# MASTER ENVIRONMENTAL ASSESSMENT 1988

# CITY OF OJAI
# MASTER ENVIRONMENTAL ASSESSMENT, 1988

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# INTRODUCTION

## Environmental Review Process

In 1970, the legislature of the State of California passed into law the California Environmental Quality Act (CEQA). In developing the policy basis for the law, the state determined that:

- The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.

- The capacity of the environment is limited, and the government of the state must take immediate steps to identify all critical thresholds for the health and safety of the people. Coordinated actions necessary to prevent such thresholds from being reached must also be taken.

- The long-term protection of the environment shall be the guiding criteria in public decisions.

- Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

It gave public agencies the responsibility of adopting objectives, criteria, and procedures for the evaluation of projects and the preparation of environmental documents.

## Purpose

In January of 1978, the Resources Agency of the State of California issued amendments to the "Guidelines for the Implementation of the California Environmental Quality Act of 1970". One of the substantive changes in the CEQA Guidelines was to allow local governments to prepare a Master Environmental Assessment (MEA). An MEA is intended to function as a comprehensive environmental information base which may be used as a reference document and early warning system in combination with the individual environmental documents required by CEQA for most public and private developments.

## Document Format

This Master Environmental Assessment is an inventory of environmental conditions in the City of Ojai and the City's adopted Sphere of Influence. It generally describes existing conditions of resources in the region then focuses on existing conditions in the City and Sphere of Influence both narratively and graphically.

The MEA is organized such that a resource is initially defined and described. Then the location and condition of the resource is described regionally and locally. City or state standards, policies, and programs related to environmental resources or constraints are located in the individual elements of the General Plan. The additional analysis that is required to fulfill CEQA related to individual components of the General Plan is provided in the CEQA section of this document. An index illustrating the location of topics within the General Plan and Master Environmental Assessment is provided at the beginning of the General Plan.

## Uses of This Document

The Master Environmental Assessment is intended to streamline the time and cost associated with the environmental review process. It is also designed to provide a land-use planning tool identifying area-wide environmental conditions. The intended uses of this document are as follows:

- identify environmental resources and hazards associated with a parcel of land within the City or its adopted Sphere of Influence such that future projects can strive to accommodate or eliminate environmental constraints at the time of initial project design;

- provide a source of basic information which permits City staff and the general public to focus the contents of initial studies and environmental impact reports;

- allow the incorporation by reference of current data and information from the MEA into new environmental reports in order to reduce the volume of the new reports; and

- provide a data base for utilization in land-use planning.

## Revisions and Supplements

The MEA in its present form provides an information base which can be updated with minimal effort. It should be periodically updated through efforts of City staff or the environmental review process.

# REGIONAL AND LOCAL SETTING

## Regional Setting

The City of Ojai is entirely located in the Ojai Valley. The Ojai Valley area is in the northern portion of what is commonly referred to as south Ventura County. Exhibit RL-1 provides an illustration of the City's location relative to other cities, freeways and Ventura County boundaries.

The Ojai Valley is located approximately 10 miles north of the City of Ventura. The Valley is characterized as semi-rural residential, consisting of small communities surrounded by hills and open space. The valley is divided into the Upper Ojai Area (east of the City of Ojai along Highway 150), and the Lower Ojai Area. The Lower Ojai includes the City of Ojai and the unincorporated communities of Meiners Oaks, Mira Monte, Oak View, and Casitas Springs.

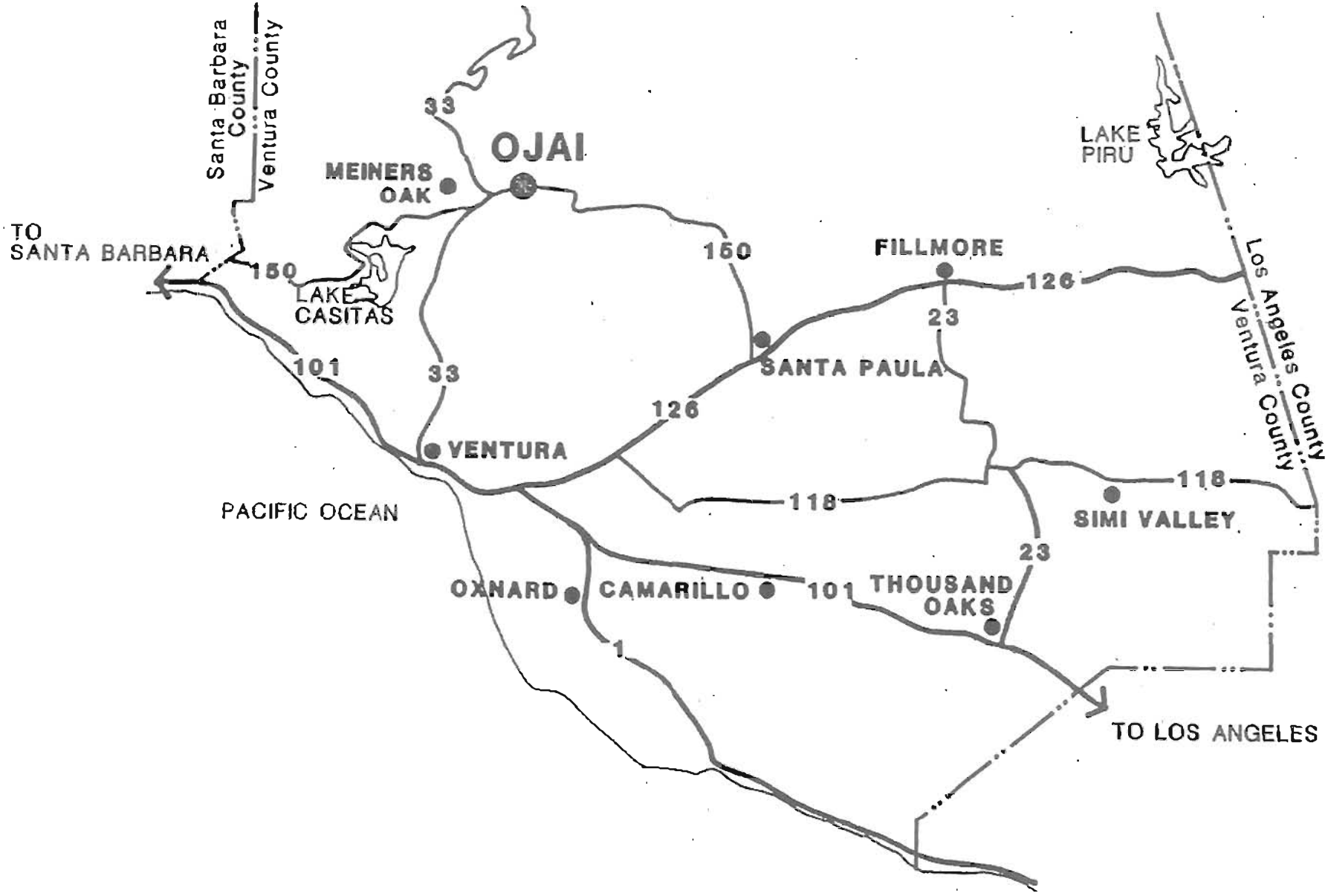
The population of the City of Ojai is 7,688 (1986). In conjunction with the surrounding Ojai Valley and Ventura River Valley region, the area's population totals over 26,000 (County of Ventura Resource Management Agency, 1985). Elevations range from 750 feet (Lower Valley) to 1,200 feet (Upper Valley). The majority of residential development consists of single family homes, with a small proportion of multi-family complexes. Numerous mobile home parks also exist, the majority of which are located southwest of the City in the unincorporated (County) communities along Highway 33. Most commercial and other non-residential development is small-scale, serving local residents.

### REGIONAL PLANNING EFFORTS

The County of Ventura and the Ventura County Local Agency Formation Commission (VCLAFCO or LAFCO) have established several planning methods for guiding development within the County as noted below. For example, countywide growth and development is directed into designated "growth" and "non-growth" areas. LAFCO in coordination with local governments has defined "spheres of influence" and "areas of interest" for each city within the County. The County has also developed planning policies that relate to communities or geographic areas of the County. The City of Ojai is located within the Ojai Area Plan.

#### Growth Control

The County of Ventura, in cooperation with cities in the County, has established a system to monitor land development and to regulate population growth throughout the County. The County's Resource Management Agency developed comprehensive demographic/land use information systems to document and project data pertaining to population and growth. This information is utilized in land use planning for the County and is the source for the population statistics given in this assessment.




MEA: REGIONAL LOCATION

# GENERAL PLAN

CITY OF OJAI

SANCHEZ
SOURCE: TALARICO

E: RL-1

The Ventura County Air Pollution Control District prepared a plan to control air pollution by limiting population growth. This has been adopted by local jurisdictions within the County. The method utilized to limit population growth is controlling the number of building permits.

## Growth and Non-Growth Areas

In order to provide for orderly and cost-effective development, as opposed to "leapfrog" development, the County of Ventura has encouraged all new development to occur in and around cities. These areas are referred to as growth areas.

A growth area is defined by the County of Ventura as an area in which urbanization has occurred or is expected to occur under current city and county general plans. Development is anticipated to occur in a significant portion of a growth area but not necessarily extend to the outer boundaries. Growth areas are located around cities and tend to occupy an area similar to a city's designated sphere of influence.

A non-growth area is the opposite of a growth area. Significant urban development is not anticipated or encouraged in these areas.

The Ojai Growth Area (OGA) boundary generally encompasses the City of Ojai, its Sphere of Influence, and small portions of land to the east and south. The OGA currently (1985) has a population of 9,070, with a population projection of 9,630 by the year 2000 and 9,760 by the year 2010. The Ventura River Valley GA generally includes the unincorporated communities of Meiners Oaks, Mira Monte, Casitas Springs, Oak View, and other residential areas along the west side of the Ventura River near Lake Casitas. The 1985 population of this GA was 13,500, with a population estimate of 14,680 by the year 2000 and 15,500 by the year 2010.

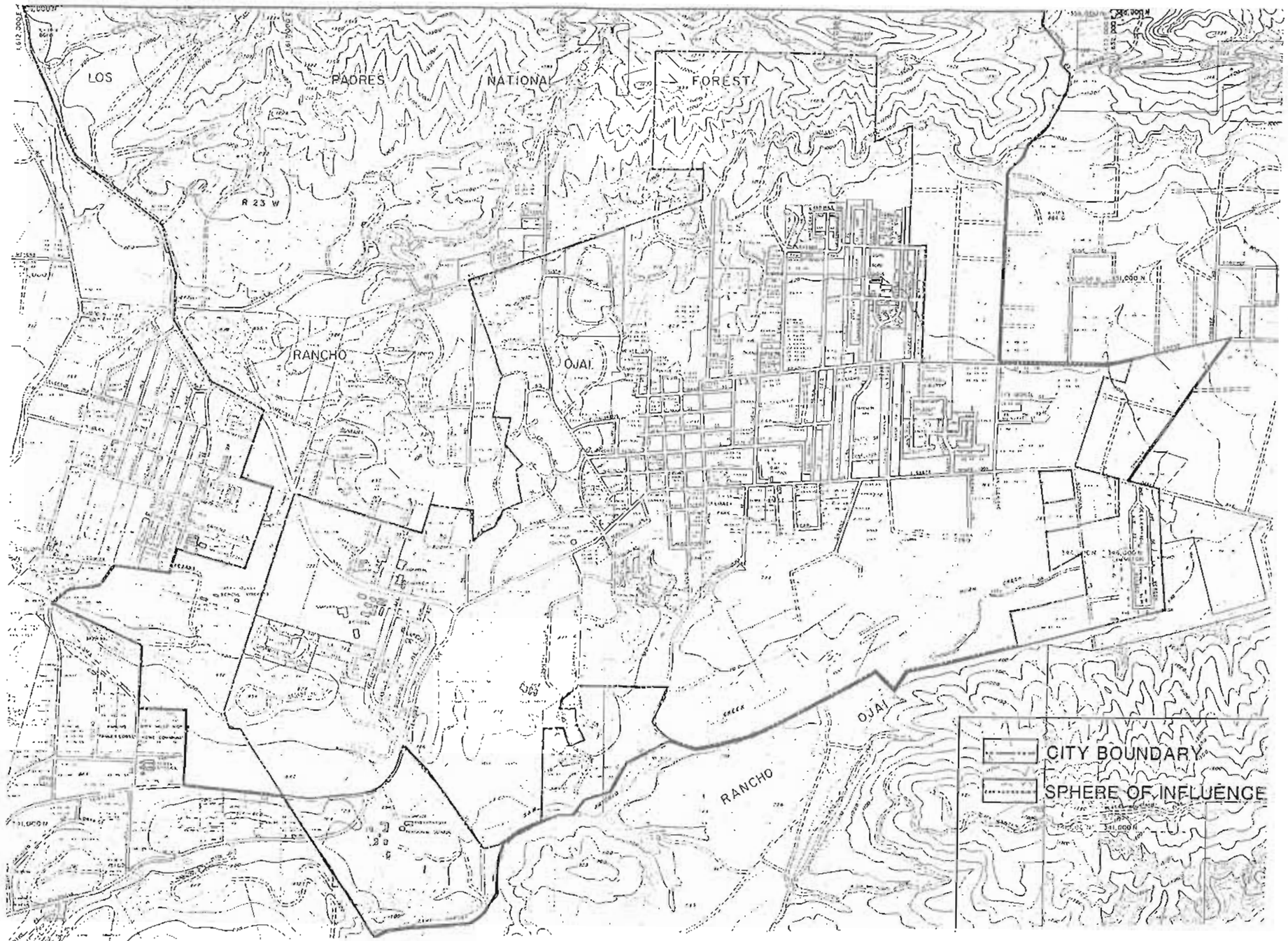
Together, the Ojai and Ventura River Valley Growth Areas have an estimated combined population of 22,557 (1986). Future population estimates for these two growth areas are 23,460 for the year 1990, 24,310 for the year 2000, and 25,260 for the year 2010.

## Sphere of Influence

A Sphere of Influence is a defined area established by the City and the Local Agency Foundation Commission (LAFCO) which represents the "probable ultimate boundary" of the City. The adoption of Sphere of Influence is required by State Government Code Sections 56076, 56301, 56378, and 56425. The Sphere of Influence is depicted on Exhibit RL-2.

## Area of Interest

An area of interest is also adopted by LAFCO and the municipality for which it is established. The area of interest concept is unique to Ventura County and was formulated to divide the County into major geographic areas containing a single city (or special district) for planning purposes. These areas are larger than a city's sphere of influence and do not necessarily correspond to any city or other boundary. Although a city does not have direct




MEA: CITY BOUNDARY/SPHERE OF INFLUENCE

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: LAFCO

EXHIBIT RL-2

jurisdiction over its area of interest, the area of interest is intended to reflect a community's identity and to designate an area for which a community could give consideration and develop planning policies.

The Ojai General Plan boundary is within the Ojai Area of Interest. The Area of Interest generally encompasses the City of Ojai, its Sphere of Influence, a significant amount of land to the east and south, and small portions of land to the northwest and west.

In total, the Ojai Area of Interest occupies about 27,622 acres or 43.2 square miles. The Ventura River Valley Area of Interest lies to the west, the Ventura Area of Interest lies to the south, and the Santa Paula Area of Interest lies to the east. To the north of the City of Ojai is the Los Padres National Forest which is not divided into areas of interest.

Ventura County General Plan

The County of Ventura adopted the Ojai Valley Area Plan (OVAP) in 1979 as a portion of the County General Plan Land Use Element. The latest revision to the plan occurred in 1982. The Plan was prepared by the Ojai Valley Area Plan Citizen Advisory Committee and comprises goals, policies, and implementation procedures and a land use map. An environmental impact report for the area was prepared concurrently with the Plan. The OVAP recognizes the geographic separation and associated unique land use characteristics of the Ojai Valley, which are reflected in the County's General Plan Land Use Element's planned land use categories for the area.

The OVAP is consistent with the goals and policies of the Countywide General Plan and the adopted 208 Areawide Treatment Management Plan. Implementation measures proposed in the 208 Plan and the County Air Quality Management Plan (AQMP) are incorporated into the OVAP. The OVAP and City of Ojai General Plan are also consistent. The City and County have both adopted ordinances designed to implement the 208, AQMP, and Countywide Planning Program population goals for the Ojai Valley.

Adopted goals of the OVAP that are specifically relevant to the Ojai General Plan are summarized below. A complete description of Issues, Goals, and Policies of the OVAP are provided in the Plan's text which is on file with the County of Ventura Planning Department, and the City of Ojai Planning and Building Department.

General:

- To develop, protect and maintain a healthful and relaxing environment.
- To encourage and institute planning measures that indicate respect for the area as a special place of unusual natural beauty and varied cultural and historic significance.

- To make provisions for maintaining the character of the Ojai Valley, while recognizing a need to maintain a balance between "no-growth" and "controlled growth".

- To provide a rate of population growth so as to provide a better opportunity to develop and maintain a healthful and safe environment.

- To live within our current, existing resources with regard to public services, if possible, so as to minimize economic pressures for change upon the Valley's urban and rural/agricultural residents.

- To encourage and maintain a perspective on the Ojai Area that will contribute to viewing problems or proposals in one area as having a relationship with, and an impact on, the area as a whole and the County in General.

- To coordinate planning and implementation within all levels of government, local agencies and special districts so as to aid the community in meeting its expressed goals.

Residential Land Use

- Residential land use pattern in the Valley shall minimize environmental degradation.

- Provisions should be made for all segments of the population.

Open Space:

- Natural hazard and natural resource areas should be maintained as open space lands.

- Provision should be made for recreational needs for the Valley residents.

- Scenic qualities of certain roads in the Ojai Valley should be maintained.

Traffic/Circulation:

- Acceptable and safe levels of service on Highway 33 demand a safe highway from Foster Park to Ojai. Modifications should include traffic signals and turn lanes.

- Acceptable and safe levels of service on Highway 150 should be achieved by modifications to selected sections, while maintaining its scenic nature.

- Acceptable and safe levels of service on all other Valley roads should be maintained at their present adequate level while preserving their scenic qualities.

- All new roads shall be designed to provide for safe and efficient travel.

- Greatest effort should be undertaken to encourage better public transit facilities in the Valley, in order to alleviate traffic congestion and air pollution.

Sanitation:

- Wastewater treatment plant capacity should be retained for new development, and should be reserved for existing development which is currently served by private systems, but would be sewered in the future.

Police:

- Adequate police protection should be promoted and maintained.

Water:

- Adequate supplies of water should be available to all valley residents.

Air Quality:

- A level of air quality which protects the public health, safety and welfare, and meets or surpasses State and Federal primary and secondary standards should be promoted.

# LAND USE

(TO BE PROVIDED WITH UPDATED LAND USE ELEMENT)

# TRAFFIC/CIRCULATION

## Regional Setting

### ROADWAY CHARACTERISTICS

Existing roadways in the Ojai vicinity are shown on Exhibit TC-1. Regional access is provided by State Route 33 from the City of Ventura to the south and Santa Maria/ Bakersfield from the north. State Route 150 is an east/west roadway providing access to and from Santa Paula to the east and Santa Barbara to the west.

State Route 33 is a fully improved freeway between the Ventura Freeway (S.R. 101) and Casitas Springs. Between Casitas Springs and the City of Ojai, the roadway primarily consists of two lanes. It widens to four lanes and a painted median through the community of Oak View. Approximately 13 miles from the City of Ventura, the roadway intersects and converges with State Route 150 (Baldwin Road). The roadway continues northeasterly as State Routes 33 and 150 to Maricopa Highway in the City of Ojai. State Route 33 then continues as Maricopa Highway north towards the Bakersfield/Santa Maria area and State Route 150 (Ventura Avenue/Ojai Avenue) continues easterly through the City of Ojai towards Santa Paula. The intersection of Ventura Avenue/Ojai Avenue (State Route 150) and Maricopa Highway (State Route 33) is controlled by a multi-phase traffic signal.

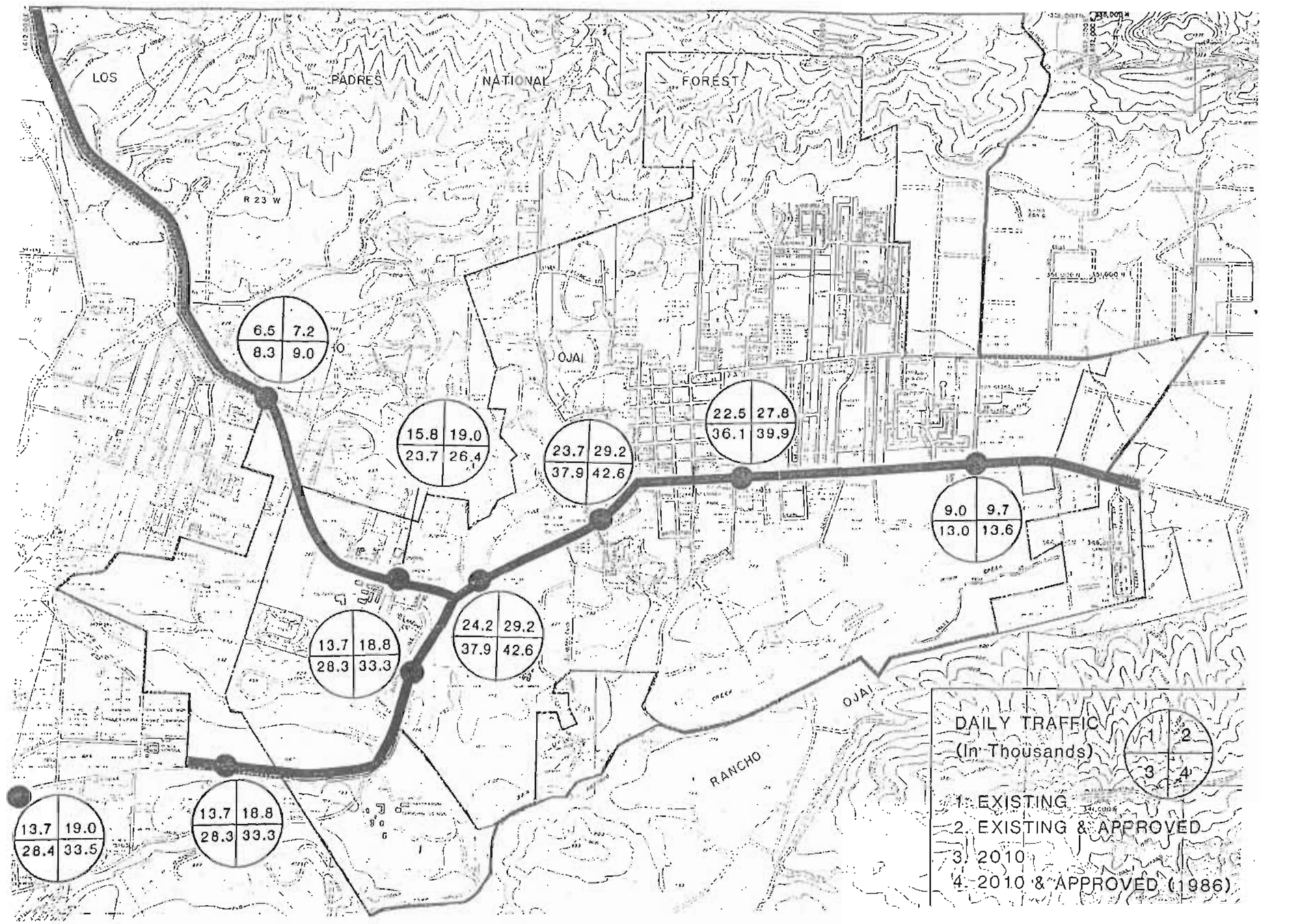
Ventura Avenue/Ojai Avenue (State Route 150) is improved easterly of Maricopa Highway intersection to provide approximately 45 feet between curbs with one lane in each direction and a painted median and restricted parking. Westerly of Maricopa Highway, the roadway is constructed to provide one lane in each direction and a left-turn lane at intersections.

Creek Road is a two-lane rural roadway located south of Ventura Avenue/Ojai Avenue. The roadway parallels State Routes 33 and 150 to the south of Oak View. It is an extension of Ventura Street.

### EXISTING TRAFFIC CONTROL AND CONDITIONS

There are two traffic signals in the City of Ojai and a traffic signal at Ventura Avenue and Baldwin Avenue. Signals are located at the intersection of Maricopa Highway and Ventura Avenue/Ojai Avenue and at the intersection of Ojai Avenue and Signal Street.

Existing traffic volumes for the street system are depicted on Exhibit TC-1 and Table TC-A. The data presented represents 1985 daily traffic volumes obtained from the California Department of Transportation and 1986 data from the County of Ventura.




MEA: EXISTING/FUTURE TRAFFIC VOLUMES

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: BDI & SANCHEZ TALARICO ASSOC. INC.

EXHIBIT TC-1

# TABLE TC-A
## SUMMARY OF DAILY ROADWAY CAPACITY
## EXISTING AND EXISTING PLUS APPROVED PROJECTS[1]

| LOCATION | EXISTING CONDITIONS EXISTING ROADWAY CAPACITY LOS "C" | DAILY TRAFFIC (VEHICLES) | V/C RATIO[1] | EXISTING PLUS APPROVED PROJECTS ROADWAY CAPACITY | V/C RATIO[1] |
|---|---|---|---|---|---|
| VENTURA AVENUE | | | | | |
| (S.R. 33/150) | | | | | |
| s/o Baldwin Road | | | | | |
| (S.R. 33) | 15,000 | 18,000 | 1.20 | 24,500 | 1.63 |
| n/o Baldwin Road | | | | | |
| (S.R. 150) | 15,000 | 13,700 | 0.91 | 19,000 | 1.27 |
| Loma Drive and | | | | | |
| Hermosa Road | 15,000 | 13,700 | 0.91 | 18,800 | 1.25 |
| s/o Maricopa Hwy | 15,000 | 13,700 | 0.91 | 18,800 | 1.25 |
| MARICOPA HIGHWAY | | | | | |
| (S.R. 33) | | | | | |
| w/o Ventura Ave/ | | | | | |
| Ojai Avenue | 30,000 | 15,800 | 0.53 | 19,000 | 0.63 |
| n/o El Roblar Dr/ | | | | | |
| Cuyama | 15,000 | 6,500 | 0.43 | 7,200 | 0.48 |
| OJAI AVENUE | | | | | |
| (S.R. 150) | | | | | |
| e/o Maricopa Hwy | 20,000 | 24,200 | 1.21 | 29,200 | 1.46 |
| e/o Country Club | 20,000 | 23,700 | 1.19 | 29,200 | 1.46 |
| e/o Signal St. | 20,000 | 22,500 | 1.13 | 27,800 | 1.39 |
| e/o Gridley Road | 15,000 | 9,000 | 0.60 | 9,700 | 0.65 |
| BALDWIN ROAD | | | | | |
| (S.R. 150) | | | | | |
| w/o Ventura Ave | | | | | |
| (S.R. 33/150) | 15,000 | 7,800 | 0.52 | 8,300 | 0.55 |

Source: BDI

[1] Based on Existing Roadway LOS "C" Daily Capacity

Existing roadway capacity in the area is shown on Table TC-A. Capacities were compared against existing roadway volumes. The volume-to-capacity ratios were then calculated. The results of these analyses are also depicted on Table TC-A.

Review of Table TC-A shows that portions of major roadways are operating at or over available capacity. Ventura Avenue south of Baldwin Road is currently over capacity. Ventura Avenue/Ojai Avenue west of the Maricopa Highway intersection is also over capacity. Ojai Avenue from east of Maricopa Highway to Montgomery Street is over capacity.

Please refer to the Ojai Recreation Element for a discussion of bicycle facilities.

## FUTURE TRAFFIC CONDITIONS

Future traffic volumes and volume-to-capacity (V/C) ratios are depicted in Table TC-B. Table TC-B indicates existing conditions and existing plus year 2010 conditions with the inclusion of Ojai Valley proposed projects (as of December 1986). The proposed projects (1986) are incorporated in the 2010 traffic conditions to depict a view of 2010 traffic on these roadways.

As illustrated in Table TC-B, roadways are over capacity in the year 2010. Ventura Avenue is over capacity at year 2010 projections. Ventura Avenue/Ojai Avenue east of Maricopa Highway and west of the eastern City limits is also over capacity.

# TABLE TC-B
## SUMMARY OF YEAR 2010
## DAILY ROADWAY CAPACITY[1]

| LOCATION | EXISTING PLUS 1984 TO 2010 GROWTH EXISTING ROADWAY CAPACITY LOS "C" | EXISTING PLUS 1984 TO 2010 GROWTH DAILY TRAFFIC (VEHICLES) | V/C RATIO[1] | EXISTING PLUS 1984 TO 2010 GROWTH PLUS ROADWAY CAPACITY | V/C RATIO[1] |
|---|---|---|---|---|---|
| VENTURA AVENUE | | | | | |
| (S.R. 33/150) | | | | | |
| s/o Baldwin Road (S.R. 33) | 15,000 | 35,500 | 2.36 | 41,600 | 2.77 |
| n/o Baldwin Road (S.R. 150) | 15,000 | 28,400 | 1.89 | 33,500 | 2.23 |
| Loma Drive and Hermosa Road | 15,000 | 28,300 | 1.89 | 33,300 | 2.22 |
| s/o Maricopa Hwy | 15,000 | 28,300 | 1.89 | 33,300 | 2.22 |
| MARICOPA HIGHWAY | | | | | |
| (S.R. 33) | | | | | |
| w/o Ventura Ave/ Ojai Avenue | 30,000 | 23,700 | 0.79 | 26,400 | 0.88 |
| n/o El Roblar Dr/ Cuyama | 15,000 | 8,300 | 0.55 | 9,000 | 0.60 |
| OJAI AVENUE | | | | | |
| (S.R. 150) | | | | | |
| e/o Maricopa Hwy | 20,000 | 37,900 | 1.90 | 42,600 | 2.13 |
| e/o Country Club | 20,000 | 37,900 | 1.90 | 42,600 | 2.13 |
| e/o Signal St. | 20,000 | 26,500 | 1.32 | 27,100 | 1.36 |
| e/o Gridley Road | 15,000 | 13,000 | 0.87 | 13,600 | 0.91 |
| BALDWIN ROAD | | | | | |
| (S.R. 150) | | | | | |
| w/o Ventura Ave (S.R. 33/150) | 15,000 | 9,100 | 0.46 | 9,600 | 0.64 |

Source: BDI

[1] Based on Existing Roadway LOS "C" Daily Capacity

# AIR QUALITY

## Introduction

The City of Ojai is regionally located in the South Central Coast Air Basin (SCCAB) as shown in Exhibit AQ-1. This air basin encompasses San Luis Obispo, Santa Barbara, and Ventura Counties. Air quality within the SCCAB is monitored at various stations throughout the basin and in Ventura County. It is managed by the Ventura County Air Pollution Control District.

