State of California

THE RESOURCES AGENCY

Department of Water Resources

BULLETIN No. 119-17

FEASIBILITY OF SERVING THE VENTURA COUNTY FLOOD CONTROL DISTRICT FROM THE STATE WATER PROJECT

JULY 1965

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FOREWORD

In November 1960 the California Water Resources Development Bond Act was approved by the State's electorate, paving the way for the construction of the State Water Project. Since that time, many local water agencies throughout the State have applied to the Department of Water Resources for consideration as potential contractors with the State for water service from the proposed facilities. Within Ventura County, both the Ventura County Flood Control District and the United Water Conservation District asked that they be considered as potential contractors for water from the State Water Project.

In the course of the Department's studies, the United Water Conservation District came to be considered as the primary contractor and the Flood Control District withdrew from active consideration. The studies which were made indicated an economic need for supplemental water in the United Water Conservation District. However, because of internal problems, the United Water Conservation District urged the Ventura County Flood Control District to again consider acting as the contracting agency with the State for a supplemental water supply.

Prior to executing water supply contracts with water agencies, the Department of Water Resources made studies of those agencies and the areas encompassed by them in order to evaluate the area's future demand for supplemental water supplies, the legal ability of each agency in question to enter into a water supply contract with the State, the engineering feasibility of providing the proposed water service, the economic justification of providing such service, and the capability of each agency and its constituent area to meet the financial burden necessarily imposed upon it by a water supply contract with the State.

The results of the studies made for each agency, along with significant supporting data have been, or will be, published in various reports and bulletins by the Department of Water Resources for the benefit of those agencies and other interested agencies and persons. This bulletin is one of a series of such publications.

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CHAPTER I. INTRODUCTION

The Ventura County Flood Control District, which is coextensive with the boundaries of Ventura County excluding the islands of Anacapa and San Nicolas, recently executed a water supply contract with the State of California for a maximum annual entitlement of 20,000 acre-feet of water from the State Water Project. This contract was the result of agreements reached between the District and the Department of Water Resources arising from negotiations based on data developed to demonstrate the feasibility of serving the area with supplemental water from the State Water Project.

The Department of Water Resources has published reports in the past which have considered the water resources of Ventura County. The most recent was Bulletin No. 78, "Investigation of Alternative Aqueduct Systems to Serve Southern California", published in 1959. This report expands and updates the economic and demographic projections presented in Bulletin No. 78 and presents a detailed financial and economic evaluation of the District's ability to contract for water from the State Water Project.

Purpose and Scope of the Report

The purpose of this report is to present the essential background data that contributed to the evaluation of the feasibility of providing supplemental water to the Ventura County Flood Control District from the State Water Project. The report includes a review of the economic history of the area, its recent economic development and future economic potential, estimates of the area's future water needs, and a schedule of the probable costs of serving the District with water from the State Water Project. The report also evaluates the economic and financial aspects of supplying water to the District's area from the State Water Project.

Location and Description of the Service Area

Ventura County fronts on the Pacific Ocean on the south and extends northward across a coastal plain into a large mountain region. Santa Barbara County lies to the west, Kern County to the north, and Los Angeles County to the east. The general area in which Ventura County is located is shown on Plate 1, "Water Service Areas and Major Water Districts".

The total area of Ventura County, excluding the offshore islands, is almost 1,180,000 acres or 1,844 square miles. Some 561,000 acres, or about 47.5 percent of the total, is under federal ownership, approximately 550,000 acres of which is part of Los Padres National Forest. The Los Padres National Forest contains most of the mountainous area in the County as well as Ventura County's highest elevation, 8,826-foot Mt. Pinos. Elevations rise generally from sea level on the south to the summit of Mt. Pinos which is at the northern border of the County.

The climate of coastal Ventura County is of the type which is usually described as Mediterranean. Basically, the climate is characterized by the concentration of a modest amount of precipitation in the very mild winters, with the warm-to-hot summers being nearly completely dry and with a high percentage of sunshine the year round. The mountains in the north of the County terminate the inland penetration of the Mediterranean climate. Here, altitude and exposure become the prime climatic controls.

The average January temperature of the coastal lowlands and interior valleys is about 52°F., with July temperatures averaging 64°F. on the coast and 72°F. in such inland areas as the Ojai Valley (Ojai station elevation is 750 feet).

Mean seasonal precipitation varies from a low of 10 inches in the northwest corner of the County to over 30 inches in the Topatopa Mountains in west-central Ventura County. Rainfall along the coastal plain ranges

from an average of about 24 inches near the Santa Barbara County border to about 12 inches at Point Mugu. Generally, the coastal plain gets about 14 to 18 inches of annual precipitation, as does the Santa Clara River Valley.

History of the Area

Some 227 years after Juan Cabrillo visited Ventura, Spain began actual occupation of California. On August 13, 1769, Gaspar de Portola and his party, traveling overland toward Monterey, reached the Santa Clara River. Traveling down the valley they reached a large Indian village, located near the present site of the City of Ventura, and named it "La Asuncion de Nuestra Senora". This village was also visited by Juan Bautista de Anza in 1776 on his second overland expedition from Sonora.

The Mission San Buenaventura was founded on Easter, March 31, 1782. This mission eventually became the dominating man-made landmark of the area and the City of San Buenaventura (now generally shortened to Ventura) grew around it.

The revolution which brought independence to most of the new world Spanish colonies in the 1820's resulted in little initial change in Ventura County since Mexican authority differed but little from the Spanish.

With the end of the war between Mexico and the United States in 1848, California became United States territory. The gold rush of 1849 brought many immigrants into California. In February of 1850, before California was yet a state, the first legislature met at San Jose and divided the territory into 27 counties. Santa Barbara County was delineated so as to include what is today Ventura County.

After California became a state on September 9, 1850, Congress established a board of land commissioners to segregate public domain from

privately-owned land. Most of the mountain land in Ventura County remained as public domain, while individual patents were given each owner of a rancho or land grant.

In 1866 the City of San Buenaventura was incorporated by an act of the State Legislature. The City was about one square mile in area. On January 1, 1873, Ventura County was formed from the southeastern portion of Santa Barbara County. San Buenaventura, the only incorporated city, was made the county seat.

During the 1880's the development of irrigation resulted in the first plantings of citrus and walnuts in the Ojai Valley and along the Santa Clara River. These crops, particularly citrus fruits, continue to have considerable commercial importance.

In 1887, partial completion of the Southern Pacific Railway's coastal line north to Santa Barbara activated a real estate boom in Ventura County, though not on the scale of other sections of Southern California.

Beans were first commercially planted on the plain near Oxnard just before the turn of the century. The rapid expansion of this crop has resulted in the area becoming a major bean producer.

The Indians of Ventura County had used tar to caulk their canoes and baskets. The early settlers were aware of oil seepages near Sulphur Mountain on the main Ojai road and as early as about 1857 a refinery had been producing marketable oil from seepages. In the early 1860's, reports by a geologist had encouraged attempts to have the subsurface oil developed. In 1865, a well drilled to a record depth of 700 feet produced a gusher. However, the oil proved too heavy for commercial use. By 1923, several good producing wells had been brought in and production in Ventura County was over

a million and a half barrels annually. Then, in January and February of 1925, the discovery of a major oil field was signified when two wells were brought in just north of the City of Ventura, each of which produced nearly 5,000 barrels a day.

During World War II, Port Hueneme was taken over by the U. S. Navy, and the harbor revived and rebuilt. During the war, a major portion of the supplies for the United States armed forces in the Pacific were shipped through Port Hueneme. The Port Hueneme Naval Center was also the training center for the Naval Construction Battalions, the "Seabees".

Today, oil and agriculture are still the major industries in Ventura County, but light manufacturing plants are increasing rapidly and subdivisions are expanding more and more into the agricultural areas. Old California, with its air of bucolic calm, is disappearing from Ventura under a deluge of people and urban growth.

Ventura County Land Use

In 1961, the Department of Water Resources made a land use survey of Ventura County. Data obtained from this survey and the 1960 land use inventory of Ventura County made for the Los Angeles Regional Transportation Study were used to classify the land into usable and nonusable acreage. Land in use in agricultural, urban, and semiurban categories, plus vacant land which could be used for either agricultural or urban use, was included in the usable category. There was no time designation on the usableness of land but nonusable land was considered to be land which was economically unsuited for use under foreseeable population and economic pressures and consisted of washes, areas of steep topography, acreages of water surface, and lands reserved for other nonagricultural and nonurban use such as the Los Padres National

Forest which occupies most of northern Ventura County. A breakdown of land use and land classification is shown by Table 1. The distribution of irrigated agriculture, urban and military land use is shown on Plate 1, entitled "Land Use in 1961".

TABLE 1

LAND USE AND CLASSIFICATION, VENTURA COUNTY, 1961 1/

Category of use	Classification: Unusable (in acres)	Classification: Usable (in acres)	Total acreage
Urban and suburban		44,000	44,000
Agriculture			134,140
Irrigated		116,270	
Nonirrigated		17,870	
Vacant	940,157	61,673	1,001,830
Total	940,157	239,813	1,179,970

1/ Excludes offshore islands.

Restrictions on Future Development

Since there is almost four and one-half times as much usable land either vacant or in agricultural use in Ventura County as in urban and suburban development (including land actually in urban and suburban use and vacant land classified as urban or suburban), future urban growth within the time of this analysis, to 1990, will not be restricted by the availability of land. However, the availability of local water supplies could prove to be a limiting factor in the future development of the area since substantial overdrafting of existing water supplies is occurring in several areas. Without supplemental water, future growth in the County will be severely hampered.

Description of the Ventura County Flood Control District

The Ventura County Flood Control District was established by the Ventura County Flood Control Act (Calif. Stats. 1944, 4th Ex. Sess., ch. 44, p. 193). The Board of Supervisors of Ventura County are designated and empowered to act, ex officio, as the Board of Supervisors of the Ventura County Flood Control District (Section 8[1/]).

Taxing Powers and Ability to Contract with the State

To meet its financial obligations, the District has the power to levy an ad valorem tax or assessment upon all taxable property in the District to carry out the purposes of the Act of Common Benefit to the District as a whole (Section 12 (1)). An ad valorem assessment or tax also may be levied upon all taxable property in each or any of the District zones, according to the benefits to be derived by the respective zones, to pay the costs and expenses of carrying out any of the purposes of the Act of Special Benefit to the respective zones (Section 12 (2)). Specific limitations are set on taxes or assessments which may be levied for purposes other than to pay the costs of any project or facility for importing water into the District, or to meet any bonded indebtedness of the District or of its zones (Section 12 (2)).

The District may issue general obligation bonds to pay the costs of improvements within zones of the District. No zone, nor the property therein, is liable for the bonded indebtedness of another zone (Sections 15 and 18).

1/ Unless otherwise specified, all references to sections are to sections of the Ventura County Flood Control Act. (The Ventura County Flood Control Act has been published as Chapter 46 of the Appendix to West's Annotated Water Code and as Section 8955, Deering's California Code, Water, Uncodified Acts.)

General obligation bonds also may be issued by the District as a unit, without regard to zones, to finance any project for importing water into the District for the benefit of the entire District (Section 35).

The Board of Supervisors must unanimously authorize the issuance of bonds and two-thirds of the affected voters must approve the authorization. Provision must be made for payment of interest at a rate not exceeding 5 percent per annum, and at least one-fortieth of the principal amount of any bonded indebtedness annually (Sections 15, 16, and 35).

The District's power to acquire and import water is clearly and expressly conferred by the District's enabling Act (Section 7(6)). Specific authority to contract with the State for a water supply is not expressly set forth in the Act. However, under the provisions of the Water Code governing the Central Valley Project (Part 3(Sections 11100-11195), Division 6 of the Water Code) the District is a state agency (Water Code Section 11102) and as such is authorized to enter into contracts with the Department for the purchase of water (Water Code Sections 11625 and 11661) and to comply with terms, provisions, and conditions of any such contract (Water Code Sections 11662-11664). Water Code Section 11652 provides that the governing body of the state agency which contracts to purchase water from the Department shall, whenever necessary, levy a tax and assessment sufficient to provide for all payments under the contract then due or to become due within the current fiscal year.

CHAPTER II. PRESENT AND FUTURE DEVELOPMENT OF THE ECONOMY

While Ventura County still largely conveys the atmosphere of a rural community, the Los Angeles urban complex is spilling over into the County, and the farmlands of the Simi and Conejo Valleys are being covered with subdivisions and industrial developments. At the same time, internal growth that is partially influenced by the spillover from Los Angeles is pushing outward from the Oxnard-Ventura center.

