5	19-V- 1
11P2	19-U-22	14D6	19-V- 9
11P3	19-U-23	14D7	19-V-10
11P4	19-U-28	14D8	19-V-15
11P5	19-U-24	14D9	19-V-17
11P6	19-U-25	14F1	19-V-35
11P7	19-U-29	14G1	19-V-34
11P8	19-V- 4	14G2	19-V-36
11P9	19-V- 8	14G3	19-V-43
11Q1	19-U-26	14G4	19-V-45
11Q2	19-U-27	14G5	19-V-40
11Q3	19-V- 5	14G6	19-V-41
11R1	19-V- 7	14G7	19-V-42

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/19W-14G8	19-V-46	1N/19W-15B1	18-V- 7
14G9	19-V-47	15E1	18-V-10
14G10	19-V-44	16J1	18-V- 9
14H1	19-V-79	18A1	17-V-59
14H2	19-V-27	18A2	17-V-49
14H3	19-V-26	18A3	17-V-48
14J1	19-V-48	18A4	17-V-31
14J2	19-V-49	18A5	17-V-30
14J3	19-V-50	18A6	17-V-29
14J4	19-V-54	18A7	17-V-54
14J5	19-V-55	18B1	17-V-22
14J6	19-V-61	18B2	17-V- 7
14J7	19-V-56	18B3	17-V- 6
14J8	19-V-57	18B4	17-V- 5
14J9	19-V-58	18B5	17-V- 4
14J10	19-V-71	18B6	17-V- 3
14J11	19-V-80	18B7	17-V-23
14K1	19-V-53	18B8	17-V-11
14K2	19-V-52	18B9	17-V-55
14K3	19-V-51	18B10	17-V-12
14K4	19-V-90	18B11	17-V-25
14L1	19-V-74	18B12	17-V-24
14L2	19-V-75	18B13	17-V- 8
14M1	19-V-76	18B14	17-V-26
14N1	19-V-77	18B15	17-V-27
14N2	19-V-78	18C1	17-V- 9
14Q1	19-V-73	18C2	17-V-10
14Q2	19-V-72	18C3	17-V-20
14R2	19-V-69	18C4	17-V-15
14R3	19-V-68	18C5	17-V-14
14R4	19-V-67	18F1	17-V-18
14R5	19-V-65	18F2	17-V-17
14R6	19-V-60	18F3	17-V-16
14R7	19-V-70	18G1	17-V-19
14R8	19-V-59	18G2	17-V-21
14R9	19-V-62	18G3	17-V-28
14R10	19-V-63	18G4	17-V-35
14R11	19-V-64	18G5	17-V-39
14R12	19-V-66	18G6	17-V-38
15A1	18-V- 6	18H1	17-V-53

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/19W-18H2	17-V-44	1N/19W-24N2	19-W-2
18H3	17-V-46	24P1	19-W-1
18H4	17-V-50	25F1	19-W-B
18H5	17-V-51	26C1	19-W-4
18H6	17-V-45	28A1	18-W-4
18H7	17-V-43	28G1	18-W-2
18H8	17-V-47	28H1	18-W-3
18H9	17-V-32	28K1	18-W-5
18H10	17-V-34	28L1	18-W-6
18H11	17-V-33	28L2	18-W-7
18H12	17-V-41	28L3	18-W-8
18H13	17-V-36	28L4	18-W-9
18H14	17-V-37	28L5	18-W-12
18H15	17-V-40	28L6	18-W-1A
18H16	17-V-52	28M1	18-W-1
18J1	17-V-42	28P1	18-W-10
18J2	17-V-57	28P2	18-W-11
18J3	17-V-58	28P3	18-W-13
19E1	16-V-9	29C1	17-W-6
19E2	17-V-60	29C2	17-W-7
19F1	17-V-61	29C3	17-W-8
19F2	17-V-72	29C4	17-W-9
19J1	17-V-64	29D1	17-W-5
19K1	17-V-63	29D2	17-W-11
19L1	17-V-62	29D3	17-W-10
19M1	16-V-12	29D4	17-W-E
19N1	16-V-7	29E1	17-W-13
19R1	17-W-1	29E2	17-W-24
20C1	17-V-69	29E3	17-W-23
20D1	17-V-68	29E4	17-W-22
20E1	17-V-66	29G1	17-W-14
20E2	17-V-67	29G2	17-W-21
20E3	17-V-65	29G3	17-W-20
20N1	17-V-70	29G4	17-W-15
23K1	19-V-84	29H1	17-W-17
23Q1	19-V-85	29H2	17-W-16
24A1	19-V-81	29H3	17-W-18
24M1	19-V-82	29H4	17-W-19
24M2	19-V-83	30A1	17-W-4
24N1	19-W-3	30A2	17-W-2

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/19W-30C1	17-W-25	1N/20W-7E1	13-U-18
30D1	16-W-9	11A1	16-U-33
30F1	17-W-26	11A2	16-U-32
30F2	17-W-C	11A3	16-U-31
30F3	17-W-R	11C1	16-U-44
30H1	17-W-3	11C2	16-U-5
30H2	17-W-12	11C3	16-U-6
1N/20W-1L1	16-U-52	11D1	16-U-45
1R1	16-U-51	11D2	16-U-46
2P1	16-U-43	11D3	15-U-3
3B1	15-U-9	11J1	16-U-7
3D1	15-U-7	11J2	16-U-38
3J1	15-U-2	11L1	16-U-2
3J2	15-U-1	11L2	16-U-4
3K1	15-U-4	11L3	16-U-1
4C1	15-U-6	11L4	16-U-3
4C2	15-U-8	11N1	16-U-30
4D1	15-U-5	11Q1	16-U-29
4D2	15-U-10	12B1	16-U-18
4E1	14-U-15	12B2	16-U-34
5C1	14-U-12	12B3	16-U-42
5D1	14-U-8	12B4	16-U-19
5K1	14-U-16	12B5	16-U-50
6A1	14-U-3	12D1	16-U-39
6A2	14-U-10	12D2	16-U-36
6B1	14-U-11	12D3	16-U-41
6B2	14-U-1	12E1	16-U-9
6B3	14-U-7	12E2	16-U-10
6C1	14-U-2	12E3	16-U-8
6H1	14-U-4	12E4	16-U-48
6J1	14-U-5	12F1	16-U-20A
6J2	14-U-18	12F2	16-U-20
6J3	14-U-17	12F3	16-U-35
6Q1	14-U-23	12F4	16-U-37
6R1	14-U-19	12F5	16-U-11
6R2	14-U-6	12G1	16-U-12
6R3	14-U-20	12G2	16-U-40
7A1	14-U-21	12H1	16-U-17
7C1	14-U-14	12K1	16-U-21
7D1	14-U-13	12K2	16-U-22

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/20W-12L1	16-U-27	1N/20W-22K1	15-V-16
12L2	16-U-28	22Q1	15-V-17
12L3	16-U-28A	23C1	16-V-18
12L4	16-U-26	23C2	16-V-5
12N1	16-U-47	23D1	16-V-19
12N2	16-U-25	23D2	16-V-6
12N3	16-U-24	23D3	16-V-4
12P1	16-U-23	23F1	16-V-17
12R1	16-U-16	23F2	16-V-16
13E1	16-V-1	24B1	16-V-15
14B1	16-V-2	24B2	16-V-14
14B2	16-V-3	24H1	16-V-8
15E1	15-V-12	24H2	16-V-13
15F1	15-V-13	24Q1	16-V-11
15J1	15-V-2	24R1	16-V-10
15J2	15-V-1	25A1	16-W-7
15J3	15-V-24	25A2	16-W-6
15R1	15-V-20	25B1	16-W-5
15R2	15-V-21	25B2	16-W-4
16A1	15-V-10	25B3	16-W-8
16B1	15-V-9	25C1	16-W-2
16C1	15-V-8	25C2	16-W-1
16F1	15-V-7	25C3	16-W-10
16H1	15-V-11	25C4	16-W-11
16M1	15-V-6	25D1	16-W-13
16N1	15-V-4	25E1	16-W-14
16P1	15-V-5	25E2	16-W-15
17G1	14-V-6	25F1	16-W-12
17K1	14-V-A	25H1	16-W-3
19E1	14-V-1	1N/21W-1A1	13-U-28
19F1	14-V-2	1A2	13-U-48
19G1	14-V-3	1B1	13-U-9
19G2	14-V-4	1B2	13-U-32
20C1	14-V-5	1B3	13-U-34
21F1	15-V-3	1C1	13-U-33
21J1	15-V-15	1D1	13-U-16
22A1	15-V-22	1D2	13-U-23
22A2	15-V-18	1D3	13-U-35
22A3	15-V-23	1E1	13-U-44
22E1	15-V-14	1F1	13-U-37

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/21W-1F2	13-U-36	1N/21W-6J1	11-U-17
1M1	13-U-45	6J2	11-U-14
1P1	13-U-49	6J3	11-U-14A
1R1	13-U-7	6L1	11-U-22
1R2	13-U-6	6P1	11-U-3
2H1	13-U-31	6R1	11-U-27
2H2	13-U-11	6R2	11-U-28
2H3	13-U-42	6R3	11-U-27A
2J1	13-U-12	7A1	11-U-21
2K1	13-U-15	7H1	11-U-6
2P1	13-U-26	7H2	11-U-12
2Q1	13-U-2	7H3	11-U-38
3A1	12-U-7	7J1	11-U-11
3B1	12-U-9	7P1	11-U-29
3C1	12-U-4	7R1	11-U-25
3C2	12-U-3	8D1	11-U-1
3L1	12-U-13	8D2	11-U-1A
3P1	12-U-1		
4A1	12-U-8	8N1	11-U-26
4D1	11-U-16	9C1	12-U-15
4D2	11-U-32	9C2	12-U-14
4D3	11-U-33	9D1	11-U-36
4J1	12-U-12	9M1	11-U-13
4M1	11-U-2	9M2	11-U-37
4M2	12-U-10	9R1	12-V-16
4N1	11-U-35	10B1	12-U-11
4P1	12-U-5	10C1	12-U-6
5A1	11-T-31	10F1	12-U-2
5C1	11-U-30	11B1	13-U-5
5G1	11-U-31	11B2	13-U-50
5H1	11-U-24	11C1	13-U-46
5H2	11-U-9A	11D1	13-U-17
5H3	11-U-9	11G1	13-U-21
5J1	11-U-34	11G2	13-U-4
5K1	11-U-23	11J1	13-U-8
5P1	11-U-20	11R1	13-U-10
6A1	11-U-19	11R2	13-U-20
6C1	11-U-5	12B1	13-U-22
6C2	11-U-4	12B2	13-U-39
6H1	11-U-18	12C1	13-U-43

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/21W-12C2	13-U-40	1N/21W-18B1	11-V-19
12E1	13-U-24	18F1	11-V-9
12E2	13-U-30	18G1	11-V-9A
12E3	13-U-29	18L1	11-V-15
12F1	13-U-41	18L2	11-V-1
12F2	13-U-47	19A1	11-V-7
12F3	13-U-13	19A2	11-V-14
12G1	13-U-1	19B1	11-V-44
12G2	13-U-38	19B2	11-V-47
12H1	13-U-19	19C1	11-V-11
12M1	13-U-25	19J1	11-V-29
12R1	13-V-16	19K1	11-V-42
14A1	13-V-1	19K2	11-V-41
14A2	13-V-3A	19K3	11-V-40
14B1	13-V-9	19K4	11-V-5
14C1	13-V-8	19L1	11-V-46
14F1	13-V-9A	19L2	11-V-25
14H1	13-V-1A	19N1	11-V-20
14J1	13-V-2	19P1	11-V-30
15C1	12-V-3	19R1	11-W-11
15H1	12-V-13	20C1	11-V-3
15J1	12-V-12	20C2	11-V-4
15L1	12-V-15	20C3	11-V-12
15P1	12-V-8	20C4	11-V-28
15Q1	12-V-7A	20D1	11-V-27
15Q2	12-V-7	20K1	11-V-38
16A1	12-V-2	20P1	11-V-39
16A3	12-V-2A	20M1	11-V-39A
16E1	11-V-34	20N1	11-V-10
16M1	12-V-4	20N2	11-W-22
16M2	11-V-33	20N3	11-W-23
16P1	12-V-17	20N4	11-W-16
17B1	11-V-8	20P1	11-V-39
17C1	11-V-24	20P2	11-W-14
17D1	11-V-37	20Q1	11-V-31
17E1	11-V-17	20R1	11-V-32
17H1	11-V-13	21D1	11-V-48
17Q1	11-V-21	21D2	11-V-6
18A1	11-V-2	21K1	12-V-14A
18A2	11-V-43	21N1	11-W-34

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/21W-22B1	12-V-11	1N/21W-30C1	11-W-37
22E1	12-V-14	30C2	11-W-25
22H1	12-V-1	30D1	11-W-29
22K1	12-V-10	30F1	11-W-1
23A1	13-V-10	30F2	11-W-7
23E1	13-V-4	31A2	11-W-28
24B1	13-V-6	31A3	11-W-26
24C1	13-V-7	31J1	11-W-21A
24C2	13-V-12	31L1	11-W-21
24E1	13-V-11	32G1	11-W-35
24F1	13-V-13	32K1	11-W-36
24F2	13-V-15	33E1	12-W-4
24L1	13-V-14	33L1	12-W-3
25G1	13-W-5	33P1	12-W-5
25L1	13-W-4	34A1	12-W-7
26J1	13-W-3	1N/22W-1A1	10-U-18
26K1	13-W-1	1C1	10-T-31
26K2	13-W-2	1D1	10-T-30
27F1	12-W-2	1F1	10-U-23
27H1	12-W-9	1H1	10-U-1
27H2	12-W-10	1M1	10-U-16
28C1	12-W-12	1P1	10-U-17
28F1	12-W-8	1P2	10-U-7
28F2	12-W-1	2A1	10-T-11
28G1	12-W-14	2A2	10-T-21
28G2	12-W-6	2D1	10-T-24
28H1	12-W-13	2D2	10-T-10
28N1	12-W-15	2D3	10-U-24
29A1	11-W-31	2E1	10-U-5
29B2	11-W-33	2E2	10-U-25
29B3	11-W-38	2G1	10-U-15
29B4	11-W-32	2K1	10-U-31
29D1	11-W-8	2K2	10-U-28
29D2	11-W-10	2K3	10-U-4
29G1	11-W-24	2M1	10-U-6
29K1	11-W-6	2N1	10-U-26
29R1	11-W-9A	2P1	10-U-9
29R2	11-W-15	3A1	10-T-17
29R3	11-W-9	3C1	9-U-19
30A1	11-W-17	3F1	9-U-64

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/22W-3F2	9-U-63	1N/22W-4D5	9-U-47D
3F3	9-U-17	4D6	9-U-56
3F4	9-U-9	4D7	9-U-47C
3J1	9-U-18	4D8	9-U-47B
3J2	9-U-67	4D9	9-U-47A
3K1	9-U-16	4D10	9-U-47
3K2	9-U-37	4F1	9-U-1
3K3	9-U-6A	4F2	9-U-45
3K4	9-U-6	4M1	8-U-15
3K5	9-U-40	4N1	9-U-26
3K6	9-U-41	4P1	9-U-44
3K7	9-U-52	5A1	8-U-34
3K8	9-U-3	5A2	8-U-32
3K9	9-U-35	5A3	8-U-20
3K10	9-U-5	5B1	8-T-5
3K11	9-U-5A	5B2	8-U-33
3K12	9-U-39	5B3	8-U-36
3K13	9-U-51	5C1	8-U-35
3L1	9-U-42	5D1	8-U-1
3L2	9-U-7	5G1	8-U-38
3L3	9-U-8	5H1	8-U-4
3L4	9-U-34	5J1	8-U-12
3L5	9-U-4	5K1	8-U-13
3L6	9-U-50	5M1	8-U-17
3P1	9-U-30	5P1	8-U-11
3P2	9-U-46	5Q1	8-U-5
3P3	9-U-29	6A1	8-U-30
3Q1	9-U-33	6A2	8-U-21
3Q2	9-U-28	6B1	8-U-28
3Q3	9-U-49	6D1	7-U-1
3Q4	9-U-32	6E1	8-U-18
3Q5	9-U-38	6J1	8-U-10
3Q6	9-U-48	6K1	8-U-29
4A1	9-T-71	6Q1	8-U-16
4B1	9-U-13	6R1	8-U-3
4C1	9-U-70	7A1	8-U-8
4D1	8-T-20	7D1	7-U-2
4D2	8-T-20A	7J1	8-U-6
4D3	9-U-57	7M1	7-U-9
4D4	9-U-47E	7M2	8-U-23

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/22W-8B1	8-U-27	1N/22W-11C1	10-U-8
8B2	8-U-A	11C2	10-U-33
8C1	8-U-14	11D1	10-U-19
8C2	8-U-22	11E1	10-U-14
8D1	8-U-2	11E2	10-U-37
8E1	8-U-26	11J1	10-U-30
8K1	8-U-9	11P1	10-U-29
8K2	8-U-37	12C1	10-U-20
8K3	8-U-19	12C2	10-U-21
8L1	8-U-24	12H1	10-U-2
8M1	8-U-25	12J1	10-U-12
8Q1	8-U-7	12M1	10-U-34
9A1	9-U-61	12M2	10-U-39
9B1	9-U-2	12N1	10-U-38
9C1	9-U-10	12N2	10-U-22
9C2	9-U-71	12P1	10-U-32
9F1	9-U-43	12P2	10-U-11
9F2	9-U-59	13A1	10-V-46
9G1	9-U-53	13D1	10-V-45
9L1	9-U-69	13D2	10-V-6
9L2	9-U-20	13E1	10-V-27
9Q1	9-U-65	13E2	10-V-22
9Q2	9-U-65A	13F1	10-V-14
9Q3	9-U-66	13H1	10-V-20
10A1	9-U-12	13H2	10-V-7
10A2	9-U-F	13J1	10-V-44
10D1	9-U-54	13J2	10-V-12
10E1	9-U-14	13J3	11-V-36
10E2	9-U-36	13K1	10-V-2
10H1	10-U-36	13L1	10-V-48
10J1	9-U-60	13N1	10-V-9
10K1	9-U-21	13P1	10-V-43
10M1	9-U-62	13Q1	10-V-15
10M2	9-U-15	14A1	10-V-23
10N1	9-U-11	14C1	10-V-21
10P1	9-U-55	14C2	10-V-26
10R1	9-U-58	14C3	10-V-25
11A1	10-U-3	14D1	10-V-1
11A2	10-U-27	14G1	10-V-24
11B1	10-U-35	14H1	10-V-16C

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/22W-14J1	10-V-41	1N/22W-17M2	8-V-8
14J2	10-V-16B	17Q1	8-V-20
14J3	10-V-16	18D1	8-V-7
14K1	10-V-11	18E1	8-V-12
14K2	10-V-47	18F1	8-V-17
14K3	10-V-42	18L1	8-V-5
14R1	10-V-40	18P1	8-V-16
14R2	10-V-19	19B1	8-V-10
15A1	9-V-49	19B2	8-V-10A
15B1	9-V-3	19B4	8-V-26
15B2	9-V-21	19H1	8-V-15
15C1	9-V-22	20B1	8-V-4
15D2	9-V-45	20E1	8-V-24
15D3	9-V-46	20E2	8-V-27
15D4	9-V-47	20N1	8-V-11
15E1	9-V-48	20R1	8-V-21
15J1	9-V-32	20R2	8-V-22
15K1	9-V-34	21C1	9-V-9
15L1	9-V-44	21J1	9-V-28
15M1	9-V-19	21J2	9-V-38
15N1	9-V-29	21K1	9-V-30
15P1	9-V-26	21L1	9-V-15
15P2	9-V-18	21L2	9-V-15A
15Q1	9-V-33	21Q1	9-V-42
15Q2	9-V-17	22A1	9-V-23
16D1	9-V-14	22C1	9-V-6
16D2	8-V-19	22C2	9-V-27
16E1	8-V-2	22D1	9-V-5
16G1	9-V-8	22F1	9-V-40
16M1	8-V-14	22J1	10-V-36
16M2	9-V-B	22J2	9-V-35
16M3	8-V-13	22J3	9-V-25
16P1	9-V-31	22M1	9-V-20
17B1	8-V-25	22M2	9-V-10
17C1	8-V-1	22M3	9-V-36
17D1	8-V-23	22M4	9-V-39
17D2	8-V-6	22M5	9-V-16
17J1	8-V-18	22M6	9-V-4
17J2	8-V-3	22M7	9-V-A
17M1	8-V-8A	22N1	9-V-43

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/22W-22N2	9-V-7	1N/22W-25K1	10-W-16
22N3	9-V-11	25L1	10-W-16A
22N5	9-V-24	25N1	10-W-34
22P1	9-V-37	26A1	10-W-10
22P2	9-V-13A	26B1	10-W-33
22Q1	9-V-13	26B2	10-W-1
22R1	10-V-52	26B3	10-W-32
22R2	9-V-2	26D1	10-W-22
22R3	9-V-1	26D2	10-W-29
23A2	10-V-28	26D3	10-W-7
23A3	10-V-17	26J1	10-W-26
23A4	10-V-49	26J2	10-W-25
23B1	10-V-3	26K1	10-W-2
23C1	10-V-13	26K2	10-W-2A
23C2	10-V-32	26M1	10-W-27
23E1	10-V-37	26M2	10-W-12
23J1	10-V-4	26P1	10-W-36
23K1	10-V-50	26R1	10-W-5
23N1	10-V-38	26R2	10-W-18
23Q1	10-V-18	27A1	9-W-11
24A1	11-V-45	27B1	9-W-9
24B1	10-V-39	27B2	9-W-5
24C1	10-V-29	27C1	9-W-10
24D1	10-V-10	27D1	9-W-3
24D2	10-V-5	27F1	9-W-12
24H1	11-V-26	27F2	9-W-A
24K1	10-V-33	27G1	9-W-8
24K2	10-V-34	27H1	9-W-7
24M1	10-V-30	27J1	10-W-28
24M2	10-V-51	27J2	10-W-28A
24N1	10-V-31	27P1	9-W-13
24P1	10-V-A	28A1	9-W-6
24P2	10-V-8	28A2	9-V-41
25A1	11-W-30	28C1	9-W-15
25B1	10-W-30A	28D1	9-W-2
25B2	10-W-30	28H1	9-W-4
25B3	10-W-4	28H3	9-W-14
25C1	10-W-20	29A1	8-W-2
25C2	10-W-6	29A2	8-W-1
25J1	10-W-31	29A3	8-W-4

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
1N/22W-34J1	9-W-1	2N/17W-6K1	23-R-9
34J2	9-W-1A	6K2	23-R-3
35A1	10-W-3	6K3	23-R-5
35C1	10-W-24	6L1	23-R-12
36B1	10-W-35	6N1	23-R-4
36B2	10-W-9	6Q1	23-R-53
36J1	10-W-14	6Q3	23-R-7
36K1	10-W-21	6Q4	23-R-6
36K2	10-W-15	6R1	23-R-21
36K3	10-W-23	7A1	23-R-25
36L1	10-W-19	7B1	23-R-50
36N1	10-W-17	7D1	23-R-23
36P1	10-W-8	7D2	23-R-24
1N/23W-1A1	7-T-6	7D3	23-R-61
1B1	7-U-3	7D4	23-R-62
1J1	7-U-4	7F1	23-R-49
1R1	7-U-5	7G1	23-R-8
12A1	7-U-6	7G2	23-R-10
12B1	7-U-7	7G3	23-R-36
2N/17W-4A1	24-R-57	7H1	23-R-39
4F1	24-R-56	7J1	23-R-31
4L1	24-R-58	7M1	23-R-29
4N1	24-R-37	7M2	23-R-30
5C1	23-Q-3	7N1	23-R-32
5C2	23-Q-2	8A1	23-R-26
5F1	23-R-55	8C1	23-R-60
5K1	23-R-48	8F1	23-R-27
5M1	23-R-18	8F2	23-R-28
5M2	23-R-20	8F3	23-R-1
5Q1	23-R-22	8H1	23-R-13
6B1	23-R-57	8J1	23-R-47
6E1	23-R-11	8J2	23-R-41
6F1	23-R-14	8J3	23-R-33
6F2	23-R-54	8J4	23-R-40
6G1	23-R-56	8J5	23-R-51
6G2	23-R-15	8K1	23-R-45
6H1	23-R-16	8K2	23-R-52
6H2	23-R-58	8L1	23-R-38
6J1	23-R-19	8M1	23-R-32
6J2	23-R-17	8P1	23-R-2

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/17W-8P2	23-R-42	2N/17W-9R1	24-R-15
8Q1	23-R-43	9R2	24-R-17
8Q2	23-R-44	9R3	24-R-4
8R1	23-R-34	9R4	24-R-3
8R2	23-R-35	9R5	24-R-30
8R3	23-R-59	9R6	24-R-43
9B1	24-R-6	9R7	24-R-16
9B2	24-R-7	10M1	24-R-14
9B3	24-R-9	10Q1	24-R-51
9B4	24-R-8	10Q2	24-R-36
9B5	24-R-8A	15D1	24-R-35
9E1	24-R-38	15D2	24-R-33
9E2	24-R-39	15D3	24-R-34
9F1	24-R-60	16A1	24-R-48
9F2	24-R-11	16A2	24-R-47
9G1	24-R-40	16A3	24-R-31
9G2	24-R-1	16A4	24-R-32
9J1	24-R-13	16A5	24-R-49
9L1	24-R-20	16B1	24-S-6
9M1	24-R-12	16D1	24-R-25
9M2	24-R-5	16E1	24-S-3
9N1	24-R-21	16F1	24-S-5
9N2	24-R-22	16G1	24-S-4
9N3	24-R-23	16H1	24-S-1
9N4	24-R-19	16M1	24-S-2
9N5	24-R-24	17A1	23-R-37
9N6	24-R-45	17A2	23-R-46
9P1	24-R-46	17A3	23-S-2
9P2	24-R-29	17B1	23-S-1
9P3	24-R-26	18L1	23-S-4
9P4	24-R-55	2N/18W-1F1	22-R-18
9P5	24-R-2	1F2	22-R-3
9P6	24-R-54	1H1	22-R-28
9P7	24-R-27	1M1	22-R-9
9Q1	24-R-44	1M2	22-R-60
9Q2	24-R-53	1M3	22-R-39
9Q3	24-R-52	1P1	22-R-4
9Q4	24-R-18	1Q1	22-R-7
9Q5	24-R-28	2C1	22-Q-5
9Q6	24-R-50	2J1	22-R-8

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/18W-2K1	22-R-6	2N/18W-7L1	20-R-51
2N1	22-R-48	7P1	20-R-39
2Q1	22-R-61	7R1	20-R-23
2R1	22-R-41	7R2	20-R-26
3A1	21-R-37	8B1	20-R-41
3A2	21-R-55	8B2	20-R-20
3E1	21-R-49	8C2	20-R-6
3J1	21-R-52	8D1	20-R-15
3K1	21-R-56	8E1	20-R-1
3K2	21-R-48	8E2	20-R-1A
3K3	21-R-47	8F2	20-R-14
3L1	21-R-45	8F3	20-R-10
3L2	21-R-10	8F4	20-R-9
3M1	21-R-20	8F5	20-R-8
3M2	21-R-21	8F6	20-R-19
3N1	21-R-3	8G1	20-R-42
3P1	21-R-22	8G2	20-R-35
3P2	21-R-53	8G3	20-R-43
3Q1	21-R-46	8K1	20-R-33
3R1	21-R-51	8K2	20-R-4
4N1	21-R-16	8K3	20-R-32
4N2	21-R-13	8K4	20-R-32A
4P1	21-R-7	8L1	20-R-30
4P2	21-R-7A	8L2	20-R-16
4R1	21-R-6	8L3	20-R-13
5P1	20-R-18	8L4	20-R-31
7B1	20-R-49	8P1	20-R-44
7F1	20-R-28	8P2	20-R-3A
7F2	20-R-29	8P3	20-R-3
7F3	20-R-37	8P4	20-R-2
7F4	20-R-38	8Q1	20-R-45
7F5	20-R-38A	8Q2	20-R-46
7G1	20-R-27	9B1	21-R-19
7G2	20-R-22	9D1	21-R-18
7H2	20-R-12	9D2	21-R-8
7H3	20-R-21	9H1	21-R-11
7H4	20-R-25	9H2	21-R-39
7J1	20-R-24	9J1	21-R-59
7J2	20-R-7	9J2	21-R-28
7K1	20-R-36	9M1	21-R-14

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2N/18W-9N1	21-R-24	2N/18W-11J4	22-R-52
9P1	21-R-25	11K1	22-R-34
9P2	21-R-15	11K2	22-R-59
9Q1	21-R-26	11K3	22-R-45
9Q2	21-R-60	11L1	22-R-33
9R1	21-R-27	11L2	22-R-55
9R2	21-R-36	11M1	22-R 14
10A1	21-R-2	11M2	22-R-56
10C1	21-R-42	11M3	22-R-50
10D3	21-R-12	11N1	22-R-36
10D4	21-R-17	11N2	22-R-49
10E1	21-R-54	12B1	22-R-42
10E2	21-R-23	12B2	22-R-43
10F1	21-R-41	12H1	22-R-23
10H1	21-R-1	12H2	22-R-29
10H2	21-R-58	12H3	22-R-30
10N1	21-R-4	12J1	22-R-31
10Q1	21-R-57	12J2	22-R-46
10Q2	21-R-30	12K1	22-R-44
10Q3	21-R-61	12K2	22-R-58
10R1	21-R-9	12K3	22-R-44A
10R3	21-R-34	12L3	22-R-5
10R4	21-R-33	12L5	22-R-16
10R5	21-R-44	12L6	22-R-15
10R6	21-R-31	12L7	22-R-17
10R7	21-R-32	12L8	22-R-57
11A1	22-R-27	12P3	22-R-24
11A2	22-R-19	12P4	22-R-13
11A3	22-R-47	13B2	22-S-7
11A4	22-R-2	13C1	22-S-6
11B2	22-R-25	13G1	22-S-5
11B3	22-R-26	13H1	22-S-11
11C1	22-R-21	13J1	22-S-8
11C2	22-R-20	14C1	22-R-38
11C3	22-R-11	14C2	22-R-37
11E2	22-R-54	14C3	22-S-1
11G1	22-R-51	14C4	22-S-14
11J1	22-R-22	14D1	22-S-17
11J2	22-R-35	14D2	22-S-16
11J3	22-R-1	14D3	22-R-40

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2N/18W-14D4	22-R-12	2N/18W-15M2	21-S-37
14E2	22-S-10	15M3	21-S-15
14F1	22-S-9	15M4	21-S-2
14F2	22-S-18	15P1	21-S-51
14G1	22-S-15	15P2	21-S-54
14M2	22-S-2	15Q1	21-S-57
14M3	22-S-3	15Q2	21-S-42
14Q2	22-S-40	16A1	21-S-18
14Q3	22-S-20	16A2	21-S-1
15B2	21-S-28	16B1	21-R-5
15B3	21-R-43	16B2	21-S-17
15B4	21-R-40	16B3	21-S-16
15B5	21-R-29	16B4	21-S-9
15B6	21-S-62	16B5	21-S-22
15C1	21-R-50	16C1	21-S-3
15C2	21-S-27	16C2	21-S-36
15D3	21-S-20	16D1	21-R-35
15E1	21-S-26	16D2	21-R-38
15E2	21-S-25	16D3	21-S-21
15E3	21-S-19	16D4	21-S-14
15E4	21-S-38	16E1	21-S-52
15E5	21-S-60	16E2	21-S-10
15F1	21-S-4	16F1	21-S-51A
15F2	21-S-12	16G1	21-S-11
15F3	21-S-31	16G2	21-S-23
15G1	21-S-29	16G3	21-S-50
15G2	21-S-53	16G4	21-S-8
15G3	21-S-39	16J1	21-S-46
15H1	21-S-5	16J2	21-S-45
15H2	21-S-35	16J3	21-S-24
15J3	21-S-58	16K1	21-S-48
15J5	21-S-32	16K2	21-S-47
15J6	21-S-34	16Q1	21-S-49
15K1	21-S-43	17A1	20-R-11
15K2	21-S-56	17A2	20-S-2
15K3	21-S-30	17A3	20-S-1
15K4	21-S-44	17B1	20-R-34
15L1	21-S-40	17B2	20-R-40
15L2	21-S-41	17B3	20-R-5
15M1	21-S-13	17B4	20-R-40A

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/18W-17C1	20-R-48	2N/19W-1Q1	19-R-4
17C2	20-R-47	1R1	19-R-13
17C3	20-R-17	2A1	19-R-9
17E1	20-S-21	2C1	19-Q-2
17E2	20-S-22	2C2	19-Q-10
17F1	20-S-13	2D1	19-Q-8
17G1	20-S-3	2H1	19-R-10
17J1	20-S-10	3A1	19-Q-7
17J2	20-S-11	3A2	18-Q-9
17J3	20-S-12	3A3	18-Q-2
			18-Q-3
17J4	20-S-9	3A4	
17K1	20-S-15	3A5	19-Q-3
17K2	20-S-4	3A6	18-R-2
17L1	20-S-14	3A7	19-Q-4
17P1	20-S-20	3A8	19-Q-7A
18F1	20-S-5	3A9	18-Q-9A
18H1	20-S-7	3A10	18-Q-19
18L1	20-S-17	3G1	18-R-27
19A1	20-S-8	4B1	18-R-32
19A2	20-S-6	4G1	18-R-22
19C1	20-S-18	4K1	18-R-30
19D1	20-S-19	4L1	18-R-3
21G1	21-S-55	4N1	18-R-26
23H1	22-S-13	4N2	18-R-25
23H2	22-S-21	4P1	18-R-5
23H3	22-S-19	4Q1	18-R-7
24Q1	22-S-22	4Q2	18-R-13
24Q2	22-S-12	5A1	17-R-52
29E1	20-T-2	5A2	17-R-44
29L1	20-T-4	5B1	17-Q-32
29L2	20-T-3	5B2	17-R-49
31K1	20-T-1	5B3	17-R-48
2N/19W-1E1	19-R-2	5C2	17-R-47
1E2	19-R-1A	5E1	17-R-35
1F1	19-R-5	5E2	17-R-25
1G1	19-R-1	5F1	17-R-45
1J2	19-R-11	5F3	17-R-46
1L1	19-R-7	5G1	17-R-31
1L2	19-R-8	5J1	17-R-7
1M1	19-R-6	5J2	17-R-10

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/19W-5K1	17-R-15B	2N/19W-8B1	17-R-42
5K2	17-R-15	8B2	17-R-9
5K3	17-R-36	8C1	17-R-5
5K4	17-R-33	8E1	17-R-30
5K5	17-R-32	8G1	17-R-18
5K6	17-R-33A	8G2	17-R-6
5K7	17-R-15A	8G3	17-R-26
5L1	17-R-13	8H1	18-R-24
5L2	17-R-13A	8Q1	17-R-19
5N1	17-R-4A	8R1	18-R-18
5P1	17-R-4	9B1	18-R-28
5Q1	17-R-37	9C1	18-R-9
5R1	18-R-6	9C2	18-R-23
5R2	18-R-11	9C3	18-R-29
5R3	17-R-38	9D1	18-R-4
5R4	18-R-25A	9F2	18-R-12
6A1	17-R-24	9L1	18-R-21
6A2	17-R-51	9N1	18-R-19
6B1	17-Q-25	9N2	18-R-31
6B2	17-R-41	9P1	18-R-16
6E1	17-R-34	9P2	18-R-20
6N1	17-R-16	9R1	18-R-17
6N2	17-R-29	10R1	18-R-15
6N3	17-R-2	11J1	19-R-3
6Q1	17-R-27	11J2	19-R-20
6R1	17-R-3	12L1	19-R-18
6R2	17-R-3A	12N1	19-R-17
7A1	17-R-17	12N2	19-R-14
7A2	17-R-20	12P1	19-R-12
7A3	17-R-8	14D1	19-S-1
7B1	17-R-1	14J1	19-S-4
7C1	17-R-39	14P1	19-S-2
7D1	17-R-28	14R1	19-S-3
7E1	16-R-14	15A1	19-R-19
7H1	17-R-40	15A2	18-R-A
7M1	17-R-21	15B1	18-S-7
7M2	17-R-22	15B2	18-S-23
7N1	17-R-23	15B3	18-S-22
7N2	17-R-43	15F1	18-S-14
8A1	17-R-14	15F2	18-S-13

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/19W-15G1	18-S-3	2N/19W-22G1	18-S-26
15H1	18-S-11	23C1	19-S-5
15H2	18-S-10	24A1	20-S-16
15J1	18-S-24	25Q1	19-T-3
15M1	18-S-21	27N1	18-T-8
15N1	18-S-6	28H1	18-T-7
15N2	18-S-5	28M1	18-T-11
15Q1	18-S-9	28P1	18-T-10
16C1	18-S-12	28P2	18-T-9
18E1	17-S-11	29C1	17-T-1
19J1	17-S-4	30G1	17-T-2
19J2	17-S-9	33B1	18-T-5
19J3	17-S-9A	33F1	18-T-1
19L1	17-S-6	33H1	18-T-4
19N1	16-S-5	34E1	18-T-3
19N2	16-S-19	34E2	18-T-2
19P1	17-S-5	34R1	18-T-6
19P2	17-S-12	35G1	19-T-4
19P3	17-S-12A	35H1	19-T-2
19Q1	17-S-7	35J1	19-T-1
19Q2	17-S-14	35Q1	19-T-5
19R1	17-S-8	2N/20W- 1C1	16-R-13
19R2	17-S-3	1M1	16-R-6
20K1	17-S-10	1Q1	16-R-3
20L1	17-S-2	2N1	16-R-8
20M1	17-S-1	2N2	16-R-18
20M2	17-S-13	3A1	15-R-23
20N1	17-S-15	3A2	15-R-22
21C1	18-S-2	3A3	15-R-21
21C2	18-S-1	3K1	15-R-7
21E1	18-S-4	4F1	15-R-20
21E2	18-S-3	5M1	14-R-3
21F1	18-S-20	6B1	14-R-1
21F2	18-S-16	6K1	14-R-2
21H1	18-S-25	8H1	14-R-4
21N1	18-S-18	9F1	15-R-18
21N2	18-S-17	9J1	15-R-24
21Q1	18-S-19	9J2	15-R-19
22A1	18-S-15	9Q1	15-R-15
22E1	18-S-27	9Q2	15-R-4

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2N/20W- 9Q3	15-R-16	2N/20W-19L1	14-S-16
9Q4	15-R-8	19L2	14-S-5
9R1	15-R-17	19L3	14-S-15
9R2	15-R-6	19L4	14-S-15A
10C1	15-R-13	19M1	14-S-19
10D1	15-R-12	19M2	14-S-18
10G1	15-R-14	19M3	14-S-17
10H1	15-R-2	20E1	14-S-2
10J1	15-R-10	20F1	14-S-20
10J2	15-R-11	20M1	14-S-4
10R1	15-R-3	20M2	14-S-7
11L1	16-R-10	20N1	14-S-12
11R1	16-R-5	20N2	14-S-13
12A1	16-R-19	21B1	15-S-12
12B1	16-R-1A	21J2	15-S-19
12F1	16-R-7	21J3	15-S-18
12F2	16-R-15	21K1	15-S-20A
12F3	16-R-12	21K2	15-S-15
12F4	16-R-16	21L1	15-S-13
12G1	16-R-17	21L2	15-S-20
12G2	16-R-1	21L3	15-S-14
12G3	16-R-21	21L4	15-S-A
12H1	16-R-2	21L5	15-S-14A
12H2	16-R-4	21M1	14-S-A
12H3	16-R-20	21P1	15-S-23
12J1	16-R-9	21R1	15-S-24
12M1	16-R-11	21R2	15-S-9
13F1	16-S-10	21R3	15-S-10
16A1	15-R-25	22F1	15-S-17
16B1	15-S-1	22H1	15-S-11
16B2	15-R-5	22L2	15-S-16
16C1	15-R-1	22L3	15-S-4
16F1	15-S-3	22L5	15-S-25
17J1	14-S-10	22M1	15-S-22
17J2	14-S-11	22M2	15-S-21
17J3	14-S-1	22N1	15-S-7
18A1	14-R-5	22N2	15-S-8
19G1	14-S-6	22P1	15-S-6
19J1	14-S-3	22Q1	15-S-5
19J2	14-S-9	23A1	16-S-16

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/20W-23G1	16-S-17	2N/20W-28A2	15-T-6
23G2	16-S-24	28A3	15-T-C
23K1	15-S-21	28B1	15-T-11
23L1	16-S-15	28C1	15-T-7
23L2	16-S-15A	28G1	15-T-12A
23Q1	16-S-8	28G2	15-T-12
23Q2	16-S-13	28H1	15-T-1
23Q3	16-S-9	28M1	15-T-2
23Q4	16-S-14	28M2	15-T-8
23Q5	16-S-22	28M3	15-T-15
23R1	16-S-4	28M4	15-T-8A
24E1	16-S-20	29E1	14-T-15
24K1	16-S-6	29J1	14-T-4
24Q1	16-S-7	29Q1	14-T-10
24Q2	16-S-1	30B1	14-S-8
24Q3	16-S-7A	30B2	14-T-8B
24R2	16-S-11	30C1	14-T-12
24R3	16-S-3	30F1	14-T-14A
25C1	16-T-8	30H1	14-T-5
25C2	16-T-4	30H2	14-T-11
25C3	16-T-7	30K1	14-T-9
25C4	16-T-19	30N1	14-T-16
25D1	16-S-2	30Q1	14-T-17
25D2	16-T-11	31B1	14-T-6
25D3	16-T-5	31B2	14-T-3
25D4	16-T-1	31B3	14-T-A
25L1	16-T-2	31C1	14-T-13
25L2	16-T-3	31C2	14-T-8
26B1	16-T-6	31C3	14-T-3A
26B2	16-T-18	31E1	13-T-1
26B3	16-S-12	31E2	14-T-18
26C1	16-S-23	31F1	14-T-1
26C2	16-T-10	31G1	14-T-7
26D1	16-S-18	32Q1	14-T-14
26D2	16-T-9	33E1	15-T-13
27A1	15-T-3	33E2	15-T-14
27D1	15-S-2	33P1	15-T-18
27D2	15-T-4	33R1	15-T-10
27D3	15-T-9	33R2	15-T-16
28A1	15-T-5	34N1	15-T-17

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/20W-36F1	16-T-12	2N/21W-16N1	12-S-8
36F2	16-T-13	16N2	12-S-9
36F3	16-T-14	16R1	12-S-2
36K1	16-T-16	16R2	12-S-6
36L1	16-T-15	17C1	11-S-21
36Q1	16-T-17	17D2	11-S-28
2N/21W- 1J1	13-R-5	17F1	11-S-22
6F1	11-R-2	17F2	11-S-27
6P1	11-R-3	17F3	11-S-A
7B1	11-R-7	17G1	11-S-26
7B2	11-R-6	17L1	11-S-4
7M1	11-R-1B	17M1	11-S-6
7N1	11-R-1	17M2	11-S-32
7P1	11-R-1A	17N1	11-S-7
7P2	11-R-8	18A1	11-S-12
8H1	11-R-4	18H1	11-S-16
10A1	12-R-12	18H2	11-S-24
10D1	12-R-14	18H3	11-S-17
10G1	12-R-11	18H4	11-S-15
10G2	12-R-3	18H5	11-S-29
10M1	12-R-2	18H6	11-S-5
10Q1	12-R-13	18R1	11-S-2
10Q2	12-R-5	18R2	11-S-20
10Q3	12-R-9	19A1	11-S-23
11H1	13-R-2	19A2	11-S-9
11H2	13-R-7	19B1	11-S-14
11J1	13-R-4	19B2	11-S-33
12F1	13-R-1	19G1	11-S-10
12G1	13-R-3	19L1	11-S-1
15A1	12-R-10	20E1	11-S-18
15B1	12-R-8	20L1	11-S-3
15C1	12-R-6	20M1	11-S-25
15C2	12-R-1	20Q1	11-S-19
15M1	12-S-12	20Q2	11-S-13
15M3	12-S-16	20Q3	11-S-11
15N1	12-S-7	20R1	11-S-30
15P1	12-S-10	21H1	12-S-11
16A1	12-R-7	21M1	12-S-3
16J1	12-S-4	21Q1	12-S-15
16J2	12-S-1	22R1	12-S-13

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2N/21W-23K1	13-S-9	2N/21W-26J1	13-T-45
23L2	13-S-7A	26J2	13-T-44
23M1	12-S-5	26K1	13-T-40
23M2	13-S-1	26N1	12-T-34A
23R1	13-S-7	26N2	12-T-34
23R2	13-S-11	26P1	13-T-31
24D1	13-S-20	26P2	13-T-16
24F1	13-S-2	26Q1	13-T-55
24J1	13-S-12	26R1	13-T-13
24K1	13-S-4	26R2	13-T-41
24K2	13-S-10	26R3	13-T-13A
24N1	13-S-18	27F1	12-T-15
24N2	13-S-8	27F2	12-T-23
24P1	13-S-6	27F3	12-T-11
24Q1	13-S-19	27F4	12-T-9
24R1	13-S-5	27G1	12-T-17
24R2	13-S-13	27G2	12-T-1
24R3	13-S-14	27G3	12-T-12
25B1	13-S-21	27H1	12-T-28
25C1	13-S-17	27H2	12-T-28A
25C2	13-S-16	27H3	12-T-29
25D1	13-S-15	27M1	12-T-27
25E1	13-T-5	27M2	12-T-25
25J1	13-T-36	27M3	12-T-26
25K1	13-T-35	27Q1	12-T-38
25K2	13-T-34	27R1	12-T-39
25N1	13-T-54	28A1	12-T-16
25N2	13-T-50	28D1	12-S-14
25P1	13-T-51	28H1	12-T-35
25Q1	13-T-11	28L1	12-T-20
25R1	13-T-56	28L2	12-T-14
26D1	13-T-30	28M1	11-T-16
26D2	12-T-30	28N1	11-T-15
26D3	13-T-4	28N2	12-T-31
26E1	13-T-18	28P1	12-T-4
26E2	13-T-46	28P2	12-T-21
26F1	13-T-39	28P3	12-T-33
26F2	13-T-48	28P4	12-T-32
26F3	13-T-17	28P5	12-T-41
26G1	13-T-49	28P6	12-T-32A

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2N/21W-28Q1	12-T-22	2N/21W-34D3	12-T-5A
28Q2	12-T-19	34H1	12-T-18
28Q3	12-T-22A	34J1	12-T-7
29D1	11-T-27	34L1	12-T-8
29K1	11-T-28	34L2	12-T-13A
29K2	11-T-26	35A1	13-T-42
29L1	11-T-6	35A2	13-T-43
29L2	11-T-14	35A3	13-T-41B
29L3	11-T-23	35B1	13-T-10
29M1	11-T-6A	35C1	13-T-2
29N1	11-T-12	35D1	12-T-6
29N2	11-T-18	35D2	13-T-25
29N3	11-T-21	35E1	13-T-20
29P1	11-T-2	35H1	13-T-53
29Q1	11-T-8	35J1	13-T-32
29R1	11-T-9	35K1	13-T-38
30F1	11-T-22	35K2	13-T-19
30G1	11-T-13	35Q1	13-T-47
30P1	11-T-10	36A1	13-T-33
30R1	11-T-7	36B1	13-T-52
30R2	11-T-19	26C1	13-T-12
31P1	11-T-17	36E1	13-T-27
31P2	11-T-11	36F1	13-T-26
31Q1	11-T-5	36G1	13-T-21
31R1	11-T-29	36G2	13-T-37
31R2	11-T-4	36H1	13-T-7
32D1	11-T-1	36L1	13-T-9
32K1	11-T-24	36L2	13-T-28
32K2	11-T-25	36N1	13-T-3A
33A1	12-T-24	36N2	13-T-3
33C1	12-T-2	36N3	13-T-6
33C2	12-T-3	36N4	13-T-29
33D1	11-T-30	36P1	13-T-8
33D2	12-T-31A	36Q1	13-T-22
33D3	11-T-3	2N/22W- 1E2	10-R-32
33M1	12-T-37	1M1	10-R-33
33Q1	12-T-40	1N1	10-R-26
33R1	12-T-13	2C1	10-R-6
34A1	12-T-36	2E1	10-R-38
34D1	12-T-5	2E2	10-R-39

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/22W- 2G1	10-R-36	2N/22W- 8N1	8-R-8
2J1	10-R-24	8N2	8-R-7
2J2	10-R-24A	8N3	8-R-1
2K1	10-R-30	8P1	8-R-6
2K2	10-R-42	8P2	8-R-3
2K3	10-R-3	8P3	8-R-9
2K4	10-R-12	8R1	8-R-5
2K5	10-R-24B	9J1	9-R-14
2L1	10-R-40	9J2	9-R-8
2L2	10-R-53	9K1	9-R-27
2M1	10-R-17	9K2	9-R-12
2M2	10-R-52	9K3	9-R-18
2N1	10-R-9	9K4	9-R-3
2N2	10-R-49	9L1	9-R-17
2N3	10-R-44	9L2	9-R-37
2N4	10-R-42A	9M1	9-R-13
2N5	10-R-51	10A1	9-R-22
2N6	10-R-50	10C1	9-R-2
2Q1	10-R-41	10C2	9-R-41
2R1	10-R-4	10E1	9-R-5
2R2	10-R-29	10E2	9-R-6
3B1	9-R-39	10G1	9-R-4
3E1	9-R-32	10N1	9-R-30
3F1	9-R-33	10N2	9-R-36
3F2	9-R-33B	10R1	9-R-7A
3J1	9-R-15	10R2	9-R-7
3K1	9-R-35	11A1	10-R-27
3K2	9-R-1	11A2	10-R-5
3M1	9-R-21	11B1	10-R-13
3M2	9-R-31	11C1	10-R-2
3M3	9-R-31A	11D1	10-R-25
3Q1	9-R-34	11D2	10-R-18
3Q2	9-R-24	11D3	10-R-19
3R1	9-R-40	11R1	10-R-47
3R2	9-R-20	12A1	11-R-5
4B1	9-R-9	12B1	10-R-1B
4F1	9-R-10	12C1	10-R-28
4J1	9-R-11	12D1	10-R-35
7R1	8-R-4	12E1	10-R-14
7R2	8-R-2	12F1	10-R-43

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/22W-12G1	10-R-1	2N/22W-14P1	10-S-24
12G2	10-R-1A	14Q1	10-S-32
12J1	10-R-11	14Q2	10-S-11
12K1	10-R-7	15D1	9-R-38
12K2	10-R-46	15Q1	9-S-33
10K3	10-R-54	15Q2	9-S-34
12L1	10-R-34	16C1	9-S-11
12M1	10-R-48	16E1	9-S-23
12N1	10-R-31	16E2	9-S-9
12N2	10-R-10	16F1	9-S-2
12Q1	10-R-8C	16H1	9-S-3
12Q2	10-R-8B	16K1	9-S-25
12Q3	10-R-8	16L1	9-S-49
12Q4	10-R-8A	16M1	9-S-35
12R1	10-R-15	16M2	8-S-16
13A1	10-S-9	16Q1	9-S-8
13G1	10-S-7	16Q2	9-S-24
13G2	10-S-1	16Q3	9-S-36
13H1	10-S-48	17G1	8-S-23
13K1	10-S-29	17H1	8-S-21
13K2	10-S-30	17J1	8-S-2
13L1	10-S-8	17J2	8-S-18
13L2	10-S-27	17L1	8-S-12
13L3	10-S-28	17N1	8-S-5
13L4	10-S-A	17N2	8-S-9
13M1	10-S-19	17P1	8-S-25
13N1	10-S-44	17Q1	8-S-19
13P1	10-S-49	17Q2	8-S-6
14A1	10-S-36	17Q3	8-S-20
14A2	10-R-45	18B1	8-S-24
14A3	10-S-23	19H1	8-S-29
14A4	10-S-22	19J1	8-S-8
14G1	10-S-16	19K1	8-S-1
14H1	10-S-21	19L1	8-S-3
14H2	10-S-20	19L2	8-S-4
14K1	10-S-5	19L3	8-S-17
14L1	10-S-42	19M1	7-S-7
14L2	10-S-31	20A1	8-S-30A
14L3	10-S-43	20B1	8-S-15
14N1	10-S-40	20B2	8-S-26

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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2N/22W-20B3	8-S-27	2N/22W-23F1	10-S-47
20E1	8-S-8A	23F4	10-S-50
20L1	8-S-7	23G2	10-S-51
20M1	8-S-11	23H1	10-S-4
20M2	8-S-22	23H2	10-S-10
20M3	8-S-28	23H3	10-S-15
20M4	8-S-10	23J1	10-S-13
20M5	8-S-13	23K1	10-S-18
20M6	8-S-8B	23K2	10-S-34
21D1	8-S-30	23K3	10-S-17
21D2	9-S-48	23M3	9-S-10
21J1	9-S-37	23Q1	10-S-6
21J2	9-S-29	23Q2	10-S-33
21Q1	9-S-16	24D1	10-S-35
21R1	9-S-38	24D2	10-S-45
22G1	9-S-10	24K1	10-S-37
22H1	9-S-32	24L1	10-S-38
22J1	9-S-47	24Q1	10-S-46
22J2	9-S-31	25A1	10-T-5
22J3	9-S-46	25A2	10-S-12
22J5	9-S-31A	25L1	10-T-27
22K1	9-S-26	25L2	10-T-26
22K2	9-S-27	25M1	10-T-28
22M1	9-S-12	25N1	10-T-33A
22M2	9-S-12A	25N2	10-T-23
22N1	9-S-7	25P1	10-T-29
22N2	9-S-19	25P2	10-T-2
22N3	9-S-15	25P3	10-T-29A
22P1	9-S-40	25Q1	10-T-1
22Q1	9-S-17	25Q2	10-T-20
22Q2	9-S-20	26B1	10-T-7
22Q3	9-S-20A	26B2	10-S-2
22Q4	9-S-30	26C1	10-S-14
22R1	9-S-5	26C3	10-T-7A
22R2	9-S-14	26D1	10-T-37
23D1	10-S-3	26F1	10-T-34
23D2	10-S-39	26H1	10-T-22
23D3	10-S-25	26J1	10-T-14
23D4	10-S-26	26K1	10-T-39
23E1	10-S-41	26L1	10-T-16

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/22W-26L2	10-T-4	2N/22W-28A1	9-S-28
26R1	10-T-33	28A2	9-S-6
26R2	10-T-19	28C1	9-T-1
26R3	10-T-3	28C2	9-T-60
26R4	10-T-15	28H1	9-T-17
27A1	9-S-44	28J1	9-T-59
27A2	9-S-43	28J2	9-T-58
27A3	9-S-50	28K1	9-T-18
27B1	9-S-45	28K4	9-T-82
27B2	9-S-42	28L1	9-T-30
27B3	9-S-41	28L2	9-T-49
27B4	9-S-41A	28L3	9-T-9
27B5	9-T-21	28M1	9-T-32
27C1	9-S-39	28N1	8-T-6
27C2	9-S-21	28P1	9-T-41
27C3	9-S-18	29M1	8-T-13
27C4	9-S-18A	29N1	8-T-3
27C5	9-T-15	29Q1	8-T-27
27C6	9-T-15A	29R1	8-T-26
27C7	9-T-42	30J1	8-T-12
27E1	9-T-5	30J2	8-T-15
27F3	9-T-47	30P1	8-T-7
27F4	9-T-29	31A1	8-T-8
27G1	9-T-53	31B1	8-T-1
27G2	9-T-52	31C1	8-T-11
27H1	9-T-72	31J1	8-T-2
27J1	9-T-50	31N1	8-T-21
27J2	9-T-38	31R1	8-T-25
27J3	9-T-37	31R2	8-T-19
27J4	9-T-14	32A1	8-T-4
27K1	9-T-51	32A2	8-T-18
27L1	9-T-64	32C1	8-T-14
27L2	9-T-46	32C2	8-T-9
27M1	9-T-23	32M1	8-T-22
27M2	9-T-27	32M2	8-T-23
27N1	9-T-56	32Q1	8-T-17
27N2	9-T-10	32R1	8-T-24
27N3	9-T-4	33A1	9-T-48
27P1	9-T-16	33A2	9-T-57
27Q1	9-T-6	33A3	9-T-3

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/22W-33A4	9-T-48A	2N/22W-36F1	10-T-32
33B1	9-T-24	36F2	10-T-25
33C1	9-T-61	36L1	10-T-36
33C2	9-T-39	36M1	10-T-8
33C3	9-T-40	36N1	10-T-13
33E1	8-T-16	36P1	10-T-35
33E2	9-T-43	36P2	10-T-38
33F1	9-T-35	2N/23W- 2K1	7-R-4
33K1	9-T-33	5F1	5-R-4
33L1	9-T-20	5L1	5-R-2
33L2	9-T-62	5P1	5-R-1
33M1	8-T-10	6D1	5-R-3
33M2	9-T-2	10R1	7-R-3
33N1	9-T-31	11N1	7-R-2
33N2	9-T-11	13F1	7-S-5
33N3	9-T-44	13K2	7-S-23
33R1	9-T-34	14B1	7-S-9
34A1	9-T-36	14K1	7-S-2
34A2	9-T-13	14L1	7-S-1A
34A3	9-T-22	14M1	7-S-21
34B1	9-T-67	14N2	7-S-22
34B2	9-T-66	14Q1	7-S-3
34B3	9-T-68	23D1	7-S-13
34D1	9-T-63	23H1	7-S-12
34D2	9-T-19	23H2	7-S-15
34E1	9-T-26	23H3	7-S-17
34F1	9-T-69	24F1	7-S-16
34H1	9-T-28	24G1	7-S-11
34J1	9-T-54	24H1	7-S-18
34J2	9-T-70	24J1	7-S-14
34K1	9-T-25	24J2	7-S-4
34L1	9-T-65	24K1	7-S-8
34M1	9-T-45	24K2	7-S-20
34M2	9-T-12	24K3	7-S-11A
34Q1	9-T-7	24K4	7-S-6A
35B1	10-T-6A	24K5	7-S-19
35C1	10-T-18	25G2	7-T-4A
35K1	10-T-6	25H1	7-T-8
35P1	10-T-9	25Q1	7-T-5
36E1	10-T-12	25R1	7-T-9

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
2N/23W-26G1	7-T-10	3N/18W-24H4	22-P-20
36A1	7-T-4	24K1	22-P-3
36A2	7-T-2	24L1	22-P-2
36B1	7-T-7	24L2	22-P-1
36C1	7-T-11	36C1	22-Q-4
36C2	7-T-3	36C2	22-Q-3
36F1	7-T-1	36F1	22-Q-2
3N/17W-19K1	23-P-2	36H1	22-Q-1
19K2	23-P-1	3N/19W- 5D1	17-N-6
19K3	23-P-3	6A1	17-O-4
19L1	23-P-5	6C1	17-O-1
19L2	23-P-4	6D1	17-N-7
19M1	23-P-6	6E1	17-O-5
19N1	23-P-7	6F1	17-O-6
19N2	23-P-9	7N1	17-O-2
19N3	23-P-8	19K1	17-P-3
19N4	23-P-10	19N1	17-P-2
30D1	23-P-11	19P1	17-P-1
31M1	23-Q-4	21N1	18-P-1
32M1	23-Q-1	21R1	18-P-4
32M2	23-Q-5	27N1	18-Q-23
3N/18W-24B1	22-P-19	28D1	18-P-2
24B2	22-P-18	28F1	18-Q-25
24C1	22-P-14	28F2	18-Q- A
24C2	22-P-13	29C1	17-P-5
24C3	22-P-12	29C2	17-Q-24A
24C4	22-P-11	29E1	17-Q-31
24C5	22-P-10	29E2	17-Q-5
24C6	22-P-9	29F1	17-Q-24
24D1	22-P-7	29F2	17-Q-23
24D2	22-P-6	29F3	17-Q-4
24E1	22-P-4	29F4	17-Q-30
24E2	22-P-5	29F5	17-Q-10
24E3	22-P-8	29F7	17-Q-34
24G1	22-P-23	29K1	17-Q-1
24G2	22-P-17	29K2	17-Q-2
24G3	22-P-16	29K3	17-Q-11
24G4	22-P-15	29L2	17-Q-3
24H2	22-P-22	29L3	17-Q-33
24H3	22-P-21	29M1	17-Q-6

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3N/19W-29M2	17-Q-13	3N/19W-34Q1	18-Q-20
30B1	17-P-4	34R1	19-Q-6
30E1	17-Q-21	35D1	19-Q-14
30E2	17-Q-20	35L1	19-Q-12
30E3	17-Q-17	35N1	19-Q-9
30E4	17-Q-20A	35N2	19-Q-5
30E5	17-Q-21A	35P1	19-Q-13
30G1	17-Q-9	35P2	19-Q-11
30H1	17-Q-7	3N/20W- 1A1	16-0-21
30K1	17-Q-8	1A2	16-0-10
30L1	17-Q-22	1B1	16-0-23
30M1	17-Q-16	1B2	16-N-31
30N1	17-Q-15	1C1	16-0-26
30N2	17-Q-14	1C2	16-0-27
30P1	17-Q-12	1C3	16-0-24
31A1	17-Q-28	1C4	16-N-22
31A2	17-Q-29	1D1	16-0-1
31M1	17-Q-19	1D2	16-0-20
31M2	17-Q-18	1D3	16-N-16
31P1	17-Q-26	1D4	16-0-33
31P2	17-Q-27	1E1	16-0-36
32R1	18-Q-29	1E2	16-0-32
32R2	18-Q-28	1F1	16-0-25
33C1	18-Q-16	1F2	16-0-28
33D1	18-Q-17	1F3	16-0-62
33D2	18-Q-24	1F4	16-0-29
33L1	18-Q-5	1G1	16-0-22
33L2	18-Q-26	1H1	16-0-64
33M1	18-Q-10	1H2	16-0-63
33M2	18-Q-11	1J1	17-0-3
33M3	18-Q-12	1L1	16-0-11A
33N1	18-Q-27	1M1	16-0-40
33N2	18-Q-14	1M2	16-0-42
33N3	18-Q-13	1M3	16-0-44
33N4	18-Q-15	1P1	16-0-30
33P1	18-Q-4	1P2	16-0-43
33P2	18-Q-18	1P3	16-0-65
33P3	18-Q-31	2A1	16-0-18
34N1	18-Q-21	2A2	16-N-39
34P1	18-Q-22	2A3	16-0-19

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3N/20W- 2B1	16-0-11	3N/20W-3N2	15-0-27
2B2	16-0-50	3P1	15-0-17
2E1	16-0-60	4C1	15-0-29
2F1	16-0-17	4E1	15-0-33
2F2	16-0-15	4E2	15-0-32
2F3	16-0-49	4F1	15-0-31
2G1	16-0-37	4F2	15-0-30
2G2	16-0-58	4N1	15-0-20
2H1	16-0-34	4N2	15-0-15
2H2	16-0-38	4P1	15-0-24
2H3	16-0-35	4P2	15-0-23
2H4	16-0-39	4Q1	15-0-13
2J1	16-0-31	4R1	15-0-14
2K1	16-0-12	5C1	14-0-18
2K2	16-0-16	5C2	14-0-10
2K3	16-0-12A	5C3	14-0-7
2K4	16-0-2	5D1	14-0-14
2L1	16-0-59	5D2	14-0-9
2L2	16-0-56	5F1	14-0-1
2L4	16-0-59A	5H1	14-0-6
2L5	16-0-56A	5L1	14-0-15
2N1	16-0-52	6A1	14-N-3
2N2	16-0-57	6F1	14-0-23
2N3	16-0-66	6G1	14-0-2
2P1	16-0-53	6J1	14-0-3
2Q1	16-0-55	6J2	14-0-11
2Q2	16-0-54	6J3	14-0-24
2R1	16-0-48	6K1	14-0-25
2R2	16-0-7	6L1	14-0-13
2R3	16-0-45	6N1	14-0-12
3B1	15-N-21	6P1	14-0-19
3D1	15-N-3	6P2	14-0-5A
3D2	15-N-4	6P3	14-0-5
3D3	15-N-8	7B1	14-0-8
3D4	15-N-15	8A1	14-0-26
3H1	15-C-19	8F1	14-0-22
3H2	15-0-18	8F2	14-0-20
3J1	15-0-25	8F3	14-0-21
3J2	15-0-9	8G1	14-0-4
3N1	15-0-16	9B1	15-0-12

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3N/20W- 9G1	15-0-4	3N/20W-27L1	15-Q-4
9K1	15-0-28	27L2	15-Q-5
9L1	15-0-22	27L3	15-Q-3
9L2	15-0-7	27M2	15-Q-6
9M1	15-0-6	28C1	15-Q-15
10C1	15-0-3	28C2	15-Q-22
10C3	15-0-3A	28F1	15-Q-21
10C4	15-0-21	28F2	15-Q-13
10C5	15-0-26	28F3	15-Q-18
10D1	15-0-5	28F4	15-Q-14
10D2	15-0-8	28H1	15-Q-10
10F1	15-0-2	28J1	15-Q-11
10F2	15-0-11	28J2	15-Q-23
10K1	15-0-34	28L1	15-Q-12
11A1	16-0-4	28L2	15-Q-20
11B1	16-0-13	28L3	15-Q-19
11C1	16-0-8	28P1	15-Q-26
11C2	16-0-51	29M1	14-Q-5
11C3	16-0-14	30P1	14-Q-6
11D1	16-0-9	31L1	14-Q-7
11D2	16-0-6	32D1	14-Q-4
11D3	16-0-5	32F1	14-Q-3
11D4	16-0-61	32G1	14-Q-2
11D5	16-0-3	32H1	14-Q-1
12D1	16-0-46	33C1	15-Q-7
12D2	16-0-47	33D1	15-Q-1
23K1	16-P-7	33M1	15-Q-8
23Q1	16-P-8	33M2	15-Q-27
23Q2	16-P-1	34F1	15-Q-16
24K1	16-P-12	34K1	15-Q-24
25J1	16-Q-6	34L1	15-Q-9
25J2	16-Q-5	36A1	16-Q-3
25J3	16-Q-4	36G1	16-Q-2
26C1	16-P-9A	36N1	16-Q-9
26D1	16-P-9	3N/21W- 1B1	13-0-27
26R1	16-Q-7	1F1	13-0-28
26R2	16-Q-8	1F2	13-0-29
27D1	15-Q-25	1K1	13-0-3
27G1	15-Q-2	1K2	13-0-31
27G2	15-Q-17	1N1	13-0-15

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3N/21W- 1P1	13-0-8	3N/21W-12C1	13-0-23
1P2	13-0-24	12D1	13-0-35
1P3	13-0-25	12D2	13-0-22
1P4	13-0-26	12D3	13-0-1
1R1	13-0-13	12E1	12-0-17
2Q1	13-0-6	12E2	13-0-5
2R1	13-0-16	12E3	13-0-2
3H1	12-0-12	14C1	13-0-19
3R1	12-0-17	14C2	13-0-33
7J1	11-0-1	14C3	13-0-30
8P1	11-0-2	15C1	12-0-3
9J1	12-0-13A	15C2	12-P-24
9K1	12-0-2A	15C3	12-P-2
9K2	12-0-15	15C4	12-P-13
9K3	12-0-11	15D1	12-P-23
9Q1	12-0-8	16A1	12-0-4
9R1	12-0-10A	16E1	12-P-16
9R2	12-0-10	16E2	12-P-14
9R3	12-0-6	16F1	12-P-15
10A1	12-0-9	16F2	12-P-15A
10E1	12-0-1	16G1	12-P-26
10K1	12-0-5	16H1	12-P-1
10M1	12-0-16	16H2	12-P-9
10P1	12-0-7	16K1	12-P-3
10R1	12-0-14	16K2	12-P-4
11D1	13-0-12	16P1	12-P-19
11D2	13-0-32	16P2	12-P-25
11E1	13-0-10	16Q1	12-P-5
11E2	13-0-4	16Q2	12-P-11
11F1	13-0-18	16R1	12-P-17
11F2	13-0-11	16R2	12-P-8
11H1	13-0-20	17D1	11-P-20
11H2	13-0-7	17D2	11-P-19
11H3	13-0-21	17P1	11-P-13
11J1	13-0-9	17R1	11-P-7
11L1	13-0-13A	18Q1	11-P-3
11P1	13-0-34	18R1	11-P-17
12A1	13-0-14	18R2	11-P-17A
12B1	13-0-36	19A1	11-P-16
12B2	13-0-37	19A2	11-P-2

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3N/21W-19B1	11-P-9	3N/21W-33Q1	12-Q-7
19G1	11-P-11	34D1	12-Q-5
19H1	11-P-12	34K1	12-Q-4
19H2	11-P-12A	34L1	12-Q-6
19H3	11-P-15	34N1	12-Q-2
19L1	11-P-14	35F1	13-Q-1
19L2	11-P-14A	36P1	13-R-6
19M1	10-P-10A	3N/22W- 2G1	10-0-10
19R1	11-P-6	2G2	10-0-9
20F1	11-P-8	2J1	10-0-8
20F2	11-P-18	2R1	10-0-7
20J1	11-P-22	11A1	10-0-6
20J2	11-P-5	11A2	10-0-11
20K1	11-P-21	11A3	10-0-5
20M1	11-P-1	11A4	10-0-4
20P1	11-Q-11	11A5	10-0-3
20P2	11-Q-7	11A6	10-0-2
20R1	11-P-4	11H1	10-0-1
21A1	12-P-18	14L1	10-P-4
21A2	12-P-14A	23F1	10-P-2
21B1	12-P-7	23F2	10-P-1
21B2	12-P-6	24R1	10-P-3
21E1	12-P-10	25F1	10-Q-4
21F1	12-P-22	25H1	10-Q-6
21F2	12-P-21	25H2	10-Q-3
21G1	12-P-20	34H1	10-Q-2A
26N1	13-Q-2	34H2	9-Q-2
28M1	12-Q-3	34Q1	9-Q-1
28N1	11-Q-6	34Q2	9-R-28
29C1	11-Q-1	34R1	9-R-29
30B1	11-Q-14	34R2	9-Q-29
30B2	11-Q-2	35E1	10-Q-2
30H1	11-Q-13	35N1	10-R-37
30H2	11-Q-12	35P1	10-Q-9
31A1	11-Q-9	35R1	10-Q-5
31B1	11-Q-3	36B1	10-Q-15
31C1	11-Q-4	36J1	10-Q-12
31E1	11-Q-10	36J2	10-Q-16
31E2	11-Q-15	36K1	10-Q-7
31F1	11-Q-5	36K2	10-Q-1