The local airshed for the City of Ojai is the Ojai Valley airshed. Several factors influence air quality in a particular airshed. These factors include meteorology (prevailing winds, temperature, temperature inversions, topography (mountains tend to trap air pollutants), basin-wide air pollutant emissions (from motor vehicles, industry, construction, etc.), and local emissions.

Since the City of Ojai is geographically bounded by mountains to the north and south, it experienced air quality similar to the entire Ojai Valley. Air quality in the City is addressed as air quality within the Ojai Valley Airshed as a whole.

The following sections discuss the factors mentioned above, air quality management, and trends in air quality as they relate to the Ojai Valley and the City of Ojai.

## Ojai Valley Airshed

### METEOROLOGY/CLIMATE

The climate of the Ojai Valley is controlled by the interaction of semi-permanent weather features with the topography surrounding the valley. Local climatic conditions are characterized by warm summers, mild winters, infrequent cloudiness or rainfall, light winds, and comfortable humidity levels. The bowl-like topography of the valley leads to frequent air stagnation that traps smog within the local airshed. Because of this limited dispersive capacity within the Ojai Valley, local air quality is extremely sensitive to further growth that may contribute additional air pollutants to the existing burden.

Temperatures in Ojai average 61 degrees Fahrenheit annually. Temperatures range from the upper 30's on winter mornings to the low 90's on summer afternoons. Although temperatures below 20 degrees and over 110 degrees have been recorded in almost 80 years of climatic measurements at Ojai, such extremes are very rare. About 80 summer afternoons reach 90 degrees while 25 winter mornings drop to freezing, but maximum and minimum temperatures usually do not fluctuate greatly from these limits.


# GENERAL PLAN

## CITY OF OJAI

MEA: SOUTH CENTRAL COAST AIR BASIN

SOURCE: AQMD

EX. AQ-1

Rainfall is confined mainly to the "wet" season from late November to early April, and averages 20 inches per year. Most summer months are completely dry. Measurable rain falls on 24 days per year with 12 of those days experiencing moderate and occasionally heavy rain. Since much of the local precipitation falls from the fringes of mid-latitude storms, a shift in the storm track of a few hundred miles can mean the difference between wet winters such as 1983 or 1985, and a very dry one as in 1984.

Winds in the Ojai Valley are steered by the surrounding topography and follow a well-defined daily cycle. During the night, cool air drains off the surrounding slopes, especially from the north and east. Cold air pools on the valley floor while a pocket of warm air remains trapped aloft. This warm pocket, in conjunction with the light winds, forms shallow temperature inversions that trap any localized emissions near their source. After sunrise, rising air along the heated slopes draws air up the Ventura River Valley with light south winds during the morning and early afternoon. These winds bring air pollutants generated by petroleum operation south of Ojai into the Ojai Valley. Some of the reactive hydrocarbon and nitrogen oxides generated by these operations may undergo chemical reactions and contribute to valley smog levels.

In the late afternoon, the sea breeze usually "breaks through" across Casitas Pass with the intrusion of cool, marine air of moderate speeds. On warm, sunny afternoons, the arrival of the sea breeze with a shift of the wind into the southwest is very noticeable. This marine layer is sufficiently strong to minimize any local air stagnation, but this cool layer capped by warm, sinking air aloft is itself a sub-inversion layer in which Santa Barbara County emissions, especially from offshore oil activities, are trapped.

## AIR POLLUTION METEOROLOGY

Air pollution (photochemical smog) levels in excess of allowable standards has been documented for more than a decade in the Ojai area. This degraded air quality has generally been attributed to a combination of recirculation of pollutants from the Los Angeles urban complex during nocturnal offshore flow; from petroleum processing activities in the Ventura River Valley during morning, up-valley flow; from Santa Barbara offshore oil activities during onshore winds across Casitas Pass; and from locally generated emissions. The complexity of Ojai's unique topographic and meteorological relationships makes it difficult to identify any single process as the primary mechanism for local smog levels. The same complexity also makes it difficult to develop a successful strategy to ultimately meet the clean air standards for photochemical smog in the Ojai Valley.

The complexity of emissions/air pollution interaction in the Ojai Valley has been confirmed in a number of regional air quality studies. Taylor (1977) in his study on county air pollution patterns concluded:

> Emissions within the mostly rural, low-population valley alone do not appear to be of sufficient magnitude to cause excessive...ozone values; it has long been suspected, therefore, that much of Ojai's ozone burden results from transport of pollutants into the valley from outside areas.

Thuman (1977) from the Ventura County Air Pollution Control District (APCD) reached the same conclusion when he stated:

> As a consequence of the frequent prevailing daytime flow of marine air through the confined passage toward the Ojai Valley under inversion conditions, substantial quantities of (smog precursors) may be transported into the Ojai Valley from sources along the Ventura River Valley, the coast, and in the Santa Barbara Channel. Smog levels may then build up in the valley as the venting of polluted air is reduced by the inversion and surrounding mountains. Although frequent wind flow through the Ventura River Valley is believed to account for a substantial portion of transport of smog and smog forming materials into the Ojai Valley, wind flowing from other means into the valley must also be considered.

The combination of average wind speeds in the Ojai Valley (about one-half of the wind speeds across the Oxnard Plain) and the fact that the Ojai Valley is located much closer to the base of the regional marine inversion (leaving a very shallow layer into which pollutants are mixed) means that small changes in emission levels may have a non-negligible impact on valley air quality. Any proposed new growth of the Ojai area must be considered within the context of this extremely limited dispersive capacity.

## EXISTING AIR QUALITY

### Ambient Air Quality Standards (AAQS)

Ambient Air Quality Standards (AAQS) are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 has since been extended to 1987 for national AAQS, and may require further extension in air quality problem areas like Southern California. Because California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table AQ-A.

## TABLE AQ-A
## AMBIENT AIR QUALITY STANDARDS

| Pollutant | Averaging Time | California Standards | | National Standards | | |
|---|---|---|---|---|---|---|
| | | Concentration | Method | Primary | Secondary | Method |
| Oxidant | 1 hour | 0.10 ppm (200 ug/m³) | Ultraviolet Photometry | — | — | — |
| Ozone | 1 hour | — | — | 0.12 ppm (235 ug/m³) | Same as Primary Standard | Ethylene Chemiluminescence |
| Carbon Monoxide | 8 hour | 9.0 ppm (10 mg/m³) | Non-Dispersive Infrared Spectroscopy (NDIR) | 10 mg/m³ (9 ppm) | Same as Primary Standards | Non-Dispersive Infrared Spectroscopy (NDIR) |
| | 1 hour | 20 ppm (23 mg/m³) | | 40 mg/m³ (35 ppm) | | |
| Nitrogen Dioxide | Annual Average | — | Gas Phase Chemiluminescence | 100 ug/m³ (0.05 ppm) | Same as Primary Standard | Gas Phase Chemiluminescence |
| | 1 hour | 0.25 ppm (470 ug/m³) | | — | | |
| Sulfur Dioxide | Annual Average | — | Ultraviolet Fluorescence | 80 ug/m³ (0.03 ppm) | — | Pararosaniline |
| | 24 hour | 0.05 ppm (131 ug/m³) | | 365 ug/m³ (0.14 ppm) | — | |
| | 3 hour | — | | — | 1300 ug/m³ (0.5 ppm) | |
| | 1 hour | 0.5 ppm (1310 ug/m³) | | — | — | |
| Suspended Particulate Matter ($PM_{10}$) | Annual Geometric Mean | 30 ug/m³ | $PM_{10}$ | — | — | — |
| | 24 hour | 50 ug/m³ | | — | — | |
| Suspended Particulate Matter | Annual Geometric Mean | — | — | 75 ug/m³ | 60 ug/m³ | High Volume Sampling |
| | 24 hour | — | | 260 ug/m³ | 150 ug/m³ | |
| Sulfates | 24 hour | 25 ug/m³ | Turbidimetric Barium Sulfate | — | — | — |
| Lead | 30 day Average | 1.5 ug/m³ | Atomic Absorption | — | — | — |
| | Calendar Quarter | — | — | 1.5 ug/m³ | Same as Primary Standard | Atomic Absorption |
| Hydrogen Sulfide | 1 hour | 0.03 ppm (42 ug/m³) | Cadmium Hydroxide STRactan | — | — | — |
| Vinyl Chloride (Chloroethene) | 24 hour | 0.010 ppm (26 ug/m³) | Tedlar Bag Collection, Gas Chromatography | — | — | — |
| Visibility Reducing Particles | 1 observation | In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70% | | — | — | — |

Source: California Air Resources Board, 1984.

## Emissions Inventory

The air quality planning process entails determining how much air pollution is released during a given day and then calculating how well such emissions will be diluted or how much chemical interaction will occur before these emissions reach a particular receptor population. If a relationship between emissions and resulting ambient air quality can be established, then one can determine how much air quality might increase or decrease in response to an increase or decrease in the emission level.

The first step in this process is to develop an accurate inventory of current emission levels. The Ventura County Air Pollution Control District is continuously updating its emissions estimates, but the last comprehensive inventory dates back to 1979. That inventory is shown in Table AQ-B.

Assuming that observed air quality is directly proportional to the volume of air pollutants released, Ojai air quality appears to be heavily dominated by oil production sources in the Ventura River Valley. Oil production (not counting the Outer Continental Shelf [OCS] activity contribution) generates about one-half the reactive organic gases and about 70 percent of nitrogen oxides, the two main ingredients that combine to form petrochemical air pollution.

Table AQ-B also shows that the Ojai Valley has a much lower pollutant emission level, but has about the same smog levels as the rest of Ventura County. This generally confirms the conclusion that the Ojai area itself generates too few emissions to be solely responsible for observed air pollution distributions. Oil production activities in both the Ventura River Valley and Santa Barbara County offshore oil fields certainly contribute significantly, but inter-airshed transport between the Oxnard Plain and the Ojai Valley, or even inter-basin transport between the Valley and the Los Angeles Basin are both possible contributing factors to Ojai Valley air quality distributions.

## Baseline Air Quality

Compliance with the minimum clean air standards is determined by ambient air quality measurements made by the APCD at its Ojai monitoring station on Maricopa Highway. Measurements for ozone have been made with a few interruptions since 1971, and a few other parameters such as total suspended particulates (dust) have also been measured for selected periods. Ozone is the only pollutant that frequently exceeds the applicable national standard. It has received the greatest attention in Ojai Valley air quality planning.

## TABLE AQ-B
## OJAI VALLEY EMISSIONS INVENTORY (tons/day)

| EMISSIONS SOURCE | POLLUTANT | | | | |
|---|---|---|---|---|---|
| | CO | ROC | NOx | SO2 | TSP |
| APCD Permitted Sources | 2.22 | 6.46 | 17.15 | 0.04 | 0.30 |
| On-Road Population | 18.75 | 0.12 | 0.88 | 0.10 | 0.07 |
| Off-Road Equipment | 1.03 | 0.14 | 0.25 | 0.07 | 0.05 |
| Ships, Trains, Planes | 0.45 | 0.15 | 0.07 | 0.03 | 0.01 |
| On-Road Comm'l, and Ind'l | 2.46 | 0.12 | 0.88 | 0.10 | 0.07 |
| Mowers, Saws, Edgers | 5.11 | 0.21 | 0.03 | 0.01 | 0.01 |
| Fires (Ag., Struct., etc.) | 4.06 | 0.68 | 0.02 | 0.00 | 0.59 |
| Miscellaneous | 0.36 | 3.12 | 1.63 | 0.13 | 5.19 |
| VALLEY TOTAL | 38.46 | 13.73 | 23.02 | 0.57 | 6.52 |

Source: Sanchez Talarico Associates, Inc.

Notes: Inventory year was 1979.

Permitted source emissions are primarily fuel burned for oil recovery.

Miscellaneous ROC emissions are mainly gasoline, paints, thinners, solvents.

Miscellaneous TSP emissions are unpaved and paved roads and construction.

Ozone concentrations in Ojai were well above the California first stage alert level of 0.20 ppm for one hour during the early 1970s; they stabilized at just below the alert level from 1976 through 1982. Maximum annual levels dropped significantly in 1983-84 suggesting that ozone attainment in Ojai may very well occur in this decade as predicted by the APCD. They rose again in 1985 to near the first stage smog alert level such that the attainment forecast is perhaps optimistic if the 1985 readings are indicative of the trend for the rest of this decade.

Despite the trend reversal in maximum ozone exposure, the number of days on which the national standard of 0.12 ppm for one hour has been exceeded has followed the same pattern of a dramatic decrease through 1976, a plateau of 20-30 violations per year from 1976 through 1982, and another sharp drop in 1983-85. Table AQ-C shows a year-by-year profile of ozone concentrations and violations at Ojai since 1977. The drop in the number of violations of the state standard from around 100 days per year to around 30, and the drop in the national standard violations from around 30 per year less than 10 is certainly indicative that air quality in the Ojai Valley has improved significantly even if the annual maxima do not properly reflect such a trend. As noted in the footnote to Table AQ-C, the 1985 ozone data may not be fully representative of the total annual number of violations because of a prolonged station outage during the summer smog season, but an improvement trend certainly exists - whatever its true magnitude.

Other pollutants measured in Ojai by the APCD or during special studies showed generally good air quality in the valley. Total suspended particulate (TSP) levels periodically exceeded the 24-hour California TSP standard, but the less stringent national primary TSP standard has been exceeded only once in the entire period of record in Table AQ-C. Since one violation per year is allowed, the Ojai Valley is technically in compliance with the national particulate standard.

It has now been recognized that TSP is not a good indication of the potential health effects of airborne dust because the larger and heavier particles are readily filtered by human breathing passages. A new standard for small, inhalable particulates has been promulgated in California and proposed nationally. There are no data in the Ojai area by which to characterize baseline levels of such small dust particles. With generally low TSP levels, it is assumed that the respirable fraction is similarly small and healthful in the Valley.

## FUTURE AIR QUALITY

### Air Quality Management Plan

The Clean Air Act Amendments of 1977 require that an Air Quality Management Plan (AQMP) be developed within any state where national AAQS are being violated. This plan must demonstrate attainment by 1982 with a possible extension to 1987 if reasonable further progress was demonstrated by the 1982 deadline. In Ventura County, as a part of the South Central Coast Air Basin (SCCAB), the AQMP was prepared by the APCD with input from other county staffs and citizen advisory committees. The plan originally in 1979 indicated that all standards could be met by the 1987 deadline if growth in the county was controlled and a large number of additional emissions controls were adopted.

## TABLE AQ-C
## OJAI VALLEY AIR QUALITY MONITORING SUMMARY - 1977-1985

| Pollutant/Standard | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|---|---|---|
| Ozone: | | | | | | | | | |
| 1-Hr > 0.10 ppm | -- | 61 | 95 | 75 | 101 | 80 | 77 | 30 | 34 |
| 1-Hr > 0.12 ppm | -- | 24 | 27 | 33 | 27 | 25 | 10 | 3 | 6 |
| 1 Hr > 0.20 ppm | -- | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Max. 1 Hr (ppm) | 0.18 | 0.19 | 0.18 | 0.18 | 0.20 | 0.19 | 0.17 | 0.15 | 0.19 |
| 2nd Hi 1-Hr (ppm) | 0.18 | 0.18 | 0.18 | 0.17 | 0.20 | 0.16 | 0.17 | 0.13 | 0.18 |
| Total Suspended Particulates: | | | | | | | | | |
| 24-Hr > 100 ug/m | 13/59 | 6/41 | 11/58 | 9/48 | -- | -- | 2/52 | 0/60 | 7/59 |
| 24-Hr > 150 ug/m | 0/59 | 0/41 | 0/58 | 1/48 | -- | -- | 0/52 | 0/60 | 3/59 |
| 24-Hr > 260 ug/m | 0/59 | 0/41 | 0/58 | 0/48 | -- | -- | 0/52 | 0/60 | 1/59 |
| Max. 24-Hr (ug/m) | 133. | 137. | 131. | 154. | -- | -- | 120. | 99. | 281. |
| 2nd Hi 24-Hr (ug/m) | 123. | 133. | 131. | 121. | -- | -- | 108. | 99. | 173. |

Source: California Air Resources Board, Summary of Air Quality Data, 1977-1985

Notes: "--" no data taken or reported for this year.
1978 and 1985 ozone data incomplete due to station outages during middle of summer "smog season".

When the U.S. Environmental Protection Agency (EPA) relaxed its requirements for a 1987 attainment deadline to allow AQMPs to include only those measures that are reasonably effective and plausible. The APCD concluded that Ojai Valley airshed will meet the ozone standard in 1987, but that the Oxnard Plain Airshed will continue to violate the standard until beyond the year 2000.

The APCD indicated that the conclusion regarding Ojai is further conditional upon no adverse air quality impacts from continuing and expanded Outer Continental Shelf (OCS) oil recovery and processing activities. The AQMP states that the primary source of unhealthful ozone air quality in the Ojai Valley is due to petroleum activities in the Ventura River Valley, and that sources will either be reduced in number in the future, or more carefully controlled. As noted in the meteorological setting, this analysis may be ignoring partial intrusion of polluted air from other airsheds in this analysis. Ojai air quality will certainly continue to improve even if the 1987 attainment forecast is perhaps slightly optimistic.

Emissions Allocation

The attainment forecast is based on projecting the emissions growth or decline in 99 pollution categories and then translating projected emissions into a corresponding ambient air quality. Ventura County is one of the few jurisdictions in California that has made a serious commitment to maintain consistency in its growth forecasts and its various infrastructure plans, including its AQMP. That commitment within the AQMP has taken the form of an emissions allocation model (EAM) for various sub-areas of the county. Adoption of the AQMP by local jurisdictions has generally included a commitment to stay within the emissions budget adopted for given sub-areas. The technique in many cities in the County to control the population-related component of the sub-regional emissions burden has been to limit population growth through limits on building permits if the demand for new construction has exceeded the forecast level of new growth.

For the unincorporated portions of the Ojai Valley, a Clean Air Ordinance was adopted in 1982 that limits the number of residential building permits to a fixed maximum each year. Each year, a maximum of 46 single lot and 140 multiple lot permits are allocated. When the annual allocation is expended, permit issuance is suspended pending any cancellations of applications or until January 1 of the next year.

It has generally been recognized that the emissions allocation approach has certain less than optimum features that limit planning flexibility to meet changes in economics, demographics, etc. Some modification of that technique is therefore anticipated in future updates of the AQMP. The 1982 AQMP Update is still in effect, and any local air quality planning must therefore be responsive to the requirements existing at this time. In the absence of an adopted new revision, it also means that the 1987 attainment forecast for ozone for the Ojai Valley is also still considered operative despite indications to the contrary noted in the baseline air quality characterization.

## Future Emissions

The input assumptions that were used to derive the attainment prediction are reproduced from the AQMP as Table AQ-D. Those input assumptions were then used to develop a future emissions inventory. The projected growth in various categories was used to predict future emission levels. The future Ojai Valley pollution burden will be off-set by the retirement of older, polluting cars, by the mandatory inspection and maintenance program that went into effect in 1984, and to a small extent by various transportation control measures (TCMs) such as increased car pooling, transit, bicycling or other reductions in single occupant vehicle (SOV) usage.

By implementing a series of reasonably available control measures and by feasible emissions control rules, the calculational process of emissions growth off-set by corresponding emissions reduction produced an annual emissions profile for reactive organic compounds (ROC) and nitrogen oxides (NOx) as shown in Exhibit AQ-2. The corresponding predicted second highest annual hourly ozone maximum is superimposed on that emissions projection. The second highest value is the basis for attainment planning because federal clean air laws allow one violation per year. An attainment or non-attainment designation is therefore based on the second highest observed hourly value in a given year. Through 1984, observations were in good agreement with the ozone forecast. In 1985 observations deviated significantly from forecasts.

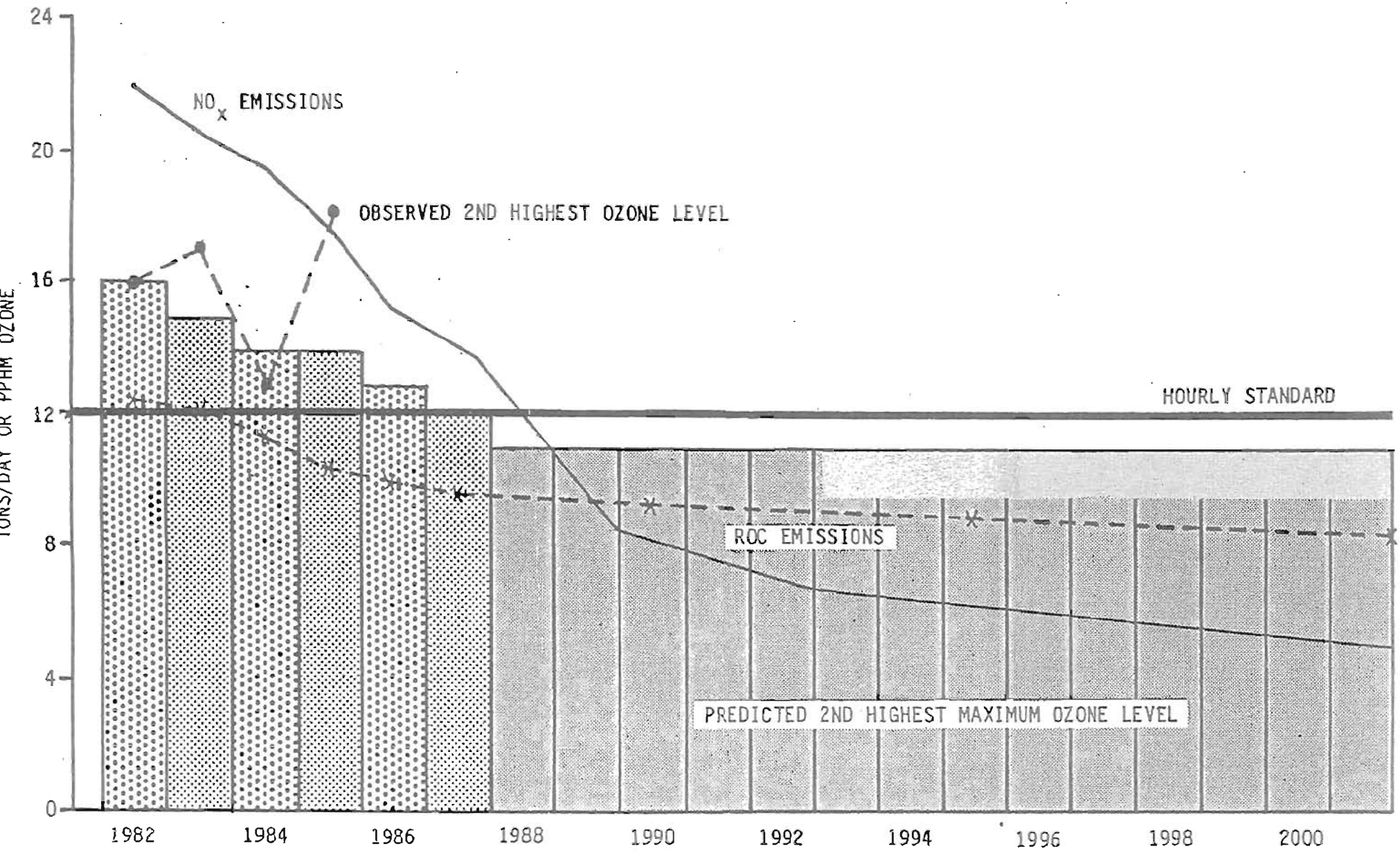
The deviation may be due to a large number of factors. It may be that emissions reduction is not occurring as fast as anticipated from the stationary source and other miscellaneous components. It may be that 1985 experienced unusual meteorological conditions not anticipated when the initial model that related emissions to downwind air quality was developed. It may be that there were unusual intrusions of polluted air from other airsheds. It may be that Outer Continental Shelf emissions, presently not accounted for in the County's air quality planning process, created an unusually significant ozone impact.

# TABLE AQ-D
## AQMP ACTIVITY DATA

OJAI VALLEY AIRSHED

| ACTIVITY DATA | UNITS | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|
| Population | People | 35305 | 36179 | 36496 | 37241 | 38227 | 38852 |
| Nonretail Employment | Jobs | 10957 | 11325 | 11690 | 12058 | 12426 | 12794 |
| Agricultural Acreage | Acres | 15697 | 15684 | 15673 | 15662 | 15651 | 15640 |
| Commercial Acreage | Acres | 525 | 535 | 545 | 555 | 565 | 575 |
| Petroleum Production | 1000 Bbl P | 11016 | 10545 | 10095 | 8651 | 9255 | 8864 |
| USA Petrochem Cup | Bbl Per Da | 24808 | 25673 | 26538 | 27404 | 28269 | 29135 |
| SCE Fuel Use | Nox in Tpy | 0 | 0 | 0 | 0 | 0 | 0 |
| Food & Ag Processing | Acres | 15697 | 15684 | 13479 | 11277 | 9078 | 6882 |
| New Dwelling Units | Units | 301 | 353 | 145 | 309 | 447 | 262 |
| Regional Population | 1000 People | 10093 | 10214 | 10335 | 10457 | 10588 | 10709 |
| Population +33% Decline | People | 34504 | 35009 | 35177 | 33402 | 30297 | 29958 |
| NR Employment +33% Decline | Jobs | 10957 | 11325 | 11690 | 11395 | 10562 | 10683 |
| NR Employment +15% Decline | Jobs | 10957 | 11325 | 11690 | 11757 | 11805 | 11834 |
| Motor Vehicle Fuel Use | People | 13426 | 13506 | 13094 | 12857 | 12757 | 12511 |
| Dwelling Units | Units | 13748 | 14101 | 14246 | 14555 | 15002 | 15264 |
| | | 1985 | 1986 | 1987 | 1990 | 1995 | 2000 |
| Population | People | 39476 | 39789 | 40100 | 41027 | 43022 | 45003 |
| Nonretail Employment | Jobs | 13162 | 13827 | 14489 | 16480 | 17037 | 19516 |
| Agricultural Acreage | Acres | 15628 | 15618 | 15607 | 15574 | 15465 | 15329 |
| Commercial Acreage | Acres | 585 | 601 | 618 | 668 | 677 | 679 |
| Petroleum Production | 1000 Bbl P | 8490 | 8133 | 7792 | 6859 | 5564 | 4533 |
| USA Petrochem Cup | Bbl Per Da | 30000 | 30000 | 30000 | 30000 | 30000 | 30000 |
| SCE Fuel Use | Nox in Tpy | 0 | 0 | 0 | 0 | 0 | 0 |
| Food & Ag Processing | Acres | 4688 | 2499 | 312 | 311 | 309 | 307 |
| New Dwelling Units | Units | 266 | 160 | 166 | 310 | 607 | 669 |
| Regional Population | 1000 People | 10840 | 10971 | 11102 | 11375 | 12071 | 12808 |
| Population +33% Decline | People | 28173 | 26388 | 24579 | 25148 | 26379 | 27587 |
| NR Employment +33% Decline | Jobs | 10266 | 10025 | 9708 | 11042 | 11415 | 13076 |
| NR Employment +15% Decline | Jobs | 11846 | 12099 | 12316 | 14008 | 14481 | 16589 |
| Motor Vehicle Fuel Use | People | 12285 | 11995 | 11727 | 11577 | 11445 | 11962 |
| Dwelling Units | Units | 15530 | 15690 | 15856 | 16360 | 17337 | 18303 |

Source: Ventura County Air Pollution Control District




MEA: EMISSIONS PROJECTIONS

# GENERAL PLAN

CITY OF OJAI

SOURCE: AQMD

EXHIBIT AQ-2

# ACOUSTIC ENVIRONMENT

## Introduction

Noise is defined as "unwanted sound". Excessive noise levels can cause hearing damage and eventual hearing loss. Noise can interfere with communication, physical and mental performance, and sleep. Noise is thought to be related to stress leading to headaches, nervous disorders, high blood pressure, indigestion, impaired vision, and other maladies. In cases where extreme noise levels affects properties, it can cause loss of values.

### NOISE LEVELS

The intensity of noise is measured in units called decibels. The decibel measurement is logarithmic meaning each increase of ten decibels is a ten-fold increase in the level of noise. One decibel is approximately equal to the threshold of a person's hearing, thirty decibels is considered very quiet, at 100 decibels begins to be intolerable, and at 180 decibels noise is lethal.

The predominant ratings scales for land use compatibility assessment are the Noise Equivalent Level (LEQ) and the Community Noise Equivalent Level (CNEL). Both scales are based on the A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear.