Population

The last three censuses of population have shown that Ventura County is growing at a faster rate than both California and metropolitan Los Angeles. A comparison of the County's growth since the census of 1880 with other Southern California counties and California is shown in Table 2. Ventura County was organized from part of Santa Barbara County in 1873; thus, the 1880 census was the first to include Ventura County as a separate entity.

According to Ventura County Planning Department estimates, the population of the County was over 288,000 on April 1, 1964. This represented an increase of about 90,000 or 45 percent since the April 1, 1960 census. Growth rates have not been homogeneous throughout the County. Those areas close to the Los Angeles metropolitan complex have shown startling rates of population growth in recent years. Thus, the Simi area and the Conejo-Coastal area have registered population gains of 300.6 percent and 171.6 percent, respectively, in the four years since the 1960 census.[1/] Other areas, still largely agricultural, have registered modest increases such as

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1/ Ventura County Planning Commission, "Population Estimates, County of Ventura", Bulletin No. 13, April 1, 1964.

TABLE 2

POPULATION IN SELECTED SOUTHERN CALIFORNIA COUNTIES AND CALIFORNIA, BY DECADES 1880-1960

Year	Ventura County	Los Angeles County	Orange County	California
		Population		
1880	5,073	33,381[1/]	[1/]	864,694
1890	10,071	101,454	13,589	1,213,398
1900	14,367	170,298	19,696	1,485,053
1910	18,347	504,131	34,436	2,377,549
1920	28,724	936,455	61,375	3,426,861
1930	54,976	2,208,492	118,674	5,677,251
1940	69,685	2,785,643	130,760	6,907,387
1950	114,647	4,151,687	216,224	10,586,223
1960	199,138	6,038,771	703,925	15,717,204
		Percent change, by decades		
1880-1890	98.5	203.9	--	40.3
1890-1900	42.7	67.9	44.9	22.4
1900-1910	27.7	196.0	74.8	60.1
1910-1920	56.6	85.8	78.2	44.1
1920-1930	91.4	135.8	93.4	65.7
1930-1940	26.8	26.1	10.2	21.7
1940-1950	64.5	49.0	65.4	53.3
1950-1960	73.7	45.5	225.6	48.5

1/ Orange County was organized from part of Los Angeles County in 1889.

the 6.3 percent increase in the Fillmore-Piru area and the 11.1 percent increase in the Santa Paula area. The greatest numerical growth during the four-year period occurred in the Oxnard area where a population gain of 25,608 persons or 35.4 percent was recorded.

The population of Ventura County and of various subunits within the County was projected by considering both factors applicable to the County as a whole and to particular areas within the County. The inter-relationships between and among adjacent areas, their respective resources, states of development, external and internal demographic pressures and the relationship of the growth of the area to that of its economic region were studied. An appraisal was then made of the principal factors and conditions likely to affect population growth and a probable range of growth for the period of forecast determined. A single projection was developed by selection of those figures within the probable range which appeared most likely to be realized.

In developing these projections, several basic assumptions were made:

1. The political, social, and economic institutions of the United States will remain substantially the same.

2. No major war or national disaster will occur during the period of projection.

3. No large-scale natural disaster or epidemic will occur in Ventura County, Southern California, or California within the period for which the projection has been made.

4. National levels of economic activity and growth will remain substantially at present levels.

The population projections for Ventura County which were made on the basis of these assumptions, are shown in Table 3 by decades to the year 1990.

TABLE 3

HISTORICAL AND PROJECTED POPULATIONS IN VENTURA COUNTY

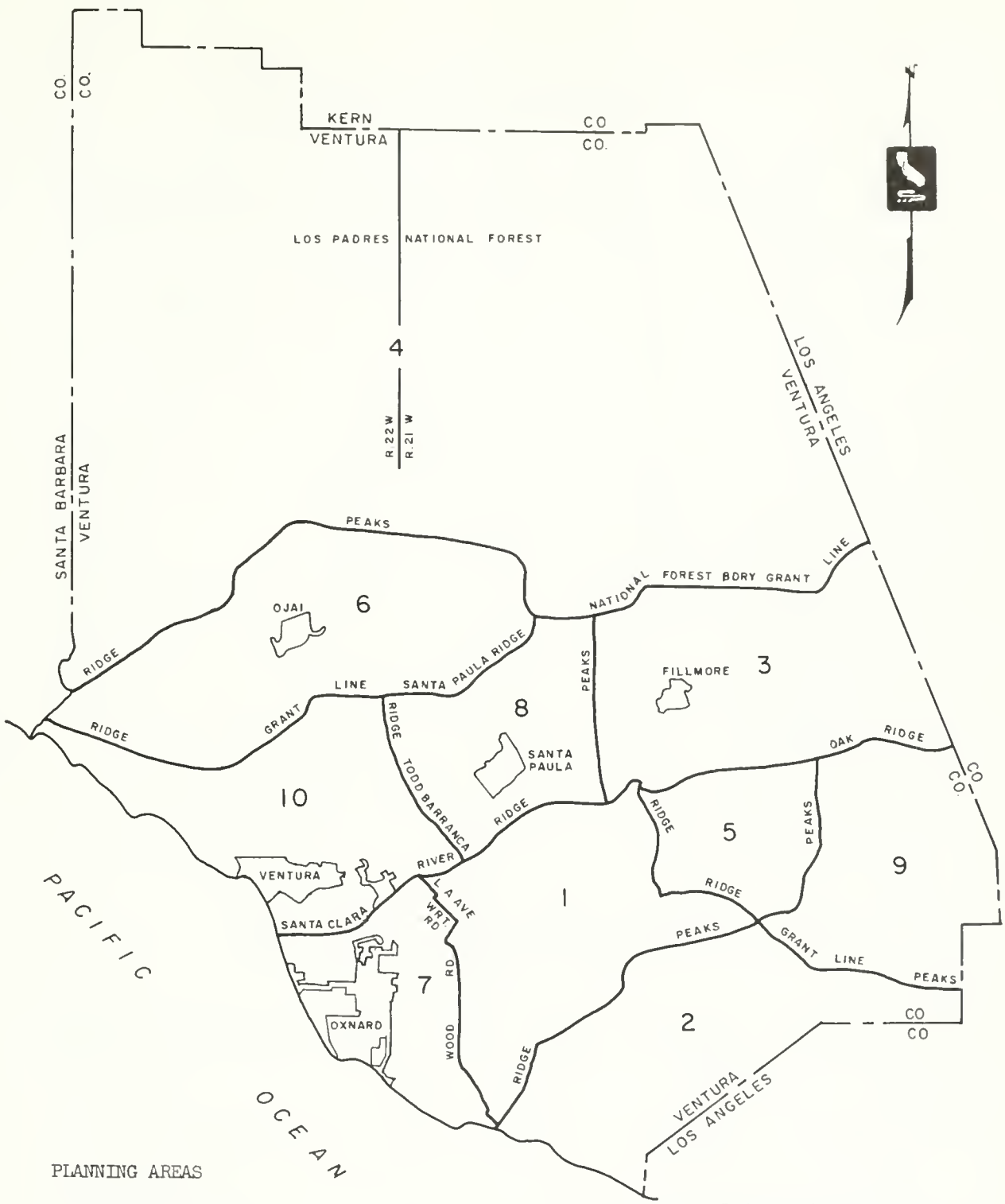
Year	Population
1960	199,138[1/]
1970	420,000
1980	740,000
1990	1,100,000

1/ United States Census, 1960.

Two separate breakdowns of total projections were made. The first was for the ten planning areas developed by the Ventura County Planning Department. These areas possess a measure of geographic homogeneity and generally separate the various existing and developing urbanized units. There are considerable current data available for these units since the Ventura County Planning Department issues quarterly bulletins with population estimates for them. The Department of Water Resources' breakdown of county population totals for these individual planning areas are shown in Table 4. The areas are delineated in Figure 1, "Ventura County Planning Areas".

A second breakdown of the population projection was made for water service areas. These areas are delineated on Plate 1, "Water Service Areas and Major Water Districts", and the projections made for them are shown on Table 5.

FIGURE 1



PLANNING AREAS

1. Camarillo
2. Conejo-Coastal
3. Fillmore-Piru
4. Los Padres
5. Moorpark
6. Ojai
7. Oxnard
8. Santa Paula
9. Simi
10. Ventura

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

FEASIBILITY OF SERVING THE
VENTURA COUNTY FLOOD CONTROL DISTRICT
FROM THE STATE WATER PROJECT

VENTURA COUNTY
PLANNING AREAS

SCALE OF MILES
5 0 5

1965

TABLE 4

HISTORICAL AND PROJECTED POPULATIONS
IN VENTURA COUNTY PLANNING AREAS
1960-1990

Planning area	1960 1/	1970	1980	1990
Camarillo	17,270	41,500	105,000	170,000
Conejo-Coastal	9,941	44,000	85,000	150,000
Fillmore-Piru	8,755	15,000	31,000	47,000
Los Padres	309	500	2,000	4,000
Moorpark	4,013	10,000	22,000	45,000
Ojai	15,288	25,000	40,000	65,000
Oxnard	72,277	119,000	195,000	263,000
Santa Paula	16,905	24,000	40,000	60,000
Simi	8,110	64,000	100,000	127,000
Ventura	46,270	77,000	120,000	169,000
Total	199,138	420,000	740,000	1,100,000

1/ Population Bulletin No. 7, Ventura County Planning Department.

TABLE 5

HISTORICAL AND PROJECTED POPULATIONS IN
VENTURA COUNTY WATER SERVICE AREAS
1960-1990

Water service area	1960	1970	1980	1990
Los Padres	309	500	2,000	4,000
Calleguas-Malibu	31,012	148,000	282,000	443,500
Oxnard Plain	87,030	150,000	255,000	353,500
Ventura River	42,346	53,000	84,000	126,500
Santa Clara River	37,175	64,000	110,000	162,000
Sulphur Mountain	1,266	4,500	7,000	10,500
Total	199,138	420,000	740,000	1,100,000

As of April 1, 1964, Ventura County had six incorporated cities and four major unincorporated areas (Camarillo, Thousand Oaks, Santa Susana, and the Simi urban areas)* as well as numerous small urban centers. Historical population data and the latest population estimates for the incorporated cities and the major unincorporated urban areas are presented in Table 6.

TABLE 6

HISTORICAL AND CURRENT POPULATION IN INCORPORATED CITIES AND MAJOR URBAN AREAS, VENTURA COUNTY 1940-1964

Area	April 1, 1940[1]	April 1, 1950[1]	April 1, 1960[1]	April 1, 1964[2]
Fillmore	3,252	3,884	4,808	5,181
Ojai	1,622	2,514	4,495	5,501
Oxnard	8,519	21,567	40,265	56,257
Port Hueneme	n.i.[3]	3,024	11,067	17,543
San Buenaventura	13,264	16,534	29,114	36,653
Santa Paula	8,986	11,049	13,279	14,975
Thousand Oaks				21,449
Camarillo urban				13,948
Santa Susana				11,772
Simi urban				20,044

1/ United States Bureau of the Census.
2/ Ventura County Planning Department, Bulletin No. 13.
3/ n.i. indicates that the city was not incorporated at the time of the census.

A separate population projection breakdown by cities was not made inasmuch as a major part of future urban growth will take place outside of the present incorporated area. Historically, the percentage of

*Camarillo and Thousand Oaks incorporated on September 22, 1964.

the County's population residing in its incorporated cities has remained quite constant for the last three decades. Census data for 1940 indicated that 51.15 percent of the county population resided in the five incorporated cities (Port Hueneme was incorporated shortly after the 1940 census with a population of about 2,800). The 1950 census showed that 51.09 percent of the county residents were living within the six incorporated cities and the 1960 census, 51.74 percent. However, April 1, 1964 population data developed by the Ventura County Planning Department shows that only 47.22 percent of the County's population resided in the six incorporated cities. This four-year drop is the result of burgeoning growth in the Conejo and Simi Valleys and the Camarillo area where the urban communities were then unincorporated. If the 1964 population of the urban communities in these areas is added to that of the incorporated cities, the total would exceed 72 percent of the residents of the County. In April 1962 (as far back as comparable data are readily available), the total was about 67 percent.

