County of Ventura

Board of Supervisors Hearing

September 15, 2020

Case No. PL17-0141

Exhibit 19.b

Draft EIR, Appendix A - F

Appendix A

Notice of Preparation and Comments

RESOURCE MANAGEMENT AGENCY

county of ventura

Planning Division
Kimberly L. Prillhart
Director

Notice of Preparation of a Draft Environmental Impact Report (DEIR) and Scoping Meeting for the Ventura County 2040 General Plan Update (Case No. PL17-0141)

January 14, 2019

The County of Ventura, Resource Management Agency, Planning Division (County) is currently developing the Ventura County 2040 General Plan Update (2040 General Plan Update) as described below. The County, as the lead agency, has determined that the proposed 2040 General Plan Update may have one or more significant effects on the environment and will prepare a Program Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA).

This Notice of Preparation (NOP) is being distributed to applicable responsible agencies, trustee agencies, and other interested parties as required by CEQA. The purpose of this notice is to call your attention to this EIR and to request that you help the County identify the significant environmental issues, mitigation measures, and range of reasonable alternatives that should be addressed in the EIR. Information on the 2040 General Plan Update, topics to be addressed in the EIR, and instructions on how to provide comments on the scope and content of the EIR are provided below.

30-day NOP Comment Period: This NOP is available for a 30-day comment period that is open from **January 14, 2019**, to **February 19, 2019**. Please submit your comments on the scope and content of the EIR in writing no later than **5:00 p.m.** on **February 19, 2019**, to:

Ventura County Resource Management Agency, Planning Division
Attn: Susan Curtis, Manager, General Plan Update Section
800 S. Victoria Ave., L #1740
Ventura, CA 93009-1740

Alternatively, you may email your comments to Susan Curtis at susan.curtis@ventura.org or fax them to her attention at (805) 654-2509.

Scoping Meeting: The County will hold a Scoping Meeting to inform the public and interested parties about the 2040 General Plan Update and solicit comments on the scope of environmental issues, mitigation measures, and range of reasonable alternatives to be addressed in the EIR. The date, time, and location of the meeting are provided below.

Wednesday, January 30, 2019 at 6:00 p.m.
County Government Center, Hall of Administration
Multi-Purpose Conference Room
800 S. Victoria Avenue
Ventura, CA 93009

Project Name: Ventura County 2040 General Plan Update

Project Location: All unincorporated areas within Ventura County. The project location is shown on Figure 1.

Project Background and Description: The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan. More information on the existing General Plan and the 2040 General Plan Update is available online at: https://vc2040.org/.

The existing General Plan establishes land use designations that describe the land uses that are allowed in the unincorporated areas of Ventura County. These land use designations include: Rural, Existing Community, Urban, Agricultural, Open Space, State or Federal Facility, and Urban Reserve Overlay.

The Existing Community and Urban designations do not provide clear guidance on how dense or intense development can be within these areas. The 2040 General Plan Update identifies and proposes more refined land use designations, which are based on currently adopted zoning. As these designations reflect what is currently allowed in the unincorporated county, (i.e., they reflect the "existing regulatory setting"), these refinements are not considered a change in allowed land uses.

During 2018, the public, Planning Commission and Board of Supervisors were engaged in an alternatives process that was designed to guide development of the General Plan Update. The alternatives process was used to discuss document organization, land use, and policy options. As part of the alternatives process for the 2040 General Plan Update, the County Board of Supervisors determined that the existing allowed land uses provide adequate land to accommodate projected population growth in the unincorporated areas of the County through the year 2040 – the planning horizon of the proposed 2040 General Plan Update.

Therefore, the 2040 General Plan Update is not expected to identify any increases in overall development relative to the existing General Plan, unless changes are required in order to meet future Regional Housing Needs Assessment (RHNA) numbers to be released in Fall 2019 (described further below as part of the recommended land use alternative).

The 2040 General Plan Update will reflect current conditions and issues, reduce redundancies in the existing General Plan, and achieve compliance with current state planning laws and guidelines. Current conditions and trends were described in detail and documented as part of the General Plan Background Report published in January 2018 (described further below). Issues to be addressed were defined and reported in the Assets, Issues, and Opportunities Summary Report. The 2040 General Plan Update will also provide a more concise and clear policy statement for the County by reducing redundant policies (similar policies that are presented in several elements and/or Area Plans), and by removing items that are simply restatements of requirements specified in state or federal regulations.

The 2040 General Plan Update will also address topics and issues pursuant to state requirements adopted since the existing General Plan was approved in 2005. These include environmental justice, transportation issues such as assessing vehicle miles traveled and analyzing transportation systems more holistically (Complete Streets), and wildfire hazards. The 2040 General Plan Update will also be designed to maintain consistency with the Guidelines for

Orderly Development, greenbelt agreements, and the Save Open Space & Agricultural Resources (SOAR) measures for Ventura County's unincorporated areas and eight incorporated cities.

The 2040 General Plan Update includes two key constituent documents: the Background Report (described further below) and the Policy Document. The Vision Statement and Guiding Principles approved by the Board of Supervisors in 2018 will be the foundation for the goals, policies, and implementation programs included in the Policy Document. The Vision Statement and Guiding Principles are available on the 2040 General Plan Update website library at: https://vc2040.org/review/documents.

Proposed 2040 General Plan: Background Report

The Background Report describes existing conditions as of 2016 and potential future trends in Ventura County. It is divided into 12 chapters that cover a wide range of topics, such as demographics, economic conditions, land use, public facilities, and environmental resources. The Background Report presents objective information and is intended to be policy-neutral, however, it provides decision makers, the public, and local agencies with context for making policy decisions.

The Background Report will also serve as the basis for the required "Environmental Setting" section of the EIR. If any substantial new or revised information related to the environmental setting becomes available during preparation of the EIR, it will be documented in the Environmental Setting and Regulatory Setting sections of the EIR. The Background Report, published in January 2018, is available at the 2040 General Plan Update website library at: https://vc2040.org/review/documents.

2040 General Plan Update: Policy Document

The Policy Document will be the essence of the 2040 General Plan Update. It will set forth the goals and policies that guide future decisions within the unincorporated areas and will identify the implementation programs required to carry out the goals and policies of the General Plan. The Policy Document will also include land use designations and a land use diagram that specifies the allowable uses of land, (e.g., residential, commercial, etc.) throughout the unincorporated area. The proposed structure and content of the General Plan and the recommended land use alternative for the 2040 General Plan Update are described below.

Structure and Content of the General Plan

The 2040 General Plan Update will reorganize the General Plan based on the state's required General Plan Elements (or chapters), and will include new content to address new state planning requirements and guidelines and policy topics identified by the Board of Supervisors related to healthy communities, environmental justice, and sustainability, including climate change mitigation, vulnerability, and adaptation. It may also include minor, non-substantive revisions to remove redundant and obsolete content.

The General Plan will address the state's mandatory elements including Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety, plus the new requirements for Air Quality and Environmental Justice, and three new optional elements: Water, Agriculture, and Economic Development.

The state allows jurisdictions to structure a General Plan to best meets its needs. The County's 2040 General Plan elements will be organized as follows: Land Use and Community Character

Element; Housing Element; Circulation, Transportation, and Mobility Element; Public Facilities, Services, and Infrastructure Element; Conservation and Open Space Element; Hazards and Safety Element; Agriculture Element; Water Resources Element; and Economic Vitality Element. Regardless of the organization of the elements, the 2040 General Plan Update will address all relevant statutory requirements.

The 2040 General Plan Update will also include a Climate Action Plan which, among other things, will include a vulnerability analysis and describe how the County plans to reduce greenhouse gas emissions and adapt to a changing climate. The Climate Action Plan will comply with the requirements of state law (CEQA Guidelines Section 15183.5 and Government Code Section 65302).

The 2040 General Plan Update will also include updates to seven of the ten Area Plans that are part of the existing General Plan:

1) El Rio/Del Norte
2) Thousand Oaks
3) Lake Sherwood/Hidden Valley
4) Ojai Valley
5) Oak Park
6) Piru
7) North Ventura Avenue

These seven Area Plans will be reviewed and assessed to compare the Area Plan goals, policies, and programs with proposed General Plan Update goals, policies and programs to ensure internal consistency. Area Plans will be updated to reflect a common format and achieve consistency with the 2040 General Plan Update elements. If directed by the Board of Supervisors, this may include deletion or modification of Area Plan goals, policies or programs that repeat the same or similar information from the General Plan and outdated information. Area Plan land use and circulation diagrams will also be reviewed for recommended revisions to ensure consistency with the updated General Plan land use and circulation diagrams.

The Coastal Area Plan, which is part of the County's Local Coastal Program, the Ahmanson Ranch Area Plan, which expired in September 2018, and the Saticoy Area Plan, which was updated in 2015, will not be notably changed as part of the 2040 General Plan Update. The existing Area Plans are available online at: vcrma.org/area-plans.

Recommended Land Use Alternative: Proposed 2040 General Plan Land Use Designations and Regional Housing Needs Allocation

The recommended land use alternative consists of two parts: Proposed 2040 General Plan Land Use Designations and the Regional Housing Needs Allocation (RHNA). Each is described further below.

The Proposed 2040 General Plan Land Use Designations are intended to provide a refined set of land use designations within the Existing Community and Urban land use designations of the existing General Plan. Although these existing designations apply to land that allows for a range

of residential, commercial, or industrial uses, neither designation identifies distinct land uses for the various parcels subject to these designations.

The Proposed 2040 General Plan Update Land Use Designations would refine the Existing Community and Urban land use designations of the existing General Plan to more clearly distinguish among land uses allowed within each designation and set forth maximum development density and intensity standards.

Specifically, the 2040 General Plan Update would establish 13 new land use designations that provide more detailed information on the types of land uses (e.g., commercial, industrial, residential) that would be allowable within areas currently designated as Existing Community and Urban. These proposed 2040 General Plan Update land use designations would be consistent with land uses and densities/intensities allowed under the current (2018) zoning designations for each affected parcel.

The proposed land use designations apply the same minimum lot size requirement as the existing General Plan, where the existing General Plan provides such a requirement. Proposed new land use designations that do not have a comparable minimum lot size in the existing General Plan would incorporate the smallest minimum lot size of the compatible zoning designation.

The proposed 2040 General Plan Update would not make changes to the following existing land use designations:

- Agricultural, Open Space, or Rural land use designations located outside of Existing Community and Urban designated area (consistent with the SOAR initiative);
- State and Federal Facility Designation since they apply to parcels owned by the state or federal government and are outside of the County's land use jurisdiction; and
- Urban Reserve Overlay, since it applies to all unincorporated areas within city spheres of influence, which are the probable future growth areas of the incorporated cities.

Existing and proposed General Plan land use designations are shown in Table 1.

Table 1 – Existing General Plan Land Use Designations and Proposed New General Plan Land Use Designations

Acronym	Land Use Designation	Max. Density/ Intensity	Min. Lot Size
Existing General Plan Land Use Designations to Remain*			
RUR	Rural	1 du/2 ac (1 dwelling unit per each 2 acres)	2 acres
AG	Agricultural	1 du/40 ac	40 acres
OS	Open Space	1 du per parcel	10 acres, or 20 acres if contiguous w/Agricultural
P	State or Federal Facility	N/A	None
UR	Urban Reserve Overlay	N/A	None
Proposed New Land Use Designations (to be applied only to areas with current Existing Community or Urban land use designations)			

Table 1 – Existing General Plan Land Use Designations and Proposed New General Plan Land Use Designations

Acronym	Land Use Designation	Max. Density/ Intensity	Min. Lot Size
ECU-R	ECU-Rural	1 du/2 ac	2 acres
ECU-A	ECU-Agricultural	1 du/40 ac	40 acres
ECU-OS	ECU-Open Space	1 du per parcel	10 acres, or 20 acres if contiguous w/Agricultural
VLDR	Very Low Density Residential	3 du/ac	10,000 SF
LDR	Low-Density Residential	5 du/ac	6,000 SF
MDR	Medium-Density Residential	13 du/ac	3,000 SF
RHD	Residential High-Density	20 du/ac	No Minimum
RPD	Residential Planned Development	20 du/ac	No Minimum
MU	Mixed Use	20 du/ac; 60% coverage	No Minimum
C	Commercial	60% coverage	No Minimum
CPD	Commercial Planned Development	60% coverage	No Minimum
I	Industrial	50% coverage	10,000 SF
PR	Parks & Recreation	N/A	N/A

* Acronyms used for existing General Plan designations are not used in the existing General Plan but are added here for reference.

As part of the 2040 General Plan Update, work will be completed in preparation for the next 8-year Housing Element cycle, which runs from 2021-2029. The 2040 General Plan Update will include an analysis of the County's currently identified potential housing sites to ensure that the County can demonstrate that there is adequate capacity based on the proposed land use designations and existing Non-Coastal Zoning Ordinance development standards to accommodate the development of dwelling units that are affordable for all household income categories (i.e., extremely low, very low, low, moderate, and above moderate income).

The update will include evaluation of sites identified in the current Housing Element to determine whether they can accommodate the County's housing need for 2021-2029. Additional sites will be identified, if needed. The unincorporated County's portion of the RHNA for the 2021-2029 Housing Element cycle is anticipated to be released by the Southern California Association of Governments in the Fall of 2019. Therefore, the Housing Element will be updated separately, likely following 2040 General Plan Update's adoption.