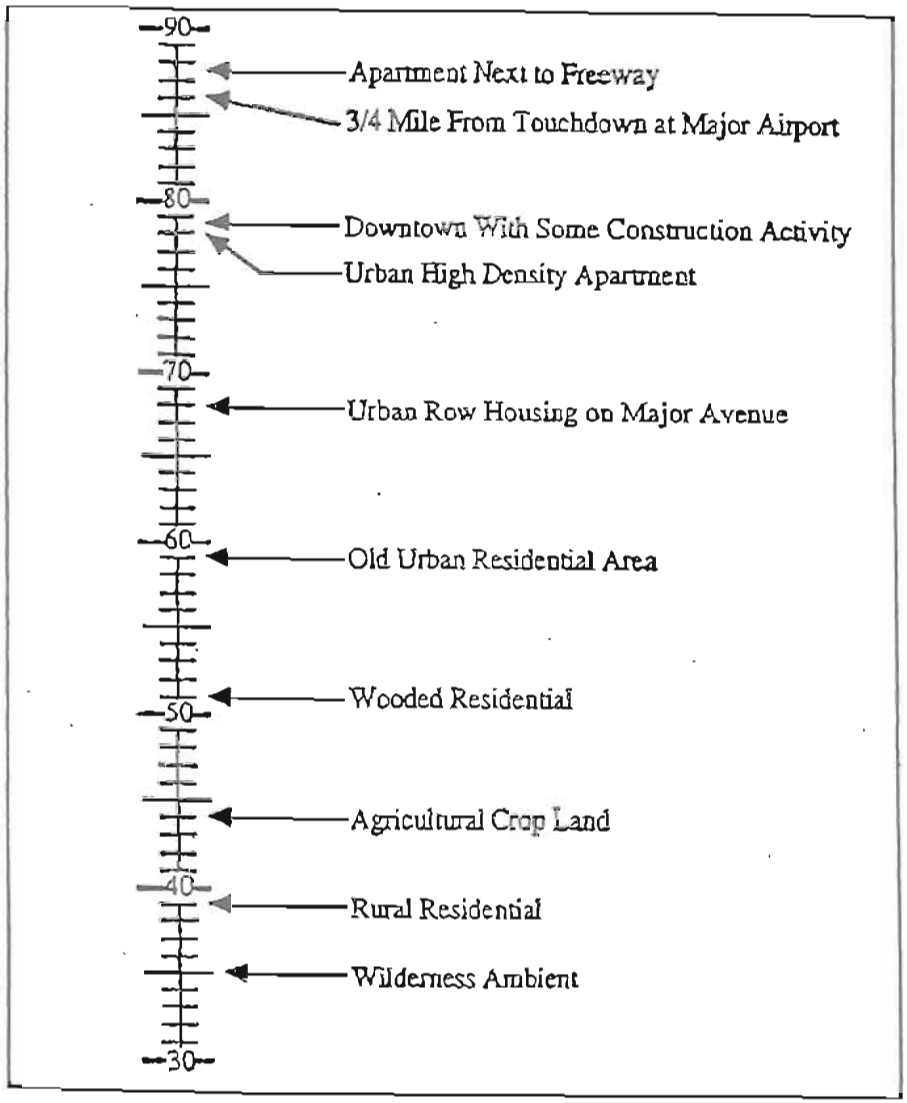
CNEL is a 24-hour, time-weighted annual average noise level. Time-weighted refers to the fact that noise which occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dB, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dB. Examples of various noise environments in terms of the CNEL scale are shown in Exhibit AE-1.

### SENSITIVE NOISE RECEPTORS

Sensitive noise receptors are land uses that require low noise levels. Sensitive receptors in the Ojai Area include residential areas, churches, schools, and hospitals. These uses require low noise levels in order to preserve their intended serene nature or their intended uses, such as a learning, living, and healing environment. Commercial land uses are not considered sensitive noise receptors. Recreational and agricultural land uses are not considered sensitive noise receptors.

### RECOMMENDED NOISE STANDARDS

The State Department of Housing and Community Development produced the most recent state guidelines for noise control. The state has established guidelines for acceptable community noise levels which are based on the CNEL rating scale. For residential uses, the state guidelines for maximum exterior noise levels are 60 to 70 dB CNEL. The most common outdoor standard used by municipalities is 65 dB CNEL. Some municipalities, usually rural communities, utilize a 60 dB CNEL guideline for residential land uses.




MEA: RELATIVE NOISE LEVELS

# GENERAL PLAN

CITY OF OJAI

SOURCE: MESTRE GREVE

EXHIBIT AE-1

## City of Ojai and Sphere of Influence

### NOISE LEVELS

In Ojai, the major sources of noise pollution are related to transportation. Generally surface street traffic is the most consistent and pervasive source of noise. Residents who live along heavily traveled streets leading to the central business district and Highways 150 and 33, have daily exposure to the noise associated with peak traffic hours. Morning and evening peak traffic hours (approximately 7:30 a.m. to 8:30 a.m. and 4:30 p.m. to 5:30 p.m.) produce the most intense surface street noise. Along routes leading to the central business district noise is produced by steady flows of traffic during morning and evening "rush" hours.

### SENSITIVE NOISE RECEPTORS

The noise environment in the majority of the City of Ojai and its Sphere of Influence is characterized as rural or semi-rural residential. The City contains noise sensitive land uses in all areas except the central business district. These sensitive uses are primarily residential uses but also include schools, churches, and Ojai Hospital.

### RECOMMENDED NOISE STANDARDS

The City of Ojai Municipal Code does not establish noise standards for land uses in the City. The City prohibits construction during weekends or holidays and between the hours of 7:00 p.m. and 7:00 a.m. on weekdays except by permission of the Director of Public Works.

The City of Ojai requires that the project comply with the State of California Noise Insulation Standards (California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Section T25-28). The code requires that "interior community noise levels (CNEL) with windows closed, attributable to exterior sources shall not exceed an annual CNEL of 45 dB in any habitable room." The code requires that this standard be applied to all new hotels, motels, apartment houses and dwellings other than detached single-family dwellings.

The recommended noise level guidelines to assess the compatibility of a residential project with the noise environment are 60 dB CNEL exterior noise levels for existing and proposed residential land uses and 45 dB CNEL for the interior noise levels.

# GEOLOGIC FORMATIONS

## Regional Setting

### INTRODUCTION

This section discusses the geologic formations that underlie the City of Ojai and the region and the conditions that result from the different formations. Geologic formations such as granite or sedimentary rock are the result of tectonic forces that have shaped the earth for billions of years. These formations have many varied characteristics. Some formations erode relatively quickly, others are more stable in nature. Some rock types are prone to landslides while some are an excellent source of aggregate for building; some are aesthetically pleasing due to their colors or shapes. This section identifies the types of rocks that underlie and surround the City and the characteristics that are important for land use planning.

Geologic formations in the southern portion of the County of Ventura generally trend southwesterly to northeasterly. This can easily be seen by the hillside and valley areas throughout the County.

#### Sedimentary Rock Formations

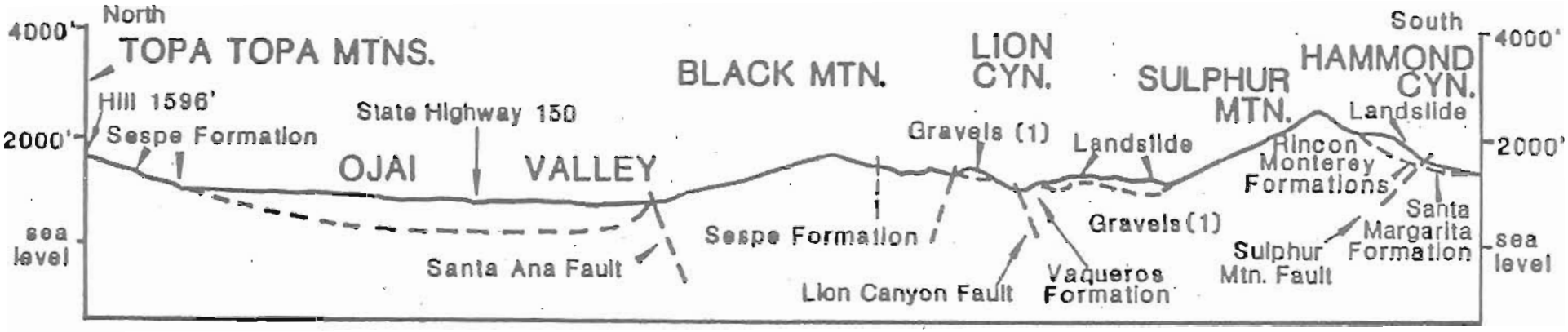
Sedimentary formations are created by the deposition of rocks and/or soil by streams, lakes, oceans, or glaciers. Metasedimentary rocks are those formed by sedimentary formations under pressure. The vast majority of Ventura County is underlain by sedimentary or metasedimentary formations. A description of the sedimentary or metasedimentary formations found in the Ojai vicinity is provided below.

- **Recent Alluvium** - This is a "younger" allumvium consisting of recent clay, silt, sand and gravel, that is unconsolidated and possibly stratified. Recent alluvium includes alluvial fans, flood plains, and streambed deposits.

- **Quaternary Nonmarine Terrace Deposits** - These are alluvial terrace deposits which, in places along the coast, overly thin marine terrace deposits. They often include local areas of older alluvial debris at higher levels.

- **Upper Miocene Marine Sedimentary Rocks** - This formation is comprised of Tequepis Sandstone and Sisquoc Formation in the Santa Ynez Mountains. The Tequepis Sandstone is gray-white, massive to thick-bedded, compact, and semifriable. The Sisquoc Formation is soft, fissile to massive, shale and siltstone.

- **Middle Miocene Marine Sedimentary Rocks** - Called Modelo formation in the Ventura basin, this rock type is brown, soft, fissile, shales that may include local areas of thin limestone beds, clay siltstone and sandstone. Coastal areas may also contain fragments of blocks or schist.




MEA: GEOLOGIC TRANSECT

# GENERAL PLAN

CITY OF OJAI

SOURCE: COUNTY OF VENTURA

EX GEO-1

- **Oligocene Nonmarine Sedimentary Rocks** - This includes the Sespe Formation and Vasquez Formation. The Sespe Formation is red to gray-green shale, sandstone and conglomerate. The Vasquez formation is red to light brown sandstone and conglomerate, with some interbedded maroon siltstone and breccias.

- **Eocene Marine Sedimentary Rocks** - Several local formations fall within this category including the Coldwater Sandstone, Sacate Formation, Cozy Dell Shale, Matilija Sandstone, Snita Shale, Juncal Formation, and Sierra Blanca Limestone. Most of these formations contain combinations of sandstone, siltstone, and shale.

Sedimentary Formations

The vast majority of Ventura County is underlain by sedimentary or metasedimentary formations. Listed in order from youngest to oldest, these are recent alluvium, Quaternary nonmarine terrace deposits, pleistocene marine and marine terrace deposits, plio-pleistocene nonmarine, pliocene marine, miocene marine , oligocene nonmarine, eocene marine, paleocene marine, cretaceous marine formation.

The most common formation in south Ventura County is recent alluvium. Alluvium is present in the plain and valley areas of the County such as the Oxnard Plain, and along creeks and rivers.

Quaternary nonmarine terrace deposits, pleistocene marine and marine terrace deposits, and plio-pleistocene nonmarine deposits are common along the ridgelines along the Santa Clara River. Pliocene marine, miocene marine and oligocene non marine formations are prevalent in the mountains near Casitas Lake. Eocene marine deposits are prevalent in the Simi Hills area and also in the National Forest in northern Ventura County. Cretaceous marine deposits are also common in the Simi Hills.

Igneous Rock Formations

Igneous formations are those formed by molten rock such as volcanic rock. Meta-igneous rock formations are created from igneous rocks under pressure. Igneous formations present in southern Ventura County are primarily volcanic formations.

The dates of solidification of many bodies of igneous rocks have been estimated through radiometric dating methods. Since many of the igneous rock bodies have identifiable positions in the geologic column, it is possible to approximate the age of sedimentary layers in the column. The relative estimated ages of geologic series are given below with a description of outstanding events and organisms occurring at about the same.

- **Quarternary Period: Recent and Pleistocene** - Rocks date from newly formed to about 2 million years old. Several glacial ages and the making of the Great Lakes occurred during this epoch. *Homo Sapiens* is present during the latter portion of this epoch.

- **Tertiary Period:** Pliocene - Rocks date from about 2 to 6 million years old. Later hominids lived during this epoch.

- **Tertiary Period:** Miocene - Rocks date from 6 to 22 million years old. The beginning of the Colorado River and primitive hominids occurred during this epoch.

- **Tertiary Period:** Oligocene -Rocks date from 22 to 36 million years of age. Creation of Nevada mountain ranges occurred during the latter part of this epoch. Grasses and grazing mammals were present.

- **Tertiary Period:** Eocene -Rocks date from 36 to 58 million years ago. During this epoch, volcanic activity began at Yellowstone Park and primitive horses were present.

- **Tertiary Period:** Paleocene -Rocks date from 58 million to 65 million years of age. Mammals became widespread and creation of the Rocky Mountains began during this epoch.

- **Cretaceous to Cambrian Periods** - These 10 periods span 65 to 575 million years ago. Various rock series formed during these periods. Dinosaurs became extinct roughly 70 million years ago. The Appalachian Mountains formed approximately 250 to 510 million years ago. The earliest oil and gas fields formed about 550± million years ago.

- **Precambrian Time** - Precambrian time spans 575 million years ago to birth of the planet. Bacteria and algae were present roughly 3 billion years ago and primitive marine animals occurred between 1 billion years ago and the beginning of the Cambrian period. The oldest dated rocks are 3800 million (3.8 billion years old).

Igneous Rocks Formations

Igneous formations present in southern Ventura County are miocene volcanic formations, located in the southern portion of the County, and small areas of tertiary intrusive rocks which are interjected in miocene marine formations.

## GEOLOGY-RELATED HAZARDS

Faulting/Seismicity

Ventura County has not directly experienced a devastating earthquake. Although the historic record shows little evidence for strong earthquakes or surface displacement along faults in the southern Ventura area, the likelihood of the occurrence of one or more such events within 50 to 100 years is not remote.

Only two historic earthquakes might have been devastating to present day populated areas of the County, but they occurred in December 1812 and January 1857, before there was any semblance of population in the region. The earthquake of 1812 severely damaged missions from present-day Santa Maria on the west, to San Fernando on the east, for a total of 116 miles. The 1857 earthquake is the first historical earthquake of California to be described as a "great" earthquake. It is estimated at 8.25 on the Richter Scale because it apparently ruptured ground from Fort Tejon to at least 100 miles in each direction along the San Andreas Fault from Fort Tejon.

The relatively recent 1971 San Fernando earthquake occurred along a fault having little historic record of activity. Several of the faults within the southern half of Ventura County are similar in structure they are subject to comparable tectonic forces as those associated with the San Fernando earthquake.

Most of the land in Ventura County is encompassed by the Transverse Range geographic province of California. The province is distinct from other provinces in that the nature of its prevailing linear trend is west to east instead of northwest to southeast (which is the case from most geologic trends in the state). The province is bounded by three major faults, including the northwest trending San Andreas Fault zone, which cuts the northeast corner of the County; the west trending Big Pine Fault, which joins the San Andreas and forms the northern boundary of the province; and the Malibu Coast Fault, which forms the southern boundary of the province where the fault extends offshore to the west of the County boundary. Each of these faults constitute a potential major earthquake hazard.

Although no known damage has occurred in the Ventura County area from earthquake activity, the potential exists due to the location of several faults and fault zones in the area. The most significant event anticipated in the area related to faulting is ground shaking.

The intensity of ground shaking/seismicity during an earthquake depends largely on geologic foundation conditions of the materials comprising the upper several hundred feet of the earth's surface. The greatest amplitudes and longest durations of ground shaking occur on thick, water-saturated, unconsolidated alluvial sediments. Ground shaking can also cause ground failure or surface rupturing due to lurching and liquefaction.

Ground shaking can cause disruption of surface drainage, blockage of surface seepage and groundwater flow, changes in groundwater flow, dislocation of street alignments, displacement of drainage channels and drains, destruction or damage to buildings and property and possibly loss of life. Seismic shaking can renew movement of old landslides as well as result in the formation of new slides. The intensity of shaking within 10 miles of the epicenter focus point of the earthquake, in areas underlain by deep alluvium, would likely be in the range of VII to VIII Modified Mercalli intensity, and VI to VII in areas underlain by firm ground bedrock. Higher intensities would be experienced immediately adjacent to the epicentral area.

The State Division of Mines and Geology in their publication entitled, "Urban Geology" 1973, Bulletin 149, indicates that on a state-wide basis, the potential hazard to structures from ground shaking is higher than any other hazard.

The state Division of Mines and Geology has also indicated that the area could experience relatively high earthquake activity. It has been estimated that within the next year there is a 3% to 4% chance of occurrence for a major earthquake measuring at least 7.0 on the Richter Scale; within the next fifty years, it is estimated that there is a 50% to 90% chance of an earthquake of this magnitude. The source of this anticipated earthquake is the 650-mile long San Andreas fault.

A fault is described as the area where two tectonic plates or continent plates meet. The San Andreas fault is the state's largest and most active fault and is the location where the western Pacific plate meets with the eastern North American plate. Activity occurs along the San Andreas fault when the two plates collide. Movement along faults tends to be abrupt rather than a slow and steady slipping. Seismologists have determined that the San Andreas fault is moving at a rate of about two inches per year. When the forces that cause earth movement create enough energy, an abrupt slippage occurs causing earthquakes that, if near enough to the earth surface, can cause landforms to displace or fracture. Fault displacement can cause damage to sewer mains, gas, water and electrical lines, structures, roads, and human life.

There are many places other than the San Andreas fault where faulting occurs. A series of related faults is called a fault zone or a fault system. There are several faults and fault zones located near the City of Ojai. These are described below and illustrated in Exhibit GEO-3.

Trying to anticipate the location of an earthquake is difficult at best. If earthquakes have historically occurred with regularity along a particular fault, there is a possibility of prediction with a degree of accuracy. In most cases in California, as in Ventura County, earthquakes have not occurred with regularity (Exhibit GEO-2).

The magnitude of an earthquake is commonly measured using the Richter Scale or Modified Mercalli Scale. Each point on the Richter Scale represents about a tenfold increase in the power of an earthquake. Tables GEO-A and GEO-B illustrate the magnitude of damage expected from earthquakes of various magnitudes.

## TABLE GEO-A
## EARTHQUAKE EFFECTS: RICHTER SCALE

| Intensity | Description of Damage |
|---|---|
| 8.9 | Damage nearly total. Large rock masses displaced. Lines of sight and leel distorted. Objects thrown into the air. |
| 8.0 | Rails bent greatly. Underground pipelines completely out of service. Damage severe to wood frame structures, especially near shock center. Few masonry structures remain standing. Large, well built bridges destroyed by the wrecking of supporting piers or pillars. |
| 7.9 | Most masonry and frame structures destroyed with their foundations. Some well built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments, Large landslides. Water thrown on banks of canals, rivers, lakes. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly. |
| 7.0 | General panic. Masonry destroyed or heavily damaged. General damage to foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. |
| 6.9 | Steering of autos affected. Fall of stucco and stone masonry walls. Twisting and fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses move on foundations if not bolted down. Loose panel walls thrown out. Branches broken from trees. Cracks in wet ground and on steep slopes. |
| 6.0 | Difficult to stand. Noticed by drivers of automobiles. Hanging objects shake. Furniture broken. Weak chimneys broken at roofline. Fall of plaster; loosens bricks, stones, tiles, cornices, unbraced parapets, and architectural ornaments. Waves on ponds, water turgid with mud. Small slides and caving in along sand and gravel banks. Large bells ring. Concrete irrigation ditches damaged. |

Source: Sanchez Talarico Associates, Inc.

TABLE GEO-A con't

| Intensity | Description of Damage |
|---|---|
| 5.9-5.0 | Felt by all. People walk unsteadily. Windows, dishes, glasses broken. Objects, books, etc. fall off shelves, pictures off walls. Furniture moved or overturned. Weak plaster and masonry cracked. Small bells ring (church or school). Trees bushes shaken visibly. |
| 4.9-4.0 | Felt outdoors by most people. Sleepers awakened. Liquids may spill. Small unstable objects displaced. Doors swing close open. Pictures move. Some breakage of plaster. |
| 3.9-3.0 | Felt indoors. Hanging objects swing slightly. Vibrations feel like passing of light trucks. May not be recognized as an earthquake. |
| Below 3.0 | Not felt except by a very few and only under special circumstances. |

Source: Sanchez Talarico Associates, Inc.

## TABLE GEO-B
## EARTHQUAKE EFFECTS: MODIFIED MERCALLI SCALE

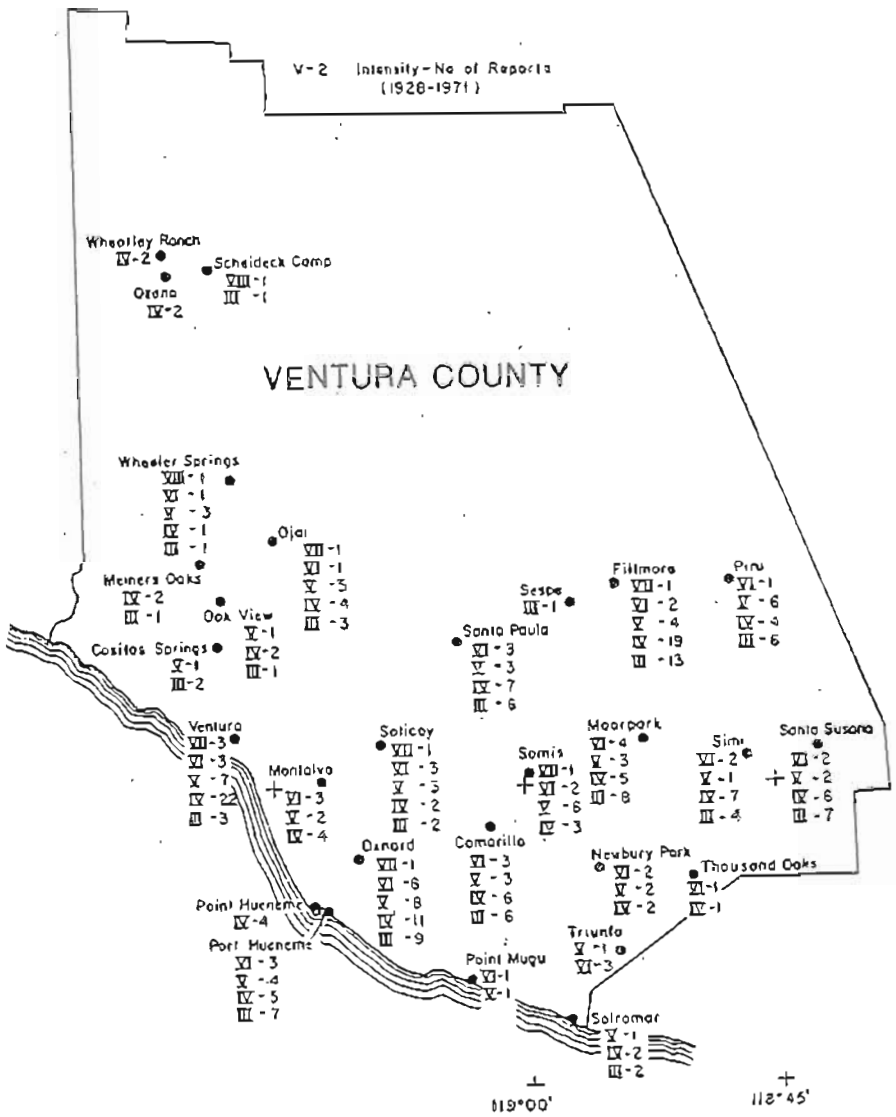
| Intensity | Description of Damage |
|---|---|
| XII | Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into air. |
| XI | Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly. |
| X | Some well-build wooden structures destroyed; most masonry and frame structures destroyed with their foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks. |
| IX | Damage considerable in specially designed structures; well-designed, frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. |
| VII | Damage slight in specially designed structures; considerable in ordinary, substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motorcars disturbed. |
| VIII | Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerably in poorly build or badly designed structures; some chimneys broken. Noticed by persons driving motorcars. |

Source: Sanchez Talarico Associates, Inc.

TABLE GEO-B con't

| Intensity | Description of Damage |
|---|---|
| VI | Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight. |
| V | Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. |
| IV | During the day, felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably. |
| III | Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration like passing of truck. Duration estimated. |
| II | Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. |
| I | Not felt except by a very few under specially favorable circumstances. |

Source: Sanchez Talarico Associates, Inc.




NOTE: INTENSITY DESCRIBED USING MODIFIED MERCALLI SCALE.

MEA: EARTHQUAKE LOCATIONS AND INTENSITIES

# GENERAL PLAN

CITY OF OJAI

SOURCE: COUNTY OF VENTURA

EXHIBIT GEO-2

## FAULTS

There are numerous faults in the Ojai vicinity. They are described below.

### Lion Mountain Fault

This fault is encompassed by the Lion Canyon Fault Zone which extends from Santa Paula Creek along the south edge of Upper Ojai Valley through the Lion Canyon area and possibly to Oak View and beyond to Lake Casitas. The actual Lion Mountain fault is located between Lake Casitas and the San Cayetano fault zone, east of Ojai. The Lion Mountain Fault Zone contains a major portion of the Oak View community and the southern section of the Ojai community. Major electrical transmission lines, gas mains, water transmission lines and sewer mains between Oak View and Ojai transverse this zone. Local geologic formations show relatively recent activity. This fault is considered potentially active.

### Santa Ana/Arroyo Parida Fault Zone

This fault extends from Montecito to the Ventura River and along the south side of the Ojai Valley. This fault system is an eastward extension of the Mission Ridge Fault in the Santa Barbara area and extends to the southeast end of the Ojai Valley where San Cayetano zone apparently begins. The Santa Ana Fault has raised the Upper Ojai Valley relative to the Ojai Valley. The fault forms a groundwater barrier in the alluvium beneath the Ventura River. Two schools lie in the fault zone and sewer mains and water transmission lines from Lake Casitas and Ventura to the Ventura area cross this fault zone. This system is considered potentially active.

### San Cayetano Fault System

This fault system consists of a major series of faults which extend over 150 miles from Santa Barbara County to Los Angeles County. Specifically, the San Cayetano zone which could affect the Ojai area is a thrust fault zone which extends 17 miles from the east edge of Ojai Valley east to Sespe Creek. Geologic evidence that the fault system should be considered active throughout its length is shown by location of earthquake epicenters, groundwater barriers and displaced alluvial sediments. Landslides are common in conjunction with the fault. This system is considered potentially active.

### Big Pine Fault Zone

This is a major east-trending fault which joins the San Andreas Fault north of the Ventura County line. The fault zone lies 16 miles north of Ojai, and consists of a series of braided faults. Terraces and stream channels have been offset by geologically recent movement along the fault. It is reported to have ruptured the ground surface for a distance of 30 miles along its length during the northern Ventura County earthquake of November 1852. This system is considered active.

San Andreas Fault

The San Andreas is the longest and most important fault in California. It transects a 4 mile section of the extreme eastern corner of Ventura County, about 27 miles northeast of Ojai. It is the only fault within Ventura County which the state has designated a special study zone. The last major earthquake generated by that portion of the fault which transects the northeast section of the County was in 1857 with a Richter Scale estimation of 8.0. The occurrence of another major earthquake along this fault is considered possible within the near future. This fault is designated active by the State Division of Mines and Geology.

Bear Canyon Fault

This fault is located north of Ojai Valley.

Red Mountain Fault Zone and Padre Juan Faults

These faults extend easterly from Santa Barbara County into Ventura County. The Red Mountain zone joins the Sulphur Mountain zone east of Ventura River. These faults are considered potentially active.

Pine Mountain Thrust Fault

This fault is situated nine miles north of the City of Ojai. This fault is considered active.

Del Valle Fault

This is a fault in the northeastern corner of south Ventura County. It displaces Pliocene rocks at the surface and is partially concealed by abundant landslides. The Del Valle fault is sometimes considered an eastward continuation of the San Cayetano Fault zone and is considered active.

Big Canyon Fault

This fault extends west from Santa Paula Creek along the north side of Sulphur Mountain. It becomes obscured to the west by landsliding but there is geologic evidence at the edge of the Upper Ojai Valley. This fault is considered inactive.

Santa Ynez Fault

This fault extends from Point Conception in Santa Barbara County, across the central portion of Ventura county, and ends near the eastern Ventura County line. It is considered to be one of the major faults in the region and is about 90 miles long. The fault lies about 4 miles north of Ojai. Evidence has been cited for recent fault movement. This fault is considered potentially active.

Possible Faults

In addition to the above mentioned vicinity faults there is evidence that faults, to date unmapped, may extend across the north part of the Ojai Valley area and link the San Cayetano Fault zone to the east with faults and possible faults to the west of Ventura River.

## LANDSLIDES

Landslides are referred to geologically as "mass wasting". Landsliding can cause abrupt depression and lateral displacement of hillside surfaces over distances of up to several hundreds of feet; disruption of surface drainages; blockage of channels and roadways; displacement and destruction of improvements such as roadways, buildings, oil and water wells, etc.; and damage or disruption of structures or property.

There are numerous causes for mass wasting, including erosion, water, broken or weak bedrock, earthquakes and engineering defects. Stream erosion can undercut slopes removing support and causing failure of slopes by landsliding. Water saturation of the bedrock on hillsides under certain conditions can cause downhill sliding due to gravity. Rainfall can also saturate and erode vast quantities of loose soil, especially after large fires denude the vegetation on slopes, washing soil downhill as earth or mudflows. Ground shaking from earthquakes can loosen material causing it to fall or slide downhill; it can also cause liquefaction of subsurface materials, which can also lead to slides. Finally, man-made cuts or excavations can undercut unstable slopes causing landslides.

The widespread landsliding and slope instability throughout much of southern Ventura County can be related to the intensity of past faulting and folding of geologic strata, to the clay content of certain sedimentary formations and the subsurface moisture content.

Land development in hillside areas can result in the formation of new landslides if grading or development design does not take into account potentially adverse landslide conditions. Many of the area's natural slopes are underlain by bedded sedimentary rocks that are inclined downhill. The slopes in these cases are marginally stable and prone to failure along the bedding planes.

Generally in Ventura County, landsliding is most commonly found along prominent fault zones, anticlinal folds (upside down "U"-shaped folds in rock strata), areas of younger geologic formations and areas of weak or clayey bedrock (refer to Exhibit GEO-5). Landslides and potentially unstable slopes are especially common in hillside areas underlain by sedimentary bedrock. Many landslides are also associated with steep slopes which have been undercut by erosion. Subsurface water is also a contributing factor to slope instability in the great majority of landslide occurrences. In general, most existing landslides in southern Ventura County are not of recent origins, over 100 years old and most are not actively moving. They are subject to movement if triggered by earthquakes, poorly planned grading or if ground moisture is substantially increased.