Present and Future Land Use

The specific types of land use data gathered in Ventura County by the Department of Water Resources during 1961 can be broadly combined into the following classifications:

Urban and Suburban

- Residential
- Commercial and industrial
- Unsegregated

Agriculture

- Irrigated
- Nonirrigated

Native Vegetation

Unclassified

Table 7 shows the 1961 land use, by the listed categories, for the various water service areas and for the County as a whole. The general distribution of irrigated agriculture, urban, and military usage is shown on Plate 2.

The slight difference between water service area totals and county totals for urban and suburban land use and acreage of irrigated agriculture represents the extent of development in North Ventura County which contains some 616,000 acres, of which 561,000 are part of Los Padres National Forest.

Urban Land Requirements

While the 1990 population is expected to be 5-1/2 times as large as the 1960 population, overall urban densities will remain relatively low. A substantial increase in the ratio of multiple unit to single family unit dwellings is expected as the County becomes increasingly urbanized. In 1960, 85.8 percent of the dwelling units in the County were classified as single, 3.5 percent as duplex, and only 10.7 percent as multiple.[1/] By 1980, however, multiple housing units are expected to account for somewhat over 15 percent of the County's housing inventory and by 1990, it is expected that this figure will approach 25 percent.

The vast majority of housing in the County will probably remain in single family units and a good proportion of the multiples themselves will be only medium density developments, causing the overall urban density to remain low. Population densities shown in Table 8 were developed with the help of historical and current land use and population data for Los Angeles,

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1/ United States Bureau of the Census, 1960.

TABLE 7

LAND USE IN VENTURA COUNTY WATER SERVICE AREAS
1961
(In Acres)

Category and class of land use	United Water Conservation District		Ventura River	Calleguas-Malibu	Sulphur Mountain	Water service area total	County totals
	Santa Clara River Unit	Oxnard Plain					
Urban and Suburban							
Residential	1,360	4,040	3,190	3,830	60	12,480	--
Commercial and industrial	610	1,850	1,130	730	11	4,331	--
Unsegregated	4,250	7,480	6,930	7,570	349	26,579	--
Gross urban and suburban area	6,220	13,370	11,250	12,130	420	43,390	44,000
Agriculture							
Irrigated[2/]	28,550	52,190	4,310	29,670	95	114,815	116,270
Nonirrigated	740	670	2,640	10,940	514	15,504	17,870
Native Vegetation	18,510	6,600	9,270	41,050	28,778	104,208	150,400
Unclassified	75,040	11,450	58,170	141,440	6	286,106	851,430
Grand total	129,060	84,280	85,640	235,230	29,813	564,023	1,179,970[1/]

1/ Excludes offshore islands.
2/ Includes areas not devoted to crop production such as public roads and highways, farm access roads, and canals.

Orange, Ventura, and parts of Riverside and San Bernardino Counties. Although Ventura County has exhibited many characteristics similar to the historical growth patterns of the presently more developed areas of Southern California, past growth of a pattern area is not necessarily an indication of future growth in the study area. Therefore, present and projected economic and social conditions, geographical conditions and other factors were also taken into account in developing the projections of urban land use which are presented in the table below.

TABLE 8

HISTORICAL AND PROJECTED URBAN LAND USE,
VENTURA COUNTY
1960-1990

Year	Population	Density, persons per acre	Net land required, in acres	Required additional land, in acres [1]	Total, urban land requirement, in acres
1960	199,138	6.2	32,025 [2]	--	--
1961	212,200 [3]	--	32,000	12,000	44,000 [4]
1970	420,000	6.8	61,764	12,236	74,000
1980	740,000	7.7	96,103	11,897	108,000
1990	1,100,000	9.0	122,222	11,778	134,000

1/ Urbanized military areas and miscellaneous "urban" paved and unpaved areas such as vacant city lots and other raw land within metropolitan areas.
2/ Los Angeles Regional Transportation Study.
3/ Ventura County Planning Department estimate.
4/ Department of Water Resources survey.

Agricultural Land Requirements

Agricultural production is presently the largest income producing industry in Ventura County. In 1964 the total F.O.B.[1/] value was $142,323,150, of which $116,198,050 represented crop value and $21,578,400 livestock and livestock products. The major crop, citrus fruit, had an F.O.B. value of $73,016,200, while truck crops had an F.O.B. value of $30,332,150.[2/]

Ventura County is still one of the principal agricultural counties of California and the nation, but urban expansion is preempting the use of more and more farm land. Higher production per acre, the result of advanced farming methods and multiple cropping, with at least two and often three crops produced yearly on most vegetable land, has brought higher production per acre. Consequently, gross returns for agriculture have advanced steadily since 1960 and for most of the years in the decade before that. Nevertheless, the future of agriculture in Ventura County lies downward. Agriculture will continue to have an active and important role in the County's economy for many years to come, but the increasing demands for urban land and the speculative pressures which are already apparent will seriously curtail agricultural acreage in the future.

Projections of irrigated agricultural acreage, by crop groupings were made for the individual water service areas shown on Plate 1 as well as for the County as a whole. These projections considered probable urban developments and consequent pressures on farm land, the normal agricultural

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1/ F.O.B. value includes cost of production, harvesting, hauling, grading, and packing. It is not "on the farm value".

2/ Source: "Annual Report and Crop Statistics", Agricultural Commissioner of Ventura County.

value of land in each area and for each crop, the desirability of particular segments of land for urban use, crop patterns, developments of new technology and related capital-labor substitutions on farms for specific crops, as well as specific social, political and economic factors which might affect agriculture in Ventura generally and its future in the various subunits of the County. The projections are shown in Table 9.

TABLE 9

HISTORICAL AND PROJECTED ACREAGES OF IRRIGATED CROPS[1/]
1961-1990

Area and crop	1961	1970	1980	1990
Ventura River				
Citrus and subtropical	2,810	2,700	2,400	2,000
Field crops	10	--	--	--
Deciduous fruit and nuts	700	400	200	100
Truck crops	80	100	50	--
Pasture, alfalfa and grain	360	350	300	200
Other[2/]	100	100	50	50
Total	4,060	3,650	3,000	2,350
Sulphur Mountain				
Citrus and subtropical	52	95	60	50
Field crops	--	--	--	--
Deciduous fruit and nuts	--	--	--	--
Truck crops	--	--	--	--
Pasture, alfalfa and grain	43	--	--	--
Other[2/]	--	--	--	--
Total	95	95	60	50
Calleguas-Malibu				
Citrus and subtropical	11,950	9,000	6,000	2,000
Field crops	560	450	300	--
Deciduous fruit and nuts	5,200	1,800	200	--
Truck crops	7,120	6,000	4,500	3,000
Pasture, alfalfa and grain	1,510	1,500	1,200	800
Other[2/]	1,060	750	750	700
Total	27,400	19,500	12,950	6,500

HISTORICAL AND PROJECTED ACREAGES OF IRRIGATED CROPS[1/]
1961-1990
(continued)

Area and crop	1961	1970	1980	1990
United Water Conservation District				
Oxnard Plain				
Citrus and subtropical	13,520	9,205	6,540	3,950
Field crops	420	2,500	1,000	500
Deciduous fruit and nuts	770	100	--	--
Truck crops	30,570	27,150	23,950	18,000
Pasture, alfalfa and grain	880	400	200	--
Other[2/]	3,350	1,000	1,050	2,000
Total	49,510	40,355	32,740	24,450
Santa Clara River				
Citrus and subtropical	22,080	22,000	20,000	16,000
Field crops	200	550	200	--
Deciduous fruit and nuts	410	100	--	--
Truck crops	2,890	2,750	2,500	2,000
Pasture, alfalfa and grain	970	750	300	--
Other[2/]	270	250	250	150
Total	26,820	26,400	23,250	18,150
Los Padres[3/]				
Citrus and subtropical				
Field crops				
Deciduous fruit and nuts				
Truck crops				
Pasture, alfalfa and grain				
Other[2/]				
Total	1,115	1,000	1,000	1,000
County total				
Citrus and subtropical	50,412	43,000	35,000	24,000
Field crops	1,190	3,500	1,500	500
Deciduous fruit and nuts	7,080	2,400	400	100
Truck crops	40,660	36,000	31,000	23,000
Pasture, alfalfa and grain	3,763	3,000	2,000	1,000
Other[2/]	4,780	2,100	2,100	2,900
Grand total[4/]	109,000	91,000	73,000	52,500

1/ Excludes areas not devoted to crop production such as public roads, canals, etc.
2/ Includes fallow land.
3/ Total acreage only available for 1961. Projections for individual crops not made.
4/ Includes irrigated land within Los Padres National Forest.

Total Land Use Projections

Estimates of total land use to 1990 were determined from urban and agricultural requirements. These data are summarized in Table 10.

TABLE 10

HISTORICAL AND PROJECTED LAND USE,
VENTURA COUNTY
1961-1990
(In Acres)

Type of land use	1961	1970	1980	1990
Urban	44,000	74,000	108,000	134,000
Irrigated agriculture, gross[1/]	116,270	97,000	77,750	56,000
Unirrigated agriculture, gross[1/]	17,870	18,000	8,000	7,500
Subtotal	178,140	189,000	193,750	197,500
Undeveloped usable land	61,673	50,813	46,063	42,313
Total usable land	239,813	239,813	239,813	239,813
Percentage of potential development of usable land	74%	79%	81%	82%

1/ Includes areas not devoted to crop production such as public roads and highways, farm access roads, and canals.

It can be noted from Table 10 that the percentage of development of usable land is expected to increase only moderately in spite of a projected countywide population growth of from 212,200 on April 1, 1961 to 1,100,000 on April 1, 1990. It is expected that most of the housing for this great increase in population will be constructed on lands presently developed for agriculture. The remaining increased housing needs are expected to be provided through greater numbers of multiple housing units and through use of land presently considered unusable.

CHAPTER III. DEMAND FOR PROJECT WATER

Over the past decade the amount of farm land being irrigated in Ventura County has substantially decreased. In 1957, a Department of Water Resources survey indicated that there were 117,000 net acres of irrigated cropland in the County. The Department survey of 1961 found that the net irrigated crop acreage had dropped to approximately 109,000 acres. Current net irrigated acreage is estimated to be about 100,000. However, in the past decade there has been a substantial increase in the amount of acreage being double and triple cropped. This intensification of land use, partially the result of changing crop patterns (an increase in vegetable crops, a decrease in dry bean plantings), has tended to result in a static level of use for agricultural water in spite of irrigated acreage decreases.

While there has not been any significant change in agricultural water use, urban water use has substantially increased. This increased use has resulted from a rapidly growing population and an expanding industrial base.

In the future, the demand for agricultural water is expected to decline as agricultural lands become urbanized, but urban water requirements will continue to expand. Primarily because of expected future sewage exportation, the total gross urban water use is expected to increase to such an extent that it will more than offset the projected decrease in agricultural usage.

Present and Future Unit Water Use

Estimates of unit values of urban water use for Ventura County were based upon studies made by the Department for Bulletin No. 78, "Investigation of Alternative Aqueduct Systems to Serve Southern California".

The values in Bulletin No. 78 were modified in some cases to adjust for current conditions of use in various areas in the County. Unit values of urban use estimated for the Oxnard Plain, the area west of Forest Park in the Ventura River Municipal Water District, the Malibu area, and the Conejo and Pleasant Valley areas were taken to be applied water rates, since the return flows from urban usage in these areas either will be exported out of the areas as sewage effluent or cannot readily be recharged to the ground water basins. Unit values for the remainder of the County were taken as the consumptive use of applied water, taking into account the reuse of return flows from water used in these areas. The estimated present and projected values of urban water use in Ventura County are shown in Table 11.

TABLE 11

ESTIMATED UNIT VALUES OF URBAN WATER USE
1960-1990

Year	Ventura River		Sulphur Mountain		Oxnard Plain		Santa Clara River		Calleguas-Malibu	
	gdp[1]	afyp[2]	gdp[1]	afyp[2]	gdp[1]	afyp[2]	gdp[1]	afyp[2]	gdp[1]	afyp[2]
1960	150	.168	70	.078	165	.185	70	.078	150	.168
1970	154	.172	74	.083	176	.197	74	.083	170	.190
1980	159	.178	78	.087	186	.208	78	.087	195	.218
1990	161	.180	81	.091	192	.215	81	.091	225	.252

1/ Gallons per day per person.
2/ Acre-feet per year per person.