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3N/22W-36K3	10-P-7	4N/18W-19N1	20-M-6
3N/23W- 5B1	5-0-7	19P1	20-M-5
5B2	5-0-19	19P2	20-M-5A
5G1	5-0-17	19P3	20-M-11
5G2	5-0-18	19R1	20-M-3
5H1	5-0-1	20K1	20-M-1
5K1	5-0-6	20M1	20-M-2
5P1	5-0-20	20M2	20-M-4
5P2	5-0-16	20N1	20-M-7
5P3	5-0-4	20R1	20-M-3
5P4	5-0-4A	24N1	22-M-1
6D1	5-0-10	25G1	22-N-1
6K1	5-0-9	25H1	22-N-2
6R1	5-0-8	27B1	21-M-1
6R2	5-0-8A	27B2	21-N-1
8A1	5-0-3	27G1	21-N-2
8B1	5-0-15	27G2	21-N-3
8B2	5-0-13	28C1	21-M-2
8B3	5-0-11	29D1	20-N-20
8B4	5-0-22	29E1	20-N-18
8B5	5-0-12	29M1	20-N-21
8B6	5-0-23	29M2	20-N-16A
8B7	5-0-2	29P1	20-N-24
8C1	5-0-5	29P2	20-N-17
8C2	5-0-14	29P3	20-N-9
8G1	5-0-21	29P4	20-N-8
12D1	7-0-1	29P5	20-N-7
23G1	7-P-1	30A1	20-N-3
31N1	5-R-5	30D1	20-N-23
3N/24W-14H1	4-P-1	30F1	20-N-6
22F1	3-P-1	30G1	20-N-27
4N/18W- 3Q1	21-L-4	30G2	20-N-1
3Q2	21-L-3	30G3	20-N-15
10P1	21-L-2	30G4	20-N-14
11Q1	22-L-3	30J1	20-N-28
11Q2	22-L-2	30K1	20-N-29
12P1	22-L-1	30M1	20-N-19
15C1	21-L-1	30M2	20-N-2
19G1	20-M-9	31B1	20-N-10
19J1	20-M-8	31B2	20-N-5

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4N/18W-31C1	20-N-4	4N/19W-29Q2	17-N-33
31D1	20-N-26	29Q3	17-N-32
4N/19W- 7M1	17-L-2	29R1	17-N-54
7M2	17-L-3	29R2	17-N-34
18N1	17-M-1	29R3	17-N-16
24R1	20-M-10	30A1	17-N-24
25A1	19-N-14	30D1	17-N-46
25B1	19-N-4	30H1	17-N-25
25C1	19-N-1	30J1	17-N-23
25E1	19-N-20	30J2	17-N-11
25J1	20-N-22	30K1	17-N-43
25J2	19-N-16	30P1	17-N-26
25K1	19-N-17	30P2	17-N-45
25K2	19-N-9	30P3	17-N-22A
25L1	19-N-23	30P4	17-N-22
25L2	19-N-3	30Q1	17-N-42
25L3	19-N-27	30R1	17-N-44
25L4	19-N-6A	31D1	17-N-56
25M1	19-N-22	31D2	17-N-3
25M2	19-N-26	31D3	17-N-29
26J1	19-N-19	31E1	17-N-14
26J2	19-N-24	31L1	17-N-57
26J3	19-N-2	31M1	17-N-58
26P1	19-N-18	31M2	17-N-59
26P2	19-N-12	31N1	17-N-47
26Q1	19-N-5	31N2	17-N-50
26Q2	19-N-15	31N3	17-N-10
26Q3	19-N-21	31N4	17-N-49
27P1	18-N-33	31P1	17-N-48
27Q1	18-N-10	31R1	17-N-23A
27R1	18-N-1A	31R2	17-N-17
27R2	18-N-1	32A1	18-N-56
28N1	18-N-19	32B1	17-N-15
28Q1	18-N-13	32B2	17-N-13
29K1	17-N-35	32F1	17-N-38A
29L1	17-N-1	32F2	17-N-62
29L2	17-N-55	32J1	17-N-5A
29L3	17-N-31	32J2	17-N-37
29M1	17-N-46A	32J3	17-N-5
29Q1	17-N-12	32J4	17-N-37A

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4N/19W-32K2	17-N-51	4N/19W-34K1	18-N-24
32K3	17-N-21	34K2	18-N-9
32K4	17-N-53	34M2	18-N-34
32K5	17-N-52	35C1	19-N-13
32L1	17-N-9	35K1	19-N-10A
32M1	17-N-38	35K2	19-N-10
32P1	17-N-8	35L1	19-N-25
32Q1	17-N-41	35L2	19-N-8
32Q2	17-N-40	35L3	19-N-7
32Q3	17-N-31A	35L4	19-N-11
32Q4	17-N-61	4N/20W-12A1	16-L-2
32R1	17-N-36	12H1	16-L-1
32R2	17-N-4	12Q1	16-L-3
33A1	18-N-32	12R1	17-L-1
33C1	18-N-3	18Q1	14-M-1
33D1	18-N-26	19C1	14-M-2
33D2	18-N-25	23G1	16-M-10
33D3	18-N-27	23J1	16-M-4
33D4	18-N-28	23J3	16-M-15
33E1	18-N-29	23L1	16-M-9
33J1	18-N-5	23N1	16-M-1
33K1	18-N-14	23Q1	16-M-8
33K2	18-N-22A	23Q2	16-M-12A
33K3	18-N-22	23R1	16-M-12
33K4	18-N-23	24D1	16-M-7
33K5	18-N-6	24N1	16-M-11
33K6	18-N-16	24R1	16-M-13
33M1	18-N-21	25A1	16-N-19
33M2	18-N-20A	25A2	16-N-8
33M3	18-N-20	25A3	16-N-56
33M4	18-N-29A	25C1	16-N-55
33M5	18-N-11	25D1	16-M-6
34B1	18-N-2A	25J1	16-N-37
34C1	18-N-18	25K1	16-N-45
34C2	18-N-12	25L1	16-N-36
34D1	18-N-31	25N1	16-N-44
34D2	18-N-4	25N2	16-N-2
34H1	18-N-7	25N3	16-N-2A
34J1	18-N-30	25P1	16-N-50
34J2	18-N-8	25P2	16-N-10

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4N/20W-25P3	16-N-34	4N/20W-34P1	15-N-1
25Q2	16-N-1A	34P2	15-N-2
25R1	16-N-41	34P3	15-N-10
26A1	16-N-43	34P4	15-N-2A
26A2	16-N-6	34P5	15-N-25
26B1	16-N-46	34Q1	15-N-13
26B2	16-M-3	34R1	15-N-7
26C1	16-N-13	35B1	16-N-7
26C2	16-M-2	35H1	16-N-17
26D1	16-N-20	35H2	16-N-54
26E1	16-N-9	35Q1	16-N-39A
26F1	16-N-11	36A1	16-N-38
26G1	16-N-49	36B1	16-N-18
26H1	16-N-12	36C1	16-N-23
26H2	16-N-21	36C2	16-N-15
26H3	16-N-35	36C3	16-N-52
26H4	16-N-12A	36D1	16-N-42
26L1	16-N-4	36D2	16-N-51
26Q1	16-N-47	36D3	16-N-40
27N1	15-N-5	36D4	16-N-3
27Q1	15-N-19	36J1	17-N-60
31H1	14-N-9	36J2	17-N-30A
31N1	14-N-4	36J3	16-N-28
31P1	14-N-7	36J4	16-N-29
32H1	14-N-8	36K1	16-N-30
32J1	14-N-1	36K2	16-N-30A
32P1	14-N-6	36N1	16-N-53A
32P2	14-N-5	36N2	16-N-5
32Q1	14-N-2	36P1	16-N-33
33B1	15-N-17	36P2	16-N-14
33C1	15-N-22	36Q1	16-N-53
33C2	15-N-11	36Q2	16-N-32
33E1	15-N-23	36Q4	16-N-25
33G1	15-N-12	36R1	16-N-57
33J1	15-N-9	36R3	16-N-24
34D1	15-N-24	36R4	16-N-26
34K1	15-N-20	36R5	17-N-30
34K2	15-N-14	36R6	16-N-27
34N1	15-N-16	4N/21W-13Q1	13-M-1
34N2	15-N-18	17J1	11-M-1

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4N/21W-18C1	11-L-1	4N/22W- 5E3	8-L-19
18C2	11-L-6	5E4	8-L-109
27E1	12-N-1	5E5	8-L-98
27E2	12-N-2	5E7	8-L-52
27F1	12-N-3	5F1	8-L-110
4N/22W- 3E1	9-L-46	5G1	8-L-73
3E2	9-L-18	5G2	8-L-91
3F1	9-L-19	5G3	8-L-64
3F2	9-L-47	5H1	9-L-31
3L1	9-L-20	5H2	9-L-24
3M1	9-L-10	5H3	8-L-29
3N1	9-L-25	5J2	8-L-7
3P1	9-L-G	5J3	8-L-72
4A1	9-L-7	5J4	8-L-92
4D1	9-L-36	5J5	9-L-4
4G1	9-L-34	5J6	9-L-15
4H1	9-L-11	5J7	8-L-66
4J1	9-L-32	5K1	8-L-71
4L1	9-L-26	5K3	8-L-95
4M1	9-L-5	5K4	8-L-40
4M2	9-L-1	5L1	8-L-5
4M3	9-L-14	5L2	8-L-70
4M4	9-L-17	5L3	8-L-69
4M5	9-L-28	5L5	8-L-44
4M6	9-L-29	5L6	8-L-103
4M7	9-L-33	5L7	8-L-9
4N1	9-L-30	5L8	8-L-5A
4P1	9-L-22	5M1	8-L-101
4P2	9-L-21	5M2	8-L-111
4P3	9-L-2	5M3	8-L-18
4P4	9-L-6	5M5	8-L-45
4R1	9-L-12	5R1	9-L-8
5C1	8-L-65	5R2	8-L-67
5C2	8-L-90	5R3	9-L-27
5C3	8-L-38	5R4	9-L-16
5D1	8-L-63	5R5	9-L-3
5D2	8-L-36	6B1	8-L-100
5D3	8-L-61	6D1	8-L-27
5E1	8-L-30	6D2	8-L-43
5E2	8-L-35	6D3	8-L-47

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4N/22W- 6D4	8-L-14	4N/22W- 6Q1	8-L-39
6D5	8-L-51	6Q2	8-L-22
6E1	8-L-48	6R1	8-L-114
6E2	8-L-107	6R2	8-L-97
6E3	8-L-13	6R3	8-L-34
6E4	8-L-12	6R4	8-L-115
6E5	8-L-96	6R5	8-L-88
6E6	8-L-99V	6R6	8-L-113
6F1	8-L-42	6R7	8-L-112
6F2	8-L-46	6R8	8-L-68
6F3	8-L-81	7A1	8-L-119
6F4	8-L-56	7A2	8-L-89
6G2	8-L-31	7A3	8-L-6
6G3	8-L-94	7B1	8-L-105
6H1	8-L-62	7B2	8-L-99
6H2	8-L-116	7B3	8-L-104
6J1	8-L-60	7B4	8-L-86
6J2	8-L-108	7B5	8-L-102
6J3	8-L-16	7B6	8-L-25
6J4	8-L-53	7B7	8-L-87
6J5	8-L-23	7C1	8-L-85
6J6	8-L-17	7C2	8-L-118
6K1	8-L-37	7C3	8-L-10
6K2	8-L-32	7D1	8-L-79
6K3	8-L-57	7D2	8-L-80
6K4	8-L-3	7G1	8-L-2
6K5	8-L-58	7G2	8-L-84
6K6	8-L-93	8B1	8-L-75
6K7	8-L-59	8B2	8-L-82
6K8	8-L-28	8B3	8-L-76
6K9	8-L-106	8D1	8-L-15
6L1	8-L-41	8D2	8-L-83
6L2	8-L-11	9B1	9-L-23
6L3	8-L-54	9B2	9-L-9A
6L4	8-L-55	9B3	9-L-9
6L5	8-L-26	9B4	9-L-A
6L6	8-L-50	9C1	9-L-48
6L7	8-L-21	9D1	9-L-35
6M1	8-L-49	9N1	9-L-38
6N1	8-L-78	9P1	9-M-A

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
4N/22W- 9Q1	9-L-43	4N/22W-17A1	8-M-2
9R1	9-L-39	17B1	8-M-1
9R2	9-L-40	17G1	8-M-3
9R3	9-L-37	25L1	10-N-8
9R4	9-L-41	25P1	10-N-7
9R5	9-L-42	25P2	10-N-6
10K1	9-L-13A	25P3	10-N-5
10K2	9-L-13	36C1	10-N-4
10K3	9-L-44	36C2	10-N-3
10Q1	9-L-45	36E1	10-N-2
10R1	10-L-9	36E2	10-N-1
10R2	10-L-10	4N/23W- 1B1	7-L-4
11D1	10-L-16	1D1	7-L-7
11E1	10-L-17	1F1	7-L-2
11L1	10-L-14	1H1	8-L-4
11M1	10-L-1	1H2	7-L-12
11M2	10-L-D	1L1	7-L-1
11N1	10-L-8	1N1	7-L-8
11N2	10-L-3	1N2	7-L-9
11N3	10-L-15	1R1	8-L-33
11N4	10-L-5	1R2	8-L-77
11N5	10-L-6	1R3	8-L-8
11N6	10-L-7	2A1	7-L-6
11P1	10-L-2	2B2	7-L-5
11P2	10-L-11	3M1	6-L-6
11P3	10-L-4	3Q1	6-L-9
11Q1	10-L-12	4G1	6-L-2
11R1	10-L-13	4G2	6-L-1
12F1	10-L-20	4K1	6-L-10
12F2	10-L-18	4R1	6-L-5
12F3	10-L-19	8R1	5-M-19
12P1	10-L-23	9B1	6-L-4
12Q1	10-L-24	9B2	6-L-11
12Q2	10-L-22	9B3	6-L-11A
12R1	11-L-5	9L1	6-L-16
12R2	11-L-4	9M1	6-L-14
14C1	10-M-1	9P1	6-M-30
14E1	10-M-2	10D1	6-L-8
16A1	9-M-1	10D2	6-L-7
16A2	9-M-2	10H1	6-L-13

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WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
4N/23W-10J1	6-L-12	4N/23W-16A2	6-M-56
11D1	7-L-13	16B1	6-M-55
11F1	7-L-15	16B2	6-M-26
11F2	7-L-14	16B3	6-M-25
11H1	7-L-11	16B4	6-M-24
11L1	7-L-14A	16B5	6-M-3
12A1	7-L-23	16B6	6-M-22
12A2	8-L-117	16B7	6-M-39
12A3	7-L-22	16C1	6-M-27
12A4	7-L-21	16C2	6-M-29
12A5	7-L-20	16C3	6-M-28
12B1	7-L-3	16C4	6-M-43
12D1	7-L-10	16D1	6-M-42
12H1	8-L-1	16D2	6-M-40
12H2	7-L-16	16F1	6-M-23
12K2	7-L-19	16G1	6-M-33
12L1	7-L-18	16L1	6-M-1
12L2	7-L-17	16M1	6-M-1A
12N1	7-M-6	16M2	6-M-4
14B1	7-M-8	16P1	6-M-36
14B2	7-M-7	16Q1	6-M-38
14B3	7-M-9	16Q2	6-M-63
14B4	7-M-11	16Q3	6-M-37
14C1	7-M-2	17C1	5-M-6
14C2	7-M-10	17J1	5-M-15
14D1	7-M-5	17J2	5-M-14
14D2	7-M-1	17J3	5-M-16
14F1	7-M-12	18M1	5-M-7
14M1	7-M-3	19M1	4-M-8B
15A1	6-M-9	19Q1	5-N-4
15A2	7-M-4	20A1	5-M-17
15C1	6-M-8	20H1	5-M-18
15C2	6-M-62	20J1	5-M-11
15D1	6-M-7	20J2	5-M-2
15D2	6-M-2	20J3	5-M-9
15E1	6-M-57	20J4	5-M-8
15E2	6-M-58	20J5	5-M-10
15G1	6-M-59	20J6	5-M-12
15N1	6-M-49	20K1	5-M-13
16A1	6-M-34	20K2	5-M-1

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State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
4N/23W-20K3	5-M-20	4N/23W-21N3	6-N-2
20P1	5-N-25	22B1	6-M-50
20Q1	5-N-36	22G1	6-M-51
20Q2	5-M-3A	22L1	6-M-52
20Q3	5-M-3	22N1	6-N-22
20Q4	5-N-21	28D1	6-N-11
20Q5	5-N-23	28E1	6-N-23
20Q6	5-N-17	28G1	6-N-21
20Q7	5-N-22	28K1	6-N-29
21A1	6-M-61	28L1	6-N-28
21A2	6-M-48	28L2	6-N-25
21B1	6-M-11	28M1	6-N-16
21B2	6-M-47	28P1	6-N-20
21B3	6-M-12	28P2	6-N-6
21B4	6-M-10	28P3	6-N-14
21B5	6-M-14	28P4	6-N-24
21B6	6-M-15	28P5	6-N-13
21B7	6-M-46	28P7	6-N-5
21B8	6-M-16	28P8	6-N-12
21B9	6-M-65	28Q1	6-N-4
21B10	6-M-64	28Q2	6-N-7
21C1	6-M-66	29B1	5-N-16
21C2	6-M-17	29B2	5-N-24
21C3	6-M-18	29B3	5-N-15
21C4	6-M-54	29C1	5-N-26
21C5	6-M-45	29C2	5-N-11
21C6	6-M-13	29F1	5-N-27
21C7	6-M-31	29F2	5-N-1
21C8	6-M-5	29F3	5-N-10
21C9	6-M-32	29F4	5-N-3
21D1	6-M-53	29G1	5-N-14
21E1	6-M-19	29G2	5-N-13
21E2	6-M-20	29G3	5-N-12
21F1	6-M-44	29H1	5-N-37
21F2	6-M-41	29H2	5-N-6
21H1	6-M-60	29H3	5-N-7
21M1	6-M-21	29J1	5-N-8
21M2	6-M-6	29J2	5-N-18
21N1	6-N-1	29L1	5-N-2
21N2	6-M-35	29P1	5-N-39

State well number S.B.B.&M.	Ventura County well number	State well number S.B.B.&M.	Ventura County well number
4N/23W-29Q1	5-N-9	5N/22W-32J2	9-K-10
30F1	5-N-5	32J3	9-K-12
30N1	5-N-32	32K1	8-K-5
31D1	5-N-30	32L1	8-K-6
31D2	5-N-31	32N1	8-K-2
32B1	5-N-20	32P1	8-K-1
32B2	5-N-28	32R1	9-K-9
32C1	5-N-35	33D1	9-K-7
32G1	5-N-34	33M1	9-K-6
32J1	5-N-19	33N1	9-K-1
32J2	5-N-29	33N2	9-K-13
32J3	5-N-38	34N1	9-K-3
32J4	5-N-33	5N/23W-33B1	6-K-5
33D1	6-N-15	33B2	6-K-6
33D2	6-N-9	33B3	6-K-7
33D3	6-N-17	33G1	6-K-4
33E1	6-N-10	33G2	6-K-3
33E2	6-N-18	33G3	6-K-2
33E3	6-N-27	33Q1	6-K-1
33E4	6-N-26		
33M1	6-N-3		
33M2	6-N-19		
33M3	6-N-8		
4N/24W-13C1	4-M-5		
13J1	4-M-3		
13J2	4-M-2		
13J3	4-M-4		
14A1	4-M-6		
24H1	4-M-7		
24J1	4-M-8		
24J2	4-M-8A		
24R1	4-M-1		
24R2	4-N-2		
36K1	4-N-1		
36R1	4-O-1		
5N/22W-31G1	8-K-3		
31K1	8-K-4		
31R1	8-K-7		
32A1	9-K-8		
32J1	9-K-11		

APPENDIX F

EVALUATING THE QUALITY OF IRRIGATION WATERS IN VENTURA COUNTY

L. D. DONEEN

APPENDIX F

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EVALUATING THE QUALITY OF IRRIGATION WATERS IN VENTURA COUNTY

L. D. DONEEN[1]

Introduction

Due to the tendency for salts to accumulate in irrigated soils, some authorities have questioned the permanency of irrigated agriculture. History of irrigated projects in the Western United States and abroad has shown the need for careful attention to the kinds and amounts of soluble material in irrigation waters. The accumulation of salts is largely determined by the irrigation water. Many of our rivers are low in dissolved salts, while others contain an appreciable quantity, particularly when degraded by return flow from upstream irrigation projects. The greatest extreme in salt concentration is found in waters from our wells. The salt content of the well waters in Ventura County varies from 1/4 to 4 tons per acre-foot. The application of 3 feet of water per season will add from 3/4's to 12 tons of salt to the soil. As most of the irrigation water in this County is pumped from wells with a moderately high salt content, the author, in cooperation with the Division of Water Resources and the University of California Agricultural Extension Service Office in Ventura County, made a survey of the salt damage to the more sensitive crops (lemons and oranges) grown in the County. This survey was made to check the validity of a recent classification for salines in irrigation water[3] and its application to Ventura County waters.

For some years the technical personnel in California interested

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in irrigated agriculture have been concerned with the quality of water used in irrigation and from time to time have set up tentative standards as a guide to its quality. One of the standards more recently established and widely distributed in California is given in Table 1.

If a water has one constituent which falls in a lower class, as listed in Table 1, it automatically is placed in that class, although probably not of as poor a quality water as one having two constituents in the class.

Table 1--Qualitative Classification of Irrigation Waters[a]

	Class I Excellent to good	Class II Good to Injurious	Class III Injurious to Unsatisfactory
K x 10^5 at 25°c[b]	Less than 100	100 - 300	More than 300
Boron, ppm[c]	" " 0.5	0.5 - 2.0	" " 2.0
Sodium, percentage[d]	" " 60	60 - 75	" " 75
Chloride, m.e.[e]	" " 5	5 - 10	" " 10

a. By L. V. Wilcox and O. C. Magistad, "Interpretation of analyses of irrigation waters and the relative tolerance of crop plants", mimeographed by the U. S. Regional Salinity Laboratory, 1943. Remimeographed by Agricultural Extension Service, University of California, 1944. Remimeographed by the Division of Irrigation, University of California, 1950 and 1952.

b. Specific electrical conductance (K x 10^5 at 25°C). This measurement is reported in reciprocal ohms per cm., multiplied by 10^5(100,000), and provides an index of total dissolved electrolytes or total salinity. Dividing the conductance (K x 10^5 at 25°C) by 10 gives an approximation of the salt content in milligram equivalents per liter. Multiplying the conductance (K x 10^5 at 25°C) by 7 gives a rough estimate of parts per million (ppm) total salts.

c. Boron is expressed as parts per million (ppm) of the element.

d. Sodium percentage is computed by the formula $\frac{Na \times 100}{Na + Ca + Mg}$, when these are expressed as milligram equivalents (m.e.) per liter.

e. Chloride is expressed as milligram equivalents (m.e.) per liter.

Because of diverse climatological conditions, crops, and soils in California, it has not been practical to establish rigid limits for all conditions. Instead, field experience has indicated the classification shown in Table 1 should be used for the purpose of orientation and as a guide and that local conditions must be considered in judging the suitability of water for irrigation. The classification shown in Table 1 is the result of the research and experience of various investigators at the University of California, and the former Rubidoux and the U. S. Salinity Laboratory of the U. S. Department of Agriculture. Other classifications for irrigation water have been suggested and these have been listed in another paper[3].

<u>Source of salines</u>. The classifications for irrigation water described above have relied on electrical conductance as the criterion for total salt. The concentration range is from 100, $K \times 10^5$ at 25°C (1,000 micromhos) or below for the best quality to 300 or above for the poorest quality water. The author's experience has been that the electrical conductance of an irrigation water is not a good measure of the potential accumulation of salines in a soil.

When nonsaline soils, irrigated for some years, gradually develop a high salt concentration, it is usually due to the accumulation of soluble salts brought in with the irrigation water. Under high water table conditions the soluble salts from the deep subsoils may be carried to the soil surface with the rise of the water table. Some salt may be dissolved from the soil minerals and with a high water table their removal by leaching is prevented. However, these are probably a minor source, and much of the salt increase may be attributed to that in the irrigation water. In the absence of a high water table, the irrigation water would be the main source of salts in the development of a saline soil.

A number of workers have shown the soil solution in well drained soil to be more concentrated than the irrigation water used. Under this condition Scofield [8], 1935, estimates that the soil solution in heavily leached soil may be twice as concentrated as the irrigation water, and under less severe leaching where the water is used sparingly the difference is much greater, often 8 times or more the concentration of the irrigation water. This concentration of salts in the soil is due to two factors; evaporation from the soil surface and water used by the plants in transpiration. The plants usually remove only a small percentage of the total salt occurring in the irrigation water.

Investigators of alkali reclamation and related fields recognize the limited solubility of calcium and magnesium carbonates and calcium sulfate, but the application of this knowledge has not been made to irrigation waters. This investigation is concerned with these slightly soluble salts which may occur in the irrigation water and their ineffectiveness in the potential salination of a soil. These salts of limited solubility do not contribute to the formation of saline soils.

Theory of Effective Salinity

Effective salinity of irrigation water. In this study let us assume the following conditions prevail: The irrigated soil is in a low rainfall area, and no extensive leaching of the soil occurs from application of more water than will be lost by surface evaporation or vegetative transpiration. These conditions are usually found in soils with a hardpan, claypan, or high water table, frequently in highly stratified, heavy clay soils, and in permeable soils where the water is used sparingly. The salts from the irrigation water will accumulate in the soil. As the soil solution becomes concentrated, certain salts will precipitate. Because of the low solubility, the order of precipitation will be calcium carbonate followed by magnesium carbonate and then sulfate. Other salts, such as calcium chloride, magnesium chloride and sulfate; and sodium chloride, sulfate, and bicarbonate, occurring in irrigation water in any significant concentrations are extremely soluble and accumulate in the soil solution. Eaton(5), 1950, discussed the calcium and magnesium carbonate precipitation as it effects the sodium percentage in the soil solution. However, Joseph(6), 1925, working with the irrigation waters of the Blue Nile, points out that calcium carbonate should not be included as "permanently soluble material" in the formation of alkali soils because of precipitation by evaporation.

The most soluble salt to precipitate is the calcium sulfate with a solubility in pure water of about 28 m.e. per l.* or 2,410 ppm. The solubility of this salt is high when compared to calcium and magnesium carbonates but not sufficiently soluble under our present standards to produce a saline soil. Many of our salt-sensitive plants grow satisfactorily in gypsiferous soils. To be sure, gypsum (calcium sulfate) in the irrigation water or in the soil will contribute to the extent of its solubility (2,410 ppm) in the salination of a soil. Other soluble salts in the soil solution will influence the solubility of gypsum, and also calcium and magnesium carbonate.

* Recently the term "equivalents per million" has been used by some groups and individuals in reporting water analyses. This method of reporting is nearly the same as that for milligrams equivalent per liter, and for all practical purposes these terms can be interchanged.

High concentrations may increase the solubility of gypsum by several m.e. per l. and extremely high concentrations of salt may increase the solubility by 50 per cent or more. When the sulfate or calcium ion predominates in a saline soil solution, the common ion will suppress the solubility of gypsum, and under certain conditions they may amount to a third or more based on its solubility in pure water. These same general principles hold for the solubility of calcium and magnesium carbonate. Calcium sulfate alone or in combination with other salts will not in itself bring about a saline soil.

Calcium and magnesium carbonate and calcium sulfate should not be included in establishing standards for salinity as is now the practice in the use of electrical conductance. The remaining soluble salts forming salinity are listed as "effective salinity" of an irrigation water in Table 2. For example, water number 1 has a conductance of 103 with a 12.2 m.e. per l. total salt. Upon concentration of this water in the soil solution, the calcium would precipitate as the carbonate, followed by the precipitation of magnesium carbonate. As there is more bicarbonate than calcium and magnesium, these two cations would not contribute to salinity and are subtracted from the total cations leaving 3.6 m.e. per l. of soluble salts or "effective salinity". Thus the salinity potential of this water is reduced from 12.2 m.e. per l. salt to 3.6. This water has been used many years on well drained soil without serious problems of salt accumulation.

Table 2. Analyses of Selected Well and River Waters used for Irrigation

No.[a]	K x 10^5 25°C	% Na	Cations m.e. per liter Ca	Mg	Na	Total Cations	Anions m.e. per liter HCO_3	SO_4	Cl	Effective m.e.	Salinity % Na
						Well Waters					
1	103	29	$\underline{2.6}$[b]	$\underline{6.0}$	3.6	12.2	9.6*[c]	1.5	1.1	3.6	100
2	187	23	$\underline{11.1}$	7.0	5.3	23.4	$\underline{2.7}$	19.9*	0.5	12.3	47
3	330	26	28.5*	3.1	11.3	42.9	$\underline{1.1}$	$\underline{25.4}$	15.0	16.4	69
4	302	90	$\underline{1.8}$	$\underline{1.1}$	26.5	29.4	3.0*	14.7	11.9	26.5	100
5	75	90	$\underline{0.6}$	$\underline{0.1}$	6.3	7.0	1.9*	1.6	3.8	6.3	100
6	69	24	$\underline{3.9}$	1.5*	1.7	7.1	4.8	0.3	1.9	2.3	74
7	48	91	$\underline{0.3}$	$\underline{0.1}$	4.2	4.6	1.8*	2.7	0.1	4.2	100
8	38	31	$\underline{1.9}$	0.9*	1.3	4.1	$\underline{2.6}$	0.8	0.4	1.5	87
9	32	18	$\underline{1.9}$	1.2*	0.7	3.8	$\underline{3.0}$	0.0	0.5	0.8	88
						River Waters					
1	61	50	$\underline{1.8}$	$\underline{1.2}$	3.0	6.0	$\underline{3.0}$	2.7	0.3	3.0	100
2	74	41	$\underline{2.5}$	1.8	3.0	7.3	$\underline{2.2}$	1.7*	3.4	4.8	63
3	117	39	$\underline{5.1}$	2.3	4.7	12.1	$\underline{2.5}$	7.2*	2.3	7.0	66
4	51	32	$\underline{1.3}$	$\underline{2.4}$	1.8	5.5	3.8*	0.6	1.0	1.8	100

a. Well water No. 1, University Farm Well No. 10, Yolo County; No. 2, Cuyama Valley, Santa Barbara County; Nos. 3, 5, 7, 8, Kern County; No. 4, Fresno County; and Nos. 6 and 9, San Joaquin County. River water No. 1, Susan; No. 2, San Joaquin; No. 3, Colorado; and No. 4, Cache Creek.

b. Figures underscored indicate these ions will precipitate as the soil solution is concentrated.

c. Asterisks following figures indicate these ions will only partially precipitate as the soil solution is concentrated.

Water number 2 is a high sulfate water with a total cation content of 23.4 m.e. per l. The first precipitation in this water would be the bicarbonate as calcium carbonate. As there is an excess of calcium over bicarbonate, no magnesium precipitation would be involved. The remaining calcium would precipitate as the sulfate, and the salinity of the water would be reduced by the calcium precipitation to 12.5 m.e. per l. After this water was used on a loam soil for 7 years the salinity had increased to a concentration that reduced potato yields by 50 per cent, and it was difficult to obtain uniform germination of seeds. Deep percolation of irrigation water was difficult due to clay linination in the subsoil; consequently much of the salt added remained in the surface three feet of soil.

Water number 3 has a high salt content with a conductance of 330 and a total ionic concentration of 42.9 m.e. per l. The reduction in concentration would be by precipitation of calcium carbonate and sulfate. Due to the high calcium content the reduction in salinity is determined by the bicarbonate and sulfate ions for a total of 26.5 m.e. per l. leaving in solution 16.4 m.e. per l.effective salinity. This water was applied sparingly on a sandy loam soil and crop yields were reduced by the accumulation of salines.

The three waters discussed above show a marked reduction in potential salinity, "effective salinity", which is not taken into consideration in the classification listed in Table 1 and consequently this Table is not applicable in estimating the salination of a soil by an irrigation water. Even with the reduction in potential soil salinity of the above waters, two of them produced saline soils because of the relatively high effective salinity and insufficient leaching of the soil.

Some waters precipitate few salts upon concentration in the soil solution, such as water number 4. In this example the reduction in salinity is by the precipitation of 2.9 m.e. per l. calcium and magnesium carbonates from a total salinity of 29.4 m.e. per l. giving 26.5 m.e. per l. effective salinity. With this water the conductance or total concentration would be a fair measure of effective salinity.

The calculation of effective salinity is more applicable to waters of low salt content, i.e., waters with a conductance of less than 100, than those of a higher salt concentration as these waters are recognized frequently as possibly harmful for some or all crops. Waters 5 and 6 with a conductance of 75 and 69, respectively, and approximately the same total salt concentration, have widely different effective salinities. Number 5 water has a high percentage of the total salts occurring as effective salinity (6.3 m.e. per l.) whereas number 6 is reduced to approximately a third (2.3 m.e. per l.). Additional samples of varying effective salinity in low salt waters of nearly the same total salt concentration are numbers 7, 8, and 9. The effective salinity ranges from 4.2 to 0.8 of a m.e. per l. The above examples indicate that the potential salinity of a water for irrigation cannot be judged by conductance or total salt content, and the slightly soluble salts of calcium and magnesium carbonates, and calcium sulfate should not be considered in classification of water for accumulation of salines in the soil.

Four surface waters diverted from rivers or streams in California for irrigation purposes are listed in Table 2. These show a reduction from total salts, when calculated as effective salinity, of 34 per cent in river water number 2 (San Joaquin) to 67 per cent for number 4, Cache Creek. With the exception of number 4, these waters give rise to soil salinity when deep percolation is impaired. Notable is the accumulation of salt in the Imperial Valley from Colorado River water, number 3. This water has an effective salinity of 7.0 m.e. per l. which is sufficiently high to account for all the accumulated salts of Imperial Valley.

Salination of a soil by irrigation water. For irrigation waters an approximate relationship exists between conductance, parts per million, milliequivalents per liter and tons of salt per acre-foot. For example, a conductance of 1,000 micromhos is approximately equivalent to 700 ppm, 10 m.e. per l. total salt, or a ton of salt per acre-foot. These are very useful relationships in expressing total salts of an irrigation water in various terms. However, in the precipitation of calcium and magnesium bicarbonates and calcium sulfate, most of the salts of high molecular weights are removed from solution, which changes the relationships that existed in the original irrigation water. A better relationship for effective salinity would be one milliequivalent to equal about 55 ppm or 150 pounds of salt per acre-foot of water. Then 10 m.e. per l. effective salinity would be approximately 550 ppm or three-fourths ton of salt per acre-foot of water. Assuming the salts of an irrigation water remain in the soil to the depth of plant rooting, then the degree of salination will be in proportion to the quantity of water used in evapotranspiration and the effective salinity of the irrigation water.

If 0.2 per cent by weight of dry soil is used as a criterion for the limit between saline and nonsaline soil, then to bring an acre-foot of soil to this concentration would require 7,140 pounds of salt. (When 4 millimhos, 10^3, of the saturated extract is used as a standard for the lower limits of salinity, the total salt is about 6,000 pounds or 0.18 per cent dry weight for soils of intermediate water-holding capacity).

As each milliequivalent effective salinity contributes about 150 pounds of salt per acre-foot of water, it would take 48 m.e. per l. to bring each acre-foot of soil to 0.2 per cent salt, or a water containing 10 m.e. per l. effective salinity would require 4.8 acre-feet to reach this salt percentage. If the rooting depth of the plant is 6 feet and salts are not leached from this rooting zone, then 10 m.e. per l. of effective salinity would require 28.8 acre-feet of water. Assuming this is applied at the rate of 2 1/2 feet per year, it would require approximately 11 years to salinize a soil uniformly to 0.2 per cent salt (this is an idealized situation as field soils are rarely ever uniformly salinized). The depth of soil or the depth of rooting of the plant species involved would determine the number of years required to salinize a soil provided leaching was not involved.

Criteria for effective salinity. The above calculations assumed no leaching of a soil below the root development of the plant. Under field conditions this would not normally occur. Under most situations in the field, the irrigation usually results in some movement of soil moisture below the root zone. Irrigated high water table soils frequently have a natural or artificial drainage system. Although all the accumulated salts are not removed in the drainage water, a balance may be established so that the accumulation of salines is held at a concentration sufficiently low to permit the growth of agricultural plants. The salts in some high water table areas may not be due entirely to the effective salinity of the irrigation water but may have been in the original soil before irrigation was started or, as some authorities have suggested, may have been brought up from salt previously deposited in the deep subsoil by the rise of the water table. Under these conditions any effective salinity of the irrigation water will only aggravate the salt condition of the soil.

Many other conditions may seriously reduce deep percolation of the irrigation water in a reasonable time such as high sodium soils, stratified soils, clay lenses, some clay and adobe soils, dense or compact subsoils, and heavy clay subsoils. These soil conditions may prevent sufficient leaching to remove the salines of the irrigation water. However, some leaching may be accomplished by holding the water on the surface for a long period of time. An extreme example would be the removal of salines on very heavy soils by growing rice in which the soil is submerged for about 5 months. Most hardpans and some claypans are practically impermeable to water. Even these may have cracks or ruptures through which water and accumulated salts may drain.

Under conditions of restricted drainage different standards should be established for effective salinity of an irrigation water than with deep, open soils where leaching is easily accomplished. Table 3 suggests tentative standards for effective salinity of the irrigation water with and without restricted drainage. The assumption is made that 1 to 2 m.e. per l. of effective salinity will be removed in crop production.

Table 3. Tentative Classification for Effective

Salinity of Irrigation Waters

Soil Conditions	Terms used	Class 1	Class 2	Class 3
Little leaching of the soil can be expected, due to low percolation rates	m.e. per l.	<3	3-5	>5
	ppm	165	165 - 275	275
	lb. per ac-ft.	450	450 - 750	750
Some leaching but restricted. Deep percolation or drainage slow.	m.e. per l.	<5	5 - 10	>10
	ppm	275	275 - 550	550
	lb.per ac-ft	750	750 - 1500	1500
Open soils. Deep percolation of water easily accomplished.	m.e. per l.	<7	7 - 15	>15
	ppm	385	385 - 825	825
	lb. per ac-ft.	1050	1050 - 2250	2250

The crucial concentrations are those listed in Class I for the three soil conditions. Classes II and III indicate increasing concentration, and the build-up of soil salinity should be checked periodically and irrigation practices adjusted to remove salinity with the minimum loss of water. Class I water is not considered safe under all extreme conditions encountered in the field. Other than those listed in Table 3, the circumstances under which an irrigation water is to be used should be taken into consideration. In areas of high annual rainfall where the soil is wet to 6 feet or more in depth, or below the depth of rooting of the crop grown, the concentration of effective salinity could be increased for all classes. In low rainfall areas some leaching may be desirable, but due to the low farm irrigation efficiencies, ranging from 20 to 80 per cent of the water delivered to the farm, most surface soils are adequately leached for removal of any excess salts. In fact, overirrigation or low farm irrigation efficiencies have resulted in damage to more soils due to the rise of a water table with increased salinity than irrigating sparingly and allowing the salts to accumulate.

In pumped areas where the water table is low, water is used sparingly, and the water contains high effective salinity, an occasional overirrigation may be beneficial in removing salines. Only a few isolated cases are known to the author in which serious salinity problems have developed due to the use of irrigation water with a relatively high salt content in the absence of a high water table. Careful investigation should be made to determine whether sufficient deep percolation is taking place in the ordinary irrigation practice to remove the salts from the surface soil. Where surface water is used for irrigation and the potentiality of developing a high water table may exist, irrigations should be limited to evapo-transpiration with the minimum of excess water to remove the salines.

Application of Effective Salinity

Ventura County irrigation waters. In the spring of 1953 and again in the fall a detailed investigation was made of salt injury to lemons and oranges, two of the more sensitive crops grown in the County. As a basis for this study, 375 irrigation waters from widely distributed agricultural areas of the County were used. A classification of these waters, percentage-wise, for total salinity and effective salinity is given in Table 4. This table is based on the standards for quality of water given in Table 1.

Table 4. Percentage Distribution of 375 Irrigation Waters in Three Classes, Based on Table 1, for Total Salinity and Effective Salinity

	Class I Less than 10 m.e. per l.	Class II Less than 30 m.e. per l.	Class III More than 30 m.e. per l.
Total salinity	16	77	7
Effective salinity	67	32	1

Applying these standards to effective salinity, it was found that 67 per cent of the waters were in Class 1, whereas on the basis of total salinity, only 16 per cent were in this class. If the criterion given in Table 3, is used 44 per cent of the waters are below 7 milliequivalents per l., 46 per cent between 7 and 15 milliequivalents and 10 per cent above 15 milliequivalents per l. For the 375 waters the average reduction from total salts to effective salinity is 48 per cent.

The above discussion has been limited to the accumulation of total salines. Other factors should be considered in the classification of irrigation waters, particularly sodium. The average sodium percentage of the total cations based on the formula given in Table 1, for the 375 waters is 29 per cent with only 5 waters above 60 per cent sodium and only one of these above 70. The per cent sodium of the effective salinity is increased when compared to the natural waters due to the precipitation of some of the calcium and

and magnesium salts as indicated in the last column of Table 2. The average per cent sodium of the effective salinity for the 375 waters is 56 per cent and is below the maximum allowable standards of 60 per cent sodium given in Table 1. However, 31 per cent of the waters were above 60 per cent sodium with 18 per cent of the water being between 60 and 70 per cent sodium, 6 per cent of them between 70 and 80, 2 per cent between 80 and 90, and 5 per cent between 90 and 100 per cent sodium.

The question arises, will the waters above 60 per cent sodium, based on effective salinity, have an adverse effect on soil structure such as dispersal of the clays accompanied by impaired water penetration? The answer, pertaining to these waters of Ventura County, seems to be no. Eighty per cent of the 375 waters precipitate calcium sulfate (gypsum) upon concentration in the soil solution. As calcium sulfate has a solubility of 28 m.e. per l., this concentration will always be present in the soil solution. Doubling this concentration with sodium salts will bring the concentration well above the saline range of 4 millimhos and only increase the sodium to 50 per cent of the cations. These waters also have an appreciable quantity of magnesium, ranging from about 1 to 20 m.e. per l. with an average of 4.3, which remains in the soil solution when calcium sulfate is precipitated. The problem would not be one of high per cent sodium, but one of total salines. Assuming the concentration of salts continues to increase above the lower limits established for a saline soil, even though the sodium percentage increased, a maintenance of good soil structure would result due to the high concentration of soluble salts.

Of the waters not giving a calcium sulfate precipitation (20 per cent), 18 per cent had sufficient bicarbonate to precipitate all the calcium and only part of the magnesium, while approximately 2 per cent or 8 waters of the 375 precipitated all the calcium and magnesium and had an excess bicarbonate which forms sodium bicarbonate. Eaton(5) listed these as "residual sodium carbonate". As the bicarbonate equals or exceeds the calcium and magnesium concentration, sodium of the soil solution will replace calcium of the cation exchange, which provides available calcium to precipitate with the excess bicarbonate. Recent investigations by Chimondes(2) show that concentrating residual sodium carbonate waters will enrich the cation exchange with sodium and at the same time give a precipitation of calcium carbonate.

Only two of the 8 waters had residual sodium of more than 1.5 m.e. per l., these being 2.5 and 3.1. The numerous farms visited showed no evidence of soil structure deterioration due to sodium in the irrigation water.

The Effect of Ventura County Irrigation Waters on Citrus and Soil

This study was limited to 20 citrus groves, as they constitute one of the major crops of this County and are considered to be very salt sensitive, especially the lemon. The areas having excess boron were not included in this study. The survey included a comparison of leaf injury, or burn, with the effective salinity of the irrigation water and with the soil type to a depth of 3 feet which contains the major concentration of citrus roots. These soils are classified as the Yolo Series, without lime accumulation and are well drained. Besides the above-mentioned variables, there is the unknown factor of the farmer's irrigation practice.

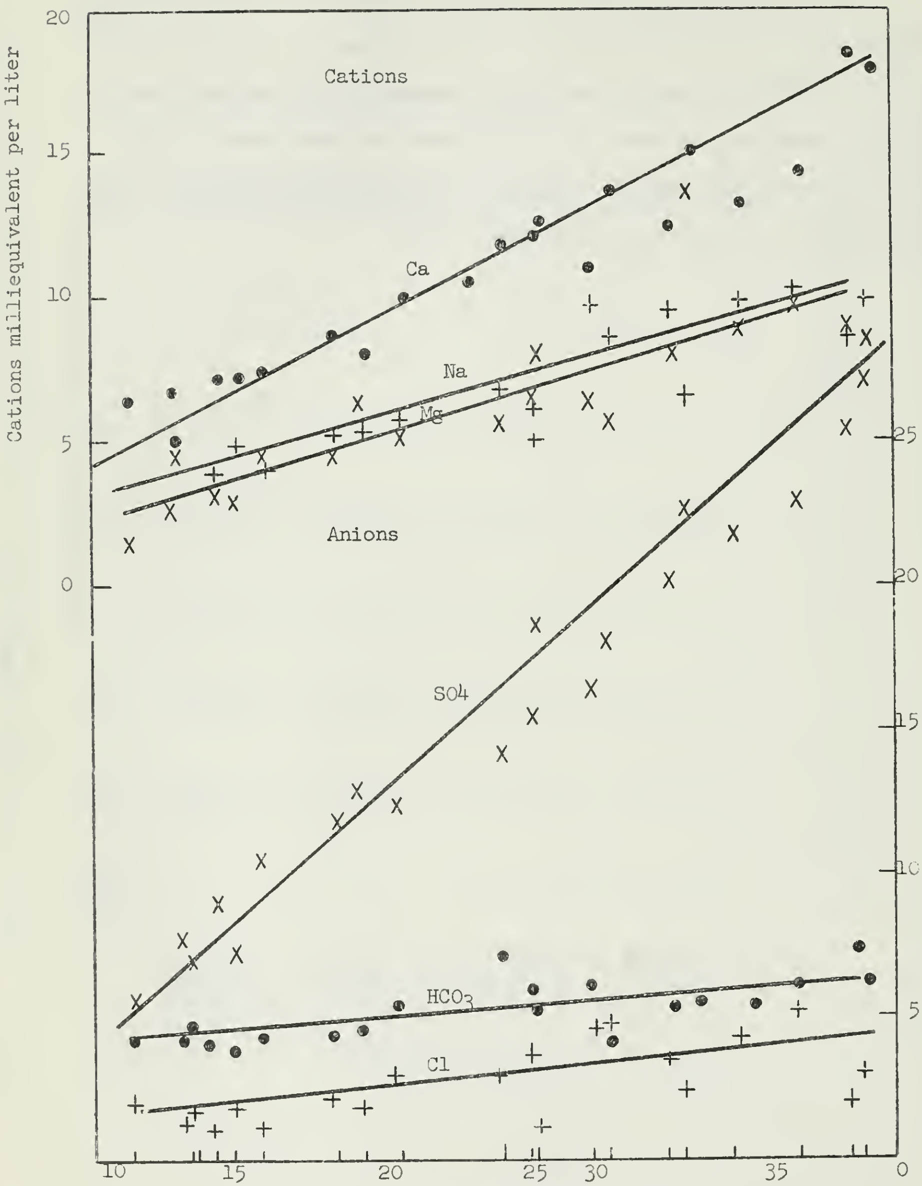
Irrigation Waters. The selection of the groves for study was made on the basis of total concentration of salts in the irrigation water; ranging from the lowest 11.32 to the highest 36.6 m.e. per l. in concentrations of water used for irrigation of citrus in the county, Table 5. The per cent sodium of the total cations is not considered high. The effective salinity for most of the waters is approximately half the total salts, and the average reduction for all waters was 46 per cent.

Table 5. Analyses and effective salinity (Eff. Sal.) of irrigation waters used on Citrus Groves and Salt Injury rating of the trees, Ventura County. 1953.

Grove	Salt* Injury Rating	Ions - Milliequivalents per liter							% Na	Eff. Sal.
		HCO_3	SO_4	Cl	Ca	Mg	Na	Total		
1 - orange		4.2	5.5	1.8	3.5	1.4	6.4	11.3	56	7.7
2 - lemon	1	4.2	7.7	1.2	6.6	2.5	4.0	13.1	30	6.5
3 - lemon		4.6	7.0	1.4	4.8	4.5	3.9	13.2	29	8.4
4 - lemon		4.0	8.9	1.1	7.1	3.1	3.9	14.1	27	7.0
5 - lemon		3.9	7.3	2.7	7.1	2.9	4.8	14.8	32	7.7
6 - orange		4.2	10.4	1.1	7.3	4.5	4.0	15.2	25	8.5
7 - orange	1	4.4	11.8	2.1	8.5	4.7	5.1	18.3	28	9.8
8 - orange	1	4.6	12.9	1.8	7.9	6.3	5.2	19.4	27	11.5
9 - lemon		5.4	12.5	2.9	9.8	5.1	5.6	20.5	27	10.7
10 - lemon		7.2	14.2	2.8	11.8	5.5	6.7	24.0	27	12.2
11 - lemon	1	5.9	15.6	3.6	12.2	6.4	6.5	25.1	26	12.9
12 - orange	2	5.3	18.7	1.1	12.4	8.0	4.9	25.3	19	12.9
13 - orange	2	6.1	16.5	4.5	11.0	6.4	9.8	27.2	36	16.2
14 - lemon	3	4.1	18.0	4.8	13.6	5.5	8.6	27.7	31	14.0
15 - orange	2	5.4	20.3	3.5	12.4	8.0	9.5	29.9	32	17.5
16 - lemon	3	5.7	22.8	2.3	15.2	8.7	6.5	30.4	21	15.2
17 - orange	2	5.4	21.7	4.2	13.3	8.9	10.0	32.2	31	18.9
18 - orange	2	6.3	22.9	5.2	14.6	9.8	10.0	34.4	29	19.8
19 - orange	2	7.6	25.4	2.0	18.5	9.0	8.7	36.2	24	17.7
20 - lemon	3+	6.1	27.3	3.1	18.1	8.6	9.9	36.6	27	18.5
Average		5.2	15.4	2.7	10.8	6.0	6.7	23.5	29	12.7

*1 - Very slight tip burn on second year leaves
2 - Some tip burn and marginal injury on second year leaves
3 - Moderate tip burn and marginal injury on second year leaves
3+ -Severe salt injury, and trees lacked vigor

The relationship of the cations and anions to the total salt concentration of the irrigation waters is given in Figure 1. The sulfate ion is closely related to total concentration, whereas the bicarbonate and chloride is relatively constant. Calcium showed the same trend as the sulfate but to a lesser degree. Sodium and magnesium increase with total concentration, but considerably less than calcium.



Total milliequivalents per liter

Fig. 1 - Relationship of individual ions to total concentration of Ventura Irrigation Waters.

The salt injury rating, Table 5, is classed from 1 to 3 according to the judgment of citrus experts. Rating 1 is for the slightest tip burn on the second year old leaves while rating 3 shows tip burn and some marginal burn for these leaves. Rating 2 is intermediate between 1 and 3. Even the salt injury in rating 3 was not considered sufficient to cause a reduction in yield. On Grove 20, rated 3+ a definite reduction in yield occurred and the trees were yellowish in appearance and lacked vigor.

Soil Salinity and Lime Accumulation from Field Irrigation. The 20 groves consisted of well established older trees. With the exception of Grove No. 1 all were furrow irrigated. Some with permanent furrows, while others were clean cultivated with the furrows remade several times a year. Grove No. 1 had been sprinkle irrigated for a number of years. The soil was sampled in foot depths to three feet for salt analysis, and accumulated lime. The sampling location was at the periphery ofthe tree and approximately 15 to 18 inches from the center of the outside furrow - the one next to the tree. This should be in the range of capillary movement of moisture from the furrow, and therefore in the area of highest salt concentration.

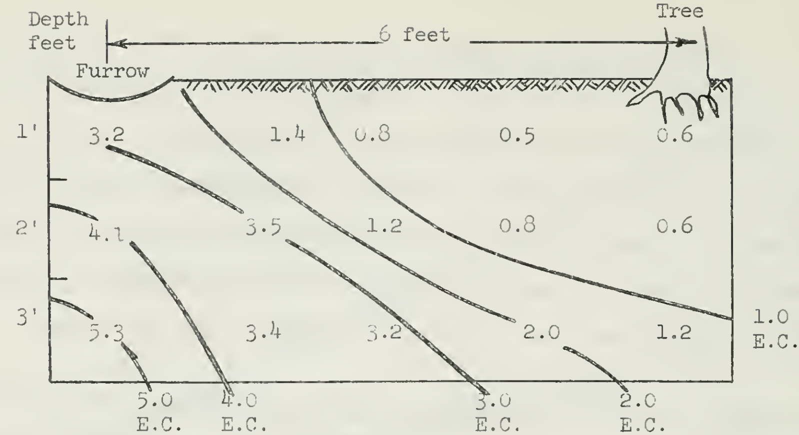


Fig. 2. Salt accumulation in soil of a lemon grove from irrigation water No. 10, Eff. Sal. 12.2 (Table 5). E. C. X 10^3 of saturation extract.

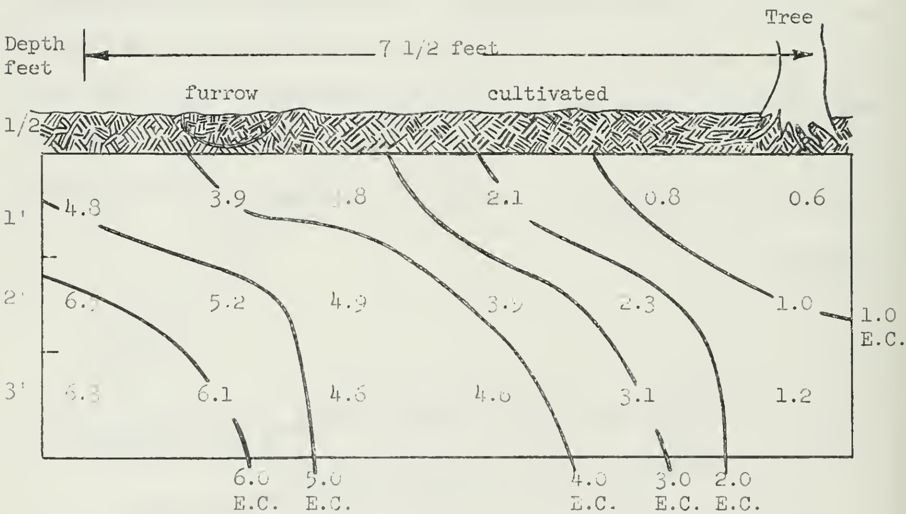


Fig. 3. Salt accumulation in soil of an orange grove from irrigation water No. 17, Eff. Sal. 18.9 (Table 5). E.C. X 10^3 of the saturation extract.

A detailed survey of salines in the soil profile from the outside furrow to the tree row is given in Figures 2 and 3 for Groves Nos. 10 and 17, and illustrates the accumulation of salines from the irrigation water. The soil profile in the tree rows parallel to the furrows is low in salt and in most cases receives no irrigation water other than from rainfall. The lime accumulation follows the same general pattern but with less variation in amounts from the tree row to the furrow. When the trees are small the furrows are placed close to the tree-row, and as they increase in size the furrows are gradually moved farther from the row. As lime is only slightly soluble, it has remained in the soil near the tree, while the accumulated salines have been leached to a lower depth by an occasional high rainfall year.

Table 6 - Analyses of Salt and Lime in Soil from Citrus Groves irrigated with different irrigation waters (Table 5). Ventura County - 1953

Grove No.	Saturated Extract m. e. per l. 0-1	1-2	2-3	Per cent Na 0-1	1-2	2-3	Per cent $CaCO_3$ Dry Wt. Soil[3] 0-1	1-2	2-3	Yolo Soil Texture[1] 0-1	1-2	2-3
	Depth Feet						Depth Feet			Depth feet		
1	13	22	30	40	39	43	1.38	2.45	2.85	L.	L.	C.
2	16	21	50*	30	28	14	1.42	1.57	3.88	Si.L.	Si.L.	C.
3	7	4	5	30	38	36	0.10	0.10	0.20	S.L.	S.L.	S.L.
4	14	8	8	23	32	26	0.21	0.33	1.07	F.S.L.	F.S.L.	F.S.L.
5	12	11	14	21	30	28	0.33	0.38	0.60	F.S.L.	F.S.L.	F.S.L.
6	21	8	7	11	26	29	0.72	0.73	0.92	F.S.L.	F.S.L.	F.S.L.
7	25	15	15	18	21	21	5.90[2]	6.70[2]	8.50[2]	L.	L.	L.
8	12	7	9	15	30	29	1.17	0.92	1.17	F.S.L.	F.S.L.	F.S.L.
9	17	14	11	25	30	34	0.17	0.10	0.13	Si.L.	Si.L.	Si.L.
10	13	13	13	31	32	27	0.18	0.13	0.15	Si.L.	Si.L.	Si.L.
11	19	14	13	26	32	31	2.40	3.56	0.75	Si.L.	Si.L.	S.L.
12	35	23	33	16	22	23	2.52	3.58	1.28	Si.C.	Si.C.	Si.C.
13	17	57*	23	25	14	24	1.82	2.70	2.58	F.S.L.	L.	L.
14	13	12	12	35	38	32	0.18	0.13	0.15	S.L.	S.L.	S.L.
15	62*	32	36	16	27	26	11.5	11.5	10.8	Si.L.	Si.L.	Si.L.
16	15	40*	63*	23	18	55	0.20	0.67	4.03	S.L.	S.L.	L.
17	34	67*	74*	23	19	29	0.67	0.92	1.78	Si.L.	Si.L.	C.
18	16	14	20	29	33	36	2.02	2.75	3.23	F.S.L.	F.S.L.	L.
19	18	-	-	24	-	-	4.80	-	-	F.S.L.	G.S.L.	G.
20	50*	71*	113*	20	31	45	0.90	1.20	1.20	F.S.L.	F.S.L.	F.S.L.
CK.	5	4	3	12	16	19	0.09	0.15	0.13	Si.L.	Si.L.	Si.L.

1. S.L. - Sandy Loam; F.S.L.- Fine Sandy Loam; L - Loam; Si.L. - Silty Loam; Si.C. - Silty Clay; C - Clay; G - Gravel
2. Outcropping of lime from mountain side

* Precipitated $CaSO_4 \cdot 2H_2O$(gypsum) in the soil

The accumulation of soluble salines, per cent sodium, lime content, and the soil texture are given in Table 6. The groves are numbered the same as those listed in Table 5. A complete analyses was made of the saturated extract, but only a summary is presented of total salts in m.e. per l. and per cent sodium of the cations. The sodium percentage of saturated extract is considered relatively low and, in general, is in the same percentage range as that of the irrigation waters, Table 5. The lime ($CaCO_3$) is based on the per cent dry weight of soil. The soil was originally classified, in 1917, as the Yolo series free of lime except in poor drainage and alkali areas, which were not covered in this investigation. The soil texture by depth was determined from the soil survey of 1917, the observations made in the field at the time the soil samples were secured, and from the moisture equivalent of the soil. The water holding capacity of the soil may be judged from the moisture equivalents. For sandy loams, the moisture-equivalent ranged from 4 to 6 per cent, fine sandy loam from 6 to 10, loams from 12 to 17, silty loam from 18 to 22, silty clay from 24 to 29, and clay from 28 to 32 per cent moisture.

Evaluating Ventura County Irrigation Waters for Citrus. The use of these waters has not deteriorated soil structure. This was noted in all groves visited and is further indicated by the low sodium percentage of saturation extract, Table 6.

On these permeable soils, little or no injury to lemon leaves was noted when the effective salinity was at or below 7 m.e. per l., as established in Table 3. One exception was noted, Grove No. 2, where a water containing 6.5 m.e. per l. effective salinity was applied to a soil classed as loam in the surface 2 feet, clay in the third foot, and below this an exceptionally heavy subsoil. A heavy deposit of lime and gypsum was noted in the 3 and 4 foot depths, Table 6, and a slight to moderate amount of injury, or "burning" was noted. In an adjoining grove using the same water but in the absence of the heavy subsoil, no injury to the leaves was observed. Wherever subsoils of low permeability were encountered the salt injury was more severe than on soils of uniform texture. Although internal drainage was considered good, the leaching of salts through the heavy subsoil was not always accomplished by the irrigation practiced. On soil of uniform texture, particularly the sandy and loamy phases, little injury was noted up to 10 m.e. per l., effective salinity, but a moderate amount of burn at 12 m.e. per l. was observed. On the sandy and gravelly soils, where some leaching nearly always occurs during each irrigation, little salt injury to the leaves was observed with concentrations as high as 12 m.e. per l.

Once these soil conditions were established with the allowable effective salinity mentioned above, injury to the leaves was in direct proportion to increased effective salinity of the irrigation water. The soil type coupled with the effective salinity listed above cannot be adhered to as a rigid classification. Occasionally leaves would show some tip burn and a slight marginal burn but not sufficiently severe to affect the vigor of the tree or cause a reduction in yield. During dry years, when the rainfall does not wet the soil below the depth of rooting and there is a shortage of irrigation water, the salt injury is more severe and widespread than during years of normal or above average rainfall. In dry years some tip and marginal burning of the leaves may occur at 7 m.e. per l. or less of effective salinity. Considering all factors involved, 7 m.e. per l., effective salinity seems to be a logical choice for the division between Class I and Class II water for a sensitive crop, such as lemons, under irrigation practices of Ventura farmers.

Since oranges are more salt tolerant than lemons under similar soil conditions, the standard could be raised from 3 to 5 m.e. per l. of effective salinity. Very little if any burning of orange leaves was noted below 10 m.e. per l. and usually only a moderate amount of injury with effective salinities of 15 to 18 m.e. per l.

Relative salt tolerance may be studied where lemons and oranges are interplanted in the same grove. Here, irrigation practices would be the same. One such grove, not listed in the tables, with a gravelly type soil on unconsolidated rock subsoil and irrigated with water having an effective salinity of 11.8 m.e. per l. showed a very slight burn, -- only the very tips of a few orange leaves, whereas the lemons had a moderate to severe burn on most of the mature leaves. Another example is grove No. 12 where a few lemon trees were interplanted with oranges and irrigated with a water having 12.9 m.e. per l. effective salinity. The orange leaves showed a moderate amount of burn and the lemon leaves an extremely severe injury.

During the seven years previous to 1951-52 the rainfall in Ventura County was lower than normal, while the 1951-52 year was high, approximately 70 per cent above normal. When this survey was made in 1953 the precipitation was again low, being about 66 per cent of normal for the rainfall year 1952-53. The citrus plants in the County showed only a very small amount of leaf injury where water of 10 m.e. per l. or less was used for irrigation as noted above. This constitutes 67%

of the water used for irrigation. The remaining 33 per cent injured the leaves from a slight burn on the tip to the extreme condition of partly defoliating the tree as the effective salinity progressively increased. This is just about the ratio of burning observed in the survey. Approximately one-third of the groves showed from slight to extreme burning of the leaves. The other two-thirds showed no injury or not in sufficient amount as to be a factor in determining the vigor of the tree, or crop production.

Precipitation of lime and gypsum from irrigation water. The accumulation of lime and gypsum for bicarbonate-sulfate water is given in Table 6. With the exception of the gravelly and the very sandy soil, where every irrigation unavoidably is a leaching process, calcium carbonate has a tendency to precipitate. Regardless of the total concentration most Ventura County waters have about 5 m.e. per l. of bicarbonates and considerably more calcium, Figure 1.

A number of waters were concentrated in the laboratory at room temperature to determine their stability. In the following example, the water had a concentration of approximately 15 m.e. per l. The cations calcium, magnesium and sodium, and anions, bicarbonate, sulfate and chloride, each had a concentration of about 5 m.e. per l. Upon concentration all of the ions increase in direct proportion to the decrease in volume with the exception of bicarbonate and calcium, Table 7. Concentrating the water one time, or half of the original volume, precipitated 71 per cent of the calcium bicarbonate. For many soils this is the range between field capacity and the permanent wilting percentage.

Table 7. Precipitation of calcium bicarbonate by increasing concentration from evaporation.

Ions	Original Water	Concentration of Original Water							
		1/2		1		2		3	
		Theor.	Found	Theor.	Found	Theor.	Found	Theor.	Found
Ca meq/L	4.8	7.2	3.1	9.6	3.0	14.4	2.8	19.2	2.8
HCO_3 meq/L	4.7	7.1	2.8	9.4	2.5	14.1	2.4	18.8	2.3
% $CaCO_3$ ppt			59		71		82		86

This experiment was conducted with the partial pressure of carbon dioxide of the air. Soil atmosphere often contains a higher concentration of carbon dioxide because of root respiration and decomposition of organic matter. This would tend to hold the calcium bicarbonate in solution. However, for the 20 groves, the average soil solution at field capacity was 2.6 times the concentration of irrigation waters. If the soil moisture is reduced to near the permanent wilting percentage the average concentration of the soil solution increases to approximately 5 times that of the irrigation waters. Thus ample opportunity for precipitation of lime occurs except when the soil is frequently leached. With increased concentration of the soil solution, gypsum precipitates as indicated in Table 6. No doubt the farmer's irrigation practice determines to a large extent the accumulation of these precipitates. Nevertheless, they were almost always found in the stratified soils and where the subsoil was heavier than the surface, particularly if irrigated with water contained 10 or more m.e. per l., of salt available for precipitation. The presence and the amount of the precipitated salts found in the soil may be used as a rough estimate of the frequency and quantity of irrigation water leached below the root zone of citrus, and also serve as a guide to irrigation efficiency studies.

Where lime and gypsum salts accumulated, they were usually visible upon examination of the soil. These salts were in the form of soft gray crystals or nodules. In some cases the deposits were in the form of streaks or layers that meandered through the soil mass. Occasionally these nodules or deposits were a 1/2 inch in diameter and usually encased an appreciable quantity of soil.

The above observation pertaining to the accumulation in the soil of the precipitates from Ventura County water may not be pertinent to their classification, but with continuous accumulation there may be eventually, and possibly at the present time, harmful effects in plant growth and yield. Most of the precipitation takes place near or around the roots of the citrus plants, and many of the roots are covered with a hard external covering, or outer shell, of lime and gypsum. Oftentimes the roots can be pulled from this depository shell leaving a long tube of the cemented soil particles. This crustation is not limited to the older roots but is found on the younger white roots. As citrus roots develop slowly with few fine fibrous roots, the question arises as to the effects of this crustaceous material around the roots on the nutrition and physiological processes of the plant. The author believes the vigor of the tree, and the size and quality of the fruit in relation to this crustification of the root system should be studied in addition to the meager observations listed above.

Recent reports. Since this investigation was started in 1953 several papers have appeared showing the accumulation of lime in soils irrigated with bicarbonate waters (1, 4, 9). These experiments were conducted in containers in the greenhouse using various bicarbonate waters. In two of the experiments (1, 9) a leaching regime was maintained, yet an appreciable accumulation of lime occurred. In an investigation on the effect of irrigation waters on soil in Idaho (7), the authors concluded that, calcium carbonate content of the soil showed an increase when irrigation waters high in calcium and bicarbonate are used.