Additional Components of the Proposed 2040 General Plan

In addition to the land use designations and RHNA analysis described above, the 2040 General Plan Update will also:

- Eliminate the designation of land within incorporated cities as Urban, and instead reference this land as "City" on the General Plan Land Use Diagram;

- Retain the current boundaries assigned to the Existing Community and Urban land use designations to ensure consistency with the Guidelines for Orderly Development (Existing General Plan Goal 3.1.1-5); and
- Amend the Non-Coastal Zoning Ordinance to create a new Open Space-Parks and Recreation zoning designation that would apply to publicly-owned parcels currently dedicated to parks and recreational uses.

Environmental Topics Addressed in the EIR: Pursuant to Section 15063(a) of the State CEQA Guidelines, no Initial Study will be prepared. The EIR will analyze the full range of environmental topics contemplated under CEQA and the State CEQA Guidelines, including the following:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems
- Wildfire

The EIR will analyze alternatives, cumulative impacts, growth-inducing impacts, and other issues required by CEQA. In addition, the EIR will expand on the environmental topics addressed in CEQA and the State CEQA Guidelines by addressing the full range of environmental topics contemplated in the County's 2011 Initial Study Assessment Guidelines which are available online at: https://docs.vcrma.org/images/pdf/planning/ceqa/current_ISAG.pdf

NOTICE OF PREPARATION: This NOP is posted at the following locations:

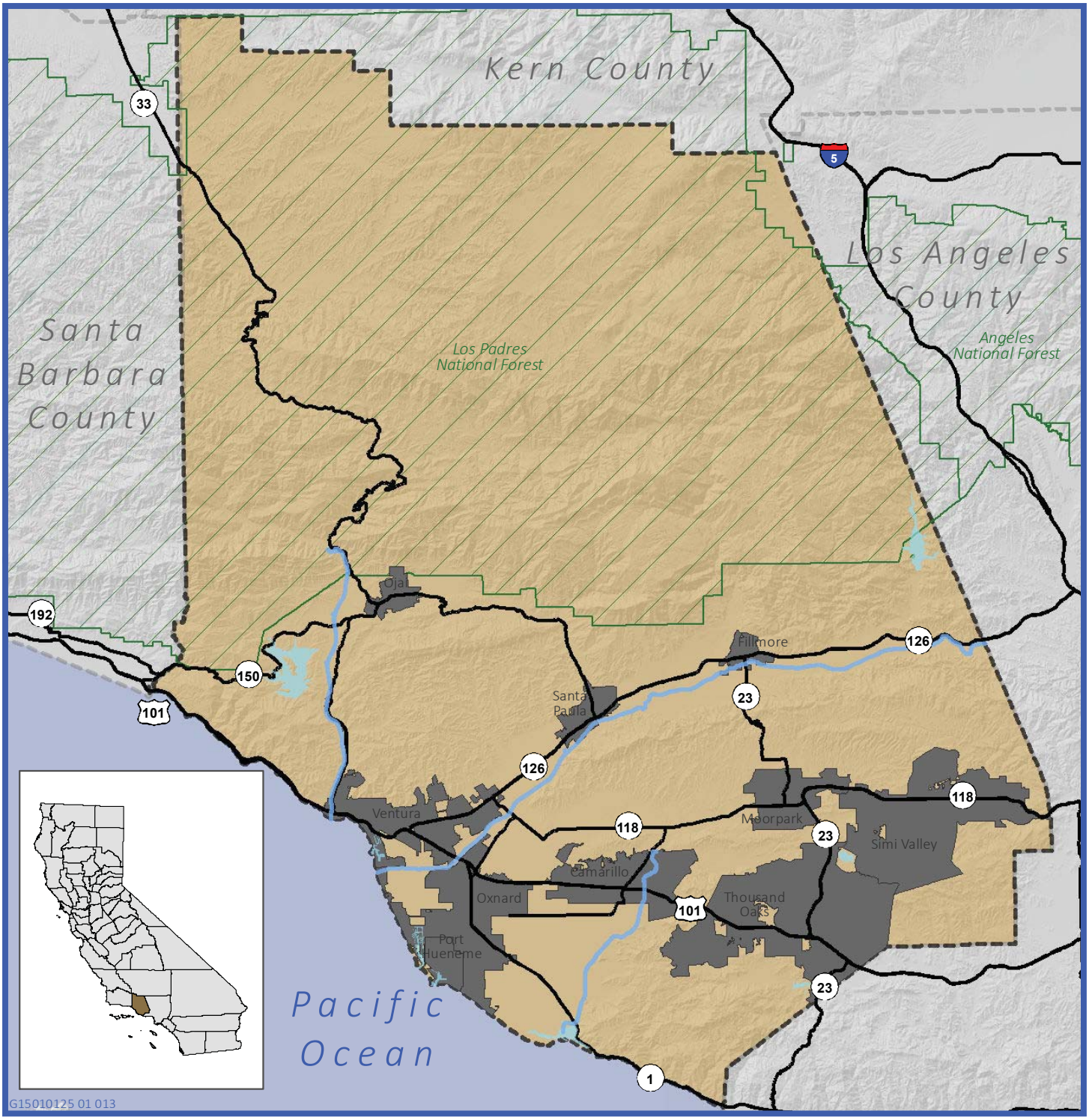
- Ventura County Resource Management Agency, Planning Division, 3rd Floor, Hall of Administration, 800 S. Victoria Avenue, CA, 93009;
- Ventura County Clerk-Recorder, Registrar of Voters, 1st Floor, Hall of Administration, 800 S. Victoria Avenue, CA, 93009;
- Ventura County General Plan Update website at https://vc2040.org/

Any person is privileged to attend and be heard on this matter. If you challenge the above described action in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this Notice, or in written correspondence delivered to the County of Ventura at, or prior to, the Public Hearing. In compliance with the Americans with Disabilities Act, if you need assistance to participate in this meeting, call (805) 654-2805.

If you have questions on the contents of this notice, please contact Susan Curtis, Manger General Plan Update at (805) 654-2497 or email susan.curtis@ventura.org.

Kimberly Prillhart, Planning Director

Attachment: Figure 1. Project Location



Ventura County 2040 General Plan

Figure 1: Project Location

Map Date: December 14, 2018

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Major Roadways
- Major Waterways
- Water Bodies
- Ventura County Boundary
- Incorporated Cities
- Unincorporated Ventura County

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Gavin Newsom
Governor

JAN 17 2019

Notice of Preparation

January 14, 2019

To: Reviewing Agencies

Re: Ventura County 2040 General Plan Update
SCH# 2019011026

Attached for your review and comment is the Notice of Preparation (NOP) for the Ventura County 2040 General Plan Update draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Susan Curtis
Ventura County
800 South Victoria Ave., L #1740
Ventura, CA 93009

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2019011026
Project Title Ventura County 2040 General Plan Update
Lead Agency Ventura County

Type **NOP** Notice of Preparation

Description The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan.

NOTE: See NOP for full project description

Lead Agency Contact

Name Susan Curtis
Agency Ventura County
Phone (805) 654-2497 **Fax**
email
Address 800 South Victoria Ave., L #1740
City Ventura **State** CA **Zip** 93009

Project Location

County Ventura
City Unincorporated
Region
Cross Streets several throughout unincorporated Vetura County
Lat / Long
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1, 23, 33, 34, 118, 126, 150
Airports Oxnard, Camarillo, and others
Railways Union Pacific, others
Waterways several lakes, rivers, and streams
Schools several
Land Use

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Wetland/Riparian; Water Supply; Water Quality; Vegetation; Traffic/Circulation; Toxic/Hazardous; Solid Waste; Soil Erosion/Compaction/Grading; Sewer Capacity; Septic System; Schools/Universities; Landuse; Growth Inducing; Cumulative Effects

Reviewing Agencies Resources Agency; California Coastal Commission; Coachella Valley Mountains Conservancy; Cal Fire; Office of Historic Preservation; Department of Parks and Recreation; Department of Fish and Wildlife, Region 5; Office of Emergency Services, California; Department of Housing and Community Development; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 7; Air Resources Board; State Water Resources Control Board, Division of Drinking Water; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

Note: Blanks in data fields result from insufficient information provided by lead agency.

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #2019011026

Project Title: Ventura County 2040 General Plan Update

Lead Agency: County of Ventura | Contact Person: Susan Curtis
Mailing Address: 800 S. Victoria Ave., L #1740 | Phone: (805) 654-2497
City: Ventura | Zip: 93009 | County: Ventura

Project Location: County: Ventura | City/Nearest Community: unincorporated Ventura County
Cross Streets: several throughout unincorporated Ventura County | Zip Code: several
Longitude/Latitude (degrees, minutes and seconds): ____° ____′ ____″ N / ____° ____′ ____″ W Total Acres: Approx. 1.2 million
Assessor's Parcel No.: n/a | Section: n/a | Twp.: n/a | Range: n/a | Base: n/a
Within 2 Miles: State Hwy #: 1, 23, 33, 34, 118, 126,150 | Waterways: Several lakes, rivers, and streams
Airports: Oxnard, Camarillo, and others | Railways: Union Pacific, others | Schools: Several

Document Type:

CEQA: [x] NOP [ ] Early Cons [ ] Neg Dec [ ] Mit Neg Dec [ ] Draft EIR [ ] Supplement/Subsequent EIR (Prior SCH No.) _____ [ ] Other: _____

NEPA: [ ] NOI [ ] EA [ ] Draft EIS [ ] FONSI Other: [ ] Joint Document [ ] Final Document [ ] Other: _____

Governor's Office of Planning & Research

JAN 14 2019
STATE CLEARINGHOUSE

Local Action Type:

[x] General Plan Update [ ] General Plan Amendment [ ] General Plan Element [ ] Community Plan
[ ] Specific Plan [ ] Master Plan [ ] Planned Unit Development [ ] Site Plan
[ ] Rezone [ ] Prezone [ ] Use Permit [ ] Land Division (Subdivision, etc.)
[ ] Annexation [ ] Redevelopment [ ] Coastal Permit [x] Other: Climate Action

Development Type:

[x] Residential: Units _____ Acres _____
[x] Office: Sq.ft. _____ Acres _____ Employees _____
[x] Commercial: Sq.ft. _____ Acres _____ Employees _____
[x] Industrial: Sq.ft. _____ Acres _____ Employees _____
[ ] Educational: _____
[x] Recreational: _____
[ ] Water Facilities: Type _____ MGD _____
[ ] Transportation: Type _____
[ ] Mining: Mineral _____
[ ] Power: Type _____ MW _____
[ ] Waste Treatment: Type _____ MGD _____
[ ] Hazardous Waste: Type _____
[ ] Other: _____

Project Issues Discussed in Document:

[x] Aesthetic/Visual
[x] Agricultural Land
[x] Air Quality
[x] Archeological/Historical
[x] Biological Resources
[ ] Coastal Zone
[x] Drainage/Absorption
[ ] Economic/Jobs
[ ] Fiscal
[x] Flood Plain/Flooding
[x] Forest Land/Fire Hazard
[x] Geologic/Seismic
[x] Minerals
[x] Noise
[x] Population/Housing Balance
[x] Public Services/Facilities
[x] Recreation/Parks
[x] Schools/Universities
[x] Septic Systems
[x] Sewer Capacity
[x] Soil Erosion/Compaction/Grading
[x] Solid Waste
[x] Toxic/Hazardous
[x] Traffic/Circulation
[x] Vegetation
[x] Water Quality
[x] Water Supply/Groundwater
[x] Wetland/Riparian
[x] Growth Inducement
[x] Land Use
[x] Cumulative Effects
[ ] Other: _____

Present Land Use/Zoning/General Plan Designation:

n/a

Project Description: *(please use a separate page if necessary)*
Please see attached Notice of Preparation.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Document Details Report
State Clearinghouse Data Base

Date Received 01/14/2019 ***Start of Review*** 01/14/2019 ***End of Review*** 02/12/2019

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Ventura **SCH#** 2019011026

Resources Agency

- ■ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  Denise Peterson
- ☐ **California Coastal Commission**
  Allyson Hitt
- ☐ **Colorado River Board**
  Elsa Contreras
- ☐ **Dept. of Conservation**
  Crina Chan
- ☐ **Cal Fire**
  Dan Foster
- ☐ **Central Valley Flood Protection Board**
  James Herota
- ☐ **Office of Historic Preservation**
  Ron Parsons
- ■ **Dept of Parks & Recreation**
  Environmental Stewardship Section
- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- ☐ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- ☐ **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Wildlife Region 1**
  Curt Babcock
- ☐ **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- ☐ **Fish & Wildlife Region 2**
  Jeff Drongesen
- ☐ **Fish & Wildlife Region 3**
  Craig Weightman
- ☐ **Fish & Wildlife Region 4**
  Julie Vance
- ☐ **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- ☐ **California Department of Education**
  Lesley Taylor
- ☐ **OES (Office of Emergency Services)**
  Monique Wilber
- ☐ **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- ☐ **Dept. of General Services**
  Cathy Buck
  Environmental Services Section
- ☐ **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Erik Vink
- ☐ **Delta Stewardship Council**
  Anthony Navasero
- ☐ **California Energy Commission**
  Eric Knight
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☐ **Public Utilities Commission**
  Supervisor
- ☐ **Santa Monica Bay Restoration**
  Guangyu Wang
- ☐ **State Lands Commission**
  Jennifer Deleong
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- ☐ **Caltrans - Division of Aeronautics**
  Philip Crimmins
- ☐ **Caltrans – Planning HQ LD-IGR**
  Christian Bushong
- ☐ **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Susan Zanchi
- ☐ **Caltrans, District 4**
  Patricia Maurice
- ☐ **Caltrans, District 5**
  Larry Newland
- ☐ **Caltrans, District 6**
  Michael Navarro
- ☐ **Caltrans, District 7**
  Dianna Watson
- ☐ **Caltrans, District 8**
  Mark Roberts
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Jacob Armstrong
- ☐ **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- ☐ **Airport & Freight**
  Jack Wursten
- ☐ **Transportation Projects**
  Nesamani Kalandiyur
- ☐ **Industrial/Energy Projects**
  Mike Tollstrup
- ☐ **California Department of Resources, Recycling & Recovery**
  Kevin Taylor/Jeff Esquivel
- ☐ **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- ☐ **State Water Resources Control Board**
  Div. Drinking Water #_____
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- ☐ **Dept. of Toxic Substances Control Reg. #_____**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☐ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ☐ **RWQCB 5S**
  Central Valley Region (5)
- ☐ **RWQCB 5F**
  Central Valley Region (5)
  Fresno Branch Office
- ☐ **RWQCB 5R**
  Central Valley Region (5)
  Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
- ☐ **RWQCB 6V**
  Lahontan Region (6)
  Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