The unit values for irrigation water used in this study have been taken from preliminary data prepared for Bulletin 122 "Ventura County - Upper Santa Clara River Drainage Area, Land and Water Use Survey, 1961". These unit values incorporate the necessary factors to account for double

and triple cropping where applicable and the necessary factors to account for loss of deep percolation waters, due to impervious strata in the coastal areas. These unit values for irrigated crops are shown in Table 12.

Present and Future Water Use

The present and projected future use of water for urban purposes in the various water service areas was determined by applying the appropriate estimates of per capita water use to projections of population for each decade of the study to 1990. Table 13 indicates the resulting urban water requirements for the service areas to 1990. To arrive at 1961 urban water requirements, the 1960 unit water use was multiplied by the 1961 population, the inconsistency being considered negligible.

The present and projected future use of water for irrigation purposes was determined by applying appropriate units of water use to projections of irrigated crop acreages in the County. The present and future irrigation water requirements for Ventura County resulting from these calculations are shown in Table 14. The values of water utilization shown in the table reflect the fact that return flows of irrigation water in coastal areas of the County would not be available for reuse.

Local Water Supplies and Ground Water Overdraft

While water supplies in Ventura County are procured principally from ground water basins, increasing amounts are being obtained from surface developments. Existing surface water facilities in the Ventura River Municipal Water District are Casitas and Matilija Reservoirs and associated diversion facilities. The United Water Conservation District operates Santa Felicia Dam and Reservoir, which controls water releases to the various spreading grounds located throughout the District. The Calleguas Municipal

TABLE 12

ESTIMATED ANNUAL UNIT VALUES
OF AGRICULTURAL WATER USE

In feet of depth

Crop	Ventura River		Oxnard Plain		Santa Clara River		Calleguas-Malibu	
	Applied water	Consumptive use	Applied water	Consumptive use	Applied water	Consumptive use	Applied water	Consumptive use
Alfalfa, pasture, small grains	3.29	2.3	3.00	3.00	3.43	2.4	3.43	2.4
Citrus and subtropical	2.00	1.4	1.86	1.86	2.00	1.4	2.00	1.4
Truck crops	1.57	1.1	1.43	1.43	1.72	1.2	1.72	1.2
Field crops	1.57	1.1	1.57	1.57	1.57	1.1	1.57	1.1
Deciduous fruits and nuts	2.14	1.5	2.14	2.14	2.14	1.5	2.14	1.5

TABLE 13

HISTORICAL AND PROJECTED
URBAN WATER REQUIREMENTS
1961-1990

Area	Urban water requirements, in acre-feet			
	1961	1970	1980	1990
Ventura River	7,300	9,110	14,950	22,800
Sulphur Mountain	101	373	580	871
Oxnard Plain	16,800	29,500	53,100	76,000
Santa Clara River	3,090	5,300	9,560	14,700
Calleguas-Malibu	6,140	28,200	61,500	111,800
Total	33,431	72,480	139,690	226,171

TABLE 14

HISTORICAL AND PROJECTED
AGRICULTURAL WATER REQUIREMENTS
1961-1990

Area	Agricultural water requirements, in acre-feet			
	1961	1970	1980	1990
Ventura River	5,953	5,295	4,405	3,410
Sulphur Mountain	173	105	84	70
Oxnard Plain	73,850	61,234	48,460	33,835
Santa Clara River	37,525	36,655	31,940	24,800
Calleguas-Malibu	37,286	26,595	17,310	8,320
Total	154,787	129,884	102,199	70,435

Water District is currently building a distribution system from the Metropolitan Water District feeder in Glendale to serve the Calleguas Municipal Water District and the City of Oxnard. These projects were constructed to help alleviate critical conditions of ground water overdraft in the Oxnard Plain. The problem of ground water overdraft is becoming more and more serious in the County. If overdraft of ground water basins is allowed to continue indefinitely, sea-water intrusion of the coastal basins will become an ever-increasing hazard and the presently existing water quality problem in the Port Hueneme and Mugu Lagoon areas will be aggravated.

The only major undeveloped surface water resource in the County is Sespe Creek. The right to develop Sespe Creek has been the object of a legal contest between Calleguas Municipal Water District and United Water Conservation District. On April 29, 1963, the California State Water Rights Board awarded the contested rights to United Water Conservation District, and they have contacted the U. S. Bureau of Reclamation to define the scope of the development.

Ground water level observations indicate that a substantial decline in ground water elevations occurred between the spring of 1960 and the spring of 1961. Most basins in Ventura County had declines of 10 feet or more. Near Port Hueneme, intrusion continued to advance inland along the entire intrusion front and the area underlain by sea water increased considerably. The line of 500 ppm chloride ion concentration advanced as much as 1,000 feet during 1960-1961 and has advanced at a more accelerated rate in recent years. In 1964 the total maximum landward advance of the 500 ppm isochlor line was 3 miles in an easterly direction along Pleasant Valley Road. From 1960 to 1964 the 500 ppm isochlor line had advanced about 1 mile. At Point Mugu the rate of advance of intrusion is more difficult to establish due to the wide fluctuations in chloride ion concentrations, although a net overall increase is evident. The total maximum landward advance of the 500 ppm isochlor line was about 2 miles in the vicinity of Wood Road.

Demand for Project Water

In developing supplemental water requirements for Ventura County, the County was divided into four main areas for purposes of analysis. Each area was analyzed with respect to total urban water demands, availability of local water supplies, and other factors inherent in each area. These four areas are discussed in the following paragraphs.

Ventura River Municipal Water District

The Ventura River Municipal Water District is currently serviced by the Ventura River Project, consisting of Casitas Dam and Reservoir, Matilija Dam and Reservoir, and the necessary diversion and distribution facilities. Current estimates by Ventura River Municipal Water District

personnel indicate that this system will supply the District with 36,700 A.F. per year. The Department of Water Resources estimates that the total district demand in the year 1990 will be 27,151 A.F. Therefore, the District will need no additional water developments until after 1990.

Calleguas Municipal Water District and Malibu Area

The Calleguas Municipal Water District is presently building a distribution system from the Metropolitan Water District's Upper Feeder in Glendale to the urban centers in the area. This line will eventually supply 39,000 A.F./year to the District. In 1970 this new line and ground water can safely supply 58,000 A.F./year. The Department's estimates of the District's total demand in 1970 is 54,795 A.F./year. However, by 1980 the demand will be 78,810 A.F./year while the supply will have only increased to 67,000 A.F./year. Therefore, an additional supply of water will have to be developed between 1970 and 1980 if ground water overdraft is not to continue.

Upper Santa Clara River

This area lies wholly within the boundaries of the United Water Conservation District. Surface water developments of United include Piru Reservoir and associated spreading grounds. In addition, United was granted the right to develop the water resources of Sespe Creek. The unused portion of the ground water in the Upper Santa Clara River flows to the Oxnard Plain. Consequently, local ground water can supply all foreseeable demands of this area. Continued pumping will not tend to deplete the ground water in this area but merely reduce the amount which flows to the Oxnard Plain. This reduction is taken into account in the Oxnard Plain section.

The Oxnard Plain

To a large extent local water supplies on the Oxnard Plain are coming from ground water in storage. With the removal of water in storage, water levels in the producing aquifers have declined below sea level and sea-water intrusion has occurred. Permanent damage has already been done to portions of the Oxnard aquifer, the main water-bearing stratum underlying most of the Oxnard Plain. The Department's estimate of demand in 1990 is 109,835 A.F./year, and the estimated available supply is 91,500 A.F./year. This latter figure includes the estimated ground water supply for the Coastal Plain, water expected to be delivered to the City of Oxnard by the Calleguas Municipal Water District, and water expected to be obtained from the Sespe Creek Project and by surface diversions from the Upper Santa Clara River. Since water demand in this area is expected to be well in excess of the total supply by 1990, a supplemental supply must be obtained to prevent further damage to the ground water basin underlying the Oxnard Plain.

Table 15 summarizes present and projected total water demands and supplies in Ventura County by water service areas. In its development, the ground water supply in the Santa Clara River Valley was assumed to be equal to urban and agricultural demands since this area presently supplies surplus water to the coastal plain and projected water demand in the valley will remain almost constant. The ground water supply for the Oxnard Plain was developed by subtracting the demands of the Santa Clara River Valley from the total supply of the United Water Conservation District as reported in the Department's Bulletin No. 78. The ground water supply for the Oxnard Plain calculated by this method amounted to 46,000 acre-feet a year. In comparison, State Water Rights Decision D 1129 (Sespe Creek) concluded that the Oxnard Plain ground water supply amounted to about 52,000 acre-feet a year.

TABLE 15

TOTAL AND SUPPLEMENTAL WATER REQUIREMENTS
1961-1990
(in acre-feet)

Water service unit	1961	1970	1980	1990
Ventura River Municipal Water District and Sulphur Mountain Area				
Demand				
Urban[1]	7,401	9,483	15,530	23,671
Irrigation[2]	6,126	5,400	4,489	3,480
Total	13,527	14,883	20,019	27,151
Existing water supplies[3]	36,700	36,700	36,700	36,700
Supplemental requirements	0	0	0	0
Calleguas Municipal Water District and Malibu Area				
Demand				
Urban[1]	6,140	28,200	61,500	111,800
Irrigation[2]	37,286	26,595	17,310	8,320
Total	43,426	54,795	78,810	120,120
Existing water supplies[4]	28,000	28,000	28,000	28,000
Supplemental requirements	15,426	26,795	50,810	92,120
Supplemental supply	0	30,000[5]	39,000[5]	39,000[5]
Additional requirements[6]	15,426	0	11,810	53,120
Santa Clara River Valley				
Demand				
Urban[1]	3,090	5,300	9,560	14,700
Irrigation[2]	37,525	36,655	31,940	24,800
Total	40,615	41,955	41,500	39,500
Existing water supplies	40,615	41,955	41,500	39,500
Supplemental requirements	0	0	0	0

TOTAL AND SUPPLEMENTAL WATER REQUIREMENTS
1961-1990
(in acre-feet)
(continued)

Water service unit	1961	1970	1980	1990
Oxnard Plain				
Demand				
Urban[1]	16,800	29,500	53,100	76,000
Irrigation[2]	73,850	61,234	48,460	33,835
Total	90,650	90,734	101,560	109,835
Existing water supplies	46,000	46,000	46,000	46,000
Supplemental requirements	44,650	44,734[8]	55,560	63,835
Supplemental supply[7]	0	45,500[8]	45,500	45,500
Additional requirements[6]	44,650	0	10,060	18,335

1/ Population projections in Chapter II times unit water values in Chapter III.
2/ Land use projections in Chapter II times unit water values in Chapter III.
3/ Bulletin 78; includes water obtained by pumping and delivery from Casitas Reservoir.
4/ State Water Rights Board Decision D 1129, p. 32, and Bulletin 78, Vol. 18.
5/ From Metropolitan Water District.
6/ Without development of another supplemental source, this amount will have to be met by overdrafting ground water as was the case in 1961.
7/ From Calleguas Municipal Water District (18,000 ac. ft.) and Sespe Creek Project (27,500 ac. ft.), either directly or in the form of additional ground water from the Upper Santa Clara River.
8/ The State Water Rights Board, in its decision granting the United Water Conservation District the right to develop Sespe Creek, stipulated that the project be completed by December 1, 1972. Therefore, it is possible that the water from Sespe may not be available in 1970 as here shown.

Buildup of Demand for Project Water

While portions of Ventura County have a need for supplemental water at the present time, these needs are being met by overdraft on local ground water supplies. Over the ensuing 10 to 20 years, additional areas in the county will also begin to experience overdraft conditions and increasing water quality problems. The Ventura County Flood Control District contracted for water deliveries in 1980, and a definite schedule of the buildup in delivery requirements between 1980 and 1990 was prepared and

incorporated in the recently executed water service contract between the County and the State. This schedule is shown in Table 16. However, the County may revise its schedule for water deliveries if it concludes the County needs supplemental water sooner than 1980.

TABLE 16

ESTIMATED ANNUAL WATER DELIVERIES
FROM THE STATE WATER PROJECT

Year	Annual water deliveries, in acre-feet
1980	1,000
1981	2,000
1982	3,000
1983	4,000
1984	5,000
1985	6,000
1986	8,000
1987	10,000
1988	13,000
1989	16,000
1990 et seq.	20,000

Based on the information in Table 15, no supplemental surface water will be needed for at least 25 years in the Ventura River Municipal Water District, Sulphur Mountain area and Santa Clara River Basin. The supplemental future water needs of the Calleguas area will be serviced by Metropolitan Water District. The Oxnard Plain will be the principal area requiring water from the State Water Project. For purposes of estimating the cost of local distribution facilities in Ventura County, it was assumed that State Project water will be delivered to the vicinity of Saticoy. Delivery to this area would place imported water in the center of urban growth of both the Cities of Ventura and Oxnard.