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APPENDIX G

MINERAL ANALYSES OF SURFACE

WATERS SUBSEQUENT TO 1952,

VENTURA COUNTY

TABLE OF CONTENTS

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-0.5	2- 8-56 1400	30	1414	8.3	134 / 6.69	45 / 3.70	140 / 6.09	3.5 / 0.09	20 / 0.67	295 / 4.83	331 / 6.90	145 / 4.09	4.5 / 0.07	--	0.92	1058	37
		2-10-58[c] 1530	75[b]	961	8.1	99 / 4.93	29 / 2.37	63 / 2.74	2.9 / 0.08	0 / 0	237 / 3.89	233 / 4.85	55 / 1.55	2.4 / 0.04	0.33	0.03	670	27
	42-5.7	2- 9-53 1300	19	897	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	229 / 3.76	-- / --	48 / 1.35	-- / --	--	--	--	--
		3- 9-53 1250	10[b]	868	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	266 / 4.36	-- / --	50 / 1.41	-- / --	--	--	--	--
		4- 7-53 1500	1[b]	1022	7.7	-- / --	-- / --	55 / 2.39	-- / --	0 / 0	320 / 5.24	-- / --	57 / 1.61	-- / --	--	0.52	--	--
		5- 1-53 1300	1	1071	7.8	145 / 7.24	33 / 2.71	65 / 2.83	2.3 / 0.06	0 / 0	327 / 5.36	296 / 6.17	59 / 1.66	2.5 / 0.04	0.6	0.43	819	22
		6- 8-53 1210	0.8	1082	7.5	-- / --	-- / --	-- / --	-- / --	-- / --	337 / 5.52	-- / --	62 / 1.75	-- / --	0.50	--	--	21
		7- 6-53 1105	1	1090	7.3	-- / --	-- / --	-- / --	-- / --	0 / 0	329 / 5.40	-- / --	58 / 1.63	-- / --	--	0.48	--	23
		8- 3-53 1330	0.02	1138	7.2	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.75	-- / --	76 / 2.14	-- / --	--	0.64	--	27
		9- 9-53 1400	0.04	1305	7.2	162 / 8.08	38 / 3.12	83 / 3.61	2.0 / 0.05	0 / 0	342 / 5.60	324 / 6.74	75 / 2.12	0 / 0	0.7	0.60	932	24
		10-13-53 1420	0.08	1322	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.75	-- / --	67 / 1.89	-- / --	--	0.54	--	21
		11-12-53 1315	0.1	1182	7.3	-- / --	-- / --	-- / --	-- / --	0 / 0	364 / 5.97	-- / --	70 / 1.97	-- / --	--	0.36	--	22
		12- 8-53 1300	0.1	1310	7.4	-- / --	-- / --	-- / --	-- / --	0 / 0	346 / 5.67	-- / --	72 / 2.02	-- / --	--	0.46	--	22
		1-11-54 1330	1.7	1364	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	354 / 5.81	-- / --	88 / 2.48	-- / --	--	0.54	--	27
		2- 8-54 1335	1.7	1124	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	305 / 5.00	-- / --	58 / 1.63	-- / --	--	0.34	--	20
		3- 8-54	17	1052	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	295 / 4.84	-- / --	47 / 1.33	-- / --	--	0.44	--	21

a. Unless otherwise indicated, analyzed by Department of Water Resources
b. Estimated.
c. Analyses by Terminal Testing Laboratories, Inc.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10⁶ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-5.7	4- 5-54 1400	50	889	8.2	-- / --	-- / --	-- / --	-- / --	12 / 0.40	222 / 3.64	-- / --	37 / 1.05	--	--	0.46	--	22
		5- 3-54 1215	4.9	992	8.2	104 / 5.19	45 / 3.70	53 / 2.31	28 / 0.07	0 / 0	261 / 4.28	259 / 5.40	45 / 1.27	3.5 / 0.06	0.6	0.44	670	21
		6- 7-54 1330	3.9	1069	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	290 / 4.75	-- / --	49 / 1.38	-- / --	--	C.48	--	21
		7- 2-54 1325	0.94	1098	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	307 / 5.03	-- / --	55 / 1.55	-- / --	--	0.32	--	21
		8- 9-54 1330	0.41	1099	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	320 / 5.25	-- / --	56 / 1.58	-- / --	--	0.46	--	21
		9- 7-54 1530	0.4	1150	7.6	152 / 7.58	40 / 3.29	60 / 2.61	2.0 / 0.05	0 / 0	339 / 5.56	306 / 6.38	56 / 1.58	4.0 / 0.06	0.6	0.50	840	19
		10-19-54 1300	0.2	1204	8.1	-- / --	-- / --	-- / --	-- / --	12 / 0.40	317 / 5.20	-- / --	51 / 1.44	-- / --	--	0.40	--	21
		11-17-54 1305	0.4	1197	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	334 / 5.48	-- / --	58 / 1.64	-- / --	--	0.48	--	19
		12- 7-54 1410	0.6	1152	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	327 / 5.36	-- / --	56 / 1.58	-- / --	--	0.30	--	26
		1-10-55 1650	0.65	976	8.2	-- / --	-- / --	-- / --	-- / --	11 / 0.37	232 / 3.80	-- / --	53 / 1.50	-- / --	--	0.36	--	22
		2- 7-55 1300	0.6	1163	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	303 / 4.97	-- / --	60 / 1.69	-- / --	--	0.46	--	20
		3- 7-55 1315	2.9	1111	8.1	-- / --	-- / --	-- / --	-- / --	10 / 0.33	268 / 4.40	-- / --	59 / 1.66	-- / --	--	0.46	--	22
		4- 6-55 1305	0.3	1170	8.2	-- / --	-- / --	-- / --	-- / --	19 / 0.63	264 / 4.33	-- / --	62 / 1.75	-- / --	--	0.48	--	22
		5-10-55 1345	1.4	1005	7.8	137 / 6.84	33 / 2.71	60 / 2.61	2.0 / 0.05	0 / 0	315 / 5.16	254 / 5.30	60 / 1.69	1.0 / 0.02	0.5	0.44	735	22
		6-6-55 1300	1.5	1155	8.2	-- / --	-- / --	-- / --	-- / --	12 / 0.40	295 / 4.83	0	64 / 1.81	-- / --	--	0.42	--	23
		7-12-55 1330	0.4	1068	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	305 / 5.00	-- / --	67 / 1.89	-- / --	--	0.46	--	24

a. Analyzed by Department of Water Resources.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-5.7	8- 8-55 1230	0.8	1125	7.9	--/--	--/--	--/--	--/--	--/--	298/4.88	--/--	68/1.92	--/--	--	1.32	--	19
		9-14-55 1410	0.5	1412	7.5	157/7.83	36/2.96	63/2.74	2.0/0.05	0/0	317/5.20	307/6.39	62/1.75	0.5/0.0	0.6	0.44	868	20
		10-12-55 1415	0.4	1225	7.6	--/--	--/--	--/--	--/--	--/--	305/5.00	--/--	70/1.97	--/--	--	0.64	--	20
		11- 8-55 1330	0.01	1256	7.4	--/--	--/--	--/--	--/--	0/0	332/5.44	--/--	71/2.00	--/--	--	0.60	--	19
		12-14-55 1200	pond	1527	7.4	--/--	--/--	--/--	--/--	0/0	342/5.60	--/--	140/3.95	--/--	--	0.47	--	27
		1- 9-56 1300	pond	1298	7.8	--/--	--/--	--/--	--/--	0/0	312/5.10	--/--	87/2.45	--/--	--	0.42	--	21
		1-26-56 1800	1000[b]	282	7.6	37/1.85	6/0.49	10/0.44	2.7/0.07	0/0	118/1.94	33/0.68	10/0.28	2.8/0.05	--	0.20	205	15
		2-14-56 1320	12	1046	8.1	--/--	--/--	--/--	--/--	0/0	285/4.67	--/--	56/1.58	--/--	--	0.76	--	20
		3- 5-56 1330	10	1074	7.9	--/--	--/--	--/--	--/--	0/0	290/4.75	--/--	55/1.55	--/--	--	0.68	--	21
		4- 9-56 1335	4.9	1105	7.9	--/--	--/--	--/--	--/--	0/0	281/4.61	--/--	60/1.69	--/--	--	0.48	--	21
		5-14-56 1240	7.8	962	8.1	111/5.54	35/2.88	54/2.35	6.0/0.15	0/0	310/5.08	202/4.20	51/1.44	3.0/0.05	0.6	0.42	620	22
		6-11-56 1345	3.9	1055	8.0	--/--	--/--	--/--	--/--	0/0	290/4.75	--/--	53/1.50	--/--	--	0.72	--	20
		7- 9-56 1305	0.7	1178	7.7	--/--	--/--	--/--	--/--	0/0	322/5.27	--/--	60/1.69	--/--	--	0.43	--	20
		8- 6-56 1245	pond	1083	7.6	--/--	--/--	--/--	--/--	0/0	334/5.48	--/--	60/1.69	--/--	--	0.41	--	23
		9-11-56 1245	pond	1215	7.4	153/7.63	41/3.37	62/2.70	1.7/0.04	0/0	348/5.70	294/6.13	62/1.75	2.8/0.04	0.6	0.59	888	20
		10- 9-56 1215	pond	1274	7.2	--/--	--/--	--/--	--/--	0/0	339/5.55	--/--	60/1.69	--/--	--	0.61	--	19

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE AG 1
MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-5.7	11- 7-56 1215	0.46	1164	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	322 / 5.28	-- / --	64 / 1.81	--	--	0.59	--	21
		12-10-56 1400	0.5	1204	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	342 / 5.60	-- / --	61 / 1.72	-- / --	--	0.54	--	21
		1- 7-57 1305	0.4	1186	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	304 / 4.99	-- / --	65 / 1.83	-- / --	--	0.55	--	21
		2- 7-57 1215	0.8	1132	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	299 / 4.90	-- / --	59 / 1.66	-- / --	--	0.46	--	21
		3- 4-57 1330	10	892	7.8	94 / 4.69	34 / 2.79	48 / 2.09	2.3 / 0.06	0 / 0	286 / 4.69	169 / 3.52	44 / 1.24	2.0 / 0.03	--	0.40	556	22
		4- 8-57 1200	1.9	1116	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	314 / 5.15	-- / --	60 / 1.69	-- / --	--	0.54	--	22
		5- 6-57 1400	2.9	1010	8.0	121 / 6.04	34 / 2.79	56 / 2.44	1.6 / 0.04	0 / 0	293 / 4.80	226 / 4.71	57 / 1.61	0.5 / 0.01	0.4	0.46	690	22
		6-10-57 1330	0.2	1094	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	299 / 4.90	-- / --	57 / 1.61	-- / --	--	0.67	--	20
		7- 1-57 1345	pond	1166	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	312 / 5.11	-- / --	57 / 1.61	-- / --	--	0.53	--	21
		8- 5-57 1400	pond	1088	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	259 / 4.24	-- / --	58 / 1.64	-- / --	--	0.54	--	22
		9- 3-57 1645	pond	1207	7.6	145 / 7.29	37 / 3.04	61 / 2.65	2.8 / 0.07	0 / 0	328 / 5.36	276 / 5.74	62 / 1.75	1.5 / 0.02	0.6	0.62	820	20
		10- 7-57 1345	pond	1613	7.4	-- / --	-- / --	-- / --	-- / --	0 / 0	373 / 6.11	-- / --	174 / 4.90	-- / --	--	0.82	--	26
		11- 4-57 1545	dry															
		12- 2-57 1330	dry															
		12-16-57[c] 1550	40[b]	597	7.3	66 / 3.27	20 / 1.68	24 / 1.04	2.7 / 0.07	0 / 0	143 / 2.35	150 / 3.12	18 / 0.51	2.9 / 0.05	0.2	0	427	17
		1- 6-58 1425	2.9	1074	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	301 / 4.93	-- / --	67 / 1.89	-- / --	--	0.31	--	22

a. Analyzed by Department of Water Resources unless otherwise indicated.
Technical Testing Laboratories, Inc.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ventura River	42-5.7	2-10-58 1430	120	753	8.0	88 / 4.39	28 / 2.30	37 / 1.61	2.6 / 0.07	0 / 0	220 / 3.61	181 / 3.77	28 / 0.79	1.4 / 0.02	0.4	0.38	477	19
		3- 3-58 1430	202	803	8.2	-- / --	-- / --	-- / --	-- / --	12 / 0.20	212 / 3.48	-- / --	27 / 0.76	-- / --	--	0.35	--	19
		4- 7-58 1600	3210	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 / 0.25	2.0 / 0.03	0.1	0.11	314	14
		5- 5-58 1530	215	838	7.6	102 / 5.09	34 / 2.79	36 / 1.57	2.2 / 0.06	0 / 0	232 / 3.80	229 / 4.77	25 / 0.71	3.5 / 0.06	0.5	0.25	605	17
		6- 9-58 1335	109	842	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	223 / 3.63	-- / --	33 / 0.92	-- / --	--	0.22	--	22
Coyote Cr.	42-6.0-0.3	1-26-56 1805	600[b]	311	7.7	42 / 2.10	5.0 / 0.41	12 / 0.52	2.7 / 0.07	0 / 0	124 / 2.04	29 / 0.60	12 / 0.34	4.0 / 0.07	--	0.22	241	17
		4-30-57[c] 0900	2.21	1035	7.8	109 / 5.45	25 / 2.05	73 / 3.17	5.5 / 0.14	0 / 0	325 / 5.32	200 / 4.17	60 / 1.69	0 / 0	1.0	0.14	730	29
		5-31-57 1500	0.72	1078	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	289 / 4.74	-- / --	65 / 1.83	-- / --	--	0.34	--	23
		7- 1-57 0800	0.21	1235	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	339 / 5.55	-- / --	69 / 1.95	-- / --	--	0.33	--	--
		8-20-57 1500	0.04	1177	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	317 / 5.19	-- / --	77 / 2.17	-- / --	--	0.34	--	26
		9- 3-57[c] 1345	0.03	1234	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	343 / 5.62	-- / --	83 / 2.33	-- / --	--	0.21	--	--
		10- 1-57 1530	0.05[b]	1048	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	322 / 5.28	-- / --	79 / 2.22	-- / --	--	0.46	--	--
		11- 1-57 1520	--	1046	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	304 / 4.98	-- / --	83 / 2.34	-- / --	--	0.40	--	--
		12- 2-57 --	11[b]	1086	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	248 / 4.06	-- / --	73 / 2.06	-- / --	--	0.24	--	--
		12-16-57[c] 1610	0.5[b]	894	7.5	86 / 4.30	35 / 2.85	58 / 2.50	2.7 / 0.07	0 / 0	232 / 3.80	197 / 4.10	53 / 1.49	0.6 / 0.01	0.2	0.03	664	26
		12-31-57 --	2.7	990	8.3	-- / --	-- / --	-- / --	-- / --	12 / 0.39	294 / 4.82	-- / --	56 / 1.58	-- / --	--	0.20	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Coyote Cr.	42-6.0-0.3	1-31-58[c] 1515	8.7	749	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	244 / 4.00	-- / --	36 / 1.01	-- / --	--	0.4	--	37
		2-28-58 1610	74	629	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	218 / 3.57	-- / --	20 / 0.56	-- / --	--	0.24	--	--
		4-30-58 1430	29	806	8.3	-- / --	-- / --	-- / --	-- / --	0 / 0	273 / 4.49	-- / --	63 / 1.77	-- / --	--	0.60	--	--
		6- 4-58 0910	8	794	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	278 / 4.55	-- / --	37 / 1.05	-- / --	--	0.13	--	--
San Antonio Cr.	42-7.7-0.2	1-13-57 1515	1.4	1010	7.4	103 / 5.14	26 / 2.14	73 / 3.18	11 / 0.27	0 / 0	193 / 3.17	197 / 4.11	120 / 3.38	9.0 / 0.15	--	0.32	780	29
Lion Canyon Cr.	42-7.7-4.5-6.0	1-26-56 1850	15[b]	214	7.6	23 / 1.15	5.0 / 0.41	12 / 0.52	2.6 / 0.07	0 / 0	68 / 1.12	26 / 0.54	11 / 0.31	7.6 / 0.12	--	0.24	187	24
		12-16-57[c] 1650	0.05[b]	589	7.0	50 / 2.50	17 / 1.40	46 / 2.00	3.9 / 0.10	0 / 0	149 / 2.45	108 / 2.25	36 / 1.01	8.6 / 0.14	0.2	0	419	33
San Antonio Cr.	42-7.7-5.8	2-25-53[d] 1605	4[b]	845	7.9	102 / 5.12	32 / 2.67	35 / 1.51	2.0 / 0.05	0 / 0	186 / 3.05	232 / 4.84	35 / 0.99	40 / 0.64	--	0	610	16
Thatcher Cr.	42-7.7-7.0-1.3	4- 7-58 1525	25[b]	471	8.1	62 / 3.10	15 / 1.20	14 / 0.63	1.3 / 0.03	0 / 0	140 / 2.30	120 / 2.49	9.0 / 0.25	5.1 / 0.08	0.2	0.04	300	13
San Antonio Cr.	42-7.7-7.6	1-26-56 1830	75[b]	398	7.8	47 / 2.35	11 / 0.90	16 / 0.70	3.5 / 0.09	0 / 0	120 / 1.96	76 / 1.58	10 / 0.28	6.7 / 0.11	--	0.15	282	17
		12-16-57[c] 1635	2[b]	708	7.5	84 / 4.20	24 / 2.00	27 / 1.19	2.7 / 0.07	0 / 0	204 / 3.35	173 / 3.60	15 / 0.42	2.4 / 0.04	0.1	0	533	16
		1-26-58[c] 1350	259	764	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	149 / 2.45	-- / --	87 / 2.45	-- / --	--	0.60	--	--
		2- 4-58 --	419	463	7.1	-- / --	-- / --	-- / --	-- / --	0 / 0	147 / 2.41	-- / --	20 / 0.56	-- / --	--	0.40	--	--
		4- 7-58 1530	30[b]	369	7.8	44 / 2.20	9.0 / 0.70	14 / 0.63	1.9 / 0.05	0 / 0	113 / 1.85	82 / 1.70	11 / 0.30	5.1 / 0.08	0.2	0.05	229	18
		4- 8-58[c] --	246	836	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	205 / 3.37	-- / --	28 / 0.79	-- / --	--	0.60	--	--
		5- 5-58[c] 1550	Lake almost full	212	7.0	14 / 0.70	11 / 0.90	14 / 0.60	4.2 / 0.11	0 / 0	93 / 1.52	10 / 0.21	18 / 0.51	0.03 / 0	0.2	0	119	26

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. Analyzed by Pacific Chemical Consultants.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second: Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-0.2	2-20-53 1100	10	846	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	220 / 3.60	-- / --	26 / 0.73	-- / --	--	--	--	--
		3-11-53 1300	7[b]	837	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	234 / 3.84	-- / --	27 / 0.76	-- / --	--	--	--	--
		4- 1-53 1400	5[b]	773	8.0	-- / --	-- / --	50 / 2.18	-- / --	0 / 0	212 / 3.48	-- / --	27 / 0.76	-- / --	--	0.66	--	--
		12-14-55 1245	10[b]	965	7.9	92 / 4.6	31 / 2.56	73 / 3.16	2.6 / 0.07	0 / 0	201 / 3.3	281 / 5.85	48 / 1.35	1.6 / 0.03	1.2	0.70	670	30
		5- 1-57[c] 1040	2.7	905	8.0	90 / 4.50	33 / 2.70	59 / 2.57	2.7 / 0.07	0 / 0	198 / 3.24	265 / 5.54	35 / 0.99	0 / 0	1.0	0.22	620	26
		5-31-57 1005	6.2	930	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	194 / 3.18	-- / --	38 / 1.07	-- / --	--	1.03	--	20
		7- 1-57 1030	4.5	895	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	195 / 3.20	-- / --	39 / 1.10	-- / --	--	0.82	--	--
		8- 1-57 1200	2.0	953	8.1	-- / --	55 / 2.39	-- / --	-- / --	0 / 0	191 / 3.13	-- / --	42 / 1.18	-- / --	--	1.00	--	24
		9- 2-57[c] 1410	5.8	948	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	192 / 3.15	-- / --	43 / 1.21	-- / --	--	0.50	--	--
		10- 1-57 1100	1.9	801	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	195 / 3.20	-- / --	39 / 1.10	-- / --	--	0.96	--	--
		11- 1-57 1520	2[b]	786	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	205 / 3.36	-- / --	38 / 1.07	-- / --	--	0.88	--	--
		12- 2-57 --	1.9	918	8.2	-- / --	-- / --	-- / --	-- / --	5.0 / 0.16	170 / 2.78	-- / --	43 / 1.21	-- / --	--	0.98	--	--
		1- 2-58 1350	0.3	576	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	194 / 3.18	-- / --	27 / 0.76	-- / --	--	0.50	--	--
		1-31-58[c] 1110	4.8	892	8.0	94 / 4.70	30 / 2.45	50 / 2.18	2.8 / 0.07	0 / 0	192 / 3.15	257 / 5.35	39 / 1.10	0 / 0	0.6	1.0	621	23
		3- 3-58 1530	126	651	8.4	-- / --	-- / --	-- / --	-- / --	75 / 0.25	166 / 2.72	-- / --	16 / 0.45	-- / --	--	0.38	--	--
		5- 1-58 --	132	703	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	172 / 2.82	-- / --	7.0 / 0.20	-- / --	--	0.10	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE AG 1
MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-0.2	6- 2-58 1400	39	752	7.8	--/--	--/--	--/--	--/--	0/0	183/3.0	--/--	9.0/0.25	--	--	0.13	--	--
Matilija Reservoir	42-15.6-1.2	4-21-58[c] 1100	Dam spilling	817	8.0	100/5.00	28/2.30	24/1.04	1.9/0.05	0/0	207/3.40	224/4.66	13/0.36	0/0	0.3	0	560	12
Matilija Cr.	42-15.6-2.2	5- 5-53 1730	5[b]	841	8.2	107/5.34	31/2.55	65/2.83	2.6/0.07	22/0.72	195/3.20	282/5.88	39/1.10	1.5/0.02	0.8	0.97	663	26
		6- 3-53 1537	6.0	938	8.1	--/--	--/--	--/--	--/--	0/0	249/4.08	--/--	59/2.09	--/--	--	0.68	--	25
		7- 7-53 1600	3.5	935	7.8	--/--	--/--	--/--	--/--	0/0	227/3.72	--/--	68/1.92	--/--	--	2.26	--	36
		8-19-53 1415	1.9	984	8.3	--/--	--/--	--/--	--/--	14/0.23	210/3.44	--/--	92/2.60	--	--	2.68	--	36
		9-14-53 1100	1.8	1114	7.4	105/5.24	27/2.22	105/4.57	5.3/0.14	0/0	251/4.11	238/4.96	101/2.85	1.0/0.02	2.5	2.99	755	38
		10- 5-53 1030	1.6	1170	7.5	--/--	--/--	--/--	--/--	0/0	246/4.03	--/--	102/2.88	--/--	--	2.64	--	35
		11- 4-53 1150	1.9	1201	8.0	--/--	--/--	--/--	--/--	0/0	290/4.75	--/--	104/2.93	--/--	--	2.88	--	37
		12- 8-53 0915	2.3	1150	8.0	--/--	--/--	--/--	--/--	0/0	283/4.64	--/--	72/2.03	--/--	--	1.80	--	30
		1- 5-54 1445	8.3	1149	8.0	--/--	--/--	--/--	--/--	0/0	266/4.36	--/--	70/1.97	--/--	--	0.78	--	30
		2- 9-54 1430	5.0	945	8.0	--/--	--/--	--/--	--/--	0/0	220/3.61	--/--	39/1.10	--/--	--	0.88	--	24
		3-24-54 0900	8.6	936	8.3	--/--	--/--	--/--	--/--	17/0.28	190/3.12	--/--	30/0.85	--/--	--	0.84	--	24
		4-14-54 1400	26	877	8.1	--/--	--/--	--/--	--/--	5.0/0.08	203/3.33	--/--	17/0.48	--/--	--	0.68	--	22
		5- 5-54 1330	12	896	8.2	98/4.89	34/2.79	50/2.18	3.4/0.09	0/0	205/3.36	279/5.82	22/0.62	0/0	0.8	0.74	620	22
		6-17-54 1515	4.8	883	8.2	--/--	--/--	--/--	--/--	12/0.20	195/3.20	--/--	34/0.96	--/--	--	0.86	--	23

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-2.2	7-13-54 1300	6[b]	796	8.2	--/--	--/--	--/--	--/--	0/0	217/3.56	--/--	29/0.82	--/--	--	0.60	--	23
		8-10-54 1435	2.1	1040	8.2	--/--	--/--	--/--	--/--	10/0.17	251/4.11	--/--	87/2.45	--/--	--	2.44	--	35
		9- 8-54 1315	1.7	1117	8.2	115/5.74	29/2.38	95/4.13	3.7/0.10	14/0.48	244/4.00	241/5.02	105/2.96	4.5/0.07	1.4	2.86	764	33
		10-18-54 0815	2.1	1242	7.9	--/--	--/--	--/--	--/--	0/0	305/5.00	--/--	118/3.33	--/--	--	3.24	--	35
		11- 8-54 1000	1.4	1267	7.8	--/--	--/--	--/--	--/--	0/0	288/4.72	--/--	124/3.50	--/--	--	3.48	--	36
		12-22-54 1530	4.8	1010	7.9	--/--	--/--	--/--	--/--	0/0	283/4.64	--/--	63/1.78	--/--	--	1.84	--	31
		1-26-55 1410	9.5	1090	8.0	--/--	--/--	--/--	--/--	0/0	433/7.10	--/--	40/1.13	--/--	--	0.98	--	20
		2-28-55 1540	8.2	1026	8.2	--/--	--/--	--/--	--/--	10/0.33	241/3.95	--/--	37/1.04	--/--	--	0.84	--	32
		3-15-55 1400	10	1015	8.2	--/--	--/--	--/--	--/--	14/0.47	210/3.44	--/--	36/1.01	--/--	--	0.86	--	25
		4-13-55 1620	5.2	1050	8.0	--/--	--/--	--/--	--/--	0/0	234/3.82	--/--	45/1.27	--/--	--	1.44	--	27
		5-11-55 0920	14	952	8.2	118/5.89	31/2.55	54/2.35	2.5/0.06	10/0.33	244/4.00	278/5.80	29/0.82	1.0/0.02	0.8	0.84	793	22
		6- 8-55 1300	5.2	1000	8.1	--/--	--/--	--/--	--/--	0/0	239/3.92	--/--	40/1.13	--/--	--	0.86	--	24
		7- 7-55 0930	3.5	1071	8.2	--/--	--/--	--/--	--/--	0/0	261/4.28	--/--	70/1.97	--/--	--	2.15	--	29
		8- 9-55 1100	1.6	1224	7.7	--/--	--/--	--/--	--/--	0/0	254/4.16	--/--	102/2.88	--/--	--	3.30	--	31
		9-23-55 1530	0.6	1140	7.6	121/6.04	31/2.55	105/4.57	3.5/0.09	0/0	268/4.40	240/5.00	125/3.53	0/0	1.8	2.64	826	34
		10- 5-55 0900	1.2	1348	7.7	--/--	--/--	--/--	--/--	0/0	263/4.31	--/--	155/4.37	--/--	--	3.20	--	36

a. Analyzed by Department of Water Resources. b. Estimated.

TABLE G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-2.2	11-9-55 1430	1.5	1398	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	288 / 4.71	-- / --	167 / 4.71	-- / --	--	4.30	--	38
		12-7-55 1200	2.4	1430	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	268 / 4.38	-- / --	162 / 4.57	-- / --	--	4.32	--	36
		1-13-56 1100	7.5	1129	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	271 / 4.45	-- / --	53 / 1.50	-- / --	--	1.60	--	24
		2-9-56 1400	20	1024	8.3	-- / --	-- / --	-- / --	-- / --	10 / 0.33	237 / 3.88	-- / --	22 / 0.62	-- / --	--	1.06	--	18
		3-7-56 1130	20	1030	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	259 / 4.23	-- / --	31 / 0.87	-- / --	--	1.75	--	20
		4-12-56 1330	34	921	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	227 / 3.75	-- / --	27 / 0.76	-- / --	--	0.57	--	19
		5-9-56 1330	108	775	8.3	101 / 5.04	27 / 2.22	31 / 1.35	9.0 / 0.23	10 / 0.32	183 / 3.00	240 / 5.00	17 / 0.48	1.0 / 0.02	0.6	0.30	510	15
		6-8-56 1230	9.9	955	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	229 / 3.75	-- / --	35 / 0.99	-- / --	--	0.89	--	20
		7-3-56 1030	5.1	1034	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	264 / 4.33	-- / --	50 / 1.41	-- / --	--	0.98	--	24
		8-14-56 1100	2.4	1133	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	266 / 4.36	-- / --	87 / 2.45	-- / --	--	1.64	--	28
		9-12-56 0830	1.8	1181	7.8	126 / 6.29	32 / 2.63	98 / 4.26	3.1 / 0.08	0 / 0	293 / 4.80	248 / 5.16	118 / 3.33	0.4 / 0.01	1.2	3.1	796	32
		10-3-56 0900	1.6	1246	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	288 / 4.72	-- / --	130 / 3.67	-- / --	--	3.45	--	33
		11-1-56 0930	1.7	1273	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	297 / 4.87	-- / --	133 / 3.75	-- / --	--	4.30	--	34
		12-11-56 1000	1.9	1240	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	293 / 4.80	-- / --	128 / 3.60	-- / --	--	3.26	--	33
		1-9-57 0930	5.4	1360	7.4	-- / --	-- / --	-- / --	-- / --	0 / 0	286 / 4.69	-- / --	125 / 3.53	-- / --	--	2.60	--	31
		1-13-57 1110	94.7	819	7.9	102 / 5.09	27 / 2.22	38 / 1.65	5.8 / 0.15	0 / 0	164 / 2.69	277 / 5.77	27 / 0.76	2.0 / 0.03	--	0.48	640	18

a. Analyzed by Department of Water Resources.

TABLE AG 1
MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second-Feet	$ECx10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-2.2	2-13-57 1200	7.6	1083	7.8	--/--	--/--	--/--	--/--	0/0	239/3.92	--/--	35/0.99	--/--	--	0.94	--	21
		3-12-57 0920	16	971	7.6	--/--	--/--	--/--	--/--	0/0	237/3.88	--/--	19/0.54	--/--	--	0.56	--	19
		4- 2-57 1130	8.2	1028	7.7	--/--	--/--	--/--	--/--	0/0	264/4.33	--/--	30/0.85	--/--	--	0.85	--	20
		4-18-57[b] 1045	21	910	7.8	97/4.85	32/2.62	53/2.30	2.7/0.07	0/0	212/3.48	264/5.50	28/0.79	0/0	1.0	0.16	612	23
		5- 8-57 1200	7.3	1000	8.0	114/5.69	35/2.88	55/2.39	2.2/0.06	0/0	246/4.04	289/6.02	32/0.90	0.1/Tr.	0.7	0.85	740	22
		6-11-57 1030	4.8	1046	7.7	--/--	--/--	--/--	--/--	0/0	271/4.44	--/--	45/1.27	--/--	--	1.30	--	22
		7- 3-57 1000	2.7	1189	7.6	--/--	--/--	--/--	--/--	0/0	273/4.47	--/--	100/2.82	--/--	--	2.64	--	31
		8- 9-57 1330	1.4	943	7.5	--/--	--/--	--/--	--/--	0/0	195/3.20	--/--	36/1.02	--/--	--	0.80	--	23
		9- 4-57 0800	0.8	1235	7.8	125/6.24	33/2.71	114/4.96	3.6/0.09	0/0	312/5.12	224/4.67	147/4.15	0.5/0.01	2.0	4.2	890	35
		10-16-57 0900	1.2	1428	8.0	--/--	--/--	--/--	--/--	0/0	311/5.10	--/--	172/4.85	--/--	--	4.8	--	37
		11- 7-57 1100	1.5	1247	7.9	--/--	--/--	--/--	--/--	0/0	299/4.90	--/--	159/4.48	--/--	--	3.52	--	33
		12- 4-57 1100	2.0	1198	8.0	--/--	--/--	--/--	--/--	0/0	296/4.85	--/--	138/3.89	--/--	--	3.62	--	34
		12-15-57 --	89	1040	7.2	152/7.58	31/2.55	33/1.44	5.9/0.15	0/0	157/2.57	411/8.56	23/0.65	0/0	0.5	0.38	759	12
		12-17-57 --	128	706	8.3	--/--	--/--	--/--	--/--	12/0.39	153/2.51	--/--	19/0.54	--/--	--	0.42	--	--
		1- 9-58 1130	9.7	1090	8.1	--/--	--/--	--/--	--/--	0/0	280/4.59	--/--	46/1.3	--/--	--	1.28	--	25
		1-26-58[b] 1040	71	739	8.1	--/--	--/--	--/--	--/--	0/0	186/3.05	--/--	21/0.59	--/--	--	0.80	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 1
MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr.	42-15.6-2.2	2-3-58 1200	754	463	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	141 / 2.31	-- / --	10 / 0.28	-- / --	--	0.34	--	--
		2-11-58 1100	86	822	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	244 / 4.00	-- / --	14 / 0.40	-- / --	--	0.36	--	15
		3-10-58 1100	57	861	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	239 / 3.92	-- / --	13 / 0.37	-- / --	--	0.43	--	14
		4-8-58[c] 1030	786	627	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	195 / 3.20	-- / --	20 / 0.56	-- / --	--	0	--	--
		4-17-58 1100	255	778	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	206 / 3.38	-- / --	7.0 / 0.20	-- / --	--	0.12	--	12
		5-8-58 1200	80	794	7.9	98 / 4.89	37 / 3.04	32 / 1.39	1.8 / 0.05	0 / 0	177 / 2.90	296 / 6.17	13 / 0.37	0 / 0	0.5	0.24	580	15
		6-6-58 1200	33	805	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	201 / 3.30	-- / --	11 / 0.30	-- / --	--	0.19	--	14
Matilija Cr. (North Fork)	42-15.6a-0.7	12-14-55 1230	15[b]	1070	8.0	102 / 5.1	30 / 2.47	94 / 4.08	2.2 / 0.06	0 / 0	284 / 4.65	292 / 6.09	39 / 1.1	1.9 / 0.03	1.2	1.04	754	35
		11-2-56[c] 1500	0.6	940	7.8	96 / 4.80	36 / 2.95	88 / 3.83	2.7 / 0.07	0 / 0	275 / 4.50	298 / 6.21	45 / 1.21	0 / 0	0.7	0.42	728	37
		1-13-57 0935	45	741	7.6	89 / 4.44	24 / 1.97	32 / 1.39	3.8 / 0.10	0 / 0	162 / 2.65	233 / 4.86	18 / 0.51	3.5 / 0.06	--	0.12	560	18
		4-18-57[c] 0945	8[b]	880	8.0	96 / 4.80	31 / 2.54	47 / 2.04	2.3 / 0.06	0 / 0	251 / 4.12	241 / 5.01	13 / 0.37	0 / 0	1.0	0.60	610	22
		5-1-57[c] 1020	2.7	910	7.7	82 / 4.10	36 / 2.95	63 / 2.74	2.7 / 0.07	0 / 0	198 / 3.24	305 / 6.35	20 / 0.56	0 / 0	1.2	0.12	636	28
		5-31-57 1030	2.0	953	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	219 / 3.59	-- / --	20 / 0.56	-- / --	--	0.53	--	26
		7-1-57 1210	0.8	1060	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	229 / 3.75	-- / --	32 / 0.90	-- / --	--	0.70	--	--
		8-1-57 1440	0.2	1063	7.9	-- / --	-- / --	85 / 3.70	-- / --	0 / 0	243 / 3.99	-- / --	46 / 1.30	-- / --	--	1.00	--	34
		9-3-57[c] 1050	0.26	1134	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	287 / 4.70	-- / --	60 / 1.69	-- / --	--	1.00	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE .G 1

MINERAL ANALYSES OF SURFACE WATERS VENTURA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10 at 25 C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Matilija Cr. (North Fork)	42-15.6a-0.7	10- 1-57 1155	0.4	976	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	267 / 4.38	-- / --	57 / 1.6	--	--	1.30	--	--
		10-11-57 1125	1.3	1127	8.2	-- / --	-- / --	-- / --	-- / --	9.0 / 0.31	275 / 4.51	-- / --	57 / 1.61	--	--	1.28	--	--
		11- 1-57 1450	1.3	993	8.3	-- / --	-- / --	-- / --	-- / --	0 / 0	289 / 4.74	-- / --	46 / 1.3	-- / --	--	1.10	--	--
		12- 2-57 --	0.8	1124	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	296 / 4.86	-- / --	42 / 1.18	-- / --	--	1.04	--	--
		12-15-57 --	9.8	899	7.6	97 / 4.84	28 / 2.30	56 / 2.44	2.5 / 0.06	0 / 0	210 / 3.45	267 / 5.57	22 / 0.62	1.2 / 0.02	0.5	0.40	603	25
		1- 2-58 1500	3.3	1018	7.7	120 / 5.99	35 / 2.88	59 / 2.57	2.4 / 0.06	0 / 0	280 / 4.59	296 / 6.17	23 / 0.65	0 / 0	0.8	0.55	731	22
		1-26-58[c] --	1505	806	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	223 / 3.66	-- / --	23 / 0.66	-- / --	--	0.50	--	--
		1-31-58[c] 1210	3.5	976	8.0	111 / 5.55	32 / 2.65	53 / 2.30	2.1 / 0.05	0 / 0	204 / 3.35	303 / 6.30	20 / 0.56	0 / 0	0.64	0.4	676	22
		3- 3-58[c] 1425	20	870	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	226 / 3.70	-- / --	12 / 0.34	-- / --	--	0.48	--	--
		5- 1-58[c] 1030	37	809	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	220 / 3.60	-- / --	20 / 0.56	-- / --	--	0.41	--	--
		6- 2-58 1200	16	780	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	204 / 3.35	-- / --	5.0 / 0.15	-- / --	--	0.10	--	--
Hall Canyon Cr.	42A-0.8	2- 8-56 1445	0.4[b]	8547	8.3	332 / 16.57	333 / 27.37	1700 / 73.95	35 / 0.90	32 / 1.08	693 / 11.36	3193 / 66.48	1380 / 38.92	10 / 0.17	--	8.6	7704	62
Hall Canyon Cr.	42A-1.3	2-26-53 0855	2[b]	8064	7.8	194 / 9.68	69 / 5.67	1850 / 80.5	25 / 0.62	0 / 0	1105 / 18.1	369 / 7.68	2600 / 73.3	0 / 0	--	9.2	5529	84

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time	Discharge: Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-1.4	2-8-56 0930	3[b]	2110	7.9	222 / 11.08	68 / 5.59	190 / 8.26	7.3 / 0.19	0 / 0	315 / 5.16	823 / 17.15	93 / 2.62	0.5 / 0.01	-- / --	1.0	1704	33
Santa Clara River	43-2.7	2-8-56 1600	0.7[b]	2053	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	289 / 4.74	-- / --	83 / 2.34	-- / --	--	--	--	--
Santa Clara River	43-4.2	2-8-56 1515	0.3[b]	2519	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	370 / 6.07	-- / --	98 / 2.76	-- / --	--	--	--	--
		1-14-57 1015	328	719	7.7	80 / 3.99	21 / 1.73	45 / 1.96	4.4 / 0.11	0 / 0	132 / 2.16	235 / 4.89	29 / 0.82	2.0 / 0.03	--	0.22	515	25
		4-22-57[c] 1530	0.1[b]	1640	7.6	108 / 5.40	45 / 3.69	172 / 7.48	8.6 / 0.22	0 / 0	250 / 4.10	501 / 10.44	80 / 2.25	0.3 / 0.00	0.6	0.20	1130	45
		10-16-57[c] 1415	3[b]	1470	7.8	148 / 7.40	57 / 4.70	98 / 4.24	5.8 / 0.15	0 / 0	205 / 4.1	496 / 10.33	70 / 1.97	7.4 / 0.12	0.38	0.8	1064	26
		4-23-58[c] 1320	60[b]	1016	8.1	110 / 5.50	35 / 2.87	65 / 2.84	3.1 / 0.08	0 / 0	232 / 3.80	316 / 6.58	33 / 0.93	1.95 / 0.03	0.76	0.05	694	25
Santa Clara River	43-4.4	8-30-55[d] --	--	3930	9.0	224 / 11.20	130 / 10.70	546 / 23.75	13 / 0.33	0.9 / 0.03	91 / 1.49	1850 / 38.50	208 / 5.85	4.2 / 0.07	0.8	6.85	3122	52
Harmon Canyon Cr.	43-4.4-1.0	1-26-56 1645	10[b]	1171	7.9	69 / 3.44	24 / 1.97	144 / 6.26	7.0 / 0.18	0 / 0	151 / 2.48	402 / 8.38	39 / 1.10	2.4 / 0.04	--	0.34	839	53
Santa Clara River	43-4.5	1-26-56 1700	8000[b]	855	7.8	6.0 / 3.04	20 / 1.64	86 / 3.74	5.5 / 0.14	0 / 0	124 / 2.04	276 / 5.75	30 / 0.85	3.0 / 0.05	--	0.25	584	44
		12-16-57[c] 1525	2000[b]	490	7.6	54 / 2.70	12 / 0.95	23 / 1.00	2.7 / 0.07	0 / 0	110 / 1.80	128 / 2.66	15 / 0.42	0 / 0	0.1	0.08	345	21
Brown Barranca	43-7.9-0.8	1-26-56 1630	15[b]	826	7.7	59 / 2.94	16 / 1.32	84 / 3.65	4.7 / 0.12	0 / 0	122 / 2.00	245 / 5.1	32 / 0.90	15 / 0.24	--	0.17	572	45
		12-16-57[c] 1500	0.1[b]	2345	7.4	124 / 6.20	79 / 6.50	288 / 12.50	9.8 / 0.25	0 / 0	247 / 4.05	851 / 17.72	115 / 3.24	17 / 0.27	0.4	0.14	1731	49
Santa Clara River	43-8.3	1-26-56 1620	4000[b]	734	7.8	63 / 3.14	19 / 1.56	53 / 2.31	2.4 / 0.06	0 / 0	95 / 1.56	236 / 4.91	24 / 0.68	5.0 / 0.08	--	0.20	508	33
		12-16-57[c] 1500	2000[b]	625	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	116 / 1.90	-- / --	25 / 0.70	-- / --	--	--	--	--
Wason Barranca	43-8.4-2.0	1-26-56 1605	30[b]	905	7.6	40 / 2.00	19 / 1.56	114 / 4.96	7.3 / 0.19	0 / 0	188 / 3.08	229 / 4.77	32 / 0.90	11.0 / 0.18	--	0.28	618	57

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. Analyzed by Pacific Chemical Consultants.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge Second Feet[b]	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Ellsworth Barranca	43-9.3-1.3	1-26-56 / 1600	125	1176	7.3	62 / 3.09	30 / 2.47	130 / 5.66	9.4 / 0.24	0 / 0	195 / 3.20	301 / 6.27	77 / 2.17	11 / 0.18	--	0.48	802	49
		12-16-57[c] / --	2	3712	7.7	128 / 6.40	88 / 7.20	570 / 24.80	17 / 0.44	0 / 0	421 / 6.90	762 / 15.86	580 / 16.34	4.4 / 0.07	0.2	1.3	2571	64
Santa Clara River	43-10.0	2-27-53[d] / 0900	60	1510	7.8	149 / 7.47	65 / 5.34	136 / 5.90	4.5 / 0.12	0 / 0	256 / 4.20	609 / 12.70	76 / 2.13	7.4 / 0.12	--	0.8	1260	31
		4-11-58[c] / 1800	10	772	7.2	96 / 4.80	24 / 1.95	38 / 1.64	2.4 / 0.06	0 / 0	201 / 3.30	226 / 4.71	22 / 0.62	0.18 / 0.0	0.5	0.1	511	19
Todd Barranca	43-10.4-1.6	1-26-56 / 1555	30	876	7.3	57 / 2.84	23 / 1.89	81 / 3.52	7.6 / 0.20	0 / 0	161 / 2.64	238 / 4.95	40 / 1.13	9.0 / 0.15	--	0.30	599	42
Haines Barranca	43-12.8-0.9	1-26-56 / 1550	20	1225	7.5	62 / 3.09	25 / 2.06	150 / 6.53	9.4 / 0.24	0 / 0	178 / 2.92	400 / 8.33	39 / 1.10	8.0 / 0.13	--	0.34	900	54
Adams Barranca	43-13.1-0.9	1-26-56 / 1545	12	2000	7.5	81 / 4.04	36 / 2.96	278 / 12.09	12 / 0.30	0 / 0	273 / 4.48	427 / 8.89	226 / 6.37	4.8 / 0.08	--	1.05	1270	62
Fagan Canyon Cr.	43-14.4-1.1	1-26-56 / 1535	20	1145	7.5	65 / 3.24	23 / 1.89	128 / 5.57	8.5 / 0.22	0 / 0	149 / 2.44	312 / 6.50	79 / 2.23	12 / 0.19	--	0.55	821	51
Santa Clara River	43-15.9	1-26-56 / 1520	3000	766	7.6	77 / 3.84	20 / 1.64	47 / 2.04	6.0 / 0.15	0 / 0	142 / 2.32	229 / 4.78	23 / 0.65	2.5 / 0.04	--	0.25	520	27
		12-16-57[c] / 1415	2000	450	7.5	44 / 2.20	16 / 1.30	21 / 0.92	2.7 / 0.07	0 / 0	110 / 1.80	112 / 2.33	13 / 0.37	0.6 / 0.01	0	0.13	319	20
Santa Paula Cr.	43-15.9-0.6	2-26-53[d] / 1115	3	875	8.0	78 / 3.92	32 / 2.67	87 / 3.76	2.0 / 0.05	0 / 0	241 / 3.95	266 / 5.55	38 / 1.08	2.5 / 0.04	--	0.3	663	36
		12- 8-53 / 1400	1	1531	8.3	96 / 4.79	45 / 3.70	190 / 8.26	4.9 / 0.13	12 / 0.40	276 / 4.52	457 / 9.53	91 / 2.57	6.9 / 0.11	--	0.63	1082	49
		1-10-55 / 1750	15	1316	7.9	156 / 7.78	41 / 3.37	113 / 4.92	5.2 / 0.13	0 / 0	251 / 4.11	480 / 9.99	65 / 1.83	6.9 / 0.11	--	0.40	1040	30
		1-26-56 / 1510	200	828	7.7	74 / 3.69	26 / 2.14	56 / 2.44	5.6 / 0.14	0 / 0	161 / 2.64	257 / 5.36	17 / 0.48	3.0 / 0.05	--	0.19	561	29
		12-16-57[c] / 1350	75	592	7.3	49 / 2.45	20 / 1.65	40 / 1.73	2.7 / 0.07	0 / 0	126 / 2.07	159 / 3.31	15 / 0.42	1.8 / 0.03	0	0.50	304	29
Mud Cr.	43-15.9-3.7-0.1	2- 7-55 / 1415	5[b]	4785	8.4	53 / 2.64	117 / 9.62	975 / 42.4	14 / 0.36	38 / 1.28	771 / 12.64	1697 / 35.3	245 / 6.91	12 / 0.20	--	1.34	3510	77

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. Analyzed by Pacific Chemical Consultants.

TABLE G 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second: Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Mud Cr.	43-15.9-3.7-0.1	12-14-55 1345	0.5[b]	5110	8.2	23 / 1.15	94 / 7.7	1160 / 50.40	23 / 0.59	0 / 0	1165 / 19.1	1407 / 29.3	365 / 10.3	3.7 / 0.06	0.9	2.71	3704	84
		11- 4-57 1400	3[b]	4545	8.0	114 / 5.69	101 / 8.30	900 / 39.15	12 / 0.32	0 / 0	549 / 9.00	1760 / 36.67	256 / 7.22	1.5 / 0.02	0.8	2.50	3435	73
		6- 9-58 1230	0.3[b]	2415	7.8	84 / 4.19	84 / 6.90	392 / 17.05	6.8 / 0.17	0 / 0	327 / 5.36	971 / 20.22	102 / 2.88	12 / 0.19	0.8	0.84	1960	59
Santa Paula Cr.	43-15.9-3.8	2- 7-55 1415	6[b]	962	8.0	71 / 3.54	37 / 3.04	74 / 3.22	1.6 / 0.04	0 / 0	237 / 3.88	230 / 4.79	48 / 1.35	1.5 / 0.02	--	0.08	560	33
		12-14-55 1345	6[b]	1150	7.8	102 / 5.1	35 / 2.86	107 / 4.65	2.0 / 0.05	0 / 0	330 / 5.4	259 / 5.40	67 / 1.9	2.4 / 0.04	0.4	0.42	787	31
		1-26-56 1945	400[b]	401	7.7	48 / 2.40	9 / 0.74	18 / 0.78	1.8 / 0.05	0 / 0	117 / 1.92	83 / 1.73	13 / 0.37	2.9 / 0.05	--	0.11	276	20
		1-13-57 1530	39.4	657	7.9	73 / 3.64	18 / 1.48	36 / 1.57	0.9 / 0.02	0 / 0	149 / 2.45	164 / 3.41	28 / 0.79	3.2 / 0.05	--	0.19	448	25
		3- 4-57[c] 1245	75[b]	790	7.6	78 / 3.90	23 / 1.89	46 / 2.00	2.7 / 0.07	0 / 0	212 / 3.48	159 / 3.31	30 / 0.85	0 / 0	0.4	0.20	526	25
		4-18-57[c] 1405	25.1	605	7.9	68 / 3.40	17 / 1.40	30 / 1.30	1.6 / 0.04	0 / 0	171 / 2.80	137 / 2.85	20 / 0.56	0 / 0	0.6	0.02	396	21
		6-10-57 1215	4.7	842	8.0	64 / 3.19	42 / 3.45	53 / 2.31	1.4 / 0.04	0 / 0	242 / 3.96	200 / 4.16	35 / 0.99	0 / 0	0.4	0.26	523	26
		7- 1-57 1230	1.8	850	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	245 / 4.00	-- / --	27 / 0.76	-- / --	--	0.28	--	27
		8- 5-57 1230	0.4	984	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	260 / 4.25	-- / --	52 / 1.47	-- / --	--	0.39	--	34
		9- 3-57 1400	0.4	1175	7.7	92 / 4.59	33 / 2.71	118 / 5.13	2.2 / 0.06	0 / 0	281 / 4.60	265 / 5.52	85 / 2.40	1.5 / 0.02	0.6	0.68	769	41
		10- 7-57 1545	0.8	1418	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	411 / 6.71	-- / --	108 / 3.05	-- / --	--	0.77	311	42
		11- 4-57 1430	4.2	1238	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	392 / 6.40	-- / --	93 / 2.62	-- / --	--	0.68	--	35
		12- 2-57 1230	1.5	1222	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	344 / 5.62	-- / --	64 / 1.80	-- / --	--	0.44	--	34

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE C 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Paula Cr.	43-15.9-3.8	12-16-57[c] 1730	100[b]	477	7.3	46/2.30	18/1.45	20/0.86	2.0/0.05	0/0	128/2.10	99/2.06	17/0.48	0.9/0.01	0.20	0.10	311	18
		1-6-58 1300	8.5	984	8.2	--/--	--/--	--/--	--/--	0/0	270/4.41	--/--	47/1.33	--/--	--	0.15	--	23
		2-10-58 1330	50	625	8.2	76/3.79	24/1.97	30/1.31	1.4/0.04	0/0	189/3.10	157/3.28	18/0.51	0.7/0.01	0.2	0.12	372	19
		3-3-58 1230	150[b]	652	8.3	--/--	--/--	--/--	--/--	9.3/0.31	160/2.61	--/--	17/0.48	--/--	--	0.08	--	18
		4-4-58[d] --	1410	425	7.4	42/2.11	10/0.86	21/0.91	--/--	0/0	96/1.57	106/2.20	8/0.23	--/--	0.4	0.09	--	--
		4-7-58 1445	540	505	7.9	58/2.89	18/1.48	19/0.83	1.3/0.03	0/0	131/2.16	139/2.90	9/0.25	2.2/0.04	0.3	0.0	357	16
		5-5-58 1415	44	669	7.5	82/4.09	23/1.89	29/1.26	1.3/0.03	0/0	167/2.74	185/3.86	17/0.48	0.5/0.01	0.4	0.14	470	17
		6-9-58 1225	70	720	7.8	--/--	--/--	--/--	--/--	0/0	183/3.0	--/--	19/0.53	--/--	--	0.06	314	20
Sisar Cr.	43-15.9-6.5	2-7-55 1400	1[b]	1015	7.9	133/6.64	44/3.62	45/1.96	1.8/0.05	0/0	337/5.52	275/5.72	38/1.07	1.5/0.02	--	0.04	575	16
		1-26-56 1920	20[b]	464	6.9	52/2.59	16/1.32	19/0.83	1.8/0.05	0/0	107/1.76	121/2.52	18/0.51	4.8/0.08	--	0.15	349	17
		3-4-57[c] 1300	1[b]	1275	7.9	132/6.60	48/3.93	61/2.65	2.0/0.05	0/0	326/5.35	295/6.15	63/1.77	0/0	0.7	0.04	936	20
		12-16-57[c] 1710	10[b]	749	7.6	74/3.70	31/2.55	32/1.39	2.3/0.06	0/0	165/2.71	198/4.12	28/0.79	2.5/0.04	0	0.17	533	18
		4-7-58[c] 1500	40[b]	490	8.0	56/2.82	18/1.50	16/0.70	1.9/0.05	0/0	134/2.20	120/2.50	10/0.28	0/0	0.03	0	331	14
Santa Paula Cr.	43-15.9-6.6	2-7-55 1400	4[b]	687	8.2	91/4.54	22/1.81	26/1.13	1.3/0.03	10/0.32	176/2.88	192/4.01	6/0.17	0/0	--	0.06	385	15
		12-14-55 1330	5[b]	750	7.8	100/5.0	21/1.69	37/1.61	1.2/0.03	0/0	241/3.95	206/4.28	11/0.3	0.4/0.01	0.4	0	539	19
		1-26-56 1930	200[b]	267	7.3	28/1.40	11/0.90	7/0.30	1.5/0.04	0/0	95/1.56	48/1.00	4/0.11	1.8/0.03	--	0.11	220	11

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. Analyses received from United Water Conservation District. Total hardness and total dissolved solids calculated.

TABLE G 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second-Feet[b]	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Paula Cr.	43-15.9-6.6	3- 4-57[c] 1300	50	550	7.9	63/3.15	19/1.56	24/1.04	16/0.04	0/0	159/2.60	134/2.79	7.0/0.20	0/0	0.6	0	368	18
		12-16-57[c] 1710	50	322	7.2	38/1.90	13/1.07	13/0.56	2.0/0.05	0/0	107/1.75	72/1.50	8.0/0.23	1.2/0.02	0	0	255	16
		4- 7-58[c] 1505	100	424	7.9	54/2.70	11/0.90	14/0.62	1.9/0.05	0/0	116/1.90	99/2.06	8.0/0.23	0/0	0.4	0	287	15
Orcutt Canyon Cr.	43-16.0-1.2	1-26-56 1505	30	435	7.8	40/2.00	10/0.82	35/1.52	8.6/0.22	0/0	144/2.36	85/1.78	10/0.28	2.3/0.04	--	0.16	290	33
Santa Clara River	43-17.0	2- 9-53 1200	75	1941	7.9	--/--	--/--	--/--	--/--	0/0	329/5.40	--/--	85/2.40	--/--	--	--	--	--
		3- 9-53 --	60	1808	7.9	--/--	--/--	--/--	--/--	0/0	3.32/5.44	--/--	87/2.45	--/--	--	--	--	--
		4- 7-53 1400	40	1801	7.7	--/--	--/--	130/5.66	--/--	0/0	307/5.04	--/--	92/2.59	--/--	--	0.70	--	--
		5- 1-53 1200	45	1937	8.0	219/10.93	76/6.25	190/8.26	6.2/0.16	12/0.40	332/5.44	848/17.66	97/2.74	4.5/0.07	1.0	0.71	1731	32
		6- 8-53 1100	40	1838	7.7	--/--	--/--	--/--	--/--	0/0	354/5.78	--/--	92/2.59	--/--	--	0.94	--	28
		7- 6-53 1000	35	1785	7.8	--/--	--/--	--/--	--/--	0/0	312/5.10	--/--	83/2.36	--/--	--	0.92	--	31
		8- 3-53 1100	25	1792	8.0	--/--	--/--	--/--	--/--	0/0	342/5.59	--/--	82/2.31	--/--	--	0.90	--	29
		9- 9-53 1315	25	1984	7.9	227/11.33	83/6.82	190/8.26	7.0/0.18	0/0	342/5.60	851/17.73	90/2.54	2.5/0.04	1.0	1.00	1753	31
		10-13-53 1330	25	2105	8.0	--/--	--/--	--/--	--/--	0/0	342/5.60	--/--	79/2.23	--/--	--	0.88	--	33
		11-12-53 1230	25	1831	8.1	--/--	--/--	--/--	--/--	0/0	337/5.51	--/--	65/1.83	--/--	--	0.58	--	29
		12- 8-53 1110	35	1968	7.9	--/--	--/--	--/--	--/--	0/0	239/3.91	--/--	79/2.23	--/--	--	0.84	--	30
		1-11-54 1230	30	2049	7.9	--/--	--/--	--/--	--/--	0/0	337/5.51	--/--	80/2.26	--/--	--	0.60	--	29

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second: Feet[b]	EC$\times10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-17.0	2- 8-54 1235	30	2188	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	339 / 5.54	-- / --	95 / 2.68	-- / --	--	0.88	--	30
		3- 8-54 1230	40	2557	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	349 / 5.70	-- / --	87 / 2.45	-- / --	--	0.86	--	30
		4- 5-54 1310	100	1481	8.1	-- / --	-- / --	-- / --	-- / --	19 / 0.63	239 / 3.91	-- / --	55 / 1.55	-- / --	--	0.64	--	29
		5- 3-54 1125	40	1964	8.2	211 / 10.53	76 / 6.25	160 / 6.96	9.0 / 0.23	0 / 0	315 / 5.16	765 / 15.93	79 / 2.23	12. / 0.19	1.1	0.94	1536	29
		6- 7-54 1230	35	2074	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	327 / 5.34	-- / --	90 / 2.54	-- / --	--	0.76	--	30
		7- 2-54 1230	25	1964	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	315 / 5.15	-- / --	92 / 2.59	-- / --	--	0.56	--	32
		8- 9-54 1210	20	2000	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	322 / 5.26	-- / --	96 / 2.71	-- / --	--	0.92	--	31
		9- 7-54 1430	20	2115	8.0	226 / 11.28	86 / 7.07	185 / 8.05	7.2 / 0.18	0 / 0	337 / 5.52	874 / 18.20	97 / 2.74	4.5 / 0.07	1.0	0.88	1735	30
		10-19-54 1200	20	1718	8.3	-- / --	-- / --	-- / --	-- / --	22 / 0.73	305 / 4.98	-- / --	67 / 1.90	-- / --	--	0.68	--	27
		11-17-54 1215	25	1786	8.3	-- / --	-- / --	-- / --	-- / --	19 / 0.63	312 / 5.10	-- / --	72 / 2.03	-- / --	--	0.78	--	44
		12- 7-54 1300	30	1862	8.1	-- / --	-- / --	-- / --	-- / --	14 / 0.47	334 / 5.45	-- / --	54 / 1.52	-- / --	--	0.56	--	37
		1-10-55 1530	100	1754	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	256 / 4.18	-- / --	66 / 1.86	-- / --	--	0.96	--	29
		2- 7-55 1200	40	2083	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	312 / 5.10	-- / --	82 / 2.31	-- / --	--	0.78	--	30
		3- 7-55 1130	35	2028	8.1	-- / --	-- / --	-- / --	-- / --	12 / 0.41	288 / 4.71	-- / --	82 / 2.31	-- / --	--	0.64	--	29
		4- 6-55 1145	20	2128	8.1	-- / --	-- / --	-- / --	-- / --	22 / 0.73	285 / 4.65	-- / --	93 / 2.62	-- / --	--	0.86	--	26
		5-10-55 1300	50	1307	7.7	145 / 7.24	45 / 3.70	93 / 4.05	4.4 / 0.11	0 / 0	285 / 4.68	456 / 9.51	42 / 1.18	0 / 0.0	1.2	1.54	970	27

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.

TABLE G 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet[b]	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Santa Clara River	43-17.0	6- 6-55 1145	35	2180	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	234 / 5.78	-- / --	92 / 2.59	-- / --	--	0.82	--	28
		7-12-55 1200	25	2083	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	249 / 4.06	-- / --	66 / 1.86	-- / --	--	0.83	--	41
		8- 8-55 1115	20	1486	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	229 / 3.74	-- / --	55 / 1.55	-- / --	--	0.62	--	25
		9-14-55 1315	15	1486	8.1	174 / 8.68	62 / 5.10	110 / 4.79	5.2 / 0.13	0 / 0	305 / 5.00	563 / 11.72	56 / 1.58	0.5 / 0.01	0.8	0.32	1256	26
		10-12-55 1325	15	1664	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	312 / 5.10	-- / --	53 / 1.49	-- / --	--	0.70	--	26
		11- 8-55 1200	20	1579	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	272 / 4.44	-- / --	52 / 1.47	-- / --	--	0.68	--	27
		12-14-55 1045	30	1683	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	315 / 5.16	-- / --	57 / 1.61	-- / --	--	0.00	--	25
		1- 9-56 1200	25	2179	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	332 / 5.42	-- / --	94 / 2.65	-- / --	--	0.92	--	26
		2-14-56 1215	40	2342	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	332 / 5.42	-- / --	98 / 2.76	-- / --	--	1.78	--	29
		3- 5-56 1230	40	1890	8.1	-- / --	-- / --	-- / --	-- / --	10 / 0.33	293 / 4.79	-- / --	81 / 2.28	-- / --	--	1.55	--	25
		4- 9-56 1240	30	1862	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	275 / 4.49	-- / --	77 / 2.17	-- / --	--	0.68	--	28
		5-14-56 1120	20	1271	8.0	138 / 6.89	46 / 3.78	81 / 3.52	9.3 / 0.24	0 / 0	273 / 4.48	412 / 8.58	45 / 1.27	3.0 / 0.05	0.8	0.60	935	24
		6-11-56 1200	25	2160	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	299 / 4.89	-- / --	103 / 2.90	-- / --	--	0.92	--	35
		7- 9-56 1030	20	1799	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	334 / 5.46	-- / --	70 / 1.97	-- / --	--	0.62	--	25
		8- 6-56 1115	20	1838	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	344 / 5.62	-- / --	73 / 2.06	-- / --	--	0.52	--	25
		9-11-56 1200	8	1773	7.7	197 / 9.83	68 / 5.59	125 / 5.44	5.6 / 0.14	0 / 0	338 / 5.54	658 / 13.71	68 / 1.92	1.3 / 0.02	0.9	0.80	1525	26

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second Feet[b]	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-17.0	10- 9-56 1105	18	2342	7.8	--/--	--/--	--/--	--/--	0/0	251/4.10	--/--	109/3.07	--/--	--	1.00	--	32
		11- 7-56 1105	15	1876	7.6	--/--	--/--	--/--	--/--	0/0	344/5.62	--/--	74/2.09	--/--	--	0.98	--	27
		12-10-56 1200	25	1503	8.2	--/--	--/--	--/--	--/--	7.0/0.23	244/3.99	--/--	68/1.11	--/--	--	0.72	--	26
		1- 7-57 1135	30	1821	7.4	--/--	--/--	--/--	--/--	0/0	321/5.22	--/--	69/1.91	--/--	--	0.81	--	25
		2- 7-57 1115	25	1996	8.0	--/--	--/--	--/--	--/--	0/0	304/4.93	--/--	84/2.31	--/--	--	1.01	--	26
		3- 4-57 1215	125	1493	7.8	156/7.78	58/4.77	109/4.74	4.9/0.13	0/0	284/4.65	507/10.57	53/1.49	4.2/0.07	--	0.74	1117	27
		4- 8-57 1100	20	2058	7.9	--/--	--/--	--/--	--/--	0/0	316/5.13	--/--	86/2.40	--/--	--	1.00	--	26
		5- 6-57 1245	30	1818	7.8	211/10.53	89/7.32	156/6.79	6.2/0.16	0/0	293/4.80	823/17.14	85/2.40	5.5/0.09	0.04	0.80	1635	27
		6-10-57 1130	25	2028	7.6	--/--	--/--	--/--	--/--	0/0	299/4.90	--/--	83/2.32	--/--	--	0.94	--	27
		7- 1-57 1200	20	1942	7.7	--/--	--/--	--/--	--/--	0/0	282/4.61	--/--	78/2.20	--/--	--	0.84	--	29
		8- 5-57 1130	5	1919	8.0	--/--	--/--	--/--	--/--	0/0	285/4.66	--/--	74/2.10	--/--	--	0.77	--	28
		9- 3-57 1245	12	1603	7.6	200/9.98	75/6.17	132/5.74	5.7/0.15	0/0	305/5.00	724/15.08	74/2.09	2.0/0.03	1.0	0.84	1364	26
		10- 7-57 1130	10	1894	7.9	--/--	--/--	--/--	--/--	0/0	273/4.46	--/--	82/2.31	--/--	--	0.80	--	28
		11- 4-57 1305	40	1621	7.6	196/9.78	69/5.67	130/5.66	6.1/0.16	0/0	327/5.36	666/13.88	72/2.03	2.0/0.03	0.7	1.04	1370	27
		12- 2-57 1140	20	1862	7.7	--/--	--/--	--/--	--/--	0/0	340/5.55	--/--	85/2.40	--/--	--	0.92	--	28
		1- 6-58 1230	30	2217	8.2	--/--	--/--	--/--	--/--	0/0	330/5.41	--/--	90/2.52	--/--	--	1.08	--	26

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE C 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet[b]	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-17.0	2-10-58 1300	250	933	8.1	108 / 5.39	33 / 2.71	51 / 2.22	2.9 / 0.07	0 / 0	223 / 3.65	281 / 5.86	28 / 0.79	0.4 / 0.01	0.6	0.42	655	22
		3- 3-58 1145	30	1140	8.3	-- / --	-- / --	-- / --	-- / --	15 / 0.55	2.8 / 3.56	-- / --	-- / --	-- / --	--	0.58	--	23
		4- 7-58 1400	1500	1745	7.5	182 / 9.08	62 / 5.10	138 / 6.00	6.1 / 0.16	0 / 0	253 / 4.16	691 / 14.39	66 / 1.86	5.4 / 0.09	0.7	0.65	1432	30
		5- 5-58 1330	300	951	7.9	108 / 5.39	37 / 3.04	54 / 2.35	3.0 / 0.08	0 / 0	203 / 3.32	315 / 6.56	27 / 0.76	1.5 / 0.02	0.8	0.56	705	22
		6- 9-58 1130	75	1171	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	229 / 3.75	-- / --	40 / 1.13	-- / --	--	0.47	--	25
O'Leary Cr.	43-20.8-0.8	1-26-56 1500	30	1739	7.8	145 / 7.24	41 / 3.37	225 / 9.79	16 / 0.41	0 / 0	146 / 2.40	817 / 17.03	47 / 1.33	3.0 / 0.05	--	0.34	1435	47
Lord Cr. (Boulder Cr.)	43-21.5-0.4-0.7	2-26-53 1140	0.3	2283	7.9	57 / 2.84	29 / 2.38	500 / 21.8	6.5 / 0.17	0 / 0	652 / 10.7	319 / 6.64	370 / 10.4	0 / 0.0	--	0.52	1609	80
		1-26-56 1450	50	544	7.2	65 / 3.25	12 / 0.95	30 / 1.30	3.6 / 0.09	0 / 0	155 / 2.55	132 / 2.74	7 / 0.20	3.5 / 0.06	0.2	0.16	376	23
		12-16-57[c] 1335	2	438	7.1	38 / 1.90	12 / 1.02	32 / 1.40	2.3 / 0.06	0 / 0	113 / 1.85	103 / 2.14	13 / 0.35	2.1 / 0.03	0.2	0	315	32
Sespe Cr.	43-21.5-1.1	2-26-53 1200	15	1087	8.2	117 / 5.84	33 / 2.71	85 / 3.70	2.7 / 0.07	0 / 0	244 / 4.00	316 / 6.58	52 / 1.47	1.5 / 0.02	--	1.04	750	30
		1-10-55 1815	50	787	7.9	85 / 4.24	19 / 1.56	72 / 3.13	2.8 / 0.07	0 / 0	162 / 2.65	229 / 4.77	54 / 1.52	4.0 / 0.06	--	1.36	535	35
		6- 6-55 1500	3	847	8.4	-- / --	-- / --	-- / --	-- / --	3.0 / 0.11	126 / 2.07	-- / --	50 / 1.41	-- / --	--	--	--	--
		1-22-57 1045	80	1248	8.1	137 / 6.84	32 / 2.63	91 / 3.96	3.7 / 0.10	0 / 0	249 / 4.08	361 / 7.53	70 / 1.97	0.40 / 0.01	--	1.28	898	29
Sespe Cr.	43-21.5-2.7	12- 7-54 1515	15	1149	8.1	109 / 5.44	29 / 2.38	125 / 5.44	4.1 / 0.11	9.0 / 0.31	195 / 3.19	288 / 6.00	126 / 3.55	3.5 / 0.06	--	2.90	800	41
		12-16-57 1330	500	404	7.3	48 / 2.40	14 / 1.12	15 / 0.66	2.7 / 0.07	0 / 0	119 / 1.95	88 / 1.83	13 / 0.37	1.48 / 0.02	0	0.12	302	16
		4- 3-58 --	12,300[d]	384	7.4	47 / 2.35	10 / 0.63	9.0 / 0.39	-- / --	0 / 0	106 / 1.74	94 / 1.95	5.0 / 0.14	-- / --	0.4	0.05	271	11

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated unless otherwise indicated.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. Measured

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Snow Cr.	43-21.5-3.7-0.5	1-26-56 1420	12[b]	1890	7.2	147/7.35	34/2.80	249/10.82	9.9/0.25	0/0	189/3.10	806/16.80	37/1.05	6.3/0.10	0.8	0.15	1463	51
Sespe Cr.	43-21.5-6.0	12-8-53 1430	15[b]	1464	8.3	81/4.04	58/4.77	140/6.09	3.7/0.10	9.0/0.32	220/3.60	348/7.26	141/3.98	0/0	--	3.16	960	41
		1-26-56 1420	3340	398	7.2	51/2.55	7.0/0.60	14/0.59	2.2/0.06	0/0	119/1.95	82/1.70	5/0.15	2.3/0.04	0.2	0.04	163	15
		1-5-57 1000	22	1307	7.6	107/5.34	23/1.89	126/5.48	5.0/0.13	0/0	209/3.43	237/4.93	152/4.29	1.0/0.02	--	1.55	826	43
		1-13-57 1100	2721	469	7.5	73/3.64	12/0.99	16/0.70	4.5/0.12	0/0	137/2.24	142/2.95	11/0.31	1.0/0.02	--	0.14	380	13
		3-4-57[c] 1145	100[b]	910	8.3	90/4.50	32/2.62	52/2.30	2.3/0.06	24/0.80	187/3.07	225/4.69	30/0.85	0/0	0.7	0.04	625	24
		6-10-57 1100	2	1275	7.9	128/6.39	45/3.70	91/3.96	3.5/0.09	0/0	254/4.16	408/8.51	54/1.52	Tr.	1.0	1.50	884	28
		7-1-57 1115	0.3	1408	7.9	--/--	--/--	--/--	--/--	0/0	257/4.20	--/--	28/0.79	--/--	--	1.52	--	[illegible]
		8-5-57 1100	0.5	1338	7.7	--/--	--/--	--/--	--/--	0/0	248/4.05	--/--	97/2.74	--/--	--	1.96	--	33
		9-4-57 1530	0.1	1200	7.7	140/6.99	24/1.97	114/4.96	3.8/0.10	0/0	260/4.26	308/6.41	117/3.30	1.5/0.02	1.2	2.4	874	35
		10-7-57 1100	0.5	1326	8.1	--/--	--/--	--/--	--/--	0/0	238/3.89	--/--	127/3.58	--/--	--	2.24	--	39
		11-4-57 1215	8.2	1067	8.0	--/--	--/--	--/--	--/--	0/0	222/3.63	--/--	154/4.34	--/--	--	3.12	--	42
		12-2-57 1100	0.1	1718	7.9	--/--	--/--	--/--	--/--	0/0	265/4.33	--/--	154/4.34	--/--	--	2.26	--	34
		1-6-58 1150	29	1092	8.4	--/--	--/--	--/--	--/--	14/0.47	237/3.87	--/--	53/1.49	--/--	--	1.40	--	27
		2-10-58 1210	240	704	8.3	86/4.29	26/2.14	32/1.39	2.1/0.05	16/0.55	169/2.78	187/3.90	18/0.51	Tr.	0.6	0.38	463	18
		3-3-58 1100	240	951	8.1	--/--	--/--	--/--	--/--	0/0	229/3.74	--/--	23/0.65	--/--	--	0.32	--	19