- ☐ **Other** _____
  _____
  _____
- ☐ _____
  Conservancy

Last Updated 5/22/18

Downing, Clay

From: Swift, Rebecca
Sent: Thursday, January 10, 2019 7:10 PM
To: Curtis, Susan; Downing, Clay
Cc: Hill, Jessica
Subject: EIR report

Good evening. As a county employee and citizen, I attempt to stay informed of current events that impact our local environment. I am a RN employed at Ventura County Medical Center in the ER. I have suggested, solicited advice, spoken to city of Ventura officials and our head of public health, Rigo Vargas over my concerns of the ongoing pollution to our oceans and waterways by cigarette butts. I request that your committee please address why the County of Ventura administration is refusing to allow cigarette butt disposal devices to be allowed by our campus. People smoke cigarettes. People arrive to the hospital due to trauma, loss of a loved one, treatment, to visit loved and very ill family members. Currently smoking is not allowed on campus. But, take a walk and look into the landscape and you will see too many cigarette butts to count. With the assistance of the Surfrider Foundation who supports and maintains these butt disposal devices, more people will dispose of the butt properly and we can still feel as a county we are encouraging healthy lifesyles. These disposal devices can be found downtown, at Marina park, on the Pier, on the Promenade and they are working. There is a sidewalk that sourrounds our campus with many poles. The above mentioned devices are simply stated, attach to a pole and a volunteer collects the debris. Please help, regards, Becky Swift, RN,CCM

Downing, Clay

From: Dulanie La Barre <dulanie@groundoperations.net>
Sent: Monday, January 28, 2019 3:01 PM
To: Curtis, Susan
Cc: Bennett, Steve
Subject: General Plan - environmental

Susan -
Given that the world's scientific community is in agreement that we have (at best) 12 years to turn around our practices to avoid catastrophic weather events (in our case drought and fire), I think that we need to radically adjust our priorities in the upcoming General Plan.

The time for business as usual is over. And frankly, I am disgusted that the Board would give the Bennet Family a free ride for the next 20 years with their methane flare, which they have already been in violation over for years. Soooo …. regarding the General Plan:

1. Stop allowing methane flares

2. Survey all existing oil wells and pipelines for adherence to, and enforcement of, the law regarding infrastructure and pollution infractions.

3. Begin identifying where we can change/update climate impacts on county land and in zoning & building regulations - encouraging more bike lanes, public transit dollars, etc.

4. Encourage Managed Rotational Grazing of cattle and livestock on open range to increase carbon sequestration and soil health.

5. Encourage reduction of herbicides and pesticides, especially re: strawberries, with penalties where necessary.

6. Have the Planning Dept. support and encourage straw-bale (with stucco) construction, especially for those who are rebuilding from the Thomas fire. The five earth-built structures at the Ojai Foundation were the only ones to survive the fire. Their new staff housing, built to code, went down in ashes.

7. Require all new housing or significant remodels to include solar panels and rainwater harvesting systems.

8. Adjust zoning laws to allow some farm worker housing on farms.

9. Review multi-family rules & regs and streamline to make it more cost effective and feasible to build affordable housing and apartments. The permit fees are off the charts and make it impossible to pencil out reasonable projects.

Thank you for adding these comments to the process for the General Plan.

Dulanie Ellis-La Barre
805-640-1133/cell 805-798-0158
206 So. Blanche St., Ojai, CA 93023

Our nettlesome task is to discover how to organize our strength into compelling power. — Dr. Martin Luther King, Jr.

Downing, Clay

From: Grundy, Farl@DOC <Farl.Grundy@conservation.ca.gov>
Sent: Monday, January 28, 2019 7:55 AM
To: Curtis, Susan
Subject: Comments on Ventura County GPU
Attachments: Ventura 2040 NOP GP Final.pdf

Ms. Curtis,

Attached are the Department of Conservation's comments regarding the NOP for the Ventura County General Plan Update. A hard copy of these comments will also be sent to you in the mail. Please let me know if you have any problems viewing the pdf.

Sincerely,

Farl Grundy
Associate Environmental Planner
Division of Land Resource Protection

California Department of Conservation
801 K Street, MS 14-15, Sacramento, CA 95814
T: (916) 324-7347
E: Farl.Grundy@conservation.ca.gov

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California
Department of Conservation
Division of Land Resource Protection

Gavin Newsom, Governor
David Bunn, Director

January 25, 2019

VIA EMAIL: SUSAN.CURTIS@VENTURA.ORG
Ms. Susan Curtis, Manager, General Plan Update Section
Ventura County Resource Management Agency, Planning Division
800 S. Victoria Avenue, L #1740
Ventura, CA 93009-1740

Dear Ms. Curtis:

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE VENTURA COUNTY 2040 GENERAL PLAN UPDATE, SCH# 2019011026

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update (Project). The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description

The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan.

Department Comments

The Department recommends the following discussion under the Agricultural Resources section of the Environmental Impact Report:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.

- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Potential contract resolutions for land in an agricultural preserve and/or enrolled in a Williamson Act contract.
- Proposed mitigation measure for all impacted agricultural lands within the proposed project area.

Although direct conversion of agricultural land is often an unavoidable impact under CEQA analysis, mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts.

All mitigation measures that are potentially feasible should be considered. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible based on its elements. The Department suggests that the County consider the adoption of an agricultural land mitigation program that will effectively mitigate the conversion of agricultural land.

Agricultural Mitigation Program

Agricultural conservation easements are an available mitigation tool that the County should consider. The Department highlights easements as a mitigation tool because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because they follow an established rationale similar to that of wildlife habitat mitigation.

Programs that establish agricultural conservation easements and in-lieu fees for mitigation banking are most effective at conserving comparable quality agricultural land when the easement requirements or fees are determined concurrent with project approval. Should significant time elapse between initial approval and the applicant's receipt of a building or grading permit, conflict may arise over the agricultural quality or value of the land being converted.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Another source is the Division's California Farmland Conservancy Program (CFCP), which has participated in bringing about conservation easements throughout the State of California

involving many California land trusts. Any other feasible mitigation measures should also be considered.

Conclusion

Thank you for giving us the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 Draft General Plan Update. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Environmental Planner at (916) 324-7347 or via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber
Conservation Program Support Supervisor

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

NOP

Name:

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

Encourage Regenerative Organic Agriculture. This practice increases soil health by increasing soil carbon content and therefore reducing atmospheric carbon levels. This approach is a win/win for agriculture **and** the environment. Healthier soils equals healthier crops and a healthier atmosphere. There are three sinks for carbon on our planet; The air, The oceans and our soils. Both our air and our oceans are being poisoned by too much carbon. Meanwhile our soils are dieing because they don't have enough carbon. Let's make Ventura counties Agricultural focus be to put Atmospheric carbon back into the soil using Regenerative Agricultural practices.

Name: DAVID WHITE, CENTER FOR REGENERATIVE AG.

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

I would like to see specific outreach to communities in "sacrifice zones" for comments on scope of a draft environmental impact report.

For example, reach out to people living by toxic agriculture, oil extraction

Name: Barbara Leighton

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

Agricultural carbon sequestration needs to be considered in EIR – Agriculture releases a very large amount of carbon so Ventura County needs to deal with it.

– The Climate Action Plan and list of emissions needs to be available prior to release of draft EIR –

Name: GORDON CLINT

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

New flood plain maps may make current zoning and current land uses infeasible. Flood plain maps may not reflect planned developments upstream, and a more unstable climate.

Name: Mary Ann Krause AICP

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

My concern is related to the fact that we have 11 years (not 20) before catastrophic effects of climate change will impact our community in unfortunable ways.

An unsustainable industry — oil & gas extraction & exploration including fracking & seismic assaults - has tremendous influence in this county at the present time. Therefore looking forward to the next 10 years what

Name: Susan Chapin

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

I would like to see the EIR address sustainable growth. I'd like to see more building upwards, not outward. This includes an emphasis on apts. & multi-story buildings close to shopping areas. In other words, prevent urban sprawl whenever possible.

I'd like to see wildlife corridors that will allow animals ~~to~~ access to the land they need to survive.

(please see back)

Name: Kristen Kessler

Last but not least, I'd like to see a comprehensive + thorough plan to reduce greenhouse gas emissions. This includes banning the use of natural gas as an energy source in the County.

Thank You-

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON SCOPE OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Write Comment Here – Additional Space Available on Back of Card

1-30-2019

Agree with the following:

① Vta Co. Emissions Inventory should be released to public asap

② Consultants helping development of Vta. Co. EIR & Vta. Co. Gen Plan should include local climate change experts and also listen to citizens and give time for their input.

③ EIR needs to study issues of oil and gas extraction/activities ~~en~~ presented by Kimberly Rivers, CFROG as these issues relate to environmental hazard & climate damage

Name: Mary Adrianne Krause, Robert Krause

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON GENERAL PLAN UPDATE PROJECT

Write Comment Here – Additional Space Available on Back of Card

GPU

Name:

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON GENERAL PLAN UPDATE PROJECT

Write Comment Here – Additional Space Available on Back of Card

The General plan update should encourage Regenerative Organic Agriculture which Improves The resources that it works with. These Regenerative practices Increase Soil health by Increasing Soil carbon content and therefore reduce atmospheric carbon levels. This approach is a win/win for agriculture and the environment. Healthier Soils make healthier crops and a healthier atmosphere. There are three sinks for Carbon on our planet; The air, The oceans and our Soils. Both our air and our oceans are being poisoned by too much carbon. Meanwhile our Soils are dieing because they do not have enough carbon. Let's make Ventura Counties' general plans agricultural focus be to put atmospheric carbon back into the Soil, using Regenerative Agricultural practices

Name:
DAVID WHITE, CENTER FOR REGENERATIVE AGRICULTURE

Public Comment, Submitted at Public Scoping Meeting for a Notice of Preparation for a Draft Environmental Impact Report for the Ventura County 2040 General Plan (Case No. PL17-0141)

COMMENT ON GENERAL PLAN UPDATE PROJECT

Write Comment Here – Additional Space Available on Back of Card

RE: Agricultural land use –

- encourage zoning for organic farming

- encourage use of regenerative systems which removes carbon from air and puts it back in soil.

Name: GORDON CLINT

Downing, Clay

From: Chris Tull <ctull17@gmail.com>
Sent: Wednesday, January 30, 2019 6:24 PM
To: Curtis, Susan
Subject: Carbon sequestration and dense development in General Plan Update

Hello Ms. Curtis,

I would like to thank you for all your hard work during this long general plan process. I understand that managing the competing expectations of a huge variety of stakeholders while under tight budgetary and time constraints is no easy feat.

In addition to expressing my appreciation, I would also like to offer two pieces of constructive feedback on the update process.

First, I noticed in the alternatives report that the County is not planning to address GHG emissions in the Agricultural or Open Space portions of the plan. I understand that, viewed purely through the lens of *changes* to land use, then the GHG emissions changes in Ag and Open space are not likely to be significant. However, given that the GP is also intended to serve as a Climate Action Plan, I believe that consideration of GHGs from Ag and Open Space will be necessary to meet our GHG reduction goals. Carbon sequestration in soils, landscape restoration, and reforestation offer powerful tools in the County's belt for drawing down emissions from the atmosphere and reducing our carbon footprint.

Second, I would kindly ask that when calculating the GHG impacts of different alternatives in the general plan, an alternative focused on dense, transit-friendly growth be analyzed relative to a more suburban expansion plan. Given the huge impact of vehicle emissions to our carbon footprint, such an alternative is almost certain to outperform a more dispersed development pattern. Furthermore, such a pattern leaves more open space available for carbon sequestration as mentioned earlier. Lastly, a development pattern focused around promoting density and public transportation aligns closely with the anticipated direction of state policy in the coming years, meaning that the County would be "future-proofing" itself from unanticipated changes in state law.

Thank you for taking the time to read my message.

Sincerely,
Christopher Tull

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Susan Curtis, Planning DATE: January 30, 2019

FROM: Nicole Collazo

SUBJECT: Request for Review of Notice of Preparation of a Draft Environmental Impact Report and Scoping Meeting for the VC 2040- GPU (Case No. PL17-0141)

Air Pollution Control District (APCD) staff has reviewed the subject Notice of Preparation (NOP) for the draft environmental impact report (DEIR), which will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. The project is not expected to identify any increase in overall development relative to the existing General Plan. However, the project will address topics and issues pursuant to state requirements adopted since the existing General Plan was approved in 2005. The Project Location includes all unincorporated areas within Ventura County. The Lead Agency for the project is the County of Ventura.

General Comments

The 2040 General Plan Update will address topics and issues pursuant to state requirements adopted since the existing General Plan was approved in 2005. Of these topics listed in the NOP, the Air Quality and Climate Change sections will be reviewed by the Ventura County APCD.