CHAPTER IV. COST OF WATER SERVICE FROM THE STATE WATER PROJECT

The cost of water service from the State Water Project to the Ventura County Flood Control District is dependent upon the District's allocated portion of construction, operation and maintenance costs of the California Aqueduct, the cost accruing from the Delta Water Charge, and the cost of local conveyance systems. Local conveyance systems will be constructed and paid for by the District itself. Construction of the State Water Facilities, on the other hand, will be done by the State and will be financed with moneys from the California Water Fund and from the sale by the State of general obligation bonds authorized under the California Water Resources Development Bond Act of 1959 (Chapter 8 (commencing with Section 12930), Part 6, Division 6 of the Water Code).

Under the standard contract for water service, each contracting agency undertakes an obligation to repay the State for its share of costs associated with water deliveries from the State Water Project. This obligation includes a share of the costs incurred for the construction of transportation facilities, a proportionate share of the operation and maintenance costs of those facilities, and the Delta Water Charge. The allocation of costs for the transportation facilities to each agency is made on the proportionate use of facilities concept, based on the relative size of maximum entitlement, the peaking capacity and emergency storage reserved in the terminal reservoir for the agency, and the distance from the Delta of the Sacramento and San Joaquin Rivers to the reach of aqueduct wherein the agency's turnout structures are located. The Delta Water Charge is the charge designed to return to the State all costs of the project conservation facilities which are allocated to the purpose of water conservation in, above, and below the Delta.

State Water Project

The cost of the State Water Project to the Ventura County Flood Control District was computed, based on estimates of the overall construction costs and on a maximum annual entitlement of 20,000 acre-feet. The basic assumptions used in this cost allocation were that repayment for the main aqueduct facilities would commence in 1964 and that state and local conveyance facilities would be designed with a capacity sufficient to deliver 11 percent of the agency's annual entitlement during any one month.

Physical Features of State Water Project

The transportation facilities of the State Water Project which will be utilized to serve Ventura County are the California Aqueduct from the Delta to the bifurcation of the East and West Branch Aqueducts, and the West Branch Aqueduct to Castaic Reservoir.

Cost of Project

The total capital costs for the transportation facilities of the State Water Project allocated to the agency are expected to amount to about $7,534,444 for the District's maximum annual entitlement of 20,000 acre-feet. This would require a maximum repayment of principal and interest by the County of $321,684 per year for the transportation facilities during years of maximum payment. The annual capital repayment would be less than the above figure in years prior to 1977 and subsequent to 2013. Operation and maintenance costs for the transportation facilities will be assessed in two ways. An annual minimum operation, maintenance, power, and replacement charge will be assessed regardless of the amount of water deliveries, and a variable operation, maintenance, power, and replacement charge will be levied which will depend on water actually delivered to Ventura County. The final

component of the District's annual cost for water deliveries will be the Delta Water Charge, which is based on the schedule of estimated annual water deliveries included in the District's water supply contract. As of the time of this study, the Delta Water Charge was estimated to be $7.29 per acre-foot at the time that water service would commence to the Ventura County Flood Control District.

Table 17 indicates the estimated annual component costs of water service from the State Water Project to the Ventura County Flood Control District, for specific years during the period of buildup in water demand to 1990, the year of maximum demand.

TABLE 17

ANNUAL CHARGES FOR WATER SERVICE
FROM THE STATE WATER PROJECT[1]

Year	Estimated annual water delivery, in acre-feet	Transportation charge: Capital cost component	Transportation charge: Minimum[2] operation and maintenance	Transportation charge: Variable[3] operation and maintenance	Delta Water Charge	Total payment to State
1963	$ --	$ --	$ --	$ --	$ --	$ --
1970	--	260,172	17,894	--	--	278,066
1980	1,000	321,684	57,657	15,658	7,290	402,289
1990	20,000	321,684	59,873	408,757	145,800	936,114

1/ These estimates were based on the assumption that the West Branch Aqueduct would be built along the Elizabeth Lake Canyon alignment. After the water supply contract with the District was executed, the Piru alignment was approved. Preliminary data indicate that there will be a substantial reduction in costs to the District as a result of this change in alignment.

2/ Minimum operation, maintenance, power, and replacement component charges are those necessary to maintain the system even though there are no water deliveries to the County.

3/ Variable operation, maintenance, power, and replacement component charges are those associated with moving water to Ventura County.

Estimates of State Water Project costs contained in this bulletin were based on the assumption that the West Branch Aqueduct would be built along the Elizabeth Lake Canyon Alignment, the official alignment at the time the water supply contract with the District was signed on December 2, 1963. In December 1964, however, after these estimates were made, the Department adopted the Piru Creek Alignment as the official route of the West Branch Aqueduct. The principal features of the West Branch Aqueduct to be built along this alignment include Oso Pumping Plant, Quail Lake, Pyramid Powerplant, Dam, and Reservoir, Castaic Powerplant, Dam and Reservoir, and 20 miles of aqueduct. Preliminary data indicate that there will be a substantial reduction in costs to the District as a result of this change in alignment.

Local Distribution Facilities

In order to distribute water from the State Water Project, the Ventura County Flood Control District will be required to build a feeder system connecting local facilities to the State Aqueduct. Since the District plans to act as a wholesaler of the imported water supply, it was assumed that the District would construct and operate a main conveyance conduit which would connect with local conveyance facilities constructed and operated by the District's customers. For the purposes of this report, estimates were made of the costs of a pipeline route that follows Castaic Creek from Castaic Reservoir to the Santa Clara River and thence down the Santa Clara River, terminating in the vicinity of Saticoy. The route of the proposed distribution facilities is shown on Plate No. 1, "Water Service Areas and Major Water Districts".

Physical Features of Local Distribution Facilities

The main features of the local conveyance facilities, under what appears to be an economical and feasible system, would be about 15 miles of 33-inch pressure conduit running from a metering structure at Castaic Reservoir, south along Castaic Creek and southwest along the Santa Clara River to the vicinity of Piru; and about 25 miles of 36-inch pressure conduit running from Piru along the Santa Clara River to Saticoy. No pumping would be required and the minimum terminal pressure would be adequate.

Cost of Local Distribution Facilities

An estimate of construction costs for the described local conveyance system was made and is tabulated in Table 18. These costs do not reflect costs that will be associated with turnout structures and local storage facilities, as these are subject to change with changes in design criteria. It was assumed that construction of the conduit will be completed in 1980 and that repayment of capital costs would be accomplished by 40-year, 5 percent bonds. Table 18 shows the estimated cost components of the local conveyance system.

TABLE 18

ESTIMATED ANNUAL COMPONENT COSTS
OF LOCAL DISTRIBUTION FACILITIES

Year placed in operation	Construction costs	Annual capital repayment $/year 1/	Annual operation cost $/year	Total annual cost $/year
1980	$5,400,000	$315,000	$21,600	$336,600

1/ Assumes a repayment period of 40 years at 5 percent interest.

The costs for water service shown in Tables 17 and 18 have been translated into equivalent unit costs per acre-foot for purposes of comparison with local unit water costs. These costs do not represent the actual average cost per acre-foot for any given year, but instead are equivalent unit rates or charges that, if applied to each acre-foot of entitlement delivered during the repayment period, would repay all costs with interest, at the appropriate interest rate.

Table 19 shows the equivalent unit costs of various components of service from the State Water Project, including the costs associated with local conveyance facilities. Since no deliveries of imported water are contemplated to be made for any purposes on land holdings in excess of 160 acres, surcharges on excess lands were not judged to be a factor in imported water costs to the District.[1/]

1/For an explanation of the surcharge for project water used on excess land see Article 30 of the "Water Supply Contract between the State of California, Department of Water Resources and the Ventura County Flood Control District".

TABLE 19

EQUIVALENT UNIT COSTS OF WATER SERVICE
FROM THE STATE WATER PROJECT

Components of cost	Equivalent unit rate, $/acre-foot
State Water Project	
Operation and maintenance expense	$26.03
Delta Water Charge	7.29
Subtotal for system operation	33.32
Capital cost of transportation expense	34.43
Total cost components for State Water Facilities	$67.75
Local Conveyance Facilities	
Estimated operation, maintenance and replacement expense	$ 1.50
Estimated capital cost expense	23.56
Total of cost components for local conveyance facilities	$25.06
Total of cost components for all water facilities	$92.81
Total, all operating components	$27.53

CHAPTER V. ECONOMIC JUSTIFICATION AND FINANCIAL CAPABILITY

Basic to the consideration of the execution of a water service contract between the State of California and the Ventura County Flood Control District are the two factors of economic justification and financial capability. Economic justification proves the worth of the proposed water service, whereas financial capability indicates an ability on the part of the District to repay the costs of water importation.

Economic Justification

A water development project can be considered economically justified if the economic benefits derived from the use of the resulting water supplies exceed the cost of providing the water service. Since water from the State Water Project supplied to Ventura County is not contemplated for irrigation purposes, a comparison of agricultural payment capacities and project charges is not necessary. However, because water service is contemplated for urban use, it is necessary to consider benefits from municipal and industrial use and project charges in order to justify such water use on an economic basis.

It is difficult to measure benefits of water importation for municipal and industrial purposes in monetary terms. Often, economic justification has been shown by demonstrating that the costs of project water are not significantly greater than existing water costs, that alternative sources of water would be more costly, and that the area's economic development would be restricted without additional water supplies. If the future economic development of the County is dependent on water importation and would occur only if imported water were available, then the benefits of such importation will undoubtedly exceed the costs associated with it.

In spite of improvements in saline water conversion technology, water costs at plant sites in Southern California under present conversion methods have been estimated to be about two to three times that of State Project water. Improvements which can reasonably be expected to occur in the future, including the development of large size, multi-purpose nuclear power generation and sea-water conversion plants, will, hopefully, lower costs substantially. However, it seems highly improbable that saline water conversion (in this case, sea-water conversion) will be anything but a more expensive alternative until sometime after 1990.

Under the forecasted figures of future growth, a supplemental source of urban water will be required. Since water importation from the State Water Project is both necessary for projected future growth and cheaper than alternative supplies, it is concluded that such importation is economically justified.

Financial Capability

To establish the financial capability of a public agency to undertake a particular project, it is necessary to show that the public credit of the agency is strong enough to reasonably support the day to day operating costs of the project and to repay any long-term debt and other fixed obligations which it will have to undertake in order to finance the project. It is necessary to show that the Ventura County Flood Control District will not be unduly burdened by its bonded debt and the aggregate amount of its unpaid fixed annual obligations during the project repayment period. Furthermore, methods of obtaining funds for debt repayment and payment of the fixed annual obligations must be practical and reasonable.

Present and Projected Assessed Valuation

Since 1952, assessed valuations in Ventura County have more than doubled, reaching a total of $582,000,000 in 1963-64. This present valuation represents an estimated market value of almost two and one half billion dollars. Table 20 shows the growth of assessed valuation from 1952 to the present, as estimated by the Department.

TABLE 20

HISTORICAL ASSESSED VALUATIONS
OF VENTURA COUNTY

Year	Assessed valuation	Percentage increase over previous year
1952-53	$283,230,490	-
1953-54	300,966,930	6.26
1954-55	327,967,200	8.97
1955-56	345,382,130	5.31
1956-57	388,883,270	12.60
1957-58	409,272,650	5.24
1958-59	435,296,100	6.36
1959-60	458,006,950	5.22
1960-61	482,551,760	5.36
1961-62	508,266,840	5.33
1962-63	538,317,920	5.91
1963-64	581,531,160	8.03

For purposes of analyzing the financial capability of the Ventura County Flood Control District to pay for service from the State Water Project, it was necessary to make projections of future assessed valuations of property within the County. These projections were

conservatively made, based on the assumption that assessed valuation per capita would remain near present levels until 1990. Projected assessed valuations, and the derivation of per capita valuations, are shown in Table 21.

TABLE 21

HISTORICAL AND PROJECTED ASSESSED VALUATIONS OF VENTURA COUNTY

Fiscal year	Population	Assessed value per capita	Assessed valuation
1960-61	199,138[1/]	$2423	$ 482,551,760
1961-62	229,337[2/]	2216	508,266,840
1962-63	248,857[2/]	2163	538,317,920
1963-64	288,275[2/]	2017	581,531,160
1969-70	420,000	2000	840,000,000
1979-80	740,000	2000	1,480,000,000
1989-90	1,100,000	2000	2,200,000,000

1/ U. S. Census, April 1, 1960.
2/ Ventura Co. Planning Dept. Estimate, April 1, 1962, 1963, and 1964 (assessed valuation constant through fiscal year).