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE C-2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second: Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Sespe Cr.	43-21.5-6.0	4-7-58 1250	2890	975	7.8	148 / 7.39	34 / 2.79	24 / 1.04	3.6 / 0.09	0 / 0	172 / 2.82	384 / 8.01	7.0 / 0.20	2.9 / 0.05	0.7	0.14	755	9
		5-5-58 1220	205	866	8.0	98 / 4.89	38 / 3.12	42 / 1.83	2.2 / 0.06	0 / 0	189 / 3.10	291 / 6.06	19 / 0.54	0 / 0	0.8	0.38	640	18
		6-9-58 1045	64	797	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	172 / 2.81	-- / --	25 / 0.71	-- / --	--	0.37	--	24
Sespe Cr.	43-21.5-33.3	1-13-57 1315	46.2	819	7.7	118 / 5.89	29 / 2.38	45 / 1.96	4.0 / 0.10	0 / 0	159 / 2.60	335 / 6.98	34 / 0.96	2.0 / 0.03	--	0.12	710	19
Sespe Cr.	43-21.5-36.5	11-2-56 1530	0.28	1410	7.75	180 / 9.00	66 / 5.41	81 / 3.52	2.7 / 0.07	0 / 0	317 / 5.20	575 / 11.98	50 / 1.41	0 / 0	0.7	0	1184	20
Santa Clara River	43-24.1	1-26-56 1345	1000[b]	1369	7.5	187 / 9.33	43 / 3.53	100 / 4.35	10.0 / 0.26	0 / 0	171 / 2.80	662 / 13.80	25 / 0.71	1.0 / 0.02	--	0.32	1150	25
		12-16-57[c] 1315	120[b]	1253	7.4	102 / 5.10	50 / 4.15	104 / 4.50	6.2 / 0.16	0 / 0	195 / 3.20	468 / 9.74	45 / 1.27	0 / 0	0.2	0.40	970	32
		4-3-58 --	4000[b]	871	7.5	87 / 4.35	27 / 2.20	50 / 2.17	-- / --	0 / 0	142 / 2.32	16 / 0.45	287 / 5.99	-- / --	0.7	0.24	609	25
Pole Cr.	43-24.8-0.6	1-26-56 1330	40[b]	1027	7.5	148 / 7.39	46 / 3.78	41 / 1.78	6.6 / 0.17	0 / 0	193 / 3.16	452 / 9.42	9.0 / 0.25	1.5 / 0.02	--	0.18	860	14
		12-17-57[c] 1630	2[b]	2035	7.9	251 / 12.50	95 / 7.80	127 / 5.50	9.0 / 0.23	0 / 0	339 / 5.56	951 / 19.80	20 / 0.56	1.8 / 0.03	0.4	0.25	1794	21
Fairview Cr.	43-27.1-0.6	1-26-56 1325	10[b]	1916	7.4	413 / 20.61	85 / 6.99	33 / 1.44	6.1 / 0.16	0 / 0	134 / 2.20	1266 / 26.38	7.0 / 0.20	1.3 / 0.02	--	0.10	2025	5
Hopper Cr.	43-28.9-1.0	12-8-53 1530	0.5[b]	2433	8.35	47 / 2.35	88 / 7.23	425 / 18.49	7.7 / 0.20	22 / 0.72	717 / 11.76	627 / 13.07	91 / 2.57	0 / 0	--	0.39	1682	65
		12-7-54 1200	0.2[b]	2770	8.2	58 / 2.89	76 / 6.25	538 / 23.40	7.9 / 0.20	30 / 1.00	974 / 15.97	564 / 11.76	118 / 3.33	1.5 / 0.02	--	0.52	1800	71
		1-10-55 1500	15[b]	1538	8.2	105 / 5.24	49 / 4.03	225 / 9.79	5.4 / 0.14	14 / 0.46	586 / 9.60	385 / 8.02	52 / 1.47	0 / 0	--	0.22	1125	51
		6-6-55 1530	0.1[b]	2703	9.5	8.0 / 0.40	87 / 7.15	540 / 23.49	8.5 / 0.22	178 / 5.92	493 / 8.08	691 / 14.40	126 / 3.55	1.5 / 0.02	--	1.30	1915	75
		1-26-56 1315	300[b]	847	7.5	112 / 5.59	28 / 2.30	27 / 1.17	5.7 / 0.15	0 / 0	149 / 2.44	300 / 6.25	9.0 / 0.25	2.0 / 0.03	--	0.12	595	13

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second: Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Hopper Cr.	43-28.9-1.0	1- 5-57 / 1105	4.4	3012	8.2	92 / 4.59	94 / 7.73	505 / 21.97	9.9 / 0.25	68 / 2.28	824 / 13.51	720 / 15.01	152 / 4.29	1.7 / 0.03	--	0.60	2074	64
		1- 7-57 / 1500	1[b]	2840	8.3	66 / 3.30	77 / 6.31	521 / 22.65	7.0 / 0.18	60 / 2.00	939 / 15.40	575 / 11.98	145 / 4.08	0.7 / 0.01	0.7	0.2	2132	70
		1-26-57[c] / --	17.8	1760	7.6	117 / 5.85	69 / 5.66	160 / 6.96	4.7 / 0.12	0 / 0	434 / 7.12	496 / 10.33	48 / 1.35	1.4 / 0.02	0.7	0.40	1250	37
		3- 4-57[c] / 1120	1[b]	2430	8.3	119 / 5.95	91 / 7.46	308 / 13.39	7.4 / 0.19	60 / 2.00	514 / 8.43	669 / 13.94	60 / 1.69	0 / 0	0.7	0	1830	50
		4-18-57[c] / 0930	11.5	1380	7.9	85 / 4.25	52 / 4.26	125 / 5.43	4.3 / 0.11	0 / 0	305 / 5.00	404 / 8.42	28 / 0.79	0 / 0	0.7	0.04	956	39
		12-16-57[c] / 1020	81	662	8.0	48 / 2.40	22 / 1.80	54 / 2.35	2.2 / 0.06	0 / 0	153 / 2.50	173 / 3.60	24 / 0.68	1.7 / 0.03	0.38	0.5	458	36
		12-16-57[c] / 1300	35[b]	640	7.5	40 / 2.00	237 / 1.95	58 / 2.54	2.7 / 0.07	0 / 0	153 / 2.50	177 / 3.69	18 / 0.51	0 / 0	0.04	0	686	39
		2- 4-58 / 1000	323	556	7.4	74 / 3.69	16 / 1.32	17 / 0.74	2.3 / 0.06	0 / 0	115 / 1.88	174 / 3.62	8.0 / 0.23	1.0 / 0.02	0.4	0.10	384	13
		4- 7-58[c] / 1130	100[b]	875	7.8	120 / 6.00	29 / 2.40	26 / 1.15	2.8 / 0.07	0 / 0	159 / 2.60	323 / 6.72	7.0 / 0.20	311 / 0.05	0.36	0	596	12
		4- 8-58[c] / 1030	95	1288	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	232 / 3.80	-- / --	24 / 0.68	-- / --	--	--	--	--
Edwards Cr.	43-30.0-0.8	1-26-56 / 1310	6[b]	233	7.3	33 / 1.65	7.0 / 0.58	4.0 / 0.17	4.5 / 0.12	0 / 0	66 / 1.08	55 / 1.15	3.0 / 0.08	8.0 / 0.13	--	0.16	165	7
Real Wash	43-30.8-0.6	1-26-56 / 1305	10[b]	1866	7.3	395 / 19.71	81 / 6.66	26 / 1.13	4.7 / 0.12	0 / 0	110 / 1.80	1215 / 25.31	5.0 / 0.14	5.0 / 0.08	--	0.12	1955	4
Nigger Wash	43-31.0-0.7	1-26-56 / 1300	7[b]	2203	7.1	363 / 18.11	70 / 5.75	103 / 4.48	7.8 / 0.20	0 / 0	120 / 1.96	1222 / 25.45	13 / 0.37	5.4 / 0.09	--	0.36	2056	16
Piru Cr.	43-31.8-0.7	12- 8-53 / 1545	12[b]	1881	7.9	146 / 7.28	76 / 6.24	170 / 7.39	6.1 / 0.16	0 / 0	283 / 4.64	675 / 14.07	82 / 2.31	0 / 0	--	1.72	1388	35
		12- 7-54 / 1130	12[b]	1724	7.8	164 / 8.18	72 / 5.92	192 / 8.35	6.8 / 0.17	0 / 0	323 / 5.30	719 / 14.97	70 / 1.97	4.0 / 0.06	--	2.30	1405	37
		1-10-55 / 1450	40[b]	1470	7.7	156 / 7.28	57 / 4.69	100 / 4.35	5.0 / 0.13	0 / 0	197 / 3.23	604 / 12.59	39 / 1.10	2.0 / 0.03	--	1.20	1095	26

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE C 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second-Feet[b]	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Piru Cr.	43-31.8-0.7	6- 6-55 1600	35	1458	8.0	124 / 6.19	66 / 5.42	135 / 5.87	5.5 / 0.14	0 / 0	202 / 3.32	619 / 12.89	62 / 1.75	0 / 0	--	1.40	1228	33
		1-26-56 1240	75	2045	7.2	281 / 14.02	85 / 6.99	144 / 6.26	7.5 / 0.19	0 / 0	159 / 2.60	1123 / 23.39	44 / 1.24	4.0 / 0.07	--	0.84	1925	22
		1- 7-57[c] 1530	5	2630	7.9	212 / 10.60	122 / 10.00	267 / 11.61	9.4 / 0.24	0 / 0	400 / 6.55	1115 / 23.23	90 / 2.54	0 / 0	0.7	1.4	2148	34
		12-16-57[c] 1245	25	2360	7.5	198 / 9.90	106 / 8.70	209 / 9.10	9.8 / 0.25	0 / 0	321 / 5.26	993 / 20.67	75 / 2.11	0 / 0	1.3	1.4	1913	32
Piru Cr.	43-31.8-1.1	3- 4-57 1030	2	2750	7.7	235 / 11.75	135 / 11.10	327 / 14.20	10. / 0.27	0 / 0	503 / 8.25	1300 / 27.05	99 / 2.8	3.4 / 0.06	1.4	2.0	2485	38
		6-10-57 1000	15	1412	8.1	122 / 6.09	62 / 5.10	105 / 4.57	5.1 / 0.13	0 / 0	245 / 4.02	5.0 / 10.32	40 / 1.13	0 / 0	1.0	1.68	1053	29
		7- 1-57 1030	20	1340	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	236 / 3.82	-- / --	39 / 1.10	-- / --	--	1.60	--	27
		8- 5-57 1000	.05	1356	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	216 / 1.90	-- / --	42 / 1.11	-- / --	--	1.74	--	29
		9- 3-57 1130	40	1321	7.9	137 / 6.84	54 / 4.44	98 / 4.26	5.8 / 0.15	0 / 0	228 / 3.74	520 / 10.83	43 / 1.21	0.5 / 0.01	1.2	2.0	964	27
		10- 7-57 1030	5	2008	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	289 / 4.71	-- / --	82 / 2.30	-- / --	--	1.96	--	32
		11- 4-57 1055	10	1800	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	317 / 5.20	-- / --	63 / 1.71	-- / --	--	2.0	--	27
		12- 2-57 1020	3	1988	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	292 / 4.82	-- / --	69 / 1.91	-- / --	--	2.0	--	28
		1- 6-58 1100	1	2824	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	417 / 6.81	-- / --	97 / 2.70	-- / --	--	2.30	--	37
		2-10-58 1115	3	2638	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	416 / 6.81	-- / --	81 / 2.21	-- / --	--	1.96	--	34
		3- 3-58 1000	40	929	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	183 / 3.00	-- / --	21 / 0.60	-- / --	--	0.90	--	23
		4- 7-58 1045	30	2174	7.3	267 / 13.32	99 / 8.14	125 / 5.44	6.9 / 0.18	0 / 0	172 / 2.82	1120 / 23.40	28 / 0.79	4.7 / 0.08	1.2	0.72	1959	20

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second-Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Piru Cr.	43-31.8-1.1	5- 5-58 1105	30[b]	943	8.1	98 / 4.89	39 / 3.21	54 / 2.35	3.2 / 0.08	0 / 0	179 / 2.94	343 / 7.15	19 / 0.54	0.5 / 0.01	0.8	0.66	725	22
		6- 9-58 0950	35[b]	848	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	171 / 2.80	-- / --	13 / 0.35	-- / --	--	0.37	--	20
Santa Felicia Reservoir (Lake Piru)	43-31.8-6.0	4- 9-58[c] --	Reservoir	757	7.9	73 / 3.53	31 / 2.55	42 / 1.83	-- / --	0 / 0	158 / 2.60	242 / 5.05	12 / 0.34	-- / --	0.7	0.36	--	23
Santa Felicia Reservoir (Lake Piru)	43-31.8-6.1	6-18-58[c] --	Reservoir	791	8.0	68 / 3.41	35 / 2.89	38 / 1.65	-- / --	0 / 0	167 / 2.74	231 / 4.82	14 / 0.40	-- / --	0.9	0.57	553	21
Santa Felicia Reservoir (Lake Piru)	43-31.8-6.4	3- 4-57 1100	Reservoir	958	7.9	113 / 5.65	36 / 2.95	63 / 2.73	4.0 / 0.10	0 / 0	186 / 3.05	358 / 7.46	28 / 0.80	2.5 / 0.04	1.4	1.2	744	24
		4-11-58 1750	Reservoir	724	7.7	80 / 4.00	28 / 2.30	39 / 1.68	3.5 / 0.09	0 / 0	148 / 2.44	246 / 5.12	20 / 0.56	0.6 / 0.01	0.80	0	418	21
Reasoner Canyon Cr.	43-31.8-6.8-0.4	1-12-53 1015	3[b]	2325	7.6	309 / 15.4	150 / 12.3	150 / 6.52	6.2 / 0.16	0 / 0	325 / 5.32	1315 / 27.4	24 / 0.68	4.5 / 0.07	--	0.32	1910	19
Piru Cr.	43-31.8-7.0	8- 4-52[d] 1530	5[b]	1270	7.9	121 / 6.04	50 / 4.14	104 / 4.52	4.5 / 0.12	0 / 0	218 / 3.58	470 / 9.80	46 / 1.30	1.2 / 0.02	--	1.5	945	30
		1-12-53 1005	30[b]	1105	8.1	130 / 6.50	40 / 3.29	62 / 2.70	2.9 / 0.07	0 / 0	244 / 4.00	374 / 7.80	27 / 0.76	1.5 / 0.02	--	1.24	800	21
		2-26-53[e] 1405	15[b]	1160	8.0	104 / 5.22	56 / 4.59	89 / 3.89	3.5 / 0.09	0 / 0	235 / 3.86	422 / 8.78	38.3 / 1.08	2.5 / 0.04	--	1.8	883	28
Santa Felicia Reservoir (Lake Piru)	43-31.8-8.0	4- 9-58[c] --	Reservoir	735	7.9	69 / 3.44	29 / 2.35	42 / 1.83	-- / --	0 / 0	152 / 2.49	233 / 4.85	12 / 0.34	-- / --	0.7	0.44	--	24
Piru Cr.	43-31.8-10.5	1-13-57 1415	1442	840	7.3	124 / 6.19	20 / 1.64	27 / 1.17	7.9 / 0.20	0 / 0	159 / 2.61	290 / 6.04	11 / 0.31	1.3 / 0.02	--	0.53	616	13
		4-18-57[d] 1330	26.2	1095	8.0	88 / 4.40	42 / 3.44	95 / 4.13	6.3 / 0.16	0 / 0	244 / 4.00	318 / 6.63	35 / 0.99	0 / 0	1.5	0.60	806	34
		2- 4-58 1530	3020	548	7.4	69 / 3.44	17 / 1.40	21 / 0.91	3.7 / 0.09	0 / 0	171 / 2.80	125 / 2.60	13 / 0.37	0.6 / 0.01	0.6	0.51	363	16
		4- 4-58 0915	1160[b]	682	7.9	52 / 2.62	37 / 3.04	34 / 1.48	-- / --	0 / 0	152 / 2.49	209 / 4.35	8.0 / 0.23	-- / --	0.7	0.28	492	21
		4- 8-58[d] 1400	0930	879	8.3	-- / --	-- / --	-- / --	-- / --	0 / 0	191 / 3.13	-- / --	45 / 1.27	-- / --	--	0.80	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Fruit Growers Laboratories, Santa Paula.
d. Analyzed by Terminal Testing Laboratories, Inc.
e. Analyzed by Pacific Chemical Consultants.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second-Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Piru Cr.	43-31.8-10.5	6-20-58[c] --	30[b]	1047	7.8	95 4.75	41 3.35	71 3.09	-- --	0 0	237 3.88	309 6.45	36 0.73	-- --	1.3	1.34	779	28
Santa Clara River	43-36.5	5-4-53 1500	10[b]	1901	--	180 8.98	76 6.25	180 7.83	5.8 0.15	0 0	334 5.48	754 15.71	84 2.37	2.5 0.04	0.8	0.49	1515	34
		9-9-53 1230	3[b]	2941	7.3	242 12.08	139 11.43	330 14.36	7.4 0.19	0 0	356 5.84	1313 27.36	125 3.53	1.5 0.02	1.4	0.98	2502	38
		5-3-54 1020	15[b]	1876	8.2	171 8.53	79 6.49	160 6.96	6.3 0.16	0 0	349 5.72	714 14.87	66 1.89	4.0 0.06	1.0	0.26	1394	32
		9-7-54 1245	1[b]	3140	8.0	260 12.97	146 12.00	340 14.79	7.2 0.18	0 0	364 5.96	1440 30.00	150 4.23	2.0 0.03	1.1	0.78	2702	37
		5-10-55 1200	15[b]	2058	8.1	216 10.78	76 6.25	176 7.66	5.8 0.15	0 0	390 6.40	769 16.02	75 2.11	1.0 0.02	1.1	0.76	1620	31
		9-14-55 1215	1[b]	3425	7.9	278 13.87	168 13.81	340 14.79	7.6 0.20	0 0	339 5.56	1570 32.71	142 4.00	0 0	0.7	0.74	2957	35
		1-26-56 1220	1500[b]	1225	7.0	152 7.58	43 3.53	85 3.70	15 0.40	0 0	195 3.20	527 10.97	41 1.16	1.0 0.02	--	0.28	1000	24
		5-14-56 0950	12.4	1923	7.9	194 9.68	84 6.90	168 7.31	8.2 0.21	0 0	356 5.84	760 15.83	78 2.20	2.5 0.04	0.8	0.58	1595	30
		9-11-56 1050	0.7	3484	7.9	307 15.32	160 14.15	352 15.31	7.6 0.20	0 0	384 6.30	1623 33.82	155 4.37	1.0 0.02	1.2	1.03	2991	34
		5-6-57 1045	4.5	2061	7.9	189 9.43	102 8.38	215 9.35	4.7 0.12	0 0	283 4.64	949 19.77	92 2.59	0.5 0.01	0.8	1.04	1800	34
		9-3-57 1035	0.4	3279	7.8	320 15.97	204 16.77	365 15.88	5.0 0.13	0 0	374 6.14	1828 38.06	150 4.23	1.5 0.02	1.2	1.12	2849	32
Salt Cr.	43-37.0-0.4	12-16-57 1200	1[b]	2920	6.8	317 15.80	174 14.30	193 8.40	18 0.46	0 0	104 1.70	30 0.85	1727 35.92	3.3 0.05	1.08	0.18	2565	22
Santa Clara River	43-37.5	1-5-53 1145	20b	1760	8.2	-- --	-- --	-- --	-- --	10 0.32	378 6.20	-- --	74 2.09	-- --	--	--	--	--
		2-9-53 1045	40[b]	1730	7.9	-- --	-- --	-- --	-- --	0 0	354 5.80	-- --	79 2.23	-- --	--	--	--	--
		3-9-53 1045	25[b]	1675	7.8	-- --	-- --	-- --	-- --	0 0	276 4.52	-- --	81 2.28	-- --	--	--	--	--

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Fruit Growers Laboratories, Santa Paula.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second: Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-37.5	4- 7-53 / 1300	20[b]	1506	8.0	-- / --	-- / --	130 / 5.66	-- / --	0 / 0	285 / 4.68	-- / --	82 / 2.31	-- / --	--	0.52	--	--
		5- 4-53 / 1420	10.4	1628	7.8	170 / 8.48	73 / 6.00	170 / 7.40	3.4 / 0.09	0 / 0	339 / 5.56	699 / 14.56	86 / 2.43	2.0 / 0.03	0.8	0.49	1441	34
		6- 8-53 / 0945	2.8	1760	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	354 / 5.80	-- / --	90 / 2.50	-- / --	--	0.56	--	35
		7- 6-53 / 0830	1.8	1869	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	339 / 5.52	-- / --	112 / 3.11	-- / --	--	0.58	--	38
		8- 3-53 / 0940	2b	2105	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	376 / 7.80	-- / --	122 / 3.40	-- / --	--	0.74	--	38
		9- 9-53 / 1200	2[b]	2457	7.7	190 / 9.48	96 / 7.89	290 / 12.62	6.6 / 0.17	0 / 0	329 / 5.40	970 / 20.21	134 / 3.78	7.9 / 0.13	1.0	0.92	1944	42
		10-13-53 / 1215	1	2577	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	339 / 5.52	-- / --	146 / 4.10	-- / --	--	0.94	--	39
		11-12-53 / 1100	1.6	2770	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	373 / 6.10	-- / --	144 / 4.01	-- / --	--	0.90	--	[illegible]
		12- 8-53 / 1015	6.4	2040	8.3	-- / --	-- / --	-- / --	-- / --	0 / 0	205 / 3.32	-- / --	89 / 2.50	-- / --	--	0.46	--	35
		1- 5-54 / 1100	10.3	1801	8.3	-- / --	-- / --	-- / --	-- / --	0 / 0	305 / 5.00	-- / --	70 / 1.91	-- / --	--	0.52	--	31
		2- 8-54 / 1100	20.8	1828	8.4	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.72	-- / --	69 / 1.91	-- / --	--	0.50	--	31
		3- 1-54 / --	19.5	1818	7.8	182 / 9.08	70 / 5.75	150 / 6.53	5.4 / 0.14	0 / 0	342 / 5.60	648 / 13.51	63 / 1.78	4.0 / 0.06	--	0.44	1418	31
		3- 8-54 / 1130	15[b]	1801	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.72	-- / --	66 / 1.81	-- / --	--	0.46	--	32
		4- 5-54 / 1200	25[b]	1779	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	339 / 5.52	-- / --	71 / 2.00	-- / --	--	0.54	--	34
		5- 3-54 / 0945	13.3	1824	8.2	137 / 6.84	91 / 7.48	160 / 6.96	7.6 / 0.2	0 / 0	317 / 5.20	667 / 13.90	70 / 1.97	3.5 / 0.06	0.8	0.46	1386	33
		6- 7-54 / 1100	5b	2364	8.2	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.72	-- / --	120 / 3.31	-- / --	--	0.76	--	38

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE G 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second: Feet	ECx10 at 25 C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-37.5	7- 2-54 1130	2[b]	2358	8.2	--/--	--/--	--/--	--/--	0/0	332/5.42	--/--	128/3.60	--/--	--	0.64	--	41
		8- 9-54 1120	1.3	2874	7.9	--/--	--/--	--/--	--/--	0/0	332/5.42	--/--	172/4.81	--/--	--	1.06	--	41
		9- 7-54 1200	0.9	2800	7.9	217/5.74	118/2.38	340/4.13	7.2/0.1	0/0	359/5.88	1198/24.95	159/4.48	0/0	1.1	1.04	2250	42
		10-19-54 1050	1.2	2797	8.0	--/--	--/--	--/--	--/--	0/0	376/6.12	--/--	161/4.50	--/--	--	1.06	--	43
		11-17-54 1115	1	3076	8.1	--/--	--/--	--/--	--/--	12/0.40	366/6.00	--/--	166/4.61	--/--	--	0.98	--	41
		12- 7-54 1100	1.6	2906	7.9	--/--	--/--	--/--	--/--	0/0	351/4.10	--/--	142/4.00	--/--	--	0.70	--	69
		1-10-55 1400	80	1265	7.4	--/--	--/--	--/--	--/--	0/0	204/3.32	--/--	62/1.71	--/--	--	0.44	--	29
		2- 7-55 1030	16	1724	7.7	--/--	--/--	--/--	--/--	0/0	344/5.61	--/--	65/1.80	--/--	--	0.46	--	30
		3- 7-55 1025	15.8	1748	7.9	--/--	--/--	--/--	--/--	0/0	315/5.12	--/--	65/1.80	--/--	--	0.36	--	30
		4- 6-55 1015	5	1923	7.9	--/--	--/--	--/--	--/--	0/0	320/5.22	--/--	78/2.20	--/--	--	0.58	--	30
		5-10-55 1105	14.8	1880	8.2	211/10.53	65/5.34	156/6.79	5.7/0.15	14/0.48	351/5.76	696/14.50	69/1.95	1.0/0.02	1.0	0.92	1415	30
		6- 6-55 1030	9	2070	7.9	--/--	--/--	--/--	--/--	0/0	317/5.20	--/--	76/2.11	--/--	--	0.62	--	29
		7-12-55 1100	2.2	1835	7.9	--/--	--/--	--/--	--/--	0/0	288/4.71	--/--	74/2.10	--/--	--	0.96	--	29
		8- 8-55 1010	1.2	2740	7.9	--/--	--/--	--/--	--/--	0/0	300/4.91	--/--	146/4.10	--/--	--	1.52	--	35
		8- 9-55 1140	1[b]	2865	7.6	185/9.23	121/9.95	300/13.05	5.4/0.14	0/0	318/5.22	1153/24.02	153/4.31	0.7/0.01	--	0.62	2213	40
		9-14-55 1105	0.4	3086	8.0	299/11.43	126/10.36	400/17.40	6.5/0.17	0/0	329/5.40	1343/27.98	184/5.19	0/0	1.2	0.94	2689	44

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-37.5	10-12-55 1100	1	3021	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	303 / 4.92	-- / --	161 / 4.50	-- / --	--	1.04	--	42
		11- 8-55 1045	0.8	3144	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	349 / 5.71	-- / --	174 / 4.90	-- / --	--	0.5	--	42
		12-14-55 0945	1.3	2969	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	351 / 5.72	-- / --	160 / 4.50	-- / --	--	0.47	--	39
		1- 9-56 1100	1.5	2808	8.0	-- / --	-- / --	-- / --	-- / --	10 / 0.33	342 / 5.60	-- / --	145 / 4.10	-- / --	--	0.85	--	39
		1-26-56 1200	700	1190	7.1	147 / 7.34	40 / 3.29	90 / 3.92	15 / 0.39	0 / 0	188 / 3.08	500 / 10.42	43 / 1.21	1.5 / 0.02	--	0.34	1035	26
		2-14-56 1030	17.8	2028	8.0	167 / 8.33	97 / 7.97	160 / 6.96	2.9 / 0.07	0 / 0	361 / 5.92	735 / 15.32	78 / 2.20	3.4 / 0.06	--	1.15	1591	30
		3- 5-56 1100	16.5	1942	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	325 / 5.31	-- / --	77 / 2.11	-- / --	--	1.30	--	30
		4- 9-56 1050	4.9	2347	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	303 / 4.92	-- / --	115 / 3.20	-- / --	--	0.58	--	37
		5-14-56 0840	12.4	1835	7.9	189 / 9.43	75 / 6.17	156 / 6.79	9.5 / 0.24	0 / 0	364 / 5.96	682 / 14.20	74 / 2.09	2.8 / 0.05	0.7	0.46	1392	30
		6-11-56 0955	2[b]	1739	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	281 / 4.60	-- / --	72 / 2.00	-- / --	--	0.64	--	27
		7- 9-56 0915	1.2	2639	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	373 / 6.11	-- / --	137 / 3.81	-- / --	--	0.72	--	37
		8- 2-56 1200	2	3050	7.6	208 / 10.4	133 / 10.90	354 / 15.40	7.5 / 0.19	0 / 0	360 / 5.90	1289 / 26.85	158 / 4.45	3.5 / 0.06	1.1	1.33	2443	42
		8- 6-56 1000	0.9	3030	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	395 / 6.43	-- / --	168 / 4.70	-- / --	--	0.88	--	40
		9-11-56 1030	0.7	3257	7.8	246 / 12.28	128 / 10.52	385 / 16.75	6.6 / 0.17	0 / 0	386 / 6.32	1355 / 28.23	195 / 5.50	0.4 / 0.01	1.0	1.15	2747	42
		10- 9-56 0930	0.6	3257	7.9	-- / --	-- / --	-- / --	-- / --	0 / 0	288 / 4.71	-- / --	183 / 5.11	-- / --	--	1.14	--	43
		11- 7-56 0950	0.7	3636	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	403 / 6.60	-- / --	162 / 4.51	-- / --	--	1.42	--	35

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second Feet	$EC \times 10^6$ at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Santa Clara River	43-37.5	12-10-56 1045	0.9	2940	8.1	--/--	--/--	--/--	--/--	0/0	364/5.92	--/--	190/5.31	--/--	--	1.16	--	40
		1- 7-57 0915	1.9	3378	7.4	--/--	--/--	--/--	--/--	0/0	386/6.31	--/--	182/5.10	--/--	--	1.24	--	39
		1-13-57 1600	11.2	2222	7.6	205/10.23	87/7.15	228/9.92	9.6/0.25	0/0	239/3.91	991/20.65	122/3.44	4.5/0.07	4.5	0.74	1900	36
		2- 4-57 1215	1907	668	7.2	--/--	--/--	--/--	--/--	0/0	187/3.06	--/--	20/0.56	--	--	--	--	--
		2- 7-57 0950	4.0	2519	7.9	--/--	--/--	--/--	--/--	0/0	331/5.41	--/--	118/3.30	--/--	--	0.80	--	35
		2-10-57 1030	11.7	2400	7.8	--/--	--/--	--/--	--/--	0/0	382/6.22	--/--	105/2.91	--/--	--	0.79	711	31
		3- 4-57 0950	16.1	2164	7.8	171/8.53	111/9.12	176/7.66	7.5/0.19	0/0	351/5.75	830/17.30	84/2.37	2.5/0.04	--	0.60	1690	30
		4- 8-57 1000	10.4	1890	7.7	--/--	--/--	--/--	--/--	0/0	267/4.32	--/--	78/2.20	--/--	--	0.57	--	31
		5- 6-57 1015	45[b]	1862	7.8	172/8.58	92/7.56	188/8.18	4.5/0.12	0/0	293/4.80	804/16.76	87/2.45	0.5/0.01	0.8	0.72	1580	33
		6-10-57 0915	2	2444	7.5	--/--	--/--	--/--	--/--	0/0	364/5.92	--/--	128/3.60	--/--	--	0.94	--	36
		7- 1-57 0950	0.8	2754	7.6	--/--	--/--	--/--	--/--	0/0	348/5.70	--/--	161/4.50	--/--	--	1.06	--	40
		8- 5-57 0900	0.5	3484	8.0	--/--	--/--	--/--	--/--	0/0	300/4.91	--/--	209/5.90	--/--	--	1.31	--	43
		9- 3-57 1005	0.4	3229	7.6	266/13.27	159/13.07	456/19.83	6.9/0.18	0/0	372/6.10	1638/34.10	232/6.54	1.5/0.02	1.0	1.56	2966	40
		10- 7-57 0950	0.5	3509	7.9	--/--	--/--	--/--	--/--	0/0	335/5.44	--/--	225/6.31	--/--	--	1.36	--	43
		11- 4-57 1020	1	2959	7.8	--/--	--/--	--/--	--/--	0/0	368/6.01	--/--	194/5.41	--/--	--	1.2	--	41
		12- 2-57 0950	1.1	2915	7.9	--/--	--/--	--/--	--/--	0/0	342/5.60	--/--	196/5.50	--/--	--	1.12	--	42

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-37.5	12-16-57[c] 1045	188	1038	7.3	100 / 5.00	32 / 2.60	71 / 3.08	11 / 0.27	0 / 0	165 / 2.70	329 / 6.85	55 / 1.55	2.07 / 0.03	1.0	0.25	711	28
		12-16-57[c] 1150	180[b]	1008	7.2	88 / 4.38	38 / 3.12	65 / 2.82	9.4 / 0.24	0 / 0	153 / 2.50	311 / 6.48	47 / 1.32	1.18 / 0.19	0.6	0	713	27
		1- 6-58 1015	2.2	3225	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	392 / 6.41	-- / --	178 / 5.00	-- / --	--	1.21	--	37
		2-17-58[c] 1000	10	2400	8.1	212 / 10.6	98 / 8.10	201 / 8.75	3.9 / 0.10	0 / 0	372 / 6.10	908 / 18.88	98 / 2.76	0.8 / 0.01	0.6	0.3	1680	32
		3- 3-58 0845	16	2068	8.1	-- / --	-- / --	-- / --	-- / --	0 / 0	344 / 5.61	-- / --	83 / 2.30	-- / --	--	0.75	--	29
		4- 7-58 1000	1680	845	7.3	85 / 4.24	34 / 2.79	47 / 2.04	4.4 / 0.11	0 / 0	167 / 2.74	286 / 5.95	21 / 0.59	1.3 / 0.02	0.4	0.21	634	23
		4- 8-58[c] 1145	646	925	7.5	-- / --	-- / --	-- / --	-- / --	0 / 0	214 / 3.50	-- / --	33 / 0.93	-- / --	--	0.60	--	--
		5- 5-58 1020	41	1567	7.8	169 / 8.43	60 / 4.93	120 / 5.22	5.5 / 0.14	0 / 0	315 / 5.16	530 / 11.05	66 / 1.86	3.5 / 0.06	0.9	0.56	1235	26
		6- 9-58 0905	3.1	2514	7.7	-- / --	-- / --	-- / --	-- / --	0 / 0	354 / 5.80	-- / --	124 / 3.51	-- / --	--	0.69	--	35
Santa Clara River	43-38.8	3- 1-54 0830	0.2	1562	8.0	178 / 8.88	56 / 4.60	120 / 5.22	4.5 / 0.12	0 / 0	353 / 5.78	529 / 11.03	50 / 1.41	8.4 / 0.14	--	0.40	1185	28
		3-14-55 0930	10[b]	1428	7.7	164 / 8.2	54 / 4.5	124 / 5.41	5.1 / 0.13	0 / 0	317 / 5.2	54 / 11.25	53 / 1.5	4.2 / 0.07	0.6	0.46	1174	30
		1-26-56 1135	900[b]	1428	7.1	187 / 9.33	54 / 4.44	93 / 4.05	13 / 0.33	0 / 0	181 / 2.96	673 / 14.02	43 / 1.21	1.0 / 0.02	--	0.44	1280	22
		2- 9-56 0930	10	1739	7.9	181 / 9.05	63 / 5.20	123 / 5.36	4.0 / 0.10	0 / 0	339 / 5.55	582 / 12.13	59 / 1.65	3.7 / 0.06	0.7	0.28	1325	27
		2- 7-57 0915	3.5	1550	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	330 / 5.41	-- / --	65 / 1.83	-- / --	--	--	--	--
		8- 6-57[c] 1010	0.3[b]	2008	7.8	178 / 8.90	81 / 6.70	184 / 8.00	6.0 / 0.17	0 / 0	372 / 6.10	756 / 15.75	75 / 2.10	0 / 0	0.3	0.85	1399	34
Potrero Cr.	43-38.9-0.1	3- 1-54 0915	0.5[b]	7936	7.8	474 / 23.6	528 / 43.4	1250 / 54.4	14. / 0.36	0 / 0	632 / 10.36	4835 / 100.7	230 / 6.49	7.4 / 0.12	--	2.12	8100	45

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Discharge Second Feet	ECx10[6] at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Potrero Cr.	43-38.9-0.1	3-14-55 0945	0.5	7845	8.0	480 / 24.0	524 / 43.4	1145 / 49.8	15 / 0.40	0 / 0	580 / 9.5	4810 / 200.2	292 / 8.25	3.8 / 0.06	1.6	3.14	8755	43
Santa Clara River	43-39.0	2-17-58[c] 0900	10[b]	1902	7.9	194 / 9.70	83 / 6.8	142 / 6.16	4.6 / 0.12	0 / 0	384 / 6.30	714 / 14.85	65 / 1.83	1.1 / 0.02	0.6	0.8	1330	27
Santa Clara River	43-39.5	1-27-56 1000	--	7940	8.1	520 / 26.0	373 / 31.70	1115 / 48.50	1.2 / 0.05	0 / 0	372 / 6.1	3960 / 82.5	613 / 17.3	8.6 / 0.14	1.6	3.80	7580	46
		8- 2-56 1115	--	7940	7.6	464 / 23.2	517 / 42.50	1012 / 44.0	16 / 0.41	0 / 0	485 / 7.95	4389 / 91.43	411 / 11.60	3.3 / 0.05	2.8	4.64	7634	40
San Martinez Grande Canyon Cr.	43-39.5-0.2	8-12-53 0940	0.05	6369	7.7	488 / 24.35	315 / 25.89	960 / 41.76	10 / 0.26	0 / 0	305 / 5.00	3330 / 69.29	567 / 16.07	3.7 / 0.06	--	--	6560	45
		3- 1-54 1100	1[b]	6535	7.9	498 / 24.8	357 / 29.4	1000 / 43.5	12 / 0.32	0 / 0	605 / 9.92	3441 / 71.7	530 / 14.9	2.0 / 0.03	--	2.82	6357	44
		8- 3-54 1000	0.1[b]	4255	7.8	331 / 16.52	229 / 18.82	520 / 22.62	7.1 / 0.18	0 / 0	285 / 4.68	2176 / 45.34	338 / 9.53	1.5 / 0.02	--	1.72	4050	39
		3-14-55 1230	0.01	6666	8.0	536 / 26.8	372 / 30.8	867 / 37.7	15 / 0.37	0 / 0	360 / 5.9	3610 / 75.2	578 / 16.3	0.7 / 0.01	1.8	3.95	1802	[illegible]
		1-26-56 1115	40[b]	3400	7.4	492 / 24.55	147 / 12.08	256 / 11.14	11 / 0.28	0 / 0	139 / 2.28	2089 / 43.52	104 / 2.93	2.0 / 0.03	--	1.10	3510	23
		2- 9-56 0905	0.1	6590	7.7	474 / 23.70	308 / 25.30	807 / 35.10	9.6 / 0.25	0 / 0	421 / 6.90	3080 / 64.1	489 / 13.8	2.7 / 0.04	1.4	3.00	6061	42
		2- 7-57 0845	0.1	6450	7.8	-- / --	-- / --	-- / --	-- / --	0 / 0	439 / 7.20	-- / --	510 / 14.38	-- / --	--	--	--	--
		8- 6-57 1040	--	6957	8.3	446 / 22.24	351 / 28.88	932 / 40.50	16 / 0.40	14 / 0.48	220 / 360	3474 / 72.33	584 / 16.45	0 / 0	0.9	2.35	6042	44
		12-16-57 1130	0.5[b]	2247	7.3	210 / 10.50	766 / 6.30	207 / 9.00	6.6 / 0.17	0 / 0	159 / 2.60	990 / 20.61	118 / 3.30	0 / 0	0.2	0.50	2457	35
		2-17-58 1120	0.1	6717	7.8	465 / 23.2	323 / 26.6	837 / 36.4	17.1 / 0.44	0 / 0	424 / 6.95	3240 / 67.39	475 / 13.40	0 / 0	1.5	1.6	4030	41
San Martinez Grande Canyon Cr.	43-39.5-0.5	8- 9-55 0940	0.2	6410	7.7	334 / 16.67	370 / 30.41	788 / 34.28	8.4 / 0.22	0 / 0	303 / 4.96	3065 / 63.85	494 / 13.93	0 / 0	--	2.32	5671	42
San Martinez Grande Canyon Cr.	43-39.5-2.0	8-12-53 1000	0.01[b]	9803	7.7	490 / 24.45	649 / 53.35	1700 / 73.95	19.0 / 0.49	0 / 0	578 / 9.48	6246 / 130.1	435 / 12.27	1.5 / 0.02	--	4.90	10850	49

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE C 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second Feet	ECx10^6 at 25°C.	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Per Cent Na
San Martinez Grande Canyon Cr.	43-39.5-2.0	3-1-54 1030	1[b]	8547	7.8	528/26.4	536/44.1	1350/58.7	24/0.61	0/0	695/11.40	5068/105.6	405/11.42	2.5/0.04	--	3.76	8705	20
		8-3-54 1100	0.01[b]	9900	8.0	484/24.2	650/53.8	1764/76.7	25/0.65	0/0	412/6.75	6300/131.2	520/14.65	2.0/0.03	1.7	8.15	8544	49
		3-14-55 1255	0.01	8550	8.0	556/27.8	468/38.8	1079/46.9	22/0.55	0/0	659/10.8	4411/91.9	355/10.0	6.6/0.11	4.2	4.85	8396	41
		2-9-56 0915	0.1	8910	7.8	434/21.70	565/46.50	1319/57.30	12/0.32	0/0	552/9.05	5016/104.5	439/12.4	3.7/0.06	2.2	4.40	9209	46
		2-7-57 0900	0.1	6800	7.9	386/19.26	448/36.83	960/41.76	12/0.31	0/0	494/8.10	3960/82.49	310/8.74	0/0	--	3.0	7000	43
		2-17-58[c] 1100	0.1	11150	7.5	457/22.80	511/42.0	1805/78.50	23/0.60	0/0	610/10.00	4250/88.50	1598/45.06	0.5/0.01	1.5	4	7800	55
San Martinez Chiquita Cr.	43-40.4-0.4	1-27-52 1030	--	7100	8.2	--/--	--/--	--/--	--/--	0/0	704/11.55	--/--	1455/41.3	--/--	--	1.7	5000[b]	--
		1-26-56 1110	35[b]	1076	7.0	155/7.73	31/2.55	64/2.78	11/0.27	0/0	222/3.64	369/7.69	64/1.80	1.0/0.02	--	0.50	835	21
		12-16-57[c] 1120	0.5[b]	317	7.2	30/1.50	4.9/0.40	30/1.29	5.9/0.15	0/0	116/1.90	59/1.23	9.0/0.25	0/0	0	0.04	255	39
Castaic Cr.	43-42.0-0.6	1-26-56 1100	100[b]	502	7.5	64/3.19	14/1.15	28/1.22	9.4/0.24	0/0	154/2.52	123/2.56	19/0.54	1.5/0.02	--	0.24	--	21
		12-16-57[c] 1100	60[b]	529	7.5	52/2.60	14/1.15	31/1.34	35/0.09	0/0	126/2.07	114/2.37	28/0.79	2.5/0.04	0	0.17	--	26
Santa Clara River	43-45.4	8-11-53 1625	1[b]	1353	7.8	124/6.19	36/2.96	85/3.70	6.0/0.15	0/0	329/5.40	279/5.81	50/1.41	16/0.26		0.72	800	29
		3-1-54 1015	0.2	2577	7.7	293/14.6	112/9.21	215/9.35	6.2/0.16	0/0	549/9.00	937/19.5	128/3.61	4.0/0.06	--	0.72	2156	28
		8-3-54 0815	0.4[b]	1600	8.2	208/10.38	73/6.00	125/5.44	6.4/0.16	25/0.84	415/6.80	553/11.53	74/2.09	13/0.21	--	0.80	1330	25
		3-14-55 1115	0.12	2290	7.7	278/13.9	97/8.0	163/7.1	6.5/0.17	0/0	506/8.3	860/17.92	117/3.3	2.8/0.05	0.8	1.0	1900	24
		8-9-55 0745	2[b]	1397	8.1	156/7.78	55/4.52	78/3.39	12/0.31	0/0	376/6.16	361/7.53	64/1.80	25/0.40	--	0.40	1039	21

a. Analyzed by Department of Water Resources unless otherwise indicated.

b. Estimated.

c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2
MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date / Time[a]	Discharge: Second: Feet	$EC\times10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Santa Clara River	43-45.4	1-26-56 1045	315	628	7.3	82 / 4.09	18 / 1.48	28 / 1.22	9.0 / 0.23	0 / 0	161 / 2.64	185 / 3.86	14 / 0.39	1.0 / 0.02	--	0.20	450	17
		2- 8-56 1500	1.2	768	8.1	63 / 3.15	25 / 2.05	60 / 2.63	2.6 / 0.07	0 / 0	256 / 4.2	104 / 2.16	57 / 1.60	0.4 / 0.01	0.2	0.42	476	33
		2- 9-56 0810	0.1	2685	7.7	229 / 11.45	137 / 11.25	217 / 9.45	8.3 / 0.21	0 / 0	403 / 6.60	1008 / 21.0	145 / 4.1	9.4 / 0.15	0.6	0.83	2165	29
		6- 6-56 1430	2.5	1425	7.5	156 / 7.78	51 / 4.19	83 / 3.61	14 / 0.37	0 / 0	410 / 6.72	322 / 6.71	66 / 1.86	18 / 0.29	--	0.82	1020	23
		8- 2-56 0900	2.5	1305	8.1	119 / 5.95	52 / 4.25	84 / 3.66	9.1 / 0.23	0 / 0	278 / 4.55	336 / 7.00	66 / 1.85	28 / 0.46	0.5	0.27	883	21
		2- 7-57 0755	0.2	2127	7.7	255 / 12.72	108 / 8.88	168 / 7.31	5.8 / 0.15	0 / 0	434 / 7.12	924 / 19.26	106 / 2.99	1.0 / 0.02	--	0.82	1965	25
		8- 6-57[c] 0900	0.5[b]	1295	8.5	131 / 6.55	49 / 4.00	97 / 4.21	5.0 / 0.13	15 / 0.51	315 / 5.16	342 / 7.12	65 / 1.83	22 / 0.35	0.1	1.25	1020	28
		12-16-57[c] 1045	50[b]	1058	7.2	103 / 5.12	40 / 3.25	64 / 2.78	5.5 / 0.14	0 / 0	137 / 2.25	399 / 8.31	33 / 0.93	3.1 / 0.05	0	0.43	785	25
		2-17-58[c] 0820	0.2	2430	7.7	257 / 12.80	113 / 9.30	192 / 8.35	7.8 / 0.20	0 / 0	552 / 9.05	874 / 18.2	105 / 2.96	0.8 / 0.01	0.4	0.5	1700	27
		2-25-58[c] 1000	90	782	7.7	69 / 3.45	35 / 2.90	44 / 1.89	4.9 / 0.13	0 / 0	125 / 2.05	277 / 5.76	15 / 0.42	1.1 / 0.02	0.4	0.4	312	29
San Francisquito Cr.	43-46.2-1.0	4- 1-58 1600	300[b]	357	7.4	42 / 2.10	13 / 1.07	12 / 0.52	2.9 / 0.07	0 / 0	163 / 2.67	42 / 0.88	4.0 / 0.11	0.6 / 0.01	0.3	0.12	238	11
Santa Clara River (South Fork)	43-47.1-1.3	1-26-56 1000	700[b]	684	7.4	78 / 3.89	24 / 1.97	28 / 1.22	36 / 0.09	0 / 0	142 / 2.32	215 / 4.48	17 / 0.48	1.8 / 0.03	--	0.34	510	17
		12-16-57[c] 1030	50[b]	1054	7.4	90 / 4.50	32 / 2.65	83 / 3.60	5.5 / 0.14	0 / 0	146 / 2.40	371 / 7.72	31 / 0.87	1.8 / 0.03	0.8	0.05	761	33
		4- 1-58 1505	300[b]	570	7.2	-- / --	-- / --	-- / --	-- / --	0 / 0	148 / 2.43	-- / --	11 / 0.31	-- / --	--	--	--	--
Newhall Cr.	43-47.1-2.6-0.2	1-26-56 1020	50[b]	260	6.9	25 / 1.25	7.0 / 0.58	16 / 0.70	7.0 / 0.18	0 / 0	56 / 0.92	72 / 1.50	12 / 0.34	4.3 / 0.07	--	0.16	170	26
Newhall Cr.	43-47.1-2.6-0.9	12-16-57[c] 1000	7[b]	489	7.2	52 / 2.60	11 / 0.90	21 / 0.90	2.7 / 0.07	0 / 0	105 / 1.72	75 / 1.56	30 / 0.85	12 / 0.19	0.3	0	308	20

a. Analyzed by Department of Water Resources unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 2

MINERAL ANALYSES OF SURFACE WATERS SANTA CLARA RIVER SYSTEM

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

(continued)

Stream Name	Station Number	Date Time[a]	Discharge: Second: Feet	$EC \times 10^6$ at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Newhall Cr.	43-47.1-2.6-0.9	4- 1-58 1445	50[b]	341	7.2	43 / 2.15	9.0 / 0.70	11 / 0.46	2.3 / 0.06	0 / 0	107 / 1.75	72 / 1.49	5.0 / 0.15	2.5 / 0.04	0.3	0.09	255	14
Newhall Cr.	43-47.1-2.6-3.7	3-18-52[c] 1230	5[b]	498	7.3	72 / 3.58	16 / 1.33	10 / 0.38	-- / --	0 / 0	84 / 1.38	179 / 3.72	11 / 0.31	--	--	0	389	7
Santa Clara River (South Fork)	43-47.1-2.7	1-10-54 1500	3[b]	2410	7.3	224 / 11.2	112 / 9.25	263 / 11.45	8.4 / 0.22	0 / 0	192 / 3.15	1156 / 24.1	163 / 4.6	6.1 / 0.10	1.7	0.47	2201	36
		1-26-56 1030	500[b]	784	7.4	111 / 5.54	29 / 2.38	41 / 1.78	7.0 / 0.18	0 / 0	178 / 2.92	297 / 6.19	20 / 0.56	0.8 / 0.01	--	0.20	655	17
Pico Canyon Cr.	43-47.1-3.2-2.7	9- 4-52 1200	25[b]	4040	7.6	452 / 22.6	166 / 13.9	437 / 19.00	-- / --	0 / 0	421 / 6.9	2140 / 44.70	103 / 2.9	11 / 0.18	--	1.15	--	34
		2-17-58[d] 0840	1.0	4710	8.1	353 / 17.6	321 / 26.4	515 / 22.4	7.8 / 0.20	0 / 0	442 / 7.25	2667 / 55.50	67 / 1.89	1.2 / 0.02	1.5	0.8	3295	34
Pico Canyon Cr.	43-47.1-3.2-3.6	3-14-55 1030	0.01	5180	8.0	448 / 22.4	377 / 31.2	662 / 28.8	12 / 0.32	0 / 0	540 / 8.85	3270 / 68.2	165 / 4.65	1.5 / 0.03	2.0	1.85	5819	35
Bouquet Canyon Cr.	43-48.1-0.7	4- 1-58 1520	400[b]	394	7.4	44 / 2.20	11 / 0.90	24 / 1.04	7.0 / 0.18	0 / 0	214 / 3.50	13 / 0.27	15 / 0.42	1.0 / 0.02	0.4	0.16	270	24
Dry Canyon Cr.	43-48.1-0.7-0.1	4- 1-58 1525	5[b]	163	7.3	14 / 0.70	5.0 / 0.41	8.0 / 0.35	3.0 / 0.08	0 / 0	43 / 0.70	31 / 0.65	6.0 / 0.17	1.0 / 0.02	0.2	0.06	110	23
Santa Clara River	43-48.3	1-26-56 0930	40[b]	279	7.7	20 / 1.00	2.0 / 0.16	39 / 1.70	3.3 / 0.08	0 / 0	139 / 2.28	20 / 0.42	5.0 / 0.14	2.8 / 0.05	--	1.42	235	58
		4- 1-58 1700	600[b]	309	7.4	33 / 1.65	5.5 / 0.45	24 / 1.04	3.0 / 0.08	0 / 0	153 / 2.51	18 / 0.37	8.0 / 0.23	0.7 / 0.01	0.2	0.60	223	33

a. Analyzed by Department of Water Resources, unless otherwise indicated.
b. Estimated.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 3

MINERAL ANALYSES OF SURFACE WATERS CALLEGUAS CREEK SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Mineral Constituents in parts per million / equivalents per million

Stream Name	Station Number	Date / Time[a]	Discharge Second Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
Calleguas Cr.	44-4.9	1-27-56 1455	75[b]	366	7.2	31 / 1.55	13 / 1.07	19 / 0.83	5.1 / 0.13	0 / 0	102 / 1.68	54 / 1.13	19 / 0.54	9.0 / 0.15	--	0.21	264	23
Long Grade Cr.	44-5.1-0.1	1-27-56 1520	20[b]	237	6.9	13 / 0.65	9.0 / 0.74	17 / 0.74	3.4 / 0.09	0 / 0	61 / 1.00	36 / 0.75	18 / 0.51	5.0 / 0.08	--	0.17	183	34
Calleguas Cr.	44-6.5	4-8-58[c] 1500	64	637	8.0	50 / 2.50	26 / 2.10	48 / 2.10	8.0 / 0.20	0 / 0	201 / 3.30	106 / 2.21	55 / 1.55	3.9 / 0.06	0.2	0	384	30
Conejo Cr.	44-7.9-3.0	1-27-56 1535	40[b]	352	6.9	25 / 1.25	14 / 1.15	20 / 0.87	3.0 / 0.08	0 / 0	88 / 1.44	60 / 1.25	21 / 0.59	9.3 / 0.15	--	0.08	264	26
Conejo Cr.	44-7.9-5.1	1-27-56 1415	40[b]	394	6.8	31 / 1.55	15 / 1.20	25 / 1.11	2.8 / 0.07	0 / 0	104 / 1.70	70 / 1.45	23 / 0.65	11 / 0.18	0.2	0.11	277	28
Arroyo Santa Rosa Cr.	44-7.9-7.0-2.3	1-27-56 1400	5[b]	262	7.2	20 / 1.00	10 / 0.82	12 / 0.52	2.1 / 0.05	0 / 0	73 / 1.20	37 / 0.77	10 / 0.28	7.5 / 0.12	--	0.30	227	21
Conejo Cr. (South Branch)	44-7.9-11.9-1.4	1-27-56 1550	10[b]	231	7.2	17 / 0.85	8.0 / 0.66	16 / 0.70	2.9 / 0.07	0 / 0	66 / 1.08	23 / 0.48	18 / 0.51	8.8 / 0.14	--	0.17	200	31
Calleguas Cr.	44-9.7	1-19-55 1430	5[b]	5000	7.6	158 / 7.9	118 / 9.8	904 / 39.3	16 / 0.40	0 / 0	195 / 3.2	1550 / 32.29	730 / 20.6	16 / 0.26	0.3	2.30	3709	69
		1-27-56 1430	25[b]	1117	6.7	162 / 8.1	27 / 2.20	35 / 1.50	12 / 0.30	0 / 0	131 / 2.15	419 / 8.73	34 / 0.95	25 / 0.40	0.6	0.13	845	12
		2-4-58 0945	104	961	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	187 / 3.06	-- / --	29 / 0.82	-- / --	--	--	--	--
Arroyo Simi Cr.	44-12.2-5.8-2.7	1-13-57 1055	1.8	2272	7.4	437 / 21.81	77 / 6.33	108 / 4.70	12 / 0.32	0 / 0	290 / 4.76	1268 / 26.42	57 / 1.61	2.5 / 0.04	--	1.56	2330	14
		2-4-58 1120	275	884	7.4	138 / 6.89	22 / 1.81	24 / 1.04	5.3 / 0.14	0 / 0	143 / 2.35	334 / 6.95	15 / 0.42	0.9 / 0.01	0.5	0.39	677	11
Arroyo Simi Cr.	44-12.2-5.8-3.3	1-27-56 1300	0.01[b]	2040	7.3	264 / 13.17	60 / 4.93	114 / 4.96	8.9 / 0.23	0 / 0	183 / 3.00	840 / 17.00	87 / 2.45	13 / 0.20	--	0.69	1634	21

a. Analyzed by Department of Water Resources, unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE G 3
MINERAL ANALYSES OF SURFACE WATERS CALLEGUAS CREEK SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Stream Name	Station Number	Date Time[a]	Dis-charge: Second: Feet	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Cent Na
						Mineral Constituents in parts per million / equivalents per million												
Arroyo Simi Cr.	44-12.2-5.8-8.5	1-27-56 1210	0.3[b]	2232	7.0	299 14.92	68 5.59	103 4.48	41 1.05	0 0	215 3.52	950 19.79	100 2.82	3.8 0.06	--	0.63	1938	17
		1-13-57 1000	1.2	1587	7.2	264 13.17	44 3.62	85 3.70	9.3 0.24	0 0	188 3.09	733 15.27	77 2.17	2.5 0.06	--	0.94	1525	18
		2-4-58 1235	200	787	7.4	120 5.99	18 1.48	24 1.04	4.2 0.11	0 0	118 1.94	290 6.04	16 0.45	6.2 0.10	0.6	0.38	595	13
Arroyo Simi Cr.	44-12.2-5.8-14.6	1-27-56 1140	1[b]	295	6.6	14 0.70	13 1.07	17 0.74	3.7 0.10	0 0	56 0.92	55 1.14	16 0.45	9.0 0.15	--	0.14	222	28
Chivo Cr.	44-12.2-5.8-14.6-0.1	1-27-56 1130	3[b]	1976	7.4	178 8.88	73 6.00	148 6.44	5.9 0.15	0 0	268 4.40	660 13.75	126 3.55	9.8 0.16	--	0.97	1636	30

a. Analyzed by Department of Water Resources.
b. Estimated.

TABLE C 4

MINERAL ANALYSES OF SURFACE WATERS MALIBU CREEK SYSTEM
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Stream Name	Station Number	Date Time[a]	Discharge: Second-Feet[b]	ECx10^6 at 25°C.	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Per Cent Na
						Mineral Constituents in parts per million / equivalents per million												
La Jolla Cr.	45A-0.1	4-22-55 0915	0.5	1683	7.5	122 / 6.12	67 / 5.53	140 / 6.12	3.9 / 0.10	0 / 0	488 / 8.00	201 / 4.18	205 / 5.77	2.5 / 0.04	0.51	0	1098	34
Big Sycamore Canyon Cr.	45B-0.1	1-14-53 1115	0.2	1217	7.4	117 / 5.85	54 / 4.43	66 / 2.86	1.1 / 0.03	0 / 0	398 / 6.52	166 / 3.45	99 / 2.80	0 / 0	--	0.10	805	22
		4-22-58[c] 0900	10	1183	7.9	96 / 4.80	52 / 4.30	94 / 4.08	2.4 / 0.06	0 / 0	403 / 6.60	173 / 3.60	103 / 2.90	4.3 / 0.07	0.30	0.1	798	31
Little Sycamore Canyon Cr.	45D-0.1	1-14-53 1055	2	1079	8.0	110 / 5.49	63 / 5.18	65 / 2.83	1.9 / 0.05	0 / 0	351 / 5.76	279 / 5.82	91 / 2.56	5.0 / 0.08	--	0.16	809	21
		4-22-58 0830	8	1051	8.0	108 / 5.40	47 / 3.90	48 / 2.10	1.0 / 90.03	0 / 0	339 / 5.55	210 / 4.40	48 / 1.35	3.8 / 0.06	0.18	0.05	698	18

a. Analyzed by Department of Water Resources, unless otherwise indicated.
b. Estimated.
c. Analyzed by Terminal Testing Laboratories, Inc.

APPENDIX H

MINERAL ANALYSES OF GROUND WATERS SUBSEQUENT TO 1952, VENTURA COUNTY

TABLE OF CONTENTS

TABLE H 1

MINERAL ANALYSES OF GROUND WATERS UPPER OJAI VALLEY BASIN NO. 4-1
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity ppm	Per Cent Na
4N/22W- 9P1	7- 8-54	1550	7.2	180 / 9.0	51 / 4.23	94 / 4.10	0.9 / 0.02	0 / 0	621 / 10.2	234 / 4.87	62 / 1.75	8.9 / 0.14	0.3	0.6	1003	7.1	24
9R4	8-25-53[b]	1880	7.4	200 / 10.00	59 / 4.82	163 / 7.08	0.8 / 0.02	0 / 0	635 / 10.41	427 / 8.90	92 / 2.58	22 / 0.36	0.3	1.0	1361	11.5	32
	7- 8-54	2545	7.2	256 / 12.8	77 / 6.4	206 / 8.96	0.7 / 0.02	0 / 0	683 / 11.20	599 / 12.48	115 / 3.25	50 / 0.80	0.6	1.1	1766	15.4	32
	7-16-56	1760	7.6	187 / 9.35	41 / 3.40	137 / 5.97	0.6 / 0.02	0 / 0	418 / 6.85	292 / 6.07	182 / 5.15	215 / 0.35	0.5	0.5	1186	9.4	32
	12-21-56[a]	1805	7.3	160 / 8.00	50 / 4.10	161 / 7.00	2.7 / 0.07	0 / 0	424 / 6.95	303 / 6.31	215 / 6.06	9.0 / 0.15	0.5	0.2	1240	11.2	37
	6-12-57	1769	6.9	178 / 8.88	47 / 3.86	134 / 5.83	0.7 / 0.02	0 / 0	425 / 6.96	283 / 5.89	199 / 5.61	13 / 0.21	0.4	0.6	1208	9.7	31
	9-27-57	1670	8.0	171 / 8.55	47 / 3.85	151 / 6.55	1.0 / 0.03	0 / 0	433 / 7.10	294 / 6.12	209 / 5.90	16 / 0.25	0.2	0.3	1150	10.4	35
	4-22-58[c]	1500	7.9	156 / 7.80	38 / 3.10	127 / 5.51	1.5 / 0.04	0 / 0	451 / 7.40	220 / 4.58	153 / 4.31	2.1 / 0.03	0.2	1.0	1004	8.7	34
4N/22W-12F1	8-25-53[b]	825	7.2	112 / 5.58	30 / 2.43	28 / 1.20	1.3 / 0.04	0 / 0	241 / 3.96	240 / 5.01	12 / 0.33	2.5 / 0.04	0.2	0.2	640	3.7	13
	9-27-57	776	7.4	110 / 5.50	32 / 2.65	22 / 0.94	1.1 / 0.03	0 / 0	229 / 3.75	259 / 5.39	5 / 0.15	0.6 / 0.01	0.5	Tr.	577	3.6	10
	12-18-57	968	7.4	142 / 7.09	35 / 2.88	30 / 1.31	1.2 / 0.03	0 / 0	288 / 4.72	292 / 6.09	12 / 0.34	0.5 / 0.01	0.4	0.1	665	4.2	12
	4-22-58	520	8.2	69 / 3.44	20 / 1.64	15 / 0.65	1.0 / 0.03	14 / 0.48	134 / 2.20	140 / 2.92	7 / 0.20	1.5 / 0.02	0.2	0.0	350	2.3	26

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 1

MINERAL ANALYSES OF GROUND WATERS UPPER OJAI VALLEY BASIN NO. 4-1
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	EC x 10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity ppm	Per Cent Na
4N/22W-12N1	8-25-53[b]	1265	7.0	88 / 4.41	28 / 2.31	131 / 5.70	1.4 / 0.04	0 / 0	545 / 8.94	14 / 0.30	98 / 2.76	32 / 0.51	0.1	1.2	707	5.7	46
	7-16-56[c]	1060	--	75 / 3.75	25 / 2.05	120 / 5.22	1.2 / 0.03	0 / 0	541 / 8.88	9.9 / 0.21	70 / 1.97	6.7 / 0.11	0.0	1.1	732	5.3	47
	12-21-56[c]	1125	6.8	79 / 3.95	30 / 2.46	126 / 5.48	2 / 0.05	0 / 0	537 / 8.80	11 / 0.23	90 / 2.54	14 / 0.02	0.2	0.8	800	5.5	47
	6-12-57	1064	6.6	69 / 3.44	22 / 1.81	132 / 5.74	1.0 / 0.03	0 / 0	519 / 8.51	18 / 0.37	64 / 1.80	15 / 0.23	0.1	1.5	641	5.8	52
	9-27-57	1035	6.8	82 / 4.10	27 / 2.20	126 / 5.50	1.7 / 0.04	0 / 0	531 / 8.70	19 / 0.39	74 / 2.10	32 / 0.51	0.1	0.9	645	5.5	46
	4-22-58[c]	630	7.3	24 / 1.20	11 / 0.90	106 / 4.60	1.0 / 0.03	0 / 0	311 / 5.10	19 / 0.40	40 / 1.13	0.1 / --	1.0	0.8	398	4.4	68
4N/22W-12R3	8-25-53[b]	5640	7.1	247 / 12.33	50 / 4.09	955 / 41.50	4.1 / 0.10	0 / 0	1460 / 24.00	14 / 0.30	1218 / 34.30	0 / 0	--	3.5	2276	41.6	72
	8-22-56[c]	740	7.8	108 / 5.40	31 / 2.50	20 / 0.87	1.0 / 0.03	0 / 0	242 / 3.97	8.0 / 0.23	219 / 4.56	1.8 / 0.03	0	0.1	636	4.6	10

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE [illegible]-2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	EC×10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/22W- 4Q1	7-17-57[b]	767	7.7	92 4.59	29 2.38	34 1.48	0.6 0.02	0 0	234 3.83	179 3.73	18 0.51	18 0.28	0.2	0.1	548	3.9	18
5H1	8-26-54[bc]	836	7.7	100 5.02	32 2.60	30 1.32	1.4 0.04	0 0	223 3.66	207 4.32	22 0.61	19 0.31	0.2	0.1	602	4.0	15
5K1	11- 3-54[b]	790	7.6	109 5.44	30 2.47	27 1.17	1.6 0.04	0 0	246 4.04	186 3.88	2.1 0.59	26 0.42	0.4	0	460	3.7	13
5L8	7- 8-54	833	7.3	106 5.30	25 2.07	34 1.47	1.1 0.03	- -	250 4.10	158 3.50	20 0.55	22 0.36	0.3	0.1	555	3.5	17
	11- 3-54[b]	782	7.5	102 5.09	25 2.06	34 1.48	1.1 0.03	0 0	256 4.20	165 3.43	22 0.62	27 0.44	0.4	0.0	503	3.6	17
	5- 7-58	682	7.8	67 3.34	27 2.22	35 1.52	1.0 0.03	0 0	139 2.28	188 3.92	26 0.73	15 0.24	0.5	Tr.	500	3.8	21
6G1	8-26-54[bc]	900	7.1	105 5.26	33 2.74	38 1.63	1.0 0.03	0 0	235 3.86	209 4.36	41 1.16	19 0.31	0.3	0.1	962	4.4	17
6K5	3-20-53	758	7.5	76 3.79	34 2.79	50 2.17	0.7 0.02	0 0	234 3.84	157 3.28	58 1.64	4.0 0.06	0.5	0.1	501	4.9	25
	12-15-55[d]	---	7.9	101 5.05	32 2.60	64 2.80	--- ---	0 0	225 3.68	176 3.67	111 3.12	--- ---	0.3	---	729	5.4	27
6K7	7-19-56[d]	---	7.5	98 4.90	55 4.50	128 5.54	--- ---	0 0	293 4.80	218 4.55	198 5.58	1.8 0.03	0.4	---	1006	10.0	37
	7-17-57[b]	1250	7.5	148 7.39	29 2.38	113 4.92	1.4 0.04	0 0	275 4.50	205 4.28	203 5.72	6.5 0.11	0.5	0.3	975	7.3	33
6K8	3-20-53	923	7.4	103 5.14	27 2.22	78 3.39	0.7 0.02	0 0	273 4.48	194 4.05	87 2.45	2.5 0.04	0.6	0.1	667	5.6	32
6K9	5-21-58[e]	864	7.7	108 5.40	27 2.20	39 1.70	1.0 0.03	0 0	244 4.00	175 3.64	58 1.63	11 0.18	0.3	0.2	530	3.9	18
6N1	12-18-56	1481	7.3	138 6.89	49 4.03	170 7.40	1.0 0.03	0 0	469 7.69	381 7.93	83 2.34	35 0.57	0.6	0.1	1130	10.7	40

a. Analyzed by D.W.R. unless otherwise stated.
b. For analysis of heavy metal constituents, see Table [illegible]-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Smith - Emery.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE -2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/22W- 6Q1	8-25-53[c]	737	7.2	103 / 5.17	16 / 1.35	32 / 1.37	0.8 / 0.02	0 / 0	214 / 3.51	159 / 3.32	23 / 0.66	3.0 / 0.05	0.3	0	472	2.8	16
	7- 8-54	848	7.3	102 / 5.1	23 / 1.88	30 / 1.31	0.9 / 0.02	0 / 0	217 / 3.55	160 / 3.34	23 / 0.65	39 / 0.63	0.4	0.1	528	3.2	16
	9-26-57	815	7.7	110 / 5.50	30 / 2.50	29 / 1.24	0.9 / 0.02	0 / 0	247 / 4.05	191 / 3.98	28 / 0.80	36 / 0.59	0	0	586	3.8	13
7B1	8-25-53[c]	943	7.5	129 / 6.44	32 / 2.66	32 / 1.39	1.9 / 0.05	0 / 0	299 / 4.90	211 / 4.60	30 / 0.84	16 / 0.25	0.2	0.2	679	4.1	13
7B2	11- 3-54[b]	752	7.7	92 / 4.59	23 / 1.89	42 / 1.83	1.2 / 0.03	0 / 0	278 / 4.56	160 / 3.34	15 / 0.42	2.5 / 0.04	---	0	491	3.8	22
7C1	8-25-52[c]	764	7.6	106 / 5.31	16 / 1.31	37 / 1.62	1.56 / 0.04	0 / 0	242 / 3.96	176 / 3.66	23 / 0.63	11 / 0.17	0.2	0	523	3.0	19
	7- 8-54	837	7.3	103 / 5.15	19 / 1.60	37 / 1.61	0.9 / 0.02	0 / 0	241 / 3.95	175 / 3.65	18 / 0.5	13 / 0.21	0.4	0.1	435	3.2	19
	12-20-56[e]	750	7.5	90 / 4.50	25 / 2.05	44 / 1.91	1.6 / 0.04	0 / 0	253 / 4.15	177 / 3.69	24 / 0.68	0 / 0	0.3	0.3	550	4.0	23
	6-12-57	735	7.4	94 / 4.69	24 / 1.97	37 / 1.61	1.0 / 0.03	0 / 0	246 / 4.03	169 / 3.52	21 / 0.59	6.4 / 0.10	0.3	0.1	552	3.6	19
	9-26-57	757	8.1	104 / 5.20	19 / 1.55	38 / 1.65	1.1 / 0.03	0 / 0	238 / 3.90	175 / 3.65	34 / 0.95	9.9 / 0.16	0	Tr.	512	3.2	20
7D1	12-11-56	1190	6.8	99 / 4.94	40 / 3.29	113 / 4.92	0.8 / 0.02	0 / 0	415 / 6.80	174 / 3.62	81 / 2.28	30 / 0.48	0.8	0.1	805	6.4	37
7D2	12-11-56	727	7.4	92 / 4.59	28 / 2.30	34 / 1.48	1.3 / 0.03	0 / 0	243 / 3.99	162 / 3.37	31 / 0.87	10 / 0.16	0.7	0.1	550	3.8	18
9A1	8-26-54[bc]	2240	7.4	159 / 7.96	28 / 2.30	294 / 12.80	3.2 / 0.08	0 / 0	722 / 11.89	234 / 4.87	238 / 6.70	6.8 / 0.11	0.4	0.8	1363	12.9	55

a. Analyzed by D.W.R. unless otherwise stated.
b. For analysis of heavy metal constituents, see -17.
c. Analyzed by Pacific Chemical Consultants.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H-2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/22W-9B1	8-25-53[c]	1470	7.2	206 / 11.32	55 / 4.55	61 / 2.65	1.7 / 0.04	0 / 0	491 / 8.05	404 / 8.43	37 / 1.05	1.2 / 0.02	1.0	0.3	1149	7.2	15
	7- 8-54	1310	7.3	168 / 8.40	43 / 3.57	54 / 2.36	1.0 / 0.03	0 / 0	388 / 6.55	312 / 6.49	30 / 0.85	9.1 / 0.15	0.8	0.2	875	60	16
	12-21-55	1535	7.2	230 / 11.50	51 / 4.16	73 / 3.19	2.7 / 0.07	0 / 0	595 / 9.75	388 / 8.08	46 / 1.6	0.6 / 0.01	1.4	0.2	1202	7.4	17
	7-17-56	1148	7.7	114 / 5.70	52 / 4.25	62 / 2.70	1.3 / 0.02	0 / 0	244 / 3.0	352 / 7.34	39 / 1.10	5.6 / 0.09	0.9	0.1	766	7.0	21
	12-20-56[e]	965	7.2	105 / 5.25	39 / 3.20	49 / 2.13	2.0 / 0.05	0 / 0	214 / 3.50	302 / 6.29	33 / 0.93	0 / 0	0.5	0.1	652	5.4	20
	6-14-57	833	8.0	116 / 5.79	29 / 2.38	39 / 1.70	0.8 / 0.02	0 / 0	283 / 4.64	184 / 3.84	22 / 0.62	40 / 0.65	0.5	0.1	660	4.1	17
	10- 1-57	815	8.0	114 / 5.70	29 / 2.40	33 / 1.45	1.0 / 0.03	0 / 0	275 / 4.50	185 / 3.85	21 / 0.60	50 / 0.800	0.2	0.5	595	3.9	15
	4-23-58[e]	999	7.3	130 / 6.50	36 / 3.00	44 / 1.90	1.0 / 0.03	0 / 0	330 / 5.42	225 / 4.68	45 / 1.26	5.3 / 0.09	0.6	0.4	684	4.9	17
4N23W- 1K1	11- 7-55[b]	1245	7.8	124 / 6.19	41 / 3.37	83 / 3.61	0.2 / 0.01	0 / 0	517 / 8.48	96 / 2.00	80 / 2.26	31 / 0.50	0.4	Tr.	777	4.7	27
2B1	8-25-53[c]	797	6.8	54 / 4.68	29 / 2.41	35 / 1.51	0.9 / 0.02	0 / 0	289 / 4.74	117 / 2.43	45 / 1.26	18 / 0.29	0.1	0	631	3.9	18
	7- 8-54	1023	7.9	113 / 5.65	28 / 2.3	56 / 2.44	0.9 / 0.02	0 / 0	244 / 4.0	228 / 4.74	44 / 1.25	7.3 / 0.12	2.4	0.1	664	4.8	23
	7-17-56	915	7.3	105 / 5.25	29 / 2.35	45 / 1.96	0.6 / 0.02	0 / 0	253 / 4.15	158 / 3.29	67 / 1.90	18 / 0.29	0.4	0.1	578	4.3	21
	8-21-57[e]	1000	7.5	106 / 5.30	32 / 2.60	54 / 2.36	1.1 / 0.03	0 / 0	253 / 4.15	164 / 3.41	95 / 2.68	7.2 / 0.12	0.1	0.2	706	5.0	23

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE B-2

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N23W-12A3	5- 7-58[e]	1040	7.9	110 / 5.50	46 / 3.80	51 / 2.20	0.7 / 0.02	0 / 0	284 / 4.65	161 / 3.35	66 / 1.86	86 / 1.38	0.1	0	681	6.0	19
12H2	8-28-53[c]	745	7.5	93 / 4.63	21 / 1.74	39 / 1.70	1.2 / 0.03	0 / 0	274 / 4.49	148 / 3.09	17 / 0.48	13 / 0.2	0.3	0	564	3.5	21
	7- 8-54	848	7.5	112 / 5.6	23 / 1.9	35 / 1.52	1.3 / 0.03	0 / 0	268 / 4.4	166 / 3.45	16 / 0.45	24 / 0.39	0.3	0.1	573	3.5	17
	11- 8-56[b]	833	7.9	112 / 5.6	26 / 2.14	33 / 1.44	1.7 / 0.04	0 / 0	276 / 4.57	176 / 3.66	18 / 0.51	23 / 0.37	0.6	0.1	580	3.6	16
	6-12-57	751	7.3	82 / 4.09	25 / 2.06	34 / 1.48	1.0 / 0.03	0 / 0	199 / 3.26	166 / 3.46	17 / 0.48	20 / 0.33	0.2	0.1	493	3.6	19
	8-20-57[b]	800	7.8	98 / 4.89	26 / 2.14	38 / 1.65	1.0 / 0.03	0 / 0	275 / 4.50	164 / 3.41	22 / 0.62	19 / 0.30	0.2	Tr.	545	3.8	19
	9- 3-57	777	7.9	102 / 5.10	27 / 2.25	32 / 1.38	1.1 / 0.03	0 / 0	275 / 4.50	175 / 3.64	16 / 0.45	25 / 0.41	0	0	531	3.7	16
12K2	8-25-53[c]	1240	7.0	183 / 9.14	37 / 3.03	48 / 2.09	1.6 / 0.04	0 / 0	314 / 5.15	371 / 7.72	48 / 1.35	16 / 0.26	0.2	0	1004	5.2	15
	7- 8-54	1379	7.3	187 / 9.35	39 / 3.25	54 / 2.37	1.3 / 0.03	0 / 0	320 / 5.25	367 / 7.64	50 / 1.40	19 / 0.31	0.3	0.1	956	5.7	16
	8-26-54[be]	1195	7.2	167 / 8.34	32 / 2.60	51 / 2.20	1.8 / 0.05	0 / 0	315 / 5.17	309 / 6.44	56 / 1.57	14 / 0.22	0.2	0.1	955	4.9	17
	12-20-55	875	7.3	122 / 6.10	25 / 2.06	38 / 1.67	0.9 / 0.02	0 / 0	293 / 4.8	200 / 4.16	25 / 0.7	18 / 0.29	0.5	0	625	3.8	17
	7-17-56	880	7.2	122 / 6.10	21 / 1.70	36 / 1.58	0.8 / 0.02	0 / 0	284 / 4.65	193 / 4.02	16 / 0.45	16 / 0.25	0.6	0.1	580	3.9	17
	11- 8-56[b]	862	7.6	118 / 5.89	25 / 2.06	36 / 1.57	1.6 / 0.04	0 / 0	283 / 4.64	191 / 3.97	22 / 0.62	16 / 0.06	0.6	0.1	610	3.7	16

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table B-17.
c. Analyzed by Pacific Chemical Consultants.
e. Analyzed by Terminal Testing Laboratories, Inc.