## LIQUEFACTION

Liquefaction is a type of ground failure that can occur during an earthquake. Liquefaction can occur on relatively level ground and have catastrophic effects on structures. Liquefaction can cause buildings to collapse or sink, pipeline and storage tanks to float or break, disruption or destruction of gas lines, sewer lines, roads, etc. Liquefaction can also be the cause of landslides on slopes as small as 2.5%.

Liquefaction occurs when loose soils that are water-saturated are subjected to ground shaking of high intensity and long duration. Liquefaction is manifested by sand boils and mudspouts at the ground surface and water seepage through ground cracks or by the development of quicksand -like conditions or landslides. When quicksand-like conditions occur, buildings may sink or tilt into the ground and underground facilities may float to the surface.

Several conditions are necessary to produce liquefaction including water saturation, low density soil, uniform grain size, lack of confining pressure, high intensity and high duration ground shaking. Ground shaking intensity depends on the magnitude of an earthquake and the amplification of the ground shaking. In terms of soil density, loose unconsolidated soil materials are the most subject to liquefaction. Uniform grain size, such as a deposit of only sand, causes materials to be more susceptible to liquefaction than mixed materials. The deeper in the soil zone the higher the confining pressure and consequently, the lower the potential for liquefaction.

Liquefaction can occur at any level of a soil deposit but usually occurs within the upper 40 to 50 feet. The potential for liquefaction exists wherever there are saturated, loose sand deposits, especially if they are near the surface. This includes most of the river valleys and the low lying plains that have poor drainage. Since subsurface soil properties are not precisely known, it is necessary to assume that all alluvial areas having high groundwater may be subject to liquefaction during strong earthquake shaking.

Referring to Exhibit GEO-1, areas designated high hazard zones for liquefaction are alluvial areas which have had water table levels within 15 feet of the ground surface at some time in the last 50 years or since water well records have been kept. Moderate hazard zones include alluvial areas which have had water between 15 and 40 feet below ground level.

Areas with alluvial soils are subject to liquefaction hazard. In the Ojai vicinity, these areas are the Santa Ana Valley north of Casitas Lake, the Ojai Valley, and the Upper Ojai Valley.

## Local Setting

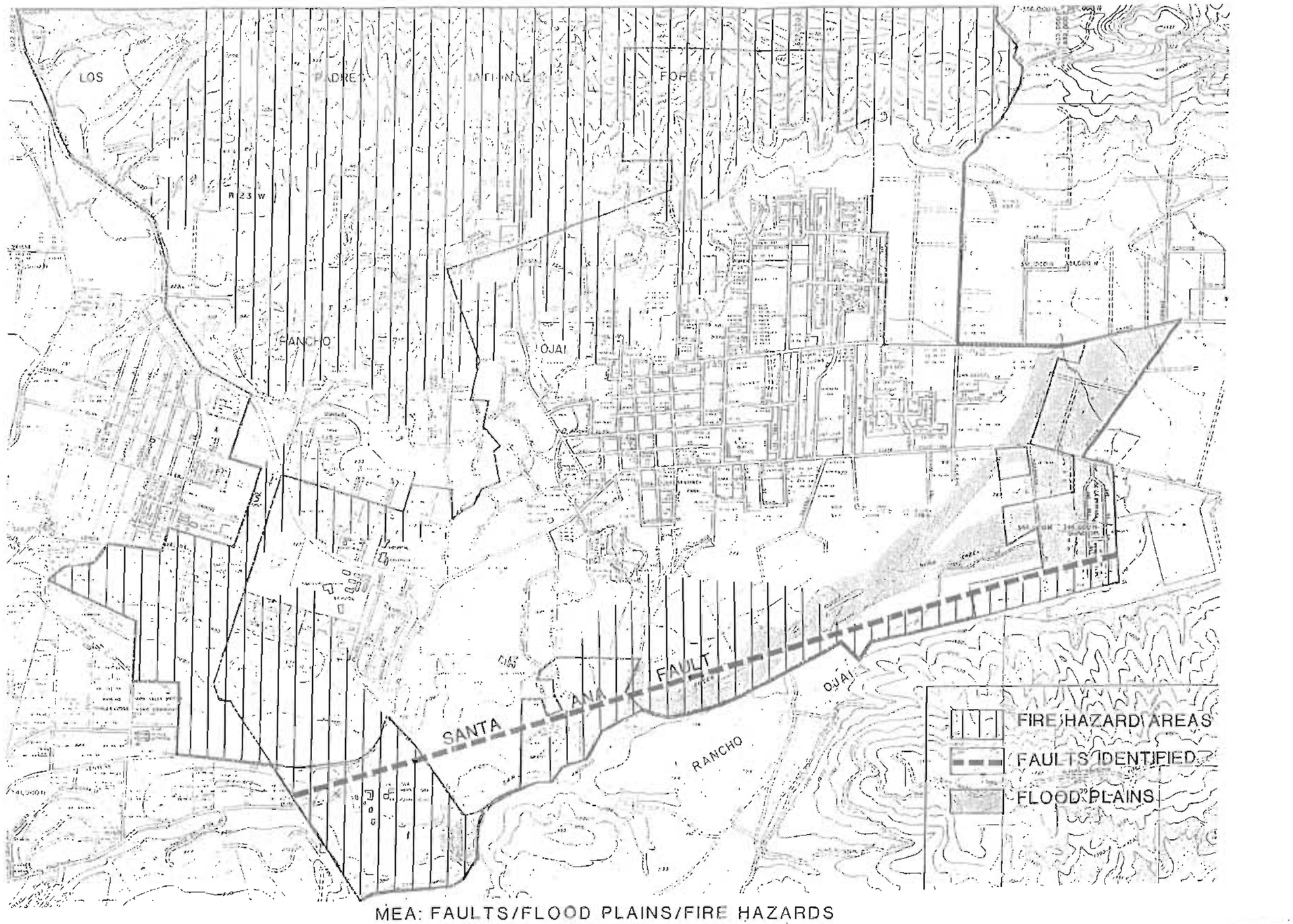
### GEOLOGY-RELATED HAZARDS

#### Faulting/Seismicity

Faults and possible faults are numerous in the region encompassing the City of Ojai. Below is a list of those which are considered to have a potential for posing hazards in the City of Ojai and its Sphere of Influence . There are only two known and potentially active faults or fault zones which cross the Ojai City boundary, these are: the Lion Mountain Fault and the Santa Ana/Arroyo Parida Fault zone. Refer to Exhibit GEO-3 for fault and fault zone locations.

- Santa Ana/Arroyo Parida Fault Zone
- Lion Mountain Fault
- San Cayetano Fault System
- Big Pine Fault
- San Andreas Fault
- Bear Canyon Fault
- Red Mountain Fault Zone
- Padre Juan Fault
- Pine Mountain Thrust Fault
- Del Valley Fault
- Big Canyon Fault
- Santa Ynez Fault

The major direct effect of earthquake faulting is surface displacement. This is when faulting causes actual rupturing of the earth's surface. In the event of surface displacement along Lion Mountain Fault or the Santa Ana/Arroyo Parida Fault zone, loss of life and property damage in the unincorporated and incorporated areas of Ojai could be significant.




MEA: FAULTS/FLOOD PLAINS/FIRE HAZARDS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: CALIF. DIV. OF MINES & GEOLOGY
1975 FLOOD INSURANCE ADMINISTRATION (HUD 1985)
VENTURA COUNTY FIRE DEPT.

EXHIBIT GEO-3

Public facilities and commercial, industrial and residential areas in the Ojai area are all encompassed by zones of potential ground shaking. The short-term local seismic history is not in itself an adequate base for estimating earthquake risk. Due to the relatively small number of such events, the record does not provide a statistically reliable basis for prediction.

## GEOLOGIC FORMATIONS

The eastern, southern, and western portions of the Sphere of Influence are underlain by quaternary nonmarine terrace deposits. The northern part of the Sphere is comprised of oligocene nonmarine deposits that extend into the City boundary and eocene marine deposits that extend into the mountains of the National Forest.

The City of Ojai is almost entirely underlain by quaternary nonmarine terrace deposits. The northwestern corner of the city is underlain by oligocene nonmarine deposits.

## GEOLOGY-RELATED HAZARDS

### Landslides

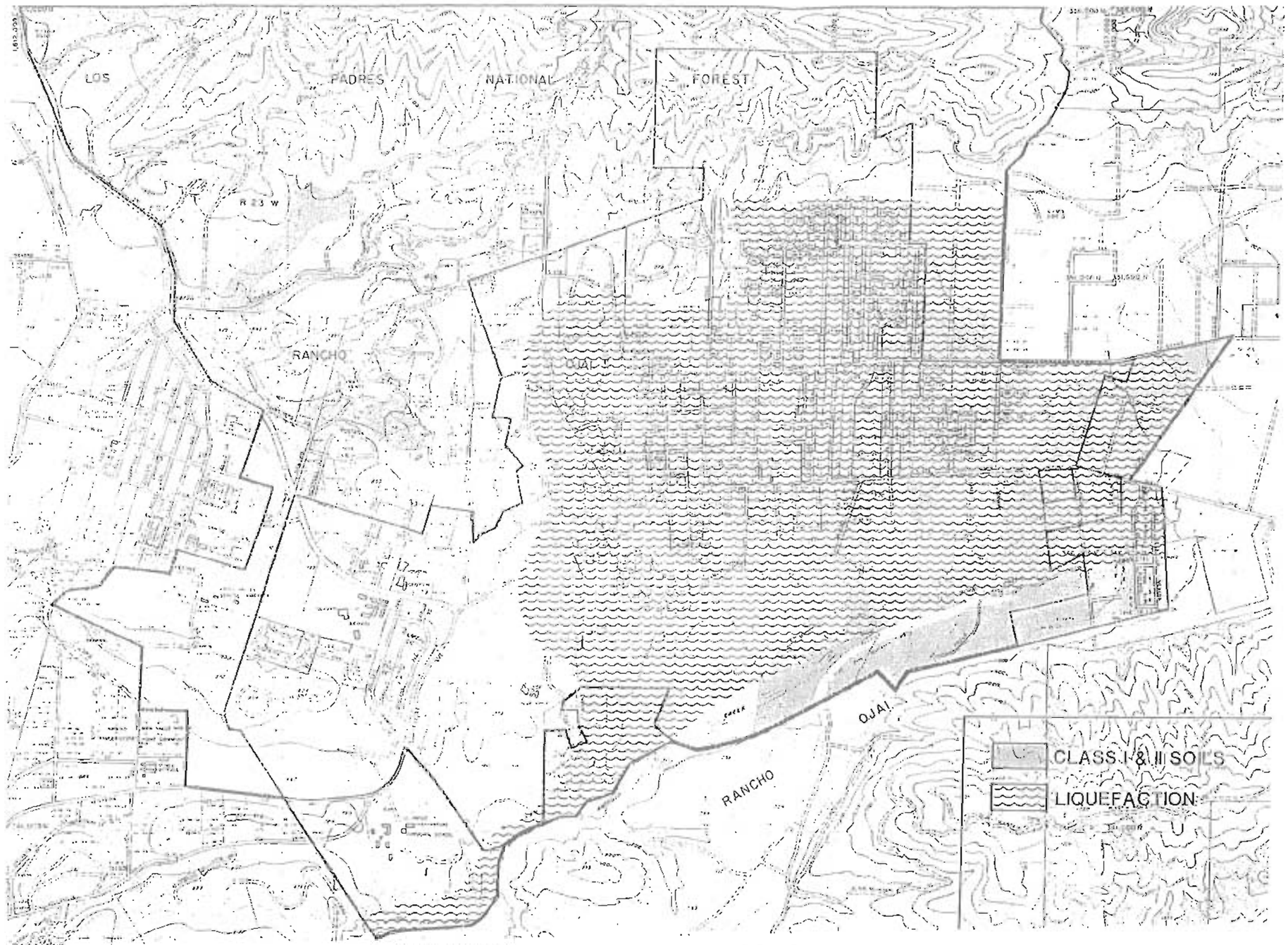
Several areas in the Ojai vicinity are subject to landsliding hazard. Most of these large areas are in the hillsides to the north and south of the City of Ojai. The Sulphur Mountain hills to the east of San Alonzo Creek and south of the Upper Ojai Valley have large areas susceptible to landsliding. In the National Forest, north east of the Ojai Valley, there is a large area of landsliding.

There are no significantly large areas of landsliding in the City's Sphere of Influence or in the City of Ojai.

### Liquefaction

There are a few areas within the Sphere of Influence but outside the City boundaries which are subject to liquefaction hazard. These areas are located along or adjacent to San Antonio Creek and in the eastern portion of the Sphere of Influence.

The majority of the City of Ojai is subject to liquefaction hazard. Those portions of the City located far north along the City boundary or to the west of the Ojai Country Club are free from significant liquefaction potential.




MEA: LIQUEFACTION/CLASS I & II SOILS

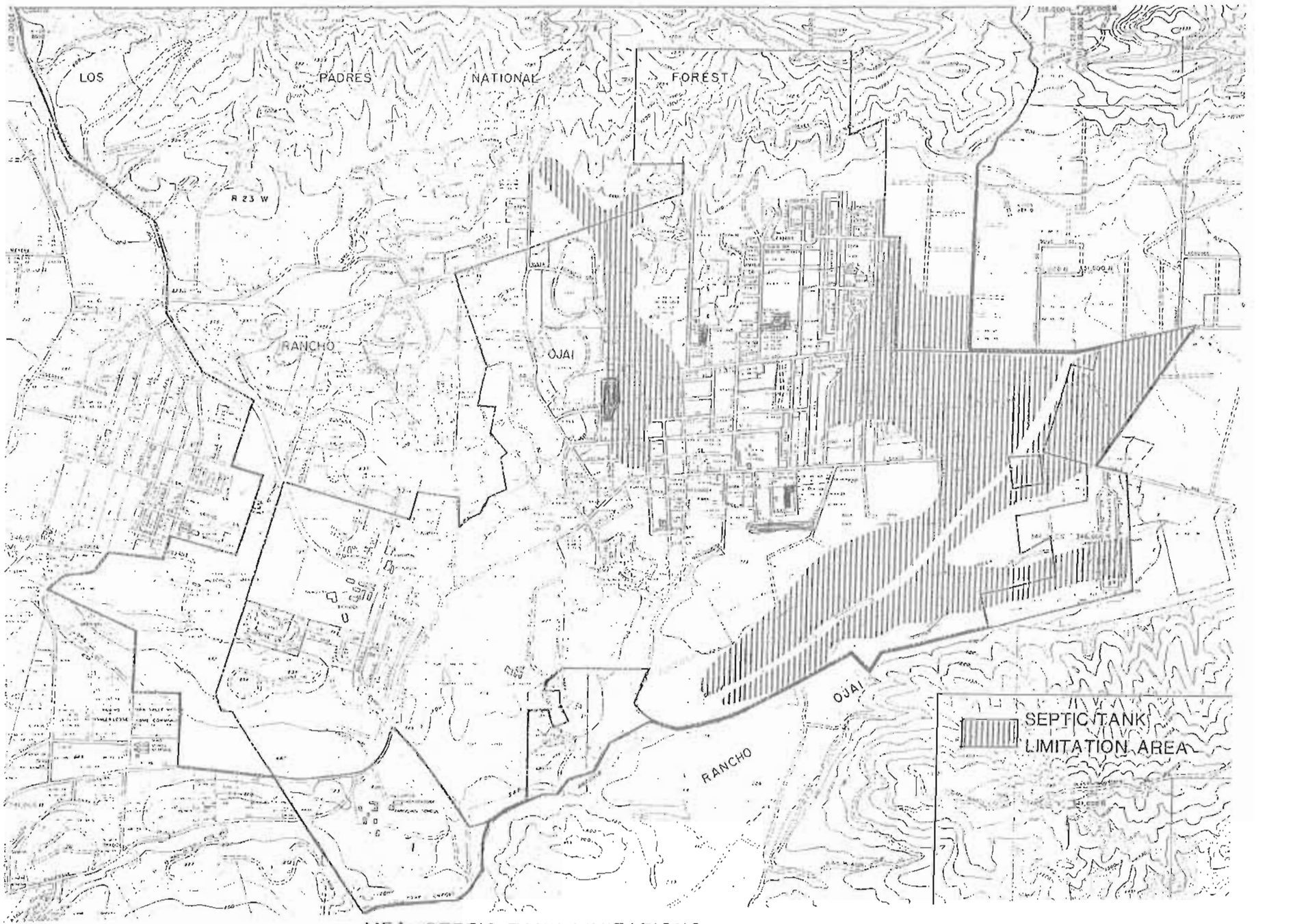
# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: U.S. DEPT. OF AGRICULTURE

EXHIBIT GEO-4




MEA: SEPTIC TANK LIMITATIONS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: U.S. DEPT. OF AGRICULTURE

EXHIBIT GEO-5

# MINERAL RESOURCES

## Regional Setting

### INTRODUCTION

Petroleum is considered by the far the most important mineral resource in Ventura County. Petroleum has been important to the county's economy since is was first produced prior to 1875. Aggregate is another important mineral resource in the County. It is used in construction and building industry. Other minerals in the County which are of commercial value are asphalt, clay, gypsum, and limestone.

Regional petroleum resource areas were derived using California Division of Mines and Geology (CDMG) Oil and Gas maps which show boundaries of known petroleum fields. These boundaries indicate the location of wells drilled on the outer edges of the fields. Petroleum fields are common throughout the south County. The largest fields are located in the Oxnard Plain. Also, many smaller fields scattered throughout the central and northern portions of the county.

Aggregate resources include sand, gravel and rock which are used for fill, rip-rap, and construction grade concrete. The California Division of Mines and Geology has mapped aggregate resources in the state. The maps were prepared in response to the Surface Mining and Reclamation Act of 1975 (SMARA). This act mandated aggregate resources throughout the state be mapped. This mapping allows local governments to make knowledgeable land use decisions based on the presence and need for these resources. The objectives of the SMARA are generally to ensure proper reclamation of mineral land and to safeguard access to mineral resources of regional and statewide significance. The regional Ojai area is located within the CDMG Western Ventura County Production Consumption Region.

The Division of Mines and Geology classified land in Ventura County south of the Los Padres National Forest according to the presence or absence of construction aggregate resources. Special attention was given to aggregate suitable for use in Portland cement concrete, the highest quality use of sand, gravel, and crushed rock. Lower quality aggregate resources acceptable for use as asphaltic concrete aggregate, construction sub-base, railroad ballast, etc., were not classified.

### MINERAL RESOURCE ZONES

The CDMG land classification is presented in the form of Mineral Resource Zones (MRZ). These zones are explained on the following pages.

#### Mineral Resource Zone-1

This is an area where adequate information indicates that no significant mineral deposits are present or where it is judged that there is little likelihood for their presence. These areas occur mainly within the interior parts of the Oxnard Plain, Santa Rosa Valley, and other

small mountain and valley areas underlain by particular bedrock formations. These formations are sedimentary deposits composed predominantly of fine-grained material unsuitable for use as aggregate.

Mineral Resource Zone-2

This is an area where adequate information indicates that significant material deposits are present or that it is highly likely that they are present. Mineral Resource Zone-2 areas are known to exist in the Ojai area.

The only deposits in the Western Ventura County Production-Consumption Region that satisfy the Mineral Resource Zone-2 criteria occur within the Santa Clara River Valley and within a small portion of the Oxnard Plain.

Mineral Resource Zone-3

This is an area containing mineral deposits whose significance cannot be evaluated from available data. Mineral Resource Zone-3 areas located in valley regions are generally underlain by Quaternary age alluvial deposits containing sand and gravel. Resource evaluations cannot be made because subsurface data is unavailable, inconclusive or unreliable. A substantial portion of the Western Ventura County Region is classified as Mineral Resource Zone-3.

Mineral Resource Zone-3a areas are those deposits judged to have relatively higher potential as sources of high quality aggregate.

Mineral Resource Zone-4

This is an area where available information is inadequate for any other zone classification. Several areas are designated as Mineral Resource Zone-4.

## Local Setting

### PETROLEUM RESOURCES

The location of petroleum fields in the Ojai area are illustrated on Exhibit GEO-6. These fields are numbered according to the Conditional Use Permit (CUP) obtained obtained for oil drilling from the County of Ventura.

There is a single permitted field located within the City limits. This field is located at the eastern portion of the City, south of Ojai Avenue. There are no permitted oil fields within the Sphere of Influence.

## AGGREGATE RESOURCES

### Mineral Resource Zones

The entire area within the City limits is designated Mineral Resource Zone-1 or Mineral Resource Zone-4 indicating there are no significant aggregate resources.

The Ojai Sphere of Influence includes the following Mineral Resource Zone designations:

#### Mineral Resource Zone-1

The southwestern and eastern portions of the Sphere of Influence are classified as Mineral Resource Zone-1 deposits.

#### Mineral Resource Zone-2

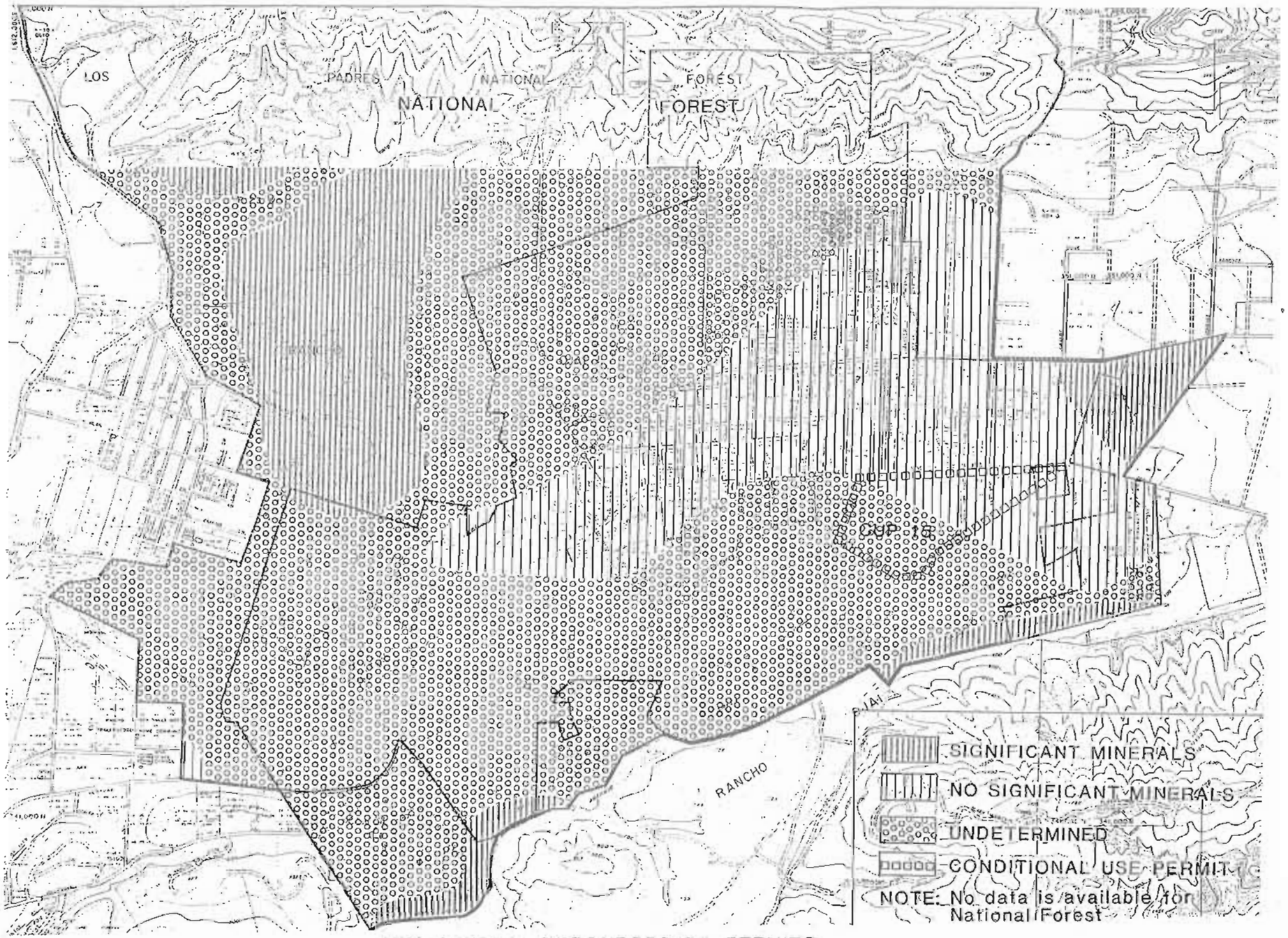
There are no areas designated Mineral Resource Zone-2.

#### Mineral Resource Zone-3

There is a small area designated Mineral Resource Zone-3 meaning there is inconclusive evidence to indicate significant aggregate deposits. This is located at the northwestern edge of Los Padres National Forest.

#### Mineral Resource Zone-4

The southern portion of the Sphere is classified as Mineral Resource Zone-4.




MEA: MINERAL RESOURCES/OIL PERMITS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: COUNTY OF VENTURA

EXHIBIT GEO-6

# SOILS

## Regional Setting

### INTRODUCTION

This discussion of soils is limited to the area south of the Los Padres National Forest boundaries. The USDA-SCS Soil Survey provides soils data and information in this southern area only.

The discussion of soils in the area is separated into several different systems of classifying and categorizing soils for various purposes. First, soils associations which are present in the region are described. Soils associations are categories used to generally describe soil profiles and characteristics. Second, important farmlands categories provided by the state are used to describe the agricultural potential of soils. Third, soils capability classifications provided by the federal government are used to categorize the agricultural potential of soils. Fourth, hydrologic soils groups are used categorize the runoff potential of soils. Fifth, vegetative soils groups are used to categorize the crop limitations of soils.

Following the discussion of soils types listed above, soils related hazards such as expansive soils and erosive soils will be identified. Landslides and mudslides are also considered soils related hazards but these conditions are discussed in the geologic formations portion of this geology section. Regional and local locations of the various soils types and hazards concludes the soils section.

### SOILS ASSOCIATIONS

Soils associations are useful for generally describing the soils in an area, for comparing different parts of an area, for looking at soils on large tracts of land, for suitability for farming or other uses and for community development. Associations are not suitable for planning the management of land, because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect management.

There are fourteen soil associations in the Ventura Area (i.e., south Ventura County). Four of these associations occur in the City of Ojai and the City Sphere of Influence: 1) The Pico-Metz-Anacapa association and 2) the Mocho-Sorrento-Garretson association are described as level to moderately sloping, excessively to poorly drained soils of the alluvial fans, plains, and basins. 3) The Ojai-Sorrento, heavy variant association is described as level to moderately steep, well and moderately well drained soils of the terraces. 4) The Sespe-Lodo association is described as moderately sloping to very steep, well and excessively well drained soils of the uplands. All of these soil associations have a frost-free season of about 250 to 350 days and an average annual air temperature of 60 to 62 degrees Fahrenheit.

The Oxnard Plain area is primarily underlain by level to moderately sloping, excessively drained to poorly drained soils of the alluvial fans, plains, and basins. The central portion of south County is largely underlain by level to moderately steep, well drained and

moderately well drained soils of the terraces. The remainder and majority of the County has moderately sloping to very steep, well drained, and excessively drained soils of the uplands.

Pico Metz-Anacapa Association

This soil association is generally level to moderately sloping with very deep, well drained sandy loams and very deep, somewhat excessively drained loamy sands. This association is commonly found in the eastern portion of the City of Ojai. The soils were formed in deep alluvium derived predominantly from sedimentary rocks. The plant cover in uncultivated areas consists of annual grasses, forbs and scattered oaks. Slopes range from 0 to 9%. Annual rainfall ranges from 14 to 18 inches. Pico, Metz, and Anacapa soils are about 60 inches deep or more.

Mocho-Sorrento-Garretson Association

The soil association tends to be level to moderate sloping with very deep, well drained loams to silty clay loams. This association is commonly found in the eastern, southwestern and northcentral portions of the City. The soils formed in deep alluvium that was derived predominantly from sedimentary rocks. The plant cover in uncultivated areas consists of annual grasses, forbs, and scattered oaks. Slopes range from 0 to 9%. Elevations range from 25 to 1,700 feet. Annual rainfall ranges from 14 to 20 inches. Mocho, Sorrento, and Garretson soils typically are well drained and are 60 inches or more deep.

Ojai-Sorrento, Heavy Variant Association

This association is generally level to moderately steep with very deep, well drained, very fine sandy loams and clay loams that have a slowly permeable sandy clay loam and heavy clay loam subsoil. This association covers the entire western half of the City and portions of the central and northeastern sections. The soils were formed on fans and terraces, in alluvium derived predominantly from sedimentary rocks. The plant cover in uncultivated areas consists of annual grasses, brush and scattered oaks. Slopes range from 0 to 3%. Elevations range from 25 to 1,700 feet. The annual rainfall ranges from 14 to 21 inches. Ojai and Sorrento soils are well drained and are 60 inches or more deep.

Sespe-Lodo Association

This association tends to be moderately steep to very steep with well drained clay loams that are moderately deep to deep over sandstone or shale, and somewhat excessively drained loams that are shallow over shale. This association is located in the southcentral and northeast corner of the City of Ojai. The soils are underlain by hard sandstone and shale. The plant cover in uncultivated areas consists of annual grasses, brush and scattered oaks. Slopes range from 15 to 75%. Elevations range from 300 to 2,600 feet. Annual rainfall is 18 to 22 inches. Sespe soils are well drained and are 24 to 48 inches deep. They are underlain by hard sandstone. Lodo soils are somewhat excessively drained and are less than 20 inches deep. Rock outcrop covers 2 to 10% of the area.

## IMPORTANT FARMLANDS

The State of California Department of Conservation classifies soils according to farmland potential. This system is frequently used to classify soils and is called the Important Farmland Inventory. Soils are categorized as prime farmland, farmland of statewide importance, farmland of local importance, unique farmland, grazing land, developed land, or other. The definitions of these designations are outlined below and the locations of these soils in the Ojai area are provided on Exhibit GEO-7.