Present and Projected Bonded Indebtedness

Ventura County has a current bonded indebtedness of $84,931,110 which is about sixteen percent of the County's assessed valuation. Table 22 shows a breakdown of the current bonded indebtedness of the area.

TABLE 22

PRESENT BONDED INDEBTEDNESS OF VENTURA COUNTY, BY TYPE OF DISTRICT[1/]

Type of district	Bonded indebtedness
Schools	$42,037,110
Water	13,068,000
Cities	11,126,000
Sanitary	852,000
County	370,000
Others	17,478,000
Total	$84,931,110

1/ As of June 30, 1963.

Although assessed valuations have been increasing in the County, bonded indebtedness has been rising at a faster rate. Table 23 shows bonded indebtedness as a percentage of assessed valuation in the County from 1959 to the present.

TABLE 23

HISTORICAL BONDED INDEBTEDNESS OF VENTURA COUNTY

Year[1/]	Bonded debt	Assessed valuation	Debt as percent of valuation
1959	$41,046,760	$435,296,100	9.43
1960	50,417,850	458,009,950	11.01
1961	58,881,470	482,551,760	12.20
1962	74,199,310	508,266,840	14.60
1963	84,931,110	538,317,920	15.78

1/ As of June 30.

Although it is difficult to estimate to what extent Ventura County will incur bonded indebtedness in the future, it was estimated that the percentage of bonded debt to assessed valuation would increase to 16 percent by 1970 and remain constant thereafter, as shown in Table 24. This estimate is based on bond issues planned and pending in the County at the present time and County estimates of future bonded debt.

TABLE 24

PRESENT AND PROJECTED BONDED INDEBTEDNESS OF VENTURA COUNTY

Year	Bonded indebtedness	Percent of total assessed valuation
1963	$ 84,931,110	15.8
1970	134,400,000	16.0
1980	236,800,000	16.0
1990	352,000,000	16.0

Analysis for Financing Future Obligations

The determination of the financial capability of the Ventura County Flood Control District to support a water service contract required an analysis of several interrelated factors, including determinations of the aggregate annual amounts of money required to pay for the District's allocated share of costs; the probable payment schedule; the present and future assessed valuation of Ventura County; its current and future debt; prevalent tax rates; and the additional tax rates necessarily incurred by undertaking a water importation project.

For this report, an investigation was made of many facets of the District's present financial situation to provide a basis for analyzing its future financial position. The data gathered in this investigation

are presented in detail in the appendix to this report, entitled "Credit Analysis of the Ventura County Flood Control District".

Comparison with Assessed Valuation. From the schedules of estimated allocated construction costs, cost of local conveyance facilities, and assessed valuation, the sum of the aggregate unpaid amount of the District's allocated share of the capital cost of the transportation facilities of the State Water Project in any one year and the total debt outstanding on local conveyance facilities in the same year was calculated as a percentage of assessed valuation for comparison purposes. These data are shown in Table 25.

TABLE 25

SUMMARY OF CAPITAL REPAYMENT OBLIGATIONS
RESULTING FROM WATER SERVICE

Year	Assessed valuation ($000)	Local conveyance facilities: Outstanding debt: Amount ($000)	Local conveyance facilities: Outstanding debt: Percent of assessed valuation	Transportation facilities: Aggregate unpaid capital costs: Amount ($000)	Transportation facilities: Aggregate unpaid capital costs: Percent of assessed valuation	Total attributable to water service: Amount ($000)	Total attributable to water service: Percent of assessed valuation
1970	$ 840,000	$ --	--	$6,709	0.8	$ 6,709	0.8
1980	1,480,000	5,340	0.3	7,139	0.5	12,479	0.8
1990	2,200,000	4,730	0.2	6,109	0.3	10,839	0.5

In the year when the ratio of the sum of the outstanding debt and the aggregate unpaid transportation capital costs to assessed valuation is the highest, occurring in about 1979, the aggregate unpaid transportation capital costs for water service and total public debt would be about 17 percent of assessed valuation (See Table 24). Thus, even at a maximum, the area's ratio of the sum of outstanding public debt and aggregate unpaid transportation capital costs to valuation would appear to be

reasonable. The ratio of outstanding debt plus aggregate unpaid transportation capital costs to assessed valuation would decline each year after the maximum year.

Levels of Ad Valorem Taxation. Tax rates in Ventura County have tended to increase in the past few years, as has been the case in most areas of Southern California. The weighted average tax rate of the County at the present time is about $8.06 per $100 assessed valuation. Table 26 indicates the weighted average tax rates and their component parts in the County for the past six years.

TABLE 26

WEIGHTED AVERAGE AD VALOREM TAX RATE COMPONENTS
IN THE VENTURA COUNTY FLOOD CONTROL DISTRICT

Year	Weighted average tax rate (per $100 assessed valuation)				
	General county rate	School districts	Cities	Special districts	Total rates
1958-59	$1.49	$3.34	$0.28	$1.03	$6.14
1959-60	1.63	3.56	.37	0.82	6.38
1960-61	1.72	3.93	.39	1.02	7.06
1961-62	1.74	3.98	.43	1.17	7.32
1962-63	1.74	4.16	.52	1.17	7.59
1963-64	1.74	4.62	.54	1.16	8.06

Under the payment schedule for the capital cost component of the transportation facilities developed during contract negotiations with the District, the Ventura County Flood Control District would make a payment to the State of about $14,716 in 1964. The amount paid would increase each year until 1990, when $790,314 would be paid on the capital cost component

and the estimated operation, maintenance, power, and replacement costs. Payments would then decrease until 1996 after which they would remain constant at $787,718 until 2013 when they would again decrease until full payment of the capital costs would have been accomplished in 2026. Thereafter, payments for a water supply of 20,000 acre-feet annually are expected to be $466,034 each year.

The annual payment requirements, as estimated for both repayment of indebtedness incurred for the local conveyance facilities and payment of the capital cost component of the transportation charge under the water supply contract with the State, were compared with projections of assessed property valuations in the County so that tax rates necessary for debt service for the local conveyance facilities and the annual payment of the capital cost component of the transportation charge could be determined. This was done in order to see if the necessary rate of taxation, should all payment obligations arising from the local conveyance facilities and the capital cost component of the contract transportation charge be collected through ad valorem taxation, would place an unreasonable burden on the taxpayers of the County. The tax rates computed as necessary for such payment, based on a maximum annual entitlement of 20,000 acre-feet, are shown in Table 27. The tax rate maximum, in 1980, would amount to just over $0.04 per $100 assessed valuation. It is possible that the District would also levy taxes until 1980 to raise funds needed to repay the minimum operation and maintenance charge for the State Water Project. The resultant tax rates are expected to be relatively small, however, and are not shown in the table.

TABLE 27

TAX RATE NECESSARY FOR CAPITAL REPAYMENT
OF LOCAL CONVEYANCE FACILITIES AND THE
ANNUAL CAPITAL COST COMPONENT OF THE
WATER SUPPLY CONTRACT TRANSPORTATION CHARGE

Year	Assessed valuation ($000)	Capital repayment for local conveyance facilities		Annual capital cost component of the water supply contract transportation charge		Total	
		Amount ($000)	Tax rate 1/	Amount ($000)	Tax rate 1/	Amount ($000)	Tax rate 1/
1970	$ 840,000	$ --	$ --	$260	$0.031	$260	$0.031
1980	1,480,000	315	0.021	322	.022	637	.043
1990	2,200,000	315	.014	322	.015	637	.029

1/ Dollars per $100 assessed valuation.

The State Water Project costs shown in Tables 25 and 27 were based on the assumption that the West Branch Aqueduct would be built along the Elizabeth Lake Canyon Alignment. As was mentioned in Chapter IV, however, the Department adopted the Piru Creek Alignment as the official route of the West Branch Aqueduct after these estimates were made. Preliminary data indicate that there will be a substantial reduction in costs to the District as a result of this change in alignment. This reduction would be reflected by a corresponding reduction in the projected debt ratios and tax rates shown in these two tables.

For purposes of this analysis, it was assumed that debt service for local water facilities and the annual payment for the capital cost component of the contract transportation charge would be accomplished through ad valorem taxation, and that other ad valorem property taxes would remain at substantially current levels in the future. Consideration was given to these projected tax rates and to the ratio of the sum of bonded debt and

aggregate unpaid transportation capital costs to future assessed valuations under conditions of water importation. Comparisons of these conditions were made against similar conditions in other areas. From these considerations, it was concluded that the Ventura County Flood Control District would have the financial capability to perform its obligations under a water supply contract with the State, to the extent of 20,000 acre-feet of water as a maximum annual entitlement.

CHAPTER VI. CONCLUSIONS

Analysis of the data gathered and presented in this report has led to the following conclusions:

1. Ventura County is now experiencing rapid and substantial population and economic growth and both internal and external trends indicate a high probability of a continuing increase in population and employment if sufficient water supplies are available in the future.

2. Water supplies available in many areas of the County are not sufficient to satisfy their future requirements and, therefore, the County's future growth will be seriously restricted unless a supply of supplemental water is made available.

3. The Ventura County Flood Control District is empowered by the Central Valley Project Act (Part 3, Division 6 of the Water Code) to enter into contracts with the State for the importation of a water supply from the State Water Project.

4. Ventura County will have an economic demand for water from the State Water Project of at least 20,000 acre-feet per year by 1990.

5. The financial position of Ventura County is such that the increase in fixed annual obligations and any taxation which might be required for the performance of a water supply contract with the State would not impose an unreasonable financial burden on the County.

6. Financing the construction of necessary local conveyance facilities, in addition to the fixed annual obligations that the District will incur under the contract with the State, would not increase the County's total ratio of debt and fixed annual obligations to assessed valuation beyond acceptable limits.

7. Ventura County, acting through the Ventura County Flood Control District, has the ability, the necessity, the economic justification, and the financial capability to enter into a contract with the State of California for water service from the State Water Project.

APPENDIX A

CREDIT ANALYSIS OF THE VENTURA COUNTY FLOOD CONTROL DISTRICT

APPENDIX A

CREDIT ANALYSIS OF THE
VENTURA COUNTY FLOOD CONTROL DISTRICT

A. Statement of Debt of the Ventura County Flood Control District

1. Net Direct Debt (full faith and credit)

   a. Bonds: none

   b. Floating debt: none

   c. Total debt: none

2. Special Obligations (not full faith and credit): none

3. Limitation on Debt

   a. Loans: For any zone flood control or conservation project, the District may borrow money subject to ceilings based on percentages of the total assessed valuation of the particular zone - 1 percent in Zone 1, 2 percent in Zones 2, 3, and 4 and 5 percent in special zones - at interest rates not to exceed 5 percent for a period of ten years or less.

   b. Bonds: Bonds to pay the cost of works or improvements in any zone or zones shall not exceed 5 percent of the taxable property of the zones.

   c. Applicable statutes: Ventura County Flood Control Act, Sections 7.5 (loans) and 15, 16, 17, and 35 (bonds).

4. Amount of Bonds Authorized but Unissued: none

5. Utilities Operated by the Agency (other than water service): none

B. Debt of Overlapping, Coterminous, and Underlying Political Units

Name and character of unit bearing bonded indebtedness	Net debt	Net debt assignable to the agency's area[1]	
		Percent	Amount
County of Ventura	$ 370,000	100	$ 370,000
Cities			
Fillmore	170,000	100	170,000
Ojai	938,000	100	938,000
Oxnard	6,255,000	100	6,255,000
Port Hueneme	220,000	100	220,000
San Buenaventura	3,310,000	100	3,310,000
Santa Paula	233,000	100	233,000
School Districts			
Elementary	13,455,400[2]	100	13,455,400
Unified	3,427,000	100	3,427,000
High	18,497,900[3]	100	18,497,900
Junior College	6,656,810[4]	100	6,656,810
Water Districts	13,068,000	100	13,068,000
Sanitary Districts	852,000	100	852,000
Ventura Port	4,750,000	100	4,750,000
United Water Conservation District	9,709,000	100	9,709,000
Other Districts	3,019,000	100	3,019,000
Total Debt	$84,931,110	100	$84,931,110

1/ As of June 30, 1963.
2/ Includes Cuyama Elementary.
3/ Includes Santa Maria Junior High.
4/ Includes Santa Maria Joint Junior College.