MINERAL ANALYSES OF GROUND WATERS OJAI VALLEY BASIN NO. 4-2
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N23W-12K2	8-20-57[b]	898	7.7	106 / 5.29	32 / 2.63	43 / 1.87	1.0 / 0.03	0 / 0	243 / 3.99	211 / 4.39	41 / 1.16	12 / 0.19	0.2	Tr.	610	4.5	19
	9-26-57	930	7.7	134 / 6.70	27 / 2.25	41 / 1.77	1.1 / 0.03	0 / 0	287 / 4.70	223 / 4.64	46 / 1.30	16 / 0.26	0	0.1	678	4.1	16
	5- 8-58	1074	7.5	155 / 7.75	31 / 2.55	44 / 1.91	1.2 / 0.03	0 / 0	301 / 4.94	289 / 6.03	24 / 0.68	15 / 0.23	0.3	0.0	779	4.5	16
12N1	11- 8-56[b]	1550	7.5	220 / 10.98	49 / 4.03	94 / 4.09	3.0 / 0.08	0 / 0	273 / 4.48	477 / 9.94	164 / 4.62	4.5 / 0.07	0.6	0.9	1305	8.2	21
	8-20-57[b]	1445	7.8	150 / 7.49	45 / 3.70	95 / 4.13	2.5 / 0.06	0 / 0	185 / 3.04	327 / 6.81	185 / 5.22	13 / 0.20	0.1	1.0	1113	7.9	27
	11- 8-56[b]	2127	7.5	227 / 11.33	55 / 4.52	150 / 6.53	2.9 / 0.07	0 / 0	388 / 6.36	254 / 5.29	370 / 10.43	0.5 / 0.01	0.4	0.8	1470	11.1	29
	8-20-57[b]	2257	7.8	216 / 10.99	53 / 4.36	200 / 8.70	3.3 / 0.08	0 / 0	409 / 6.71	256 / 5.33	430 / 12.3	0.8 / 0.01	0.2	1.0	1650	13.1	36
5N/22W-32J2	8-25-53[c]	1250	7.2	143 / 7.16	31 / 2.52	86 / 3.74	1.4 / 0.04	0 / 0	291 / 4.77	268 / 5.59	106 / 3.00	5.0 / 0.08	0.3	0.3	798	6.3	28
	12-20-56[e]	1360	7.4	134 / 6.70	34 / 2.79	118 / 5.13	4.7 / 0.12	0 / 0	299 / 4.90	280 / 5.83	143 / 4.03	0 / 0	0.3	0.2	920	8.0	35
	6-13-57	1157	7.2	130 / 6.49	31 / 2.55	83 / 3.61	1.3 / 0.03	0 / 0	256 / 4.19	293 / 6.10	91 / 2.57	0.8 / 0.01	0.4	0.2	842	6.2	28
	10- 1-57	1250	7.2	137 / 6.85	33 / 2.75	103 / 4.46	1.3 / 0.03	0 / 0	302 / 4.95	283 / 5.89	121 / 3.40	0 / 0	0.5	0.1	835	7.2	32
	4-24-58[e]	812	7.6	106 / 5.30	27 / 2.20	39 / 1.72	1.9 / 0.05	0 / 0	260 / 4.27	209 / 4.35	25 / 0.70	0 / 0	1.1	0.1	511	4.0	19
32J3	8-25-53[c]	1735	7.2	140 / 6.94	16 / 1.31	180 / 7.83	1.4 / 0.04	0 / 0	216 / 3.55	95 / 1.98	382 / 11.04	1.2 / 0.02	0.9	0.5	1056	10.6	49
	7- 8-54	1530	7.4	134 / 6.7	23 / 1.88	133 / 5.79	1.0 / 0.03	0 / 0	284 / 4.65	171 / 3.57	209 / 5.9	2.7 / 0.04	0.9	0.1	859	7.7	40

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table [illegible]-17.
c. Analyzed by Pacific Chemical Consultants.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE -3

MINERAL ANALYSES OF GROUND WATERS VENTURA RIVER VALLEY BASIN NO. 4-3

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/23W- 5A1	6-23-56[b]	1110	7.6	123 6.15	.38 3.10	60 2.61	2.0 0.05	0 0	328 5.38	115 2.40	139 3.92	1.4 0.02	0.6	0	920	5.8	22
5H1	8-24-53[c]	1052	7.6	138 6.91	30 2.47	53 2.28	2.1 0.05	0 0	294 4.82	273 5.68	48 1.35	3.1 0.05	0.4	0.2	833	4.8	19
	7-8-54	990	7.5	136 6.79	33 2.71	52 2.26	2.0 0.05	0 0	295 4.84	266 5.54	3.9 1.10	3.9 0.06	0.6	0.5	723	5.0	19
	7-18-56	1092	7.5	139 6.95	32 2.65	53 2.31	1.6 0.04	0 0	305 5.0	262 5.46	50 1.4	7.0 0.11	0.7	0.5	719	5.0	19
	6- 6-57[b]	1165	7.3	131 6.55	39 3.20	57 2.48	2.7 0.07	0 0	305 5.00	273 5.67	58 1.63	1.9 0.03	0.4	0.1	800	5.8	20
	5- 7-58	807	7.4	103 5.14	29 2.38	40 1.74	1.3 0.03	0 0	240 3.94	220 4.59	20 0.56	2.5 0.04	0.6	0.3	587	4.2	19
6B2	6- 6-57[b]	1410	7.4	143 7.15	42 3.44	132 5.74	2.0 0.05	0 0	481 7.88	260 5.42	112 3.15	11 0.18	0.8	0.1	1000	8.5	35
	9-19-57[b]	1577	7.3	147 7.32	44 3.63	141 6.15	1.4 0.04	0 0	521 8.53	258 5.37	113 3.18	13 0.21	0.16	0.3	1096	8.6	36
6D1	8-24-53[c]	1645	7.3	208 10.40	53 4.34	98 4.24	1.9 0.05	0 0	412 6.74	475 9.90	78 2.19	11 0.17	0.4	0.2	1197	8.6	22
	12-19-56	1398	7.3	179 8.93	39 3.21	92 4.00	1.8 0.05	0 0	390 6.39	372 7.76	74 2.09	7.0 0.11	1.0	0.1	1045	7.3	25
	6- 6-57[b]	1390	7.5	130 6.50	51 4.18	82 3.58	2.0 0.05	0 0	372 6.10	300 6.25	68 1.92	14 0.23	0.5	0.1	990	7.8	25
6R2	8-20-53[c]	1418	7.0	159 7.94	30 2.50	114 4.96	1.8 0.05	0 0	426 6.99	270 5.61	107 3.00	8.1 0.13	0.3	0.2	975	7.5	32
	7- 8-54	1287	7.2	153 7.63	38 3.12	107 4.65	1.8 0.05	0 0	439 7.20	252 5.24	91 2.57	7.9 0.13	0.5	0.6	885	7.8	32

a. Analyzed by D.W.R. unless otherwise stated.
b. Analyzed by Terminal Testing Laboratories, Inc.
c. Analyzed by Pacific Chemical Consultants.

TABLE H-3

MINERAL ANALYSES OF GROUND WATERS VENTURA RIVER VALLEY BASIN NO. 4-3

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/23W- 6R2	5- 7-58	1748	7.3	194 / 9.68	49 / 4.03	134 / 5.83	2.0 / 0.05	0 / 0	545 / 8.94	282 / 5.87	130 / 3.67	60 / 0.97	0.4	0.6	1149	9.9	28
8C3	11- 8-55[d]	1037	7.8	111 / 5.54	40 / 3.29	45 / 1.96	1.8 / 0.05	0 / 0	246 / 4.04	273 / 5.68	44 / 1.24	3.5 / 0.06	0.5	0.6	802	5.3	18
4N/23W- 3M1	8-25-53[c]	1260	7.5	157 / 7.86	33 / 2.73	67 / 2.93	1.0 / 0.03	0 / 0	469 / 7.70	128 / 2.66	107 / 3.00	24 / 0.39	0.1	0.2	884	5.7	22
	7- 8-54	1190	7.2	157 / 7.83	33 / 2.71	70 / 3.05	1.3 / 0.03	0 / 0	495 / 8.12	132 / 2.74	95 / 2.68	31 / 0.50	0.4	0.3	8.16	5.5	22
9B3	8-24-53[c]	972	7.5	113 / 5.63	32 / 2.63	53 / 2.28	1.8 / 0.05	0 / 0	262 / 4.30	226 / 4.70	48 / 1.35	15 / 0.24	0.4	0.3	711	5.0	22
	7-11-57[b]	1019	7.7	104 / 5.19	36 / 2.97	58 / 2.50	2.0 / 0.06	0 / 0	259 / 4.25	246 / 5.12	51 / 1.43	7.0 / 0.10	0.2	---	739	5.5	23
11D1	8-25-53[c]	523	7.3	48 / 2.38	15 / 1.20	45 / 1.93	0.8 / 0.02	0 / 0	232 / 3.80	29 / 0.60	34 / 0.96	15 / 0.24	0.4	0.0	325	2.0	35
	7- 8-54	490	7.3	37 / 1.85	19 / 1.56	47 / 2.04	0.8 / 0.02	0 / 0	242 / 3.96	25 / 0.53	27 / 0.76	14 / 0.22	0.7	Tr.	313	2.1	37
	7-17-56	521	7.2	44 / 2.2	15 / 1.25	45 / 1.95	0.6 / 0.02	0 / 0	232 / 3.8	30 / 0.62	30 / 0.85	16 / 0.25	0.6	0.1	301	2.0	35
	4-24-58[b]	471	7.9	38 / 1.90	19 / 1.60	46 / 1.99	0.7 / 0.02	0 / 0	227 / 3.72	36 / 0.75	40 / 1.13	5.3 / 0.09	0.4	0.0	311	2.0	36
16C4	8-25-53[c]	919	7.4	122 / 6.08	29 / 2.38	44 / 1.89	1.9 / 0.05	0 / 0	242 / 3.96	248 / 5.16	49 / 1.38	5.7 / 0.09	0.4	0.2	606	4.3	18
	7- 8-54	885	7.4	117 / 5.84	32 / 2.63	47 / 2.04	2.1 / 0.05	0 / 0	251 / 4.12	255 / 5.32	31 / 0.87	8.4 / 0.14	0.7	0.6	651	4.8	19
	7-17-56	971	7.3	123 / 6.15	29 / 2.40	49 / 2.13	1.6 / 0.04	0 / 0	250 / 4.10	262 / 5.45	37 / 1.05	8.5 / 0.14	0.7	0.6	650	4.6	20
	9-25-57	918	7.7	123 / 6.15	30 / 2.45	48 / 2.09	2.7 / 0.07	0 / 0	250 / 4.10	268 / 5.58	39 / 1.10	7.8 / 0.13	0.4	0.5	656	4.6	19

a. Analyzed by D.W.R. unless otherwise stated.
b. Analyzed by Terminal Testing Laboratories, Inc.
c. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table -17.

TABLE E-3

MINERAL ANALYSES OF GROUND WATERS VENTURA RIVER VALLEY BASIN NO. 4-3

WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/23W-16C4	4-24-58[b]	879	7.5	102 / 5.10	29 / 2.40	50 / 2.18	2.0 / 0.05	0 / 0	281 / 4.60	207 / 4.31	38 / 1.07	2.7 / 0.04	0.5	0.	581	4.6	22
32B1	5-29-57[b]	1135	7.1	118 / 5.90	36 / 2.95	55 / 2.39	2.0 / 0.05	0 / 0	293 / 4.80	253 / 5.27	38 / 1.07	6.0 / 0.10	0.4	0.2	750	5.4	21
	9-18-57[b]	1031	7.6	118 / 5.90	37 / 3.08	53 / 2.30	2.2 / 0.06	0 / 0	282 / 4.62	261 / 5.43	45 / 1.27	4.8 / 0.08	0.2	0.3	718	5.4	20
	5- 7-58[b]	813	7.5	93 / 4.64	27 / 2.22	48 / 2.07	1.9 / 0.05	0 / 0	246 / 4.04	183 / 3.81	31 / 0.87	7.8 / 0.13	0.4	0.4	504	4.3	23
32J1	8-24-53[c]	962	7.3	124 / 6.28	32 / 2.60	44 / 1.89	1.9 / 0.05	0 / 0	274 / 4.49	242 / 5.05	38 / 1.08	50 / 0.08	0.5	0.2	685	4.5	18
	7- 8-54	930	7.3	133 / 6.64	31 / 2.55	47 / 2.04	2.1 / 0.05	0 / 0	305 / 5.00	239 / 4.97	30 / 0.85	6.5 / 0.10	0.6	0.6	672	4.7	18
	5-29-57[b]	1025	7.7	122 / 6.10	31 / 2.54	53 / 2.30	2.0 / 0.05	0 / 0	298 / 4.88	249 / 5.19	43 / 1.21	5.8 / 0.09	0.7	0.4	710	4.9	21
33M1	8-24-53[c]	1640	7.0	203 / 10.17	50 / 4.09	99 / 4.30	3.1 / 0.08	0 / 0	436 / 7.15	394 / 8.22	113 / 3.18	2.5 / 0.04	0.5	0.8	1156	8.5	23
	7- 8-54	1466	7.3	199 / 9.93	51 / 4.19	103 / 4.48	3.0 / 0.07	0 / 0	398 / 6.52	383 / 7.98	126 / 3.55	0 / 0	0.6	0.6	1125	8.8	24
	7-17-56	1850	7.3	225 / 11.25	50 / 4.15	95 / 4.15	1.8 / 0.05	0 / 0	400 / 6.55	372 / 7.75	191 / 5.4	3.9 / 0.06	0.7	0.7	1217	8.4	21
	7- 9-57[c]	1950	7.9	216 / 10.80	66 / 5.40	119 / 5.16	3.2 / 0.08	0 / 0	433 / 7.1	404 / 8.42	218 / 6.15	5.0 / 0.08	0.1	0.3	1323	10.6	24
	5- 7-58[c]	1451	7.3	194 / 9.68	43 / 3.53	75 / 3.26	2.0 / 0.05	0 / 0	340 / 5.58	417 / 8.68	78 / 2.20	4.0 / 0.06	0.7	0.4	1042	6.8	20
24H1	8-24-53[c]	918	7.1	127 / 6.34	32 / 2.66	36 / 1.56	1.2 / 0.03	0 / 0	384 / 6.30	158 / 3.30	26 / 0.74	2.5 / 0.04	0.4	0.2	629	4.3	15

a. Analyzed by D.W.R. unless otherwise stated.
b. Analyzed by Terminal Testing Laboratories, Inc.
c. Analyzed by Pacific Chemical Consultants.

TABLE I-4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/18W- 3Q1	8-18-53[b]	1948	7.6	151/7.54	85/6.96	195/8.48	6.2/0.16	0/0	701/11.55	466/9.72	66/1.86	5.6/0.09	0.6	1.2	1375	11.6	37
3Q2	5-10-57[c]	2115	7.3	114/5.70	82/6.72	237/10.30	14/0.36	0/0	787/12.90	406/8.46	55/1.55	3.9/0.06	1.2	0.5	1600	10.7	46
	9-24-57	2040	7.8	162/8.10	88/7.25	215/9.35	5.5/0.14	0/0	772/12.65	469/9.76	82/2.30	10/0.16	0.7	0.6	1327	12.2	38
19P2	8-18-53[b]	1588	7.6	158/7.89	69/5.70	107/4.67	4.4/0.11	0/0	290/4.75	596/12.40	48/1.35	11/0.18	1.0	0.9	1212	10.5	25
	11- 7-55	1495	8.2	154/7.7	70/5.76	106/4.62	3.8/0.10	0/0	259/4.25	600/12.48	46/1.30	9.5/0.15	1.0	0.8	1282	10.5	25
19R1	5- 9-57[c]	1525	7.9	144/7.20	62/5.08	115/5.00	3.9/0.10	0/0	264/4.32	556/11.58	50/1.41	2.6/0.04	0.7	1.2	1132	10.2	29
27B1	8-18-53[b]	2798	7.7	274/13.70	125/10.30	239/10.40	6.9/0.18	0/0	374/6.13	1202/25.02	117/3.30	30/0.49	0.6	0.7	2381	20.9	31
	11- 7-55	2755	7.6	312/15.57	145/11.92	280/12.18	5.6/0.14	0/0	415/6.80	1378/28.70	142/4.00	44/0.71	0.7	1.0	2720	24.2	31
	8-24-56	3050	7.9	290/14.50	127/10.45	272/11.80	7.0/0.18	0/0	394/6.45	1270/26.45	122/3.45	33/0.53	0.5	1.1	2486	22.4	32
	5-10-57[c]	3340	7.3	295/14.75	164/13.44	315/13.70	8.6/0.22	0/0	453/7.42	1370/28.54	158/4.45	47/0.76	0.7	0.7	2800	27.4	32
	6- 5-58[c]	3180	8.1	253/12.60	172/14.16	276/12.00	8.3/0.21	0/0	378/6.20	1331/27.71	155/4.37	22/0.35	0.7	1.2	2394	26.4	31
27G1	8-18-53[b]	2245	7.8	205/10.26	101/8.28	189/8.22	5.8/0.15	0/0	354/5.81	900/18.75	94/2.64	9.9/0.16	0.5	0.8	1803	16.7	31

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/18W-27G1	6-25-54[b]	1990	7.8	197/9.83	87/7.16	189/8.24	5.5/0.14	0/0	337/5.52	846/17.62	84/2.36	5.6/0.09	0.6	0.5	1639	15.5	32
30J1	7-22-53[de]	1330	7.8	147/7.34	52/4.36	82/3.57	5.0/0.13	0/0	250/4.10	472/9.83	36/1.02	27/0.44	0.8	1.1	--	8.1	23
4N/19W-25A1	9-15-53[b]	2020	7.9	249/12.45	98/8.05	112/4.87	5.5/0.14	0/0	326/5.35	898/18.70	41/1.14	32/0.51	0.8	1.2	1983	13.1	19
25C1	8-18-53[b]	2850	7.1	370/18.48	110/9.05	200/8.69	7.8/0.20	0/0	475/7.65	1222/25.43	70/1.98	106/1.70	0.8	0.9	2437	17.9	24
	7-14-57	2600	7.4	281/14.0	120/9.85	172/7.50	5.8/0.15	0/0	238/3.9	1155/24.05	83/2.35	112/1.81	0.1	0.2	2200	17.5	24
25L5	7-23-56[d]	2597	7.6	369/18.41	125/10.28	130/5.66	7.1/0.18	0/0	437/7.16	1135/23.64	53/1.49	120/1.94	0.8	1.2	2360	16.1	16
25R2	8-18-53[b]	1135	7.6	109/5.44	46/3.74	75/3.27	4.0/0.10	0/0	236/3.80	380/7.92	33/0.93	0/0	0.9	0.9	820	7.1	26
27P1	11- 3-54[d]	1490	7.5	150/7.48	72/5.92	90/3.91	4.6/0.12	0/0	322/5.28	534/11.12	29/0.82	6.4/0.10	1.0	0.7	1107	10.0	27
33A2	7-23-56[d]	1235	8.0	145/7.24	59/4.85	74/3.22	4.1/0.11	0/0	264/4.32	484/10.08	28/0.79	21/0.34	0.3	1.0	1035	8.2	21
33C1	8-18-53[b]	1316	7.6	136/6.78	56/4.60	85/3.68	4.3/0.11	0/0	275/4.52	480/10.00	30/0.84	5.6/0.09	0.9	1.2	993	8.4	24
	6-25-54[b]	1422	7.6	136/6.82	57/4.71	84/3.67	4.3/0.11	0/0	275/4.50	480/10.00	29/0.82	8.1/0.13	0.9	0.7	1059	8.5	24
33C2	7-23-56[d]	1408	7.6	176/8.78	77/6.33	90/3.92	4.5/0.12	0/0	310/5.08	612/12.75	29/0.82	22/0.36	1.0	1.0	1275	10.4	20

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by United States Geological Survey.

TABLE H 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/19W-33D4	8-18-53[b]	1122	8.0	111 / 5.53	45 / 3.66	78 / 3.37	3.6 / 0.09	0 / 0	243 / 3.92	389 / 8.11	27 / 0.75	4.3 / 0.07	0.9	0.6	842	7.1	27
	6-25-54[b]	1045	7.7	110 / 5.48	47 / 3.86	79 / 3.42	3.6 / 0.09	0 / 0	244 / 4.00	392 / 8.16	27 / 0.75	5.6 / 0.09	0.8	0.6	852	7.4	27
	5- 9-57[c]	1195	8.0	104 / 5.20	52 / 4.26	78 / 3.39	3.9 / 0.10	0 / 0	221 / 3.63	409 / 8.52	25 / 0.70	8.3 / 0.13	0.6	0.5	820	7.8	21
	11-22-57[c]	1303	8.2	120 / 6.00	59 / 4.85	76 / 3.32	4.3 / 0.11	0 / 0	251 / 4.12	445 / 9.26	29 / 0.82	4.4 / 0.07	0.7	0.3	989	8.3	23
33E1	8-18-53[b]	1370	7.6	144 / 7.22	58 / 4.73	84 / 3.65	4.7 / 0.12	0 / 0	261 / 4.21	516 / 10.75	28 / 0.78	18 / 0.29	1.0	0.6	1049	8.5	23
	5-10-57[c]	1500	8.0	142 / 7.10	65 / 5.33	86 / 3.74	4.3 / 0.11	0 / 0	279 / 4.58	516 / 10.75	30 / 0.85	21 / 0.34	0.7	0.6	1100	9.2	23
	9-27-57	1320	7.9	154 / 7.70	58 / 4.75	76 / 3.31	6.9 / 0.18	0 / 0	256 / 4.20	523 / 10.88	32 / 0.90	19 / 0.31	0.6	0	1032	8.2	21
33J1	8-18-53[b]	1800	7.6	220 / 11.00	73 / 5.98	105 / 4.56	5.1 / 0.13	0 / 0	274 / 4.50	710 / 14.78	54 / 1.53	70 / 1.12	0.9	0.9	1582	10.7	21
	6-25-54[b]	1990	7.4	238 / 11.92	88 / 7.24	110 / 4.80	5.5 / 0.14	0 / 0	315 / 5.16	790 / 16.48	58 / 1.64	66 / 1.06	0.6	0.9	1633	12.2	20
	5- 9-57[c]	2250	7.3	245 / 12.25	111 / 9.10	121 / 5.26	6.6 / 0.17	0 / 0	296 / 4.85	886 / 18.46	70 / 1.97	75 / 1.21	0.7	0.9	1790	14.5	20
	11-27-57	2315	8.1	302 / 15.07	106 / 8.71	119 / 5.18	6.0 / 0.15	0 / 0	294 / 4.82	974 / 20.29	86 / 2.43	88 / 1.42	1.2	1.1	1925	14.0	18
33M1	6-25-54[b]	1300	7.6	125 / 6.23	52 / 4.27	73 / 3.15	4.3 / 0.11	0 / 0	237 / 3.86	438 / 9.14	26 / 0.72	9.3 / 0.15	0.9	0.6	942	7.5	23

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE 4

MINERAL ANALYSES OF GROUND WATERS PIRU BASIN NO. 4-4.06
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/19W-33M1	8-27-56[c]	1200	7.7	118 / 5.90	52 / 4.29	77 / 3.36	4.3 / 0.11	0 / 0	225 / 3.68	450 / 9.37	26 / 0.73	5.9 / 0.10	0.4	0.5	900	7.8	25
34D1	7-23-56[d]	1923	7.5	226 / 11.28	96 / 7.89	103 / 4.48	5.4 / 0.14	0 / 0	373 / 6.12	764 / 15.92	38 / 1.07	38 / 0.61	0.9	0.3	1625	12.5	19
34J1	11- 3-54[d]	1265	7.8	127 / 6.34	57 / 4.69	83 / 3.61	4.5 / 0.12	0 / 0	271 / 4.44	433 / 9.02	31 / 0.87	6.9 / 0.11	1.0	0.6	915	8.4	24
34M1	9- 8-54[bd]	1730	7.7	194 / 9.68	74 / 6.12	99 / 4.30	5.3 / 0.13	0 / 0	269 / 4.42	670 / 13.96	47 / 1.33	45 / 0.73	0.7	0.2	1368	10.6	21
35K1	9- 8-54[bd]	1735	8.0	183 / 9.15	70 / 5.77	107 / 4.67	5.5 / 0.14	0 / 0	209 / 3.43	696 / 14.52	61 / 1.71	9.9 / 0.16	0.8	1.4	1415	10.6	24
35K2	8-23-57	1390	7.9	156 / 7.80	57 / 4.70	79 / 3.43	11 / 0.28	0 / 0	226 / 3.70	535 / 11.14	43 / 1.20	9.4 / 0.15	0.9	0.5	1063	8.4	21
5N/18W-33R1	1-19-56[bd]	2180	7.5	272 / 13.60	71 / 5.89	161 / 7.00	12 / 0.30	0 / 0	682 / 11.20	710 / 14.80	17 / 0.48	29 / 0.46	0.2	0.4	1721	13.2	26

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table 17.

TABLE -5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/19W- 6D1	8-19-53[b]	1232	7.8	114 5.72	47 3.88	96 4.16	4.4 0.11	0 0	277 4.47	397 8.26	43 1.20	75 0.12	0.9	0.5	1030	8.2	30
	11- 7-55	1250	7.5	122 6.1	36 2.97	110 4.79	3.5 0.09	0 0	274 4.5	408 8.50	39 1.1	6.6 0.11	1.2	0.4	970	7.9	34
3N/20W- 2E2	7-10-57[c]	1548	7.2	189 9.43	57 4.69	90 3.92	5.1 0.13	0 0	312 5.12	552 11.51	48 1.35	17 0.27	0.6	0.7	1270	8.7	22
2F4	7-10-57[c]	1585	7.5	191 9.53	64 5.26	94 4.09	5.4 0.14	0 0	307 5.04	581 12.10	53 1.49	26 0.42	0.6	1.0	1280	9.5	21
2L4	4-15-53[c]	1580	7.9	182 9.08	63 5.18	104 4.52	5.9 0.15	0 0	332 5.44	573 11.93	48 1.35	25 0.40	0.7	0.6	----	9.9	24
	7-22-53[cd]	1530	7.9	164 8.18	62 5.10	111 4.83	5.7 0.15	0 0	308 5.05	580 12.08	44 1.24	16 0.26	0.7	0.7	----	10.1	26
2M1	7-10-57[c]	1333	7.2	156 7.78	54 4.44	90 3.92	4.6 0.12	0 0	268 4.40	500 10.41	51 1.44	6.5 0.11	0.7	0.7	1080	8.5	24
2R4	8-10-56[c]	2433	8.1	241 12.03	83 6.82	210 9.14	7.2 0.18	0 0	368 6.04	689 14.36	254 7.16	33 0.52	0.9	1.1	1871	16.1	32
3N2	8-19-53[b]	1374	7.6	146 7.32	53 4.37	88 3.81	4.5 0.11	0 0	289 4.74	455 9.47	44 1.23	15 0.24	0.7	0.3	1009	8.3	24
4N3	12-23-57[c]	1312	7.9	138 6.89	52 4.27	84 3.65	4.5 0.12	0 0	244 4.00	454 9.45	49 1.38	12 0.19	0.8	0.6	940	8.0	24
4Q2	3-29-56[bc]	1430	7.9	147 7.39	57 4.68	88 3.83	4.4 0.12	0 0	290 4.76	468 9.75	48 1.34	24 0.39	0.7	0.9	1060	8.6	24
5C2	6-25-54[b]	995	7.5	121 6.06	38 3.11	45 1.95	2.0 0.05	0 0	329 5.40	222 4.63	23 0.65	43 0.70	0.5	0.3	706	5.1	17
5D1	8-19-53[b]	832	7.8	112 5.62	28 2.32	32 1.41	2.1 0.05	0 0	322 5.20	176 3.66	16 0.45	17 0.28	0.8	0.3	559	3.8	15

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table -17.
d. Analyzed by United States Geological Survey.

TABLE -5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at $25^\circ C$	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/20W- 5D1	6-25-54[b]	1018	7.4	132/6.60	32/2.64	33/1.43	2.1/0.05	0/0	349/5.72	185/3.86	20/0.55	44/0.71	0.4	0.2	678	4.1	13
	8-29-56	890	7.9	111/5.55	36/3.00	28/1.20	1.7/0.04	0/0	290/4.75	193/4.03	16/0.45	34/0.55	0.7	Tr.	594	4.2	12
	5-16-57[e]	1045	7.4	132/6.60	40/3.28	35/1.52	2/0.05	0/0	345/5.66	206/4.29	25/0.70	31/0.50	0.9	0	702	4.9	13
	11- 6-57	951	8.3	137/6.84	31/2.55	35/1.52	1.8/0.05	24/0.80	277/4.54	204/4.25	24/0.68	37/0.60	0.5	0.1	629	4.1	14
5D2	8-20-53[b]	1067	7.6	143/7.14	40/3.30	37/1.60	1.8/0.05	0/0	328/5.28	255/5.32	30/0.84	43/0.70	0.6	0.2	778	5.0	13
	6-25-54[b]	1044	7.5	143/7.14	40/3.30	38/1.64	2.0/0.05	0/0	316/5.18	253/5.26	39/1.10	47/0.76	0.4	0.1	768	5.0	14
	12-19-55	978	7.4	122/6.1	28/2.30	57/2.47	2.0/0.05	0/0	244/4.0	279/5.82	28/0.8	14/0.23	0.9	0.2	735	4.8	23
	8-29-56	1090	8.1	154/7.7	43/3.55	34/1.49	1.9/0.05	0/0	320/5.25	289/6.02	28/0.80	43/0.70	0.6	0.2	797	5.1	12
	5-22-57[e]	1185	7.5	147/7.35	39/3.20	42/1.83	2/0.05	0/0	288/4.72	316/6.58	35/0.99	37/0.60	0.8	0.1	766	5.1	15
5L1	6-25-54[b]	1245	7.6	136/6.78	46/3.82	79/3.41	3.3/0.08	0/0	266/4.36	410/8.55	40/1.13	8.8/0.14	0.7	0.7	940	7.3	24
7D1	7-10-57[c]	1248	7.5	151/7.53	40/3.29	80/3.48	2.8/0.07	0/0	273/4.48	425/8.86	39/1.10	5.0/0.08	0.6	0.6	930	6.8	24
10D2	8-20-53[b]	2440	7.5	255/12.72	93/7.64	192/8.34	7.4/0.19	0/0	381/6.14	874/18.18	119/3.36	40/0.64	0.8	1.0	1967	16.2	29
10F2	8-20-53[b]	2980	7.5	256/12.80	86/7.05	322/14.00	8.1/0.21	0/0	336/5.51	1080/22.50	186/5.22	81/1.31	0.8	0.3	2378	21.7	41

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table F-17.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE [illegible]-5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/20W-10F2	11- 8-55	3584	7.6	383 / 19.11	111 / 9.12	376 / 16.36	9.3 / 0.24	0 / 0	373 / 6.12	1528 / 31.84	169 / 4.76	143 / 2.30	---	1.4	3081	25.7	37
3N/21W-12A2	1-17-56[c]	1192	7.5	144 / 7.19	46 / 3.78	83 / 3.61	3.5 / 0.09	0 / 0	276 / 4.52	438 / 9.12	35 / 0.99	3.5 / 0.06	0.8	0.6	900	7.5	25
12C1	8-20-53[b]	2710	7.7	346 / 17.30	116 / 9.55	134 / 5.82	3.4 / 0.08	0 / 0	439 / 7.20	879 / 18.30	201 / 5.67	123 / 1.98	0.4	0.3	2229	15.5	18
	6-25-54[b]	3000	7.5	376 / 18.42	124 / 10.18	142 / 6.20	3.4 / 0.08	0 / 0	439 / 7.20	946 / 19.72	222 / 6.25	125 / 2.01	0.4	0.9	2281	16.5	18
	12-19-55	3390	7.5	462 / 23.1	131 / 10.80	208 / 9.07	4.1 / 0.11	0 / 0	388 / 6.35	1275 / 26.57	315 / 8.9	102 / 1.65	0.8	0.1	2969	20.0	21
	8-29-56	2930	7.5	356 / 17.8	131 / 10.80	162 / 7.03	2.7 / 0.07	0 / 0	381 / 6.25	1030 / 21.45	225 / 6.35	74 / 1.19	0.8	0.5	2347	17.9	20
12D1	8-20-53[b]	2780	7.7	418 / 20.89	126 / 10.35	144 / 6.26	5.1 / 0.13	0 / 0	373 / 6.01	1060 / 22.10	281 / 7.92	98 / 1.58	0.5	0.2	2582	16.7	17
12D2	8-20-53[b]	2780	7.5	409 / 20.43	123 / 10.15	141 / 6.13	5.1 / 0.13	0 / 0	406 / 6.55	1038 / 21.60	266 / 7.50	90 / 1.45	0.5	0.3	2412	16.4	17
	6-25-54[b]	3100	7.9	374 / 18.70	145 / 11.90	158 / 6.90	3.9 / 0.10	0 / 0	100 / 1.64	1194 / 24.80	32 / 9.08	126 / 2.03	0.4	0.3	2885	18.9	18
	12-19-55	2905	7.2	388 / 19.4	114 / 9.42	174 / 7.58	4.7 / 0.12	0 / 0	479 / 7.85	1008 / 21.00	227 / 6.4	78 / 1.26	0.7	0.3	2425	17.1	21
12E4	3-28-56[bc]	1180	7.7	132 / 6.59	47 / 3.90	87 / 3.76	4.1 / 0.11	0 / 0	276 / 4.52	428 / 8.91	37 / 1.04	6.8 / 0.11	0.8	0.6	978	7.8	26
12H1	7-24-56[c]	1258	7.6	147 / 7.34	49 / 4.03	80 / 3.48	3.6 / 0.09	0 / 0	278 / 4.56	429 / 8.93	36 / 1.02	8.0 / 0.13	0.8	0.6	1005	7.6	23
4N/19W-30D1	8-19-53[b]	1664	7.5	209 / 10.47	78 / 6.37	70 / 3.04	3.4 / 0.09	0 / 0	402 / 6.58	509 / 10.59	57 / 2.01	42 / 0.68	0.5	0.7	1313	9.5	15

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.

TABLE H-5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/19W-30K1	3-31-55[b]	1725	7.5	188/9.38	72/6.50	110/4.80	4.6/0.12	0/0	336/5.50	652/13.62	40/1.14	13/0.21	0.7	0.7	1325	11.4	23
30P3	3-31-55[b]	1556	7.5	155/7.75	69/5.69	102/4.45	4.5/0.12	0/0	315/5.17	552/11.50	43/1.21	11/0.17	0.7	0.6	1154	10.3	25
30P4	3-31-55[b]	1492	7.5	165/8.25	60/4.96	93/4.05	4.8/0.12	0/0	296/4.85	542/11.32	38/1.07	11/0.18	0.7	0.7	1132	9.1	23
32B1	8-26-54[bc]	1330	7.9	125/6.24	51/4.22	100/4.36	4.4/0.11	0/0	277/4.54	450/9.38	40/1.13	5.4/0.09	0.7	0.4	1142	8.7	29
32F1	8-26-54[bc]	1400	7.6	145/7.27	57/4.70	83/3.62	4.7/0.12	0/0	269/4.41	508/10.60	33/0.92	1.9/0.03	0.7	0.8	979	8.4	23
32K1	8-26-54[bc]	1500	7.8	160/8.02	63/5.19	86/3.72	4.4/0.11	0/0	269/4.41	544/11.36	38/1.06	24/0.38	0.8	0.9	1070	9.0	22
4N/20W-12Q1	8-19-53[b]	1190	7.6	131/6.56	31/2.55	81/3.50	2.5/0.06	0/0	251/4.05	293/6.24	81/2.28	12/0.20	0.8	1.8	748	6.3	28
	12-19-55	1220	7.3	136/6.8	31/2.56	90/3.91	2.1/0.05	0/0	296/4.85	256/5.33	92/2.6	20/0.32	1.1	1.7	858	6.5	39
	8-28-56	1235	7.4	139/6.95	28/2.30	86/3.73	2.0/0.05	0/0	296/4.85	258/5.38	78/2.20	26/0.42	0.7	2.0	852	6.1	29
23J2	3-10-56[bc]	1060	7.3	138/6.91	38/3.12	57/2.48	2.8/0.07	0/0	313/5.14	248/5.16	63/1.78	31/0.50	0.5	0.6	813	5.7	20
23N1	8-19-53[b]	668	7.5	53/2.63	32/2.63	37/1.4	1.4/0.04	-/-	226/3.64	100/2.09	34/0.96	20/0.33	-	0.3	387	3.3	25
	11- 8-55	736	7.4	82/4.1	17/1.42	40/1.73	0.8/0.02	0/0	235/3.85	120/2.50	28/0.8	25/0.41	0.8	0	474	3.2	22
	8-28-56	664	7.8	74/3.7	18/1.45	37/1.60	1.3/0.03	0/0	201/3.3	105/2.18	30/0.85	27/0.43	0.6	0.3	425	3.1	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.

TABLE H-5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC\times10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
4N/20W-23N1	5-16-57[e]	745	8.0	87 / 4.35	17 / 1.39	43 / 1.87	1.6 / 0.04	0 / 0	233 / 3.82	112 / 2.33	37 / 1.04	44 / 0.71	1.0	0.2	480	3.3	24
23Q1	8-19-53[b]	1175	7.8	151 / 7.55	36 / 2.95	52 / 2.24	2.9 / 0.07	0 / 0	273 / 4.40	283 / 5.89	69 / 1.95	51 / 0.83	0.6	0.8	763	5.3	18
	8-28-56[e]	975	7.4	139 / 6.96	39 / 3.21	48 / 2.10	2.4 / 0.06	0 / 0	259 / 4.24	262 / 5.46	68 / 1.92	45 / 0.72	0.6	0.8	760	5.4	17
	12- 3-57[e]	1113	7.7	120 / 6.00	32 / 2.60	50 / 2.18	2.1 / 0.05	0 / 0	221 / 3.62	237 / 4.93	69 / 1.94	38 / 0.61	0.8	0	770	4.8	20
24D1	6-25-54[b]	1300	7.4	162 / 8.10	33 / 2.76	60 / 2.59	2.9 / 0.07	0 / 0	340 / 5.58	258 / 5.37	78 / 2.19	34 / 0.54	0.6	0.7	877	5.4	19
	8-28-56[e]	1300	7.7	142 / 7.12	44 / 3.62	64 / 2.80	3.1 / 0.08	0 / 0	317 / 5.20	276 / 5.75	87 / 2.46	38 / 0.62	0.4	0.7	864	6.5	21
	12- 3-57[e]	1296	7.6	138 / 6.90	39 / 3.20	60 / 2.60	2.0 / 0.05	0 / 0	295 / 4.83	258 / 5.37	90 / 2.54	29 / 0.47	0.6	0.1	911	5.9	20
25C1	8-19-53[b]	1293	7.4	147 / 7.36	55 / 4.55	72 / 3.10	2.9 / 0.07	0 / 0	312 / 5.11	407 / 8.48	47 / 1.32	11 / 0.18	0.7	0.7	952	7.7	21
	6-25-54[b]	1300	7.5	149 / 7.47	51 / 4.17	70 / 3.02	2.9 / 0.07	0 / 0	312 / 5.12	392 / 8.16	45 / 1.27	15 / 0.24	0.8	0.6	977	7.3	21
	5-16-57[e]	1210	7.6	116 / 5.80	51 / 4.18	67 / 2.91	2.7 / 0.07	0 / 0	249 / 4.08	360 / 7.51	50 / 1.41	8.6 / 0.14	1.1	0.6	822	7.2	22
	11-29-57	1285	7.3	153 / 7.63	50 / 4.11	64 / 2.78	2.5 / 0.06	0 / 0	292 / 4.78	376 / 7.84	54 / 1.52	15 / 0.23	0.9	0.7	900	7.0	19
25D1	8-19-53[b]	1085	7.8	127 / 6.34	33 / 2.68	64 / 2.80	2.9 / 0.07	0 / 0	241 / 3.89	307 / 6.38	55 / 1.56	13 / 0.21	0.8	1.0	720	5.6	24
	11- 8-55	1070	8.1	130 / 6.5	33 / 2.74	64 / 2.79	2.4 / 0.06	0 / 0	253 / 4.15	307 / 6.38	62 / 1.75	13 / 0.21	1.0	0.7	806	5.6	23

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H-5

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/20W-25J1	8-28-56[e]	1650	7.8	189 / 9.44	97 / 7.93	112 / 4.85	5.9 / 0.15	0 / 0	420 / 6.88	580 / 12.10	96 / 2.70	39 / 0.62	0.2	0.2	908	12.9	22
26A2	8-19-53[b]	1175	7.4	132 / 6.60	36 / 2.94	71 / 3.10	3.2 / 0.08	0 / 0	279 / 4.50	318 / 6.61	62 / 1.74	0.6 / 0.01	0.8	1.2	791	6.1	24
	6-25-54[b]	1010	7.6	138 / 6.91	36 / 3.00	73 / 3.17	2.7 / 0.06	0 / 0	266 / 4.36	321 / 6.69	72 / 2.02	12 / 0.20	0.7	1.2	835	6.2	24
	11- 8-55	1170	7.7	139 / 6.95	38 / 3.10	80 / 3.48	3.0 / 0.08	0 / 0	290 / 4.75	314 / 6.55	71 / 2.0	28 / 0.45	1.0	0.8	880	6.7	26
	5-16-57[e]	1260	7.4	124 / 6.20	41 / 3.36	87 / 3.78	3.5 / 0.09	0 / 0	236 / 3.87	324 / 6.75	80 / 2.25	13 / 0.21	1.0	0.2	870	7.2	28
26D1	8-19-53[b]	877	7.6	111 / 5.57	22 / 1.78	43 / 1.85	1.7 / 0.05	0 / 0	251 / 4.05	179 / 3.73	41 / 1.14	30 / 0.48	0.6	0.5	460	3.7	20
	6-25-54[b]	852	7.2	118 / 5.88	19 / 1.55	44 / 1.92	2.0 / 0.05	0 / 0	256 / 4.10	194 / 4.04	28 / 0.78	35 / 0.56	0.5	0.3	600	3.5	20
	8-28-56	811	7.7	95 / 4.75	24 / 1.95	34 / 1.49	2.5 / 0.06	0 / 0	195 / 3.2	190 / 3.95	35 / 1.0	0.5 / 0.01	0.6	0.5	550	3.5	18
	5-16-57[e]	955	7.7	116 / 5.80	27 / 2.21	48 / 2.09	2 / 0.05	0 / 0	241 / 3.95	212 / 4.42	45 / 1.27	26 / 0.42	1.0	0.3	620	4.4	21
	6- 5-58[e]	1000	7.9	118 / 5.90	29 / 2.35	46 / 2.00	1.5 / 0.04	0 / 0	250 / 4.10	214 / 4.46	44 / 1.24	25 / 0.40	0.1	0.9	671	4.4	19
33C1	8-26-54[bc]	672	7.7	53 / 2.66	31 / 2.55	43 / 1.88	1.4 / 0.04	0 / 0	250 / 4.09	104 / 2.16	21 / 0.58	19 / 0.31	0.7	0.2	433	3.0	26
34K1	6-29-54[b]	1370	7.4	177 / 8.85	44 / 3.60	64 / 2.80	2.5 / 0.06	0 / 0	413 / 6.76	277 / 5.76	67 / 1.88	66 / 1.06	0.3	0.4	930	6.5	18
	12-19-55	1275	7.4	178 / 8.9	39 / 3.20	66 / 2.85	2.0 / 0.05	0 / 0	412 / 6.75	258 / 5.38	59 / 1.65	70 / 1.12	0.6	0	967	6.1	19
	8-28-56	1295	7.9	128 / 6.4	52 / 4.30	86 / 3.72	3.8 / 0.10	0 / 0	287 / 4.7	402 / 8.37	46 / 1.30	14 / 0.23	0.6	0.5	911	8.1	26

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by Terminal Testing Laboratories, Inc.

MINERAL ANALYSES OF GROUND WATERS FILLMORE BASIN NO. 4-4.05
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
4N/20W-34K2	8-19-53[b]	1391	7.2	185 9.24	39 3.17	74 3.20	2.5 0.06	0 0	408 6.59	283 5.90	80 2.25	68 1.09	0.5	0.4	948	6.6	20
	6-25-54[b]	1440	7.2	194 9.70	46 3.74	66 2.86	2.0 0.05	0 0	400 6.56	308 6.42	87 2.46	76 1.22	0.2	0.6	1056	6.7	17
	8-28-56[e]	1300	7.4	176 8.80	49 3.98	74 3.20	2.8 0.07	0 0	317 5.20	341 7.10	106 2.99	67 1.08	0.2	0.4	1000	7.3	20
34N3	1-17-56[e]	1445	7.4	213 10.63	52 4.27	80 3.48	1.2 0.03	0 0	393 6.44	451 9.39	60 1.69	63 1.01	0.5	0.4	1130	7.8	19
34R1	8-19-53[b]	1245	7.7	142 7.10	44 3.60	82 3.54	3.9 0.10	0 0	294 4.82	372 7.74	48 1.35	20 0.33	0.6	0.2	928	7.2	25
36B2	3-31-55[b]	1782	7.5	194 9.70	77 6.38	106 4.60	5.1 0.13	0 0	342 5.61	648 13.51	66 1.87	4.3 0.07	0.6	0.6	1364	11.1	22
36C2	11- 8-55	1600	7.5	212 10.6	73 6.04	83 3.61	3.5 0.09	0 0	394 6.45	551 11.48	67 1.9	62 1.01	1.1	0.7	1376	9.7	18
36K1	8-19-53[b]	1244	7.6	119 5.94	44 3.66	93 4.04	4.8 0.12	0 0	277 4.53	379 7.90	47 1.32	2.5 0.04	0.7	0.1	886	7.8	29
36P2	8-19-53[b]	1478	7.2	159 7.94	58 4.81	91 3.86	11 0.28	0 0	319 5.23	494 10.30	53 1.50	5 0.08	0.6	0.5	1141	9.0	23
	11-29-57[e]	1267	8.0	110 5.50	56 4.60	103 4.48	4.4 0.11	0 0	245 4.02	429 8.93	44 1.24	3.9 0.06	0.6	0.2	996	9.2	30
36Q1	8-19-53[b]	1276	7.9	132 6.60	43 3.57	93 4.04	4.5 0.11	0 0	279 4.57	411 8.56	44 1.23	7.4 0.12	0.6	0.1	965	7.7	28
	6-25-54[b]	1160	7.6	119 5.95	54 4.47	93 4.06	4.6 0.12	0 0	280 4.60	413 8.60	43 1.20	6.2 0.10	0.7	0.5	920	8.7	28
	5-15-57[e]	1385	7.6	117 5.85	56 4.59	98 4.26	4.3 0.11	0 0	287 4.70	424 8.83	48 1.35	8.6 0.14	0.6	0.2	1002	9.0	29
36R2	8-26-54[bc]	1200	8.1	95 4.74	50 4.08	94 4.10	4.3 0.11	0 0	216 3.54	401 8.35	44 1.23	3.7 0.06	0.7	0.3	890	8.3	31

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
2N/22W- 1M1	6-25-54[b]	1045	8.0	108/5.39	33/2.75	72/3.12	3.5/0.09	0/0	259/4.24	293/6.11	40/1.13	1.2/0.02	0.3	0.3	775	6.0	28
2E3	1-12-56[c]	1111	7.8	65/3.24	79/6.49	115/5.00	4.2/0.11	0/0	344/5.64	375/7.81	52/1.47	1.0/0.02	0.5	0.5	935	9.2	34
2G1	6-25-54[b]	3810	7.5	212/10.66	134/11.00	500/21.72	9.0/0.23	0/0	755/12.40	1968/20.20	392/11.05	1.8/0.03	1.0	2.2	2678	31.2	50
2J3	7- 9-56[d]	1130	7.3	107/5.35	50/4.05	74/3.22	3.6/0.09	0/0	312/5.11	279/5.80	71/2.00	0/0	0.4	0	864	7.4	25
2J4	7-24-56[c]	1176	7.5	131/6.54	34/2.79	74/3.22	3.0/0.08	0/0	312/5.12	313/6.52	41/1.16	1.5/0.02	0.6	0.4	825	6.1	25
3M1	8-24-53[b]	1370	8.4	134/6.68	36/2.94	99/4.30	4.6/0.12	0/0	275/4.50	372/7.75	61/1.71	24/0.38	0.4	0.1	935	7.4	31
3M2	8-24-53[b]	1370	9.1	132/6.59	36/2.94	97/4.22	4.0/0.10	0/0	369/6.05	190/3.96	75/2.10	108/1.74	0.5	0.1	938	7.3	30
	6-25-54[b]	1235	7.4	130/6.51	41/3.39	92/3.99	3.7/0.09	0/0	305/5.00	364/7.64	49/1.37	2.5/0.04	0.5	0.7	953	7.4	29
3P1	7-25-57[c]	1385	7.8	146/7.29	36/2.96	111/4.83	4.1/0.10	0/0	199/3.26	493/10.28	49/1.38	0.5/0.01	0.4	0.2	1098	7.9	32
11C2	7-22-53[ce]	1270	7.8	111/5.54	23/1.89	152/6.61	3.6/0.09	0/0	166/2.72	486/10.12	52/1.47	2.0/0.03	0.3	0.2	--	8.6	47
3N/21W- 3R2	7-23-56[c]	1087	7.5	137/6.84	36/2.96	80/3.48	3.3/0.08	0/0	371/6.08	286/5.96	40/1.13	4.0/0.07	0.4	0.3	860	6.5	26
9Q2	7-10-57[c]	1172	7.3	145/7.24	32/2.63	84/3.65	2.6/0.07	0/0	278/4.56	386/8.04	43/1.21	0.5/0.01	0.4	0.3	855	6.4	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories, Inc.
e. Analyzed by United States Geological Survey.

TABLE H 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
3N/21W- 9R3	7-13-53[f]	--	--	137 / 6.85	33 / 2.71	83 / 3.61	-- / --	0 / 0	307 / 5.03	322 / 6.71	36 / 1.01	-- / --	-	0.4	918	6.3	27
10A1	7-13-53[f]	--	--	150 / 7.51	36 / 2.95	90 / 3.92	-- / --	0 / 0	344 / 5.64	331 / 6.91	49 / 1.38	17 / 0.28	-	0.4	--	6.9	27
	8-16-54	1096	7.9	136 / 6.79	37 / 3.04	80 / 3.48	3.3 / 0.08	0 / 0	349 / 5.72	293 / 6.11	40 / 1.13	20 / 0.32	0.6	0.2	780	6.6	26
11D1	7-13-53[f]	--	--	143 / 7.15	37 / 3.04	92 / 3.96	-- / --	0 / 0	343 / 5.63	330 / 6.88	51 / 1.44	32 / 0.53	-	0.6	--	7.0	28
3N/21W-11E1	7-13-53[f]	--	--	165 / 8.25	46 / 3.77	77 / 3.35	-- / --	0 / 0	320 / 5.24	395 / 8.25	55 / 1.55	13 / 0.21	-	0.5	--	7.1	22
	6-25-54[b]	1300	7.3	143 / 7.14	42 / 3.45	92 / 4.00	2.5 / 0.06	0 / 0	354 / 5.80	318 / 6.63	61 / 1.71	34 / 0.54	0.3	0.4	964	7.5	27
	7- 8-54	1519	7.4	172 / 8.6	44 / 3.62	94 / 4.10	2.7 / 0.07	0 / 0	369 / 6.05	377 / 7.85	55 / 1.55	33 / 0.53	0.6	0.4	1040	9.8	25
11E2	7-13-53[f]	--	--	163 / 8.15	44 / 3.61	76 / 3.31	-- / --	0 / 0	328 / 5.38	367 / 7.75	57 / 1.61	24 / 0.39	-	0.4	--	6.9	22
	7- 7-54	1360	7.4	177 / 8.83	48 / 3.95	90 / 3.92	2.9 / 0.07	0 / 0	339 / 5.56	423 / 8.81	60 / 1.69	31 / 0.50	0.8	0.3	1016	7.9	23
11E3	7-10-57[c]	1289	7.4	166 / 8.28	47 / 3.86	90 / 3.92	2.4 / 0.06	0 / 0	353 / 5.78	400 / 8.34	60 / 1.69	32 / 0.52	0.4	0.3	990	7.8	24
11F2	7-13-53[f]	--	--	202 / 10.1	58 / 4.75	87 / 3.79	-- / --	0 / 0	320 / 5.25	504 / 10.5	80 / 2.25	21 / 0.34	-	0.6	--	8.5	20
	6-25-54[b]	1452	7.3	189 / 9.46	53 / 4.35	96 / 4.15	2.9 / 0.07	0 / 0	321 / 5.26	481 / 10.01	78 / 2.16	33 / 0.53	0.4	0.3	1240	8.4	23

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table 17.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-14C4	7-31-56[c]	1449	7.9	120 / 5.99	48 / 3.95	160 / 6.96	4.0 / 0.10	0 / 0	290 / 4.76	408 / 8.50	140 / 3.95	3.0 / 0.05	0.6	0.7	1125	11.0	41
15C1	7-13-53[f]	--	--	198 / 9.90	52 / 4.27	87 / 3.78	-- / --	0 / 0	357 / 5.86	460 / 9.59	71 / 2.00	12 / 0.19	-	0.8	--	8.1	21
	7- 3-54	1196	7.6	168 / 8.38	35 / 2.88	80 / 3.48	2.8 / 0.07	0 / 0	344 / 5.64	369 / 7.69	52 / 1.49	20 / 0.33	0.7	0.4	925	6.4	23
	7-10-57	1370	7.8	156 / 7.8	58 / 4.80	85 / 3.68	2.1 / 0.05	0 / 0	247 / 4.05	484 / 10.08	78 / 2.2	24 / 0.39	0.1	0.3	1088	8.5	23
15C2	12-19-55	1215	7.4	148 / 7.4	34 / 2.80	83 / 3.62	2.2 / 0.06	0 / 0	317 / 5.2	349 / 7.27	46 / 1.3	13 / 0.21	0.7	0.2	--	6.5	26
	8-29-56	1410	7.3	164 / 8.20	52 / 4.25	84 / 3.65	3.0 / 0.08	0 / 0	293 / 4.80	438 / 9.13	55 / 1.55	17 / 0.27	0.5	—	1046	8.0	23
15C4	7-13-53[f]	--	--	178 / 8.90	49 / 4.02	92 / 4.00	-- / --	0 / 0	322 / 5.28	457 / 9.53	58 / 1.63	8 / 0.13	-	0.9	--	8.0	24
	6-25-54[b]	1289	7.7	168 / 8.40	50 / 4.12	86 / 3.72	2.9 / 0.07	0 / 0	333 / 5.46	422 / 8.78	61 / 1.71	18 / 0.29	0.4	0.4	1098	7.9	23
	7- 9-57	1530	7.1	188 / 9.4	54 / 4.40	87 / 3.77	2.1 / 0.05	0 / 0	345 / 5.65	489 / 10.19	60 / 1.7	20 / 0.32	0.0	0.2	1140	8.2	21
16F2	9-14-56[d]	1725	7.7	177 / 8.84	62 / 5.04	130 / 5.68	3.5 / 0.09	0 / 0	355 / 5.82	553 / 11.53	77 / 2.16	4.3 / 0.07	0.5	0.6	1276	10.8	29
16K1	7-13-53[f]	--	--	172 / 8.60	50 / 4.10	104 / 4.52	-- / --	0 / 0	317 / 5.20	510 / 10.61	54 / 1.52	2 / 0.03	-	0.6	--	8.6	26
	6-25-54	1428	7.8	178 / 8.84	47 / 3.91	109 / 4.76	3.6 / 0.09	0 / 0	319 / 5.24	533 / 11.12	39 / 1.09	5.0 / 0.08	0.5	0.6	1231	8.8	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE F 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-16K1	11-13-56[c]	1369	7.7	167 / 8.33	54 / 4.44	93 / 4.05	3.3 / 0.08	0 / 0	278 / 4.56	506 / 10.55	61 / 1.72	4.0 / 0.07	0.8	0.6	1165	8.6	24
	7- 9-57	1540	7.9	168 / 8.40	58 / 4.80	104 / 4.51	2.0 / 0.05	0 / 0	314 / 5.15	521 / 10.85	60 / 1.7	7.5 / 0.12	0.2	0.3	1134	9.4	25
	9- 3-57[c]	1364	8.0	175 / 8.73	52 / 4.27	106 / 4.61	3.5 / 0.09	0 / 0	312 / 5.12	527 / 10.97	62 / 1.75	4.5 / 0.07	0.6	0.7	1135	9.0	26
16K2	7-13-53[f]	--	--	200 / 10.00	55 / 4.51	137 / 5.95	-- / --	0 / 0	339 / 5.56	619 / 12.90	73 / 2.06	-- / --	-	0.8	--	10.5	29
	7- 7-54	2020	7.8	220 / 11.00	64 / 5.30	136 / 5.92	4.4 / 0.11	0 / 0	360 / 5.9	668 / 13.92	76 / 2.15	7.5 / 0.12	0.7	0.8	1449	11.3	27
	7- 9-57	1755	7.6	177 / 8.85	69 / 5.70	124 / 5.40	1.6 / 0.04	0 / 0	299 / 4.90	621 / 12.92	85 / 2.40	6.1 / 0.10	0.2	0.3	1314	11.1	27
16R2	7- 7-54	1875	7.6	212 / 10.60	60 / 4.93	119 / 5.18	1.9 / 0.05	0 / 0	326 / 5.35	601 / 12.53	87 / 2.3	5.7 / 0.09	0.7	0.7	1354	5.8	32
	11-13-56[c]	1754	7.6	210 / 10.48	66 / 5.43	111 / 4.83	4.0 / 0.10	0 / 0	325 / 5.33	609 / 12.69	97 / 2.74	0 / 0	0.9	0.7	1415	10.4	23
	8-20-57[c]	1577	7.7	214 / 10.68	61 / 5.01	120 / 5.22	4.2 / 0.11	0 / 0	327 / 5.36	622 / 12.95	106 / 2.99	0.5 / 0.01	0.6	0.8	1366	10.3	25
20M1	8-24-53[b]	1384	7.5	172 / 8.60	50 / 4.11	76 / 3.30	2.9 / 0.07	0 / 0	322 / 5.27	434 / 9.04	58 / 1.62	3.1 / 0.05	0.5	0.3	999	7.5	21
	6-25-54[b]	1325	7.5	163 / 8.16	47 / 3.86	73 / 3.16	2.4 / 0.06	0 / 0	313 / 5.12	420 / 8.75	52 / 1.47	6.9 / 0.11	0.4	0.5	1037	7.1	21
	5-14-57[d]	1360	7.8	182 / 9.10	28 / 2.30	84 / 3.65	2.7 / 0.07	0 / 0	305 / 5.00	437 / 9.10	53 / 1.49	3.7 / 0.06	1.0	0.3	996	6.0	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table F 17.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/21W-20P3	7-16-57[c]	1887	7.7	223 / 11.13	65 / 5.34	125 / 5.44	4.0 / 0.10	0 / 0	393 / 6.45	618 / 12.87	94 / 2.65	0 / 0	0.5	0.9	1466	10.9	25
21B1	8-24-53[b]	2268	7.3	241 / 12.07	72 / 5.96	174 / 7.57	5.5 / 0.14	0 / 0	396 / 6.49	621 / 12.95	221 / 6.21	0 / 0	0.4	1.9	1690	13.7	29
	12-19-55	2205	7.3	224 / 11.2	61 / 5.03	196 / 8.50	4.3 / 0.11	0 / 0	436 / 7.15	585 / 12.18	204 / 5.75	1.6 / 0.03	0.9	1.1	1642	13.6	34
	8-29-56	2145	7.3	194 / 9.7	77 / 6.30	203 / 8.82	3.2 / 0.08	0 / 0	366 / 6.0	673 / 14.02	156 / 4.4	2.2 / 0.04	0.7	1.5	1590	15.2	35
	11- 9-56[c]	2040	7.5	207 / 10.33	72 / 5.92	190 / 8.27	5.8 / 0.15	0 / 0	418 / 6.86	613 / 12.77	178 / 5.02	0.5 / 0.01	0.9	1.6	1615	14.3	34
	5-14-57[d]	2080	7.3	182 / 9.10	64 / 5.25	210 / 9.13	6.3 / 0.16	0 / 0	348 / 5.70	597 / 12.44	170 / 4.74	0 / 0	0.5	0.2	1492	14.5	39
	8-20-57[c]	2212	7.6	208 / 10.38	70 / 5.75	218 / 9.48	5.9 / 0.15	0 / 0	436 / 7.14	590 / 12.30	215 / 6.06	0.3 / Tr.	0.6	1.6	1670	15.4	37
	5- 8-58[d]	1908	8.0	122 / 6.08	63 / 5.16	211 / 9.17	5.7 / 0.15	0 / 0	124 / 2.04	637 / 13.26	188 / 5.30	2.1 / 0.03	0.4	1.1	1218	14.5	45
21E1	11- 9-56[c]	2222	7.6	239 / 11.93	83 / 6.82	185 / 8.05	5.4 / 0.14	0 / 0	426 / 6.98	719 / 14.98	160 / 4.51	0.5 / 0.01	0.8	1.3	1745	15.0	30
	10- 3-57[c]	2315	7.4	220 / 10.98	102 / 8.38	176 / 7.66	4.4 / 0.11	0 / 0	459 / 7.53	712 / 14.84	180 / 5.08	0 / 0	0.5	1.4	1749	16.2	28
21F1	11- 9-56[c]	2222	7.3	228 / 11.38	77 / 6.33	160 / 6.96	5.6 / 0.14	0 / 0	404 / 6.63	578 / 12.05	216 / 6.09	0.5 / 0.01	0.8	1.6	1620	13.4	28
	8-20-57[c]	2105	7.5	199 / 9.93	71 / 5.84	171 / 7.44	5.6 / 0.14	0 / 0	374 / 6.13	520 / 10.84	232 / 6.54	0	0.4	1.7	1469	13.4	32

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H 17
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 6

MINERAL ANALYSES OF GROUND WATERS SANTA PAULA BASIN NO. 4-4.04
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
3N/21W-21F1	6- 5-58[d]	2118	7.9	132 / 6.60	97 / 8.00	175 / 7.60	5.3 / 0.14	0 / 0	372 / 6.10	463 / 9.64	235 / 6.62	0 / 0	0.2	1.4	1415	15.7	34
30H3	7-10-57[c]	1248	7.6	131 / 6.54	38 / 3.12	113 / 4.92	4.5 / 0.12	0 / 0	276 / 4.52	421 / 8.78	52 / 1.47	0.5 / 0.01	0.4	0.4	990	8.2	33
32E1	7-10-57[c]	1976	7.1	231 / 11.53	59 / 4.85	170 / 7.40	6.0 / 0.15	0 / 0	343 / 5.62	693 / 14.43	135 / 3.81	0.5 / 0.01	0.6	1.0	1595	12.4	31
3N/22W- 2G2	8-24-53[b]	3000	7.6	214 / 10.68	51 / 4.16	350 / 15.21	5.4 / 0.14	0 / 0	376 / 6.17	823 / 17.15	234 / 6.60	15 / 0.24	0.6	0.9	2205	19.5	50
	5-16-57[d]	3210	7.2	188 / 9.40	123 / 10.08	460 / 20.00	6.3 / 0.16	0 / 0	595 / 9.75	1147 / 23.90	250 / 7.04	0	1.2	0.8	2610	29.9	50
	11- 5-57	2020	7.7	146 / 7.29	61 / 5.01	225 / 9.79	6.2 / 0.16	0 / 0	253 / 4.14	518 / 10.79	250 / 7.05	0.5 / 0.01	0.5	1.9	1410	15.0	44
11H1	8-24-53[b]	3290	7.5	222 / 11.10	120 / 9.85	418 / 18.18	7.7 / 0.20	0 / 0	586 / 9.60	1089 / 22.69	231 / 6.51	7.5 / 0.12	1.0	0.6	2593	28.2	46
	5-16-57[d]	3530	7.7	226 / 11.30	132 / 10.82	414 / 18.00	6.6 / 0.17	0 / 0	642 / 10.52	973 / 20.27	270 / 7.61	14 / 0.23	1.0	0.1	2608	29.0	45
23F2	5- 1-53[b]	2170	7.7	180 / 8.98	67 / 5.52	236 / 10.25	9.0 / 0.23	0 / 0	587 / 9.62	621 / 12.95	88 / 2.49	6.8 / 0.11	0	0.5	1583	15.4	41
	6-25-54[b]	2065	7.8	173 / 8.66	71 / 5.81	213 / 9.28	9.4 / 0.24	0 / 0	513 / 8.40	638 / 13.25	86 / 2.43	1.9 / 0.03	0	1.9	1561	15.3	39
	12-20-55	2530	7.4	240 / 12.0	70 / 5.76	262 / 11.40	3.2 / 0.08	0 / 0	531 / 8.7	862 / 17.95	89 / 2.5	1.9 / 0.03	1.0	1.1	2135	17.2	39