Air Quality Section- The air quality assessment should consider project consistency with the 2016 Air Quality Management Plan (AQMP). The 2016 AQMP presents Ventura County's strategy (including related mandated elements) to attain the 2008 federal 8-hour ozone standard by 2020, as required by the federal Clean Air Act Amendments of 1990 and applicable U.S. EPA clean air regulations. The 2016 AQMP uses an updated 2012 emissions inventory as baseline for forecasting data, SCAG RTP 2016 data, and CARB's EMFAC2014 emission factors for mobile sources. The AQMP can be downloaded from our website at http://www.vcapcd.org/AQMP-2016.htm.

The Ventura County Air Quality Assessment Guidelines (AQAG) should also be used to evaluate all potential air quality impacts. The AQAG are also downloadable from our website here: http://www.vcapcd.org/environmental-review.htm. Specifically, the air quality assessment should consider reactive organic compound, nitrogen oxide emissions and particulate matter from all project-related motor vehicles, sources not permitted with APCD, and construction equipment that may result from potential buildout, as appropriate to future development policies and implementation measures. We note that the AQAG has not been updated since 2003 and serves

as a reference and is not required or mandated by the APCD (AQAG Page 1-1). Current air quality determinations follow the same process but using different tools (CalEEMod vs. URBEMIS, CO Hotspots analysis no longer required, etc.). The recommended list of mitigation measures in the AQAG are also limited and outdated. For example, the following template is currently being recommended by APCD as a Commenting Agency for projects that include construction equipment, reflecting state laws adopted since the AQAG was last updated in 2003:

2. Construction Equipment

Purpose: In order to ensure that ozone precursor and particulate emissions from diesel-powered mobile construction equipment are reduced to the greatest amount feasible.

Requirement: The Permittee shall comply with the provisions of all applicable California State Laws and APCD Rules and Regulations regarding portable construction equipment and construction vehicles.

Documentation: The project applicant shall ensure compliance with the following State Laws and APCD requirements:

I. Construction equipment shall not have visible emissions greater than 20% opacity, as required by APCD Rule 50, Opacity.

II. All portable diesel-powered equipment over 50 BHP shall be registered with the State's Portable Equipment Registration Program (PERP) or an APCD Portable Permit.

III. Off-Road Heavy-Duty trucks shall comply with the California State Regulation for In-Use Off-Road Diesel Vehicles (Title 13, CCR §2449), the purpose of which is to reduce NO_x and diesel particulate matter exhaust emissions.

IV. On-Road Heavy-Duty trucks shall comply with the California State Regulation for In-Use On-Road Diesel Vehicles (Title 13, CCR §2025), the purpose of which is to reduce NO_x and diesel particulate matter exhaust emissions.

V. All commercial on-road and off-road diesel vehicles are subject to the idling limits of Title 13, CCR §2485, §2449(d)(3), respectively. Construction equipment shall not idle for more than five (5) consecutive minutes. The idling limit does not apply to: (1) idling when queuing; (2) idling to verify that the vehicle is in safe operating condition; (3) idling for testing, servicing, repairing or diagnostic purposes; (4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); (5) idling required to bring the machine system to operating temperature, and (6) idling necessary to ensure safe operation of the vehicle. It is the Permittee's responsibility to have a written idling policy that is made available to operators of the vehicles and equipment and informs them that idling is limited to 5 consecutive minutes or less, except as exempted in subsection a. above.

The following are recommended measures for construction equipment and vehicles:

I. Diesel powered equipment should be replaced by electric equipment whenever feasible.

II. Maintain equipment engines in good condition and in proper tune as per manufacturer's specifications.

III. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.

IV. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

GHG Section- Neither APCD nor the County has adopted a threshold of significance applicable to Greenhouse Gas (GHG) emissions from projects subject to the County's discretionary land use permitting authority. APCD published a report as a request by the Ventura County Air Pollution Control Board to report back on possible GHG thresholds options on November 8, 2011. The District will be looking into what GHG threshold is best suitable for Ventura County in the near future which will undergo a public review process.

The following are recommended guidance documents that could be used to address the impacts of climate change and greenhouse gases in Ventura County.

On May 2016, the CARB published a Mobile Source Strategy. In this report, ARB staff is outlining a mobile source strategy that simultaneously meets air quality standards, achieves GHG emission reduction targets, decreases toxics health risk, and reduces petroleum consumption from transportation emissions over the next fifteen years. These goals and targets include These include 1) Attaining federal health-based air quality standards for ozone in 2023 and 2031 in the South Coast and San Joaquin Valley, and fine particulate matter (PM2.5) standards in the next decade; 2) Achieving greenhouse gas (GHG) emission reduction targets of 40 percent below 1990 levels by 2030, with continued progress towards an 80 percent reduction by 2050; 3) Minimizing health risk from exposure to toxic air contaminants; 4) Reducing our petroleum use by up to 50 percent by 2030; and 5) Increasing energy efficiency and deriving 50 percent of our electricity from renewable sources by 2030. The report can be found here: https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.htm.

On November 2017, the California Air Resources Board published it latest Climate Change Scoping Plan. The Scoping Plan lays out a strategy for achieving California's 2030 Greenhouse Gas target and builds on the state's successes to date, proposing to strengthen major programs that have been a hallmark of success, while further integrating efforts to reduce both GHGs and air pollution. California's climate efforts will 1) Lower GHG emissions on a trajectory to avoid the worst impacts of climate change; 2) Support a clean energy economy which provides more opportunities for all Californians; 3) Provide a more equitable future with good jobs and less pollution for all communities; 4) Improve the health of all Californians by reducing air and water pollution and making it easier to bike and walk; and 5) Make California an even better place to live, work, and play by improving our natural and working lands. The 2017 Climate Change Scoping Plan can be accessed here https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

Finally, on December 2018, the Governor's Office of Planning and Research (OPR) published a Draft Technical Advisory. This document incorporates developments since the June 2008 Technical Advisory publication, including regulatory changes made to the regulations that implement CEQA (commonly known as the "CEQA Guidelines" in late 2018 by the California Natural Resources Agency (Agency). Although this document largely focuses on project-level analyses of greenhouse gas impacts, Section IV briefly addresses community-scale greenhouse gas reduction plans as one pathway to streamline CEQA analyses. This discussion draft is

intended to address some common issues and topics that arise in greenhouse gas emissions analyses under CEQA but is not intended to address every single issue and topic. More information on the OPR's Technical Advisory can be found here http://opr.ca.gov/ceqa/technical-advisories.html.

Environmental Justice- The AB 617 legislation sets out an ambitious implementation schedule for APCD. The California Air Resources Board (CARB) must set the overall direction of the program by October 1, 2018. This includes identifying impacted communities, establishing the criteria for air monitoring and local emissions reduction programs, and developing statewide strategies for reducing emissions. The local air districts also have specific roles and responsibilities. On April 27, 2018, the VCAPCD submitted to CARB a technical assessment to develop an initial list of candidate communities for Ventura County.

On July 31, 2018 the Ventura County Air Pollution Control Board approved the District staff's recommendation that the greater Oxnard/Port Hueneme area be the highest priority region in Ventura County for inclusion in CARB's Community Air Protection Program. District staff's recommendation is based on our assessment that we have not identified a single or multiple sources of significant air emissions that would lead us to identify a smaller region adjacent to these source(s). This is in part based on our review of our permitted sources in the area. The greater Oxnard/Port Hueneme area is also home to several agricultural operations and these operations generally utilize pesticides and diesel equipment. In addition, the Port of Hueneme and several warehouse type distribution centers are located in the area. Heavy-duty trucks associated with these goods movement facilities move throughout the area. In summary, we are looking at a diffuse inventory of air pollution sources in this area. This will likely require additional research including community level air monitoring in several locations to identify any sources of concern. In addition, by having a larger area, the VCAPCD will have flexibility to target our incentive funds within the area as we learn more about potential issues with air pollutant sources in and adjacent to the area.

As amended by Assembly Bill 617 (C. Garcia, Chapter 136, Statutes of 2017), Health and Safety Code section 40920.6(c) requires that on or before January 1, 2019, each local air district that is a nonattainment area for one or more air pollutants must adopt an expedited schedule for the implementation of BARCT by the earliest feasible date, but in any event not later than December 31, 2023.

District staff has created a BARCT rule development schedule to comply with this statutory requirement. CARB has identified four affected facilities that are subject to AB 617 BARCT requirements; the facilities are operated by Procter and Gamble, New Indy Container, California Resources (Santa Clara Valley Gas Plant), and Trinity ESC. District staff then evaluated which District rules are applicable to these facilities that may not meet BARCT requirements including Rule 74.23, *Stationary Gas Turbines*; Rule 74.15, *Boilers, Steam Generators and Process Heaters*; Rule 71.3, *Transfer of Reactive Organic Compound Liquids*; and Rule 74.10, *Components at Crude Oil and Natural Gas Production and Processing Facilities*. In addition, District development of a new rule is proposed to regulate the ozone precursor emissions from

oilfield flares to address emissions from a nonemergency flare at the Santa Clara Valley Gas Plant.
A public meeting was held on October 30, 2018 by the District to provide the participants with the list of affected facilities and rules, rule adoption schedules and deadline to submit the written comments. No significant concerns with the proposed rule schedules were expressed by the meeting participants.

On December 11, 2018, the Ventura County Air Pollution Control Board will consider approval of District staff's proposed schedule for implementation of Best Available Retrofit Technology (BARCT) to fulfill this mandate under AB 617.

We look forward to working with the County of Ventura to make sure the 2040 General Plan Update is consistent with recently adopted air quality regulations and the state's plans to reduce greenhouse gas emissions.

If you have any questions, please call me at 645-1426 or email me at nicole@vcapcd.org.

JAN 3 0 2019

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

January 25, 2019

Susan Curtis
Ventura County
800 South Victoria Ave., L #1740
Ventura, CA 93009

RE: SCH# 2019011026 Ventura County 2040 General Plan Update, Ventura County

Dear Ms. Curtis:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Steven.Quinn@nahc.ca.gov

Sincerely,

for

Steven Quinn
Associate Governmental Program Analyst

cc: State Clearinghouse

California
Department of Conservation
Division of Land Resource Protection

Gavin Newsom, Governor
David Bunn, Director

FEB 04 2019

January 25, 2019

VIA EMAIL: SUSAN.CURTIS@VENTURA.ORG
Ms. Susan Curtis, Manager, General Plan Update Section
Ventura County Resource Management Agency, Planning Division
800 S. Victoria Avenue, L #1740
Ventura, CA 93009-1740

Dear Ms. Curtis:

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE VENTURA COUNTY 2040 GENERAL PLAN UPDATE, SCH# 2019011026

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update (Project). The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description

The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan.

Department Comments

The Department recommends the following discussion under the Agricultural Resources section of the Environmental Impact Report:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.

- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Potential contract resolutions for land in an agricultural preserve and/or enrolled in a Williamson Act contract.
- Proposed mitigation measure for all impacted agricultural lands within the proposed project area.

Although direct conversion of agricultural land is often an unavoidable impact under CEQA analysis, mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts.

All mitigation measures that are potentially feasible should be considered. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible based on its elements. The Department suggests that the County consider the adoption of an agricultural land mitigation program that will effectively mitigate the conversion of agricultural land.

Agricultural Mitigation Program

Agricultural conservation easements are an available mitigation tool that the County should consider. The Department highlights easements as a mitigation tool because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because they follow an established rationale similar to that of wildlife habitat mitigation.

Programs that establish agricultural conservation easements and in-lieu fees for mitigation banking are most effective at conserving comparable quality agricultural land when the easement requirements or fees are determined concurrent with project approval. Should significant time elapse between initial approval and the applicant's receipt of a building or grading permit, conflict may arise over the agricultural quality or value of the land being converted.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Another source is the Division's California Farmland Conservancy Program (CFCP), which has participated in bringing about conservation easements throughout the State of California

involving many California land trusts. Any other feasible mitigation measures should also be considered.

Conclusion

Thank you for giving us the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 Draft General Plan Update. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Environmental Planner at (916) 324-7347 or via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber
Conservation Program Support Supervisor

FEB 11 2019

G Valladolid
1129 Maricopa Hwy B-251
Ojai CA 93023

February 7, 2019

Ms Susan Curtis, Manager
General Plan Update
VC Resource Management Agency
Planning Division
800 S Victoria Avenue L 1740
Ventura CA 93009

Dear Ms Curtis

GENERAL PLAN 2040 UPDATE COMMENTS

As a county government, we have the power to determine the next 20 years of planning for the County of Ventura. How will growth happen? The main issue is to consider global warming and climate chaos, caused by greenhouse gases, and its health and safety effects on the population. The County's vision to be exhibited in the general plan must restrict contributing to creation of greenhouse gases. Let's examine some quick research.

The Existing Building is the Greenest Building according to some university professors involved in architecture.

Donovan D. Rypkema, PlaceEconomics, a development consultant says, "Adaptive reuse is the long-practiced method of adapting old structures for new purposes... developers and architects have the opportunity to change the primary function of the structure... Structures that are commonly adapted for reuse include under-used or abandoned churches, industrial complexes and schools."

Building materials as one example of ramifications on greenhouse gases and sustainability. Among building materials, conventional drywall is the third largest producer of greenhouse gases, just behind cement and steel. Resource conservation can happen by adapting existing buildings no longer in use.

Considering the foregoing information, my comment for the general plan is to take the following approach.

A Put a moratorium on new construction for the next 20 years.

B Inventory existing unused structures.