C. Summary of Debt of Ventura County and Other Political Entities

Type of debt	Outstanding debt as of June 30				
	1959	1960	1961	1962	1963
Net bonded debt	$ 0	$ 0	$ 0	$ 0	$ 0
Net floating debt	0	0	0	0	0
Other County debt	41,046,760	50,417,850	58,881,470	74,199,310	84,931,110
Total debt	$41,046,760	$50,417,850	$58,881,470	$74,199,310	$84,931,110

D. Default Record. There has been no default in the payment of principal or interest on any debt during the past twenty years, either by the water agency or by any overlapping, coterminous or underlying taxing district.

E. Assessed Valuation and Estimated Market Value of Property in Ventura County

1.Valuation: by type of: property	Valuation				
	1959-60	1960-61	1961-62	1962-63	1963-64
Secured property	$379,010,140	$397,046,930	$412,305,630	$436,672,130	$475,598,920
Unsecured property	22,770,700	21,123,890	25,511,050	28,407,970	29,599,290
Utilities	56,229,110	64,380,940	70,450,160	73,237,820	76,332,950
Total assessed value	$458,009,950	$482,551,760	$508,266,840	$538,317,920	$581,531,160

2. Assessment Ratio (proportion of market value). State Board of Equalization estimates of the district's assessment ratio are shown below for the years 1960-61, 1961-62, 1962-63, and 1963-64. Assessment ratios for 1958-59 and 1959-60 were estimated to be 25 percent. Note that these ratios do not apply to public utilities, which are assumed to be assessed at 45 percent of market value.

1958-59 - 25.0 percent

1959-60 - 25.0 percent

1960-61 - 25.6 percent

1961-62 - 25.0 percent

1962-63 - 22.4 percent

1963-64 - 22.5 percent

3. Estimated Market Value of Property in the District

1958-59 -- $1,667,441,556

1959-60 -- $1,732,064,938

1960-61 -- $1,776,548,520

1961-62 -- $1,907,822,631

1962-63 -- $2,239,001,157

1963-64 -- $2,414,954,155

4. Important Tax Exempt Property Within the District. The total area of Ventura County, excluding offshore islands, is about 1,180,000 acres. Some 561,000 acres, or about 47.5 percent of the total, is under federal ownership and consists of the Los Padres National Forest and various military installations. These federally owned lands and installations are the major tax exempt properties in the County. The major military facilities consist of Point Mugu Navy

Base, containing 3,953 acres of land situated along the coast southeast of Port Hueneme; Port Hueneme Navy Base, containing 1,644 acres of land situated in the City of Port Hueneme; and Oxnard Air Force Base, containing approximately 750 acres of land situated approximately 5 miles east of downtown Oxnard. That portion of Los Padres National Forest which is within Ventura County, (containing approximately 550,000 acres), overlies most of Ventura County north of the Santa Clara River Valley. In addition to the federally-owned lands, there are 1,650 acres of tax exempt property owned by the Camarillo State Hospital.

5. Concentrations of Valuable Property Just Outside the Area. The Los Angeles Metropolitan area is adjacent to the eastern boundary of Ventura County. The areas of Newbury Park, Thousand Oaks, and the Simi Valley have approximately 18 percent of the population of Ventura County, and more than 50 percent of the working force of these areas are employed in Los Angeles County.1/

6. Ten Largest Taxpayers in the Area. The ten largest taxpayers in the County in the approximate order of their assessed valuation are as follows:

Southern California Edison Company
Shell Oil Company
Tidewater Oil Company
Pacific Telephone Company
General Telephone Company
Standard Oil Company
Texaco Oil Company
Southern Counties Gas Company
Continental Oil Company
Union Oil Company

1/ Ventura County Planning Commission, "Population Estimates County of Ventura", Bulletins No. 10 and 11, July and October, 1963.

These companies account for about 27 percent of the total county tax collections in the agency.

F. Tax Rates on Property in Ventura County

1. Tax rate components	Weighted average tax rates					
	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
County rate	$1.49	$1.63	$1.72	$1.74	$1.74	$1.74
Cities	0.28	0.37	0.39	0.43	0.52	0.54
School districts	3.34	3.56	3.93	3.98	4.16	4.62
Special districts	1.03	0.82	1.02	1.17	1.17	1.16
Total rate	$6.14	$6.38	$7.06	$7.32	$7.59	$8.06

2. Assessment Roll. Generally, taxes for all districts are levied from the same assessment roll.

3. Legal Limits on Tax Rates (in dollars per $100 assessed valuation)

a.	Ventura County	No legal limit
b.	Cemetery districts	$0.20
c.	Drainage districts	No legal limit. (Tax on real property only; bonds and special assessments are authorized.)
d.	Fire protection district	No legal limit. (Tax authorized to retire bonds.)
e.	Flood control district	
	Zone I	$0.20 (Plus tax for bonds.)
	Zones II, III, and IV	$0.40 (Plus tax for bonds.)
f.	Oxnard Harbor	No legal limit for operation and bond repayment; $0.03 for "Capital Outlay".

g.	Ojai Valley Hospital	$0.20 (Plus tax for bonds.)
h.	Montalvo Municipal Improvement District	No legal limit.
i.	County Library	$0.30.
j.	Lighting districts	No legal limit.
k.	Memorial	$0.30. (Plus tax for bonds.)
l.	Moorpark Mosquito Abatement District	$0.40.
m.	Ventura Port	$0.10. (Plus tax for bonds.)
n.	Protection	No legal limit. (Tax on real property only. Bonds are authorized.)
o.	Recreation and Park	$0.50. (Plus tax for bonds.)
p.	Sanitary districts	$1.00. (Plus tax for bonds.)
q.	School districts	$2.00. (Through junior college. Bonded debt subject to additional rates. Increased rates may be allowed under provisions of California Educational Code. Section 20803.)
r.	Soil conservation districts	
	Calleguas, Quail Lake, Simi Valley	$0.02. (Tax on land only, excluding mineral rights.)
	San Fernando	$0.02. (Tax on land only.)
s.	Storm drain maintenance	No legal limit.
t.	County water districts	No legal limit.
u.	Municipal water districts	No legal limit.
v.	Water conservation districts	
	San Antonio	$0.25 for regular assessments. (Tax on land only.) $0.30 for special assessments. (Tax on real property only.)
	Santa Clara	Same
	Simi Valley	$0.25. (Tax on land only.)
	United	$0.25. (Tax on real property only.)
w.	County water works	No legal limit.

G. Record of Tax Collections on Property in Ventura County

1. Tax Collections

Fiscal year	Amount levied	Collection in year of levy		Uncollected at end of fiscal year	
		Amount	Percent	Amount	Percent
1962-63	$ 38,776,765.99	$ 38,337,328.24	98.9	$ 439,437.75	1.1
1961-62	34,439,776.45	34,070,804.64	98.9	368,971.81	1.1
1960-61	31,920,048.95	31,627,850.22	99.1	292,198.73	0.9
1959-60	27,238,600.57	27,042,549.15	99.3	196,051.42	0.7
1958-59	24,727,259.28	24,537,904.04	99.2	189,355.24	0.8
Total	$157,102,451.24	$155,616,436.29	99.0	$1,486,014.95	1.0

2. When Taxes are Due

a. Due dates: One-half of tax levy due on November 1, and one-half on February 1.

b. When delinquent: December 10 and April 10 following due date.

c. Penalties: Penalties attach as of the delinquent date, to the extent of 6 percent of each delinquent installment. No discounts are allowed for prompt payment.

3. Tax Sales. Tax sales of delinquent property are regularly held by the county.

4. Estimated Tax Delinquency. Each year, the county tax collector estimates a tax payment delinquency which is used for budget purposes and for computing necessary tax levies and rates for the ensuing year. The estimate is generally 2 percent of the total levy.

5. Collection of Taxes. The Ventura County Flood Control District does not collect its own taxes or the taxes of other taxing districts. The county tax collector collects all taxes.

H. Receipts and Disbursements of the Ventura County Flood Control District

Income and expense	1959-60	1960-61	1961-62
Cash, beginning of fiscal year	$1,371,334.77	$1,692,948.10	$2,385,570.11
Revenue			
Taxes	994,629.27	1,248,468.07	1,333,236.79
Interest	44,029.86	55,177.82	48,012.90
Bond Revenue	132,786.69	128,671.00	125,955.08
Miscellaneous	41,340.61	479,146.60	245,521.45
Subtotal	$2,584,121.20	$3,604,411.59	$4,138,296.33
Expenditures			
Salaries and wages	$ 130,519.45	$ 183,394.01	$ 218,477.96
Service and supply	113,584.68	130,783.32	221,902.11
Capital outlay	511,873.80	779,590.30	1,349,796.68
Bond expenditure	126,250.00	125,000.00	123,750.00
Miscellaneous	8,955.17	73.85	220,308.80
Subtotal	$ 891,183.10	$1,218,841.48	$2,134,235.55
Balance, end of fiscal year	$1,692,938.10	$2,385,570.11	$2,004,060.78

I. Sinking Fund Operations. There are no sinking funds being operated by the agency at the present time.

J. Future Debt Service Requirements. None exist for the agency as an entity at the present time.

K. Management and Services

1. Fiscal Policies. The district was formed in 1944 and since that time has engaged almost entirely in flood control activity. However, the powers of the district are defined broadly enough so that it may engage in water procurement operations. The district is divided into

K. Management and Services (cont'd)

1. Fiscal Policies. (cont'd)

four zones, and can levy an ad valorem tax on all property within the district. The maximum tax rate in any one year is limited to $0.20 per $100 of assessed valuation in Zone I, and $0.40 in Zones II, III, and IV exclusive of any bonds previously approved. Generally $0.02 of the tax rate established in each zone is used to support the centralized flood control administration budget.

2. General Character and Efficiency of the Management. The management has been effective in its efforts to negotiate a water service contract with the State.

3. Services Performed by the Agency. Thus far the district's primary concern has been the handling and disposal of unwanted waters in such manner as to minimize damage from storm flows and reduce hazards to life and property. Flood control improvements are constructed in part by the district, and in part through the joint efforts of the district and state or federal agencies. The cost of the work accomplished in the flood control district during 1963 amounted to 3.2 million dollars. The district has also acted as a negotiator for a water service contract with the State and upon receiving imported water, will act as a wholesaler of water to local water agencies and districts.

L. Economic Background

1. Land Area. The district encompasses about 1,844 square miles.

2. Population

Year	Population
1940	69,685
1950	114,647
1960	199,138

3. Employment by Major Industry Group[1/]

Industry group	Number employed			
	1960	1961	1962	1963
Agriculture, forestry, and fishing	13,625	13,325	12,100	12,025
Mining	2,575	2,375	2,300	2,300
Construction	4,475	4,825	5,350	5,550
Manufacturing	7,025	7,250	9,000	11,600
Transportation, communication, and utilities	2,825	2,850	3,075	3,200
Trade	12,250	13,050	13,700	14,225
Finance, insurance, and real estate	1,725	1,825	2,075	2,350
Services	9,000	9,400	10,250	10,725
Government	14,700	15,400	16,700	18,175

1/ Source: California Department of Employment.

4. Agriculture[1/]

Crop	Unit	Production of leading crops, by year			
		1961	1962	1963	1964
Fruits and nuts					
Lemons	Tons	308,000	307,107	288,616	402,278
Oranges	Tons	171,140	167,919	217,894	214,185
Strawberries	Tons	5,330	5,687	5,520	8,330
Avocados	Tons	4,275	5,384	4,654	7,296
Walnuts	Tons	2,115	4,308	1,811	2,708
Others	Tons	7,088	8,226	8,351	9,937
Truck crops					
Tomatoes	Tons	149,888	181,713	129,468	139,413
Lettuce	Tons	58,492	53,500	90,136	83,903
Celery	Tons	65,448	64,057	74,700	76,481
Cabbage	Tons	20,318	34,140	24,871	30,646
Beans	Tons	26,234	25,730	22,230	21,597
Others	Tons	65,605	63,172	66,653	67,063
Field crops					
Sugar beets	Tons	21,700	7,770	50,905	114,577
Alfalfa	Tons	22,800	21,840	24,040	18,000
Lima beans	Tons	13,990	15,400	14,500	8,750
Others	Tons	8,011	9,345	8,460	7,226
Livestock					
Milk	Cwt.	2/	642,540	696,480	716,260
Cattle and calves	Cwt.	2/	331,037	350,301	326,060
Hogs	Cwt.	2/	14,876	4,728	5,730
Chicken meat	Lbs.	1,318,000	1,321,816	1,825,880	2,720,496
Chicken eggs	Doz.	14,018,000	17,073,500	26,974,960	34,133,705
Turkey meat	Lbs.	2/	2,460,000	1,540,000	100,000

1/ Source: County Agricultural Commissioner.
2/ Not Available.