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
2N/22W-10R1	3- 1-55[b]	1250	7.6	129 / 6.44	45 / 3.70	110 / 4.79	4.1 / 0.10	0 / 0	234 / 3.84	451 / 9.39	54 / 1.52	6.4 / 0.10	0.9	0.4	915	8.4	32
10R2	6-29-54[c]	1540	7.5	145 / 7.73	58 / 4.75	106 / 4.60	4.4 / 0.11	0 / 0	261 / 4.28	542 / 11.31	62 / 1.74	12 / 0.19	0.6	0.7	1139	9.5	27
	11-12-56[b]	1351	7.8	139 / 6.94	48 / 3.95	120 / 5.22	4.1 / 0.11	0 / 0	263 / 4.31	468 / 9.74	60 / 1.69	14 / 0.23	1.2	0.6	1100	9.3	32
	8-20-57[b]	1314	8.4	122 / 6.09	46 / 3.78	114 / 4.96	3.6 / 0.09	0 / 0	248 / 4.07	437 / 9.10	58 / 1.64	13 / 0.20	0.6	0.5	1014	8.8	33
16K1	8-24-53[c]	1490	7.6	132 / 6.61	36 / 2.97	135 / 5.86	4.0 / 0.10	0 / 0	296 / 4.86	456 / 9.50	48 / 1.35	4.3 / 0.07	0.6	0.5	870	8.9	38
	6-27-54[c]	1440	7.6	122 / 6.10	44 / 3.64	131 / 5.70	4.0 / 0.10	0 / 0	288 / 4.72	462 / 9.61	49 / 1.37	9.3 / 0.15	0.6	0.6	1013	9.4	37
	12-11-57	1365	7.0	118 / 5.90	40 / 3.30	126 / 5.50	3.6 / 0.09	0 / 0	259 / 4.25	453 / 9.44	50 / 1.40	8.2 / 0.13	0.6	0.3	983	8.9	37
	4-23-58[d]	1418	7.7	120 / 6.00	40 / 3.30	138 / 5.98	4.2 / 0.11	0 / 0	281 / 4.60	450 / 9.37	53 / 1.49	3.7 / 0.06	0.8	0.1	971	9.4	39
16M3	7-25-56[b]	1439	7.8	129 / 6.44	50 / 4.11	132 / 5.74	3.7 / 0.10	0 / 0	264 / 4.32	504 / 10.51	61 / 1.72	1.5 / 0.02	0.8	0.7	1100	10.0	35
17Q2	7-18-56[d]	1320	7.7	135 / 6.75	48 / 3.90	122 / 5.30	4.6 / 0.12	0 / 0	276 / 4.52	411 / 8.56	56 / 1.58	0 / 0	0.4	0.6	1188	9.3	35
19K2	11- 8-55[b]	1745	8.2	194 / 9.68	63 / 5.18	165 / 7.18	5.1 / 0.13	13 / 0.42	276 / 4.53	638 / 13.29	108 / 3.05	61 / 0.99	0.8	0.6	1520	12.5	32
20B1	6-29-54[c]	2820	7.3	346 / 17.30	92 / 7.55	241 / 10.48	7.0 / 0.18	0 / 0	298 / 4.88	1095 / 22.85	191 / 5.54	163 / 2.63	0.2	0.6	2474	18.2	30

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analyses of heavy metal constituents see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-21L1	8-30-55[c]	1440	7.8	147 / 7.36	50 / 4.12	96 / 4.18	4.7 / 0.12	0 / 0	256 / 4.19	483 / 10.08	59 / 1.67	13 / 0.21	0.6	0.7	1134	8.4	27
2N/23W- 5L1	6-29-54[c]	1765	7.8	171 / 8.54	51 / 4.18	143 / 6.20	7.0 / 0.18	0 / 0	361 / 5.92	504 / 10.51	102 / 2.87	5.6 / 0.09	0.2	0.6	1275	10.6	32
	7-18-56[d]	1600	7.3	160 / 8.00	50 / 4.05	146 / 6.34	6.8 / 0.17	0 / 0	383 / 6.30	447 / 9.30	122 / 3.43	2.3 / 0.04	0.3	0.2	1380	10.6	34
	12-11-57	1264	7.4	82 / 4.09	42 / 3.45	150 / 6.53	7.5 / 0.19	0 / 0	194 / 3.18	310 / 6.45	168 / 4.74	5.5 / 0.09	0.3	0.3	925	10.2	46
	4-23-58	1741	7.6	172 / 8.60	55 / 4.50	146 / 6.33	6.3 / 0.16	0 / 0	387 / 6.35	500 / 10.41	121 / 3.40	6.9	0.3	0.3	1253	11.0	32
5P1	8-25-53[c]	2000	7.5	203 / 10.15	54 / 4.41	172 / 7.47	6.0 / 0.16	0 / 0	372 / 6.12	472 / 9.64	226 / 6.36	6.82 / 0.11	0.2	0.7	1374	12.0	34
	6-29-54[c]	2050	7.5	209 / 10.45	54 / 4.44	179 / 7.80	5.9 / 0.15	0 / 0	376 / 6.16	461 / 9.40	253 / 7.15	8.7 / 0.14	0.2	0.7	1525	12.4	34
	12-19-56[d]	3120	7.3	311 / 15.55	99 / 8.11	215 / 9.35	7.8 / 0.20	0 / 0	351 / 5.75	490 / 10.21	623 / 17.55	2 / 0.03	0.2	0.5	2736	17.7	28
13F1	12-19-56	1600	7.4	162 / 8.08	45 / 3.70	148 / 6.44	5.2 / 0.13	0 / 0	390 / 6.39	481 / 10.03	74 / 2.09	0.5 / 0.01	0.8	0.7	1180	10.3	35
13K1	8- 2-56[b]	1449	7.8	158 / 7.88	58 / 4.77	144 / 6.26	5.0 / 0.13	0 / 0	364 / 5.96	515 / 10.73	75 / 2.12	1.5 / 0.02	0.8	0.6	1215	11.2	33
14L1	8-25-53[c]	1650	7.4	162 / 8.09	43 / 3.51	157 / 6.83	4.8 / 0.12	0 / 0	405 / 6.65	480 / 10.00	74 / 2.07	5.6 / 0.09	0.3	0.5	1168	10.5	37
14M1	8-25-53[c]	1510	7.5	162 / 8.10	46 / 3.82	148 / 6.44	4.9 / 0.13	0 / 0	373 / 6.12	503 / 10.45	78 / 2.25	1.9 / 0.03	0.3	0.7	1234	10.4	35

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analyses of heavy metal constituents see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 7

MINERAL ANALYSES OF GROUND WATERS MOUND PRESSURE AREA BASIN NO. 4-4.03
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
2N/23W-14M1	7-18-56[d]	1650	7.7	150 / 7.50	57 / 4.67	137 / 5.96	5.2 / 0.13	0 / 0	383 / 6.28	458 / 9.54	82 / 2.31	0.0 / 0.0	0.2	0.6	1260	10.8	33
	5-27-57[d]	1575	7.6	149 / 7.45	50 / 4.10	161 / 7.00	5.5 / 0.14	0 / 0	384 / 6.30	477 / 9.94	78 / 2.20	2.5 / 0.04	1.5	0.5	1250	11.2	37
	12-11-57	1429	7.4	163 / 8.13	44 / 3.62	142 / 6.18	5.5 / 0.14	0 / 0	377 / 6.18	466 / 9.70	81 / 2.28	1.0 / 0.02	0.5	0.6	1190	9.9	34
14N1	7-23-56[b]	1389	7.6	162 / 8.08	44 / 3.62	128 / 5.57	4.8 / 0.12	0 / 0	351 / 5.76	473 / 9.85	70 / 1.97	2.5 / 0.04	0.6	0.5	1210	9.3	32
14Q1	12-11-57[d]	1190	7.1	92 / 4.60	49 / 4.00	114 / 4.94	4.3 / 0.11	0 / 0	259 / 4.24	363 / 7.55	50 / 1.40	0 / 0	0.2	0.4	930	9.1	36
	4-23-58[d]	1268	7.7	72 / 3.60	63 / 5.20	115 / 5.00	5.3 / 0.14	0 / 0	284 / 4.65	365 / 7.60	51 / 1.44	0 / 0	0.3	0	862	10.3	36
24G1	5-16-57[d]	1585	7.8	163 / 8.15	52 / 4.26	137 / 5.96	5.5 / 0.14	0 / 0	342 / 5.61	502 / 10.46	78 / 2.20	14 / 0.23	1.0	0.5	1134	10.4	32
24K2	6-29-54[c]	2210	7.4	265 / 13.29	79 / 6.55	162 / 7.06	6.2 / 0.16	0 / 0	288 / 4.72	828 / 17.28	142 / 4.00	85 / 1.38	0.4	0.6	1854	13.8	26
24K3	6-29-54[c]	1540	7.4	153 / 7.64	43 / 3.55	124 / 5.40	4.7 / 0.12	0 / 0	337 / 5.52	447 / 9.32	64 / 1.80	11 / 0.17	0.3	0.6	1084	9.1	32
	9-13-56[d]	1670	7.8	159 / 7.96	51 / 4.17	135 / 5.85	5.5 / 0.14	0 / 0	345 / 5.66	509 / 10.60	55 / 1.54	9.3 / 0.15	0.5	0.5	1196	10.2	32
	12-18-56	1389	7.4	165 / 8.23	48 / 3.95	130 / 5.66	5.2 / 0.13	0 / 0	346 / 5.68	490 / 10.21	75 / 2.12	16. / 0.26	1.3	0.6	1190	9.7	32

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analyses of heavy metal constituents see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE [illegible]

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/21W- 6L1	8-10-56[b]	1980	8.2	172 / 8.58	80 / 6.58	180 / 7.83	7.2 / 0.18	14 / 0.48	305 / 5.00	674 / 14.04	114 / 3.21	2.0 / 0.03	0.9	0.9	1575	14.6	34
7M2	7-24-56[b]	1163	7.8	113 / 5.64	40 / 3.29	108 / 4.70	5.0 / 0.13	0 / 0	298 / 4.88	364 / 7.58	47 / 1.33	8.0 / 0.13	0.6	0.6	910	8.1	34
2N/22W- 2R1	11-16-53[bc]	1320	7.6	137 / 6.86	39 / 3.18	100 / 4.34	4.7 / 0.12	0 / 0	275 / 4.50	425 / 8.85	49 / 1.38	0.6 / 0.01	0.4	0.5	942	7.6	30
	11- 4-54[b]	1257	7.7	128 / 6.39	41 / 3.37	108 / 4.70	4.5 / 0.11	0 / 0	305 / 5.00	401 / 8.36	41 / 1.16	1.5 / 0.02	0.6	0.4	840	8.2	32
	11- 7-55[b]	1290	7.6	145 / 7.24	43 / 3.53	111 / 4.83	5.0 / 0.13	0 / 0	298 / 4.88	446 / 9.30	59 / 1.66	2.0 / 0.03	0.5	0.5	1077	8.5	31
	11- 8-56[d]	1290	7.9	141 / 7.05	44 / 3.61	123 / 5.35	5.9 / 0.15	0 / 0	317 / 5.20	444 / 9.25	57 / 1.61	0 / 0	0.1	0.3	1084	9.1	33
	11-26-57	1255	7.5	151 / 7.53	46 / 3.78	113 / 4.92	4.8 / 0.12	0 / 0	303 / 4.96	466 / 9.70	62 / 1.75	1.5 / 0.02	0.4	0.5	1090	8.8	30
11A1	11-16-53[bc]	2050	8.2	181 / 9.05	59 / 4.89	209 / 9.10	5.8 / 0.15	0 / 0	349 / 5.71	732 / 15.24	83 / 2.34	5.6 / 0.09	0.5	0.7	1474	14.1	39
	11- 4-54[b]	1769	7.6	195 / 9.73	66 / 5.43	175 / 7.61	5.6 / 0.14	0 / 0	351 / 5.76	723 / 15.06	83 / 2.34	7.9 / 0.13	0.8	0.6	1410	13.2	33
	11- 7-55[b]	2128	7.8	220 / 10.98	77 / 6.33	240 / 10.44	8.2 / 0.21	0 / 0	383 / 6.28	897 / 18.69	106 / 2.99	5.0 / 0.08	0.7	0.8	1920	17.0	37
	11- 8-56[b]	1941	7.8	193 / 9.63	68 / 5.59	195 / 8.48	6.0 / 0.15	0 / 0	340 / 5.58	757 / 15.77	90 / 2.54	4.5 / 0.07	0.8	0.6	1600	14.2	36
	11-26-57[b]	1865	7.4	196 / 9.78	68 / 5.59	206 / 8.96	5.6 / 0.14	0 / 0	356 / 5.84	751 / 15.64	97 / 2.74	9.0 / 0.15	0.5	0.7	1650	14.7	37
11A2	8-24-53[a]	1805	7.5	168 / 8.41	55 / 4.50	178 / 7.74	5.5 / 0.14	0 / 0	339 / 5.55	623 / 12.98	70 / 1.98	11 / 0.17	0.4	0.5	1356	12.4	37

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H-8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-11A2	11-16-53[bc]	1450	8.0	141 / 7.04	45 / 3.72	122 / 5.30	4.6 / 0.12	0 / 0	300 / 4.91	473 / 9.85	59 / 1.53	3.1 / 0.05	0.4	0.5	989	9.2	33
	6-25-54[c]	1740	7.6	165 / 8.26	52 / 4.25	170 / 7.42	5.3 / 0.13	0 / 0	325 / 5.32	616 / 12.82	70 / 1.98	11 / 0.17	0.4	0.6	1328	11.8	37
	11- 4-54[b]	2127	7.8	213 / 10.63	81 / 6.66	240 / 10.44	6.2 / 0.16	0 / 0	393 / 6.44	874 / 18.21	95 / 2.68	6.9 / 0.11	0.8	0.7	1730	17.3	38
	11- 7-55[b]	1637	7.6	178 / 8.88	56 / 4.60	165 / 7.18	5.5 / 0.14	0 / 0	334 / 5.48	628 / 13.09	77 / 2.17	4.5 / 0.07	0.6	0.6	1437	11.9	35
	11- 8-56[d]	1720	7.9	174 / 8.70	59 / 4.84	186 / 8.09	7 / 0.18	0 / 0	351 / 5.75	661 / 13.77	80 / 2.25	3.8 / 0.06	0.3	0.3	1476	13.1	37
	11-26-57	1415	7.8	156 / 7.78	50 / 4.11	140 / 6.09	4.8 / 0.12	0 / 0	315 / 5.16	539 / 11.22	66 / 1.86	5.0 / 0.08	0.5	0.5	1210	10.3	34
12D1	8-24-53[c]	2110	7.7	209 / 10.43	70 / 5.72	198 / 8.62	5.5 / 0.14	0 / 0	344 / 5.64	807 / 16.85	92 / 2.58	9.9 / 0.16	0.4	0.5	1699	14.5	35
	6-25-54[c]	1960	7.6	188 / 9.38	61 / 5.00	188 / 8.20	5.5 / 0.14	0 / 0	323 / 5.30	742 / 15.24	86 / 2.43	3.7 / 0.06	0.4	0.9	1532	13.3	36
	5-22-57[d]	1500	7.8	123 / 6.15	45 / 3.69	147 / 6.39	5.5 / 0.14	0 / 0	299 / 4.90	473 / 9.85	58 / 1.63	1.0 / 0.02	0.8	0.2	1020	10.2	39
	11-27-57[d]	1590	7.9	134 / 6.70	56 / 4.58	156 / 6.80	5.5 / 0.14	0 / 0	293 / 4.80	538 / 11.20	85 / 2.39	1.5 / 0.02	0.4	0.1	1270	11.5	37
12E1	11- 8-56[b]	1492	7.8	186 / 9.28	63 / 5.18	120 / 5.22	5.2 / 0.13	0 / 0	342 / 5.60	583 / 12.15	66 / 1.86	2.0 / 0.03	0.9	0.7	1325	10.5	26
	8-20-57[b]	1618	7.7	167 / 8.33	64 / 5.26	125 / 5.44	4.6 / 0.12	0 / 0	353 / 5.78	551 / 11.5	60 / 1.71	0 / 0	0.5	0.7	1277	10.8	28
12G1	8-24-53[c]	1775	7.5	187 / 9.36	60 / 4.95	141 / 6.13	5.8 / 0.15	0 / 0	294 / 4.82	618 / 12.90	90 / 2.52	1.9 / 0.03	0.6	0.5	1369	11.2	30

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE 3-8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10[6] at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-12G1	6-25-54[c]	1242	7.8	123 6.14	46 3.76	114 4.95	4.5 0.11	0 0	262 4.28	448 9.35	50 1.40	5.6 0.09	0.8	0.6	970	8.8	33
	1- 6-56	1855	7.6	184 9.20	61 5.0	171 7.45	5.7 0.15	0 0	360 5.9	656 13.67	82 2.3	7.4 0.12	0.9	0.5	1453	12.6	34
	12-19-56	1886	7.3	226 11.28	74 6.08	168 7.31	6.2 0.16	0 0	367 6.02	776 16.16	93 2.62	0.5 0.01	0.8	0.8	1300	13.6	29
	11-27-57[d]	2052	7.8	189 9.45	77 6.35	169 7.36	7.4 0.19	0 0	317 5.20	775 16.14	93 2.62	0.52 0.5	0.5	0.6	1628	13.9	32
	4-22-58[d]	1432	7.6	124 6.20	43 3.50	138 6.01	5.3 0.14	0 0	310 5.08	438 9.12	50 1.41	7.99 0.13	0.6	0.2	999	9.7	38
12K3	11- 4-54[b]	1665	7.7	93 4.64	57 4.69	240 10.44	9.8 0.25	0 0	454 7.44	493 10.27	85 2.40	13 0.21	0.4	0.5	1237	12.6	52
-12Q2	9- 1-54[bc]	1732	7.7	178 8.89	61 5.01	124 5.40	4.9 0.13	0 0	260 4.26	633 13.20	80 2.26	0.6 0.01	0.8	0.9	1292	10.5	28
14J1	9- 1-54[bc]	1700	7.8	187 9.35	58 4.79	114 4.96	4.8 0.12	0 0	284 4.66	596 12.50	75 2.12	19 0.30	0.6	0.9	1274	9.9	26
14P2	7- 2-56[ef]	1538	7.9	145 7.25	51 4.18	130 5.65	--- ---	- -	263 4.31	508 10.57	58 1.64	2 0.03	0.7	0.8	----	9.8	33
	10-31-57[ef]	1773	7.4	185 9.24	60 4.90	144 6.26	--- ---	- -	315 5.16	614 12.78	77 2.17	6 0.10	0.7	0.7	----	11.2	31
	3-11-58[f]	1290	7.7	120 6.01	40 3.27	118 5.13	--- ---	- -	258 4.24	415 8.65	47 1.33	7 0.11	0.7	0.5	----	8.4	36
22M2	8-30-55[c]	1360	7.7	139 6.93	48 3.98	94 4.11	5.1 0.13	0 0	274 4.48	447 9.31	57 1.60	5.0 0.08	0.6	0.6	1002	8.2	27
23B1	7- 2-56[ef]	1574	7.9	154 7.72	50 4.11	145 6.30	---	-	263 4.31	543 11.31	65 1.83	3 0.04	0.7	0.7	----	10.4	35

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
e. Date sample submitted to laboratory
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H-8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
2N/22W-23B1	8-1-56[b]	1537	8.1	172 / 8.58	59 / 4.85	117 / 5.09	4.8 / 0.12	0 / 0	266 / 4.36	574 / 11.96	76 / 2.14	12 / 0.19	0.8	0.9	1235	10.1	27
	10-31-57[ef]	1718	7.5	181 / 9.07	60 / 4.97	133 / 5.78	-- / --	- / -	293 / 4.81	594 / 12.37	75 / 2.11	13 / 0.21	0.7	0.6	----	10.8	29
	3-13-58[f]	1153	7.8	104 / 5.20	30 / 2.50	100 / 4.35	-- / --	- / -	247 / 4.06	336 / 7.00	37 / 1.04	Tr. / Tr.	0.8	0.7	----	6.9	36
23B2	7-2-56[ef]	1684	7.6	177 / 8.83	60 / 4.94	130 / 5.65	-- / --	- / -	280 / 4.59	583 / 12.14	69 / 1.95	6 / 0.09	0.7	0.6	----	10.6	29
	10-31-57[ef]	1706	7.5	186 / 9.29	54 / 4.42	133 / 5.78	-- / --	- / -	284 / 4.66	588 / 12.25	74 / 2.09	10 / 0.16	0.7	0.7	----	10.2	30
	3-13-58[f]	1497	7.5	146 / 7.30	49 / 4.07	132 / 5.74	-- / --	- / -	271 / 4.45	519 / 10.80	64 / 1.81	6 / 0.10	0.7	0.7	----	9.8	34
23C1	7-2-56[ef]	1527	7.9	152 / 7.63	50 / 4.13	145 / 5.55	-- / --	- / -	260 / 4.27	514 / 10.71	58 / 1.64	5 / 0.08	0.8	0.8	----	9.8	33
	10-31-57[ef]	1660	7.3	167 / 8.34	51 / 4.23	136 / 5.91	-- / --	- / -	289 / 4.74	546 / 11.37	69 / 1.95	8 / 0.13	0.7	0.8	----	10.1	32
	3-11-58[f]	1082	7.7	99 / 4.96	30 / 2.49	93 / 4.04	-- / --	- / -	245 / 4.02	322 / 6.70	34 / 0.96	-- / --	0.8	0.6	----	6.5	35
23C2	7-2-56[ef]	1532	7.8	154 / 7.70	53 / 4.34	130 / 5.65	-- / --	- / -	258 / 4.24	534 / 11.12	60 / 1.69	3 / 0.05	0.8	0.6	----	10.0	32
	10-31-57[ef]	1641	7.4	172 / 8.59	52 / 4.24	130 / 5.65	-- / --	- / -	281 / 4.60	552 / 11.48	68 / 1.92	6 / 0.10	0.7	0.7	----	9.9	31
	3-11-58[f]	1082	7.7	99 / 4.95	32 / 2.66	93 / 4.04	-- / --	- / -	243 / 3.99	317 / 6.60	34 / 0.93	-- / --	0.8	0.5	----	6.7	35
23F2	12-14-55[b]	1567	7.8	167 / 8.33	66 / 5.43	100 / 4.35	4.6 / 0.12	0 / 0	237 / 4.70	534 / 11.12	63 / 1.78	22 / 0.36	0.7	0.5	1155	9.9	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
e. Date sample submitted to laboratory.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H-8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-23G1	7- 2-56[ef]	1564	7.8	159 7.95	54 4.45	130 5.65	-- --	- -	287 4.70	540 11.26	61 1.72	4 0.06	0.7	0.6	----	10.1	31
	8- 1-56[b]	1324	7.7	161 8.03	55 4.52	100 4.35	4.4 0.11	0 0	264 4.32	522 10.88	63 1.78	8.7 0.14	0.8	0.7	1140	9.0	26
	10-31-57[ef]	1698	7.5	191 9.56	53 4.37	136 5.91	-- --	- -	289 4.74	618 12.86	72 2.03	11 0.18	0.7	0.7	----	10.3	30
	3-12-58[f]	1045	7.6	102 5.12	32 2.67	80 3.48	-- --	- -	237 3.88	302 6.30	33 0.93	2 0.03	0.8	0.4	----	6.2	31
23G2	7- 2-56[ef]	1684	7.6	167 8.35	55 4.52	145 6.30	-- --	- -	250 4.09	595 12.39	74 2.08	2 0.03	0.7	0.9	----	10.8	33
	10-31-57[ef]	1746	7.5	181 9.03	58 4.74	144 6.26	-- --	- -	287 4.70	600 12.50	77 2.17	9 0.15	0.7	0.8	----	11.0	31
	3-11-58[f]	1377	7.7	136 6.82	43 3.50	125 5.44	-- --	- -	260 4.27	478 9.96	56 1.58	5 0.08	0.8	0.7	----	8.9	35
23J1	8-24-53[e]	1610	7.6	172 8.58	60 4.90	106 4.78	4.9 0.12	0 0	290 4.74	565 11.75	66 1.86	19 0.3	0.5	0.6	1252	9.8	26
	6-25-54[e]	1450	8.0	162 8.12	59 4.90	114 4.95	4.9 0.12	0 0	293 4.80	535 11.15	68 1.91	25 0.40	0.6	0.5	1222	10.0	27
	1- 6-56	1610	7.6	167 8.35	57 4.72	125 5.42	4.3 0.11	0 0	280 4.60	581 12.10	71 2.00	7.9 0.13	0.9	0.5	1277	10.3	29
	11-27-57[d]	1735	8.0	165 8.25	71 5.83	118 5.12	5.1 0.13	0 0	284 4.65	591 12.30	79 2.23	8.1 0.13	0.6	0.2	1320	11.1	26
23K1	11- 3-54[b]	1515	7.8	149 7.44	64 5.26	105 4.57	4.8 0.12	0 0	285 4.68	513 10.69	58 1.64	13 0.21	0.9	0.6	1128	10.0	26
	7- 2-56[ef]	1640	7.7	170 8.48	61 5.00	130 5.65	-- --	- -	276 4.52	595 12.40	68 1.92	7 0.11	0.8	0.7	----	10.7	30

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
e. Date sample submitted to laboratory.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H-8

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN FOREBAY AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/22W-23Q1	8-24-53[c]	1528	7.9	183 / 9.14	60 / 4.95	115 / 5.00	4.9 / 0.13	0 / 0	275 / 4.51	600 / 12.50	74 / 2.07	11 / 0.17	0.8	0.8	1208	10.1	26
26C5	7-18-57[b]	1515	7.7	179 / 8.93	53 / 4.36	104 / 4.52	4.6 / 0.12	0 / 0	295 / 4.84	530 / 11.05	64 / 1.80	12 / 0.19	0.8	0.8	1215	9.0	25
27F1	8-27-54[bc]	1700	7.8	184 / 9.20	66 / 5.44	106 / 4.60	5.8 / 0.15	0 / 0	344 / 5.65	542 / 11.30	74 / 2.08	3.8 / 0.61	0.4	0.7	1389	10.2	24
27F2	11- 3-54[b]	2500	7.4	338 / 16.87	107 / 8.80	125 / 5.44	7.7 / 0.20	0 / 0	344 / 5.64	975 / 20.32	98 / 2.76	143 / 2.31	0.8	0.6	2060	14.4	17
27L1	8-25-53[c]	1530	7.5	166 / 8.28	55 / 4.58	105 / 4.56	4.7 / 0.12	0 / 0	311 / 5.10	494 / 10.28	60 / 1.68	41 / 0.66	0.4	0.6	1138	9.3	26
	1- 6-56	1630	7.5	188 / 9.40	55 / 4.50	111 / 4.83	4.7 / 0.12	0 / 0	323 / 5.30	544 / 11.32	64 / 1.80	38 / 0.61	1.1	0.3	1312	9.5	26
	12-18-56[d]	1645	7.8	177 / 8.85	71 / 5.82	121 / 5.26	5.9 / 0.15	0 / 0	326 / 5.35	566 / 11.79	75 / 2.11	42 / 0.68	0.6	0.6	1332	11.2	26

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1N/21W- 9M1	Undifferentiated Quaternary and Fox Canyon	5- 1-53[b]	921	7.8	75/3.74	23/1.87	102/4.42	5.5/0.14	0/0	308/5.05	169/3.52	53/1.50	7.4/0.12	0.7	0.1	1051	5.1	44
		8-24-53[b]	920	7.4	83/4.14	17/1.44	94/4.09	4.7/0.12	0/0	297/4.86	171/3.56	52/1.47	Tr./--	0.4	0.2	698	4.9	42
		12-21-55	970	7.5	79/3.95	22/1.80	104/4.50	5/0.13	0/0	299/4.9	183/3.82	55/1.55	1.6/0.03	0.6	0.2	637	5.5	43
		12-26-56	862	7.6	61/3.04	24/1.97	96/4.18	4.5/0.12	0/0	310/5.09	141/2.93	50/1.41	0/0	0.6	0.3	675	4.3	45
		4-22-58[c]	890	7.7	64/3.20	22/1.75	95/4.16	4.2/0.11	0/0	305/5.00	138/2.87	50/1.41	0/0	0.3	0	612	4.3	45
16E2	Undifferentiated Quaternary	7-25-57[d]	973	7.7	89/4.44	31/2.55	87/3.78	5.0/0.13	0/0	285/4.68	246/5.13	44/1.24	1.0/0.02	0.2	0.4	720	6.2	35
18Q1	Oxnard	3- 8-56	1120	8.1	120/6.00	33/2.70	81/3.50	5.4/0.14	0/0	311/5.10	287/5.97	43/1.20	15/0.24	0.3	0.6	821	6.3	28
19K5	Oxnard	12-13-55	1163	7.9	121/6.04	37/3.04	80/3.48	3.7/0.10	0/0	269/4.41	338/7.05	45/1.25	3.0/0.05	0.6	0.4	822	6.6	28
		11- 7-57[c]	1165	7.7	113/5.65	38/3.15	91/3.96	3.5/0.09	0/0	278/4.55	333/6.93	45/1.27	0/0	0.3	0.5	900	7.2	31
20K1	Fox Canyon	11- 3-54[d]	1140	7.9	81/4.04	32/2.63	125/5.43	4.7/0.12	0/0	293/4.80	233/4.85	90/2.54	1.0/0.02	0.4	0.2	724	7.4	44
21H1	- - -	12-13-55[d]	1887	7.9	172/8.58	55/4.52	144/6.26	3.5/0.09	0/0	340/5.57	442/9.21	172/4.85	2.0/0.03	0.3	0.3	1265	10.9	32
21N1	Undifferentiated Quaternary	4-17-53[b]	1050	8.0	101/5.07	30/2.49	89/3.87	4.0/0.10	0/0	287/4.71	269/5.61	50/1.41	Tr.	0.3	0.1	745	6.5	34

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.

TABLE H-9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/21W-21N1	Undifferentiated Quaternary	8-27-54[bd]	1065	7.9	106 / 5.32	29 / 2.41	83 / 3.60	3.2 / 0.08	0 / 0	277 / 4.54	263 / 5.48	51 / 1.44	4.3 / 0.07	0.3	0.5	796	6.1	32
		11- 8-57[c]	1070	7.7	103 / 5.15	31 / 2.55	86 / 3.72	3.1 / 0.08	0 / 0	281 / 4.60	266 / 5.54	55 / 1.55	0 / 0	0.2	0.2	819	6.4	32
28C1	Undifferentiated Quaternary	12-21-55	1045	7.7	59 / 2.95	30 / 2.47	115 / 5.00	5.3 / 0.14	0 / 0	311 / 5.10	176 / 3.66	73 / 2.05	0.5 / 0.01	0.5	0.3	564	5.5	47
		6- 8-56	971	7.6	59 / 2.94	34 / 2.79	110 / 4.79	3.9 / 0.10	0 / 0	310 / 5.08	180 / 3.76	68 / 1.92	0.5 / 0.01	0.6	0.4	650	5.5	45
		12-18-56	1176	7.4	80 / 3.99	46 / 3.78	129 / 5.61	5.4 / 0.14	0 / 0	300 / 4.92	262 / 5.45	123 / 3.47	1.0 / 0.02	0.6	0.4	875	8.6	42
28E1	Undifferentiated Quaternary	7-24-57[d]	1037	8.1	71 / 3.54	33 / 2.71	101 / 4.39	5.2 / 0.13	0 / 0	257 / 4.21	252 / 5.26	50 / 1.41	2.0 / 0.03	0.3	0.3	722	6.6	41
28G1	Undifferentiated Quaternary	6- 8-56[c]	1440	7.4	140 / 7.0	63 / 5.13	143 / 6.22	4.2 / 0.11	0 / 0	274 / 4.50	450 / 9.40	131 / 3.68	3.2 / 0.05	0.3	0.2	1136	11.5	34
		4- 4-57[c]	1640	7.9	142 / 7.10	53 / 4.34	137 / 5.96	4.3 / 0.11	0 / 0	339 / 5.55	409 / 8.52	135 / 3.80	1.0 / 0.02	0.5	0.4	1180	10.4	34
		11-26-57	1380	7.7	146 / 7.29	53 / 4.36	132 / 5.74	4 / 0.11	0 / 0	337 / 5.52	397 / 8.27	138 / 3.89	0 / 0	0.3	0.4	1380	11.8	33
28N1	Oxnard	8-27-54[bd]	1210	7.9	111 / 5.55	42 / 3.48	88 / 3.80	3.9 / 0.10	0 / 0	284 / 4.66	330 / 6.88	55 / 1.54	1.9 / 0.03	0.3	0.7	844	7.4	29
29B3	Oxnard and Undifferentiated Quaternary	8-27-54[bd]	1218	7.8	117 / 5.86	40 / 3.29	91 / 3.94	3.9 / 0.10	0 / 0	280 / 4.59	332 / 6.91	56 / 1.57	7.4 / 0.12	0.4	0.6	917	7.3	30
29B5	Undifferentiated Quaternary	7-24-57[d]	1036	8.1	122 / 6.09	35 / 2.88	90 / 3.92	6.8 / 0.14	0 / 0	260 / 4.27	354 / 7.38	46 / 1.30	3.0 / 0.05	0.4	0.5	860	7.0	30
29C1	- - -	8- 2-56[d]	1037	7.9	112 / 5.59	43 / 3.53	78 / 3.39	3.6 / 0.09	0 / 0	256 / 4.20	333 / 6.94	47 / 1.33	1.5 / 0.02	0.7	0.6	835	7.0	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Terminal Testing Laboratory, Inc.
c. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table H-17.

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.02
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/21W-29C1	- - -	11-8-57[e]	1215	7.6	118 / 5.90	40 / 3.30	93 / 4.04	3.5 / 0.09	0 / 0	287 / 4.70	343 / 7.14	53 / 1.49	6.0 / 0.10	0.2	0.5	940	7.4	30
29D2	Oxnard	5-16-57[e]	1260	8.0	113 / 5.65	39 / 3.20	99 / 4.30	3.9 / 0.10	0 / 0	284 / 4.66	346 / 7.21	43 / 1.21	1.7 / 0.03	1.5	0.4	908	7.6	32
30A1	Undifferentiated Quaternary and Fox Canyon	8-26-53[b]	1068	7.8	109 / 5.45	25 / 2.07	91 / 4.0	4.3 / 0.11	0 / 0	286 / 4.69	286 / 5.96	39 / 1.11	1.9 / 0.03	0.2	0.6	731	6.2	34
		12-16-54[b]	1112	7.9	104 / 5.20	37 / 3.08	87 / 3.78	3.9 / 0.10	0 / 0	274 / 4.49	303 / 6.30	39 / 1.11	2.5 / 0.04	0.1	0.7	768	7.0	31
		10-25-55[e]	1080	8.0	104 / 5.19	31 / 2.57	99 / 4.31	5.2 / 0.13	0 / 0	289 / 4.74	298 / 6.20	32 / 0.90	3.0 / 0.05	0.3	0.7	----	7.0	35
		12-18-56[e]	1005	7.5	99 / 4.95	35 / 2.87	104 / 4.52	6.6 / 0.17	0 / 0	304 / 4.98	295 / 6.15	38 / 1.07	2.4 / 0.04	0.1	1.9	784	7.5	36
		11-26-57	890	7.8	99 / 4.94	30 / 2.47	86 / 3.74	45 / 0.12	0 / 0	292 / 4.78	257 / 5.36	44 / 1.24	2.0 / 0.03	0.3	0.6	720	6.3	33
30K1	Oxnard and Undifferentiated Quaternary	7-26-57[d]	1053	7.9	134 / 6.69	34 / 2.79	80 / 3.48	4.1 / 0.11	0 / 0	283 / 4.64	341 / 7.11	41 / 1.17	1.5 / 0.03	0.5	0.6	860	6.4	27
31A1	Undifferentiated Quaternary	11-7-57[e]	1165	7.7	118 / 5.90	36 / 3.00	94 / 4.08	3.5 / 0.09	0 / 0	262 / 4.30	353 / 7.35	40 / 1.13	4.4 / 0.07	0.3	0.8	910	7.2	31
31J1	Undifferentiated Quaternary, Fox Canyon and Santa Barbara	6-11-56[e]	960	7.7	84 / 4.18	45 / 3.69	86 / 3.73	5.2 / 0.13	0 / 0	264 / 4.33	254 / 5.30	67 / 1.89	1.1 / 0.02	0.1	0	756	7.4	32
		5-20-58[e]	1014	8.3	60 / 3.00	37 / 3.07	104 / 4.05	5.3 / 0.14	0 / 0	197 / 3.23	248 / 5.16	82 / 2.31	2.4 / 0.04	0.1	0.9	692	7.5	42
31L1	- - -	8-26-53[b]	992	7.9	86 / 4.28	28 / 2.29	91 / 3.94	4.6 / 0.12	0 / 0	259 / 4.25	254 / 5.30	42 / 1.17	6.2 / 0.10	0.2	0.5	642	6.4	37

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Terminal Testing Laboratory, Inc.
c. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	EC x 10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-31L1	- - -	7- 9-54	1220	7.6	94 / 4.70	31 / 2.54	119 / 5.18	9.5 / 0.24	0 / 0	314 / 5.15	242 / 5.05	83 / 2.35	2.4 / 0.04	0.3	0.6	793	7.5	41
		12-16-54[b]	1218	7.7	82 / 4.10	34 / 2.79	122 / 5.30	6.2 / 0.16	0 / 0	294 / 4.82	233 / 4.85	97 / 2.73	6.2 / 0.10	0.2	0.6	773	7.5	43
		6-11-56	1000	8.2	49 / 2.45	34 / 2.79	110 / 4.79	5.0 / 0.13	0 / 0	183 / 3.00	254 / 5.29	63 / 1.78	4.0 / 0.07	0.5	0.7	675	7.2	47
		5-20-58[c]	910	8.3	50 / 2.50	25 / 2.05	105 / 4.56	6.5 / 0.17	0 / 0	212 / 3.48	193 / 4.02	60 / 1.69	4.1 / 0.07	0.1	0.7	615	5.8	49
31L2	Oxnard and Undifferentiated Quaternary	11- 8-57[c]	1080	7.7	93 / 4.65	32 / 2.65	91 / 3.96	5.1 / 0.13	0 / 0	278 / 4.55	254 / 5.29	55 / 1.55	0 / 0	0.2	0.8	805	6.7	35
32C1	San Pedro Formation	7-24-57[d]	1142	8.0	82 / 4.09	40 / 3.29	104 / 4.52	6.0 / 0.15	0 / 0	248 / 4.07	312 / 6.50	49 / 1.38	2.0 / 0.03	0.2	0.4	790	8.0	38
32G1	Oxnard	6-11-56	1070	7.4	124 / 6.20	13 / 1.05	92 / 4.00	4.0 / 0.1	0 / 0	222 / 3.64	331 / 6.90	53 / 1.49	0 / 0	0.4	0.5	864	5.2	35
		5-20-58[c]	1078	8.2	62 / 3.10	39 / 3.20	110 / 4.80	5.7 / 0.15	0 / 0	204 / 3.35	286 / 5.95	70 / 1.97	2.7 / 0.04	0.4	0.2	717	8.0	42
32K1	Undifferentiated Quaternary	6-11-56[c]	1080	7.6	90 / 4.50	45 / 3.68	119 / 5.16	4.4 / 0.11	0 / 0	246 / 4.03	336 / 7.00	67 / 1.89	1.8 / 0.03	0.1	1.1	888	9.0	39
		5-20-58[c]	1144	8.3	66 / 3.30	43 / 3.50	120 / 5.20	6.5 / 0.17	0 / 0	197 / 3.23	333 / 6.93	71 / 2.00	4.0 / 0.06	Tr.	0.7	774	8.9	43
1N/22W- 2N2	Oxnard	8- 1-56[d]	1562	7.7	184 / 9.18	59 / 4.85	108 / 4.70	4.6 / 0.12	0 / 0	273 / 4.48	589 / 12.27	66 / 1.86	2.0 / 0.03	0.8	0.9	1280	9.7	25
2P2	Oxnard	8- 1-56[d]	1030	7.6	126 / 6.29	41 / 3.37	80 / 3.48	3.9 / 0.10	0 / 0	249 / 4.08	375 / 7.82	43 / 1.21	2.5 / 0.04	0.8	0.7	885	7.0	26
3F4	Oxnard	8-25-53[b]	1360	7.5	166 / 8.32	51 / 4.18	97 / 4.23	4.4 / 0.11	0 / 0	289 / 4.74	506 / 10.54	55 / 1.56	19 / 0.30	0.6	0.6	1171	8.5	25

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Terminal Testing Laboratory, Inc.
c. Analyzed by Pacific Chemical Consultants
d. For analysis of heavy metal constituents, see Table H 17.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W- 3F4	Oxnard	6-29-54[b]	1410	7.4	149 / 7.46	48 / 3.91	92 / 4.00	4.7 / 0.12	0 / 0	276 / 4.52	442 / 9.22	51 / 1.44	19 / 0.31	0.7	0.7	982	8.0	26
		5-25-55	1360	7.7	156 / 7.8	50 / 4.10	88 / 3.82	4.5 / 0.12	0 / 0	280 / 4.6	467 / 9.74	48 / 1.35	22 / 0.36	0.9	0.7	1091	8.0	24
		6- 8-56	1408	7.4	162 / 8.08	54 / 4.44	93 / 4.05	4.5 / 0.12	0 / 0	298 / 4.88	465 / 9.68	53 / 1.49	21 / 0.34	0.6	0.6	1110	8.6	24
		4- 4-57[c]	1665	7.7	172 / 8.60	65 / 5.33	118 / 5.13	5.1 / 0.13	0 / 0	307 / 5.03	583 / 12.15	62 / 1.75	19 / 0.31	0.7	0.5	1306	10.6	27
		4- 8-58[f]	1616	7.3	176 / 8.79	54 / 4.47	110 / 4.78	-- / --	- / -	313 / 5.13	530 / 11.04	57 / 1.61	18 / 0.29	0.7	0.6	--	9.3	27
		4-22-58[c]	1622	7.7	179 / 8.95	61 / 4.95	106 / 4.60	5.3 / 0.14	0 / 0	308 / 5.05	544 / 11.33	61 / 1.72	1.6 / 0.03	0.4	0.1	1092	9.7	25
5B4	Oxnard and Undifferentiated Quaternary	12-23-57[d]	1667	7.8	179 / 8.93	61 / 5.01	112 / 4.87	4.6 / 0.12	0 / 0	267 / 4.37	579 / 12.07	95 / 2.68	7.6 / 0.12	0.7	0.7	1265	10.0	26
5C2	Oxnard	12-14-55[d]	1280	8.0	135 / 6.74	46 / 3.78	90 / 3.92	4.0 / 0.10	0 / 0	261 / 4.28	428 / 8.91	49 / 1.38	8.0 / 0.13	0.8	0.4	926	7.8	27
7D1	Oxnard	8-25-53[b]	1168	7.4	119 / 5.94	41 / 3.37	88 / 3.82	4.0 / 0.10	0 / 0	249 / 4.08	396 / 8.25	39 / 1.11	1.9 / 0.03	0.6	0.6	860	7.3	29
		6-29-54[b]	1180	7.7	113 / 5.66	42 / 3.48	89 / 3.85	4.0 / 0.10	0 / 0	242 / 3.96	403 / 8.22	39 / 1.10	2.5 / 0.04	0.6	0.7	892	7.4	29
		12-22-55	1208	7.6	120 / 6.0	59 / 3.20	90 / 3.91	3.8 / 0.10	0 / 0	250 / 4.10	391 / 8.14	41 / 1.15	0.6 / 0.01	1.1	0.6	912	7.2	30
		12-18-56[c]	1150	7.7	116 / 5.80	45 / 3.69	107 / 4.65	4.3 / 0.11	0 / 0	250 / 4.10	401 / 8.35	48 / 1.35	0 / 0	0.6	0.4	884	8.5	33

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metals constituents, see Table H-17.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at $25^\circ C$	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W- 7D1	Oxnard	5-16-57[e]	1255	8.1	116 / 5.80	43 / 3.52	97 / 4.22	3.9 / 0.10	0 / 0	259 / 4.25	391 / 8.15	43 / 1.21	0 / 0	1.7	0.2	920	7.8	31
		4-22-58[e]	1253	7.5	132 / 6.60	26 / 2.10	90 / 3.90	3.9 / 0.10	0 / 0	247 / 4.05	356 / 7.41	48 / 1.35	0.3 / 0.01	0.1	2.3	851	6.1	31
7J2	Oxnard	8- 1-56[d]	1038	7.5	117 / 5.84	44 / 3.62	82 / 3.57	3.9 / 0.10	0 / 0	254 / 4.16	374 / 7.80	40 / 1.13	1.0 / 0.02	0.8	0.7	885	7.3	27
7M2	- - -	4-16-58	1180	7.5	120 / 6.0	41 / 3.4	80 / 3.48	3.4 / 0.09	0 / 0	244 / 4.0	395 / 8.22	39 / 1.1	1.7 / 0.03	0.9	0.3	875	7.0	27
8K3	Oxnard	10-25-55[e]	1220	7.6	128 / 6.39	41 / 3.36	97 / 4.22	4.6 / 0.12	0 / 0	255 / 4.18	403 / 8.39	37 / 1.04	1.7 / 0.03	0.8	0.8	--	7.8	30
		6- 8-56	1096	8.4	121 / 6.04	45 / 3.70	82 / 3.57	3.8 / 0.10	19 / 0.64	224 / 3.68	389 / 8.10	41 / 1.16	1.0 / 0.02	0.8	0.7	895	7.4	27
		4- 4-57[e]	1360	7.4	121 / 6.05	48 / 3.93	109 / 4.74	5.1 / 0.13	0 / 0	262 / 4.30	439 / 9.15	55 / 1.55	0 / 0	0.7	0.5	1000	8.8	32
		4-23-58[e]	1188	7.7	122 / 6.10	45 / 3.70	91 / 3.96	4.6 / 0.12	0 / 0	259 / 4.25	388 / 8.08	51 / 1.44	0 / 0	0.8	0.5	817	7.8	29
9E1	Oxnard	12-14-55[d]	1221	7.8	136 / 6.79	51 / 4.19	90 / 3.92	4.5 / 0.12	0 / 0	254 / 4.16	453 / 9.44	48 / 1.35	1.5 / 0.02	0.8	0.5	979	8.2	26
9H1	Oxnard	12-16-55[d]	1460	7.7	158 / 7.88	52 / 4.27	95 / 4.13	4.5 / 0.12	0 / 0	287 / 4.70	480 / 10.01	52 / 1.47	15 / 0.24	0.8	0.5	1081	8.5	25
		4- 8-58[f]	1483	7.4	147 / 7.37	50 / 4.15	105 / 4.56	- / -	- / -	287 / 4.70	467 / 9.73	53 / 1.49	8 / 0.13	0.7	0.6	--	8.7	28
9Q3	Oxnard	10-25-55[e]	1250	7.5	134 / 6.69	41 / 3.39	92 / 4.00	4.5 / 0.12	0 / 0	254 / 4.16	413 / 8.60	38 / 1.07	0 / 0	0.8	0.8	--	7.5	28
		6- 8-56	1225	8.4	128 / 6.39	49 / 4.03	84 / 3.65	3.8 / 0.10	19 / 0.64	224 / 3.68	423 / 8.82	43 / 1.21	1.0 / 0.02	0.9	0.7	935	7.8	26

a. Analyzed by Department of Water Resources unless otherwise stated.
c. Analyzed by Terminal Testing Laboratory, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC\times10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W- 9Q3	Oxnard	4- 4-57[e]	1390	7.8	126 / 6.30	46 / 3.77	102 / 4.43	3.1 / 0.08	0 / 0	262 / 4.30	416 / 8.67	44 / 1.24	0 / 0	0.8	0.5	950	8.3	30
		4-23-58[e]	1282	7.6	129 / 6.45	46 / 3.75	94 / 4.12	4.2 / 0.11	0 / 0	256 / 4.20	421 / 8.77	45 / 1.27	0 / 0	0.8	0.2	873	8.0	29
10A3	Oxnard	12-14-55[d]	1610	8.2	184 / 9.18	62 / 5.10	105 / 4.57	4.8 / 0.12	10 / 0.33	243 / 3.99	605 / 12.61	68 / 1.92	2.0 / 0.03	0.9	0.6	1259	9.8	24
11B1	Oxnard	8-27-54[bd]	1600	7.8	175 / 8.75	58 / 4.70	104 / 4.53	4.7 / 0.12	0 / 0	267 / 4.38	594 / 12.38	60 / 1.68	1.2 / 0.02	0.7	0.8	1211	9.4	25
		11- 7-57[e]	1550	7.6	164 / 8.20	57 / 4.65	115 / 5.00	5.5 / 0.14	0 / 0	278 / 4.55	557 / 11.60	59 / 1.66	0 / 0	0.4	0.7	1235	9.8	28
12J2	Oxnard and Undifferentiated Quaternary	8-13-56[d]	1119	7.4	121 / 6.04	38 / 3.12	74 / 3.22	3.3 / 0.08	0 / 0	250 / 4.10	359 / 7.47	38 / 1.07	0.5 / 0.01	0.8	0.7	805	6.4	26
		11- 7-57[e]	1215	7.6	118 / 5.90	36 / 3.00	91 / 3.96	3.1 / 0.08	0 / 0	250 / 4.10	359 / 7.47	43 / 1.21	0 / 0	0.4	0.5	900	7.0	31
12P1	Oxnard	11- 3-54[d]	1111	7.9	132 / 6.59	45 / 3.70	88 / 3.83	4.4 / 0.11	0 / 0	258 / 4.24	415 / 8.65	41 / 1.16	3.0 / 0.05	0.8	0.4	835	7.6	27
13J4	Oxnard	7-25-57[d]	1119	7.8	122 / 6.09	39 / 3.20	79 / 3.44	3.6 / 0.09	0 / 0	277 / 4.54	336 / 6.99	47 / 1.33	1.3 / 0.02	0.6	0.6	833	6.7	27
14F1	Oxnard	8- 1-56[d]	1375	7.6	161 / 8.03	54 / 4.44	98 / 4.26	4.4 / 0.11	0 / 0	261 / 4.28	522 / 10.87	54 / 1.52	2.5 / 0.04	0.8	0.8	1130	8.8	25
15B3	- - -	10-25-55[e]	1220	7.7	130 / 6.49	42 / 3.44	91 / 3.96	4.5 / 0.12	0 / 0	258 / 4.23	408 / 8.49	38 / 1.07	1.9 / 0.03	0.7	0.7	--	7.5	28
		6- 8-56[e]	1200	7.7	132 / 6.60	50 / 4.80	97 / 4.25	4.3 / 0.11	0 / 0	250 / 4.10	445 / 9.25	45 / 1.27	1.4 / 0.02	0.8	0.8	932	8.4	28
		4- 8-58[f]	1248	7.4	122 / 6.09	40 / 3.31	99 / 4.31	-- / --	- / -	260 / 4.27	395 / 8.23	44 / 1.24	2 / 0.03	0.7	0.6	--	7.6	31

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE H 9

MINERAL ANALYZES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/22W-16D2	- - -	4-16-58	1204	7.2	124 / 6.20	43 / 3.50	85 / 3.71	3.2 / 0.08	0 / 0	250 / 4.10	404 / 8.42	39 / 1.10	4.5 / 0.07	0.7	0.3	890	7.3	28
16E1	- - -	4-16-58	1255	7.7	129 / 6.45	43 / 3.55	103 / 4.47	4.5 / 0.12	0 / 0	250 / 4.1	405 / 8.4	55 / 1.55	2.7 / 0.04	0.8	0.2	918	8.1	31
17B1	Undifferentiated Quaternary	4-16-58	1082	7.8	106 / 5.30	36 / 2.95	73 / 3.19	3.4 / 0.09	0 / 0	229 / 3.75	323 / 6.73	39 / 1.10	2.4 / 0.04	0.7	0.3	775	6.2	28
17C1	- - -	4-16-58	1147	7.6	120 / 6.00	36 / 3.00	77 / 3.33	3.1 / 0.08	0 / 0	244 / 4.00	369 / 7.68	37 / 1.05	2.1 / 0.03	0.7	0.2	827	6.4	27
17D2	- - -	4-16-58	1181	7.4	114 / 5.70	43 / 3.50	85 / 3.71	3.4 / 0.09	0 / 0	247 / 4.05	387 / 8.06	41 / 1.15	1.1 / 0.02	0.8	0.2	862	7.3	29
17J1	- - -	4-16-58[g]	534	7.9	14 / 0.7	13 / 1.1	87 / 3.80	3.7 / 0.10	0 / 0	262 / 4.3	3 / 0.07	43 / 1.20	1.1 / 0.02	0.3	0.5	313	3.9	67
17J2	Oxnard	4-16-58	4000	7.3	437 / 21.80	150 / 12.30	132 / 5.72	5.9 / 0.15	0 / 0	211 / 3.45	441 / 9.19	1014 / 28.60	2.4 / 0.04	0.4	0.4	2995	27.3	14
17Q1	- - -	4-16-58[g]	305	9.1	2 / 0.10	0 / 0	65 / 2.82	1.7 / 0.04	18 / 0.60	49 / 0.80	4 / 0.08	50 / 1.40	1.6 / 0.03	0.4	0.1	159	2.9	95
18E1	Oxnard	8-25-53[b]	1230	7.5	125 / 6.25	42 / 3.46	90 / 3.91	4.0 / 0.10	0 / 0	249 / 4.08	413 / 8.60	44 / 1.23	1.2 / 0.02	0.6	0.5	899	7.5	28
		7- 9-54	1155	7.5	118 / 5.89	45 / 3.70	80 / 3.48	4.1 / 0.10	0 / 0	256 / 4.20	385 / 8.03	37 / 1.04	3.0 / 0.05	1.0	0.6	840	7.3	26
		5-25-55	1220	7.5	130 / 6.5	39 / 3.2	88 / 3.82	4.2 / 0.11	0 / 0	253 / 4.15	399 / 8.30	41 / 1.15	2.5 / 0.04	0.9	0.8	920	7.1	28
		5-17-56[b]	1240	7.8	127 / 6.35	43 / 3.51	87 / 3.77	4.0 / 0.11	0 / 0	249 / 4.09	408 / 8.50	43 / 1.21	1.8 / 0.03	0.6	0.8	917	7.4	28
		12-18-56[c]	1145	8.4	76 / 3.80	64 / 5.25	102 / 4.43	5.1 / 0.13	31 / 1.04	139 / 2.28	425 / 8.85	53 / 1.49	0 / 0	0.6	0.2	830	9.8	33

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
g. Bailed sample.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-18E1	Oxnard	4-23-58[c]	1225	7.6	130/6.50	39/3.20	89/3.88	3.9/0.10	0/0	250/4.10	396/8.24	48/1.35	6.5/0.11	0	2.8	848	7.2	28
18P1	Oxnard	5-16-57[c]	1260	7.6	117/5.85	45/3.69	98/4.26	4.7/0.12	0/0	259/4.25	404/8.42	45/1.27	0/0	1.2	0.4	900	8.1	31
19B1	Oxnard	5-16-57[c]	1255	7.9	116/5.80	46/3.77	98/4.26	4.3/0.11	0/0	257/4.22	398/8.29	47/1.32	0/0	0.7	0.4	912	8.1	31
19B3	Oxnard and Undifferentiated Quaternary	5-25-55	1100	8.1	122/6.1	35/2.9	76/3.29	3.7/0.10	0/0	247/4.05	356/7.41	39/1.1	4.2/0.07	0.9	0.7	834	6.3	27
		12-13-55[d]	1079	7.9	118/5.89	37/3.04	78/3.39	3.7/0.10	0/0	246/4.04	349/7.27	40/1.13	0.5/0.01	0.9	0.4	805	6.5	27
		5-17-56[b]	1140	7.9	120/5.98	36/2.94	79/3.45	3.9/0.10	0/0	253/4.14	351/7.30	42/1.17	1.2/0.02	0.6	0.7	824	6.5	28
		4- 4-57[c]	1200	8.1	113/5.65	39/3.20	87/3.78	3.9/0.10	0/0	250/4.10	356/7.42	43/1.21	0/0	2.0	0.6	850	7.1	30
		11-26-57	968	7.6	134/6.69	26/2.14	78/3.39	4.1/0.11	0/0	243/3.98	345/7.18	44/1.24	0/0	0.7	0.7	815	6.2	27
		4-23-58[c]	1141	7.7	122/6.10	36/3.00	85/3.70	4.6/0.12	0/0	250/4.10	358/7.45	45/1.26	0/0	0.7	0.3	713	6.8	29
19H1	Undifferentiated Quaternary	7- 9-54	1134	7.4	123/6.14	43/3.53	85/3.70	4.1/0.11	0/0	251/4.12	363/7.56	59/1.66	4.5/0.07	1.0	0.6	865	7.4	27
		12-16-54[b]	1520	7.5	155/7.75	52/4.26	92/4.01	4.7/0.12	0/0	228/3.73	376/7.84	158/4.46	1.2/0.02	0.6	0.7	1075	8.4	25
		4-23-58[c]	1325	7.8	60/3.00	15/1.20	162/7.06	5.7/0.15	0/0	12/0.20	1.4/0.03	388/10.93	0/0	0.5	0.2	919	11.2	62
20B1	Oxnard	8-25-53[b]	1190	7.6	75/3.73	19/1.58	167/7.26	3.8/0.10	0/0	261/4.27	353/7.35	41/1.14	3.1/0.05	0.4	0.5	798	8.4	58

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-20B1	Oxnard	7- 9-54	1058	7.9	117 / 5.84	34 / 2.79	83 / 3.61	5.2 / 0.13	0 / 0	271 / 4.44	343 / 7.14	35 / 0.99	7.9 / 0.13	0.8	0.5	784	6.6	29
		12-16-54[b]	1160	7.7	116 / 5.80	37 / 3.08	80 / 3.49	5.1 / 0.13	0 / 0	257 / 4.21	346 / 7.22	39 / 1.11	6.2 / 0.10	0.5	0.7	820	6.7	28
		5-25-55	1120	7.7	123 / 6.15	46 / 3.75	81 / 3.51	5.1 / 0.13	0 / 0	250 / 4.1	391 / 8.15	39 / 1.1	7.5 / 0.12	0.8	0.7	840	7.4	26
		10-25-55[e]	1120	8.0	122 / 6.09	34 / 2.81	82 / 3.57	5.6 / 0.14	0 / 0	247 / 4.05	363 / 7.56	36 / 1.02	4.4 / 0.07	0.6	0.5	--	6.5	28
		5-17-56[b]	1150	7.8	119 / 5.93	36 / 2.99	81 / 3.50	4.9 / 0.13	0 / 0	255 / 4.18	351 / 7.30	42 / 1.17	6.8 / 0.11	0.4	0.8	827	6.6	28
		3-29-57[e]	1235	7.7	116 / 5.80	38 / 3.11	85 / 3.69	4.7 / 0.12	0 / 0	256 / 4.20	345 / 7.19	40 / 1.13	0 / 0	0.6	0.5	850	6.9	28
		4-16-58	1125	7.3	119 / 5.95	35 / 2.85	77 / 3.33	4.3 / 0.11	0 / 0	253 / 4.15	350 / 7.28	37 / 1.05	3.8 / 0.06	0.3	0.3	809	6.3	27
20E1	Oxnard	7- 9-54	1242	7.8	115 / 5.75	37 / 3.05	84 / 3.65	3.9 / 0.10	0 / 0	226 / 3.7	348 / 7.24	51 / 1.45	2.9 / 0.05	0.8	0.6	793	6.8	29
		12-16-54[b]	1520	7.5	155 / 7.55	51 / 4.22	92 / 4.02	4.7 / 0.12	0 / 0	228 / 3.73	374 / 7.80	158 / 4.46	4.3 / 0.07	0.5	0.7	1094	8.6	25
20E2	Fox Canyon	5-25-55	1080	7.8	139 / 6.95	30 / 2.43	87 / 3.75	4.1 / 0.10	0 / 0	256 / 4.2	388 / 8.08	39 / 1.1	3.7 / 0.06	0.5	0.6	900	6.3	28
		12-13-55[d]	1160	8.0	124 / 6.19	33 / 2.71	84 / 3.65	4.5 / 0.12	0 / 0	221 / 3.62	364 / 7.59	42 / 1.18	2.5 / 0.04	0.4	0.4	956	6.5	29
		5-17-56[b]	1210	8.0	136 / 6.82	31 / 2.52	88 / 3.80	4.2 / 0.11	0 / 0	255 / 4.18	388 / 8.07	42 / 1.17	6.1 / 0.10	0.4	0.6	934	6.4	29
		4- 4-57[e]	1250	7.9	130 / 6.50	35 / 2.87	102 / 4.44	7 / 0.18	0 / 0	257 / 4.22	409 / 8.52	45 / 1.27	1.0 / 0.02	0.5	0.4	950	7.5	32

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-20E2	Fox Canyon	11-26-57	1060	7.7	134 / 6.69	32 / 2.63	84 / 3.65	4.5 / 0.12	0 / 0	248 / 4.06	377 / 7.86	44 / 1.24	1.0 / 0.02	0.5	0.6	990	6.4	28
		4-23-58[e]	1201	7.8	140 / 7.00	30 / 2.45	91 / 3.96	4.6 / 0.12	0 / 0	262 / 4.30	380 / 7.91	43 / 1.21	1.5 / 0.02	0.3	0.3	827	6.5	29
20R1	- - -	4- 5-57	22200	6.9	1371 / 68.40	518 / 42.60	2541 / 110.50	29 / 0.75	0 / 0	232 / 3.80	123 / 23.39	6896 / 194.50	13 / 0.21	1.3	1.1	15788	195.1	50
		4-16-58	19520	7.0	948 / 47.30	485 / 39.90	2887 / 125.52	2.5 / 0.06	0 / 0	253 / 4.15	1155 / 24.05	6808 / 192.00	7.4 / 0.12	0.5	0.3	13966	194.6	59
21B1	- - -	10-25-55[e]	1120	7.9	126 / 6.29	32 / 2.63	86 / 3.74	4.5 / 0.12	0 / 0	242 / 3.97	354 / 7.37	32 / 0.90	0.5 / 0.01	0.6	0.7	--	6.5	29
		6- 8-56	1041	7.7	125 / 6.24	37 / 3.04	78 / 3.39	3.8 / 0.10	0 / 0	256 / 4.20	360 / 7.51	37 / 1.04	1.5 / 0.02	0.7	0.7	877	6.5	27
		4-16-58	1140	7.3	120 / 6.00	36 / 3.00	92 / 4.00	3.7 / 0.10	0 / 0	253 / 4.15	362 / 7.54	57 / 1.60	9.2 / 0.15	0.9	0.4	841	7.1	31
21B2	- - -	5-17-57[c]	1185	7.7	116 / 5.80	38 / 3.11	91 / 3.96	4.7 / 0.12	0 / 0	256 / 4.19	367 / 7.65	40 / 1.13	0 / 0	1.5	0.3	860	7.2	30
21J3	Oxnard	7-18-57[d]	1130	8.1	140 / 6.99	38 / 3.12	85 / 3.70	4.3 / 0.11	0 / 0	257 / 4.22	395 / 8.22	47 / 1.33	3.5 / 0.06	0.8	0.7	990	6.9	27
21L1	Oxnard	8-25-53[b]	1234	7.5	129 / 6.43	42 / 3.47	90 / 3.91	4.5 / 0.11	0 / 0	249 / 4.08	401 / 8.35	56 / 1.59	5.0 / 0.08	0.6	0.5	754	7.5	29
		6-27-54[b]	2024	8.1	218 / 10.91	71 / 5.87	111 / 4.85	5.5 / 0.14	0 / 0	222 / 3.64	403 / 8.22	354 / 9.99	16 / 0.25	0.5	0.7	1599	10.9	22
		4-16-58[h]	7360	7.1	737 / 36.80	246 / 20.20	465 / 20.20	8.2 / 0.21	0 / 0	180 / 2.95	576 / 11.99	2278 / 64.25	14 / 0.23	0.6	0.7	6164	62.5	26
		4-16-58[j]	11925	7.0	1202 / 60.0	384 / 31.6	739 / 34.5	11 / 0.29	0 / 0	235 / 3.85	733 / 15.27	3829 / 108.0	12 / 0.19	0.8	0.8	10251	107.3	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.
h. Sampled after pumping five minutes.
j. Sampled after pumping 25 minutes.

TABLE H-9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/22W-21L2	Oxnard	8-25-53[b]	1278	7.6	122 / 6.12	39 / 3.24	87 / 3.79	4.0 / 0.10	0 / 0	249 / 4.08	389 / 8.10	44 / 1.23	5.6 / 0.09	0.5	0.5	865	7.1	29
		6-27-54[b]	1800	7.6	186 / 9.30	59 / 4.88	102 / 4.45	5.5 / 0.14	0 / 0	258 / 4.23	369 / 7.54	248 / 7.00	8.1 / 0.13	0.5	0.7	1465	9.5	24
		12-16-54[b]	3610	7.4	391 / 19.55	128 / 10.50	133 / 5.76	7.0 / 0.18	0 / 0	221 / 3.62	413 / 8.60	822 / 23.20	1.9 / 0.03	0.4	0.9	2734	23.8	16
		5-25-55	3820	7.6	466 / 23.3	144 / 11.85	130 / 5.66	6.6 / 0.17	0 / 0	204 / 3.35	478 / 9.96	982 / 27.7	4.5 / 0.07	0.8	0.7	3261	27.7	14
21Q1	- - -	12-16-54[b]	1190	7.8	110 / 5.50	44 / 3.62	83 / 3.60	3.9 / 0.10	0 / 0	256 / 4.21	361 / 7.52	40 / 1.14	1.9 / 0.03	0.7	0.9	834	7.3	28
21R1	Oxnard	8- 2-56[d]	990	8.0	102 / 5.09	44 / 3.62	80 / 3.48	4.5 / 0.12	0 / 0	224 / 3.68	348 / 7.24	40 / 1.13	0.5 / 0.01	0.9	0.8	810	7.2	28
22L1	- - -	12-13-55[d]	1188	7.9	130 / 6.49	39 / 3.21	82 / 3.57	3.9 / 0.10	0 / 0	246 / 4.04	384 / 8.01	42 / 1.18	1.0 / 0.02	0.8	0.4	849	6.9	27
22M8	- - -	8-10-56[d]	1092	8.2	121 / 6.04	42 / 3.45	76 / 3.31	4.0 / 0.10	17 / 0.56	214 / 3.51	375 / 7.82	40 / 1.13	0.5 / 0.01	1.0	0.8	830	6.9	26
22N3	Oxnard	11- 7-57[c]	1165	7.8	111 / 5.55	42 / 3.45	89 / 3.88	4.7 / 0.12	0 / 0	275 / 4.50	339 / 7.06	44 / 1.24	0 / 0	0.5	0.7	905	7.5	30
22N4	Oxnard	8-27-54[bd]	1195	7.9	119 / 5.95	40 / 3.25	88 / 3.81	3.9 / 0.10	0 / 0	249 / 4.07	374 / 7.80	45 / 1.26	3.1 / 0.05	0.7	0.7	904	7.2	29
22Q2	Semi-perched (?) and Oxnard	8- 2-56[d]	3597	7.8	174 / 8.68	94 / 7.73	700 / 30.45	17 / 0.44	0 / 0	573 / 9.40	1705 / 35.52	123 / 3.47	10 / 0.16	1.2	2.6	3215	37.9	65
22Q3	Undifferentiated Quaternary	8-10-56[d]	1092	8.0	115 / 5.74	38 / 3.12	74 / 3.22	8.2 / 0.21	0 / 0	278 / 4.56	321 / 6.68	36 / 1.02	7.5 / 0.12	0.8	0.6	795	5.6	26

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.

TABLE H-9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N22W- 23A2	Oxnard	9- 2-52[bd]	1232	7.7	128 / 6.38	40 / 3.32	86 / 3.74	4.5 / 0.12	0 / 0	254 / 4.17	394 / 8.21	43 / 1.22	0 / 0	0.7	0.5	890	7.2	28
23B2	Oxnard	8-10-56[d]	1089	8.1	112 / 5.59	44 / 3.62	76 / 3.31	4.2 / 0.11	0 / 0	220 / 3.60	371 / 7.73	40 / 1.13	0.5 / 0.01	0.9	0.6	835	7.0	26
		11-7 -57[e]	1165	7.8	116 / 5.80	40 / 3.30	91 / 3.96	3.5 / 0.09	0 / 0	250 / 4.10	371 / 7.72	44 / 1.24	0 / 0	0.4	0.7	900	7.4	30
23C1	- - -	10-25-55[e]	1150	7.5	121 / 6.04	37 / 3.07	87 / 3.78	4.7 / 0.12	0 / 0	248 / 4.06	370 / 7.70	36 / 1.02	0.0 / 0.00	0.8	0.7	--	7.0	29
		6- 8-56	1041	8.4	118 / 5.89	42 / 3.45	80 / 3.48	3.7 / 0.10	12 / 0.40	234 / 3.84	370 / 7.71	39 / 1.10	1.0 / 0.02	0.8	0.7	840	7.0	27
		4- 4-57[c]	1210	7.3	114 / 5.70	41 / 3.36	95 / 4.13	5.1 / 0.13	0 / 0	253 / 4.13	394 / 8.21	45 / 1.27	0 / 0	1.0	0.5	920	7.6	31
24B2	Oxnard	11-27-56[d]	1053	8.0	127 / 6.34	37 / 3.04	76 / 3.31	4.0 / 0.10	0 / 0	263 / 4.31	353 / 7.35	41 / 1.16	0 / 0	1.2	0.6	855	6.5	26
25C2	Oxnard	8-25-53[b]	1250	8.0	126 / 6.29	36 / 2.97	82 / 3.54	4.0 / 0.10	0 / 0	264 / 4.33	367 / 7.54	44 / 1.23	1.9 / 0.03	0.5	0.5	815	6.6	27
		6-27-54[b]	1082	7.7	116 / 5.80	42 / 3.48	83 / 3.60	4 / 0.10	0 / 0	264 / 4.32	373 / 7.61	44 / 1.23	1.3 / 0.02	0.6	0.4	906	7.2	28
26A1	Oxnard	8-25-53[b]	1250	7.7	121 / 6.07	35 / 2.88	83 / 3.59	3.8 / 0.10	0 / 0	251 / 4.12	362 / 7.55	43 / 1.20	1.0 / 0.02	0.5	0.5	828	6.6	28
		12-22-55	1145	7.8	122 / 6.1	35 / 2.84	86 / 3.76	4.5 / 0.12	0 / 0	262 / 4.30	355 / 7.40	39 / 1.10	1.6 / 0.03	1.0	0.6	865	6.7	29
		6- 8-56	1042	7.7	124 / 6.19	38 / 3.12	80 / 3.48	3.8 / 0.10	0 / 0	264 / 4.32	346 / 7.20	40 / 1.13	1.0 / 0.02	1.0	0.2	865	6.7	27

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.