The important farmlands inventory does not cover the area within the Los Padres National Forest. In the Ojai vicinity, the areas within the alluvial plains of the Ventura river, Ojai Valley, and Upper Ojai Valley are overlain with important farmland soils where the soils are not overlain by development. In the hillside and mountain areas, these soils are designated primarily grazing land and other lands.

### Prime Farmland

This is land with the best combination of physical and chemical features for the production of agricultural crops. This land has the soil quality, growing season and moisture content needed to produce sustained high yields of crops economically when treated and managed according to modern farming methods. California's prime farmland are well drained, irrigated soils over 40 inches deep with a water holding capacity of four inches or more.

### Farmland of Statewide Importance

This is land with a good combination of physical and chemical features for the production of agricultural crops. This land is also considered prime land with a good combination of physical and chemical characteristics. The criteria for farmland of statewide importance is similar to that of prime farmland but there is no minimum soil depth limitation and no permeability restriction. These soils have a broader water holding capacity and moderate erosion hazard.

### Unique Farmland

This is land of lesser quality soils used for production of the state's leading agricultural cash crops. This is land other than prime farmlands and farmlands of statewide importance that is currently use for the production of specific high value food and fiber crops. Examples of such crops are citrus, olives, avocados, fruit, and vegetables.

### Farmland of Local Importance

In some local areas, there is concern for preservation of additional farmlands for the production of food, fiber, forage, and oilseed crops, even though these lands are not identified as having national or statewide importance. These land are identified by a local committee made up of concerned agencies, and called together by the Soil Conservation Service district conservationist designated as county representative. A local committee reviews lands under this category on at least a five year basis.

Grazing Land

This is land on which the existing vegetation is suited for grazing of livestock.

Developed Land

This land is considered urban land.

## SOILS CAPABILITIES

Soil capability grouping is used by the Soil Conservation Service to generally show the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of soil damage when they are used, and the way they respond to treatment. The grouping does not consider land forming which is an expensive means of changing the slope or depth of soils. It also does not apply to horticultural crops or crops requiring special management.

Soils capability classes, capability subclasses, and capability units are described in Tables GEO-C, GEO-D, AND GEO-E respectively. All soils are given a capability class and those with limitations are also given a capability subclass and/or capability unit.

The Oxnard Plain area of the County of Ventura and the areas near the Santa Clara River, the Ventura River and along the mouths of canyons tend to have very fertile soils which are capability classified as Classes I and II. Many areas adjacent to the Class I and II soils are capability classified as fair to poor (Classes III and IV). The remainder of the County's land is primarily capability classified as Classes VI and VII which are considered very poor for farming.

## HYDROLOGIC SOIL GROUPS

Soils are classified into hydrologic soil groups according to runoff potential. This system is used by the Soil Conservation Service. The groups are shown in Table GEO-F.

## TABLE GEO-C
## CAPABILITY CLASSES

| CLASS | DESCRIPTION |
|---|---|
| I | Soils have few limitations that restrict their use. |
| II | Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices. |
| III | Soils have severe limitations that reduce the choice of plants, require special conservation practices, or both. |
| IV | Soils have very severe limitations that reduce the choice of plants, require very careful management or both. |
| V | Soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture or range, woodland, or wildlife habitat. |
| VI | Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat. |
| VII | Soils have very severe limitations that make then unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat. |

Source: USDA - SCS Soil Survey

## TABLE GEO-D
## CAPABILITY SUBCLASSES

| CLASS | DESCRIPTION |
|---|---|
| e | Main limitation is risk of erosion unless close-growing plant cover is maintained. |
| w | Water in or on the soil interferes with plant growth or cultivation. |
| s | The soil is limited mainly because it is shallow, droughty or stony. |
| c | Chief limitation is climate that is too cold or too dry. |

Source: USDA - SCS Soil Survey

Note: Class I soils have no subclasses as the soils have few limitations.

## TABLE GEO-E
## CAPABILITY UNITS

| CLASS | DESCRIPTION |
|---|---|
| 0 | Course sandy or very gravelly substratum. |
| 1 | Potential or actual erosion hazard. |
| 2 | Poor drainage or overflow hazard. |
| 3 | Slow or very slow permeability in subsoil or substratum. |
| 4 | Course or gravelly texture. |
| 5 | Fine or very fine texture. |
| 6 | Excess salts or alkali. |
| 7 | Stones, cobblestones or rock outcrop. |
| 8 | Shallowness over hardpan or hard, unweathered bedrock. |
| 9 | Low inherent fertility, which is associated with strong acidity, low calcium - magnesium ratio, or excess calcium, boron, or molybdenum. |

Source: USDA - SCS Soil Survey

## TABLE GEO-F
## HYDROLOGIC SOIL GROUPS

| CLASS | DESCRIPTION |
|---|---|
| Group A | Soils have high infiltration rate when thoroughly wetted: chiefly deep, well drained to excessively drained sand, gravel, or both. Rate of water transmission is high, thus runoff potential is low. |
| Group B | Soils have moderate infiltration rate when thoroughly wetted: chiefly soils that are moderately deep to deep, moderately well drained to well drained and moderately course texture. Rate of water transmission is moderate. |
| Group C | Soils have slow infiltration rate when thoroughly wetted: chiefly soils that have a layer impeding downward movement of water, or moderately fine textured to fine textured soils that have slow infiltration rate when dry. Rate of water transmission is slow. |
| Group D | Soils have very slow infiltration rate when thoroughly wetted: chiefly clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near surface, or soils that are shallow over nearly impervious material. Rate of water transmission is very slow. |

Source: USDA - SCS Soil Survey

The soils in southeastern areas of south Ventura County are classified as Group D meaning they have a very slow infiltration rate and very high runoff potential. The central and northwestern portions of south County including the Oxnard Plain area trend toward Group C soils. These are soils with a slow infiltration rate and thus high runoff potential. The soils along the County's rivers tend to have Group B soils which merge to Group A soils nearer the river beds. Group B soils have a moderate infiltration rate and moderate runoff potential. Group A soils have a high infiltration rate and low runoff potential.

## SOILS-RELATED HAZARDS

Hazards associated with soils in regard to land use capabilities concern:

- expansive soils hazards (refer to Exhibit GEO-9 for hazard areas);
- erosional soils hazards (refer to Exhibit GEO-10 for hazard areas);
- landslides/mudslides (refer to Exhibit GEO-5 for hazard areas.

### Expansive Soils

Expansive soils are those which are generally clayey, expand or swell when wetted, and contract or shrink when dried. These soils are typically located in areas of moderate slope. Expansive soils are referred to as soils having high shrink-swell potential. Downslope soil creep in hillside areas is a concern with regard to expansive soils. As an expansive soil shrinks and swells it tends to move downslope due to gravity.

Expansive soils tend to be very localized and site specific and a soils test is usually necessary to determine a particular site's susceptibility to expansive soils. Engineering practices can sometimes be applied to alleviate the problems associated with building on expansive soils. Examples of these practices are appropriate foundation design, less steep slopes, removal and replacement of expansive soils, special landscaping, and irrigation techniques to bind and avoid wetting the soil.

Moderately expansive soils are prevalent throughout south Ventura County. Areas of low potential for expansive soils are common along rivers and some canyons. Small areas of highly expansive soils are scattered throughout the western portion of the south County. Larger areas are common in the southeastern portion of south County.

### Erosional Soils

Erosion, the breakdown and removal of rock or soil, is a natural process that occurs due to weathering. Man's activities often exacerbate and speed up this process to an extreme degree.

There are a number of factors which naturally affect soil erosion. Vegetation is very important in slowing soil erosion. Vegetation tends to hold soil together with root systems. Land which has been denuded by man, fire or other processes has a much greater potential for soil erosion than landforms with vegetative cover.

Temperature also plays a vital role in slowing erosion in that temperature affects vegetation. In humid areas, vegetation is more lush and soils are held together accordingly. In dry areas, vegetation is generally sparse and soils are more easily eroded.

Slope of the land is another important factor. As slopes increase, so does the probability of erosion. The reason for this is water moving over flat surface is slower and picks up less soil than on a steep surface.

Rainfall in an area is a crucial factor in that rainfall both supports vegetation and washes away soils.

Soil type is another critical component of soil erosion. Impermeable soils are much more vulnerable to erosion than are permeable ones. Soils which allow water to percolate have a greater chance of holding together than those that do not. If water is unable to penetrate the soil, it will wash downslope carrying sediment. Well-cemented, consolidated soils or massive rock units are generally far less readily eroded than are fine-grained, unconsolidated soils.

These factors along with the extremely localized nature of an erosional hazard require that soil erodibility be investigated on a site by site basis to determine land use compatibility. The erodible soils map, Map 6, provides a general guide for determining when such an investigation may be appropriate in the Ojai vicinity.

The majority of south Ventura County soils have potential for very sever water erosion if the soils is cultivated or heavily grazed. The exceptions to this are the Oxnard Plain area and areas along the rivers of the County. These areas experience no potential to moderate potential for erosion hazard.

Landslides/Mudslides

Refer to the Geological Hazards portion of the Geology section.

## Local Setting

### SOILS ASSOCIATIONS

Four soil associations are found in the City boundaries and extend into the Sphere of Influence. Ojai Sorrento, heavy variant association lies to the west, an area of Sespe-Lodo Association lies to the north. The Pico-Metz-Anacapa Association and the Mocho-Sorrento-Garretson Association are located in the eastern portion of the Sphere along the San Antonio River. The Four soil associations found in the City of Ojai: 1) Pico-Metz-Anacapa Association, 2) Mocho-Sorrento-Garretson Association, 3) Ojai-Sorrento Association, 4) Sespe-Lodo Association.

The Pico-Metz-Anacapa Association is located at the far eastern portion of the City's boundary. The soils of this association are some of the most productive in the County.

The Ojai-Sorrento is the predominant soil association found in the City of Ojai, encompassing approximately half of the City limits. All are generally level to steeply sloping, deep, well drained, sandy, clay and silt clay loams.

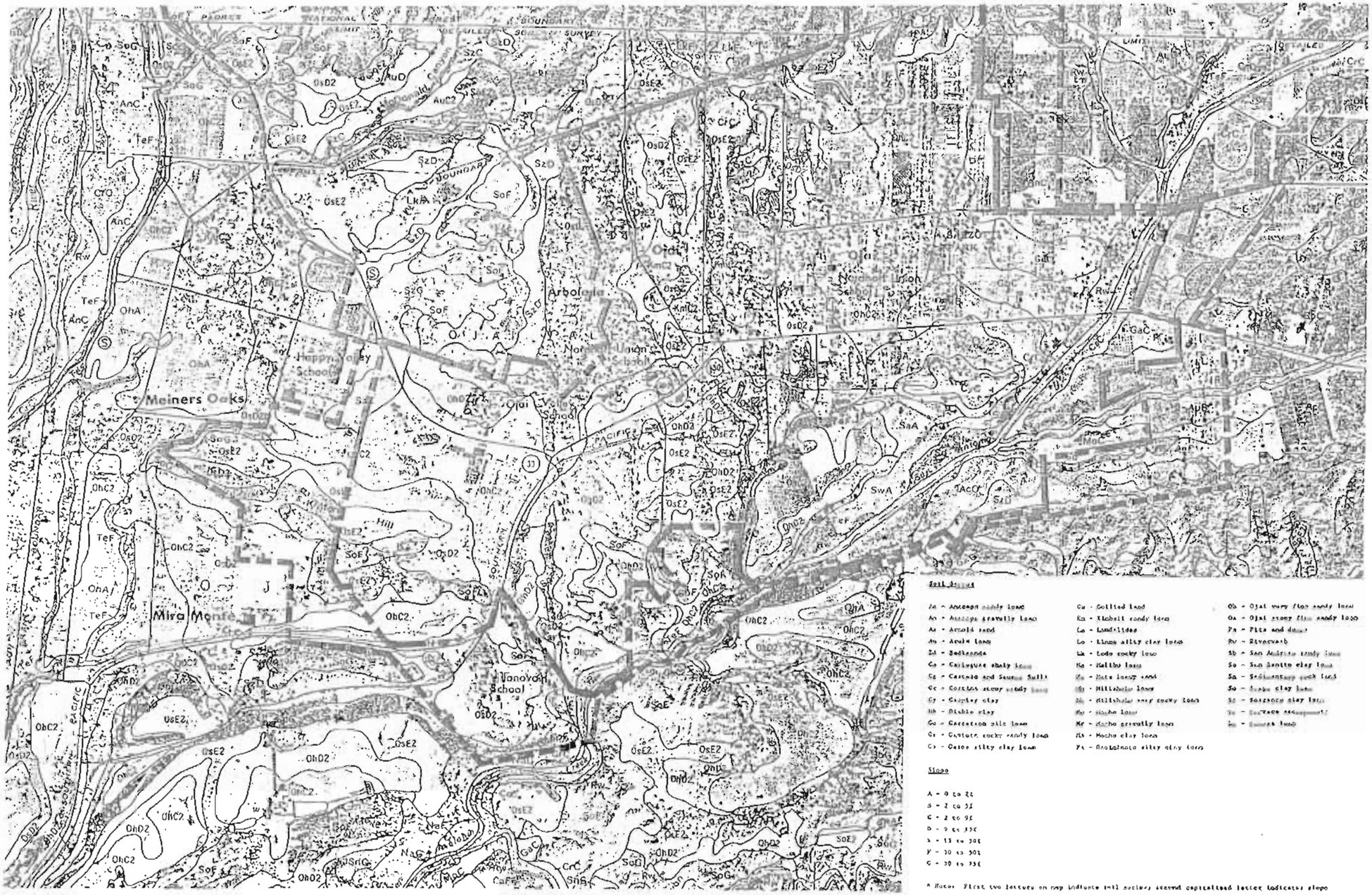
The Sespe-Lodo association is located at the City's northern boundary and poses the most severe constraint with respect to excavations, sewer septic filter fields, intensive use play area, golf fairways and lawns.

The Mocho-Sorrento-Garretson association is located at the far eastern end of the City's boundary and exhibits the least constraints for these uses.

### IMPORTANT FARMLANDS

A portion of the Sphere of Influence located within the National Forest is not designated by the California Department of Conservation. The eastern portion of the Sphere is primarily designated prime farmland and farmland of statewide importance although there are also areas of developed land and a small area of unique farmlands. The southern portion of the Sphere is designated as developed. The western and southwestern portion of the Sphere is given several designations including prime, statewide importance, unique, local importance, developed, and grazing lands

The City of Ojai is almost entirely designated as developed land within its boundaries by the California Department of Conservation. The exceptions are very small areas located at the eastern city boundary and western city boundary. These areas are designated prime and unique farmlands and farmlands of statewide importance.




MEA: SOIL TYPES

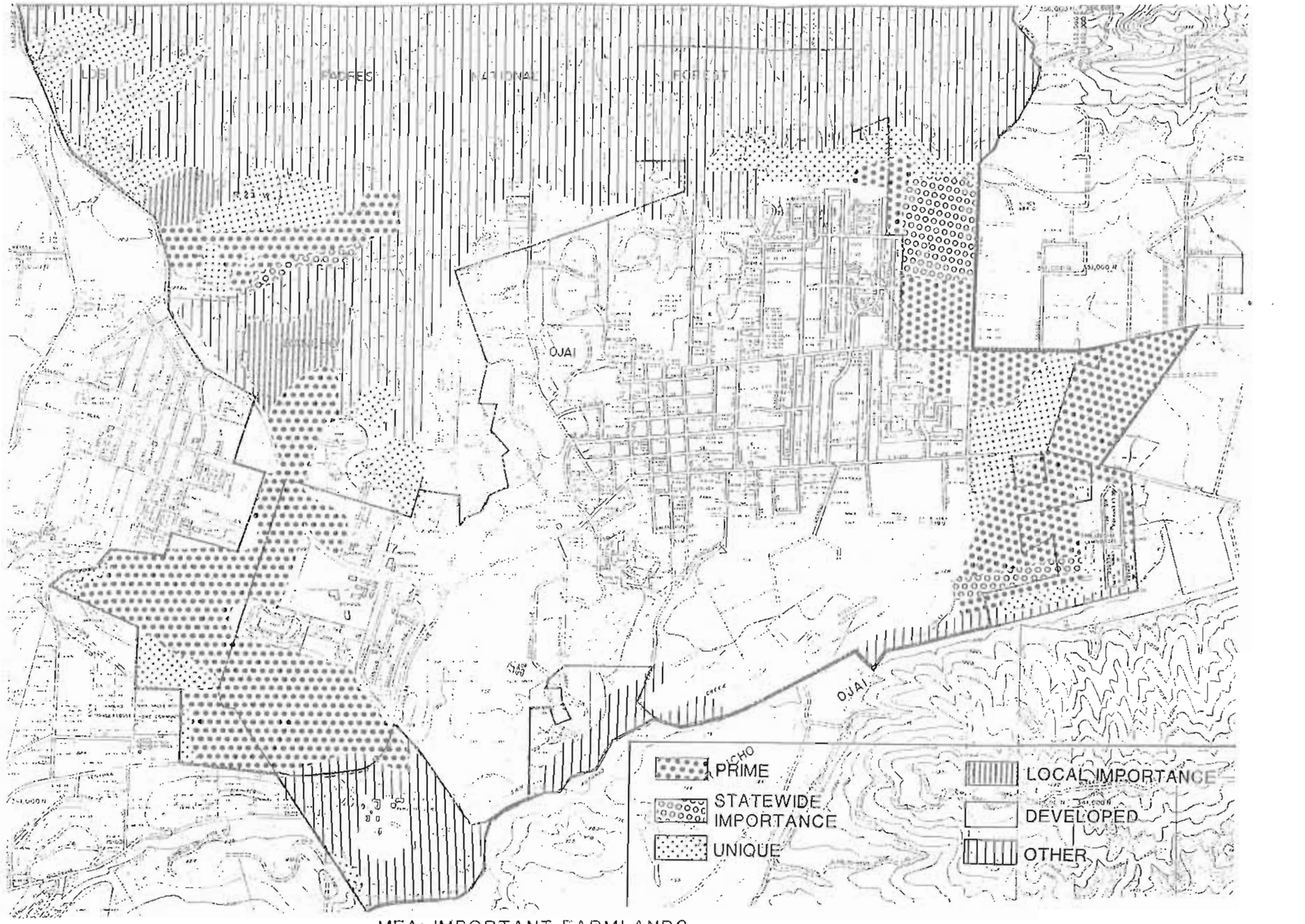
# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: U.S.DEPT OF AGRICULTURE

EXHIBIT GEO-7




MEA: IMPORTANT FARMLANDS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: CALIF. DEPT. OF CONSERVATION

EXHIBIT GEO-8

## SOILS CAPABILITIES

The lands in the far south and eastern portions of the City's Sphere of Influence along San Antonio Creek are primarily capability Class I and Class II soils. They are well suited for agricultural purposes. In addition, the area near Meiners Oaks along Highway 33 and McDonald Canyon contains very good soils. The western portion of this eastern section tends to have Class III and IV soils which are fair to poor soils for row crops. The western portion of the Sphere is comprised of a mix of very good/good, fair/poor, and very poor soils under the capability classification system.

Land within the City of Ojai boundaries is not exceptionally well suited for crop agriculture. The southwestern leg of the City and a small area in the northwest are capability classified as very poor (Classes VI and VII). The majority of the land in the City is Classes III and IV soils which are considered fair and poor soils for row crop purposes. Note that although these soils are not well suited for row crops, it does not mean that they are not well suited for specialty crops or crops requiring special management practices such as avocados. The entire eastern portion of the City on both sides of San Antonio Creek contains Class I and Class II soils which are considered very good and good soils for agriculture.

## HYDROLOGIC SOIL GROUPS

The northwestern portion of the Sphere of Influence contains areas of Group D soils, but the majority of the Sphere has Group C soils. Group A and B soils exist in the eastern-most portion of the Sphere along San Antonio Creek.

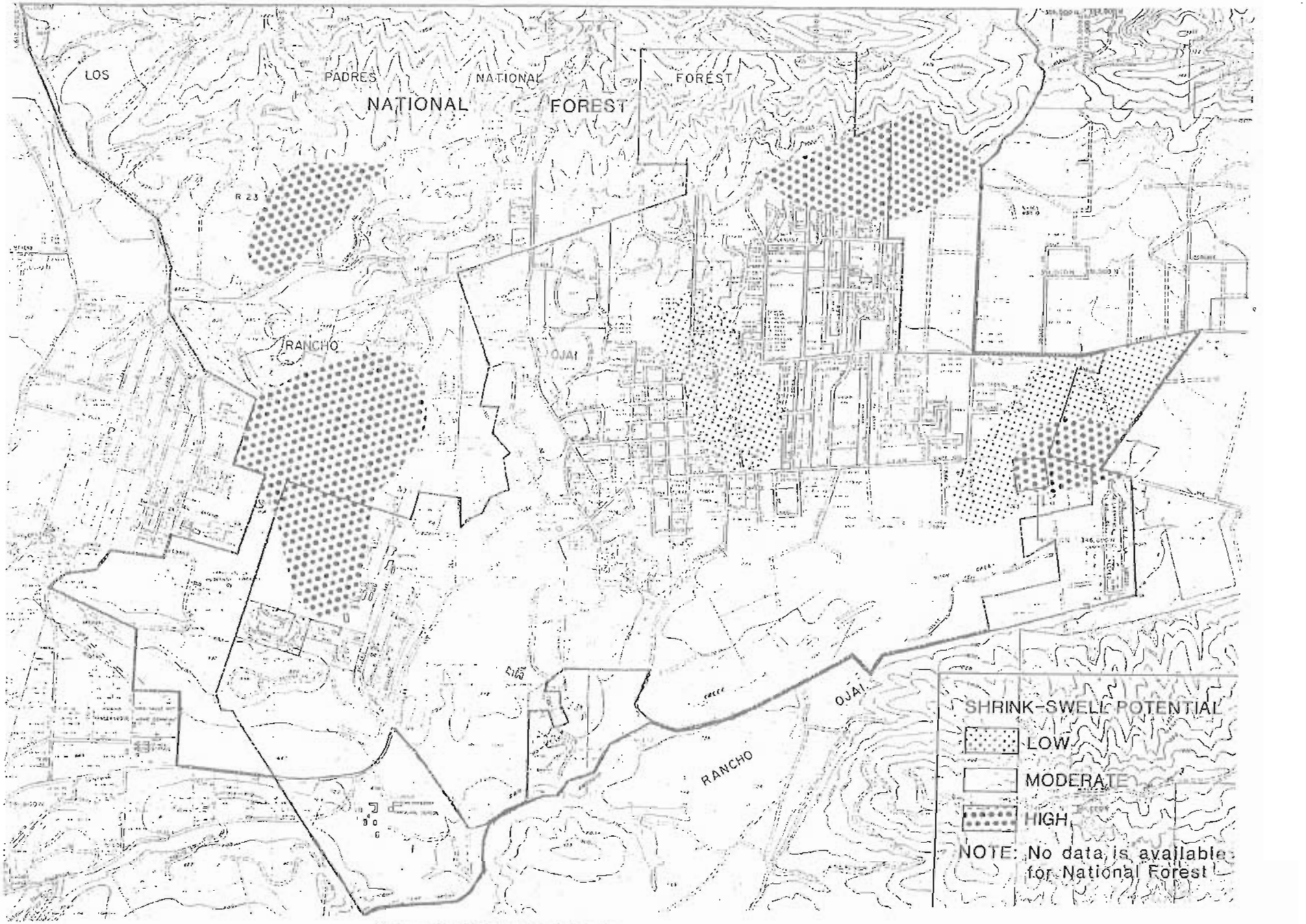
The City's soils are primarily classified as Group C soils. A large wide strip of Group A soils runs north-south through the center of the City. Another area of Group D soils are located along the City's northern boundary.

## SOILS-RELATED HAZARDS

### Expansive Soils

The majority of the adopted Sphere of Influence is underlain by moderately expansive soils. The southeastern portion of the Sphere has highly expansive soils near Highway 150. Highly expansive soils are also prevalent in the portion of McDonald Canyon and the area east of Meiners Oaks located within the Sphere of Influence boundaries.

The great majority of the land within the City of Ojai is covered with moderately expansive soils with the exception of the central portion of the City which has low expansive potential. These soils can be built upon easily with conservative engineering practices. The northeastern corner of the City is covered with highly expansive soils which must be taken into consideration prior to land development.




MEA: EXPANSIVE SOILS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

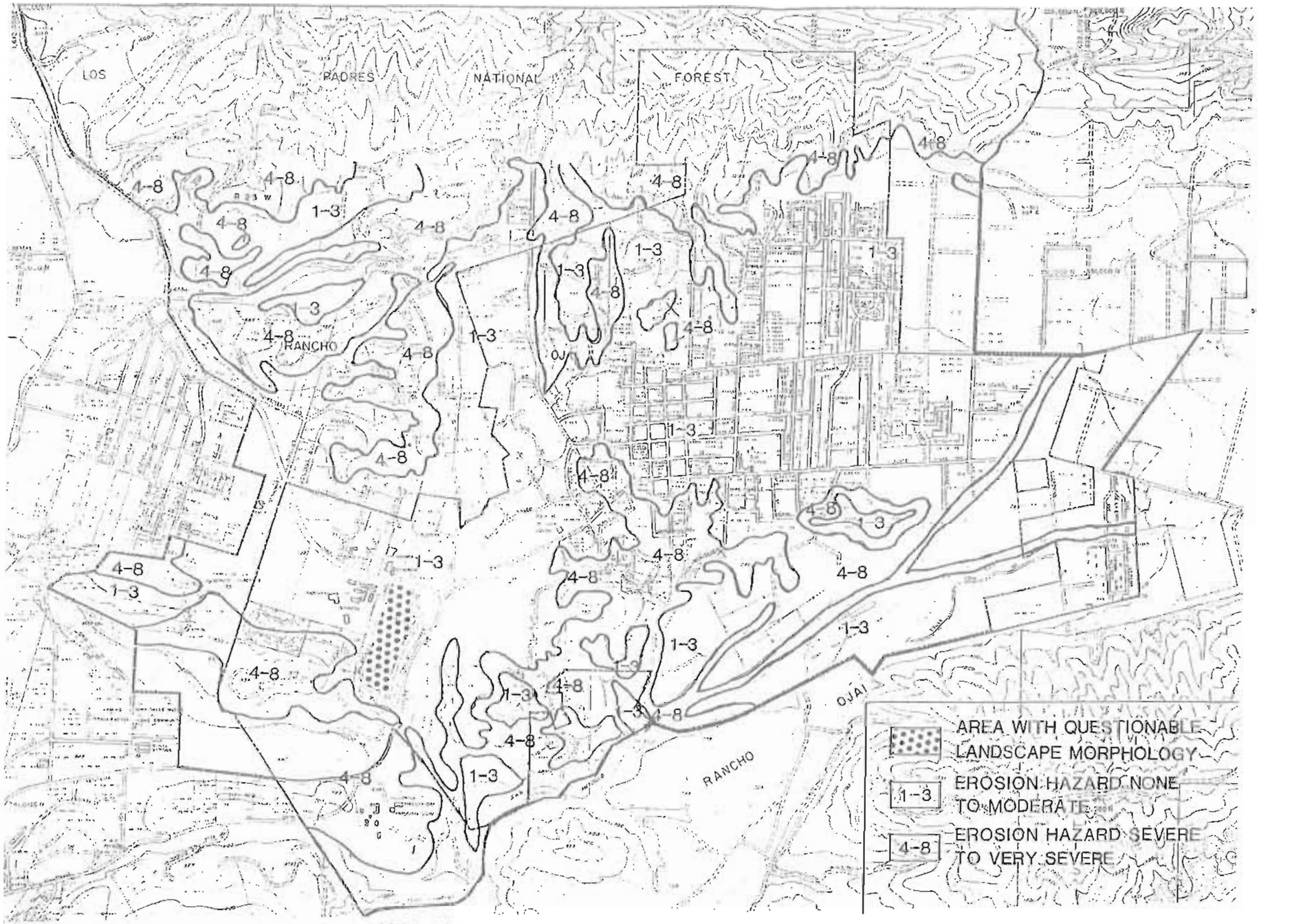
SOURCE: U.S.DEPT. OF AGRICULTURE

EXHIBIT GEO-9

Erosional Soils

Outside the City limits, the trend of severe erosion hazard near the City increasing to very sever hazard to the northwest and reducing to moderate hazard to the southeast continues in the City vicinity. A small area east of Meiners Oaks, however, has potential for moderate erosion hazard.

Potential for severe erosion hazard characterizes the majority of the soils within the City limits. To the northwest, the potential increases to very sever and to the southwest, the potential for erosion hazard is reduced to moderate.




MEA: EROSION HAZARDS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: CALIF. DIV. OF MINES & GEOLOGY

EXHIBIT GEO-10

# HYDROLOGY/FLOODING

## Regional Setting

### INTRODUCTION

The purpose of this section is to identify the location and condition of groundwater basins and to investigate the existence and severity of flood hazards in the City of Ojai and its Sphere of Influence.

The City of Ojai lies in a broad alluvial plain crossed by San Antonio Creek and its tributaries. The Ojai Valley was originally an inlet or bay of the Pacific Ocean, which has receded. The present configuration of mountains and valley is a result of marine activity and geologic forces.

Potential flooding and related impacts are not enumerated on a site specific basis. Additional site specific and project area specific information must be collected (and analyzed) prior to project approvals. MEA maps should be utilized to direct planners and decision-makers to areas of concern and in this way focus attention to constraints for a site specific evaluation.

### GROUNDWATER

The City of Ojai is within the Ojai Groundwater Basin. This basin is part of the Ventura Hydrologic Unit which is located generally north and east of the City of Ventura and includes the Ojai, Upper Ojai, Upper Ventura, and Lower Ventura River Basins. The Ojai Basin contains the largest quantity of groundwater within this unit. Major groundwater recharge areas within the Ojai Groundwater Basin are located in the western half. Water-bearing materials are generally confined by a clay cap more than 50 feet thick.