C Adapt existing inventory of unused structures to thoroughly researched needs for growth

The overwhelming number of scientists say that we must halt our creation of greenhouse gases now. We must overcome the resistance. Remember that businesses that catered to the horse and buggy did not want to lose jobs to the new car industry. Yet, the population learned new employment opportunities and thrived. A sustainable economy can employ those dependent on a deadly and outdated type of growth and escape certain doom. Planning must sincerely weigh the welfare of Ventura's residents along with our role regarding the quality of life of the planet and include all of our valid concerns in the general plan.

Sincerely

G Valladolid

Downing, Clay

From: Curtis, Susan
Sent: Tuesday, February 12, 2019 7:36 AM
To: 'prettycheapjewelry'
Subject: RE: Comment for VC Gen Plan Scoping

Good Morning Nina,

Thank you for your thoughtful comments on the General Plan NOP regarding environmental review in "wet" environments.

As always we appreciate your input and participation in the project.

Thank you again,

Susan Curtis | Manager
General Plan Update Section
susan.curtis@ventura.org

Ventura County Resource Management Agency | Planning Division
P. (805) 654-2497 | F. (805) 654-2509
800 S. Victoria Ave., L #1740 | Ventura, CA 93009-1740
Visit the Planning Division website at **vcrma.org/planning**
Ventura County General Plan Update. Join the conversation at **VC2040.org**
For online permits and property information, visit **VC Citizen Access**

Pursuant to the California Public Records Act, email messages retained by the County may constitute public records subject to disclosure.

From: prettycheapjewelry <prettycheapjewelry@gmail.com>
Sent: Sunday, February 3, 2019 8:22 AM
To: Curtis, Susan <Susan.Curtis@ventura.org>
Subject: Comment for VC Gen Plan Scoping

Please include the following comments for developing the general plan scoping. Similar comments were given to you on Nov 24, 2018 for the draft General Plan and analysis in the EIR is requested based on the policies that the General Plan will codify.

Thank you,
Nina Danza

An environmental analysis of potential building in wet environments allowed by the General Plan is requested. One of the most harmful policies and practices affecting stream and river environments are drainage and flood projects with the resultant ground and surface water impacts as well as wildlife impacts. The analysis should quantify full build out in the county where development could occur based on the general plan, and include :
- decreased groundwater infiltration
- loss of ag and municipal water supply
- decreased surface water quality on human and wildlife including at receiving water and beach/shore
- decreased riparian environment and the impacts on plant and animal species population

Downing, Clay

From: prettycheapjewelry <prettycheapjewelry@gmail.com>
Sent: Saturday, November 24, 2018 9:04 AM
To: Curtis, Susan
Subject: Public Comment for VC General Plan Section 7.2

If public review is still open for the subject section please accept the following. If not please let me know when the next opportunity to submit these will occur. Thank You.
Nina Danza
Ventura Sierra Club Chair

To break the build-flood-damage-rebuild cycle, the General Plan Section 7.2 must include a much stronger priority and procedure for preserving wet environments. One of the most harmful policies and practices affecting stream and river environments are drainage and flood projects. Local cities, as well as the county, continue to approve development in their jurisdictions adjacent to stream/river corridors resulting in an obligation to provide flood protection. At this time, requirements intended to mitigate surface water impacts and promote conservation in new or redevelopments simply are not proven nor vigorous enough to ensure stream and river health. Once housing/commercial/industrial development are in place, regulations favor protection of these 'existing' structures and sacrifice water quality, riparian environments, groundwater recharge and the suite of related ecological elements. This process is unsustainable and will continue to result in encroachment upon and destruction of wet environments, native plant and animal habitat. Therefore, it is recommended the staff develop a point system for scoring a project, alone as well as in a regional context, on their wet environment impacts in which high scores would not be permitted.

When projects are sited along federal watercourses an even more damaging and endless cycle of riparian corridor destruction is set in motion. Cities and residents in areas that are mapped as requiring flood insurance often demand relief from the county in the form of increased flood control. That relief has repeatedly been provided by hardscape structures such as channeling surface drainage into curbs, paved swales, and underground pipes and discharging into the major watercourses. Although non-structural techniques are proven to be more flood resilient, the county claims outdated Army Corp of Engineers standards must be used along federal watercourses. Those practices rely heavily on cost-benefit computations that ignore ecosystem damage, fail to include natural plant and animal habitat value, use hardscape paved surfaces, and prohibit vegetation along levees creating dry dead zones. It is now clear, as seen in countless locations throughout southern California, that riparian ecosystems are wiped out as a result of federal flood control practices.

To change the way flood protection is provided, the General Plan needs to contain a passage indicating more environmentally sensitive methods be used, such as non-structural engineering, or green-infrastructure such as combined rock-vegetation side banks. Additionally, I suggest that every project do cost-benefit computation which includes values for: habitat and species protected, groundwater recharge value, value of water quality improvements, etc. Values can be developed based on known factors such as dollars saved from avoiding correcting fish passage barriers or value of infiltrated groundwater acre-ft. The General Plan should be altered indicating cost is not the deciding factor in project approval, for example, 'Hard solutions such as concrete or rip-rap channels are not permissible based solely on cost-benefit analysis. Other factors such as wet environment benefits provided by a project are to be analyzed and used to determine the final project alternative. These factors shall be integrated into the suite of a project's technical feasibility analysis.'

Finally, county operation and maintenance practices also perpetuate wet environment damage. The county has not sought alternative maintenance program approval at any of the Corp watercourses and continues to strip vegetation within the sidebanks and some streambeds. Elsewhere in the US, entities have negotiated alternative maintenance strategies at federal watercourses and an effort to preserve vegetation and that effort is essential in our area. The General Plan might add sections for requiring alternative programs for long term maintenance.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-8391
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Serious Drought.
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a California Way of Life.

February 14, 2019

Ms. Susan Curtis
Ventura County Resource Management Agency
Planning Division, General Plan Update Section
Ventura County
800 South Victoria Ave., L#1740
Ventura, CA 93009

RE: Ventura County 2040 General Plan Update
Vic. LA-210/ PM R33.921
SCH # 2019011026
GTS # VEN-2017-00228AL-NOP

Dear Ms. Curtis:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health, and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. You may reference to The Governor's Office of Planning and Research (OPR) for more information.

http://opr.ca.gov/ceqa/updates/guidelines/

Caltrans is aware of challenges that the region faces in identifying viable solutions to alleviating congestion on State and Local facilities. With limited room to expand vehicular capacity, this development should incorporate multi-modal and complete streets transportation elements that will actively promote alternatives to car use and better manage existing parking assets. Prioritizing and allocating space to efficient modes of travel such as bicycling and public transit can allow streets to transport more people in a fixed amount of right-of-way.

Caltrans supports the implementation of complete streets and pedestrian safety measures such as road diets and other traffic calming measures. Please note the Federal Highway Administration (FHWA) recognizes the road diet treatment as a proven safety countermeasure, and the cost of a road diet can be significantly reduced if implemented in tandem with routine street resurfacing.

We encourage the Lead Agency to integrate transportation and land use in a way that reduces Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions by facilitating the provision of more proximate goods and services to shorten trip lengths, and achieve a high level of non-motorized travel and transit use. We also encourage the Lead Agency to evaluate the potential of Transportation Demand Management (TDM) strategies and Intelligent Transportation System (ITS) applications in order to better manage the transportation network, as well as transit service and bicycle or pedestrian connectivity improvements.

The Department also seeks to provide equitable mobility options for people who are economically, socially, or physically disadvantaged. Therefore, we ask the Lead Agency to evaluate the project site for access problem, VMT and service needs that may need to be addressed.

We recommend the County to include updates with Land Use Element, Mobility Element, Housing Element, Transportation Impact Study Guidelines (if any), and Traffic Impact Mitigation Fee program including the State facility improvements. Please invite Caltrans for review and consultation when each element/guideline/program is being updated.

If the County is growing with development, then please provide General Plan development net trip generation, trip distribution, and trip assignment estimates to the State facilities for the general plan with regards to the local and regional road system. To ensure that queue formation does not create potential traffic conflicts, General Plan development-generated trips should be added to the existing and future scenario traffic volumes for all freeways and highways. To avoid potential traffic conflicts such as inadequate weaving distances, queue spilling back onto the freeway, and uneven lane utilization, please analyze the adequacy of the operations of the impacted freeway segments with Highway Capacity Manual. We recommend the County to meet with us for further consultation before preparation of the traffic impact study on the State facilities.

A discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. Any mitigation involving transit or Transportation Demand Management (TDM) is encouraged and should be justified to reduce VMT and greenhouse gas emissions. Such measures are critical to facilitating efficient site access.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is available online at:

http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

The Lead Agency should identify General Plan development-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed General Plan development; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable modes shares, thereby reducing VMT.

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 897-8391 and refer to GTS # VEN-2017-00228-AL-NOP.

Sincerely,

MIYA EDMONSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
WATERSHED PLANNING AND PERMITS DIVISION
800 South Victoria Avenue, Ventura, California 93009
Sergio Vargas, Deputy Director – (805) 650-4077

M E M O R A N D U M

DATE: February 14, 2019

TO: Susan Curtis, RMA Planner
County of Ventura

FROM: Nathaniel Summerville, Engineer III - Advanced Planning Section

SUBJECT: PL17-0141 Ventura County 2040 General Plan Update
Notice of Preparation of a Draft Environmental Impact Report

Pursuant to your request dated January 14, 2019, this office has reviewed the submitted Notice of Preparation and provides the following comments. The Administrative Draft has not been reviewed at this time and will be reviewed when it becomes available.

PROJECT LOCATION:

All unincorporated areas within Ventura County.

PROJECT DESCRIPTION:

The County of Ventura is undertaking a comprehensive update of its General Plan. The County's current General Plan was most recently updated in 2005 and has not been comprehensively updated since 1988. The 2040 General Plan Update is anticipated to be adopted in 2020 and will set forth the County's vision of its future and express the goals, policies, and implementation programs that will guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040. In addition, all area plans, specific plans, subdivisions, public works projects, and zoning decisions must be found to be consistent with the direction provided in the County's General Plan.

COMMENTS:

References to Flood Control District should be replaced with references to the Watershed Protection District.

Coastal Wave and Beach Erosion Hazards:
It is noted in the currently available documents that climate change will be incorporated into the General Plan Update. The existing general plan notes goals, policies, and programs related to coastal hazards and erosion. Consistent with the Policies of the California Coastal Commission the General Plan Update should consider expanding this section to address the hazards of sea level rise as it relates to discretionary development.

The current policy: "*Discretionary development in areas adjacent to coastal beaches shall be allowed only if the Public Works Agency with technical support from the Ventura County Watershed Protection District, determines from the applicant's submitted Wave Run-up Study that wave action and beach erosion are not hazards to the proposed development, or that the hazard would be mitigated to a less-than-significant level, and that the project will not contribute significantly to beach erosion.*" The General Plan Update and associated environmental documentation should address sea level rise as a component of the wave run-up and beach erosion hazard analysis.

END OF TEXT

Downing, Clay

From: Margot Davis <wally97@hotmail.com>
Sent: Friday, February 15, 2019 2:17 PM
To: Curtis, Susan
Subject: General plan Ventura county

The general plan must take into account the current climate emergency in all aspects. This is especially important regarding the extraction of fossil fuel's currently existing in the county. No more wells or infrastructure should be permitted starting today. Existing permits should be reviewed and discontinued whenever possible. The county needs to be addressing the climate emergency now today.

Sent from my iPhone

FEB 15 2019

GAVIN NEWSOM
GOVERNOR

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

MARK S. GHILARDUCCI
DIRECTOR

February 7, 2019

Ms. Susan Curtis
Ventura County
800 South Victoria Ave., L #1740
Ventura, CA 93009

RE: Notice of Preparation for the Ventura County 2040 General Plan Update Draft Environmental Impact Report, SCH No. 2019011026

Dear Ms. Curtis,

Thank you for the opportunity to comment on the Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the Ventura County (County) 2040 General Plan Update Draft Environmental Impact Report, SCH No. 2019011026. Since the California Governor's Office of Emergency Services (Cal OES) provides community support for disaster response and recovery, our review and comment focuses on how the County 2040 General Plan Update project may address related topics (hazards, safety, wildfire, flood, et al).

Cal OES is pleased to note the County elected to use the most current California Environmental Quality Act (CEQA) Environmental Checklist Form, which includes the topics of Wildfire and Energy. Also, that wildfire hazards are addressed in the September 2015 Ventura County Multi-Hazard Plan for those portions of the County and eight of its cities designated by the California Department of Forestry and Fire Protection as "State Responsibility Area (SRA)" and "Very High Fire Hazard Severity Zones (VHFHSZ)," among other hazards.

It appears the 2015 Ventura County Multi-Hazard Plan may need to be updated by 2020 within the timeframe the County 2040 General Plan Update DEIR will be prepared. In light of the influence hazard mitigation planning may have in the County's 2040 General Plan development, it is Cal OES' recommendation the documents be prepared in parallel between 2019 and 2020. A table in the DEIR (or general plan safety element), which identifies these specific hazard mitigation issues and where they are addressed in the general plan may be helpful and a worthwhile effort to demonstrate compliance with state planning law requirements and the Disaster Mitigation Act of 2000.

Cal OES notes state planning law includes a requirement for consultations with state agencies in regard to information related to hazards. As such, Cal OES is happy to share all available information at its disposal to facilitate the county's ability to comply with state planning and environmental laws.

If you have any questions about these comments, please contact me at (916) 823-1945 or patricia.nelson@caloes.ca.gov.