TABLE H-9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25 C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalent per million													
1N/22W- 26R1	- - -	5-17-57[e]	1010	7.8	70 3.50	42 3.44	78 3.39	3.9 0.10	0 0	331 5.42	193 4.02	43 1.21	0 0	1.2	0.4	716	6.9	23
27A1	- - -	4-27-53[b]	1163	7.7	117 5.87	39 3.21	85 3.70	8.5 0.22	0 0	256 4.20	375 7.81	43 1.20	1.9 0.03	1.7	0.6	894	7.1	28
27A2	Oxnard Undifferentiated Quaternary	7-18-57[d]	1075	8.0	132 6.59	34 2.79	80 3.48	4.1 0.11	0 0	262 4.30	360 7.49	42 1.18	1.5 0.02	0.7	0.7	865	6.4	27
27F2	Oxnard	8-27-54[bd]	1184	7.7	124 6.22	38 3.10	84 3.66	3.9 0.10	0 0	257 4.21	371 7.72	42 1.19	2.7 0.06	0.6	0.8	872	6.9	28
		5-16-57[e]	1200	7.9	105 5.25	42 3.44	95 4.13	4.3 0.11	0 0	268 4.40	349 7.27	45 1.27	0 0	2.0	0.3	880	7.7	32
27G2	- - -	3-17-55	1235	7.6	126 6.29	38 3.12	84 3.65	3.8 0.10	0 0	254 4.16	365 7.60	43 1.21	5.0 0.08	0.8	0.6	820	6.9	28
28A2	- - -	8-25-53[b]	1288	7.6	119 5.94	39 3.24	88 3.80	4.0 0.10	0 0	254 4.17	384 8.00	42 1.17	0 0	0.6	0.5	759	7.1	29
		6-27-54[b]	1200	7.6	120 6.01	41 3.33	84 3.63	4.0 0.10	0 0	258 4.24	371 7.73	44 1.23	3.1 0.05	0.6	0.7	811	7.1	28
28A2	- - -	12-16-54[b]	1198	7.8	111 5.55	43 3.57	85 3.70	3.9 0.10	0 0	253 4.14	369 7.68	40 1.14	2.5 0.04	0.7	0.8	860	7.4	29
		5-25-55	1000	7.8	120 6.0	29 3.2	86 3.72	3.9 0.10	0 0	256 4.2	358 7.45	41 1.15	2.9 0.05	0.9	0.7	899	7.0	29
		10-25-55[e]	1140	8.0	118 5.89	39 3.17	96 4.18	4.6 0.12	0 0	262 4.29	364 7.58	36 1.02	0.2 Tr.	0.8	0.8	--	7.5	31
		5-17-56[b]	1180	8.0	117 5.84	38 3.13	89 3.85	3.9 0.10	0 0	264 4.33	361 7.53	43 1.22	4.3 0.07	0.7	0.9	834	7.1	30

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
e. Analyzed by U. S. Geological Survey.

TABLE B-9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/22W-28A2	- - -	12-11-57	1131	7.1	114/5.70	38/3.10	101/4.41	3.6/0.09	0/0	262/4.30	342/7.11	71/2.00	3.2/0.05	0.6	0.4	811	7.6	33
		4-16-58	1130	7.5	114/5.70	37/3.05	79/3.42	1.7/0.04	0/0	278/4.55	309/6.44	43/1.20	1.8/0.03	0.7	0.2	810	6.5	28
28H2	Oxnard	5-15-56[bd]	1200	8.1	122/6.08	42/3.42	86/3.73	4.2/0.11	0/0	258/4.23	367/7.65	48/1.34	1.2/0.02	0.6	0.6	919	7.3	28
		12-18-56[c]	1150	7.7	116/5.80	45/3.69	107/4.65	4.3/0.11	0/0	250/4.10	401/8.35	48/1.35	0/0	0.6	0.4	884	8.5	32
		3-29-57[c]	1260	7.8	116/5.80	39/3.20	90/3.91	3.9/0.10	0/0	268/4.40	353/7.35	43/1.21	0/0	0.7	0.5	880	7.2	30
		11-26-57	1040	7.5	128/6.39	38/3.12	84/3.65	3.8/0.10	0/0	253/4.14	369/7.68	51/1.44	0.5/0.01	0.6	0.7	875	6.9	27
		4-16-58	1180	7.4	124/6.20	38/3.10	83/3.59	3.2/0.08	0/0	253/4.15	373/7.77	50/1.40	2.3/0.04	0.7	0.3	855	6.8	28
35C1	- - -	5-16-57[c]	1260	8.0	119/5.95	43/3.52	91/3.96	4.3/0.11	0/0	275/4.50	347/7.23	69/1.94	0/0	1.5	0.1	900	7.6	29
36K1	Oxnard	3-17-55	1265	7.6	124/6.19	35/2.88	88/3.83	4.1/0.11	0/0	268/4.40	296/6.16	88/2.48	6.9/0.11	0.6	0.5	790	6.8	29
		5-17-57[c]	1360	7.8	122/6.10	40/3.28	99/4.30	4.7/0.12	0/0	273/4.48	301/6.27	110/3.10	2.8/0.06	0.3	0.2	900	7.7	31
2N/21W-18H1	Oxnard	8-24-53[b]	1518	7.4	160/8.00	50/4.14	113/4.92	4.8/0.12	0/0	266/4.37	532/11.09	65/1.83	3.2/0.05	0.6	0.5	1064	9.2	29
		6-29-54[b]	1650	7.5	167/8.35	58/4.80	127/5.52	4.8/0.12	0/0	280/4.60	577/12.02	78/2.19	6.8/0.11	0.6	0.7	1257	10.4	29
		6-11-56[c]	1690	7.6	173/8.65	63/5.15	147/6.38	5.5/0.14	0/0	282/4.61	592/12.30	93/2.62	4.4/0.07	0.8	0.8	1316	11.7	31

a. Analyses by Department of Water Resources unless otherwise stated.
b. Analyses by Pacific Chemical Consultants.
c. Analyses by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table B-17.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10[6] at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/21W-18H1	Oxnard	4-22-58	1577	7.6	159 / 7.95	56 / 4.60	128 / 5.56	4.7 / 0.12	0 / 0	332 / 5.45	495 / 10.31	92 / 2.60	16 / 0.26	0.7	0.2	1157	10.3	30
18H3	Oxnard	10-16-57[e]	1586	7.3	128 / 6.4	61 / 5.0	127 / 5.52	5.5 / 1.4	0 / 0	205 / 4.1	506 / 10.53	106 / 2.99	6.4 / 0.10	0.3	0.9	1168	11.9	30
18H4	Oxnard	6-29-54[b]	1650	7.6	167 / 8.35	58 / 4.80	126 / 5.50	4.7 / 0.12	0 / 0	280 / 4.60	578 / 12.04	77 / 2.16	8.1 / 0.13	0.5	0.7	1267	10.4	29
19A1	Oxnard	8-24-53[b]	1500	7.4	153 / 7.65	49 / 4.05	124 / 5.40	5.3 / 0.14	0 / 0	277 / 4.54	535 / 11.13	63 / 1.77	1.3 / 0.02	0.6	0.5	1147	9.6	31
		10-25-55[e]	1640	7.8	177 / 8.85	57 / 4.69	138 / 6.00	5.7 / 0.15	0 / 0	290 / 4.75	608 / 12.66	68 / 1.92	3.0 / 0.05	0.6	0.9	--	10.8	31
		12-26-56	1666	7.4	189 / 9.43	66 / 5.43	118 / 5.13	5.4 / 0.14	0 / 0	306 / 5.01	588 / 12.25	91 / 2.57	2.5 / 0.04	0.8	0.8	1370	10.7	26
19A2	Oxnard	8-24-53[b]	1415	7.4	146 / 7.25	47 / 3.87	111 / 4.82	4.6 / 0.12	0 / 0	264 / 4.33	492 / 10.23	59 / 1.65	2.8 / 0.05	0.6	0.6	1079	8.8	30
		6-29-54[b]	1660	7.5	168 / 8.38	60 / 4.97	127 / 5.54	5.1 / 0.13	0 / 0	288 / 4.72	599 / 12.49	73 / 2.05	2.5 / 0.04	0.6	0.6	1284	10.6	34
		6-11-56[e]	1690	7.4	182 / 9.14	66 / 5.49	138 / 6.00	5.4 / 0.14	0 / 0	349 / 5.72	579 / 12.10	80 / 2.25	1.6 / 0.03	0.7	0.4	1380	11.6	29
		12-26-56	1550	7.8	186 / 9.28	66 / 5.43	123 / 5.35	5.2 / 0.13	0 / 0	300 / 4.92	622 / 12.95	85 / 2.40	2.0 / 0.03	0.9	0.8	1375	10.9	26
		4-22-58	1619	7.9	173 / 8.65	58 / 4.80	127 / 5.54	3.8 / 0.10	0 / 0	302 / 4.95	582 / 12.11	78 / 2.20	5.3 / 0.09	0.8	0.4	1227	10.4	29
32Q1	Oxnard and Undifferentiated Quaternary	3-31-56[bd]	5570	7.5	230 / 11.50	149 / 12.35	701 / 30.5	6.7 / 0.17	0 / 0	346 / 5.66	1480 / 30.84	649 / 18.30	4.3 / 0.07	0.5	1.5	3535	43.0	56

a. Analyses by Department of Water Resources unless otherwise stated.
b. Analyses by Pacific Chemical Consultants.
c. Analyses by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
e. Analyzed by United States Geological Survey.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/22W-21J3	Oxnard and Undifferentiated Quaternary	7-17-57[d]	1300	8.3	149 / 7.44	45 / 3.70	90 / 3.92	4.6 / 0.12	12 / 0.40	245 / 4.02	448 / 9.34	48 / 1.35	3.0 / 0.05	0.8	0.7	1010	8.7	26
21Q1	Oxnard	8-30-55[b]	1480	7.9	164 / 8.20	56 / 4.59	90 / 3.91	4.7 / 0.12	0 / 0	274 / 4.48	507 / 10.59	66 / 1.85	19 / 0.30	0.7	0.6	1097	8.6	23
24K1	Oxnard	4-17-53[b]	1770	8.0	183 / 9.13	71 / 5.82	136 / 5.92	6.0 / 0.15	0 / 0	302 / 4.96	666 / 13.87	72 / 2.04	Tr. / Tr.	0.5	0.6	1420	11.9	28
25A1	Oxnard	4-29-55[d]	1700	7.6	183 / 9.13	61 / 5.01	125 / 5.44	5.6 / 0.14	0 / 0	288 / 4.72	633 / 13.19	70 / 1.97	0 / 0	0.9	0.6	1350	10.6	28
25C1	Oxnard	7-17-57[d]	1923	8.0	231 / 11.53	66 / 5.43	166 / 7.22	5.2 / 0.13	0 / 0	313 / 5.13	785 / 16.36	84 / 2.37	13 / 0.20	0.7	1.2	1645	12.8	30
25N3	Oxnard	12-20-55[d]	1700	8.1	175 / 8.75	65 / 5.35	137 / 5.97	4.9 / 0.13	0 / 0	269 / 4.4	665 / 13.87	69 / 1.95	6.9 / 0.11	0.3	0.9	1373	11.5	30
25P4	Oxnard	12-13-55[d]	1808	7.8	203 / 10.13	68 / 5.59	120 / 5.22	5.8 / 0.15	0 / 0	274 / 4.49	700 / 14.58	72 / 2.03	1.0 / 0.02	0.8	0.6	1424	11.0	24
25Q3	Oxnard and Undifferentiated Quaternary	8- 1-56[d]	1298	7.5	155 / 7.73	52 / 4.27	100 / 4.35	4.2 / 0.11	0 / 0	276 / 4.52	503 / 10.48	52 / 1.47	5.5 / 0.09	0.8	0.7	1130	8.7	26
25R1	Oxnard	12-29-55[d]	1730	7.9	179 / 8.95	63 / 5.22	137 / 5.97	4.7 / 0.12	0 / 0	275 / 4.5	661 / 13.77	67 / 1.9	4.0 / 0.07	0.4	0.6	1394	11.3	30
26L3	Undifferentiated Quaternary	12-14-55[d]	1267	7.7	145 / 7.24	46 / 3.78	90 / 3.92	4.4 / 0.11	0 / 0	274 / 4.49	450 / 9.38	47 / 1.33	1.7 / 0.03	0.8	0.5	1000	7.8	26
27M2	Oxnard	8-25-53[b]	1585	7.5	164 / 8.72	57 / 4.67	105 / 4.57	4.7 / 0.12	0 / 0	314 / 5.15	514 / 10.69	59 / 1.65	47 / 0.76	0.6	0.5	1224	9.4	25
		6-29-54[b]	1803	7.6	210 / 10.52	70 / 5.79	125 / 5.34	5.1 / 0.13	0 / 0	334 / 5.47	676 / 13.81	67 / 1.88	46 / 0.74	0.5	0.7	1241	11.3	25

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
d. For analyses of heavy metal constituents, see Table H-17.

TABLE H 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/22W-27M2	Oxnard	12-21-55	1690	7.5	188 / 9.4	59 / 4.85	131 / 5.72	4.8 / 0.12	0 / 0	317 / 5.20	600 / 12.50	64 / 1.8	42 / 0.68	0.9	0.4	1322	10.7	28
		6- 8-56	1563	7.7	204 / 10.18	71 / 5.84	108 / 4.70	5.0 / 0.13	0 / 0	327 / 5.36	612 / 12.74	67 / 1.89	34 / 0.55	1.6	0.7	1300	10.7	23
		12-18-56	1626	7.9	209 / 10.43	70 / 5.75	108 / 4.70	6.3 / 0.16	0 / 0	338 / 5.54	665 / 13.85	59 / 1.66	1.0 / 0.02	1.5	0.8	1440	10.6	22
		4- 4-57[c]	1915	7.8	188 / 9.40	72 / 5.90	126 / 5.48	2.7 / 5.48	0 / 0	320 / 5.25	643 / 13.40	73 / 2.06	29 / 0.47	0.8	0.5	1390	11.5	26
		4-23-58[c]	1841	7.8	210 / 10.52	73 / 6.03	120 / 5.20	5.3 / 0.14	0 / 0	342 / 5.60	644 / 13.41	78 / 2.20	33 / 0.53	0.6	0	1256	11.4	24
28A2	Oxnard	8-30-55[b]	1480	7.5	160 / 8.00	50 / 4.16	101 / 4.38	5.1 / 0.13	0 / 0	336 / 5.52	476 / 9.91	51 / 1.43	6.8 / 0.11	0.6	0.7	1093	8.7	26
28C1	- - -	8-30-55[b]	1680	7.7	162 / 8.11	46 / 3.79	155 / 6.76	5.1 / 0.13	0 / 0	306 / 5.01	578 / 12.05	72 / 2.02	3.7 / 0.06	0.7	0.6	1243	10.7	36
28J3	Oxnard	8- 1-56[d]	1418	7.9	159 / 7.93	56 / 4.60	104 / 4.52	4.6 / 0.12	0 / 0	293 / 4.80	492 / 10.24	57 / 1.61	22 / 0.35	0.8	0.8	1255	9.2	26
28K2	Oxnard	7-17-57[d]	1360	8.1	177 / 8.83	54 / 4.44	104 / 4.52	5.2 / 0.13	0 / 0	288 / 4.72	528 / 11.00	61 / 1.72	25 / 0.40	0.7	0.7	1180	9.1	25
28K3	Oxnard	7-17-57[d]	1570	7.9	168 / 8.38	52 / 4.27	104 / 4.52	4.6 / 0.12	0 / 0	257 / 4.22	527 / 10.97	61 / 1.72	25 / 0.40	0.8	0.7	1175	8.9	26
29Q2	Oxnard	8- 1-56[d]	1519	7.9	161 / 8.03	56 / 4.60	108 / 4.70	4.6 / 0.12	0 / 0	300 / 4.92	538 / 11.21	50 / 1.41	2.5 / 0.04	0.8	0.9	1175	9.4	27
31N1	Oxnard and Undifferentiated Quaternary	5- 2-57[k]	--	7.3	95 / 4.71	41 / 3.40	68 / 2.95	-- / --	0 / 0	261 / 4.28	272 / 5.65	40 / 8.33	-- / --	-	1.2	--	6.4	27
32C1	- - -	5-16-57[c]	1260	7.8	118 / 5.90	48 / 3.93	94 / 4.09	4.3 / 0.11	0 / 0	256 / 4.20	414 / 8.62	45 / 1.27	4.8 / 0.08	1.7	0.6	900	8.1	29

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analyses of heavy metal constituents, see Table H-17.
k. Analyzed by Smith-Emery Company.

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/22W-33A2	Oxnard (shallow)	8-27-54[bd]	2000	7.9	236/11.80	84/6.89	120/5.22	5.6/0.14	0/0	342/5.60	792/16.54	67/1.88	24/0.38	0.6	0.9	1710	12.3	22
33A4	Oxnard (shallow)	8-27-54[bd]	2940	7.3	340/17.00	132/10.89	175/7.60	7.8/0.20	0/0	325/5.34	1378/28.55	82/2.32	1.2/0.02	0.4	1.2	2464	18.7	21
33B2	Oxnard and Undifferentiated Quaternary	3- 8-56[bd]	1440	8.0	145/7.24	64/5.30	109/4.74	4.8/0.13	0/0	293/4.80	5.1/10.67	55/1.56	24/0.38	0.5	0.8	1148	10.2	27
34M1	Oxnard	4- 8-58[f]	1538	7.4	159/7.96	53/4.39	110/4.78	--/--	-/-	295/4.84	487/10.15	55/1.55	23/0.37	0.8	0.5	--	9.2	28
2N/23W-25Q1	Oxnard	8-25-53[b]	1368	7.5	135/6.75	36/2.97	121/5.25	4.3/0.11	0/0	259/4.24	457/9.52	54/1.53	1.9/0.03	0.4	0.5	1027	8.3	35
		6-29-54[b]	1400	7.5	133/6.64	42/3.42	116/5.04	3.9/0.10	0/0	258/4.24	450/9.38	57/1.61	6.2/0.10	0.5	0.6	987	8.6	33
		12-21-55	1375	7.8	134/6.7	36/2.97	137/5.97	3.8/0.10	0/0	262/4.30	490/10.21	53/1.5	4.3/0.07	0.8	0.3	1028	9.0	38
		4- 4-57[c]	1485	7.7	127/6.35	41/3.39	126/5.48	5.1/0.13	0/0	259/4.25	478/9.96	58/1.63	2.1/0.03	0.6	0.3	1010	9.0	36
		4-23-58[c]	1414	7.5	142/7.10	47/3.90	82/3.56	2.4/0.06	0/0	250/4.10	433/9.03	60/1.69	14/0.22	0	1.3	968	7.5	24
25R2	Oxnard	12-23-57[d]	1890	7.8	184/9.18	56/4.60	172/7.48	5.5/0.14	0/0	301/4.94	679/14.15	83/2.34	1.0/0.02	0.8	1.0	1440	12.2	35
36A1	Oxnard	9-14-56[c]	1225	8.0	126/6.32	40/3.27	124/5.40	4.7/0.12	0/0	261/4.28	464/9.67	54/1.52	1.2/0.02	0.5	0.5	968	8.8	36
		4-23-58[c]	1381	7.7	134/6.70	38/3.11	117/5.09	4.2/0.11	0/0	250/4.10	440/9.16	55/1.55	13/0.20	0.6	0.2	936	8.3	34

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.
f. Analyzed by Fruit Growers Laboratory, Inc.

TABLE 9

MINERAL ANALYSES OF GROUND WATERS OXNARD PLAIN PRESSURE AREA BASIN NO. 4-4.01
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1S/21W-5H1	Oxnard	6-11-56[l]	27548	6.4	2079 / 103.7	829 / 68.14	4100 / 178.35	30 / 0.77	0 / 0	12 / 0.20	1572 / 32.76	11400 / 321.5	45 / 0.72	0.5	0.8	22060	318	51
		6-11-56[m]	28329	6.4	2217 / 110.6	938 / 77	5000 / 217.5	30 / 0.77	0 / 0	15 / 0.24	1696 / 35.33	13400 / 377.88	40 / 0.64	0.8	1.2	24500	370	54
		5-19-58[c]	33032	7.6	822 / 41.00	1228 / 101.1	4968 / 216.00	51 / 1.30	0 / 0	610 / 10.00	1088 / 22.65	11550 / 325.35	0 / 0	0	1.2	23940	327	60
6F1	- - -	6-11-56	1000	7.9	76 / 3.79	34 / 2.79	93 / 4.05	4.2 / 0.11	0 / 0	242 / 3.[illegible]	257 / 5.35	55 / 1.55	3.5 / 0.06	0.5	0.6	710	6.8	38
		5-20-58[c]	1170	8.5	92 / 4.55	32 / 2.64	115 / 5.00	4.9 / 0.13	0 / 0	262 / 4.30	244 / 5.08	95 / 2.68	3.5 / 0.06	0.4	0.9	812	7.8	41

a. Analyzed by Department of Water Resources unless otherwise stated.
c. Analyzed by Terminal Testing Laboratories, Inc.

l. Sample from upper perforation 180' to 190'.
m. Sample from lower perforation 330' to 340'.

TABLE B 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
2N/17W- 7H2	Alluvium	8- 1-56[b]	1088	7.9	66 / 3.29	35 / 2.88	148 / 6.44	1.7 / 0.04	0 / 0	364 / 5.96	130 / 2.70	139 / 3.92	1.0 / 0.02	0.8	0.2	720	6.7	51
7H3	Alluvium and Las Llajas Formation	7- 9-57[b]	2100	7.4	69 / 3.44	35 / 2.88	352 / 15.33	2.3 / 0.06	0 / 0	353 / 5.78	13 / 0.27	536 / 15.12	0 / 0	0.8	0.4	1380	15.9	72
8J6	Santa Susana Formation	7- 9-57[b]	759	7.4	62 / 3.09	16 / 1.32	84 / 3.65	0.8 / 0.02	0 / 0	303 / 4.96	74 / 1.54	53 / 1.49	0.5 / 0.01	0.4	0.3	445	3.7	45
8R4	Martinez Formation	5- 3-56[bc]	1065	7.9	19 / 0.94	15 / 1.26	200 / 8.70	2.4 / 0.06	0 / 0	461 / 7.56	14 / 0.30	103 / 2.90	1.2 / 0.02	0.5	0.2	585	8.8	79
9F1	Cretaceous Rocks	8-17-53	946	7.5	54 / 2.69	23 / 1.89	110 / 4.79	1.8 / 0.05	0 / 0	232 / 3.80	91 / 1.89	129 / 3.64	0 / 0	1.0	0.3	535	5.6	51
		4- 5-55	730	7.7	60 / 2.99	21 / 1.73	66 / 2.87	1.0 / 0.03	0 / 0	212 / 3.48	51 / 1.06	110 / 3.10	3.0 / 0.05	0.6	0.2	460	4.1	38
9G3	Cretaceous Rocks	7- 7-54	784	7.5	60 / 3.00	21 / 1.70	60 / 2.61	0.8 / 0.02	0 / 0	201 / 3.30	40 / 0.83	97 / 2.75	7.3 / 0.12	0.5	0.2	469	4.0	36
		1-11-56	747	7.5	52 / 2.60	22 / 1.80	69 / 3.00	0.4 / 0.01	0 / 0	204 / 3.35	57 / 1.18	99 / 2.8	5.8 / 0.09	0.3	0.1	449	4.1	40
		5-22-57[d]	930	7.2	64 / 3.20	39 / 3.20	79 / 3.43	2.0 / 0.05	0 / 0	220 / 3.60	184 / 3.83	80 / 2.25	2.6 / 0.04	1.0	0.1	622	6.3	35
9N3	Alluvium and Cretaceous Rocks	8-17-53	968	7.6	88 / 4.39	37 / 3.04	68 / 2.96	1.8 / 0.05	0 / 0	317 / 5.20	140 / 2.92	69 / 1.95	2.5 / 0.04	0.9	Tr.	596	5.2	28
		7- 7-54	1389	8.0	37 / 1.85	19 / 1.55	203 / 8.82	2.6 / 0.07	0 / 0	323 / 5.30	89 / 1.85	188 / 5.30	4.4 / 0.07	2.1	0.4	701	8.8	72

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/17W- 9N3	Alluvium and Cretaceous Rocks	4- 7-55	1067	7.7	13 / 0.65	32 / 2.63	185 / 8.05	2.8 / 0.07	0 / 0	332 / 5.44	90 / 1.87	155 / 4.37	1.2 / 0.02	2.0	0.5	640	8.1	71
		1-11-56	1140	7.9	30 / 1.50	21 / 1.71	190 / 8.25	2.1 / 0.05	0 / 0	351 / 5.75	103 / 2.15	129 / 3.65	2.4 / 0.04	1.5	0.4	674	8.3	72
		9-19-56[d]	950	8.3	15 / 0.76	12 / 0.96	186 / 8.10	3.1 / 0.08	29 / 0.96	237 / 3.88	54 / 1.13	145 / 4.09	1.2 / 0.02	1.3	0.3	664	8.2	82
		5-27-57[d]	1160	7.9	37 / 1.85	19 / 1.56	193 / 8.39	3.5 / 0.09	0 / 0	348 / 5.70	103 / 2.15	135 / 3.80	0 / 0	1.6	0.3	800	8.5	71
9Q7	Cretaceous Rocks	7- 8-57[b]	1437	7.8	82 / 4.09	39 / 3.21	165 / 7.18	2.4 / 0.06	0 / 0	272 / 4.46	253 / 5.28	167 / 4.71	0.5 / 0.01	1.0	0.1	912	10.1	49
9R8	Cretaceous Rocks	7- 8-57[b]	1172	7.7	125 / 6.24	43 / 3.53	124 / 5.39	3.2 / 0.08	0 / 0	379 / 6.22	342 / 7.12	67 / 1.89	0.5 / 0.01	0.6	0.1	860	9.0	35
15D2	Alluvium and Cretaceous Rocks	8-17-53	2036	6.7	216 / 10.78	117 / 9.62	115 / 5.00	3.6 / 0.09	0 / 0	537 / 8.80	683 / 14.22	90 / 2.54	2.5 / 0.04	1.2	0.1	1625	14.7	20
		7- 7-54	1975	7.1	194 / 9.70	98 / 8.10	109 / 4.74	3.9 / 0.10	0 / 0	509 / 8.35	552 / 11.50	85 / 2.40	5.4 / 0.09	0.7	0.2	1453	12.9	21
		4- 7-55	1904	6.9	134 / 6.69	147 / 12.08	115 / 5.00	4.6 / 0.12	0 / 0	442 / 7.24	659 / 13.73	87 / 2.45	5.5 / 0.09	0.6	0.2	1510	16.7	21
		1-11-56	1865	7.3	180 / 9.00	94 / 7.7	125 / 5.45	3.0 / 0.08	0 / 0	485 / 7.95	600 / 12.50	72 / 2.05	1.9 / 0.03	1.0	0.1	1473	13.2	25
		9-19-56	1473	7.9	133 / 6.65	77 / 6.30	94 / 4.07	3.1 / 0.08	0 / 0	418 / 6.85	397 / 8.26	66 / 1.85	5.0 / 0.08	0.8	0.1	1040	10.3	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/17W-16J2	Cretaceous Rocks	11- 1-54[b]	878	7.9	32 / 1.60	35 / 2.88	125 / 5.43	3.7 / 0.10	0 / 0	310 / 5.08	167 / 3.48	50 / 1.41	3.0 / 0.05	0.2	0.0	544	5.5	54
18Q1	Las Llajas Formation	8- 1-56[b]	662	8.1	19 / 0.95	9.0 / 0.74	135 / 5.87	1.7 / 0.04	0 / 0	307 / 5.04	84 / 1.74	33 / 0.93	1.0 / 0.02	0.2	0.1	440	5.9	77
2N/18W- 1M3	Alluvium	8-17-53	2747	7.4	285 / 14.22	118 / 9.70	250 / 10.88	6.6 / 0.17	0 / 0	383 / 6.28	1097 / 22.86	190 / 5.36	7.4 / 0.12	2.0	1.6	2318	20.8	31
		7- 7-54	3128	7.4	304 / 15.20	121 / 10.0	246 / 10.70	7.4 / 0.19	0 / 0	390 / 6.40	1115 / 23.22	190 / 5.35	14 / 0.22	0.9	1.4	2345	20.9	30
		5-24-57[d]	2775	7.0	185 / 9.25	157 / 12.87	250 / 10.87	7.0 / 0.18	0 / 0	381 / 6.25	996 / 20.75	190 / 5.35	8.6 / 0.14	1.0	1.2	1950	23.9	33
		10-14-57[d]	2904	7.0	253 / 12.60	146 / 12.00	246 / 10.70	7.8 / 0.20	0 / 0	472 / 7.74	1106 / 23.03	205 / 5.77	4.1 / 0.07	0.7	0.4	2387	22.9	30
1N1	Alluvium and Older Formations	11- 1-54[b]	2105	7.9	222 / 11.08	92 / 7.56	155 / 6.74	5.9 / 0.15	0 / 0	298 / 4.88	806 / 16.79	112 / 3.16	23 / 0.38	0.8	0.9	1682	14.5	26
2K1	Alluvium	8-17-53	2212	7.3	242 / 12.08	80 / 6.58	200 / 8.70	6.6 / 0.17	0 / 0	354 / 5.80	852 / 17.75	118 / 3.33	28 / 0.46	1.0	1.1	1857	15.5	32
		4- 7-55	2604	7.1	270 / 13.50	131 / 10.80	224 / 9.74	6.9 / 0.18	0 / 0	398 / 6.52	1092 / 22.7	191 / 5.39	7.9 / 0.13	1.2	1.6	2190	20.7	28
3R2	Alluvium and Sespe Formation	7-31-56[b]	2463	7.4	288 / 14.37	107 / 8.80	205 / 8.92	6.9 / 0.18	0 / 0	388 / 6.36	979 / 20.39	190 / 5.36	5.0 / 0.08	0.8	1.3	2130	17.9	28
4N3	Alluvium	8- 1-56[b]	1709	7.3	203 / 10.13	74 / 6.08	160 / 6.96	6.3 / 0.16	0 / 0	376 / 6.16	637 / 13.28	123 / 3.47	14 / 0.23	0.7	1.2	1570	13.2	33

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/18W- 7F4	Volcanics	8-17-53	909	7.4	75 / 3.74	56 / 4.60	27 / 1.17	0.8 / 0.02	0 / 0	242 / 3.96	162 / 3.38	63 / 1.78	20 / 0.32	0.6	0.1	629	5.6	12
		4- 7-55	921	7.6	86 / 4.29	66 / 5.43	27 / 1.17	1.0 / 0.03	0 / 0	273 / 4.48	190 / 3.96	74 / 2.09	22 / 0.36	0.4	0.1	720	6.4	11
		1-11-56	1044	7.6	88 / 4.40	66 / 5.40	40 / 1.74	0.3 / 0.01	0 / 0	287 / 4.70	207 / 4.32	80 / 2.25	30 / 0.48	0.4	0.0	846	6.9	15
		9-19-56[d]	1150	7.8	91 / 4.56	76 / 6.24	32 / 1.38	0.8 / 0.02	0 / 0	298 / 4.88	235 / 4.89	87 / 2.46	16 / 0.26	0.1	0.1	812	7.3	11
8A1	Alluvium	7- 9-57[b]	2410	5.9	249 / 12.43	92 / 7.56	168 / 7.31	5.7 / 0.15	0 / 0	90 / 1.47	786 / 16.38	314 / 8.85	8.6 / 0.14	0.6	1.1	2010	15.0	27
8H1	- - -	7- 9-57[b]	2119	7.5	225 / 11.23	84 / 6.90	162 / 7.05	5.0 / 0.13	0 / 0	278 / 4.56	780 / 16.24	146 / 4.12	1.8 / 0.03	0.7	0.9	1742	14.1	28
8J1	Alluvium	8-17-53	2083	7.4	223 / 11.13	90 / 7.40	155 / 6.74	4.5 / 0.12	0 / 0	334 / 5.48	755 / 15.72	143 / 4.03	12 / 0.20	1.1	0.8	1380	14.3	27
		9-19-56	2080	7.7	180 / 9.00	91 / 7.45	161 / 7.00	5.2 / 0.13	0 / 0	207 / 3.40	739 / 15.40	147 / 4.15	17 / 0.27	0.8	0.7	1530	14.6	30
		1-11-56	2220	7.3	240 / 12.00	77 / 6.35	189 / 8.20	3.3 / 0.08	0 / 0	351 / 5.75	796 / 16.58	145 / 4.10	14 / 0.23	0.6	0.6	1832	14.6	31
		6- 4-58[d]	2080	7.6	214 / 10.70	80 / 6.60	172 / 7.47	4.6 / 0.12	0 / 0	314 / 5.15	730 / 15.20	135 / 3.80	8.0 / 0.13	0.4	0.5	1411	14.2	30
8P3	Alluvium	8-17-53	2083	7.1	233 / 11.63	82 / 6.74	165 / 7.18	3.6 / 0.09	0 / 0	381 / 6.24	742 / 15.46	120 / 3.36	0 / 0	1.0	0.7	1662	14.0	28

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Terminal Testing Laboratories.

TABLE H 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/18W- 8P3	Alluvium	7- 7-54	1700	7.4	198 / 9.88	60 / 4.93	150 / 6.52	4.0 / 0.10	0 / 0	349 / 5.72	600 / 12.50	100 / 2.82	0 / 0	0.7	0.5	1398	11.6	30
		4- 7-55	2083	7.3	210 / 10.50	83 / 6.82	144 / 6.26	4.9 / 0.12	0 / 0	300 / 4.92	773 / 16.10	112 / 3.16	0 / 0	1.0	1.0	1585	13.2	26
8Q1	Alluvium	8-17-53	2500	7.5	296 / 14.77	112 / 9.21	165 / 7.18	4.5 / 0.12	0 / 0	163 / 2.68	1091 / 22.72	209 / 5.89	0 / 0	1.0	0.5	2125	16.5	23
		7- 7-54	3077	7.8	415 / 20.70	154 / 12.70	230 / 10.00	6.4 / 0.16	0 / 0	215 / 3.52	1550 / 32.30	237 / 6.68	0 / 0	0.8	0.8	2910	22.8	23
		4- 7-55	2232	7.3	210 / 10.50	132 / 10.90	132 / 5.74	4.7 / 0.12	0 / 0	403 / 6.60	851 / 17.7	112 / 3.16	0 / 0	0.6	0.6	1710	16.7	21
9A1	Alluvium	7-15-57[b]	2703	5.4	296 / 14.77	110 / 9.04	208 / 9.05	6.4 / 0.16	0 / 0	60 / 0.98	1068 / 22.24	350 / 9.87	5.5 / 0.09	0.6	1.4	2320	18.3	27
9C1	Alluvium	3-28-56[bc]	2620	7.8	268 / 13.40	105 / 8.60	209 / 9.10	7.0 / 0.18	0 / 0	366 / 6.00	961 / 20.05	164 / 4.63	6.2 / 0.10	0.4	1.5	2201	17.9	29
10C1	Alluvium	11- 1-54[b]	2305	7.5	241 / 12.03	92 / 7.56	190 / 8.26	5.5 / 0.14	0 / 0	388 / 6.36	833 / 17.36	134 / 3.78	10 / 0.17	0.9	1.0	1810	16.0	30
10D1	Alluvium	9- 1-54[bc]	2120	7.3	233 / 11.65	75 / 6.16	158 / 6.86	3.7 / 0.09	0 / 0	303 / 4.97	784 / 16.35	119 / 3.35	5.0 / 0.08	0.6	1.1	1619	13.1	28
10R2	Alluvium	9- 1-54[bc]	1320	7.4	158 / 7.90	41 / 3.33	74 / 3.20	2.0 / 0.05	0 / 0	288 / 4.72	406 / 8.46	49 / 1.37	11 / 0.18	0.5	0.3	962	6.6	22
11B2	Alluvium	8-17-53	1937	7.4	203 / 10.13	73 / 6.00	165 / 7.18	6.8 / 0.17	0 / 0	317 / 5.20	701 / 14.60	103 / 2.90	17 / 0.28	1.2	0.9	1572	13.4	31

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.

TABLE H 10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/18W-11B2	Alluvium	7- 7-54	2620	7.3	212 / 10.60	84 / 6.95	158 / 6.85	7.6 / 0.20	0 / 0	320 / 5.25	751 / 15.65	106 / 3.00	24 / 0.38	0.7	0.9	1610	14.0	28
		4- 7-55	2061	7.3	251 / 12.52	84 / 6.90	172 / 7.48	6.7 / 0.17	0 / 0	344 / 5.64	840 / 17.49	118 / 3.33	21 / 0.34	0.8	1.5	1770	14.6	28
		5-24-57[d]	2175	7.5	208 / 10.40	90 / 7.38	211 / 9.17	6.6 / 0.17	0 / 0	329 / 5.40	828 / 17.25	125 / 3.52	16 / 0.26	1.2	0.7	1726	16.7	34
11K5	Sespe Formation	7- 9-57[b]	1404	7.6	188 / 9.38	51 / 4.19	100 / 4.35	2.4 / 0.06	0 / 0	305 / 5.00	479 / 9.97	106 / 2.99	15 / 0.23	0.6	Tr.	1165	8.6	24
11K6	Sespe Formation	7- 9-57[b]	1548	7.7	200 / 9.98	51 / 4.19	94 / 4.09	2.0 / 0.05	0 / 0	257 / 4.22	560 / 11.66	90 / 2.54	18 / 0.29	0.6	0.2	1210	8.3	22
12A1	Alluvium	7- 8-57[b]	1757	7.9	182 / 9.08	70 / 5.75	138 / 6.00	2.6 / 0.07	0 / 0	238 / 3.90	588 / 12.25	156 / 4.40	6.0 / 0.10	0.8	0.6	1330	11.8	29
12B1	Alluvium	4- 7-55	1754	7.5	177 / 8.83	59 / 4.85	120 / 5.22	4.0 / 0.10	0 / 0	298 / 4.88	528 / 11.0	124 / 3.50	12 / 0.19	1.0	0.7	1220	10.2	27
12L2	Alluvium	9-22-54[b]	1144	7.8	110 / 5.49	36 / 2.96	78 / 3.39	1.7 / 0.04	0 / 0	285 / 4.68	241 / 5.02	72 / 2.03	19 / 0.31	0.7	0.2	714	6.4	29
12P5	Alluvium	3- 8-56[bc]	1030	7.2	89 / 4.45	35 / 2.85	78 / 3.37	1.6 / 0.04	0 / 0	270 / 4.43	174 / 3.63	88 / 2.47	17 / 0.27	0.6	0.2	670	6.3	31
14D5	- - -	7- 9-57[b]	823	7.7	100 / 4.99	23 / 1.89	53 / 2.31	1.2 / 0.03	0 / 0	265 / 4.34	146 / 3.04	60 / 1.69	7.0 / 0.11	0.4	0.1	590	4.2	25
15A1	Alluvium	3- 8-56[bc]	918	8.1	94 / 4.68	28 / 2.29	60 / 2.60	1.6 / 0.04	0 / 0	310 / 5.08	153 / 3.19	43 / 1.21	9.3 / 0.15	0.4	0.2	614	4.5	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE B-10
MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$ECx10^6$ at 25^oC	pH	Ca	Mg	Na	K	CO_6	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/18W-15B1	Alluvium and Sespe Formation	11-1-54[b]	1535	7.9	176 / 8.78	64 / 5.26	86 / 3.74	2.7 / 0.07	0 / 0	312 / 5.12	509 / 10.61	69 / 1.95	1.0 / 0.02	0.6	0.3	1124	9.1	21
15D1	Alluvium and Sespe Formation	9-1-54[bc]	1525	7.5	133 / 6.64	43 / 3.51	139 / 6.05	3.8 / 0.10	0 / 0	270 / 4.42	489 / 10.20	67 / 1.88	5.6 / 0.09	0.6	0.5	1065	9.7	37
15D4	Alluvium Sespe Formation	7-31-56[b]	1424	7.7	165 / 8.23	49 / 4.03	87 / 3.78	1.5 / 0.04	0 / 0	312 / 5.12	409 / 8.52	85 / 2.40	1.0 / 0.02	0.7	0.4	1050	7.9	24
15E3		12-20-57[d]	1340	7.4	141 / 7.05	44 / 3.65	99 / 4.30	3.1 / 0.08	0 / 0	422 / 6.92	293 / 6.10	85 / 2.39	0 / 0	0.3	0.4	1087	8.0	29
15F4		8-17-53	1453	7.2	162 / 8.08	47 / 3.86	100 / 4.35	2.5 / 0.06	0 / 0	327 / 5.36	401 / 8.36	94 / 2.65	0 / 0	1.0	0.4	1058	8.3	27
		7-7-54	1485	7.5	154 / 7.70	43 / 3.60	102 / 4.44	1.6 / 0.04	0 / 0	381 / 6.15	322 / 6.50	99 / 2.80	2.8 / 0.05	1.0	0.4	1020	8.1	28
15F4		1-6-56	2240	7.3	242 / 12.10	75 / 6.20	181 / 7.88	3.9 / 0.10	0 / 0	351 / 5.75	788 / 16.42	147 / 4.15	7.5 / 0.12	0.7	0.6	1785	14.2	30
		6-4-58[d]	1429	7.7	149 / 7.45	46 / 3.75	110 / 4.80	2.8 / 0.07	0 / 0	381 / 6.15	336 / 7.00	94 / 2.65	0 / 0	0.6	0.4	1032	8.7	30
15J3	Alluvium and Sespe Formation	9-22-54[b]	1600	7.4	177 / 8.83	68 / 5.59	82 / 3.57	3.7 / 0.10	0 / 0	332 / 5.44	489 / 10.18	84 / 2.37	2.0 / 0.03	1.0	0.2	1130	9.3	20
15J4	Alluvium and Sespe Formation	11-4-54[b]	2340	7.5	239 / 11.93	127 / 10.44	130 / 5.65	4.9 / 0.13	0 / 0	312 / 5.12	785 / 16.35	226 / 6.37	2.0 / 0.03	0.9	0.2	1803	16.2	20
15K1	Sespe Formation	9-22-54[b]	1420	8.1	128 / 6.39	61 / 5.01	88 / 3.83	3.3 / 0.08	0 / 0	290 / 4.76	397 / 8.28	87 / 2.45	0 / 0	0.9	0.2	960	8.9	25
15L1	Sespe Formation	9-22-54[b]	914	7.7	130 / 6.49	21 / 1.73	32 / 1.39	3.1 / 0.08	0 / 0	207 / 3.40	261 / 5.44	29 / 0.82	0 / 0	2.0	0.0	644	3.2	14

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table B 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H-10

MINERAL ANALYSES OF GROUND WATERS SIMI VALLEY BASIN NO. 4-9
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$ECx10^6$ at 25 C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral constituents in parts per million / equivalents per million													
2N/18W-15L3	Sespe Formation	7-31-56 [b]	1138	7.8	95 / 4.74	59 / 4.85	114 / 4.96	8.2 / 0.21	0 / 0	320 / 5.24	348 / 7.25	83 / 2.34	2.0 / 0.03	0.8	0.5	915	9.5	34
15M2	Sespe Formation	7-31-56 [b]	1282	7.9	23 / 1.15	14 / 1.15	280 / 12.18	4.7 / 0.12	0 / 0	373 / 6.12	275 / 5.73	101 / 2.85	1.5 / 0.02	1.2	0.9	890	12.3	83
15Q1	Sespe Formation	11-1 -54 [b]	1690	7.4	127 / 6.34	98 / 8.06	130 / 5.65	4.9 / 0.13	0 / 0	368 / 6.04	567 / 11.82	65 / 1.83	2.0 / 0.03	1.0	0.4	1233	13.8	28
17B5	Alluvium	8-1 -56 [b]	1529	7.8	179 / 8.93	52 / 4.27	117 / 5.09	2.8 / 0.07	0 / 0	322 / 5.28	498 / 10.37	101 / 2.85	2.5 / 0.04	0.8	0.4	1225	9.4	28
18F1	Sespe Formation	8-17-53	645	7.3	53 / 2.64	29 / 2.38	36 / 1.57	1.4 / 0.04	0 / 0	278 / 4.56	35 / 0.72	41 / 1.16	1.0 / 0.02	0.9	0.0	372	2.1	24
		1- 6-56	644	7.9	44 / 2.20	31 / 2.52	50 / 2.17	1.2 / 0.03	0 / 0	290 / 4.75	44 / 0.91	44 / 1.25	2.9 / 0.05	0.6	0.1	394	2.2	31
		9-19-56	650	8.2	49 / 2.44	31 / 2.58	38 / 1.67	2.2 / 0.06	0 / 0	290 / 4.75	39 / 0.82	46 / 1.30	5.3 / 0.08	0.5	0.1	380	2.0	25
24Q1	Cretaceous Rocks	3- 2-55 [b]	862	7.5	65 / 3.24	18 / 1.48	95 / 4.13	2.7 / 0.07	0 / 0	322 / 5.28	130 / 2.70	39 / 1.10	1.5 / 0.02	0.7	0.1	490	4.2	46
24Q2	Cretaceous Rocks	3-2 -55 [b]	833	7.5	54 / 2.69	18 / 1.48	99 / 4.31	2.7 / 0.07	0 / 0	310 / 5.08	114 / 2.37	39 / 1.10	2.0 / 0.03	0.8	0.1	425	4.4	51
3N/18W-24G3	Santa Barbara Formation	9-17-53 [c]	1050	7.5	151 / 7.46	31 / 2.57	42 / 1.83	2.9 / 0.07	0 / 0	329 / 5.39	286 / 5.97	23 / 0.66	1.2 / 0.02	0.2	0.2	798	4.5	15
24H1	Santa Barbara Formation	9- 1-54 [bc]	990	7.4	133 / 6.67	26 / 2.13	43 / 1.88	3.2 / 0.08	0 / 0	301 / 4.93	255 / 5.32	22 / 0.62	3.1 / 0.05	0.3	0.9	710	4.1	18

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.

TABLE H 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity ppm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/19W- 1J1	Recent Alluvium	9- 3-53	3184	7.2	177 / 8.83	25 / 2.06	500 / 21.75	4.2 / 0.11	0 / 0	427 / 7.00	224 / 4.67	725 / 20.45	0 / 0	2.3	2.6	1960	23.9	66
		6-24-54[b]	3370	7.4	201 / 10.05	30 / 2.49	533 / 23.20	4.2 / 0.11	0 / 0	415 / 6.80	234 / 4.87	860 / 24.30	1.2 / 0.02	1.2	2.5	2215	29.6	65
		4- 8-55	2667	7.5	136 / 6.79	53 / 4.36	345 / 15.01	4.5 / 0.12	0 / 0	400 / 6.56	273 / 5.68	5.6 / 14.6	1.0 / 0.02	1.2	1.4	1635	19.5	57
		9-19-56	3780	7.7	190 / 9.50	34 / 2.80	531 / 23.10	8.6 / 0.22	0 / 0	329 / 5.4	240 / 5.00	908 / 25.60	1.2 / 0.02	1.0	4.6	2194	26.1	65
2C2	Alluvium	4- 7-55	2355	7.8	266 / 13.30	91 / 7.55	181 / 7.87	4.3 / 0.11	0 / 0	345 / 5.65	873 / 18.20	161 / 4.55	2.2 / 0.04	0.7	0.8	1929	15.5	27
		9-19-56[c]	2725	8.0	183 / 9.15	141 / 11.56	375 / 16.30	7.8 / 0.2	0 / 0	411 / 6.74	1166 / 24.29	264 / 7.44	8.0 / 0.13	0.3	1.5	2532	28.1	44
2D2	Alluvium and Sespe Formation	7-24-56[d]	2959	7.6	252 / 12.57	120 / 9.86	400 / 17.40	4.7 / 0.12	0 / 0	422 / 6.92	1207 / 25.15	283 / 7.98	2.0 / 0.03	0.9	1.7	2745	27.4	44
2D3	Alluvium and Sespe Formation	7-24-56[d]	2857	7.4	242 / 12.08	116 / 9.54	360 / 15.66	4.7 / 0.12	0 / 0	407 / 6.68	1148 / 23.92	255 / 7.19	11 / 0.18	0.9	1.6	2560	25.3	42
5F2	San Pedro Formation	9- 7-54[bd]	570	7.7	53 / 2.66	15 / 1.27	38 / 1.64	1.6 / 0.04	0 / 0	179 / 2.93	37 / 0.77	52 / 1.47	27 / 0.44	0.3	0.4	412	2.7	29
5K1	Alluvium and Fox Canyon	9- 7-54[bd]	2180	7.6	210 / 10.48	64 / 5.30	184 / 8.00	3.5 / 0.09	0 / 0	282 / 4.62	660 / 13.73	179 / 5.05	52 / 0.84	0.3	0.8	1622	13.4	34
5K5	- - -	9- 3-52	2000	7.5	199 / 9.93	63 / 5.18	190 / 8.26	4.2 / 0.11	0 / 0	244 / 4.00	663 / 13.82	161 / 4.54	26 / 0.42	0.8	0.6	1537	13.6	35
6K1	San Pedro Formation	7-25-56[d]	2105	7.8	183 / 9.13	83 / 6.82	252 / 10.96	4.5 / 0.12	0 / 0	278 / 4.56	843 / 17.56	179 / 5.05	12 / 0.19	0.8	0.6	1880	17.9	41

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H-17.

TABLE H-11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/19W-6N3	- - -	6-24-54[b]	1390	7.2	143 / 7.14	46 / 3.82	100 / 4.34	5.0 / 0.13	0 / 0	242 / 3.96	457 / 9.33	71 / 2.00	29 / 0.46	0.4	0.4	1156	8.3	28
		4- 8-55	1481	7.2	151 / 7.53	42 / 3.45	100 / 4.35	2.9 / 0.07	0 / 0	273 / 4.48	369 / 7.69	107 / 3.02	53 / 0.85	0.5	0.3	1040	7.9	28
		9-17-56	3050	7.8	240 / 12.00	85 / 7.00	363 / 15.80	1.4 / 0.04	0 / 0	3.4 / 5.15	1129 / 23.53	227 / 6.40	12 / 0.19	0.9	0.3	2354	22.8	45
6R1	Alluvium	4- 8-55	3400	--	392 / 19.60	137 / 11.3	285 / 12.4	3.9 / 0.10	0 / 0	415 / 6.8	1304 / 24.17	285 / 8.05	48 / 0.77	0.5	0.8	2858	23.8	29
7M1	- - -	4- 5-55	2455	7.7	127 / 6.35	67 / 5.52	337 / 14.65	4.0 / 0.10	0 / 0	262 / 4.3	547 / 11.4	365 / 10.30	4.5 / 0.07	0.6	0.5	1683	20.3	55
		1-11-56	2420	8.0	135 / 6.75	66 / 5.40	348 / 15.12	4.1 / 0.11	0 / 0	244 / 4.0	548 / 11.42	425 / 12.00	7.3 / 0.12	0.6	0.4	1787	20.6	55
9C3	Alluvium and Fox Canyon	11- 1-54[d]	2520	7.6	221 / 11.03	82 / 6.74	280 / 12.18	4.0 / 0.10	0 / 0	283 / 4.64	938 / 19.55	185 / 5.22	25 / 0.40	0.6	0.9	1940	19.0	40
9N2	Fox Canyon	8-31-54[bd]	1223	7.7	97 / 4.87	36 / 2.98	109 / 4.74	2.1 / 0.05	0 / 0	284 / 4.66	262 / 5.45	74 / 2.09	18 / 0.29	0.3	0.6	820	7.8	38
2N/20W-1Q1	San Pedro Formation	4- 8-55	875	7.5	108 / 5.40	30 / 2.45	59 / 2.58	1.2 / 0.03	0 / 0	317 / 5.20	180 / 3.75	30 / 0.85	31 / 0.51	0.3	0.2	663	5.1	25
		9-18-56	916	8.2	101 / 5.05	31 / 2.55	55 / 2.37	2.0 / 0.05	0 / 0	329 / 5.40	155 / 3.22	28 / 0.80	34 / 0.54	0.5	0.0	630	4.6	24
2D1	Fox Canyon	7- 9-57[d]	552	7.6	72 / 3.59	11 / 0.90	34 / 1.48	2.3 / 0.06	0 / 0	201 / 3.30	113 / 2.36	17 / 0.48	0.5 / 0.01	0.2	0.1	385	2.4	25
3K1	San Pedro Formation	4- 8-55	1305	7.2	175 / 8.75	40 / 3.35	57 / 2.48	1.6 / 0.04	0 / 0	229 / 3.75	328 / 6.84	87 / 2.45	91 / 1.46	0.5	0.2	986	5.9	17

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
d. For Analysis of heavy metal constituents, see Table H-17.

TABLE H-11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M	Producing Aquifer	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral constituents in parts per million / equivalents per million													
2N/20W-3K2	- - -	6- 5-58[c]	551	8.1	64 / 3.20	12 / 0.97	36 / 1.56	2.4 / 0.06	0 / 0	189 / 3.10	108 / 2.25	18 / 0.50	0 / 0	0.2	0.1	345	2.6	27
6B1	Alluvium and San Pedro Formation	6-24-54[b]	935	7.6	71 / 3.55	36 / 2.93	82 / 3.56	4.4 / 0.11	0 / 0	342 / 5.60	125 / 2.54	59 / 1.67	11 / 0.18	0.5	0.3	596	4.6	35
		4- 8-55	1612	7.3	214 / 10.68	62 / 5.10	70 / 3.06	6.7 / 0.17	0 / 0	486 / 7.96	487 / 10.14	39 / 1.10	6.4 / 0.10	0.6	0.1	1185	8.3	16
8F1	Fox Canyon	7-26-57[d]	488	8.1	47 / 2.35	18 / 1.48	35 / 1.52	2.0 / 0.05	0 / 0	193 / 3.17	85 / 1.78	14 / 0.39	0.4 / 0.01	0.3	0.1	327	2.2	28
9R1	Fox Canyon	6-24-54[b]	1689	7.6	163 / 8.16	52 / 4.28	161 / 7.00	3.9 / 0.10	0 / 0	281 / 4.60	548 / 11.41	131 / 3.70	1.9 / 0.03	0.4	0.5	1276	11.4	36
16C1	Fox Canyon	4- 8-55	990	7.7	94 / 4.70	23 / 1.93	85 / 3.69	3.8 / 0.10	0 / 0	217 / 3.55	239 / 4.98	60 / 1.70	1.7 / 0.03	0.2	0.2	695	5.7	36
17J1	- - -	6-24-54[b]	1390	7.8	151 / 7.56	43 / 3.50	103 / 4.48	3.9 / 0.10	0 / 0	261 / 4.28	426 / 8.90	89 / 2.50	11 / 0.17	0.2	0.4	1056	8.1	29
		4-7-55	553	7.9	67 / 3.35	13 / 1.10	41 / 1.76	2.3 / 0.06	0 / 0	204 / 2.35	107 / 2.23	16 / 0.45	1.4 / 0.02	0.4	0.4	373	2.9	28
18A1	Fox Canyon and Grimes Canyon	6-24-54[b]	555	7.7	56 / 2.80	15 / 1.20	32 / 1.41	2.3 / 0.06	0 / 0	188 / 3.08	90 / 1.88	18 / 0.51	4.9 / 0.08	0.2	0.1	351	2.4	26
		4-8-55	508	7.7	59 / 2.94	11 / 0.90	30 / 1.31	3.0 / 0.08	0 / 0	188 / 3.08	86 / 1.79	14 / 0.39	8.4 / 0.14	0.4	Tr.	325	2.2	25
		9-19-56[c]	1050	8.0	102 / 5.10	34 / 2.79	48 / 2.09	2.7 / 0.07	0 / 0	178 / 2.92	175 / 3.65	78 / 2.20	87 / 1.40	0.2	0.2	732	5.0	20

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table B-17.

TABLE H 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/21W- 3L1	Fox Canyon and Grimes Canyon	8-22-56[d]	909	7.8	64 / 3.19	32 / 2.63	87 / 3.78	2.7 / 0.07	0 / 0	322 / 5.28	108 / 2.26	62 / 1.75	17 / 0.28	0.6	0.3	606	4.4	39
9D1	San Pedro Formation, Fox Canyon; Grimes Canyon	7-11-56	923	8.0	51 / 2.55	27 / 2.25	117 / 5.09	2.9 / 0.08	0 / 0	281 / 4.60	166 / 3.45	57 / 1.60	8.6 / 0.14	0.4	0.4	610	5.4	51
		8-11-56[c]	905	8.3	55 / 2.76	31 / 2.55	120 / 5.20	4.7 / 0.12	14 / 0.46	295 / 4.84	183 / 3.81	62 / 1.75	6.3 / 0.10	0	0.3	656	5.3	49
11A1	Fox Canyon	7-31-56[d]	740	7.8	76 / 3.79	28 / 2.30	54 / 2.35	1.8 / 0.05	0 / 0	256 / 4.20	108 / 2.24	50 / 1.41	29 / 0.47	0.5	0.4	530	4.3	28
11H2	San Pedro Formation	5-15-56[bd]	825	7.9	78 / 3.88	28 / 2.30	56 / 2.45	1.7 / 0.04	0 / 0	267 / 4.38	106 / 2.20	54 / 1.52	32 / 0.52	0.2	0.1	590	4.3	28
12G1	Fox Canyon	4- 8-55	862	8.0	93 / 4.65	31 / 2.60	48 / 2.10	3.7 / 0.10	0 / 0	262 / 4.30	197 / 4.10	27 / 0.75	3.0 / 0.05	0.4	0.2	603	4.8	22
		9-19-56[c]	500	8.1	62 / 3.10	15 / 1.23	44 / 1.91	3.1 / 0.08	0 / 0	203 / 3.33	115 / 2.40	20 / 0.56	0.6 / 0.01	0.2	0.2	376	3.0	30
15C2	San Pedro Formation	6-25-54[b]	1468	7.4	140 / 7.99	55 / 4.53	82 / 3.56	2.7 / 0.07	0 / 0	329 / 5.40	425 / 8.38	58 / 1.64	19 / 0.30	0.4	0.6	1085	8.2	22
		4- 8-55	2575	7.4	388 / 19.40	123 / 10.00	230 / 10.00	6.8 / 0.18	0 / 0	287 / 4.70	1284 / 26.75	124 / 3.50	259 / 4.17	0.6	0.5	2698	20.2	25
15M2	San Pedro Formation and Fox Canyon	7-16-57[d]	918	7.9	70 / 3.49	26 / 2.14	90 / 3.92	4.0 / 0.10	0 / 0	281 / 4.60	165 / 3.44	59 / 1.66	1.7 / 0.03	0.2	0.3	590	5.1	41
16R2	- - -	4- 8-55	1000	7.6	86 / 4.30	27 / 2.20	91 / 3.97	3.7 / 0.09	0 / 0	287 / 4.70	213 / 4.44	50 / 1.40	4.9 / 0.08	0.2	0.2	695	5.9	38
		9-19-56[c]	875	7.9	50 / 2.50	28 / 2.30	106 / 4.61	4.7 / 0.12	0 / 0	239 / 3.92	197 / 4.10	55 / 1.55	0 / 0	0.3	0.4	576	5.6	48

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H 17.

TABLE H 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10[6] at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/21W-16R2	- - -	7- 9-57	992	8.3	88 / 4.40	29 / 2.35	92 / 3.98	4.2 / 0.11	0 / 0	302 / 4.95	225 / 4.69	51 / 1.45	3.2 / 0.05	0.1	0.2	676	5.9	37
3N/18W-30E1	Sespe Formation	3- 7-56	1365	8.3	132 / 6.60	59 / 4.85	96 / 4.18	9.8 / 0.25	0 / 0	354 / 5.80	384 / 8.00	67 / 1.90	20 / 0.32	0.4	0.2	1021	9.3	26
3N/19W-17P1	San Pedro and Santa Barbara Formation	7-24-56[d]	244	8.1	30 / 1.50	6.0 / 0.49	15 / 0.65	0.6 / 0.02	0 / 0	112 / 1.84	23 / 0.48	11 / 0.31	5.5 / 0.09	0.4	Tr.	210	0.8	24
19N2	Fox Canyon and Grimes Canyon	3- 8-56[bd]	354	7.4	37 / 1.87	7.5 / 0.66	22 / 0.95	1.7 / 0.04	0 / 0	145 / 2.38	36 / 0.74	14 / 0.39	5.6 / 0.09	0.4	Tr.	245	1.1	27
28F1	Epworth Gravels	6-24-54[b]	348	7.9	42 / 2.12	6.1 / 0.50	18 / 0.78	0.8 / 0.02	0 / 0	134 / 2.20	23 / 0.46	16 / 0.44	24 / 0.38	0.1	0.1	250	1.2	23
29E2	Epworth Gravels	7- 7-54	300	7.0	23 / 1.15	5.0 / 0.42	26 / 1.11	1.0 / 0.03	0 / 0	95 / 1.55	1.0 / 0.03	21 / 0.60	30 / 0.48	0.4	0.1	230	1.2	41
		4- 8-55	259	7.6	24 / 1.20	5.0 / 0.38	30 / 1.31	0.8 / 0.02	0 / 0	98 / 1.60	7.0 / 0.15	21 / 0.60	39 / 0.47	0.4	Tr.	232	1.3	45
		9-18-56[c]	250	7.5	20 / 0.98	7.0 / 0.58	29 / 1.25	1.0 / 0.03	0 / 0	102 / 1.67	6.0 / 0.13	25 / 0.70	20 / 0.32	0.2	0.1	208	1.3	44
29F6	Epworth Gravels and San Pedro Formation	1-13-56[d]	271	7.5	21 / 1.05	7.0 / 0.58	24 / 1.04	1.0 / 0.03	0 / 0	83 / 1.36	8.0 / 0.16	22 / 0.62	29 / 0.47	0.4	Tr.	220	1.3	39
29L1	Epworth Gravels	11- 4-54[d]	325	7.2	28 / 1.40	8.0 / 0.66	26 / 1.13	1.1 / 0.03	0 / 0	122 / 2.00	8.0 / 0.16	24 / 0.68	33 / 0.54	0.2	0.1	244	1.2	35
29N1	Epworth Gravels	3-30-56[bd]	323	7.7	37 / 1.83	8.0 / 0.66	21 / 0.92	1.1 / 0.03	0 / 0	122 / 2.00	10 / 0.21	29 / 0.82	19 / 0.31	0.3	0.1	279	1.4	27
30M2	San Pedro Formation	7-24-56[d]	323	8.1	32 / 1.60	9.0 / 0.74	24 / 1.04	0.7 / 0.02	0 / 0	144 / 2.36	8.0 / 0.17	21 / 0.59	13 / 0.21	0.5	Tr.	270	1.1	31
30Q1	San Pedro Formation	1-17-56[d]	187	7.4	13 / 0.65	5.0 / 0.41	20 / 0.87	0.6 / 0.02	0 / 0	76 / 1.24	7.0 / 0.14	21 / 0.59	1.8 / 0.03	0.4	Tr.	130	0.7	45

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.
d. For analysis of heavy metal constituents, see Table H 17.

TABLE B 11

MINERAL ANALYSES OF GROUND WATERS LAS POSAS VALLEY BASIN NO. 4-8
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
3N/19W-31D1	Epworth Gravels and San Pedro Formation	1-17-56[d]	388	7.8	56 / 2.79	9.0 / 0.74	20 / 0.87	1.2 / 0.03	0 / 0	176 / 2.88	36 / 0.75	19 / 0.54	16 / 0.26	0.5	Tr.	275	1.6	20
31M2	San Pedro Formation	9- 2-53	432	7.8	41 / 2.05	9.0 / 0.74	27 / 1.17	1.4 / 0.04	0 / 0	190 / 3.12	9.0 / 0.18	15 / 0.42	18 / 0.30	0.7	0.1	254	1.2	29
		4- 8-55	376	7.8	52 / 2.60	7.0 / 0.57	28 / 1.21	0.8 / 0.02	0 / 0	186 / 3.05	12 / 0.26	21 / 0.60	21 / 0.34	0.5	0.1	267	1.4	28
		1-12-56	408	8.0	42 / 2.10	9.0 / 0.72	30 / 1.30	1.2 / 0.03	0 / 0	189 / 3.10	8.0 / 0.17	21 / 0.60	15 / 0.24	0.6	0.0	255	1.3	31
32R1	San Pedro Formation	8-31-54[bd]	3140	8.0	24 / 1.22	7.1 / 0.58	631 / 27.40	4.5 / 0.11	0 / 0	568 / 9.31	12 / 0.25	685 / 19.30	0.6 / 0.01	0.4	7.1	1700	27.5	94
33H1	San Pedro Formation	3- 7-56[bd]	1050	7.7	65 / 3.23	43 / 3.56	93 / 4.03	3.9 / 0.10	0 / 0	293 / 4.81	152 / 3.16	105 / 2.95	0 / 0	0.4	0.8	699	6.1	37
33N2	San Pedro Formation	9- 3-53	710	8.0	39 / 1.95	18 / 1.48	80 / 3.48	2.1 / 0.05	0 / 0	305 / 5.00	12 / 0.25	50 / 1.41	15 / 0.24	0.8	0.1	355	3.5	50
		1-12-56	628	7.9	42 / 2.10	15 / 1.21	76 / 3.30	2.4 / 0.06	0 / 0	314 / 5.15	58 / 1.20	11 / 0.32	4.3 / 0.07	0.7	0.2	371	3.4	49
		9-18-56	639	8.0	39 / 1.95	16 / 1.30	75 / 3.28	2.2 / 0.06	0 / 0	314 / 5.15	8.0 / 0.16	44 / 1.25	2.7 / 0.04	0.5	0.1	361	3.3	50
3N/20W-26J1	San Pedro Formation	5- 7-56[bd]	358	7.8	21 / 1.03	7.4 / 0.61	35 / 1.52	0.7 / 0.02	0 / 0	107 / 1.76	9.6 / 0.20	34 / 0.95	17 / 0.28	0.7	0.1	232	1.5	48
27M1	San Pedro Formation	6-24-54[b]	632	7.8	51 / 2.55	21 / 1.69	46 / 2.00	1.9 / 0.05	0 / 0	256 / 4.20	20 / 0.42	42 / 1.33	21 / 0.34	0.9	0.3	376	2.1	32
		9- 1-54[bd]	612	7.9	57 / 2.85	16 / 1.29	46 / 2.00	1.7 / 0.05	0 / 0	260 / 4.26	9.6 / 0.20	49 / 1.37	25 / 0.40	1.0	0.3	361	2.1	32
33L1	Fox Canyon	1-17-56[d]	409	7.9	51 / 2.54	10 / 0.82	29 / 1.26	2.6 / 0.07	0 / 0	190 / 3.12	64 / 1.33	13 / 0.37	1.0 / 0.02	0.4	0.1	270	1.6	27

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table B 17.

TABLE B 12

MINERAL ANALYSES OF GROUND WATERS TIERRA REJADA BASIN 4-15
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$EC \times 10^6$ at 25^oC	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Mineral Constituents in parts per million / equivalents per million													
2N/19W-12M2	6-24-54[b]	990	7.9	54 / 2.68	59 / 4.82	56 / 2.44	1.9 / 0.05	0 / 0	229 / 3.76	213 / 4.35	65 / 1.82	9.9 / 0.16	0.1	0.2	792	6.2	24
14D1	8-17-53	648	7.5	44 / 2.20	41 / 3.37	28 / 1.22	0.8 / 0.02	0 / 0	222 / 3.64	92 / 1.92	37 / 1.04	4.0 / 0.06	0.8	0.1	463	3.2	18
15B1	8-17-53	745	7.7	49 / 2.45	48 / 3.95	39 / 1.70	1.4 / 0.04	0 / 0	254 / 4.16	116 / 2.41	54 / 1.52	3.5 / 0.06	0.8	0.1	530	4.0	21
	8-15-56[c]	810	7.9	46 / 2.32	60 / 4.90	55 / 2.38	1.6 / 0.04	0 / 0	298 / 4.88	130 / 2.71	62 / 1.75	1.8 / 0.03	0.1	0.1	592	4.8	25
15H2	8-17-53	529	7.7	41 / 2.05	32 / 2.63	22 / 0.96	0.8 / 0.02	0 / 0	229 / 3.76	32 / 0.67	31 / 0.87	15 / 0.24	0.7	0.1	336	1.9	17
	6-24-54[b]	528	7.8	41 / 2.07	30 / 2.45	23 / 0.98	0.8 / 0.02	0 / 0	225 / 3.68	35 / 0.72	30 / 0.85	16 / 0.25	0.2	0.2	376	1.8	18
	8-15-56[c]	570	7.9	48 / 2.39	34 / 2.83	25 / 1.10	0.8 / 0.02	0 / 0	244 / 4.00	44 / 0.92	40 / 1.13	13 / 0.20	0.1	0.1	388	2.3	17
15M1	8-17-53	616	7.7	43 / 2.15	42 / 3.45	41 / 1.78	1.8 / 0.05	0 / 0	278 / 4.56	82 / 1.71	38 / 1.07	0	0.7	0.1	460	2.9	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 13

MINERAL ANALYSES OF GROUND WATERS SANTA ROSA BASIN NO. 4-7
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10⁶ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/19W-19N2	San Pedro Formation	8-17-53	1020	7.7	64 / 3.19	57 / 4.69	74 / 3.22	3.3 / 0.08	0 / 0	361 / 5.92	77 / 1.61	84 / 2.37	60 / 0.96	0.5	0.2	627	5.3	29
20K1	Volcanics	8-17-53	833	7.6	49 / 2.45	46 / 3.78	63 / 2.74	1.5 / 0.04	0 / 0	327 / 5.36	71 / 1.47	54 / 1.52	36 / 0.58	0.7	0.1	518	3.7	30
		8-15-56[b]	810	8.0	50 / 2.48	49 / 3.98	66 / 2.88	1.6 / 0.04	0 / 0	332 / 5.44	84 / 1.75	60 / 1.69	13 / 0.21	0.3	0.5	492	3.9	31
21H1	Volcanics	8-17-53	838	8.1	14 / 0.70	12 / 0.99	160 / 6.96	3.1 / 0.08	0 / 0	283 / 4.64	131 / 2.73	47 / 1.33	0 / 0	0.5	0.1	565	7.0	80
		8-31-54[cd]	873	8.3	16 / 0.81	11 / 0.93	157 / 6.82	4.5 / 0.11	3.0 / 0.10	271 / 4.44	122 / 2.54	52 / 1.47	1.2 / 0.02	0.2	0.3	569	6.9	79
		8-15-56[b]	770	7.6	16 / 0.80	9 / 0.74	162 / 7.04	4.7 / 0.12	0 / 0	273 / 4.48	144 / 3.01	52 / 1.46	0 / 0	0	0.3	556	7.2	81
		5-29-57[b]	915	8.1	18 / 0.90	9.0 / 0.74	179 / 7.78	5.5 / 0.14	0 / 0	281 / 4.60	184 / 3.83	50 / 1.41	0 / 0	1.0	0.4	670	7.9	81
2N/20W-22K1	San Pedro Formation	1-13-56[d]	810	7.9	55 / 2.74	56 / 4.60	54 / 2.35	1.0 / 0.03	0 / 0	351 / 5.76	74 / 1.55	77 / 2.17	7.0 / 0.11	0.2	0.1	530	4.0	24
22L3	San Pedro Formation	8-17-53	881	7.5	50 / 2.49	51 / 4.19	63 / 2.74	1.3 / 0.03	0 / 0	344 / 5.64	59 / 1.23	83 / 2.34	8.4 / 0.14	0.6	0.2	530	3.8	29
23F1	- - -	9- 1-54[cd]	873	7.8	41 / 2.57	43 / 3.51	66 / 2.85	1.3 / 0.03	0 / 0	325 / 5.34	60 / 1.26	81 / 2.29	12 / 0.19	0.1	0.4	548	3.6	32
23H1	- - -	7-25-56[d]	769	8.2	48 / 2.40	52 / 4.27	60 / 2.61	1.8 / 0.05	12 / 0.40	310 / 5.08	90 / 1.87	72 / 2.03	4.5 / 0.07	0.5	0.1	605	3.9	28

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Terminal Testing Laboratories, Inc.
c. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table H 17.