The primary structural features affecting water-bearing rocks are faulting and folding. The groundwater storage capacity and direction of movement of groundwater is largely due to the magnitude and direction of folding in the area.

#### Groundwater Quality

Groundwater within the Ojai Basin is of acceptable quality for domestic, agricultural and industrial uses. Good water quality and a large storage capacity has made this Basin a desirable area for storage and extraction of groundwater.

The quality of groundwater occurring in the Ventura Hydrologic Unit is influenced by a number of factors. Water quality degradation may be divided into those resulting from natural causes and those produced by activities of man.

Where unconfined conditions exist disposal of highly mineralized wastewater results in relatively rapid degradation. In areas overlain by a naturally protective clay cap (shown on Exhibit HYD-1 as the central portion of the groundwater basin), degradation of important aquifer zones may occur at a much slower rate.

Degradation can occur to water quality from a number of sources. Natural degradation in most cases cannot be alleviated. The most serious source of natural degradation is mineral decomposition. Portions of the rocks found in the Ojai vicinity are very soluble. They can readily yield minerals which percolate into most of the major watersheds of the County.

Besides natural degradation, the daily activities of man can generate wastes which have a degrading effect upon the quality of surface water and groundwater. Since the movements of groundwater are very slow, sources of impurities that are introduced into a hydrologic unit are usually extremely difficult to identify. In some cases, the source of water quality degradation may not even exist at the time adverse conditions are identified. Major sources of groundwater degradation include: irrigation return water, sewage, and effluent from industrial operations, as noted below:

- Irrigation - Water applied to plants contains dissolved minerals. Plant Plant processes of evaporation and transpiration use applied water but do not have any real effect on the dissolved minerals present. Water which percolates to the water table contains much higher concentrations of dissolved minerals than the original water.

- Sewage - Sewage treatment can have detrimental effects upon surface water or groundwater quality. Untreated sewage can escape pipes and unsound septic systems. Effluent from sewage treatment plants is discharged into the ocean or creeks and rivers. This can lead to degraded surface water quality.

- Industrial Operations - The production and processing of industrial goods can result in wastewater of adverse quality. Industries which historically have produced adverse quality wastewater are the petroleum industry, food processing and processing plants, water softener regeneration, and dump sites.

Impervious Surfaces

Increasing impervious surfaces through the construction of parking lots, buildings or similar development has an effect on the hydrologic cycle; it decreases groundwater recharge and it increases urban runoff. Water that is available to percolate into the ground and replenish the groundwater, is hampered by impermeable surfaces. In this manner the amount of available groundwater recharge can be reduced. Total runoff of the area is, in addition, increased.

Runoff of vehicular pollutants from paved surfaces during the stormy season can also degrade water quality as surface oils penetrate the groundwater basin.

Extraction

The City of Ojai uses 1,607 acre-feet of water per year. In the City, 1,335 acre-feet (83%) is obtained from groundwater.

## FLOODING

### Climate

The climate of the Ojai area directly affects the duration and intensity of rainfall. It is characterized by hot summers and mild winters. The mean annual precipitation for the area ranges from 19 inches near the confluence of San Antonio Creek and the Ventura River, to 30 inches in the mountains.

Major floods in the area are produced by unstable frontal storms that form in the Pacific Ocean and approach the coast from the west. These frontal systems form by cold air masses from the polar regions mixing with very moist warm air from the tropics. They have a potential for producing heavy and prolonged rainfall. The rain generally occurs during the winter months from November to April. Storms last from three to four days. Local storms can cause high intensity precipitation for a duration of about six hours or less. General summer storms can also occur in southern California during the later summer or early fall months. These storms have not resulted in any major floods in the San Antonio Creek Basin during the periods for which discharge records are available.

### Drainage

Drainage for the City of Ojai and Sphere of Influence is south and southwest. The streams and drains are typical of the majority of streams in southern California; streamflow is negligible except during and immediately after rains. Climatic and basin characteristics are not conducive to continuous runoff. Runoff increases rapidly in response to high-intensity precipitation and is magnified to some degree by the impermeable surfaces created by urbanization. Streamflow is seasonal and diminishes rapidly at the end of the winter precipitation season. Based on records on the last 100-year period of flood history, some flood damage will occur in the vicinity of Ojai on an average of once in every four years. The Ojai area historically has been subjected to major storms on an average of once every 11 years.

### Channel Analysis

There are many creeks and drains in the Ojai area which could have an affect on the City when floods occur. The following tables and descriptions briefly detail those watercourses which pose possible flood hazards for the City of Ojai.

- **San Antonio Creek** - this is a major tributary to the Ventura River. It originates in Senior Canyon north of the Ojai Valley and flows southwestward to its confluence with the Ventura River north of Casitas Springs.

- **Thacher Creek** - this creek originates northeast of Ojai and flows in a southwesterly direction to its confluence with San Antonio Creek in the City of Ojai.

- **Stewart Canyon Channel** - Stewart Canyon traverses the City of Ojai and its Sphere of Influence from north to south. It goes through the center of the City. Along Stewart Canyon Channel urban development has occurred. This drain runs from the mountains north of the City south to its confluence with San Antonio Creek along the southern corporate boundary. A debris basin was built by the U.S. Army Corps of Engineers at the mouth of Stewart Canyon Storm Channel. It contains and regulates the outflow for both the Intermediate Regional (100-year) and Standard Project Floods (500-year). Below the basin a concrete channel and covered box conduit has been constructed to accommodate the Intermediate and Standard Project Flood. This improvement extends from the spillway of the debris basin to approximately 200' downstream of the Southern Pacific Railroad crossing. In this manner all flood hazards along Stewart Canyon Channel have been eliminated above the downstream end of the channel improvement.

- **Fox Canyon Barranca** - this traverses the City and Sphere from north to south in the eastern third of the City. Along Fox Canyon Barranca urban development has occurred. This drain runs from the mountains, north of the City to its confluence with Stewart Canyon Drain and then into San Antonio Creek, along the southerly corporate boundary.

  The principal danger of flooding along the Fox Canyon Barranca is the inadequate inlet under Daly Road. This inlet could become clogged from debris generated upstream of Daly Road.

  The area tributary to Fox Canyon includes a large area east of the channel that is not collected due to a lack of lateral drainage facilities. The City Master Plan of Drainage (dated June 1979) proposes a storm drain parallel to Fox Canyon Channel. This drain would intercept much of the tributary east of Fox Canyon. It is designated as Drain 26 and is considered to be a Ventura County Flood Control "Redline" or jurisdictional channel.

- **McNell Creek** - McNell Creek is an unimproved channel throughout its length and runs mostly through agricultural land. The channel is inadequate to contain an Intermediate Regional (100-year) Flood throughout its length.

- **Happy Valley Drain** - this drain travels northeast to southwest and is situated just outside the western boundary of the City limits. The flood plain for Happy Valley Drain south of El Roblar is partially developed.

- **Dron Creek** - this creek travels north to south, originating from the mountains and emptying into San Antonio Creek. Dron Creek has the potential to overflow its banks before it reaches San Antonio Creek.

## TABLE HYD-A
## WATERCOURSES IN THE OJAI VICINITY

| WATERCOURSE | TOTAL DRAINAGE (Sq. Miles) | DESIGN FLOW (Ft./Sec.) |
|---|---|---|
| San Antonio Creek | 52.2 | 19,700 |
| Thacher Creek | 11.3 | 5,300 |
| Stewart Canyon Channel | 2.7 | 3,680 |
| Fox Canyon Barranca | 2.3 | 2,040 |
| McNell Creek | 2.1 | 1,200 |
| Happy Valley Drain | 1.3 | 1,290 |
| Dron Creek | 1.0 | 1,200 |

Source: Zone 1 Flood Control Study, VCFCD. October, 1974.

## TABLE HYD-B
## SUMMARY OF DISCHARGES FOR CREEKS IN THE OJAI VALLEY

| FLOODING SOURCE & LOCATION | DRAINAGE AREA (SQ. MILES) | PEAK DISCHARGES (CUBIC FT./SEC) 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| San Antonio Creek: | | | | | |
| Upstream of confluence with McNell Creek | 12.1 | 2,500 | 5,600 | 7,000 | 11,000 |
| Upstream of confluence with Thatcher Creek | 15.0 | 2,500 | 5,600 | 7,000 | 11,000 |
| Downstream of confluence with Thatcher Creek | 24.9 | 4,200 | 9,600 | 12,000 | 18,000 |
| Thatcher Creek: | | | | | |
| At confluence with San Antonio Creek | 9.9 | 2,300 | 5,400 | 6,800 | 9,500 |
| Stewart Canyon Storm Channel: | | | | | |
| Upstream of confluence with Fox Canyon | 2.6 | 980 | 2,200 | 2,700 | 3,900 |
| At confluence with San Antonio Creek | 5.0 | 1,400 | 3,800 | 5,500 | 7,900 |
| Fox Canyon Storm Drain: | | | | | |
| At corporate limits | 0.4 | 200 | 470 | 580 | 850 |
| At confluence with Stewart Canyon | 2.3 | 1,400 | 2,300 | 2,800 | 4,000 |

Source: Flood Insurance Study, City of Ojai, California: Ventura County, April 1978, U.S. Department of Housing and Urban Development, Federal Insurance Administration. Revised October 31, 1985.

## Flooding Hazards

Almost all of the above described waterways pose a flooding threat to the City of Ojai. Flooding can be aggravated by several factors such as inadequate channel cross-sections, culverts at roadways, poor flow line alignment, and excessive debris.

The major watercourse influencing the City is San Antonio Creek. Damaging floods along this creek and its tributaries in the vicinity of Ojai are reported to have occurred in 1862, 1867, 1884, 1911, 1914, 1938, and 1943. Major floods along the creek are described as having a peak discharge greater than 3500 cubic feet per second. Major floods have been recorded along San Antonio Creek occurred in 1952, 1958, 1965, 1966 1969, and 1978. The flood of January 25, 1969 had the largest recorded peak discharge at 16,200 cf./sec. The largest peak discharge for San Antonio Creek during the 1978 winter storms was 14,000 cf./sec. which was recorded on February 10th. This was facilitated by the 16.23 inches of rainfall during the months of December and January in the City of Ojai. The January 16th storm produced a 6,900 cf./sec. peak discharge on San Antonio Creek with the March 4th storm producing a 10,100 cf./sec. discharge.

Most flooding problems along the San Antonio Creek are associated with excessive debris accumulation and in some instances, alignment of the natural stream; losses of recreational facilities such as picnic tables are common on an annual basis (Flood Insurance Study, HUD, 1978). The Ojai Valley is periodically threatened by flows containing large quantities of debris from steep canyons of the upper watershed. The existing channels can become clogged with debris and no longer carry the volume of flood flows. These flows then spread over the valley causing loss in property and posing potential hazard to life.

Traditional improvement plans to alleviate debris flows are debris dams and basins at canyon mouths and the lining of channels. These improvements would then carry the cleared water from the basin outlets past points which are susceptible to flood damages. Systematic and periodic flood channel preventive maintenance including removing debris accumulating in flood channels and contributory streams would lessen or remove flood threats from debris clogged channels.

The floods during the January 1969 storms resulted in excessive channel sedimentation and production of large quantities of floating debris. In many areas, severe sedimentation resulted in the blockage of road crossings. This occurred along Grand Avenue and Ojai Avenue in the Ojai Valley and Highway 33 north of Ojai.

Debris basins are invaluable during storm periods because they provide an area to capture and accumulate debris before it can enter the downstream channels and cause damage. The Stewart Canyon Debris Basin is credited with saving the City of Ojai from major property damages and loss of lives. It is estimated that over 200,000 cubic yards of material were deposited in the basin by the January and February 1969 storms.

The floods during the January/February/March 1978 storm season produced minor flooding problems in numerous storm drains throughout the City of Ojai. Most of these facilities are undersized and inadequate to accommodate peak flood discharges and can result in flooding problems during major storms.

A burned watershed, results of the July Wheeler fire, posed a serious potential threat of flooding to the Ojai Valley in the 1985-1986 flood season. Fortunately emergency measures including debris dams, temporary channels, watershed reseeding and extensive sandblasting combined with a wet, but well distributed, rainfall resulted in little serious flooding to the valley.

## Flood Plain Management

In October 1978 the City of Ojai adopted a Flood Protection Ordinance incorporating flood plain management programs recommended by a Flood Insurance Study. The intent of the ordinance is to regulate development in flood plains and flood prone areas, the stream channels, canyon channels, and barranca channels identified in the Flood Insurance Study and in this document.

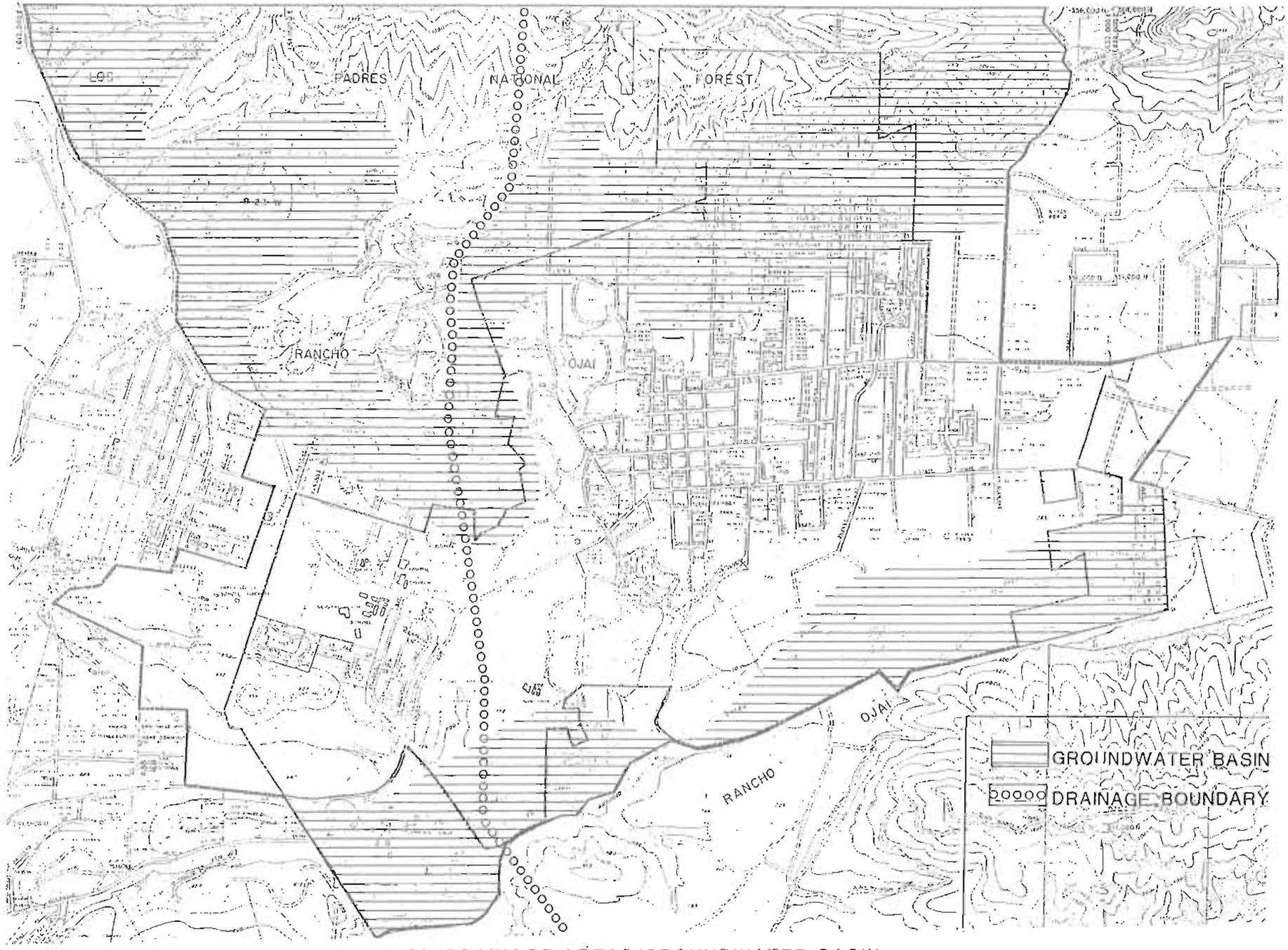
The Master Plan of Drainage Study, prepared for the City of Ojai in June 1979, identifies sources of funding which may be used by a development applicant in completing a specific project.

Areas in the Ojai Valley outside of the City limits are subject to Ventura County Flood Control District Regulations and Policies guiding Flood Control activities in Zone 1. Flood Zone 1 of the Ventura County Flood Control District encompasses the areas shown in Table HYD-C.

## TABLE HYD-C
## FLOOD ZONE 1

| AREAS WITHIN FLOOD ZONE 1 | | | |
|---|---|---|---|
| 1. | Ventura Area | 5. | Matilija |
| 2. | Foster Park | 6. | Ojai |
| 3. | Oak View | 7. | Pitas Point |
| 4. | Meiners Oak | 8. | Rincon Area |

Source: Ventura County Flood Control District




MEA: DRAINAGE AREAS/GROUNDWATER BASIN

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: COUNTY OF VENTURA

EXHIBIT HYD-1

# BIOLOGICAL RESOURCES

## Regional Setting

The purpose of this portion of the MEA is to lay the groundwork and provide a working tool for the planning and management of the City's biotic resources. This portion of the MEA has the following objectives:

- to document the existing biological resources base within the study area at a scale appropriate for general planning purposes;
- to define and delineate areas of high, moderate and low biological significance, as an "overlay" to the existing resource base, whereby ongoing resource planning review and management activities can be focused;
- to outline and discuss management considerations for the various areas of significance identified, to provide City planners with guidelines to direct their planning and management activities.

It should be noted that the biological resources section of the MEA provides base data to be used for identification and management of biological resources currently identified in Ojai. As additional information is generated through subsequent detailed surveys, the findings of this study should be refined and updated. It is not anticipated that this process will result in redesignation of biological sensitivity levels (Exhibit BR-1). It is expected to provide detailed information on the distribution and interrelationships of key resources within the designated management units so that they may be properly managed at the appropriate level of detail.

### CURRENT PRACTICES AND PROBLEMS

A recurring question which arises in land use planning, resource management and environmental review is, "what constitutes a significant biological resource?". Surprisingly, even more than a decade after the California Environmental Quality Act of 1970 (CEQA) was enacted, there is no universally accepted answer. CEQA established a procedural structure for environmental review to ensure that the long-term protection of the environment is a guiding criterion in public decisions. Consistently within this structure there is the need to determine whether or not a resource is significant.

Although some selected biological resources are addressed by laws, codes, and policies, they are limited to legally protected rare and endangered species, riparian habitats and wetlands. These address only a fraction of the biological resources which exist in our environment and in no way represent the only significant resources given any reasonable interpretation.

The lack of broader criteria with which to determine significance has been a fundamental problem in managing biological resources. This problem has manifested itself in several ways, including unpredictable findings and conclusions; widespread disagreement on resource values; and, an inconsistent planning perspective within which sound goals and planning decisions have been difficult to make.

## CRITERIA FOR DETERMINING SIGNIFICANCE

A set of criteria have been developed for the MEA which define resources as being of either high, moderate, or low significance. The criteria and rationale are discussed below:

### High Significance

The criteria and rationale defining "high significance" relate to resources that are generally limited in distribution and whose contribution to biological diversity and/or productivity is critical within their regional context. In most cases, the term "regional" refers to southern California. For purposes of the Ojai Master Environmental Assessment, these resources include:

- the habitat of state and federally sanctioned rare, endangered and threatened plant and animal species;
- biotic communities, vegetative associations and habitats of plant and animal species that are highly restricted in distribution on a regional basis;
- habitat that at some point in the life cycle of a species or group of species serves as a concentrated breeding, feeding, resting or migrating grounds, and is limited in availability;
- biotic resources that are of scientific interest because they are either extreme in physical/geographical limitations, or they represent an unusual variation in a population or community;
- areas that serve as "core" habitats to regional plan, wildlife, and game populations and fisheries.

### Moderate Significance

The criteria for defining "moderate significance" relate to resources whose contribution to native biological diversity and productivity is limited to their local context and/or which support the functioning and integrity of adjacent areas of high significance. Such resources are:

- habitats that are key to the maintenance of localized plant and animal populations but are not significant on a regional basis;

- areas which act to buffer and protect resources of high significance;

- corridors and zones which serve to link areas of high significance and facilitate their ecological interactions;

- biological resources which are noteworthy for their educational and/or horticultural value.

Low Significance

Remaining biological resources fall within areas of "low significance". The single criterion for determining these resources is:

- Areas where biological resources have been removed or significantly altered and/or none of the above criterion apply.

## Regional

### OVERVIEW

The General Plan area is within the coastal and foothill region of central Ventura County. The area ecologically encompasses a wide range of physical habitats including flatlands, hills and mountains. These habitats support a diverse collection of grassland, brushland, and woodland vegetation types. These vegetation types support a wide variety of wildlife.

As is typical of most of the Southern California coastal region, past agricultural activities and more intense urban development have occurred over much of the study area. These activities have resulted in the removal of natural habitats from the landscape. As a consequence, large areas of native vegetation and wildlife habitats have also been lost. Native vegetation remains relatively undisturbed only in the steeper hills and mountains and flood plain areas.

This ecological "fabric" which covers the study area contains seven major vegetation types, five of which are native or naturalized and two of which are man-created. Associated with these are hundreds of plant and wildlife species, some of which have become very restricted in their distribution.

# City of Ojai and Sphere of Influence

## BIOTIC COMMUNITIES

Biotic communities are assemblages of plant and animal species that are found in specific physical habitats. They are ecological units containing a diverse group of organisms that exist together in an orderly, predictable manner and have a very close and complex set of interrelationships. These communities are commonly identified and discussed with reference to one or two dominant plant species and the nature of the vegetation.

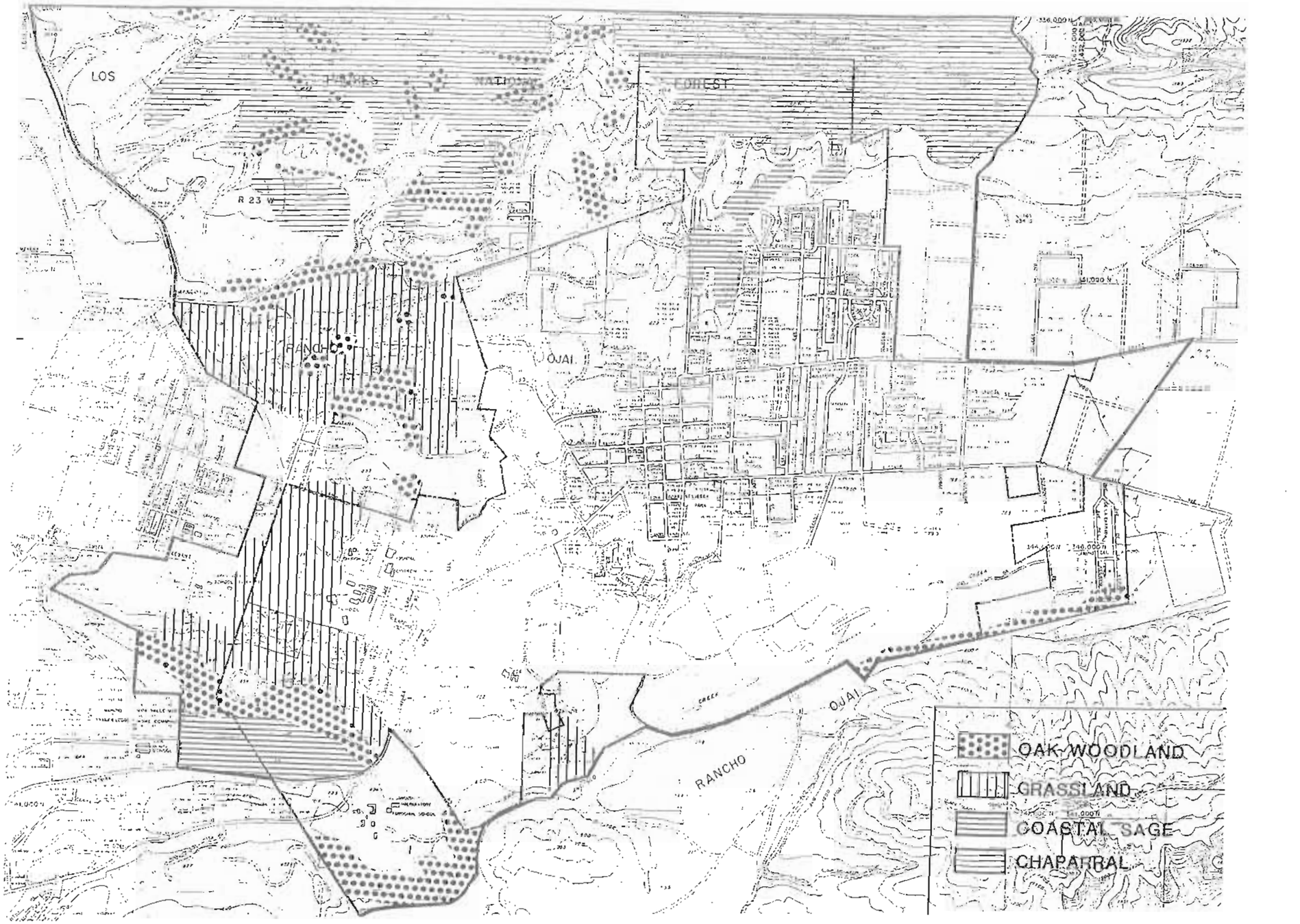
Seven major biotic communities exist within the study area. The biotic communities are shown on Exhibit BR-1. These include coastal sage scrub, introduced grassland, rural-agricultural, urban, chaparral, riparian, and oak woodland. Following is a brief discussion of the general ecology of the major biotic communities found within the study area. Each community description includes information on the significance, physiognomy, characteristic plant species, representative wildlife, distribution, and wildlife value. Because the definitions of biotic communities are largely based on vegetation types, their distribution follows the vegetation types mapped.

### Coastal Sage Scrub

Coastal sage scrub is the characteristic plant community of the lower elevation hillsides and ridges of coastal southern California where it occupies dry, rocky, or gravelly soils. This community is found on Krotona Hill, scattered in the west central portion of the General Plan area and on Nordhoff Ridge. Typically, it can be found on steep hillsides and in narrow canyons which are unusable for grazing and agriculture.

Coastal sage scrub is an open shrub community. The dominant species are shrubs that grow two to five feet high, but do not normally form a closed canopy. However, bare ground is not common. Rainfall and soil moisture are sufficient to support a rich variety of forbs and grasses. Growth of the dominant vegetation occurs in late winter and spring, following the onset of winter rains. Most flowering will occur in spring, but some shrub species continue into summer. The vegetation becomes dormant and more or less deciduous in summer and fall.

Natural seeding rapidly reestablishes this community after fire, which normally consumes this vegetation entirely. Ground cover is usually reestablished within one year after a burn. Floral species comprising coastal sage scrub communities include California sagebrush (*Artemisia californica*), California encelia (*Encelia californica*), deer weed (*Lotus scoparius*), black sage (*Salvia mellifera*), and California buckwheat (*Erigonum fasciculatum*). Within both the sage and mixed subcommunities, larger shrubs such as lemonadeberry (*Rhus integrifolia*), laurel sumac (*Rhus laurina*), and toyon (*Heteromeles arbutifolia*) are also common on north-facing slopes and in drainages.




MEA: BIOLOGICAL RESOURCES

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: COUNTY OF VENTURA
PUBLIC WORKS AGENCY

EXHIBIT BR-1

Coastal sage scrub is highly productive and supports a surprising diversity and abundance of wildlife. Amphibians are generally absent; however, several reptiles and many mammals and birds are commonly found.

## Chaparral

Chaparral is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils. A well-developed chaparral cover is found at Black Mountain and intermixed with coastal sage scrub on Nordhoff Ridge.

Vegetative composition varies considerably; however, most species possess small, broad, hard leaves. Most plants are evergreen, growing and flowering primarily in late winter and spring and becoming somewhat dormant over the summer and fall. Chaparral species commonly grow six to ten feet high and often form dense, nearly impenetrable stands.

Chamise chaparral communities are dominated by chamise (*Adenostoma fasciculatum*). This species is joined in dominance by other species which include California sagebrush, lemonadeberry, laurel sumac, black sage, scrub oak (*Quercus dumosa*), and toyon. Typically, a large accumulation of litter is found surrounding the base of shrubs and is important to the overall ecology of the chaparral community. It functions as a "groundcover" in place of grasses and forbs to retard rainfall runoff, thereby inhibiting erosion and enhancing percolation of water into the soil.

Additionally, the leaf litter is highly flammable and readily burns during the drier parts of the year. Periodic burning (every twenty years or so) is a key element to the maintenance of a healthy, productive chaparral cover. The plants of this community are adapted to recurrent fires and either produce seeds that require high temperatures before germinating (scarification) or possess root crowns that send up sprouts following fire. Furthermore, fires recycle nutrients held in the plants back to the soil in the form of ash. If fire does not occur, the soil becomes sterile and plants eventually become decadent and die without replacement. This can lead to problems in wildlife and watershed management. Following a fire, annuals produce a dense groundcover that holds the soil in place until the larger shrubs and the litter are re-established.

The diversity of wildlife in pure unbroken strands of chaparral is limited. However, community productivity is high and large numbers of individual species are often present. Under natural conditions of recurring fire, the chaparral is regularly burned, thus creating openings that often support many grasses and coastal sage scrub species. This process is extremely important to wildlife. These openings provide an edge between the successional vegetation and chaparral that is much more diverse and able to support a greater number of species than either habitat type alone. These animals are able to utilize this interface as an entrance to dense chaparral in areas that would otherwise be closed to them. The characteristic wildlife species found in this plant community are virtually the same as those found in coastal sage scrub.