Sincerely,

Patricia Nelson
Environmental Officer

cc: State Clearinghouse

Downing, Clay

From: Bob Poole <bpoole@wspa.org>
Sent: Sunday, February 17, 2019 8:02 AM
To: Curtis, Susan
Subject: WSPA Comment Letter Ventura County GP EIR Scoping draft - 2 15 19 Final
Attachments: WSPA Comment Letter Ventura County GP EIR Scoping 2 15 19 Final.pdf

Susan,

Please accept the attached WSPA comment letter on behalf of our members as further reinforcement of our concerns and requests of what should be included in the County's CEQA analysis related to the VC 2040 General Plan Update process currently underway.

Thank you,

Bob

Bob Poole
Director, Production, State and Coastal Issues

1415 L Street, Suite 900 Sacramento, CA 95814
C 805.833.9760
P 916.325.3085
bpoole@wspa.org

Bob Poole
Director, Production, State and Coastal Issues

February 15, 2019

Ventura County Resource Management Agency,
Planning Division
Attn: Susan Curtis, Manager, via email: susan.curtis@ventura.org
General Plan Update Section
800 S. Victoria Ave., L#1740
Ventura, CA 93009-1740

Re: WSPA Comments on Ventura County General Plan Environmental Impact Report Scope

Dear Ms. Curtis,

The Western States Petroleum Association (WSPA) appreciates this opportunity to provide additional feedback on the Ventura County General Plan Alternatives document. WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and four other western states.

As the General Plan begins the CEQA process and scopes the Environmental Impact Report (EIR), we would like the EIR to consider studying and fully analyzing the effects of importing oil and gas versus producing it locally in Ventura County.

WSPA believes that our people, our planet, our prosperity and our progress towards a sustainable energy future are all best served by inclusive dialogue. While we are going to have topics we disagree on, including this proposed resolution, we all share the same future.

We can all agree that our shared goal is to create the most sustainable energy future not only for Ventura County but for the country as a whole. The real question is how elected officials can develop policies that will help us get there.

California uses nearly two million barrels of oil each day and only produces around 30 percent of that. The other 70 percent must be imported from out of state, mostly coming in overseas by tanker ship. Continuing to rely on imports increases environmental impacts and our carbon footprint. As the alternative report is developed, please study the environmental impacts of importing oil and gas versus local production. Each barrel not produced in Ventura County is another barrel that California imports from overseas, which we believe is an important consideration that should be analyzed in the EIR.

Ventura County oil and gas producers abide by some of the most stringent regulations in the world. The California Environmental Quality Act (CEQA) doesn't exist outside of California. When we rely heavily on foreign imports for our oil and gas needs, we're supporting countries that don't have the same stringent regulatory framework or uphold our values for the environment. Allowing for more local energy

production will allow for it to be produced safely and under responsible regulations. As such, the global impacts of foreign oil and gas production should be reflected in the alternatives report.

Even with a push toward a diversified energy mix, oil and gas consumption will still be a part of the mix well beyond the life of this plan. According to the US Energy Information Agency, by 2040, fossil fuels will still account for approximately 80% of energy use in the United States. Given this outlook, we will still need these sources to power our economy. The County must plan for the need for oil and gas well into the future, and that includes local production.

WSPA believes that Ventura County's public policy goal should be to supply affordable, ample, and secure domestically-produced energy under California's stringent environmental and safety standards to increase not only Ventura County residents', but also Californians', well-being and access to opportunity. Our industry is fully committed to supplying the energy needs of today and tomorrow locally, thereby reducing imports and contributing to a long-term future of environmental sustainability and support for jobs and the economy.

Instead of supporting efforts with potentially unforeseen, negative consequences on those who are most vulnerable to the impacts of higher energy costs and least able to afford them, doesn't it make sense to recognize the best thing we can do to benefit our environment? We believe that to ***have the greatest impact on reducing the effects of climate change*** is to produce the energy we need for the foreseeable future (that would otherwise be imported from overseas) here in California under the most stringent environmental standards anywhere in the world.

WSPA is committed to a truly sustainable energy future and empowering the future energy mix, partnering with state, local and community leaders in civil public discourse and calling out potentially damaging policy changes such as the ones being considered here that threaten equality, economy, environment and energy.

WSPA appreciates this opportunity to provide our initial input regarding the Ventura County General Plan during the EIR Scoping Period. We believe that addressing the above comments will ensure we have the most accurate information going forward. If you have any questions, please contact me at (805) 305-5086 or via e-mail at bpoole@wspa.org.

Respectfully,

Downing, Clay

From: Tom Orsini <orsini@frontier.net>
Sent: Sunday, February 17, 2019 1:03 PM
To: Curtis, Susan
Cc: Bennett, Steve
Subject: Ventura County Notice of Preparation of Draft EIR
Attachments: Final Letter CEQA Scoping.docx

Hi Susan,

Attached are my comments regarding the General Plan Update EIR and Scoping Process.

Please confirm that you received the document, and let me know if you have any problems opening the file.

Thank you for the opportunity to provide comments. Tom Orsini, Ojai Valley Resident

Public Comments: via e-mail on 2/18/2019 regarding the 1/14/2019 Ventura County Notice of Preparation of a Draft Environmental Impact Report (EIR).

Submitted by: Tom Orsini, Ojai Valley Resident and Interested Party

Area Plan Updates:

The Notice of Preparation (NOP) Project Description states that the General Plan (GP) Update will include, if directed by the Board of Supervisors (Board), the deletion or modification of Area Plan goals, policies or programs that repeat the same or similar information from the General Plan and outdated information.

Area Plan Updates were discussed in detail during three GP Update Scoping Sessions held in 2015. Specifically, the September 22, 2015 Staff Scoping Presentation included a final review by the Board of proposed options. At this meeting, the Board gave direction to the Staff that the GP Update process would only include Area Plan changes for consistency and redundancy, and would not include any changes to "area specific polices". Additionally, the Staff's August 4, 2015 presentation concluded that a more comprehensive update to the Area Plans would require "extensive public outreach, visioning, reconsideration of the goals, policies, and programs, and additional California Environmental Quality Act (CEQA) compliance."

The above Board direction has been communicated to the public in numerous public meetings and written documents since 2015. During the summer of 2016, the County conducted extensive community outreach to insure adequate public input, and to meet the statutory requirement of public involvement. As a follow-up, the County issued a newsletter in March 2017 that included answers to "frequently asked questions". In response to questions regarding Area Plans, the newsletter provided the following information to the public regarding Area Plan updates:

"However, Area Plans also include unique goals, policies, and programs that are specific to a given geographic area within the county. As part of this project, all Area Plans will be evaluated for consistency with the updated General Plan, but the project will not include a concurrent revision of the Area Plans."

The above public disclosure has informed the public's understanding of the GP update process and the scope of the expected Area Plan revisions and Program EIR.

Program EIR Scoping and Alternatives: There is substantial evidence in both environmental reports and legal proceedings that geographic areas covered by Area Plans have unique environmental conditions, and that "area specific policies" currently included in the Area Plans have provided critical protection for the residents of these geographic areas from disproportionate levels of environmental degradation. The use of a Program EIR that includes Area Plan Updates does not change the CEQA requirement that each Area Plan Update is a Project subject to

CEQA and must include an analysis that evaluates the significance of the possible environmental effects (direct and indirect) of the Project on the unique environmental conditions that exist within the boundaries of the Area Plan. Substantive changes to "area specific policies" would require a separate EIR to adequately inform decision-makers and the public of potentially significant environmental impacts of proposed changes, and possible ways to reduce or avoid any significant environmental effects. Accordingly, as an alternative to Staff's recommendations, the Board of Supervisors should consider limiting Area Plan changes to the Board's original scoping direction, and not include any changes to "area specific policies". This alternative would better meet the County's commitment to the Vision Statement and Guiding Principles, and meet the CEQA requirement that an EIR must take into consideration unique environmental settings. Any proposed changes to "area specific polices" should be deferred until a comprehensive update of the Area Plans can be completed and EIR prepared.

Regional Housing Allocation and Land Use Designations:

The NOP Project Description states that the General Plan Update will include new General Plan Land Use Designations. These new designations will include Residential Planned Development (20 du/ac) and Mixed Use (20 du/ac). Under recently passed State Laws and Regulations, proposed affordable housing development projects with a 20 du/ac density or greater may qualify for CEQA streamlining, or exemption, and only require a ministerial approval. Additionally, the State adopted Housing Accountability Act may prohibit the County from lowering the density or denying a project if the project complies with General Plan Land Use Designations and related Zoning Ordinances.

The NOP Project Description also proposes a preliminary affordable housing analysis that would evaluate and identify locations to meet the potential requirements of the next 8-year Housing Element cycle, which runs from 2021-2029. As proposed in Chapter 8 of the Alternatives Report, the Staff's analysis would assume that the County's Regional Housing Needs Assessment (RHNA) allocation would be similar to the RHNA allocation reflected in the last 2013 to 2021 RHNA cycle, which shows the need to identify land for 1,015 new dwelling units. By comparison, the approved household forecast to be included in the new 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) shows a significantly lower increase of 684 households during the 10-year period 2020-2030 (interpolated 8-year amount of 547). According to recently published RHNA subcommittee reports, the 2020-2030 forecast will be the primary determinant of the housing needs assessment for the 2021-2029 RHNA cycle period.

For the first time, the 2020 RTP/SCS schedule will be fully coordinated with the RHNA process. The RHNA subcommittee approved the SCAG forecast in February, and consultation with California Department of Housing and Community Development (HCD) will begin in the spring of 2019. SCAG expects to receive the initial HCD housing needs allocation in the fall of 2019, and the SCAG 2020

RTP/SCS will be developed during 2019 and completed by April 2020. Accordingly, the SCAG local distribution of the HCD housing needs allocation will be consistent with the 2020 RTP/SCS population forecast and distribution scenario analysis.

Considering the fact that initial draft of the 2020 RTP/SCS is scheduled for release in April 2020, it is very likely that the Ventura County Planning Staff has already performed a preliminary growth distribution analysis that incorporates the new 2020 RTP/SCS SCAG population forecast. This analysis will have identified preferred growth scenarios in all of the unincorporated areas of Ventura County by location, and amount, based on recently issued CEQA guidelines for evaluating the significance of the environmental effect of proposed land use projects.

Previously, the General Plan Update Alternatives Report concluded that the County had adequate development capacity to meet forecasted housing needs, so presumably the objective of the above described affordable housing assessment is to identify and designate preferred Land Use Map locations that will subsequently qualify for project level CEQA streamlining. Based upon recently passed State laws, the transportation impact of proposed designated growth locations must be analyzed based on Vehicle Miles Traveled (VMT). Generally, the stated purpose of these recently passed environmental laws is to allow project level CEQA streamlining as a trade-off for achieving the State's greenhouse gas reduction goals through program level analysis, and implementation of regional population growth distribution strategies that reduce VMT. The successful achievement of the State's long-term greenhouse gas and air quality management goals is fully dependent upon local city and county governments implementing these RTP/SCS strategies.

Program EIR Scoping and Alternatives: The Program EIR should include a full environmental assessment of the growth inducing and population re-distribution impact of any new Land Use Map sites that are identified as Residential Planned Development (20 du/ac) or Mixed Use (20 du/ac). The assessment should include a comparison of the Project total VMT and VMT per capita to the baseline scenarios that will be included in the 2020 RTP/SCS, and consider any unique environmental conditions that are currently identified in the Area Plans. Although the County is not required to adopt the 2020 RTP/SCS preferred growth scenario, the State's GP Guidelines state that the GP Program EIR "should discuss any inconsistencies between the proposed General Plan and the Regional Transportation Plan including any applicable Sustainable Communities Strategy".

The General Plan Update Program EIR must identify mitigation measures and alternatives to avoid or minimize potential impacts, to the extent feasible. Growth scenarios based on the 2020 RTP/SCS, which includes updated population forecasts, would clearly be feasible alternatives that must be considered. Accordingly, as an alternative to the proposed use of the 2013 to 2021 Housing Needs Assessment, the Board of Supervisors should consider adopting the SCAG 2020 RTP/SCS base case scenario analysis, and new VMT metrics, as the baseline for evaluating any new Land Use Map sites in the 2040 General Plan Update and CEQA Program EIR.

Downing, Clay

From: Anita Au <au@scag.ca.gov>
Sent: Tuesday, February 19, 2019 7:58 AM
To: Curtis, Susan
Cc: Ping Chang
Subject: SCAG Comments on NOP of a DEIR for the Ventura County 2040 General Plan Update [SCAG NO. IGR9812]
Attachments: IGR9812 NOP Ventura County 2040 General Plan Update.pdf

Good morning Susan,

Please find attached SCAG Comments on NOP of a DEIR for the Ventura County 2040 General Plan Update [SCAG NO. IGR9812].

Please contact me at (213) 236-1874 or au@scag.ca.gov if you have any questions or difficulties with the attached file.

Thank you!

Anita Au
Associate Regional Planner
Tel: (213) 236-1874
au@scag.ca.gov

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
900 Wilshire Blvd., Ste. 1700, Los Angeles, CA 90017

SCAG
INNOVATING FOR A BETTER TOMORROW

SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017
T: (213) 236-1800
www.scag.ca.gov

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February 19, 2019

Ms. Susan Curtis, Manager, General Plan Update Section
Ventura County Resource Management Agency, Planning Division
800 S. Victoria Ave., L #1740
Ventura, California 93009-1740
Fax: (805) 654-2509
E-mail: susan.curtis@ventura.org

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update [SCAG NO. IGR9812]

Dear Ms. Curtis,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS) pursuant to Senate Bill (SB) 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS) goals and align with RTP/SCS policies.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update in Ventura County. The proposed project includes a comprehensive General Plan update with an anticipated adoption in 2020.