5. Industry

a. Principal Industries

(1) Aerospace and electronics

(2) Food and kindred products

(3) Petroleum production and refining

(4) Defense testing, training, and supply

b. Major Establishments in the Area

Rocketdyne Corporation
Northrop Corporation
Oxnard Air Force Base
Point Mugu Naval Air Missile Test Center and Air Base
Point Hueneme Naval Construction Battalion Center
Atomics International
Raytheon Corporation
Shell Oil Company

6. Trade. The cities of Ventura and Oxnard are the leading trading centers of the County, accounting for over half of the County's retail and wholesale trade. The burgeoning communities in the Conejo and Simi Valleys are becoming increasingly important centers of retail trade.

TOTAL TAXABLE RETAIL SALES
VENTURA COUNTY

Cities and unincorporated area	1960	1963	Percent increase
Fillmore	$ 5,559,000	$ 6,349,000	14.2
Ojai	7,393,000	9,316,000	26.0
Oxnard	56,573,000	85,508,000	51.1
Port Hueneme	2,554,000	5,135,000	101.0
Santa Paula	14,888,000	18,049,000	21.2
Ventura	70,931,000	94,021,000	32.6
Unincorporated area	66,995,000	94,774,000	41.5
Total	$224,893,000	$313,152,000	39.2

7. Transportation. Ventura County is served by water, highway, air, and rail facilities. U. S. Highway 101 traverses Ventura County in an east-west direction and passes through Thousand Oaks, Newbury Park, Camarillo, Montalvo, and Ventura. State Highway 126 runs from U. S. 99 to U. S. 101, and passes through Fillmore and Santa Paula. Oxnard is served by State Highway 1, Ojai by State Highways 150 and 393, and Port Hueneme by State Highway 34. The Ventura County Airport adjacent to Oxnard, serviced by Pacific Airlines, is easily reached from the majority of cities in Ventura County. Port Hueneme, the only deep water port between Los Angeles and San Francisco, is a regular port of call for Matson and Saquenay Steamship Lines. The Southern Pacific Railway provides Ventura County with passenger and freight service and Port Hueneme is connected to the Southern Pacific facilities by the Ventura County Railway Company. All cities in Ventura County are served by Greyhound Bus Lines and numerous trucking firms.

8. Natural Resources. Natural gas and oil are the principal natural resources in the County.

M. Financial Data for Ventura County

1. General Data

a. Population

(1) 1950	114,647
(2) 1960	199,138

b. Assessed Valuation

(1) Amount, 1959-60	$ 458,006,950	
(2) Basis of assessment	45.0%	Utilities
	25.0%	All other property
(3) Estimated full valuation	$1,732,064,938	

c. Bonded Debt as of June 30, 1960 $ 50,417,850

d. Tax Levies, 1959-60 $ 27,238,600

2. Per Capita Data (1959-60)

a. Assessed valuation $ 2,300

b. Estimated full valuation $ 8,700

c. Bonded debt $ 253

d. Tax levies $ 137

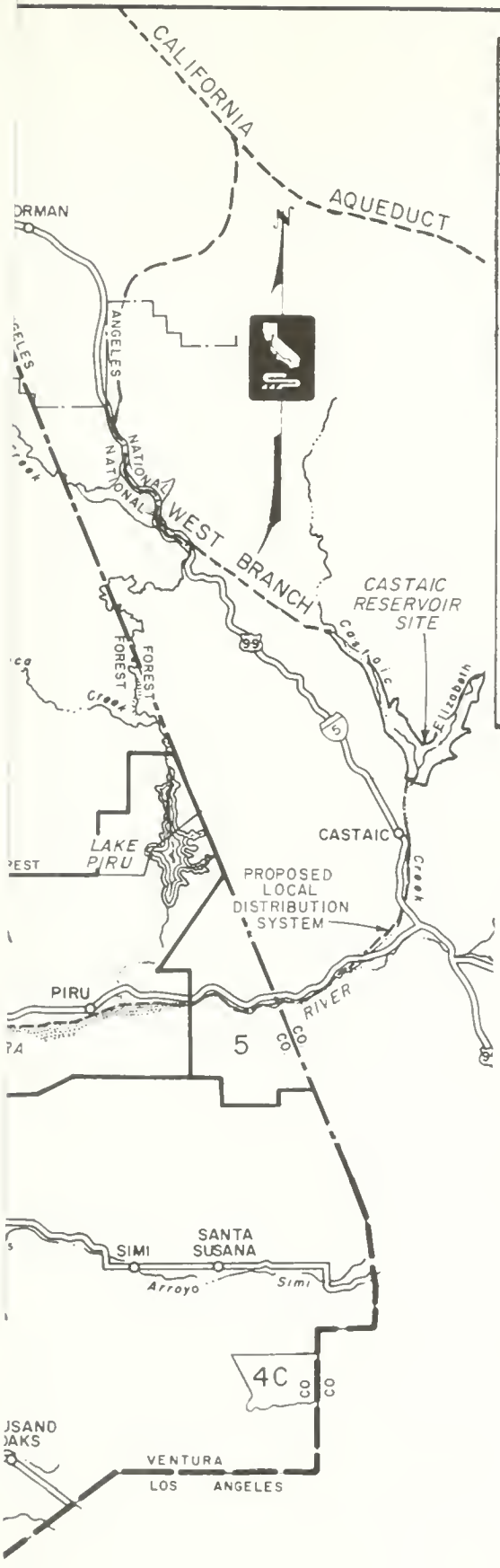
3. Ratios (1959-60)

a. Tax Supported Bonded Debt as a Percent of:

(1) Assessed valuation	11.0%
(2) Estimated full valuation	2.9
(3) Tax levies	185.1

b. Percentage Increase in:

(1) Population, 1950 to 1960	73.7%
(2) Assessed valuation, 1958-59 to 1962-63	23.7
(3) Bonded debt, 1959-1963	106.9
(4) Tax levies, 1958-59 to 1962-63	56.8



LOCATION MAP

LEGEND

MAJOR WATER DISTRICT	WATER SERVICE AREA
Ventura River MWD	1 Ventura River
	2 Sulphur Mountain
United Water Conservation District	3A Santa Clara River
	3B Oxnard Plain
	3C Oxnard Plain
Calleguas MWD	4A Calleguas-Malibu
	4B Calleguas-Malibu
	4C Calleguas-Malibu
	5 Excluded Area
	6 Los Padres National Forest

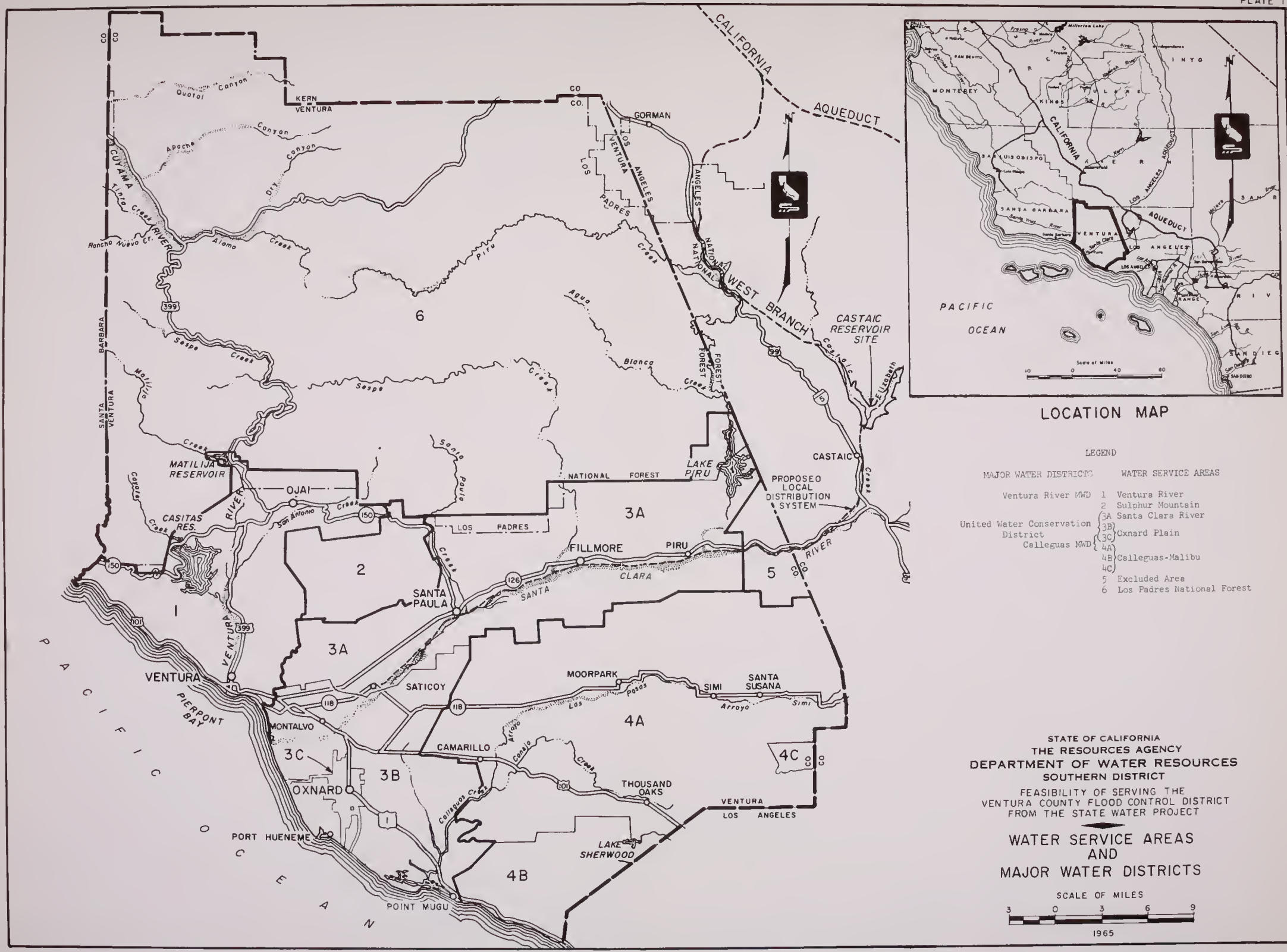
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

FEASIBILITY OF SERVING THE
VENTURA COUNTY FLOOD CONTROL DISTRICT
FROM THE STATE WATER PROJECT

WATER SERVICE AREAS AND MAJOR WATER DISTRICTS

SCALE OF MILES
3 0 3 6 9

1965



LOCATION MAP

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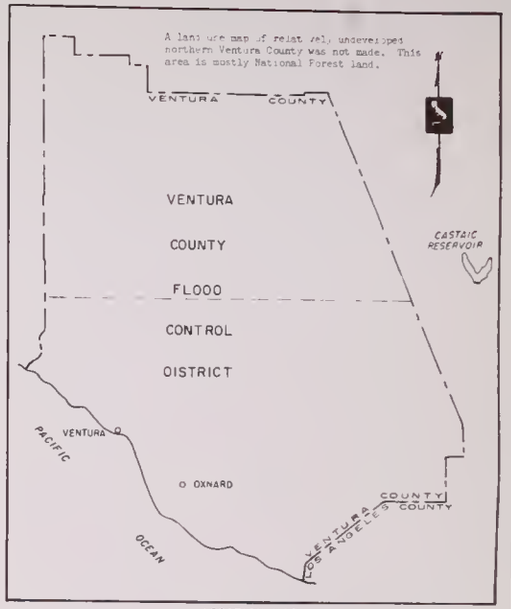

LOCATION MAP

LEGEND

- IRRIGATED AGRICULTURE
- URBAN DEVELOPMENT
- MILITARY

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

FEASIBILITY OF SERVING THE
VENTURA COUNTY FLOOD CONTROL DISTRICT
FROM THE STATE WATER PROJECT

LAND USE IN 1961
(SOUTHERN HALF OF COUNTY)

SCALE OF MILES
2 0 2 4

1965