Introduced Grassland

Introduced grassland, also referred to as valley grassland, is a vegetation type that replaces native communities following dryland farming, heavy grazing, and other artificial clearing. Natural plant species are either cleared or are destroyed and are replaced by adventitious species that can withstand constant disturbance. As a result, the flora of this community is dominated by annuals and perennial herbs that grow one to three feet high. The majority of these are non-native and are often considered to be "weeds". The vegetative cover of this community characteristically germinates during the late fall rainfall, with most growth and flowering occurring from winter through spring. Plants then die and persist as seeds through summer and early fall.

Introduced grasslands are found scattered throughout the study area. Relatively large blocks of introduced grassland are found in the southeast and southwest as well as just west of Arbolada. Presumably, these areas were once covered by a native coastal sage scrub or native grassland community. As ranching and agricultural practices grew in the region, these areas were either mechanically cleared or treated with herbicides and were either converted to grassland to improve livestock grazing or plowed for farming.

Dominant species include various introduced grasses (e.g., *Brome* spp., *Avena* spp., *Festuca* spp., *Hordeum* spp. etc.) and mustards (*Brassica* spp.). Numerous spring-flowering native wildflowers are also present in limited numbers. These are rapid-growers, shooting up out of the soil in a manner of a week or two under the proper climatic conditions and adequate rainfall. When the weather becomes hot and dry, they disappear with the same rapidity.

Introduced grassland is easily re-established after fire; and on-going grazing and agricultural practices will continue to promote this vegetation. If left undisturbed, these areas will eventually revert back to their native conditions of native grasslands or coastal sage scrub.

Large open expanses of grassland support a limited diversity of wildlife, but those that are present are normally abundant. No amphibian species are expected in this dry, disturbed habitat. Several reptiles and small mammals are present.

Two groups of birds dominate the avian fauna in this community. Grassland birds forage for seeds and insects on the ground. Several of these species will nest here if not disturbed. The second group of birds are the predators. For these bird of prey species, grasslands serve as critical feeding grounds where they prey on small mammals, lizards, and small birds. They depend on woodland habitats in the region for nesting and perching sites.

Riparian

Riparian communities are found along drainage courses throughout California where moisture is at or near the surface on a year-round basis. These conditions are favorable for the establishment of a rich cover of trees, shrubs, herbs, and grasses. This community type is found along numerous drainage courses in the study area. In particular, well developed riparian communities are found along San Antonio Creek and McDonald Creek. It was once much more extensive in the region; however, flood control and irrigation projects have

severely restricted its distribution. Due to the wide variation in the intensity and extent of man's activities adjacent to and within these areas, species composition and growth form vary considerably.

Riparian communities have a dense vegetative cover. These areas are dominated by willows (*Salix* sp.) western sycamore (*Plutanus racemosa*) and coast live oak (*Quercus agrifolia*). A dense understory of large shrubs, including toyon, elderberry (*Sambucus mexicana*), laurel sumac, and lemonadeberry, is commonly present. The groundcover is usually a thick layer of leaf litter.

Due to the similarity of wildlife habitat provided by riparian communities and oak woodland, this aspect of this community is discussed in the next section.

Oak Woodland

Major oak woodlands are found at Krotona Hill throughout the lower Stewart Canyon/Arbolada area, San Antonio Creek and Black Mountain. Minor woodlands can be found at numerous other locations within the study area. These communities, consisting of either open "savannah" or more dense forest, are dominated by coast live oaks and Valley oaks (*Quercus Lobata*) ten to thirty feet tall with an understory of grasses and scattered shrubs. Large shrubs characteristic of the chaparral and coastal sage scrub communities, such as toyon, laurel sumac, lemonadeberry, Mexican elderberry and coffeeberry (*Rhamnus californica*) commonly occupy the openings between the oak trees. The majority of the oak woodland communities within the study area are in good to excellent condition despite the fact that the native understory vegetation of most has been heavily disturbed by recreational use and/or heavy grazing pressure.

Fire results in the clearing of litter and dead vegetation, and loss of approximately 50% of living material on oaks. Rejuvenation of the woody vegetation will occur after a fire. Annual grasses and chaparral type shrubs in the understory will reseed and resprout after a burn.

Oak and riparian woodlands are very uncommon in southern California. This is contributing to the loss of regional wildlife resources because woodland habitats are of high ecological value. For a given number of acres of habitat, they support higher population densities of wildlife than any other terrestrial habitat.

Oak and riparian woodland habitats normally possess a high diversity of plant types enhanced by their overlap with surrounding vegetation types (edge effect or ecotone), which in turn supports abundant and diverse wildlife resources. All woodlands should be viewed as components of a regional system of woodland "island" habitats. The number of wildlife species each woodland island can hold is a function of its size and its isolation. Larger woodlands, and woodlands located close to other woodlands (such as in the same canyon or in adjacent canyons), can hold more species than smaller or isolated ones. If an individual woodland or a large portion of a woodland is removed, the diversity and abundance of wildlife there, as well as in surrounding woodlands, will decrease.

These habitats normally support relatively high numbers of amphibians beneath leaf litter and along most stream banks. Several reptile species are also common here. Rodents are common along the edge of neighboring habitats and in areas where seasonal flooding does not occur. Particularly in lowland areas, woodlands are very important to furbearers which use these habitats for cover, food, and denning. Populations of furbearers commonly reach their greatest densities in an around these areas.

Woodlands are very important to bird species. Nearly all the species found in surrounding habitats can be found here. In addition, it supports others that require the moist vegetation and/or trees. Many of these species are migratory, and utilize this habitat for over-wintering. Larger birds of prey specifically require the trees as perching and nesting sites and forage in surrounding vegetation.

These habitats also serve as wildlife dispersion corridors important to regional wildlife populations. Many wildlife species, particularly medium and large forms, must move from place to place to forage for food or meet other requirements necessary for their survival. In addition, the dispersion of young after reproduction is essential to prevent local population crowding and to maintain genetic variability and numbers throughout regional populations. Wildlife dispersion usually takes place along canyon drainages and stream courses, not only because topographic resistance is minimized, but also because they commonly support woodland habitats which provide cover, food, and/or water during movement.

Agriculture

This community is generally comprised of orchards, cultivated croplands and scattered residential and farm structures. It is found mostly on valley floors where land us suitable for agriculture and where irrigation is available. This community is found over much of the Ojai Valley and the broader foothill canyons where agricultural land uses have a fairly long history.

The prevailing orchards and row-crops found here are far removed from natural conditions and represent environmental simplifications which are artificially managed. Eucalyptus windrows composed of single rows of blue gum (*Eucalyptus globulus*) fifty to seventy-five feet high, are commonly aligned between fields and orchards. A wide variety of roadside and irrigation ditch weeds complete the vegetation of this community.

The native flora in rural communities have been heavily impacted, and natural habitat diversity and productivity has been greatly reduced. Consequently, the diversity and abundance of fauna is very limited. Croplands and orchards are capable of supporting a relatively small number of wildlife species. These include several perching birds and birds of prey, few reptiles and a number of small rodents and medium sized mammals. The type and number of wildlife vary with the crop present and the season. Adjacent eucalyptus windrows are frequently used by birds of prey for roosting and occasionally for nesting.

### Urban/Cultural

Urban communities are located within cities and towns with residential subdivisions, parks, golf courses, and commercial areas. Within the study area, this community is represented over much of the Ojai Valley which is rapidly urbanizing. Generally, all native vegetation in these areas has been removed and replaced with non-native ornamental species which are frequently manicured.

Faunal diversity is extremely low. Several small bird species thrive under these conditions.

## HIGH INTEREST SPECIES

Widespread habitat loss and degradation in southern California is now indicated by the relatively high number of rare, endangered, or protected, plant and animal species found here. Numerous species which are known or are expected to occur within the study area have been given special status designations by federal and state agencies and private organizations. The reader should note that those designations from private groups are advisory only and include: 1) bird species which are of special concern to the National Audubon Society and have been "blue listed" due to recent or current declines in their population numbers; and 2) plant species which are native and considered "rare and endangered" by the California Native Plant Society. Table BR-A lists those plant and animal species which have received special status designations and may occur within the study area.

## AREAS OF SIGNIFICANCE

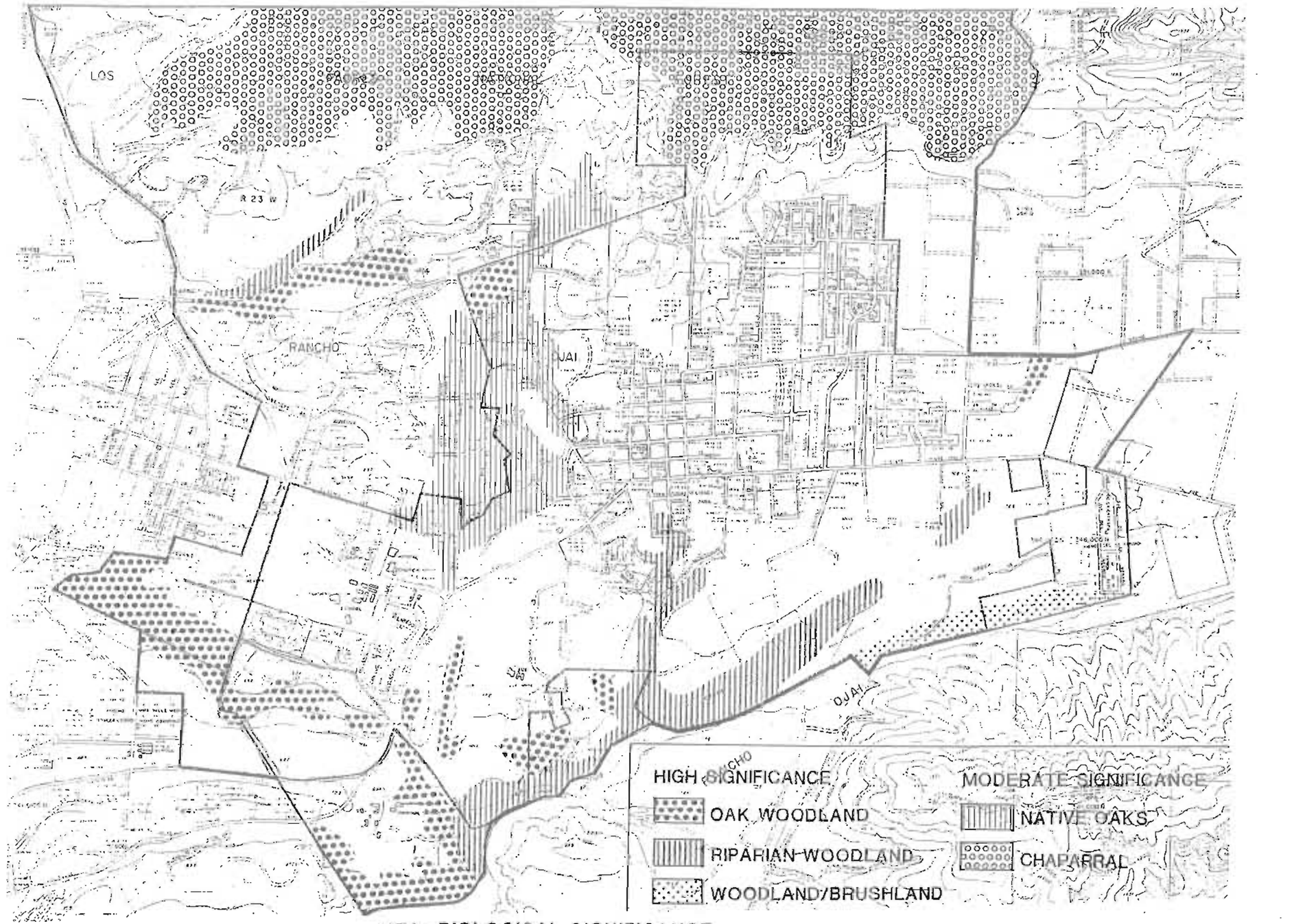
The significance of the various biological communities within the community is as shown on Exhibit BR-2.

### Areas of High Significance

Based on the evaluation criteria for determining biological resource significance. There are four resource types within the study area which are of high significance.

- Regionally significant oak woodland - These areas represent relatively large blocks of essentially unbroken oak woodland communities.

- Regionally significant riparian woodland - These areas represent relatively large blocks of essentially unbroken riparian communities.




MEA: BIOLOGICAL SIGNIFICANCE

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: COUNTY OF VENTURA
SANCHEZ TALARICO ASSOCIATES, INC.

EXHIBIT BR-2

# TABLE BR-A
## SPECIES OF SPECIAL STATUS AND/OR CONCERN AND REPRESENTATIVE EXAMPLES OF THEIR OCCURRENCE WITHIN THE STUDY AREA

| SPECIES | STATUS | | | | OCCURRENCE WITHIN CITY AND SPHERE |
|---|---|---|---|---|---|
| | STATE | FEDERAL | C.N.P.S. | AUD. SOC. | |
| Ring-tailed cat (Bassariscus astutus) | Fully protected, protected fur-bearer | - | - | - | Potentially within the city and sphere: resident within chaparral. |
| Black-shouldered kite (Elanus leucurus) | Fully protected | - | - | - | Nesting resident in open foothills: occurs in oak and riparian woodlands: forages in grasslands and agricultural areas; found throughout study area in such habitats. |
| Cooper's hawk (Accipiter cooperii) | Spec. concern | - | - | Blue listed | Breeding resident in broken oak and riparian woodlands where it also forages; found primarily in remote areas. |
| Sharp-shinned hawk (Accipiter striatus) | Spec. concern | - | - | Blue listed | Winter visitor in thick oak and riparian woodlands where it also forages: found primarily in remote areas. |
| Northern harrier (Buteo lineatus) | Spec. concern | - | - | Blue listed | Winter visitor: forages in grasslands. |
| Red-shouldered hawk (Buteo lineatus) | - | status under. | - | Blue listed | Breeding resident in broken oak and riparian woodlands; forages in adjacent grasslands; occurs throughout area. |
| Golden eagle (Aquila chrysaetos) | Fully protected | Protected under Bald Eagle Act | - | - | Breeding resident in secluded foothill areas. |

## TABLE BR-A (Cont'd.)

| SPECIES | STATUS | | | | OCCURRENCE WITHIN CITY AND SPHERE |
|---|---|---|---|---|---|
| | STATE | FEDERAL | C.N.P.S. | AUD. SOC. | |
| California Condor (Gymnogyps californianus) | Endangered | Endangered | - | - | Infrequent visitor throughout. |
| Merlin (Falco columbarius) | Spec. concern | Status undet. | - | Blue listed | Winter visitor or migrant throughout area; found in open grassland, brushland and broken woodland areas. |
| American kestrel (Falco sparverius) | - | - | - | Blue listed | Breeding resident throughout area; found in nearly all habitats including suburban. |
| Bell's least vireo (Vireo bellii) | Endangered | Candidate for endangered listing | - | Blue listed | Potentially a breeding resident in well-developed willow riparian areas throughout the study area. |
| Hairy woodpecker (Pendrocopos villosus) | | | - | Blue listed | Breeding resident in well-developed oak and riparian woodlands. |
| Bewick's wren (Thryomanes bewickii) | - | - | - | Blue listed | Breeding resident in coastal sage scrub throughout. |
| Western bluebird (Sialia mexicana) | | - | - | Blue listed | Winter visitor and migrant throughout; prefers scattered trees near open fields and open brush. |
| Loggerhead shrike (Lanius ludovicianus) | - | - | - | Blue listed | Breeding resident throughout; found in nearly all habitats. |
| Yellow warbler (Dendroica petechia) | - | - | - | Blue listed | Winter visitor and migrant throughout willow thickets along stream courses. |

## TABLE BR-A (Cont'd.)

| SPECIES | STATUS | | | | OCCURRENCE WITHIN CITY AND SPHERE |
|---|---|---|---|---|---|
| | STATE | FEDERAL | C.N.P.S. | AUD. SOC. | |
| Vesper sparrow (Pooecetes gramineus) | - | - | - | Blue listed | Winter visitor in agricultural areas, grasslands, and open brushland. |
| Blunt-nosed leopard lizard (coembella silus) | Endangered | Endangered | - | - | Sparsely vegetated areas, canyon floors and large washes. |
| Coast horned lizard (Phrynosoma coranatum) | - | Status Undet. | - | - | Resident in coastal sage scrub. |
| Ojai fricillary (Fritillaria ojaiensis) | - | - | Rare and Endangered | - | Chaparral throughout study area |
| Nevin s brickella (Brickellia nevinii) | | - | Rare | - | Coastal sage scrub and chaparral in dry washes and dry slopes. |
| Blockmans liveforever (dudleya blockmaniae) | - | - | Rare | - | Dry stoney places within coastal sage scrub. |

- **Woodland/brushland ecotone** - These areas represent large regionally significant woodland in combination with valuable wildlife habitat.

- **Rare and endangered species habitat** - These areas are as yet not identified, but have the potential to occur within the study area as evidenced by the presence of several rare and endangered species in the region (not shown on exhibit).

Areas of Moderate Significance

Based on the evaluation criteria, there are two resource types which are of moderate significance. These are shown on Exhibit BR-2 and listed below.

- **Locally significant stands of native oaks** - These areas represent stands of native oak which are either individual trees, relative small groves, or relatively large but developed for urban uses (only the lower Stewart Canyon/Arbolada area has been mapped due to scale).

- **Locally significant stands of native brushland** - These areas represent relatively large blocks of native chaparral and coastal sage scrub which possess moderate value as watershed, native flora and wildlife value.

Areas of Low Significance

All remaining areas not delineated as either high significance or moderate significance, are of low significance. No further discussion of these resource areas is provided since these areas do not contribute importantly to the continuance of biological diversity and productivity; thus, they do not require management considerations.

# CULTURAL RESOURCES

# CULTURAL RESOURCES

## Introduction

Cultural resources encompass a wide variety of properties which were, and are, significant in local and American history, regional architecture, archaeology, and culture. The Federal Advisory Council on Historic Preservation has set forth the following criteria to assist in determining what constitutes historic significance.

Districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- that are associated with events that have made a significant contribution to the road patterns of our history; or
- that are associated with the lives of persons significant in our past; or
- that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- that have yielded, or may be likely to yield information important in history or prehistory.

# Historical Resources

## INTRODUCTION

Locational factors are the only elements directly affecting the destruction or preservation of the City of Ojai's historic resources.

## CITY OF OJAI AND SPHERE OF INFLUENCE

### Archival Research

On July 2, 1986, a record search and literature review was initiated at the Regional Archaeological Clearinghouse located at the University of California, Los Angeles to determine previously recorded historic cultural resource areas located within the City of Ojai and its adopted Sphere of Influence.

The results of this endeavor indicated that two structures are listed in the California Inventory of Historic Resources (1976) as possessing cultural significance. These are the Arcade, and the Post Office Tower and Portico. This state-issued document came about in 1975 in response to the passing of the National Historic Preservation Act in 1966. Under this federal mandate, each state is responsible for identifying all properties "possessing historical, architectural, archaeological, and cultural values".

A review of the National Register of Historic Places (1976, Volumes I & II including subsequent yearly supplements) reveals that neither of these state-recognized historical resources has been accepted by the federal agency as possessing similar significance.

### County-Designated Sites

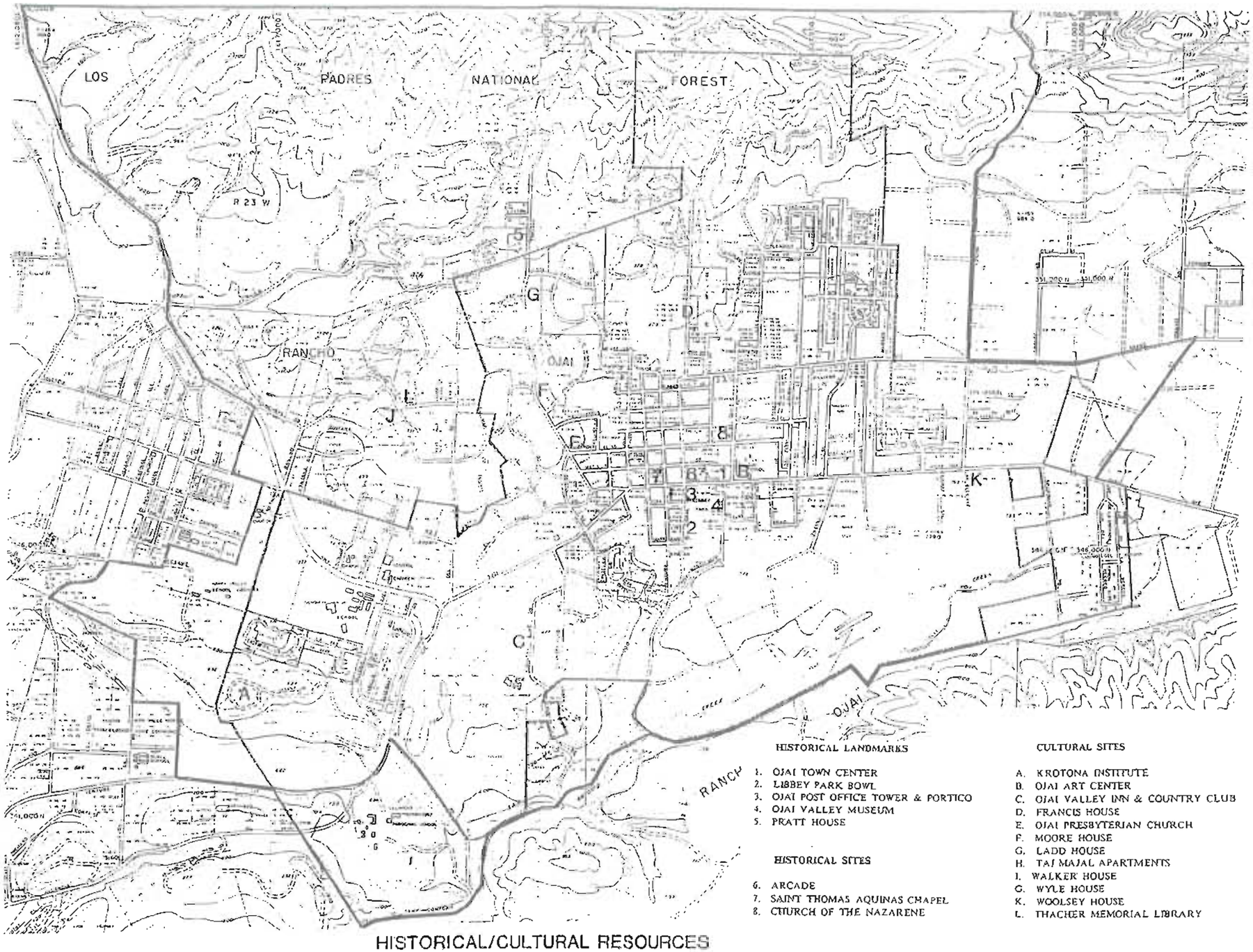
The Ventura County Cultural Heritage Board designated the following four places as historical landmarks. Their locations are as shown on Exhibit CR-1.

1. Ojai Post Office Tower and Portico: Located at Ojai Avenue, between Signal and Montgomery Streets, the post office tower and portico were built in 1917. Edward Libbey built the Spanish revival building.

2. Sycamore Tree at Libbey Park Bowl: This tree is significant to regional history because it was bent into an "N" shape by Indians prior to settlement of the area. The tree is thought to have been bent as a trail marker.

3. Ojai Valley Museum: This museum was built in 1938 as a fire station on S. Montgomery next to, and north of, the Art Center.

4. Pratt House: This house is located at 1330 Foothill, outside the City limits. It is a famous design by Greene and Greene architects in the craftsman style.




HISTORICAL/CULTURAL RESOURCES

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: SANCHEZ TALARICO ASSOC. INC.

EXHIBIT CR-1

The County of Ventura Inventory also recognizes the following places as historic sites:

A. Ojai Arcade - Built in 1917 at Ojai and Signal Street, this mission revival style arcade is a block of shops with a long series of arches.

B. St. Thomas Aquinas Catholic Chapel - Located on Ojai Avenue between Blanche and Ventura, this 1919 Spanish revival style church was rebuilt by Edward Libbey after fire consumed the first building.

C. Church of the Nazarene (1884) - This church is located at 213 N. Montgomery Street. This was the first church in Ojai. It was built in 1884 and the architectural style is Queen Anne.

City-Designated Sites

Several sites have been considered as historical sites by the City of Ojai. The Church of the Nazarene was authorized by the City for "historical monument" designation. The Ladd House and the Theodore Woolsey House have also been authorized by the City "historical landmark" designation. The Ojai Arcade and the George Thacher Memorial Library have been authorized as "qualified" for historical designation.

Other points of interest and cultural significance in the Ojai vicinity are listed below.

A. Krotona Institute (1924)
Hermosa Road, NE of Ventura

B. Ojai Art Center
Montgomery Street and Ojai Avenue

C. Ojai Valley Inn and Country Club
Country Club Road

D. Francis House
1104 S. Signal

E. Ojai Presbyterian Church
NE corner of Foothill and Aliso

F. Moore House
512 N. Foothill Road

G. Ladd House
818 N. Foothill Road

H. Taj Majal Apts
Avenida de la Vereda

I. Walker House
Rancho Drive and Del Norte Road

J. Wyle House
1064 Rancho Drive

K. Theodore Woolsey House
1481 East Ojai Avenue

L. George Thacher Memorial Library
Northwest corner of Aliso and Lion

## ARCHAEOLOGICAL RESOURCES

### Archival Research

The entire Ojai Valley is an archaeologically sensitive area with various known or suspected archaeological sites in the City of Ojai. These sites are not publicized to protect resources from unauthorized exploration and excavation. Six prehistoric archaeological sites had been previously recorded. The following provides a brief description of those prehistoric sites that have been recorded within the City and its adopted Sphere of Influence.

#### Ven-136

Archaeological site Ven-136 was first recorded in 1961 by Thomas Blackburn. At that time he noted a stone bowl fragment, choppers, scrapers, and hammerstones scattered across an area that measured approximately 33 x 33 meters. The site was located on a small knoll overlooking an intermittent stream and may have functioned as a short-term campsite. The records did not indicate that any additional work had taken place at the site since its original recording.

#### Ven-137

Also recorded in 1961 by Blackburn, was Ven-137. This site was located on a small knoll and included in its artifact inventory were metates, manos, choppers, scrapers, hammerstones, blade fragments, and one small leaf-shaped projectile point.

Because of its diverse artifact assemblage and increased size (33 x 66 meters) Blackburn suggested that it may have served as a permanent campsite. In 1961 a residence was already present on the site prompting Blackburn to make the observation that probably most of the site had already been destroyed. No additional work is recorded as having taken place at Ven-137.

#### Ven-138

Ven-138 was also registered in 1961 by Blackburn. This was the largest of the three sites measuring 132 x 66 meters and it was tentatively identified as a large permanent campsite. The site was located on the east side of Stewart Canyon on an alluvial terrace above a stream. The surface artifacts that were observed included manos, metates, choppers, scrapers, hammerstones, stone blade fragments, and a single projectile point which was small and leaf-shaped. As with Ven-136 and Ven-137, no mention is made of any further investigation of the site.

#### Ven-139

Cultural resource area Ven-139 is located on a slight knoll on the west bank of San Antonio Creek. Scattered across an area of 100 x 66 meters were fragments of millingstones, manos,

and hammerstones. This site was recorded in 1968 by Blackburn who noted at the time that the site was worth testing. No records were available to suggest that such a test ever took place.

**Ven-554**

In 1978 David Whitley recorded Ven-554. This site was located in Stewart Canyon and consisted of a single bedrock mortar and an isolated flake.

**Ven-61**

The last site within the adopted Sphere of Influence is Ven-61. This site was located on the eastern edge of the City on a wooden knoll. The site was officially registered at UCLA in 1949 but much had transpired at the site prior to that time. In March 1942, Mr. J.A. Morrison of the Ventura County Pioneer Museum contacted Mr. Phil Orr, an archaeologist located in Santa Barbara, asking if he would be interested in examining the site. In his letter Mr. Morrison stated that the site covered "perhaps five acres... and was a gold mine of Indian artifacts." He went on to say that earlier the landowner and his father had "hauled bowls, pestles, and skeletons, etc. (away) by the wagon load, in order to clear the land."

In response to Mr. Morrison's request, Mr. Orr conducted a systematic excavation at the site in the early months of the summer of 1942. During his investigation, Orr was able to identify a sweathouse (a structure commonly used by the Chumash for ceremonial purposes) and recover 117 burials along with approximately 700 artifacts. Artifacts of interest included a spatulate daggar made from the femur of a grizzly bear and inlaid with olivella and haliotis shell, a dog skeleton, and drilled teeth of other dogs. The skeletons that were recovered, none of which were complete, were flexed in the upper level, while the lower cultural component contained extended individuals. This variation in burial practices prompted Orr to state that the upper individuals were Canalino and those found below could be assigned to the earlier "Hunting People Horizon". Mr. Orr appears to have been greatly satisfied by this discovery. In a letter to Mr. Morrison dated July 2, 1942 he says that this "is something I have wanted to find for a long time." He goes on to note that "we definitely established, the lack of steatite in the earlier horizon, and discovered that these earlier people had far more variety in their decoration than we had suspected."

The sweathouse uncovered by Orr was undisturbed and measured 10 feet across by 3 feet deep. It consisted of an initial tier of rectangular rocks that had been carefully put down, while the following tiers were of irregular rocks and broken metates and mortars.

The records on file at UCLA indicated that Ven-61 was to be given to the County of Ventura as a park. Additional inquiries have revealed that the site may now be destroyed or buried beneath a golf course.

## Other Surveys

In addition to the archaeological surveys that were conducted during which sites were recorded, several others have been carried out that failed to register any cultural resource areas. The records at UCLA show that seven such surveys have taken place within the City and its adopted Sphere of Influence. All of these have been small ranging in size from approximately 150 acres to eight acres.