When available, please send environmental documentation to *SCAG's Los Angeles office in Los Angeles (900 Wilshire Boulevard, Ste. 1700, Los Angeles, California 90017) or by email to au@scag.ca.gov* providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Anita Au, Associate Regional Planner, at (213) 236-1874 or au@scag.ca.gov. Thank you.

Sincerely,

Ping Chang
Manager, Compliance and Performance Monitoring

[1] Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2016 RTP/SCS for the purpose of determining consistency for CEQA. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a determination of consistency with the 2016 RTP/SCS for CEQA.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE VENTURA COUNTY 2040 GENERAL PLAN UPDATE [SCAG NO. IGR9812]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS. For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the RTP/SCS.

2016 RTP/SCS GOALS

The SCAG Regional Council adopted the 2016 RTP/SCS in April 2016. The 2016 RTP/SCS seeks to improve mobility, promote sustainability, facilitate economic development and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health (see http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx). The goals included in the 2016 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2016 RTP/SCS are the following:

SCAG 2016 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and active transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies**
	**SCAG does not yet have an agreed-upon security performance measure.*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG 2016 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

2016 RTP/SCS STRATEGIES

To achieve the goals of the 2016 RTP/SCS, a wide range of land use and transportation strategies are included in the 2016 RTP/SCS. Technical appendances of the 2016 RTP/SCS provide additional supporting information in detail. To view the 2016 RTP/SCS, please visit: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. The 2016 RTP/SCS builds upon the progress from the 2012 RTP/SCS and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that the SCAG region strives toward a more sustainable region, while the region meets and exceeds in meeting all of applicable statutory requirements pertinent to the 2016 RTP/SCS. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

DEMOGRAPHICS AND GROWTH FORECASTS

Local input plays an important role in developing a reasonable growth forecast for the 2016 RTP/SCS. SCAG used a bottom-up local review and input process and engaged local jurisdictions in establishing the base geographic and socioeconomic projections including population, household and employment. At the time of this letter, the most recently adopted SCAG jurisdictional-level growth forecasts that were developed in accordance with the bottom-up local review and input process consist of the 2020, 2035, and 2040 population, households and employment forecasts. To view them, please visit http://www.scag.ca.gov/Documents/2016GrowthForecastByJurisdiction.pdf. The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts			Adopted County of Ventura Forecasts		
	Year 2020	Year 2035	Year 2040	Year 2020	Year 2035	Year 2040
Population	19,663,000	22,091,000	22,138,800	886,400	945,100	965,400
Households	6,458,000	7,325,000	7,412,300	285,300	305,600	312,300
Employment	8,414,000	9,441,000	9,871,500	374,300	409,600	419,800

MITIGATION MEASURES

SCAG staff recommends that you review the Final Program Environmental Impact Report (Final PEIR) for the 2016 RTP/SCS for guidance, as appropriate. SCAG's Regional Council certified the Final PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on April 7, 2016 (please see: http://scagrtpscs.net/Pages/FINAL2016PEIR.aspx). The Final PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

Downing, Clay

From: Cindy Piester <work4peacenow@gmail.com>
Sent: Saturday, February 16, 2019 2:55 PM
To: Curtis, Susan
Cc: Cindy Piester
Subject: Public Comment on VC EIR

Dear Ms. Curtis,

Thank you for your effort in behalf of the public regarding the 2040 GPU.

I would like to be assured that going forward, **any and all staff dealing with the VC General Plan update for 2040, be required to participate in a thorough training program on the science of Climate Change from a legitimate source such as the NOAA Planet Stewards Education Project. This is in the public interest**.

We, the public are entrusting the future of ourselves, our children and grandchildren into your care at a time when public policy MUST be prepared with a due diligence never before required due to the extreme climate changes that are overtaking not only Ventura County but the globe. It is imperative that all staff involved in this process understand just what is at stake. Business as usual just does not fly.

It is not sufficient that the county take a primarily adaptive response to climate change, but one that mitigates all contributing climate change factors. In particular, one that requires that GHG emissions are greatly reduced and reduced in a way that does not put the burden just on the public. We must get accurate data that takes into account the oil and gas produced here in Ventura County and it's downstream impact. This is in the public interest, which must be considered and prioritized through out the project.

I attended the scoping meeting held recently at the County Government Center. During that meeting it was mentioned by staff that in order to limit GHG emissions, each individual could limit their driving. I agree, but this can not be a burden solely placed on the public. To the extent that this is done by land use and zoning that bring residential areas and the work place in closer proximity that is great. However, there are many other mitigating options to be considered here such as those that require more stringent oversight and regulations of the oil industry, and these were not mentioned in comments by staff.

During that meeting, I heard from you and other staff a repetitive stance on the extent to which you held focus groups and provided opportunity for the public to provide input, although I am wondering what a close look at who showed up and who participated may lead to many other questions.

I also heard many voices from the public that echoed a lack of trust in that the process and bias in influence between members of the public and those whose interests are solidly with oil. This lack of trust does not speak well for the way focus groups, public input into the process, and the handling of advantages that benefit oil interests were conducted or bias built into the process.

For example, one of the comments that really caught my attention during that meeting was that those with vested oil interests were a part of the task force,
while citizen experts were not included. I found this deeply troubling and I hope that this kind of advantage be eliminated from future efforts by staff. Please review all potentialities for bias built into the process and correct them.

Please ensure that public input is actually a reality with data gathered from the public accurately and without prejudice being passed on to our representatives as quickly as possible. This is necessary to protect the public interest and it is not clear to me that this is actually taking place.

As the county goes forward in this process, I request that greater effort be made to address the interests of the public in a manner that insures transparency and trust. When the public asks for the release of documents critical to it's understanding of the process, it is my belief that even if the documents are being used in making plans and even if the documents are in the process of revision themselves, that the public should be given access to them on request. That this is not being done and despite the reasons given, leads to lack of transparency and, inevitably, to mistrust by the public. Please take measures to correct this inadequacy in the process.

I also feel that the though the meeting was well attended, the meeting room could have been set up for better communication. A number of people complained that they were unable to hear what the staff was saying. In public meetings held by the staff towards gathering public input, I formally request that microphones be in place for both the staff and for the public. The public microphone should not be a pass around mike, but rather a stationary one that people walk up to in order to save time. An additional hand held mike should also be available for those with mobility issues.

With climate change moving much more quickly than scientists had expected, it is imperative that the 2040 GPU make allowances for regular updates in policy. These updates must then allow for actual changes to be implemented as quickly as possible. The process going forward must allow for any and all changes that are in the public interest to become immediately actionable.

Thank you,

Cindy Piester
177 Jordan Ave.
Ventura, CA
93001

February 19, 2019

Dear Ventura County Planning Staff and Consultants,

I live in unincorporated Ventura. I lead the local Citizens' Climate Lobby group with 350 members. I am a founding coordinating team member of the 350 Ventura County Climate Hub with 1,000 members. I am Co-Chair of the California Sierra Club Energy Climate Committee. I own and operate a business growing and selling beneficial insects for biologicall based pest management and am Director of a non-profit promoting agroecological approaches to land management. I am speaking for myself, but with the experience and insight of my work in agroecology and the past seven years of intensive learning from respected experts and explaining to the grassroots about the climate problem and solutions.

Fossil fuel industry leaders know that the trade-off for phasing out of oil and gas is the continued health of the overall community and economy. Yet they have spent tens of thousands on propaganda to mislead the public, to elect leaders who do not support a phase-out and to block policies that assure a JUST TRANSITION away from fossil fuels as quickly as possible. We ask that they participate with us in community engagement so that everyone will want to unite to make significant lifestyle, home, business and transportation changes and enjoy the benefits and the greater security from decarbonizing our lives and economy.

For Ventura County to do its part to reverse climate change means nothing short of helping keep the global temperature from rising 1.5 degrees C by 2030. The federal and state mandates will only become more challenging and urgent as 2030 approaches. It only makes sense that YOU the planners educate our decision-makers to accept the latest science and search for mitigation measures for a climate emergency mobilization to do our part county-wide, not just in the unincorporated area, to stabilize the climate.

We don't have 11 more years to reverse runaway climate catastrophe. We really only have whatever we plan to accomplish in the next few years starting with our joining the Clean Power Alliance and setting the default at 100% renewable energy and everything that implies as to our priorities to decarbonize our electricity

This critical situation requires that you look beyond the last Governor's Executive Order and the last recommendations of the Air Resources Board and the current recommendations and results of the EIR for SCAG's Connect.SoCal plan It also requires that you anticipate the enactment of HR 763 The Energy Innovation and Carbon Dividend Act that will establish an upstream steadily rising price on carbon to

exceed $110 per ton of CO2e in the coming decade. These are unusual times for which no planner has been trained or gained experience. There is no respectable alternative to failure to achieve daunting goals. There is no life within a policy that failed to cover all of the implications.

You cannot say you have done proper research in the Background Report without stating that there is growing political will for a tax on carbon and other measures at all levels. It has to be considered irresponsible to fail to note that the odds are that fossil fuels will be phased out well before 2040. You enjoy regular visits from oil industry lobbyists who insist otherwise. We strongly advise you to put your trust in scientists and in the compelling moral necessity to stop oil and gas extraction as expeditiously as possible. Our Climate Action Plan must anticipate the economic transition away from fossil fuels not just to protect the local economy from the on-going harm from oil spills and gas explosions, and leaked methane, etc. It must anticipate the bottom falling out of any economy that depends on fossil fuels. That is, of course, not mentioned in the newly adopted Ventura County Economic Vitality Plan where the word climate is mentioned once in passing without reference to the crisis. It is time for the county leadership be honest with the people about the threats to economic stability from continued reliance on fossil fuels.

Tonight the Oxnard City Council will adopt a resolution "opposing new or expansion of existing offshore oil and gas leases off the coast of Ventura County and related onshore development, fracking, and related techniques; and *supporting a phase-out of oil and gas extraction and a framework to develop new responsible renewable energy projects."* If the largest city in the county is explicitly envisioning such a future, the county's General Plan can do no less. That means just for example no more ministerial renewal of antiquated drilling permits without an EIR that looks at cumulative effects to greenhouse gas emissions. The EIR can only conclude that there is no way to mitigate those effects.

I applaud the January meeting of the Agriculture Policy Advisory Committee that finally has addressed the necessity to draw carbon dioxide down out of the atmosphere and into the soil and vegetation. The background report must reflect the science and the interim goals of the ARB 2030 Implementation Plan for Natural and Working Lands. The ARB goals and future plans for increasing the ambitious and scope of those plans was not mentioned at the meeting. Misinformation was shared with the Advisory Committee showing the need for more and broader honest dialogue about the potential for farmers to sequester carbon in different cropping systems. The question is not whether they can sequester or at least stabilize soil carbon; the question should be what they think

society should pay them to farm carbon as well as food and flowers for the future of life on earth.

There is a major role for management of natural resources and farm land to sequester carbon. Agriculture spokespeople point to the mountains as the place to sequester carbon. It is true that there must be policy to enlarge and increase the health of urban forests to the greatest extent possible. There must be declarations to the state and federal forest managers that It must be in county policy that natural disturbance processes on forests are ideally suited to sequestering carbon AND minimizing fire fuel. It should be included in the Background Report from the best available science indicating that the best way to maximize forest carbon storage is to maximize protection of forests from logging, including logging conducted under the rubric of "thinning", which leads to a large net reduction in forest carbon storage and net increase in carbon emissions. We will not increase forest carbon storage by pulling more carbon out of the forests through logging. The County's CAP must include an inventory of the carbon sinks in all forest lands and use of GIS mapping software, the setting of goals to increase sinks and the tracking of soil carbon in the forests within the county, as well as the wetlands, seagrass beds, riparian areas, chaparral, grasslands, AND farmland.

Many parkland and landscaping as well as farm management practices unnecessarily deplete soil carbon, pollute air and surface and groundwater, and expose insects, fish, animals and humans to toxic chemicals. Some believe they are contributing to epidemic chronic diseases and infertility. It is easy to mitigate. Ban all degrading and polluting practices in land and farm management. The conclusion of the EIR of the Agriculture Chapter of the last VC General Plan has a shocking conclusion that these practices cannot be mitigated. I assure you this is a new day and a very different EIR.

Mention must be made of the relationship between use of toxic pesticides and herbicides and GHG emissions. Roundup damages soil microbes that are the means for soil carbon sequestration. Aerosols from spraying causes illnesses that cause more car trips to get medical help. Aerosols and herbicide –laden dust prevent some people from walking in their own neighborhoods or using bike trails. There are people in Camarillo Heights who could walk to the store, but they drive to protect themselves from exposure to agricultural chemicals and many people will not walk their dogs because of the widespread use of toxic herbicides beside sidewalks.

There are so many measures that could be listed for which an EIR can be conducted. The Ascent Environmental team knows them. I am sure they are capable of guiding staff to present a strong plan responsive to a MUCH more relevant, meaningful and comprehensive Background Report weighed equally among all possible measures to

reduce emissions and the necessary metrics and possible measures to draw down CO2 though biological carbon sequestration. They are capable of a tight EIR that does not allow far-away offsets or avoidance of the true requirements of SB 743 or the full accounting of Phase 3 Cross-Boundary Transportation Emissions applying to incoming and outgoing goods at the Port of Hueneme relative to ports in Japan, China and Australia. There must at least be credible estimates of those emissions in the inventory. The consultants know these issues because they know how the courts have ruled against Sonoma and San Diego Counties when those counties repeatedly refused to hold to explicit, relevant, fair and enforceable policies demanded by climate activists to cover their county's fair share of emissions.