TABLE H 13

MINERAL ANALYSES OF GROUND WATERS SANTA ROSA BASIN NO. 4-7
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	EC x 10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
2N/20W-23K1	San Pedro Formation	9- 1-54[cd]	873	7.8	54 / 2.71	42 / 3.42	66 / 2.87	1.2 / 0.03	0 / 0	333 / 5.46	66 / 1.37	75 / 2.11	8.1 / 0.13	0.1	0.2	550	3.6	32
23Q1	San Pedro Formation	8-17-53	1042	7.5	69 / 3.44	57 / 4.69	72 / 3.13	1.3 / 0.03	0 / 0	364 / 5.96	74 / 1.55	100 / 2.82	52 / 0.83	0.6	0.1	635	5.3	28
		8-15-56[b]	970	7.4	60 / 2.98	59 / 4.88	69 / 3.00	1.2 / 0.03	0 / 0	368 / 6.04	86 / 1.78	94 / 2.65	16 / 0.26	0	0.2	548	4.9	28
		5-29-57[b]	880	7.5	42 / 2.10	50 / 4.10	69 / 3.00	0.8 / 0.02	0 / 0	334 / 5.48	67 / 1.40	85 / 2.39	5.5 / 0.09	0.2	0.1	610	3.7	33
		5- 7-58[b]	868	7.5	46 / 2.30	46 / 3.80	68 / 2.96	1.5 / 0.04	0 / 0	330 / 5.42	66 / 1.37	85 / 2.39	8.4 / 0.14	0.2	0.3	591	3.7	33
24E1	San Pedro Formation and Fox Canyon	8-17-53[c]	917	7.6	45 / 2.27	52 / 4.28	71 / 3.09	2.1 / 0.05	0 / 0	329 / 5.31	91 / 1.91	92 / 2.58	1.9 / 0.03	0.5	0.2	538	4.4	32
		8-15-56[b]	870	8.0	49 / 2.44	58 / 4.79	66 / 2.88	2.2 / 0.06	0 / 0	327 / 5.36	94 / 1.96	94 / 2.65	4.9 / 0.08	0.2	0.1	528	4.8	28
		5-29-57[b]	1240	7.7	65 / 3.25	71 / 5.82	73 / 3.17	1.6 / 0.04	0 / 0	282 / 4.62	81 / 1.69	193 / 5.44	26 / 0.42	0.5	0.1	808	7.7	26
		6- 5-58[b]	1226	8.2	62 / 3.12	72 / 5.88	69 / 3.00	1.5 / 0.04	0 / 0	287 / 4.70	89 / 1.85	182 / 5.13	18 / 0.29	0	0.5	787	7.3	25
24R1	- - -	1-12-56	957	8.0	49 / 2.45	50 / 4.10	71 / 3.08	2.6 / 0.07	0 / 0	308 / 5.05	73 / 1.53	76 / 2.15	56 / 0.91	0	0	619	4.7	32
25L1	Alluvium and Volcanics	8-17-53	995	7.5	68 / 3.39	60 / 4.93	63 / 2.74	1.3 / 0.03	0 / 0	346 / 5.68	141 / 2.93	79 / 2.23	12 / 0.20	0.6	0.1	648	5.4	25

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Terminal Testing Laboratories, Inc.
c. Analyzed by Pacific Chemical Consultants.
d. For analysis of heavy metal constituents, see Table H 17.

TABLE H 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at $25^\circ C$	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/20W- 6C1	Alluvium	3- 7-56[b]	5920	7.6	410/20.50	246/28.60	428/18.60	3.9/0.10	0/0	406/6.65	1245/25.95	1220/34.35	1.9/0.03	0.1	0.5	4478	47.3	27
6H1	- - -	3- 7-56[b]	2060	7.7	84/4.21	88/7.30	218/9.46	3.1/0.08	0/0	452/7.42	197/4.11	337/9.51	9.3/0.15	0.0	0.5	1224	13.6	45
		4-22-58	2035	8.0	113/5.65	100/8.25	200/8.69	2.0/0.05	0/0	650/10.65	170/3.53	298/8.40	4.3/0.07	0.0	0.3	1305	12.0	38
6J1	San Pedro Formation and Volcanics	8-24-53[b]	2540	7.4	168/8.41	108/8.95	246/10.70	3.4/0.09	0/0	520/8.54	487/10.14	333/9.39	Tr./Tr.	0.0	0.5	1864	19.6	38
6R1	- - -	4-22-58	1400	7.9	106/5.30	76/6.25	97/4.20	4.6/0.12	0/0	281/4.60	287/5.98	172/4.85	12/0.20	0.2	0.1	1025	10.6	26
6R3	- - -	4-22-58	1040	8.1	72/3.60	50/4.15	78/3.40	3.3/0.09	0/0	314/5.15	138/2.87	110/3.1	13/0.21	0.3	0.1	681	6.1	30
1N/21W- 3L1	Alluvium, San Pedro Formation, and Fox Canyon	8-24-53[b]	1368	7.6	100/4.99	29/2.39	157/6.83	4.2/0.11	0/0	313/5.14	258/5.38	130/3.66	1.9/0.03	0.3	0.4	907	9.2	48
		6-27-54[b]	1089	8.0	89/4.45	35/2.89	100/4.34	3.1/0.08	0/0	268/4.40	239/4.88	79/2.22	25/0.04	0.2	0.3	768	7.3	37
		10- 2-57	905	8.2	89/4.45	29/2.40	72/3.14	2.3/0.06	0/0	232/3.80	240/5.00	53/1.50	3.5/0.06	0.0	0.2	641	5.6	31
3N1	Fox Canyon	7-25-57[c]	1266	7.9	96/4.79	36/2.96	128/5.57	4.0/0.10	0/0	281/4.60	296/6.17	96/2.71	0/0	0.4	0.4	831	8.6	42
14B2	Alluvium, San Pedro Formation, and Volcanics	7-24-57[c]	1992	7.0	169/8.43	60/4.93	183/7.96	4.0/0.10	0/0	335/5.49	480/9.99	216/6.09	0.8/0.01	0.2	0.5	1381	13.0	37
14F1	San Pedro Formation and Volcanics	6-16-54[b]	1487	7.7	126/6.28	42/3.46	140/6.10	4.2/0.11	0/0	313/5.14	338/6.90	142/3.99	5.0/0.08	0.2	0.5	1079	9.7	38

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H -17.

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

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

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-14F1	San Pedro Formation and Volcanics	12-21-55[c]	1468	7.8	135 / 6.74	44 / 3.62	150 / 6.53	4.8 / 0.12	0 / 0	315 / 5.16	371 / 7.73	147 / 4.15	0.5 / 0.1	0.4	0.3	1078	10.3	38
14F2	Volcanics	4-22-57[c]	1111	8.0	68 / 3.39	48 / 3.95	108 / 4.70	4.0 / 0.10	0 / 0	345 / 5.66	141 / 2.94	125 / 3.53	0.5 / 0.01	0.2	0.2	760	6.5	39
14J2	Alluvium and Volcanics	8-26-53[b]	1775	7.3	164 / 8.19	66 / 5.49	137 / 5.94	5.2 / 0.13	0 / 0	376 / 6.16	378 / 7.88	184 / 5.19	19 / 0.30	0.2	0.3	1271	11.6	30
		6-27-54[b]	1620	7.7	136 / 6.78	64 / 5.25	137 / 5.94	2.0 / 0.05	0 / 0	361 / 5.91	361 / 7.37	169 / 4.75	17 / 0.28	0.1	0.4	1268	11.2	33
		1- 5-56	1655	7.9	147 / 7.35	58 / 4.77	132 / 5.73	1.7 / 0.04	0 / 0	357 / 5.85	348 / 7.26	167 / 4.70	23 / 0.37	0.0	0.1	1144	10.5	32
		9-18-56[d]	1810	7.9	156 / 7.80	71 / 5.82	147 / 6.40	3.1 / 0.08	0 / 0	351 / 5.76	402 / 8.38	189 / 5.32	12 / 0.19	0.0	0.4	1340	12.3	32
		9- 3-57	1590	8.0	142 / 7.10	44 / 3.60	145 / 6.30	3.8 / 0.10	0 / 0	311 / 5.10	394 / 8.21	145 / 4.10	1.4 / 0.02	0.2	0.2	1085	10.0	35
15H1	Fox Canyon	11- 8-57[d]	1900	7.5	162 / 8.10	61 / 5.06	186 / 8.08	3.5 / 0.09	0 / 0	345 / 5.65	506 / 10.53	180 / 5.07	6.0 / 0.09	0.1	0.3	1440	13.2	38
15J1	- - -	6-15-54[b]	2680	7.4	241 / 12.05	90 / 7.45	246 / 10.70	3.9 / 0.10	0 / 0	391 / 6.40	712 / 14.55	340 / 9.57	4.3 / 0.07	0.2	0.7	2074	18.3	35
15J2	Alluvium	8- 2-56[c]	2725	8.2	257 / 12.82	108 / 8.88	235 / 10.22	3.4 / 0.09	17 / 0.56	373 / 6.12	733 / 15.28	336 / 9.48	1.5 / 0.02	1.0	0.8	2040	19.2	32
15Q1	Alluvium, San Pedro Formation, and Fox Canyon	6-27-54[b]	1410	7.4	89 / 4.43	33 / 4.00	136 / 5.90	4.7 / 0.12	0 / 0	300 / 4.92	290 / 6.03	130 / 3.66	4.3 / 0.07	0.2	0.3	874	9.5	41
22E1	- - -	6-15-54[b]	1788	7.8	175 / 8.76	53 / 4.32	149 / 6.50	3.1 / 0.08	0 / 0	317 / 5.19	466 / 9.52	176 / 4.95	8.1 / 0.13	0.2	0.6	1371	10.9	33

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H-14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/21W-23E1	- - -	4-30-53[b]	1545	9.9	111 / 5.55	17 / 1.38	132 / 5.73	5.5 / 0.14	0 / 0	331 / 5.42	161 / 3.35	144 / 4.05	6.2 / 0.10	-	0.1	803	7.3	45
26K1	Alluvium and Volcanic	8-26-53[b]	1625	7.3	144 / 7.20	76 / 6.30	132 / 5.74	1.0 / 0.03	0 / 0	436 / 7.15	299 / 6.24	196 / 5.52	28 / 0.45	0.2	0.1	1262	12.1	30
		9-18-56[d]	1420	8.0	94 / 4.70	87 / 7.09	141 / 6.13	2.0 / 0.05	0 / 0	305 / 5.00	305 / 6.35	222 / 6.25	22 / 0.36	0.1	0.2	1100	13.0	34
2N/20W-20E1	- - -	7-30-54	1203	7.9	97 / 4.84	46 / 3.78	115 / 5.00	5.0 / 0.13	0 / 0	254 / 4.16	340 / 7.09	79 / 2.23	0 / 0	0.6	0.3	870	8.9	36
21M1	San Pedro Formation	12-21-55[c]	1374	7.9	75 / 3.74	76 / 6.25	116 / 5.05	4.3 / 0.11	0 / 0	406 / 6.66	240 / 5.01	124 / 3.50	1.5 / 0.02	0.4	0.2	900	8.5	33
21M2	Fox Canyon	7-25-56[c]	1000	8.1	58 / 2.89	46 / 3.78	90 / 3.92	1.6 / 0.04	0 / 0	337 / 5.52	119 / 2.47	96 / 2.71	3.0 / 0.05	0.4	0.1	640	5.1	37
21P1	San Pedro Formation	11-4-54[c]	927	8.1	44 / 2.20	54 / 4.44	94 / 4.08	3.0 / 0.08	0 / 0	381 / 6.24	96 / 2.00	95 / 2.68	2.0 / 0.03	1.0	0.0	606	4.6	38
28C2	Alluvium and San Pedro Formation	7-25-56[c]	1600	7.6	84 / 4.19	84 / 6.90	164 / 7.13	2.0 / 0.05	0 / 0	517 / 8.48	248 / 5.16	157 / 4.43	18 / 0.29	0.4	0.3	1120	9.8	39
28M4	- - -	8-24-53[b]	2030	7.5	99 / 4.95	88 / 7.30	240 / 10.43	1.3 / 0.04	0 / 0	620 / 10.19	370 / 7.71	151 / 4.26	37 / 0.59	0.3	0.4	1357	12.5	46
		6-27-54[b]	2040	7.7	82 / 4.10	98 / 8.07	238 / 10.36	1.0 / 0.03	0 / 0	620 / 10.16	362 / 7.54	148 / 4.13	43 / 0.69	0.4	0.6	1355	12.4	46
		1-12-56	2080	7.8	76 / 3.80	91 / 7.47	248 / 10.78	1.2 / 0.03	0 / 0	616 / 10.10	358 / 7.45	152 / 4.30	42 / 0.67	0.2	0.1	1452	12.0	49
30C1	- - -	7-30-54	2409	7.3	186 / 9.28	86 / 7.07	304 / 13.22	6.5 / 0.17	0 / 0	346 / 5.68	839 / 17.48	252 / 7.11	0 / 0	0.8	0.9	1890	20.5	45
		5-23-57[d]	2680	7.2	170 / 8.50	86 / 7.05	328 / 14.26	35 / 0.90	0 / 0	351 / 5.75	816 / 17.00	255 / 7.18	0 / 0	0.5	0.6	2008	22.2	46

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.
d. Analyzed by Terminal Testing Laboratories, Inc.

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/20W-30H1	Fox Canyon	7-30-54	1828	7.3	92/4.59	68/5.59	250/10.88	6.6/0.17	0/0	395/6.48	295/6.14	283/7.98	0/0	1.0	0.7	1220	14.8	51
32D1	San Pedro Formation and Fox Canyon	12-21-55[c]	1342	7.8	70/3.49	74/6.08	136/5.92	5.0/0.13	0/0	429/7.03	166/3.46	177/4.99	0.6/0.01	0.2	0.2	889	8.6	38
33R2	Alluvium	8-24-53[b]	1455	7.1	94/4.72	81/6.80	83/3.61	Tr./0.01	0/0	411/6.74	66/1.38	207/6.82	61/0.98	0.0	0.1	1039	8.4	24
		12-22-55	839	7.5	50/2.50	45/3.66	80/3.48	0.5/0.01	0/0	464/7.60	3.0/0.07	71/2.00	2.0/0.03	0.3	0.0	512	3.5	36
		9-18-56[d]	850	8.5	53/2.64	52/4.22	78/3.40	0.8/0.02	29/0.96	361/5.92	17/0.36	107/3.02	0/0	0.1	0.3	564	3.4	33
34R1	- - -	6-27-54[b]	1125	8.0	61/3.06	68/5.55	78/3.40	2.9/0.07	0/0	386/6.32	108/2.25	87/2.46	73/1.18	0.0	0.3	734	5.8	28
2N/21W-22R1	- - -	8-27-54[bc]	1191	7.5	55/2.76	26/2.11	150/6.55	5.5/0.14	0/0	282/4.62	149/3.10	139/3.93	6.2/0.10	0.3	0.5	707	6.9	57
23R1	- - -	8-24-53[b]	1122	7.6	108/5.40	31/2.57	97/4.20	4.2/0.11	0/0	242/3.96	290/6.04	74/2.07	7.5/0.12	0.2	0.2	696	6.9	34
23R2	Alluvium and San Pedro Formation	7-30-54	873	7.7	81/4.04	29/2.38	70/3.05	3.2/0.08	0/0	246/4.04	136/2.83	60/1.69	48/0.78	0.5	0.2	595	5.5	32
		7-25-57	800	8.2	58/2.90	27/2.20	75/3.24	3.1/0.08	0/0	137/2.25	171/3.56	71/2.00	58/0.94	0.2	0.1	549	5.5	38
		10-8-57[d]	984	8.1	84/4.20	30/2.43	75/3.24	3.5/0.09	0/0	251/4.12	136/2.83	72/2.02	41/0.66	0.1	0.3	693	5.8	33

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For analysis of heavy metal constituents, see Table H-17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Ca	Mg	Na	K	CO3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral constituents in parts per million / equivalents per million													
2N/21W-23R2	Alluvium and San Pedro Formation	5-13-58	1458	7.0	149 7.44	41 3.37	105 4.57	6.7 0.17	0 0	227 3.72	372 7.75	102 2.88	60 0.97	0.5	0.3	1044	8.1	29
23R3	Fox Canyon	2-14-56[bc]	1100	7.5	96 4.82	32 2.57	95 4.15	4.2 0.11	0 0	273 4.47	239 4.98	82 2.30	3.7 0.06	0.4	0.4	779	6.8	36
		11-8-57[d]	1255	7.8	102 5.10	33 2.75	127 5.50	4.7 0.12	0 0	256 4.20	307 6.39	88 2.48	0 0	0.2	0.4	915	8.4	40
25K2	Fox Canyon	7-30-54	1795	7.3	170 8.48	60 4.93	215 9.35	5.7 0.15	0 0	403 6.60	581 12.11	171 4.82	0 0	0.6	0.6	1400	14.4	41
		11-7-57[d]	2075	7.8	156 7.80	63 5.20	198 8.60	5.9 0.15	0 0	299 4.90	571 11.89	180 5.07	0 0	0.2	0.8	1470	14.0	40
26D4	San Pedro Formation and Fox Canyon	8-2 56[c]	790	8.1	66 3.29	20 1.64	76 3.31	3.7 0.10	0 0	246 4.04	155 3.22	41 1.16	1.5 0.02	0.5	0.3	540	4.3	40
26G1	San Pedro Formation and Fox Canyon	11-8-54[c]	1481	7.7	71 3.54	23 1.89	220 9.57	5.1 0.13	0 0	349 5.72	292 6.08	128 3.61	5.5 0.09	0.5	0.5	910	9.7	63
28N3	San Pedro Formation	7-22-53[ce]	851	8.0	81 4.04	26 2.14	84 3.65	2.0 0.05	0 0	256 4.20	162 3.37	68 1.92	8.4 0.14	0.3	0.2	--	5.7	37
		8-27-54[bc]	966	8.1	80 4.01	30 2.46	82 3.57	2.0 0.05	0 0	267 4.37	169 3.51	73 2.05	11 0.18	0.4	03.	674	5.7	35
28Q3	Alluvium	12-30-55[c]	1546	7.6	158 7.88	54 4.44	100 4.35	2.1 0.05	0 0	256 4.20	214 4.46	248 6.99	65 1.05	0.3	0.2	1125	8.8	26
33A1	Alluvium	8-24-53[b]	2400	7.4	237 11.84	59 4.91	256 11.13	1.6 0.04	0 0	270 4.42	915 19.07	151 4.26	19 0.30	1.0	1.0	1816	16.1	40
		6-27-54[b]	2600	7.6	270 13.5	69 5.68	276 12.00	1.6 0.04	0 0	264 4.32	1140 23.22	136 3.82	25 0.40	1.0	1.1	2168	17.7	38

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants
c. For analysis of heavy metal constituents, see Table H -17
d. Analyzed by Terminal Testing Laboratories, Inc.
e. Analyzed by United States Geological Survey.

TABLE H 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral constituents in parts per million / equivalents per million													
2N/21W-33A1	Alluvium	9-14-56	2420	7.1	71/3.55	178/14.60	222/9.65	2.4/0.06	0/0	256/4.2	837/17.44	192/5.40	13/0.21	1.0	0.8	1841	23.7	35
		6-26-57	2560	7.4	283/14.1	75/6.20	239/10.40	1.8/0.05	0/0	253/4.15	1096/22.81	161/4.55	11/0.18	1.0	0.3	1934	16.7	34
		11-7-57[d]	2785	7.6	273/13.60	84/6.90	276/12.00	2.0/0.05	0/0	232/3.80	1110/23.11	172/4.85	1.5/0.02	0.5	0.8	2160	19.0	37
33F1	Alluvium, San Pedro and Fox Canyon	12-20-55[c]	1834	7.2	194/9.68	62/5.10	140/6.09	3.3/0.08	0/0	383/6.28	548/11.42	127/3.58	4.8/0.08	1.0	0.7	1415	11.3	29
	- - - ,	11-7-57[d]	2039	7.6	202/10.10	69/5.70	156/6.80	3.9/0.10	0/0	415/6.80	588/12.24	145/4.08	0/0	0.4	0.8	1580	12.6	30
34D2	Fox Canyon	8-2-56[c]	909	8.0	74/3.69	24/1.97	85/3.70	4.0/0.10	0/0	264/4.32	183/3.82	50/1.41	2.5/0.04	0.4	0.3	610	5.1	39
34H1	SanPedro Formation and Fox Canyon	11-8-57[d]	1020	8.0	90/4.50	28/2.30	87/3.76	3.5/0.09	0/0	250/4.10	227/4.73	63/1.77	1.0/0.02	0.2	0.4	750	6.2	35
35D3	Alluvium	11-8-57[d]	2135	7.7	200/10.00	62/5.10	200/8.70	2.0/0.05	0/0	220/3.60	691/14.39	155/4.37	39/0.64	0.4	0.2	1570	13.9	36
35E1	- - -	7-30-54	2145	7.5	191/9.53	70/5.75	260/11.31	7.0/0.18	0/0	349/5.72	697/14.53	206/5.81	1.0/0.02	0.6	0.7	1695	17.2	42
35H1	- - -	3-8-56[b]	1190	7.9	90/4.49	36/3.00	114/4.96	3.9/0.10	0/0	284/4.66	274/5.71	83/2.34	0/0 -	0.3	0.4	842	7.9	40

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For heavy metal constituents, see Table H-17.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 14

MINERAL ANALYSES OF GROUND WATERS PLEASANT VALLEY BASIN NO. 4-6
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
2N/21W-35Q1	San Pedro Formation	11-7-57[d]	944	7.7	90/4.50	27/2.20	79/3.44	2.4/0.06	0/0	250/4.10	218/4.54	55/1.55	0/0	0.3	0.4	720	5.7	34
36A1	San Pedro Formation and Fox Canyon	4-29-55[c]	1720	7.6	142/7.08	55/4.52	170/7.40	5.4/0.14	0/0	349/5.72	428/8.91	164/4.62	0/0	0.5	0.3	1227	12.1	39
36F2	- - -	3-8-56[b]	2210	7.7	222/11.10	64/5.25	190/8.25	4.3/0.11	0/0	256/4.19	723/15.08	160/4.50	44/0.71	0.3	0.7	1625	13.6	33
36L2	San Pedro Formation and Fox Canyon	3-7-56[b]	1900	8.2	105/5.25	63/5.16	212/9.23	6.6/0.17	Tr./Tr.	354/5.80	384/8.01	214/6.05	2.5/0.04	0.3	0.7	1220	14.0	47
		11-8-57[d]	1900	7.7	119/5.95	61/5.05	209/9.10	5.5/0.14	0/0	351/5.75	414/8.62	210/5.92	0/0	0.2	0.4	1370	14.3	45
36N4	San Pedro Formation	7-30-54	1410	7.3	144/7.19	48/3.95	120/5.22	2.8/0.07	0/0	295/4.84	329/6.86	148/4.17	4.0/0.06	0.5	0.3	1040	9.2	32
		3-7-56[b]	1700	8.0	159/7.96	55/4.50	132/5.76	4.3/0.11	0/0	299/4.90	410/8.54	170/4.80	7.4/0.12	0.2	0.5	1200	10.4	31
		9-14-56[d]	1500	7.3	146/7.32	60/4.94	146/6.35	5.1/0.13	0/0	298/4.88	449/9.35	172/4.85	4.0/0.07	0	0.3	1172	11.4	34
		9-30-57	--	7.9	166/8.30	56/4.60	145/6.31	3.4/0.09	0/0	296/4.85	449/9.35	177/5.00	7.9/0.13	0.3	0.2	1200	11.0	33
		4-22-58[d]	1808	7.3	184/9.20	49/4.00	133/5.81	14/0.36	0/0	300/4.92	441/9.18	190/5.35	3.7/0.06	0.2	Tr.	1163	10.2	30

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. For heavy metal constituents, see Table H-17.
d. Analyzed by Terminal Testing Laboratories, Inc.

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10[6] at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/19W- 2B2	Modelo Formation	1-11-56[b]	3030	7.6	277 / 13.85	156 / 12.86	246 / 10.70	3.9 / 0.10	0 / 0	488 / 8.00	1151 / 23.98	206 / 5.80	2.2 / 0.04	1.4	0.5	2623	23.7	28
2L1	Modelo Formation	8-18-53[c]	1085	7.4	122 / 6.11	41 / 3.39	55 / 2.40	2.0 / 0.05	0 / 0	395 / 6.37	190 / 3.96	65 / 1.83	1.2 / 0.02	0.9	0.3	714	5.6	20
		6-27-54[c]	900	7.5	109 / 5.43	36 / 2.96	47 / 2.04	2.0 / 0.05	0 / 0	373 / 6.02	138 / 2.88	61 / 1.71	0 / 0	0.7	0.2	682	4.5	19
		5-23-57[d]	845	7.9	93 / 4.65	32 / 2.62	38 / 1.65	1.6 / 0.04	0 / 0	353 / 5.78	89 / 1.85	48 / 1.35	0 / 0	1.2	0.1	602	3.2	18
		10- 2-57	954	7.7	112 / 5.60	44 / 3.65	47 / 2.06	1.7 / 0.04	0 / 0	391 / 6.40	150 / 3.12	48 / 1.35	0.6 / 0.01	0.9	0.1	675	5.0	18
		5- 2-58[d]	892	7.9	102 / 5.10	33 / 2.70	42 / 1.85	1.0 / 0.03	0 / 0	351 / 5.75	111 / 2.31	55 / 1.55	27 / 0.44	0.2	0.3	588	3.9	19
4A1	Modelo Formation	1-11-56[b]	1285	7.8	89 / 4.47	74 / 6.08	113 / 4.92	2.2 / 0.06	0 / 0	315 / 5.16	368 / 7.67	99 / 2.79	0.6 / 0.01	0.4	0.2	970	10.6	31
5F1	Topanga Formation	8-18-53	725	7.7	84 / 4.19	20 / 1.64	44 / 1.91	2.5 / 0.06	0 / 0	300 / 4.92	85 / 1.77	33 / 0.93	1.0 / 0.02	0.8	Tr.	470	2.9	25
5L1[e]	Topanga Formation	8-30-54[bc]	770	7.3	95 / 4.74	16 / 1.33	109 / 4.75	2.2 / 0.05	0 / 0	294 / 4.82	104 / 2.18	39 / 1.10	0 / 0	0.4	0.5	471	3.2	59
		8-14-56[d]	745	7.8	85 / 4.24	27 / 2.23	46 / 1.98	2.8 / 0.07	0 / 0	261 / 4.28	146 / 3.04	44 / 1.24	1.6 / 0.03	0.2	0.1	504	4.2	23
5N2	Topanga Formation and Volcanics	8-30-54[bc]	1062	7.5	89 / 4.47	36 / 2.93	84 / 3.64	1.0 / 0.03	0 / 0	327 / 5.37	160 / 3.31	87 / 2.46	1.2 / 0.02	0.7	0.5	652	5.7	33
7E3	Alluvium and Topanga Formation	7-25-56[b]	962	8.0	76 / 3.79	50 / 4.11	58 / 2.52	0.6 / 0.02	0 / 0	366 / 6.00	82 / 1.71	81 / 2.28	26 / 0.42	0.3	Tr.	635	4.4	24

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H-17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
e. This well was known as 5F1 in the previous Ventura report.

TABLE H 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/19W- 7F1	Topanga Formation	8-18-53	1307	7.5	118 / 5.89	74 / 6.08	64 / 2.78	0.7 / 0.02	0 / 0	468 / 7.68	198 / 4.12	81 / 2.28	27 / 0.43	0.6	Tr.	894	7.1	19
		6-27-54[c]	1198	7.6	107 / 5.35	66 / 5.46	71 / 3.08	0.8 / 0.02	0 / 0	451 / 7.39	181 / 3.69	79 / 2.22	30 / 0.48	0	0.1	846	6.5	22
		8-14-56[d]	910	7.7	74 / 3.68	55 / 4.54	53 / 2.32	0.4 / 0.01	0 / 0	361 / 5.92	204 / 1.75	82 / 2.31	18 / 0.29	0.1	0.1	520	4.6	22
7J1	Topanga Formation	8-30-54[bc]	1335	7.5	136 / 6.90	84 / 6.91	37 / 1.60	1.0 / 0.03	0 / 0	370 / 6.06	403 / 8.40	42 / 1.19	5.4 / 0.09	0.1	0.1	1147	8.5	10
7K1	Topanga Formation	8-30-54[bc]	1075	7.3	85 / 4.24	64 / 5.24	53 / 2.30	0.4 / 0.01	0 / 0	362 / 5.94	181 / 3.77	70 / 1.98	11 / 0.18	0.1	0.2	809	5.9	20
7K16	Topanga Formation	7-26-57[b]	1036	8.2	105 / 5.24	61 / 5.01	56 / 2.44	0.6 / 0.02	10 / 0.32	334 / 5.48	181 / 3.78	104 / 2.93	8.0 / 0.13	0.2	Tr.	870	7.2	19
7R3	Volcanics	7-22-53[bf]	1300	7.6	142 / 7.09	82 / 6.74	38 / 1.65	1.4 / 0.04	0 / 0	313 / 5.13	454 / 9.45	48 / 1.35	0.2 / Tr.	0.3	Tr.	--	8.4	11
8G1	Topanga Formation	8-14-56[d]	1650	7.6	139 / 6.96	128 / 10.52	100 / 4.36	2.7 / 0.07	0 / 0	354 / 5.80	608 / 12.67	104 / 2.92	0 / 0	0.1	0.2	1092	15.0	20
		10- 2-57	1550	7.9	127 / 6.35	105 / 8.65	88 / 3.81	2.7 / 0.07	0 / 0	354 / 5.80	522 / 10.86	92 / 2.60	3.6 / 0.06	0	0.1	1224	12.5	20
		5- 2-58[d]	1755	7.7	138 / 6.90	124 / 10.20	111 / 4.84	3.5 / 0.09	0 / 0	378 / 6.20	589 / 12.26	113 / 3.18	11 / 0.18	0.4	0.6	1184	15.1	22
		5- 6-58[d]	1795	7.3	150 / 7.50	113 / 9.30	108 / 4.72	3.5 / 0.09	0 / 0	339 / 5.55	627 / 13.05	108 / 3.04	0 / 0	0.2	--	1151	14.1	22
8G2	Volcanics	8-27-54[bc]	1811	7.5	147 / 7.37	116 / 9.55	101 / 4.40	2.9 / 0.07	0 / 0	353 / 5.79	616 / 12.85	104 / 2.94	3.7 / 0.06	0.2	0.2	1409	14.0	20

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by United States Geological Survey.

TABLE E 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10 at 25 C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/19W- 8K1	Volcanics	8-23-53[f]	1560	7.5	119 / 5.94	97 / 7.98	89 / 3.87	2.9 / 0.07	0 / 0	324 / 5.31	484 / 10.08	98 / 2.76	1.0 / 0.02	0.3	0.2	--	11.9	22
9B1	Modelo Formation and Volcanics	1-11-56[b]	1915	7.6	170 / 8.48	137 / 11.26	120 / 5.22	3.6 / 0.09	0 / 0	320 / 5.24	791 / 16.48	127 / 3.58	0.3 / 0.01	0.4	0.1	1600	16.6	21
9G2	Modelo Formation	7-23-53[bf]	1720	7.8	128 / 6.39	107 / 8.80	114 / 4.96	3.4 / 0.09	0 / 0	313 / 5.13	564 / 11.74	125 / 3.53	0.8 / 0.01	0.2	0.1	--	13.9	25
9H2	Modelo Formation and Volcanics	1-11-56[b]	1650	7.9	132 / 6.59	104 / 8.55	144 / 6.26	4.2 / 0.11	0 / 0	510 / 8.36	478 / 9.96	117 / 3.30	0.8 / 0.01	0.2	0.2	1270	13.2	29
9K1	Alluvium and Modelo Formation	8-18-53	1980	7.4	131 / 6.54	87 / 7.15	220 / 9.57	9.8 / 0.25	0 / 0	534 / 8.76	516 / 10.76	119 / 3.36	7.4 / 0.12	0.6	0.3	1472	14.8	41
		6-27-54[c]	2110	7.3	129 / 6.47	89 / 7.28	238 / 10.37	11 / 0.27	0 / 0	564 / 9.24	565 / 11.78	121 / 3.42	8.7 / 0.14	0	0.2	1534	15.2	43
		1-11-56[b]	1715	7.7	124 / 6.19	86 / 7.07	200 / 8.70	8.8 / 0.23	0 / 0	527 / 8.64	504 / 10.49	118 / 3.33	0.5 / 0.01	0.1	0.4	1335	14.6	39
		8-14-56[d]	1900	7.2	134 / 6.72	95 / 7.81	211 / 9.15	7.8 / 0.20	0 / 0	527 / 8.64	555 / 11.56	122 / 3.43	0 / 0	0	0.3	1232	15.2	38
		5- 1-58[d]	1891	8.1	72 / 3.60	103 / 8.52	191 / 8.30	8.3 / 0.21	0 / 0	442 / 7.25	471 / 9.81	121 / 3.41	3.7 / 0.06	0	0.7	1246	13.4	40
10E3	Modelo Formation	1-11-56[b]	1428	7.7	141 / 7.04	74 / 6.08	117 / 5.09	5.0 / 0.13	0 / 0	569 / 9.32	321 / 6.68	82 / 2.31	4.5 / 0.07	0.5	0.2	1060	9.0	28
10L5	Modelo Formation	1-17-56[b]	1757	7.8	191 / 9.53	103 / 8.47	100 / 4.35	1.6 / 0.04	0 / 0	373 / 6.12	504 / 10.50	192 / 5.41	21 / 0.34	0.4	0.1	1400	12.9	19
10P1	Modelo Formation	8-30-54[bc]	1390	7.5	132 / 6.62	78 / 6.44	59 / 2.54	2.5 / 0.06	0 / 0	330 / 5.41	417 / 8.20	74 / 2.09	0.6 / 0.01	0.3	0.1	1083	9.0	16

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table E 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by United States Geological Survey.

TABLE H 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	ECx10^6 at 25°C	pH	Ca	Mg	Na	K	CO3	HCO3	SO4	Cl	NO3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/19W-14K3	Alluvium and Topanga Formation	8-18-53[c]	1665	7.6	117/5.85	105/8.64	104/4.44	4.4/0.11	0/0	310/5.08	526/10.93	117/3.30	0/0	0.4	0.2	1269	13.2	23
		8-15-56[d]	1420	7.4	106/5.28	103/8.41	94/4.08	3.9/0.10	0/0	315/5.16	456/9.50	105/2.96	0/0	0.1	0.1	880	12.6	23
		5-22-57[d]	1560	7.7	84/4.20	97/7.95	125/5.43	4.7/0.12	0/0	294/4.82	449/9.35	140/3.94	2.7/0.04	0.3	0.6	1070	12.9	31
		10- 3-57	1545	8.2	112/5.60	95/7.80	85/3.70	3.7/0.10	0/0	272/4.45	454/9.46	113/3.20	2.5/0.04	0.3	0.1	1131	11.6	22
		4-25-58[d]	1645	7.6	118/5.90	105/8.60	110/4.80	4.2/0.11	0/0	311/5.10	480/10.00	160/4.51	0/0	0.7	0.1	1077	13.5	25
15B2	Topanga Formation	5- 6-58[b]	989	7.3	107/5.34	61/5.01	27/1.17	2.0/0.05	0/0	280/4.59	300/6.24	24/0.68	2.2/0.04	0.1	0.0	783	6.2	10
15L1	Volcanics	8-20-57[b]	1106	8.2	20/1.00	20/1.64	203/8.83	0.6/0.02	0/0	465/7.62	146/3.05	36/1.02	0/0	0.2	0.1	698	8.9	77
16A1	Volcanics	8-27-54[bc]	3100	7.7	271/13.54	237/19.48	179/7.80	10/0.26	0/0	306/5.02	1690/35.25	53/1.50	8.1/0.13	0.2	0.2	2808	28.1	19
		10- 3-57	2500	7.5	168/8.40	167/13.70	229/9.95	11/0.28	0/0	165/2.70	1410/29.36	39/1.10	3.3/0.05	0.6	0.2	2295	23.9	31
		5- 8-58[d]	2737	7.5	162/8.08	174/14.32	262/11.40	14/0.36	0/0	136/2.24	1457/30.33	42/1.18	0/	0.4	0.8	--	26.1	33
18B1	Volcanics	11- 8-54[b]	1492	7.4	126/6.29	103/8.47	66/2.87	1.2/0.03	0/0	505/8.28	288/6.00	109/3.07	13/0.21	0.4	0	930	9.4	16
18B9	Volcanics	8-18-53	1653	7.8	153/7.63	110/9.04	80/3.48	2.9/0.07	0/0	383/6.28	602/12.55	43/1.21	1.5/0.02	0.8	Tr.	1337	12.6	17

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.

TABLE H 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$EC \times 10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million: Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
1N/19W-18B9	Volcanics	6-27-54[c]	1720	7.9	153 7.64	110 9.07	81 3.54	2.9 0.07	0 0	379 6.22	625 13.02	46 1.30	2.5 0.04	0.2	0.1	1523	12.7	17
18H15	Volcanics	8-18-53	935	7.1	87 4.34	50 4.11	40 1.74	0.9 0.02	0 0	451 7.40	31 0.64	56 1.58	21 0.34	0.5	0	556	2.8	17
		6-27-54[c]	883	7.4	90 4.49	48 4.00	43 1.87	0.8 0.02	0 0	462 7.58	43 0.89	62 1.74	21 0.34	0.1	0.1	667	2.8	18
		8-14-56[d]	850	7.5	82 4.08	58 4.82	49 2.12	0.8 0.02	0 0	486 7.96	53 1.09	66 1.86	14 0.23	0	0.5	608	3.1	19
1N/20W- 1K1	Topanga Formation	7-22-53[bf]	601	8.3	36 1.80	29 2.38	47 2.04	0.5 0.01	6 0.20	228 3.74	25 0.52	52 1.47	19 0.31	0.1	0.2	--	2.3	33
2Q1	Volcanics	3-28-56[bc]	810	8.4	20 0.98	22 1.78	138 6.00	1.4 0.04	5.4 0.18	363 5.95	45 0.94	46 1.30	17 0.28	0	0.2	532	6.0	68
3J1	Volcanics	8-18-53	687	7.6	46 2.30	41 3.37	43 1.87	0.7 0.02	0 0	288 4.72	74 1.54	39 1.10	1.5 0.02	0.6	0.1	408	2.8	25
		6-27-54[c]	680	7.8	43 2.16	39 3.21	46 2.00	0.4 0.01	0 0	279 4.57	83 1.69	41 1.16	2.5 0.04	0.1	0.1	423	2.8	27
		8-14-56[d]	625	7.3	44 2.20	40 3.33	46 1.99	0.4 0.01	0 0	283 4.64	95 1.97	42 1.18	0.8 0.01	0	0.5	432	2.9	27
11P1	Volcanics	8-27-54[bc]	852	8.0	77 3.84	32 2.62	60 2.62	0.4 0.01	0 0	357 5.85	54 1.12	61 1.71	23 0.37	0.2	0.4	504	3.2	29
12B6	Topanga Formation	7-22-53[bf]	861	8.0	65 3.24	38 3.12	67 2.91	0.5 0.01	0 0	352 5.77	51 1.06	70 1.97	23 0.37	0	0.1	--	3.5	31
12D2	Alluvium and Older Formations	8-18-53	725	7.5	49 2.45	32 2.63	60 2.61	0.9 0.02	0 0	278 4.56	33 0.68	65 1.83	33 0.54	0.6	Tr.	418	3.2	34

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by United States Geological Survey.

TABLE H 15

MINERAL ANALYSES OF GROUND WATERS CONEJO VALLEY BASIN NO. 4-10
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Producing Aquifer	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B	Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
					Mineral Constituents in parts per million / equivalents per million													
1N/20W-12D2	Alluvium and Older Formations	8-14-56[d]	690	8.0	50 / 2.48	35 / 2.83	55 / 2.37	0.8 / 0.02	0 / 0	273 / 4.48	16 / 0.33	80 / 2.25	22 / 0.35	0	0.1	392	3.2	31
12F6	Alluvium and Older Formations	7-22-53[bf]	825	7.9	61 / 3.04	39 / 3.21	58 / 2.52	0.6 / 0.02	0 / 0	320 / 5.24	45 / 0.94	70 / 1.97	45 / 0.73	0.3	0	--	3.5	29
12F7	Alluvium and Older Formations	1-12-56[b]	695	8.0	64 / 3.19	38 / 3.12	63 / 2.74	1.0 / 0.03	0 / 0	376 / 6.16	42 / 0.87	61 / 1.72	12 / 0.19	0.3	0.1	460	2.9	30
12N4	Alluvium and Older Formations	1-11-56[b]	769	7.4	83 / 4.14	40 / 3.29	47 / 2.04	0.3 / 0.01	0 / 0	366 / 6.00	99 / 2.06	46 / 1.30	16 / 0.25	0.3	Tr.	505	3.5	22
15R1	Volcanics	8-18-53	763	7.3	67 / 3.34	34 / 2.79	45 / 1.96	0.5 / 0.01	0 / 0	312 / 5.12	58 / 1.20	46 / 1.30	17 / 0.28	0.7	0	440	3.0	24
		6-27-54[c]	698	7.6	61 / 3.06	34 / 2.76	49 / 2.12	0 / 0	0 / 0	287 / 4.71	74 / 1.51	52 / 147	19 / 0.30	0.1	0.1	434	3.2	27
		8-14-56[d]	740	7.6	66 / 3.28	40 / 3.25	43 / 1.85	0 / 0	0 / 0	303 / 4.96	64 / 1.33	58 / 1.63	11 / 0.17	0.1	0.1	416	3.4	22
2N/19W-33N2	Topanga Formation	6-24-54[c]	670	7.8	41 / 2.03	16 / 1.33	74 / 3.20	2.0 / 0.05	0 / 0	288 / 4.72	22 / 0.45	45 / 1.27	16 / 0.26	0.3	0.2	383	3.3	48
34E1	Topanga Formation	8-18-53[c]	1640	7.8	115 / 5.75	88 / 7.23	122 / 5.33	4.0 / 0.10	0 / 0	350 / 5.65	485 / 10.10	106 / 3.00	1.2 / 0.02	0.5	0.3	1185	12.7	29
		6-27-54[c]	1630	7.8	98 / 4.92	91 / 7.50	129 / 5.60	4.4 / 0.11	0 / 0	346 / 5.68	472 / 9.82	101 / 2.84	1.2 / 0.02	0.3	0.1	1220	12.5	31
		8-14-56[d]	1440	7.7	112 / 5.60	96 / 7.87	137 / 5.96	4.7 / 0.12	0 / 0	366 / 6.00	507 / 10.56	106 / 2.98	0 / 0	0.2	0.6	1304	13.6	31

a. Analyzed by Department of Water Resources unless otherwise stated.
b. For analysis of heavy metal constituents, see Table H 17.
c. Analyzed by Pacific Chemical Consultants.
d. Analyzed by Terminal Testing Laboratories, Inc.
f. Analyzed by United States Geological Survey.

TABLE H 16

MINERAL ANALYSES OF GROUND WATERS MALIBU HYDROLOGIC UNIT NO. 4-16
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	$ECx10^6$ at 25°C	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1S/20W-19B1	10-13-55[b]	1360	7.6	112 / 5.59	65 / 5.39	95 / 4.13	1.4 / 0.04	0 / 0	415 / 6.80	202 / 4.21	139 / 3.92	0.4 / 0.01	0.3	0.3	--	8.3	27
22L1	10-13-55[b]	1250	7.7	44 / 2.20	64 / 5.25	116 / 5.05	1.4 / 0.04	0 / 0	378 / 6.20	216 / 4.50	77 / 2.17	1.2 / 0.02	0.6	0.3	--	6.3	40
1N/17W- 7R1	7-23-57[c]	1189	7.9	84 / 4.19	78 / 6.41	68 / 2.96	7.8 / 0.20	0 / 0	361 / 5.92	320 / 6.67	30 / 0.85	5.2 / 0.08	0.1	0.2	869	7.8	22
1N/19W-20E1	8-18-53	621	7.2	62 / 3.09	30 / 2.47	26 / 1.13	1.5 / 0.04	0 / 0	307 / 5.04	45 / 0.94	21 / 0.59	2.5 / 0.04	0.6	0.0	358	1.7	17
23K1	4-30-53[d]	1075	7.5	93 / 4.67	57 / 4.72	68 / 2.96	4.5 / 0.12	0 / 0	426 / 6.97	220 / 4.58	32 / 0.90	6.2 / 0.10	0.0	Tr.	762	5.5	24
23Q2	7-23-53[bc]	1060	7.8	99 / 4.94	58 / 4.77	61 / 2.65	4.3 / 0.11	0 / 0	421 / 6.90	216 / 4.50	33 / 0.93	3.9 / 0.06	0.2	0.1	--	5.6	21
24M2	8-18-53	1587	7.8	18 / 0.90	13 / 1.07	340 / 14.79	5.3 / 0.14	0 / 0	586 / 9.60	283 / 5.90	43 / 1.21	14 / 0.23	0.8	Tr.	1042	14.9	88

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by United States Geological Survey.
c. For analysis of heavy metal constituents, see Table H 17.
d. Analyzed by Pacific Chemical Consultants.

TABLE H 16

MINERAL ANALYSES OF GROUND WATERS MALIBU HYDROLOGIC UNIT NO. 4-16
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	ECx10[6] at 25°C	pH	Mineral Constituents in parts per million / equivalents per million											Total Dissolved Solids ppm	Effective Salinity epm	Per Cent Na
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B			
1N/19W-26C1	4-15-53[bc]	637	7.8	46 / 2.30	30 / 2.47	50 / 2.17	1.5 / 0.04	0 / 0	274 / 4.49	87 / 1.81	23 / 0.65	1.0 / 0.02	0.1	Tr.	--	2.5	31
	8-18-53	645	7.9	43 / 2.15	32 / 2.63	50 / 2.18	1.7 / 0.04	0 / 0	271 / 4.44	85 / 1.77	21 / 0.59	1.0 / 0.02	0.5	Tr.	391	2.6	31
28G1	8-18-53	1064	7.3	127 / 6.34	37 / 3.04	57 / 2.48	0.9 / 0.02	0 / 0	295 / 4.84	244 / 5.09	63 / 1.78	0 / 0	0.6	0.0	743	5.5	21
29D2	8-18-53	667	7.5	70 / 3.49	25 / 2.06	36 / 1.57	1.2 / 0.03	0 / 0	310 / 5.08	34 / 0.70	31 / 0.87	16 / 0.26	0.5	0.0	393	2.1	22
30F5	1- 6-56[c]	455	9.3	2 / 0.10	1 / 0.08	100 / 4.35	0.5 / 0.01	40 / 1.33	122 / 2.00	28 / 0.59	20 / 0.56	0.8 / 0.01	0.2	0.1	289	4.4	96
30F7	7-24-57[c]	503	8.9	13 / 0.65	5 / 0.41	98 / 4.26	0.4 / 0.01	15 / 0.49	198 / 3.25	53 / 1.10	21 / 0.59	1.6 / 0.03	0.1	0.1	312	4.3	80
1N/20W-25C2	8-18-53	935	7.2	86 / 4.29	35 / 2.88	72 / 3.13	2.2 / 0.06	0 / 0	388 / 6.36	110 / 2.30	52 / 1.47	4.5 / 0.07	0.6	0.1	564	4.0	30

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by United States Geological Survey.
c. For analysis of heavy metal constituents, see Table H 17.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Ojai Valley (4-2)									
4N/22W-4G1	7-17-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	0.0	---	---
5H1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
5K1	11-3 -54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
5L8	11-3 -54	---	---	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
6G1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
6K10	7-17-57	0.0	0.0	0.5	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
7B2	11- 3-54	0.0	---	0.0	0.0	0.41	0.0	0.0	20	0.0	---	---	---	---	---	---	---
9A1	8-26-54[b]	---	---	0.0	0.0	1.4	0.0	0.0	--	0.0	---	---	---	---	---	---	---
4N/23W-1K1	11- 7-55	---	---	0.0	0.0	1.3	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12H2	11-8- 56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
12K2	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
	11- 8-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
12N1	11- 8-56	0.0	0.0	0.0	0.0	3.0	0.0	0.0	10	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	2.8	0.0	0.0	10	0.0	---	---	---	---	---	---	---
14G1	11- 8-56	0.0	0.0	0.0	0.0	0.24	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---

a. Analyzed by Department Water Resources unless otherwise stated.

b. Analyzed by Pacific Chemical Consultants.

TABLE F 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
							Ventura River Valley (4-3)										
3N/23W-8C3	11-8 -55	---	---	0.0	0.0	0.29	0.0	0.0	--	0.0	---	---	---	---	---	---	---
							Piru Basin (4-4.06)										
4N/18W-30G1	10-25-51[d]	0.01	0.14	---	---	---	0.03	---	21	---	0.2	0.6	0.02	---	0.3	0.05	---
30J1	7-22-53[c]	0.00	0.00	0.00	0.00	0.16	0.0	0.00	27	0.00	---	---	---	---	---	---	---
4N/19W-25L5	7-23-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
27P1	11- 3-54	0.0	---	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
33A2	7-23-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
33C2	7-23-56	0.0	0.0	0.0	0.0	0.32	0.0	0.0	30	0.0	---	---	---	---	---	---	---
34D1	7-23-56	0.0	0.0	0.0	0.0	0.1	0.0	0.0	30	0.0	---	---	---	---	---	---	---
34J1	11- 3-54	0.0	---	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
34M1	9- 8-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
35K1	9- 8-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
5N/18W-33R1	1-19-56[b]	---	---	4.2	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.
d. Analyzed by City of Los Angeles, Department of Water and Power.

TABLE B 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
									Fillmore Basin (4-4.05)								
3N/20W-2E2	7-10-57	0.0	0.0	0.0	0.0	1.68	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2F4	7-10-57	0.0	0.0	0.0	0.0	0.11	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2L4	4-15-53[c]	0.0	0.00	0.00	0.00	0.28	0.0	0.00	30	0.00	---	---	---	---	---	---	---
	7-22-53[c]	0.05	0.00	0.00	0.00	0.24	0.0	0.00	31	0.00	---	---	---	---	---	---	---
2M1	7-10-57	0.0	0.0	0.0	0.0	0.03	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2R4	8-10-56	0.0	0.0	0.0	0.0	1.6	0.0	0.0	25	0.0	---	---	---	---	---	---	---
4N3	12-23-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	---	---	---
4Q2	3-39-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
7D1	7-10-57	0.0	0.0	0.0	0.0	0.07	0.0	0.0	30	0.0	---	---	---	---	---	---	---
3N/21W-12A2	1-17-56	---	---	0.0	0.0	0.42	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12E4	3-28-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12H1	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
4N/19W-32B1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
32F1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
32K1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
4N/20W-23J2	3-10-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Fillmore Basin (4-4.05) (continued)									
4N/20W-33C1	8-26-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
34N3	1-17-56	---	---	0.0	0.0	3.6	0.0	0.0	--	0.0	---	---	---	---	---	---	---
36R2	8-26-54[b]	---	---	0.0	0.0	0.5	0.0	0.0	--	0.0	---	---	---	---	---	---	---
								Santa Paula Basin (4-4.04)									
2N/22W-2E3	1-12-56	---	---	0.0	0.0	1.5	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2J4	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
3P1	7-25-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
11C2	7-22-55[c]	0.00	0.10	0.00	0.00	0.01	0.0	0.00	41	0.00	---	---	---	---	---	---	---
3N/21W-3R2	7-23-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
9Q2	7-10-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
11E3	7-10-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
14C4	7-31-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
16K1	11-13-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
	9-3-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
16R2	11-13-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---

a. Analyzed by Department Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.

TABLE E 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Santa Paula Basin (4-4.04) (continued)									
3N/21W-20P3	7-16-57	0.0	0.0	0.2	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---
21B1	11- 9-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
21E1	11-9- 56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	10- 3-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
21F1	11- 9-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
30H3	7-10-57	0.0	0.0	0.0	0.0	0.22	0.0	0.0	30	0.0	---	---	---	---	---	---	---
32E1	7-10-57	0.0	0.0	0.025	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
								Mound Pressure Area (4-4.03)									
2N/22W-10R1	3- 1-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10R2	11-12-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.17	0.05	0.0	30	0.0	---	---	---	---	---	---	---
16M3	7-25-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	---	---	---
19K2	11- 8=55	---	---	0.0	0.0	1.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/23W-13K1	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
14N1	7-23-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---

a. Analyzed by Department Water Resources unless otherwise stated.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
						Oxnard Plain Forebay Area (4-4.02)											
2N/21W- 6L1	8-10-56	0.0	0.0	0.0	0.0	0.3	0.0	0.0	30	0.0	---	---	---	---	---	---	---
7M2	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2N/22W- 2R1	11-16-53[b]	---	---	0.05	0.02	0.05	0.05	0.1	--	0.1	---	---	---	---	---	---	---
	11- 4-54	---	---	0.0	0.0	0.16	0.0	0.0	40	0.0	---	---	---	---	---	---	---
	11- 7-55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
11A1	11-16-53[b]	---	---	0.05	0.02	0.05	0.05	0.1	--	0.1	---	---	---	---	---	---	---
	11- 4-54	---	---	0.0	0.0	0.15	0.56	0.0	50	0.0	---	---	---	---	---	---	---
	11- 7-55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
	11- 8-56	0.0	0.0	0.0	0.0	0.02	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	11-26-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
11A2	11-16-53[b]	---	---	0.05	0.02	0.05	0.05	0.1	--	0.1	---	---	---	---	---	---	---
	11- 4-54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
	11- 7-55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	0.0	---	---
12E1	11- 8-56	0.0	0.0	0.0	0.0	1.8	0.0	0.0	30	0.0	---	---	---	---	---	---	---
	8-20-57	0.0	0.0	0.0	0.0	0.2	0.0	0.0	25	0.0	---	---	---	---	---	---	---
12K3	11- 4-54	0.0	---	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
12Q2	9- 1-54[b]	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
14J1	9- 1-54[b]	---	---	0.0	0.0	1.6	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
						Oxnard Plain Forebay Area (4-4.02) (continued)											
2N/22W-23B1	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
23F2	12-14-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
23G1	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
23K1	11- 3-54	0.0	---	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
26C5	7-17-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
27F1	8-27-54[b]	---	---	0.0	0.0	1.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
27F2	11- 3-54	0.0	---	0.0	0.0	0.42	0.0	0.0	30	0.0	---	---	---	---	---	---	---
						Oxnard Plain Pressure Area (4-4.01)											
1N/21W-16E2	7-25-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---
19K5	12-13-55	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
20K1	11- 3-54	0.0	---	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
21H1	12-13-55	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
21N1	8-27-54	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
28E1	7-24-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
28N1	8-24-54[b]	---	---	1.2	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
29B3	8-27-54[b]	---	---	0.8	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
29B5	7-24-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	---	---	---	---	---	---	---
29C1	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
30K1	7-26-57	0.0	0.0	0.4	0.0	0.0	0.0	0.0	45	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
		Oxnard Plain Pressure Area (4-4.01) (continued)															
1N/21W-32C1	7-24-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
1N/22W- 2N2	8- 1-56	0.0	0.0	0.0	0.0	0.16	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2P2	8- 1-56	0.0	0.0	0.0	0.0	0.4	0.0	0.0	30	0.0	---	---	---	---	---	---	---
5B4	12-23-57	0.0	0.0	0.0	0.0	0.26	0.0	0.0	30	0.0	---	---	---	---	---	---	---
5C2	12-14-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
7J2	8- 1-56	0.0	0.0	0.3	0.0	0.84	0.0	0.0	25	0.0	---	---	---	---	---	---	---
9E1	12-14-55	---	---	0.0	0.0	0.3	0.0	0.0	--	0.0	---	---	---	---	---	---	---
9H1	12-16-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10A3	12-14-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
11B1	8-27-54[b]	---	---	0.1	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12J2	8-13-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
12P1	11- 3-54	0.0	0.0	0.0	0.0	0.42	0.0	0.0	50	0.0	---	---	---	---	---	---	---
13J4	7-25-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	0.0	---	---
14F1	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
19B3	12-13-55	---	---	0.0	0.0	0.08	0.0	0.0	--	0.0	---	---	---	---	---	---	---
20E2	12-13-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
21J3	7-18-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
21R1	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
22L1	12-13-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
		Oxnard Plain Pressure Area (4-4.01) (continued)															
1N/22W-22M8	8-10-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
22N4	8-27-54[b]	---	---	0.3	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
22Q2	8- 2-56	0.0	0.0	0.0	0.0	1.8	0.0	0.0	30	0.0	---	---	---	---	---	---	---
22Q3	8-10-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45	0.0	---	---	---	---	---	---	---
23B2	8-10-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
24B2	11-27-56	0.0	0.0	0.0	0.0	0.08	0.0	0.0	40	0.0	---	---	---	---	---	---	---
27A2	7-18-57	0.0	0.0	0.2	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
27F2	8-27-54[b]	---	---	0.1	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
28H2	5-15-56[b]	---	---	0.3	0.0	0.8	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/21W-32Q1	3-31-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/22W-21J3	7-17-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
25A1	4-29-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
25C1	7-17-57	0.0	0.0	0.0	0.0	1.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
25N3	12-20-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
25P4	12-13-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
25Q3	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
25R1	12-29-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
26L3	12-14-55	---	---	0.0	0.0	0.4	0.0	0.0	--	0.0	---	---	---	---	---	---	---
28J3	8- 1-56	0.0	0.0	0.0	0.0	0.4	0.0	0.0	30	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
						Oxnard Plain Pressure Area (4-4.01) (continued)											
2N/22W-28K2	7-17-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
28K3	7-17-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
29Q2	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
33A2	8-27-54[b]	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
33A4	8-27-54[b]	---	---	0.1	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
33B2	3- 8-56[b]	----	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/23W-25R2	12-23-57	0.0	0.0	0.2	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
						Simi Valley (4-9)											
2N/17W- 7H2	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
7H3	7- 9-57	0.4	0.0	0.0	0.0	0.0	0.0	0.0	15	0.0	---	---	---	---	---	---	---
8J6	7- 9-57	0.0	0.0	0.0	0.0	0.07	0.0	0.0	30	0.0	---	---	---	---	---	---	---
8R4	5- 3-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
9Q7	7- 8-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
9R8	7- 8-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
16J2	11- 1-54	0.0	---	0.0	0.0	0.0	0.0	0.0	5	0.0	---	---	---	---	---	---	---
18Q1	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	---	---	---
2N/18W- 1N1	11- 1-54	0.0	---	0.0	0.0	0.51	0.0	0.0	35	0.0	---	---	---	---	---	---	---
3R2	7-31-56	0.0	0.0	0.2	0.0	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
4N3	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
8A1	7- 9-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	0.0	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
Simi Valley (4-9) (continued)																	
2N/18W-8H1	7- 9-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
9A1	7-15-57	0.05	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
9C1	3-28-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10C1	11- 1-54	0.0	---	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
10D1	9- 1-54[b]	---	---	0.0	0.0	0.0	0.1	0.0	--	0.0	---	---	---	---	---	---	---
10R2	9- 1-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
11K2	7- 9-57	0.0	0.0	0.0	0.0	0.56	0.0	0.0	30	0.0	---	---	---	---	---	---	---
11K6	7- 9-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
12A1	7- 8-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
12L2	9-22-54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---
12P5	3- 8-56[b]	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
14D5	7- 9-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
15A1	3- 8-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
15B1	11- 1-54	0.0	---	0.0	0.0	0.17	0.0	0.0	30	0.0	---	---	---	---	---	---	---
15D1	9- 1-54[b]	---	---	0.0	0.0	0.05	0.0	0.0	--	0.0	---	---	---	---	---	---	---
15D4	7-31-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
15J3	9-22-54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---
15J4	11- 4-54	0.0	---	0.45	0.0	4.2	0.0	0.0	25	0.0	---	---	---	---	---	---	---
15K1	9-22-54	0.0	0.0	0.2	0.0	0.19	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H-17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
							Simi Valley (4-9) (continued)										
2N/18W-15L1	9-22-54	0.0	0.0	0.7	0.0	0.0	0.28	0.0	60	---	---	---	---	---	---	---	---
15L3	7-31-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
15M2	7-31-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	---	---	---
15Q1	11- 1-54	0.0	---	0.0	0.0	0.43	0.0	0.0	25	0.0	---	---	---	---	---	---	---
17B5	8- 1-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
24Q1	3- 2-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
24Q2	3- 2-55	---	---	0.0	0.0	0.5	0.0	0.0	--	0.0	---	---	---	---	---	---	---
3N/18W-24H1	9- 1-54[b]	---	---	0.1	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
							Las Posas Valley (4-8)										
2N/19W- 2D2	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
2D3	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
5F2	9- 7-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
5K1	9- 7-54	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
6K1	7-25-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
9C3	11- 1-54	0.0	---	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
9N2	8-31-54[b]	---	---	0.0	0.0	0.2	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/20W- 2D1	7- 9-57	0.0	0.0	0.01	0.0	0.07	0.0	0.0	30	0.0	---	---	---	---	---	---	---
8F1	7-26-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	0.0	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Las Posas Valley (4-8) (continued)									
2N/21W- 3L1	8-22-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
11A1	7-31-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
11H2	5-15-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
15M2	7-16-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	0.0	---	---
3N/19W-17P1	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
19N2	3- 8-56[b]	---	---	0.0	0.0	0.4	0.0	0.0	--	0.0	---	---	---	---	---	---	---
29F6	1-13-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
29L1	11- 4-54	0.0	---	0.0	0.0	0.0	0.0	0.0	65	0.0	---	---	---	---	---	---	---
29N1	3-30-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
30M2	7-24-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	---	---	---	---	---	---	---
30Q1	1-17-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
31D1	1-17-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
32R1	8-31-54	---	---	0.0	0.0	0.9	0.0	0.0	--	0.0	---	---	---	---	---	---	---
33H1	3- 7-56[b]	---	---	0.0	0.0	0.5	0.0	0.0	--	0.0	---	---	---	---	---	---	---
3N/20W-26J1	5- 7-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
27M1	9- 1-54[b]	---	---	0.0	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
33L1	1-17-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
								Santa Rosa Valley (4-7)									
2N/19W-19N2	11-26-52[c]	0.00	0.12	0.00	0.00	0.40	0.00	0.00	55	0.00	---	---	---	---	---	---	---
21H1	8-31-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/20W-22K1	1-13-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
23F1	9- 1-54	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
23H1	7-25-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60	0.0	---	---	---	---	---	---	---
23K1	9- 1-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
								Pleasant Valley (4-6)									
1N/21W- 3N1	7-25-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	0.0	---	---
14B2	7-24-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	0.0	---	---
14F1	12-21-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
14F2	4-22-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
15J2	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40	0.0	---	---	---	---	---	---	---
2N/20W-21M1	12-21-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
21M2	7-25-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65	0.0	---	---	---	---	---	---	---
21P1	11- 4-54	0.0	---	0.0	0.0	0.0	0.0	0.0	65	0.0	---	---	---	---	---	---	---
28C2	7-25-56	0.0	0.0	0.0	---	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
32D1	12-21-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
2N/21W-22R1	8-27-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
						Pleasant Valley (4-6) (continued)											
2N/21W-23R3	2-14-56[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
26D4	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35	0.0	---	---	---	---	---	---	---
26G1	11- 8-54	---	---	---	---	0.0	0.0	0.0	--	---	---	---	---	---	---	---	---
28N3	7-22-53[c]	0.00	0.09	0.23	0.00	0.38	0.0	0.00	36	0.00	---	---	---	---	---	---	---
	8-27-54[b]	---	---	0.0	0.0	0.4	0.0	0.0	--	0.0	---	---	---	---	---	---	---
28Q3	12-20-55	---	---	0.0	0.0	3.7	0.0	0.0	--	0.0	---	---	---	---	---	---	---
33P1	12-20-55	---	---	0.7	0.0	1.3	0.0	0.0	--	0.0	---	---	---	---	---	---	---
34D2	8- 2-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	0.0	---	---	---	---	---	---	---
36A1	4-29-55	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
						Conejo Valley (4-10)											
1N/19W- 2B2	1-11-56	---	---	0.0	0.0	1.80	0.0	0.0	--	0.0	---	---	---	---	---	---	---
4A1	1-11-56	---	---	0.0	0.0	0.26	0.0	0.0	--	0.0	---	---	---	---	---	---	---
5L1	8-30-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
5N2	8-30-54[b]	---	---	0.1	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
7E3	7-25-56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30	0.0	---	---	---	---	---	---	---
7J1	8-30-54[b]	---	---	0.0	0.0	0.8	0.0	0.0	--	0.0	---	---	---	---	---	---	---
7K1	8-30-54[b]	---	---	0.0	0.0	1.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
7K16	7-26-57	0.0	0.0	0.0	0.0	0.64	0.0	0.0	30	0.0	---	---	---	---	---	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
						Conejo Valley (4-10) (continued)											
1N/19W- 7R3	7-22-53[c]	0.09	0.00	0.10	0.00	0.20	0.0	0.00	44	0.00	---	---	---	---	---	---	---
8G2	8-27-54[b]	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
9B1	1-11-56	---	---	0.25	0.0	2.5	0.0	0.0	--	0.0	---	---	---	---	---	---	---
9G2	7-23-53[c]	0.02	0.00	0.00	0.00	0.28	0.0	0.00	60	0.00	---	---	---	---	---	---	---
9H2	1-11-56	---	---	0.0	0.0	0.94	0.0	0.0	--	0.0	---	---	---	---	---	---	---
9K2	1-11-56	---	---	0.0	0.0	0.56	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10E3	1-11-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10L5	1-17-56	---	---	0.0	0.0	0.9	0.0	0.0	--	0.0	---	---	---	---	---	---	---
10P1	8-30-54[b]	---	---	0.2	0.0	0.1	0.0	0.0	--	0.0	---	---	---	---	---	---	---
15B2	5- 6-58	0.0	0.0	0.0	0.0	2.2	0.0	0.0	60	0.0	---	---	---	---	---	---	---
15L1	8-20-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50	0.0	---	---	---	---	---	---	---
18A1	8-27-54[b]	---	---	0.0	0.0	17.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
18B1	11- 8-54	0.0	0.0	0.0	0.0	5.6	0.0	0.0	50	0.0	---	---	---	---	---	---	---
1N/20W- 1K1	7-22-53[c]	0.00	0.00	0.01	0.00	0.01	0.0	0.00	65	0.00	---	---	---	---	---	---	---
2Q1	3-28-56[b]	---	---	0.0	0.0	0.05	0.0	0.0	--	0.0	---	---	---	---	---	---	---
11P1	8-27-54[b]	---	---	0.0	0.0	0.8	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12B6	7-22-53[c]	---	0.00	0.00	0.00	0.15	0.0	0.00	36	0.00	---	---	---	---	---	---	---
12F6	7-22-53[c]	0.01	0.00	0.00	0.00	0.14	0.0	0.00	29	0.00	---	---	---	---	---	---	---

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b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.

TABLE H 17

MINERAL ANALYSES OF TRACE CONSTITUENTS IN GROUND WATER
WATER QUALITY AND WATER QUALITY PROBLEMS VENTURA COUNTY
(continued)

Well Number S.B.B. & M.	Date Sampled[a]	Mineral constituents in parts per million															
		Fe	Al	Mn	Hex.Cr.	Zn	Cu	Pb	SiO_2	As	Sr	Ba	Ni	Ag	Sn	Mo	V
							Conejo Valley (4-10) (continued)										
1N/20W-12F7	1-12-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
12N4	1-11-56	---	---	0.0	0.0	0.08	0.0	0.0	--	0.0	---	---	---	---	---	---	---
							Malibu Hydrologic Unit (4-16)										
1N/17W- 7R1	7-23-57	0.0	0.0	0.0	0.0	0.17	0.0	0.0	60	0.0	---	---	---	---	0.0	---	---
1N/19W-23Q2	7-23-53[c]	0.02	0.00	0.00	0.00	0.27	0.0	0.00	35	0.00	---	---	---	---	---	---	---
26C1	4-15-53[c]	0.0	0.00	0.00	0.00	0.05	0.0	0.00	55	0.00	---	---	---	---	---	---	---
30F5	1- 6-56	---	---	0.0	0.0	0.0	0.0	0.0	--	0.0	---	---	---	---	---	---	---
30F7	7-24-57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	0.0	---	---	---	---	0.0	---	---

a. Analyzed by Department of Water Resources unless otherwise stated.
b. Analyzed by Pacific Chemical Consultants.
c. Analyzed by United States Geological Survey.