In 1973 Nelson Leonard III surveyed approximately 50 acres in the extreme eastern portion of the City. In the same year Steven Horne conducted a survey for a firebreak north of the City and its adopted Sphere. Although most of Horne's reconnaissance took place outside the current boundaries of the project area, it did include approximately 150 acres in the northwest corner. In 1979 Sheila Callison, working for the Forest Services, surveyed an area of approximately 75 acres south of Fairview Road. In 1980 and 1981 Robert Lopez conducted three cultural surveys within the City. These totalled 54 acres and were located west of Stewart Canyon (8 acres), immediately south of this Callison surveyed parcel (14 acres), and East of Happy Valley School (32 acres). The final survey was conducted by William Breece in 1986 at the location of the now dismantled Happy Valley School. The project area was 25 acres, but only approximately 8-10 acres of this falls within the current project boundaries. As mentioned above, all of these cultural resource surveys failed to record any new archaeological sites.

# RECREATIONAL RESOURCES

# RECREATIONAL RESOURCES

## Introduction

The amount of open space as provided by park and recreational areas is a major element contributing to the overall beauty of the City of Ojai. A park can be defined as:

> An open space, usually landscaped or left in its natural state, intended for outdoor recreation and the general enjoyment of nature. The distinctive feature of a park, as opposed to other recreational areas, is the opportunity offered for passive recreation - sitting, walking, and watching. Parks may contain playfields, playgrounds, playlots, golf courses, swimming pools, camping grounds, etc... but none of these facilities alone would make a park (Abrams).

Recreation is more active in nature and is defined as:

> Any activity voluntarily undertaken for pleasure, fun, relaxation, exercise, self-expression, or release from boredom, worry, or tensions that which is physically and psychologically rejuvenating...(Abrams)

### FACTORS AFFECTING PARK AND RECREATION QUALITY

The factors affecting the location of land for park purposes and the quality of the recreational experience are those of location and population attraction. The close proximity of a park or facility to a school is advantageous. They occupy the same type and size of service. This allows one to effectively compliment the facilities of another. The value of parks and their accompanying open space becomes even more evident when situated in an area of high density residential land use.

Demand for recreational facilities is determined by population, age composition, environmental characteristics, size of area served and the park itself. State of California park requirements under the Quimby Act are 2 park acres per 1,000 population. Parkland in Ojai greatly exceeds this requirement. Ojai City parks alone constitute 46.5 acres (over 6 acres per 1,000 residents).

Recreational needs must be evaluated and satisfied by offering a variety of relevant activities. Those parks situated in central locations with extensive recreational services offered are in greater demand and are generally used most frequently.

### RECREATIONAL FACILITIES

The type, location, and size of recreational facilities vary in the City of Ojai. Numerous parks exist and range from local city parks to regional county parks. Trails vary from local bicycle/equestrian routes to national forest hiking trails. Definitions of each type/category of

facility are given below, followed by an inventory and description of each existing facility. The inventory is divided into four categories including parks, trails, specialized facilities and regional preserves.

## DEFINITIONS

### Regional/County Parks

These parks include those regional facilities operated by the County of Ventura which attract people in a wide range of age and with broad recreational interests. They include Soule Park and Camp Comfort. These widely utilized facilities provide recreational opportunities to Ojai Valley residents and visitors.

### Local/Community Parks

Local/community parks provide facilities to serve the daily needs of a defined neighborhood or community. Facilities may include: open areas for passive recreation; active sports areas; baseball and court games; and neighborhood activity centers. A local park may be a small neighborhood park (less than 5 acres) such as Daly Park, a larger city park such as Libby Park, or a specialized facility or school used for community recreation needs.

### Trails

Trails are defined as paths designed to accommodate hiking, horseback riding, and/or bicycling through an area and may or may not be removed from vehicular traffic.

Trails are categorized in this MEA and General Plan according to function (hiking, equestrian, bicycle), and then according to scale. Backbone trails are those routes which continue through the City, connecting to other regional systems. Local trails are those within the City which presently serve mostly local residents.

### Specialized Facilities

These facilities provide specific recreational opportunities for local or regional use. These facilities usually have an individual element of attraction. The facility may be within a park, and may be privately or publicly owned or operated. Examples include:

- Arts, Museums, and Cultural Centers
- Auditoriums/Amphitheaters
- Botanical Gardens/Nature Centers
- Campgrounds
- Equestrian Centers
- Festival Grounds
- Golf Courses
- School Playing Fields
- Vista Points/Scenic Areas
- Water Activity Areas (e.g., mountain streams, swimming pools)

### Preserves

Land which is highly valued for its natural condition, unique scenic/aesthetic resources, biological resources, geologic phenomena, or cultural significance may be classified or considered for designation as a regional preserve. It is protected in its natural state from development in order to maintain or enhance the aesthetic, natural quality of an area. An example of an existing preserve is the Los Padres National Forest.

## Existing Conditions: Recreation Inventory

### PARKS

### Regional Parks

The following regional parks are located within the Ojai Planning Area and are illustrated on the Recreation Element Map.

#### Soule Park

This facility, a regional park operated by the County of Ventura, lies in the southeast corner of the City limits. The park consists of 169 developed acres with a total of 326 acres available for park development. Park amenities include:

- golf course and club house facilities as well as open space for recreation;
- an equestrian center utilized by local and nearby riders;
- picnic grounds and sports fields;
- potential future trails.

#### Camp Comfort

This park is a County facility of 38 acres located southwest of City boundaries. Picnicking and passive recreation are the predominant activities. Amenities at Camp Comfort include:

- 160 picnic tables (78 additional proposed);
- 15 Recreational Vehicle (RV) sites (65 additional proposed);
- potential future trails.

## Local Parks

The following local parks are located within the City of Ojai and are illustrated on the Recreation Element Map.

### Libbey Park

This facility encompasses approximately 17.8 acres and is located south of Ojai Avenue, between Montgomery Street and Signal Street. Park amenities include:

- 8 tennis courts (4 lighted);
- Libbey Bowl -- amphitheater which seats 750 people;
- small tot lot;
- non-organized picnic tables; and
- gazebo

### Sarzotti Park

This facility encompasses approximately 10 acres and is located north of Aliso Street, between Shady Lane and Park Road. Park amenities include:

- 2 lighted ball fields;
- 2 soccer fields;
- horseshoe pit;
- 2 reserved picnic areas (up to 50 and 150 persons);
- 2 community center buildings;
- children's play apparatus area; and
- shade trees.

### Daly Park

This small neighborhood park encompasses approximately 1.5 acres and is passive in nature. Park amenities include:

- 5 picnic tables.

## INVENTORY OF TRAILS

Recreational trails are an important element in the Ojai community. Existing and proposed equestrian, bicycling, and hiking trails are depicted on the Master Plan of Trails Map in the Recreation Element.

## INVENTORY OF SPECIALIZED FACILITIES

Ojai is known for its variety of recreational opportunities. Popular activities include golfing, tennis, horseback riding in Ojai, and hiking, camping, and other outdoor pastimes nearby. An inventory of existing specialized facilities is provided in the Recreational Facilities Matrix on the following page. Existing and proposed facilities are illustrated in the General Plan Recreation Element Maps ("Recreation" and "Master Plan of Trails")

## INVENTORY OF PRESERVES

### Los Padres National Forest

Los Padres National Forest (LPNF) is located immediately to the north of Ojai City boundaries. A portion of the 516,000-acre National Forest is within the Ojai Sphere of Influence and Planning Area.

The LPNF consists primarily of wooded mountains with 140 miles of streams ranging from the Sespe River to Matilija Creek. Numerous recreational activities opportunities exist, including hiking, horseback riding and camping; and fishing and seasonal hunting. Campgrounds in proximity to Ojai consist of: Gridley Springs, Wheeler Gorge, Holiday, the Pines, White Ledge, and Lions Campgrounds.

# PUBLIC SERVICES

# PUBLIC SERVICES

## Water

### REGIONAL SETTING

The quantity and quality of Ojai's water supply plays major roles in determining development trends within the area. Water is demanded for purposes that require varying levels of quality including municipal (domestic), industrial, and agricultural purposes. The County as a whole consumes about 375,000 acre-feet of water per year (1981). Surface water supplies 35,000 acre-feet per year, imported water supplies 75,000 acre-feet per year, and groundwater supplies 25,000 acre-feet per year.

#### Water Management

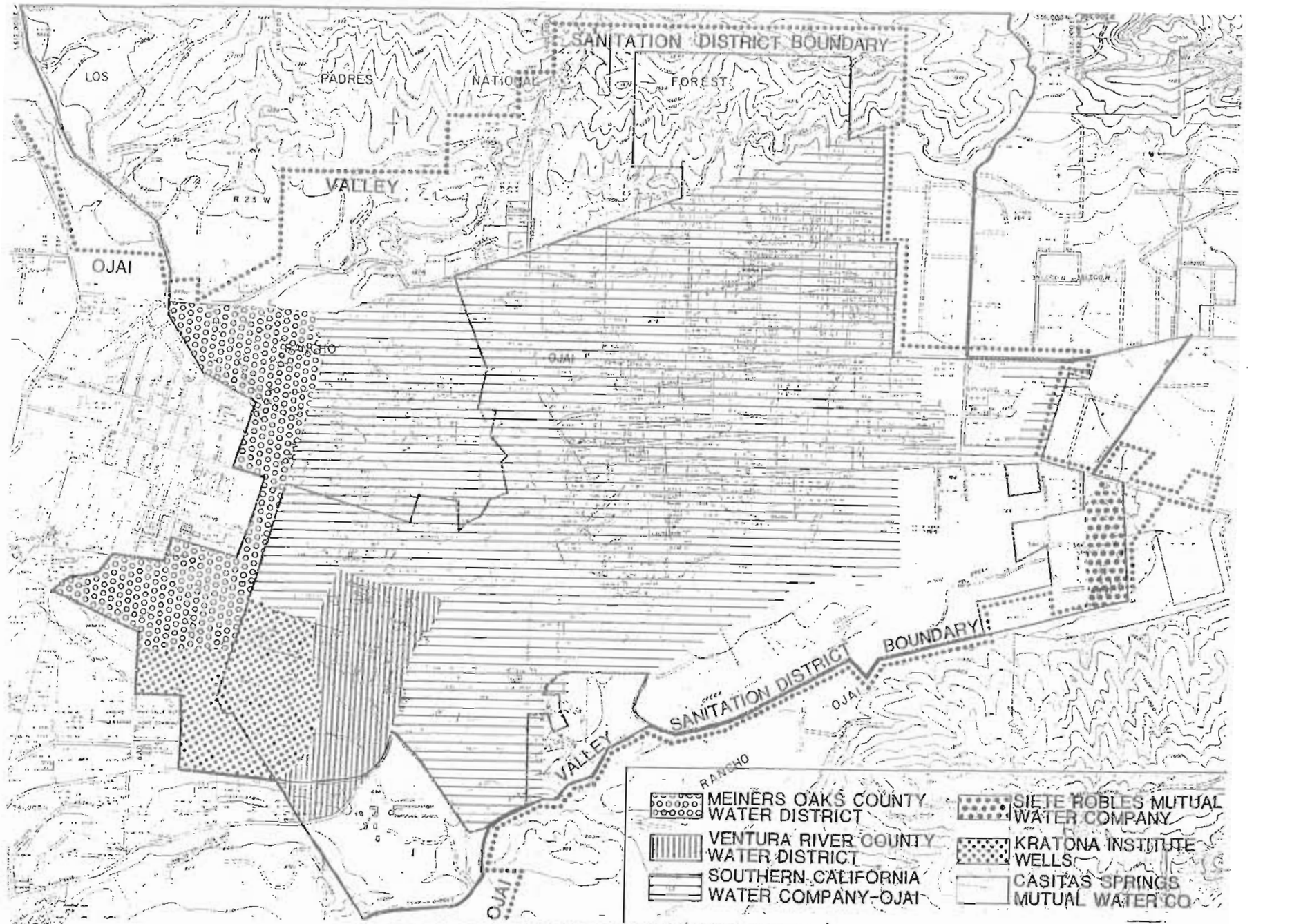
Water quality problems generally fall into two categories: non-point sources and point sources. Non-point sources of water quality degradation relate to non-specific contaminant sources such as urban and agricultural run-off and sea water intrusion (in the Oxnard Plain area). Point sources of water quality problems relate to specific contaminant sources such as sewage treatment plants and industry.

Several agencies are responsible for management of the quality and quantity of water resources at the federal, state, and local levels of government. The U.S. Environmental Protection Agency sets standards for water quality based upon the concentration of total dissolved solids (TDS). The state Water Resources Control Board has authority over point source dischargers and water quality standards in surface waters and groundwaters in the state. The regional division of the Water Resources Control Board in Ventura County is the Regional Water Quality Control Board - Los Angeles Region. The Ventura County Water Quality Management Plan, or the 208 Plan, is a federally-mandated plan under the Clean Water Act. The County is responsible for controlling non-point sources of water pollutants. The state is also required to conform with the 208 Plan of the County.

#### Water Purveyors

There are numerous water purveyors in the Ojai Valley. These purveyors provide water for both agricultural and domestic uses. Their areas of service are illustrated on Exhibit PS-1 at the end of this document. The purveyors are both governmental and private agencies.

The government agencies include Meiners Oaks County Water District and Ventura River County Water District. The private and mutual water companies in the Valley include Casitas Municipal Water District, Southern California Water Company-Ojai, Tico Mutual Water Company, Siete Robles Mutual Water Company, Senior Canyon Mutual Water Company, Casitas Springs Mutual Water Company, Hermitage Mutual Water Company, Villanova Road Waterwell Association, and Sheriff's Honor Farm. Most of these companies pump from groundwater wells. Casitas Municipal Water District also sells surface water to Southern California Water Company and other companies on an "as needed" basis.




MEA: WATER PURVEYORS/SANITATION DISTRICTS

# GENERAL PLAN

CITY OF OJAI

SCALE: 1"=2000'

SOURCE: COUNTY OF VENTURA

EXHIBIT PS-1

## Surface Water

The Casitas Municipal Water District has the responsibility for the development and delivery of surface water in much of the Ojai Valley. Lake Casitas Reservoir has a storage capacity of about 254,000 acre-feet of water. Matilija Lake Reservoir also provides water to the Ojai Valley; it has a storage capacity of 1,500 acre-feet. The "safe annual yield" of both lakes is about 20,350 acre-feet per year. Safe annual yield is defined as the average amount of water that can be withdrawn over an extended period of time without deficiencies in supply during a dry spell equal to the longest historic dry cycle. The reservoir is replenished by rainfall and surface water run-off in the Casitas Watershed (about 45%) and diversion of the Ventura River-Matilija Creek Drainage.

Water quality of the major reservoirs has remained constant. Surface water quality such as rivers and tributaries fluctuates from season to season, but is adequate in most areas for agricultural uses.

## Groundwater

Groundwater storage is dynamic. Water supply is depleted through seepage to the earth's surface and the formation of springs, streams or other water forms. It is also depleted through use by water agencies and individual well systems. Groundwater basins are replenished or recharged when water seeps down through the ground and into the basin. A groundwater basin may be recharged by a surface area much larger than the basin itself. When groundwater is withdrawn faster than it is recharged, the situation is called overdraft of the groundwater basin.

Groundwater quality in Ventura County is gradually degrading because of agricultural, septic systems, and urban runoffs. Water quality in the major reservoirs has remained constant. Surface water quality such as rivers and tributaries fluctuates form season to season. It is adequate in most areas for agricultural uses.

Three major groundwater basins serve the Ojai Valley. These basins and their estimated capacities are as follows:

Ojai Basin - 83,500 acre-feet
Upper Ventura Basin - 35,118 acre-feet
Upper Ojai Basin - 5,600 acre-feet

Note that the actual maximum computed storage levels of these basins are much less than estimated capacity. Groundwater levels also fluctuate considerably during dry and wet seasons.

Agriculture demands the greatest amount of groundwater resources in the County as a whole and is dependent upon continued availability of adequate qualities and quantities of water. Agricultural demand for groundwater in the County is about 80% of the total groundwater demand.

## Wastewater

Developed areas generate demand for sewer service. The intensity and character of land development determines the magnitude of the demand for this service. The predominant factor affecting sanitary sewage systems is land use type. In this regard, wastewater facilities can influence the magnitude, timing, and location of urban development.

### TREATMENT SYSTEM

Five sanitation districts united in 1985 to form the Ojai Valley Sanitary District. The district serves the communities of Ojai, Meiners Oaks, Oak View, and Mira Monte. A single treatment plant serves the Ojai Valley. This is the Oak View Treatment Plant which is part of the Ojai Valley Sanitary District facilities. The treatment plant has an existing design capacity of 3.0 million gallons per day (mgd). Its current demand is for 2.1 mgd, leaving an unused capacity of 0.9 mgd. The district's utilization rate is 70% of its capacity.

State requirements indicate that as a waste treatment facility reaches 75% of capacity, a study should be prepared for plant expansion. A facility expansion would have to be initiated at 90% of capacity.

The effluent from the treatment process meets requirement discharge parameters for Biological Oxygen Demand (BOD) and suspended solids. The plant is currently upgrading to meet the nitrogen quota.

### LOCAL SETTING

#### Water Demand

Residential uses demand the greatest amount of water in the Ojai area. The average generation factors used by Southern California Water Company for estimating demand in the Ojai area are tabulated below.

TABLE PS-A
WATER DEMAND FACTORS

| USE | FACTOR (CUBIC FEET/YEAR) |
|---|---|
| Commercial | 27,000 per customer |
| Residential | 27,000 per customer |

Source: Southern California Water Company

The water demand for urban uses varies according to the type of use. Using Southern California Water Company estimates, this section delineates demand for water in the City.

TABLE PS-B
OJAI ANNUAL WATER DEMAND (Average)

| USES | DEMAND (HUNDRED CUBIC FEET/YEAR) |
|---|---|
| Residential and Commercial | 678,000 |
| Public offices | 27,000 |
| Parks and Recreation Facilities | 12,000 |
| Four Major Ranchers | 6,000 |
| TOTAL | 740,000 ccf |

Source: Sanchez Talarico Associates, Inc.

Note: 1 ccf = 435.6 acre-feet.

In addition to water supplied from wastewater reclamation, the present water supply is capable of accommodating current water requirements in the City of Ojai.

It is difficult to estimate the City's safe water supply due to uncertainties in the calculation of safe yields from the groundwater basins, and in the water rights to these basins.

Water Purveyors

The City of Ojai is provided water by two water purveyors. The largest is Southern California Water Company. Ventura County River District services a small area in the southwestern portion of the City. Casitas Municipal Water District sells water to these agencies as needed. Many rural areas within the Sphere of Influence do not receive water services, but individual wells are prevalent in these areas. Siete Robles Mutual Water Company provides water to the southern portion within the Sphere of Influence and Meiners Oaks County Water District service area extends into western portions.

Groundwater

Groundwater provides about 83% of the Ojai's water supply. Water for the City of Ojai is supplied primarily by groundwater wells via Southern California Water Company and the Ventura River County Water District.

The quality of both groundwater and surface supplies in the Ojai Valley and the City is relatively good and acceptable for most uses. It meets all Environmental Protection Agency standards for drinking water, except turbidity, which will require the construction of additional treatment facilities.

### WASTEWATER

#### Collection System

The City of Ojai is served by a small system of main collection lines leading directly to the Oakview Treatment Plant as well as city sewer lines. A 15-inch main trunk line under Ojai Avenue and a network of tributary sewer lines provide gravitational flow toward the Oak View Treatment Plant. Major trunk lines extend west from Ojai Avenue into networks along Ventura Road, Creek Road and Country Club Road. The overall collection system is generally adequate although portions will need "patching" or replacement in the near future.

#### Treatment Demand

A number of residences utilize septic sewer systems in Ojai, especially in more rural areas. It is difficult to estimate existing sewage demand in the City due to the unknown number of septic systems.

## Fire Service

### REGIONAL SETTING

The County of Ventura has many areas within, or in close proximity to, high fire hazard zones. This section identifies location and equipment of existing and proposed fire service facilities.

#### Fire Hazard Zones

Fire hazard zones are derived from the criteria of State Division of Forestry. The low hazard zone extends into all areas where native brush is found growing in pine natural strands. This is common on undeveloped hillside areas. The moderate hazard zone encompasses areas of grass and low brush in areas of low to moderate slope. The extreme hazard zone includes all areas of high brush and woodland, and all steep slopes regardless of vegetation.

The need for fire protection service is related to the location of fire hazard zones. The location of a fire station and the accessibility of a location to an engine or ladder company primarily determines the adequacy of fire service.

#### Fire Protection

Easy access to all service areas and especially those areas designated as high fire hazard zones is essential to adequate fire service. The accessibility to roadway networks affects the time required for a fire company to reach various parts of the community.

## LOCAL SETTING

### Fire Hazard Zones

Based upon hazard zones criteria and the pattern of development, the City of Ojai is divided into hazard zone categories.

The areas within the City of Ojai that are located in the high hazard zone are:

- the northern border of the City along the development/hillside interface;
- the western border of the City along El Roblar Drive;
- the southwestern corner of the City bordering the Ojai Valley Inn and Country Club, and;
- the southern portion of the City in Soule Park.

The areas within the City of Ojai Sphere of Influence that are located in a high fire hazard zone are:

- the northern, northwestern, and western portions of the Sphere along the interface of developed areas and hillside areas (including residential areas and Highway 33)
- the western portion of the Sphere at Krotona Hill;
- the southwestern portion of the Sphere near Villanova School and Camp Comfort;
- the southern portion of the Sphere south of Ojai Country Club, and;
- the southeastern portion of the Sphere along the hillsides of Black Mountain.

### Fire Protection

Fire protection is presently provided to the City of Ojai and the Sphere of Influence by the fire station listed below. The response time to all areas of the City is approximately the same with some variation due to road types and accessibility. Fire hydrants are distributed throughout the City and adequate fire flow capacity from all existing water lines (2000 gpm at 20 lbs. psi) is provided for effective fire service.

The fire department in Ojai has no plans for station expansion or additional fire fighting equipment. The City has a mutual aid agreement with the County of Ventura and nearby cities whereby the fire departments work together in an extensive fire that requires outside assistance.

| Fire Station | Location | Personnel | Equipment |
|---|---|---|---|
| No. 21 | 1201F Ojai Avenue | 3 firemen | |

## Police Services

### LOCAL SETTING

The City of Ojai Police Department is involved in many activities including law enforcement, crime prevention, crime reduction, apprehending offenders, recovering property, and regulating non-criminal conduct such as traffic supervision, patrolling and community services.

The Ojai Police Department is located at 402 S. Ventura Street. There are currently 22 sworn officers and 4 dispatchers and support employees. At current staff levels, 2.89 police officers are provided per every 1,000 residents throughout the City of Ojai. The recommended state ratio is 2 officers for 1,000 population.

Areas of high police call activity are in the vicinity of Nordhoff High School during the school year. Complaints of disturbances by the retirement community surrounding the high school is often the primary police demand.

## Schools

### LOCAL SETTING

The City of Ojai provides both public and private schooling. The Ojai Unified School District plans the location and size of school facilities according to current population and student forecasts. Methods are used to establish total enrollment and locational enrollment for the existing student population and that of the future.

This section presents information related to school facility planning, student generation factors per residence, school capacity, and enrollment data.

#### School Facility Planning

School location and size, attendance areas, and new school construction in the Ojai Valley are the responsibility of the Ojai Unified School District (OUSD). In determining the physical adequacy of the school system, school location criteria such as pupils per classroom, walking distance and land requirements are considered.

Population and student forecasts serve as the foundation for school facility planning. Existing household characteristics such as residential density type and existing average student population per household (of each type) are also of major importance to school facility planning.

Student Generation

Adequacy of school facilities is based on two major factors: total enrollment in school facilities and the locational distribution of the student population at each school level. Factors such as household size and composition, number of bedrooms per unit, and housing density are used in estimating existing and future enrollment from existing and planned total population.

The factors used by OUSD in projecting the number of school age children generated by housing units are shown in Table PS-C. These factors serve in estimating generation per household in the OUSD and are utilized in accordance with County ordinances.

Table PS-C
STUDENT GENERATION FACTORS

| GRADES | FACTORS |
|---|---|
| 7 - 12 | 0.9 pupils per dwelling unit |
| K - 6 | 0.6 pupils per dwelling unit |

Source: Sanchez Talarico Associates, Inc.

School Facilities

The City of Ojai is served by a system of 8 public schools located within the Ojai Unified School District and 14 private schools. These are as follows:

Public

- Meiners Oaks Elementary School (K-6)
- Mira Monte Elementary School (K-6)
- San Antonio Elementary School (K-6)
- Summit Elementary School (K-6)
- Topa Topa Elementary School (K-6)
- Matilija Jr. High School (7-8)
- Chaparral High School (9-12)
- Nordhoff High School (9-12)

Private

- Happy Valley (7-12)
- Live Oak Baptist Christian
- Monica Ros (Pre-3)
- Oak Grove School - Krishnamurti (1-8)
- Oak Meadow
- Ojai Valley Children's House (Nursery-Elementary)
- Ojai Valley School (3-12)
- Ojai Valley Seventh Day Adventist (1-6)
- Ojai Valley Christian (K-12)
- Pethrus School
- St. Thomas Aquinas (K-8)
- Sunshine Elementary (1-8)
- The Thacher School (9-12)
- Villanova Preparatory (9-12)

Enrollment figures for the public junior high and high schools within the Ojai Unified School District (OUSD) have not shown significant fluctuations. The Ojai Unified School District foresees the range of students in high school and students in junior high school to remain constant. Public elementary schools are showing an increase in enrollment and are generally receiving more students from the area.

Private schools located within the City of Ojai and its immediate vicinity make up a significant proportion of the total school population. Private school enrollment is on an incline and presents a problem in accurate projections of public school student enrollment. The service area of these schools cannot be defined so the ensuing sections will primarily address public school capacities and service.

Student Generation

The OUSD estimated number of students are listed below.

| | |
|---|---|
| Elementary | 1500-1550 |
| Junior High | 520-535 |
| High | 950-1000 |

Locational considerations with regard to school age populations indicate that on the east side of the City, in particular, the once younger population characteristics of Ojai have become older and less child-oriented. In contrast, the residential land uses in other areas have a younger, child-oriented population.

Most of the potentially developable residential land within the City service area is located at the southwest end of the City. The schools located in this area (Meiners Oaks, Mira Monte, Nordhoff and Matilija) have a higher capacity than the schools located on the east side in aggregate.

In areas with the greatest potential for future urban growth and student population increases (the southwestern portion and extreme northeastern portions of the City) there is sufficient available capacity within the schools.

## Public Transit

There are two providers of transit service in the City of Ojai area including South Coast Area Transit (SCAT), and the Retired Senior Citizens Volunteer Program (RSVP). RSVP service is discussed in the following section.

South Coast Area Transit provides transportation service to the Cities of Ojai, Oxnard, Port Hueneme, Santa Paula, San Buenaventura, and the unincorporated areas of western Ventura County between these cities. Service is provided 359 days each year. SCAT buses travel along Highway 33 to Pala Drive, La Luna Avenue, El Roblar Drive, Maricopa Highway, and Ojai Avenue within the Ojai area. The route terminates at the intersection of Ojai Avenue and Signal Street. The buses operate between 6:30 a.m. and 7:20 p.m. Monday through Saturday, and between 9:05 a.m. and 6:25 p.m. on Sundays.

## Senior Services

Senior Services are provided by the Little House program. These include the Retired Senior Citizens Volunteer Program (RSVP) which operates dial-a-ride and Help of Ojai which operates Meals on Wheels.

The Little House program of Ojai provides various services to seniors. The Retired Senior Citizens Volunteer Program (RSVP) provides dial-a-ride services to the entire Ojai Valley on a donation basis. The service is available only to senior citizens and handicapped persons. RSVP operates four mini-vans.

Meals-On-Wheels provides one noon meal per day at a price of three dollars, plus an optional afternoon snack for an extra 25 cents. This service is available weekdays only. The meals are prepared at Help of Ojai as part of the Little House program and delivered by volunteers.

## Sanitation/Solid Waste

Solid waste collection in the City of Ojai is currently provided to residential customers by Harrison & Sons Rubbish. This company maintains a contract with the City of Ojai to serve all areas within the Ojai City limits. The company is currently operating below capacity.

Solid waste from the City is taken to the Santa Clara Expansion/ Ventura Coastal Landfill in the City of Oxnard. It is estimated that the 145-acre landfill will be closed in 1988. Upon closure of the site, an expansion site (Bailard site) will open immediately adjacent to the present site. The new site is expected to close in the year 1993. The Bailard site is limited by State permit to a five year service life.

A separate site has been proposed for a new landfill. The site is located in Weldon Canyon and consists of 425 usable acres. Weldon Canyon is located west of Highway 33, 2.5 miles north of the City of Ventura. This location is closer to the City than the Coastal and Bailard sites. Permits for use of this site are currently being processed.

## Hospitals

Ojai Valley Community Hospital serves the entire Ojai Valley. Ojai Valley is a full service hospital that maintains a yearly average 55% occupancy rate.

Currently, Ojai Valley Community Hospital is considering the construction of a 15,000-square foot medical office building at the corner of Maricopa Highway and Pirie Road in 1988. The building will house a multi-specialty clinic, diagnostic services, physicians' offices, and hospital financial services. This facility is intended to serve the entire Ojai Valley.

## Library

There are three libraries that serve Ojai and the surrounding area. The Ojai Library is the main branch and Meiners Oaks and Oak View are two smaller branches.

The Ojai Library is located at 111 East Ojai Avenue and is the main library for the Ojai Valley. This library is open from 10:00 a.m. to 9:00 p.m. Monday through Thursday, from 12:00 noon to 5:00 p.m. on Friday and Saturday, and from 1:00 p.m. to 4:00 p.m. on Sundays. The library offers a collection of over 50,000 books and an inter-library loan and information search systems. The library was expanded to 6,500 square feet in 1981 and there are no current plans for expansion.

In addition to the Ojai Library, there are two other smaller county libraries - Meiners Oaks and Oak View.

Meiners Oaks is located at 114 North Padre Juan Avenue. It is open from 10 a.m. to 12 p.m. and 1 p.m. to 5 p.m. Monday through Thursday. Oak View Library is located at 473 North Ventura Avenue and is open from 10 a.m. ot 1 p.m. and 2 p.m. to 6 p.m. Tuesday through Saturday.