Take note that Ascent knows what is required to be consistent with the letter and the spirit of SB 743. I suggest avoiding drawn-out disputes by welcoming their leadership in order to help you be leaders rather than foot-draggers on this policy. The full requirement is described in the Notice of Preparation for EIR of SCAG's Connect SoCal Plan that is currently out for comment. I advise you to anticipate that Ventura County will finally be required to enforce SB 743. While not popular in the areas around Thousand Oaks and Ventura and possibly other spheres of influence, you must present this to the decision-makers as an opportunity to demonstrate how quality of life can be enhanced by project designs that meet the requirements of SB 743, because VMT has to decrease by a lot.

The projected growth in the unincorporated area and the goals for provision of affordable housing are low compared to what the county is expecting the cities to take up. However, the county's General Plan can aspire to make provision as needed for the prompt development of Demonstration Projects compliant with SB 743 and maximizing affordable housing units. Designs can provide benefits to residents similar to those provided for adult living centers where people also do not need cars and enjoy reliable shared or public transportation to the places they want to go. A model development can be designed in each of the five districts that is tied to a community microgrid and a short, local public transportation grid that may be smaller electric vans and shared vehicles and bicycles and flexible zoning: mixed-use, live-work, live-shop, live-garden, work-garden. No zoning in such demonstration zones should be required to be single occupancy following the example of the city of Minneapolis There must be a fee for parking spaces including for all residents, employees, clients and shoppers.

Why? Probably 55% of the county's emissions are from transportation, mostly from light duty vehicles. We cannot decarbonize by 2030 just by a plan to transition to EV's with decarbonization of all electricity. Energy experts are saying that cannot now happen that fast. That is why enforcement of SB 743 is essential. Average per capita driving must

decrease by a great deal, regardless of what people drive. Some say people in California have to cut driving in LDV's by 32% by 2030 to make decarbonization of the transportation system feasible, others say less, but nobody says less than 20%. ***This transparent calculation is a required piece of the EIR.*** I suggest that there is no better way to achieve the likely required goal for reduction of VMT than a steady plan to unbundle parking from residences, workplaces, shopping, services and recreation no matter how loud and angry some people will complain. If this type of strong policy is adopted and excellent designers are sought for Demonstration Projects, the whiners and criers will eventually see that they were wrong.

There is one impact from the enforcement and successful demonstration of the benefits of SB 743 that must be paramount. That is the requirement that all people and animals and very high-value critical tools and materials for people's livelihoods must be capable of evacuation in case of a wildfire or flood, debris flow or tsunami. The impact cannot be mitigated offsite, but it can be overcome with ingenuity on a site by site basis. There have to be multiple means for everyone to escape to safe places, not with a carload of belongings, but all people have to be able to relocate at once from a vulnerable high-density project. Safe places for evacuation must be equipped with a self-contained microgrid with enough battery storage for minimum two weeks of cloudy days.

I repeat, there are many more policies on which impacts can be discussed. The principles are presented here. It will be easier to have a conversation as we have been saying for two years when we can see the calculations of a sound inventory and a plan.

Thank you for the opportunity of sharing some of my thoughts.

Jan Dietrick
President, Rincon-Vitova Insectaries, Inc.
108 Orchard Dr
Ventura, CA 93001
805-746-5365

"Citrus Capital of the World" City of Santa Paula
970 Ventura Street ● Santa Paula, California ● Mailing Address: P.O. Box 569 ● 93061 ● (805) 525-4478 ● www.ci.santa-paula.ca.us

February 19, 2019

Ventura County Resource Management Agency, Planning Division
Attn: Susan Curtis, Manager, General Plan Update Section
800 S. Victoria Ave, L #1740
Ventura, CA 93009-1740

Re: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Ventura County 2040 General Plan Update (Case No. PL 17-0141)

Dear Ms. Curtis,

The City of Santa Paula (City) appreciates the opportunity to assist Ventura County (County) identify the significant environmental issues, mitigation measures and range of reasonable alternatives that should be addressed in the DEIR for the 2040 General Plan update. Because no Initial Study was prepared (per CEQA Section 15063.a), the scope of our review reflects information conveyed in the County's NOP and documents incorporated therein by reference. Below, *City Comments* follow each of these elements focusing on key points emphasis and/or issues to consider during the course of the update.

I. **Alternatives Report**. The County Board of Supervisors determined through their alternatives process that the existing allowed land uses provide adequate land to accommodate projected population growth in the unincorporated areas of the County through the year 2040 and, as such, the 2040 General Plan Update is not expected to identify any increases in overall development relative to the existing General Plan, unless changes are required in order to meet future Regional Housing Needs Assessment (RHNA) numbers to be released in Fall 2019.
City Comments: The City looks forward to reviewing the RHNA numbers when they are released, understanding that the County will incorporate findings into the Housing Element to be updated separately after the County's 2040 General Plan Update's adoption.

II. **Assets, Issues and Opportunities Summary Report**. Issues defined and reported in the March 2017 Assets, Issues, and Opportunities Summary Report.
City Comments: The City is supportive of the priority opportunities identified in the report and would like to underscore the importance of the following components: Investments in Transit Infrastructure such as high-capacity transit and improved connectivity and safety for pedestrians and bicyclists; the value of job creation and economic growth through preservation of open spaces and agricultural development and Guidelines for Orderly Development directing development to cities; and, the importance of infill housing to support projected employment growth.

III. **2040 County General Plan Policy Document**. Reorganized chapters and new content to address state planning requirements and policy topics identified by the County Board of Supervisors, including the state's mandatory elements – Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety, plus the new requirements – Air Quality and Environmental Justice, and three new optional elements – Water, Agriculture, and Economic Development.
City Comments: Generally, the City seeks to achieve policy and standards consistency particularly with respect to transportation issues (vehicle miles traveled and analyzing transportation systems more holistically such as Complete Streets), and wildfire hazards. Maintaining consistency with the Guidelines for Orderly Development, greenbelt agreements, and the Save Open Space & Agricultural Resources (SOAR) measures is an important objective.

IV. **2040 County General Plan Land Use Designations**. The Proposed 2040 General Plan Update Land Use Designations (resulting in 13 new designations) would refine the Existing Community and Urban land use designations of the existing General Plan to more clearly distinguish among land uses allowed within each designation and set forth maximum development density and intensity standards.
City Comments: The City is supportive of the proposed 2040 General Plan Update land use designations remaining consistent with land uses and densities/intensities allowed under the current (2018) zoning designations, and incorporating the smallest minimum lot size of the compatible zoning designation for designations that do not have a comparable minimum. Additionally, the City supports that the proposed 2040 General Plan Update would not make changes to the following existing land use designations:
- *Agricultural, Open Space, or Rural land use designations located outside of Existing Community and Urban designated area (consistent with the SOAR initiative);*
- *State and Federal Facility Designation since they apply to parcels owned by the state or federal government and are outside of the County's land use jurisdiction; and*
- *Urban Reserve Overlay, since it applies to all unincorporated areas within city spheres of influence, which are the probable future growth areas of the incorporated cities.*

V. **2040 General Plan Background Report**. Given that no Initial Study will be prepared (per CEQA Section 15063.a); the City understands that the EIR will analyze the full range of environmental topics as informed by the County's General Plan Background Report (January 2018). The City made valuable use of this information during the current update of the 2040 Santa Paula General Plan (anticipated adoption – Q4 2019). Please refer to the following *City Comments* related to individual environmental topics.
1. **Aesthetics**. *City Comments: Within the City, SR 150 and the portion of SR 126 east of SR 150 are identified by Caltrans as eligible scenic highways. Consistent with state law, both City and County should continue to maintain and implement policies and programs that provide for the long-term conservation of open space and scenic areas within County jurisdiction.*
2. **Agriculture and Natural Resources**. *City Comments: Please note that the City's long-term vision is to emphasize its unique physical disposition at the foothills of the Santa Paula Mountains abutting the Santa Clara River by maintaining the citrus and avocado orchards and fields of row crops bordering the city, as well as the creeks and barrancas trending through the urban lands to the valley bottom. Views of these features are available from many locations throughout the city, and they should be maintained for the enjoyment of current and future generations. As such, the City supports County-wide conservation of agriculture, open space and sensitive natural habitat lands. Be reminded that the Save Open Space and Agricultural Resources (SOAR) initiative was extended to 2050.*

3. **Air Quality and Greenhouse Gas Emissions**. *City Comments: Please note that the City embraces the Livable Corridors strategy which combines three different components into a single planning concept to model VMT and greenhouse gas emission reduction benefits: (1) County Transportation Commissions' identified transit corridors; (2) increased investments in Complete Streets to encourage walking/biking; and, (3) mixed-use, transit supportive activity centers. Also, please note that the City's Land Use Plan and growth assumptions described the updated Land Use Element are consistent with the 2016-2040 Regional Transportation Plan and the Sustainable Communities Strategy.*
4. **Health and Well-Being**. *City Comments: The City encourages the County to continue to assess and develop policies and programs to resolve conditions in communities with a high Health Disadvantage Index (HDI). Strategies to consider that support economic growth can be focused on these areas: support small business and entrepreneurship; promote tourism (including Agritourism) and recreational opportunities; enhance fiscal sustainability; downtown revitalization; enhancing economic competitiveness.*
5. **Cultural and Historic Resources**. *City Comments: The City 2040 General Plan Update includes policies to complete a comprehensive historic preservation study and formally recognize additional historic districts: Downtown Commercial; Downtown Residential; South 7th St; McKevitt Heights; Park St; The Oaks; and, Richmond Tract.*
6. **Energy**. *City Comments: Electricity is supplied to customers in the City by Southern California Edison (SCE), which obtains its power from a variety of sources. There are no electrical generating facilities within the City. The City encourages the County to take a leadership role in coordinating energy utilities and local jurisdictions to develop policy and programs to economize energy use and further develop renewable energy sources.*
7. **Geology/Soils**. *City Comments: Earthquake ground shaking potential in the City is classified as violent or extreme. The City is compliant with all relevant Federal and State laws having developed many General Plan policies and Municipal Code regulations intended to mitigate risks to life and property. The City encourages the County include policy and programs to ensure that projects are evaluated to assess potential geologic hazards, and mitigation is required when necessary to reduce risks in conformance with current requirements.*
8. **Hazards and Safety**. *City Comments: **Floods**. The City works with the Ventura County Watershed Protection District (VCWPD) to maintain compliance with the National Flood Insurance Program through permit review of structures and evaluation of site plans for development in flood plains. The City serves as floodplain manager within the sphere of influence. The network of storm drains that conveys surface water from urban areas to the major channels is the responsibility of the City's Public Works Department and the City's Storm Drain Master Plan evaluates existing drainage systems and identifies proposed facilities needed to address deficiencies. The City's Capital Improvement Program prioritizes and identifies sources of funding for storm drain improvements as recommended by the Storm Drain Master Plan. The City underscores the importance of County General Plan policies and programs requiring inter-agency coordination (City, County, VCWPD, Army Corps of Engineers) and adequate maintenance for dams northeast of Santa Paula which have the potential to result in significant inundation in the City or surrounding area: Lake Pyramid Dam, Lake Castaic Dam, Bouquet Canyon Dam, and Santa Felicia Dam (Lake Piru). **Airport**. As the County is aware, Santa Paula Airport is a privately-owned, public use airport located one mile east of the Santa Paula central business district, south of SR-126. The 24.5-acre airport is owned by the Santa Paula Airport Association, Ltd. and is operated by the owners/stockholders. Santa Paula Airport is classified in the National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport. Please be aware that air safety zones applicable to the airport are designated in the 2000 CLUP and include the Runway Protection Zone (formerly called the Inner Safety*

Zone); the Outer Safety Zone; and the Traffic Pattern Zone. ***Materials****. The City reminds the County that the City coordinates with the California Environmental Protection Agency (CalEPA) who maintains the California Hazardous Waste and Substances List (also known as the "Cortese List"). Please be aware that as of April 2017, approximately 220 regulated facilities in Santa Paula were on the County's CUPA list, as well as five facilities that collect and/or transfer hazardous waste. City 2040 General Plan Update policy is in place to continue a cooperative working relationship with County DEHS to ensure that existing facilities that use, store, transport or dispose of hazardous materials comply with existing regulations.*

9. **Hydrology/Water Resources**. *City Comments: The Santa Paula Groundwater Basin is the City's sole source of potable water supply. The allocation of the groundwater in the Santa Paula Groundwater Basin is between the City of Ventura and the Santa Paula Basin Pumpers Association (SPBPA), which is a consortium of water users in the Santa Paula area, including the City of Santa Paula and farming interests. The City's current allocation is about 5,560 acre-foot/year, and the City is operating near this limit. Any planned development, including the Ventura County General Plan, within the City of Santa Paula water service area shall address the water demands beyond what the City can supply. Both City and County should continue to minimize impacts from existing uses and development activities on surface waters and aquifer recharge areas, and enhance water quality in stream channels and aquifer recharge areas by reducing existing sources of water pollution and minimizing water pollutants from new development. The City is committed to partnering with the County in seeking funding sources for programs to improve storm water quality and continue partnerships with other agencies such as the Ventura County Waters.*
10. **Land Use/Planning**. *City Comments: Please note that the Santa Paula 2040 General Plan Update is estimated to be adopted in Q4 2019. With respect to policy continuity, the City offers the following advisement as to County land use element updates proximate to City limits:*
    - *The City requests the County conform with the Guidelines for Orderly Development Guidelines by adequately assessing demand for delivery of the full range of municipal services to all parcels within the Santa Paula Planning Area.*
    - *53.1 acres of the West Area 2 Expansion Area are to be annexed to the City of Santa Paula per City Council action expected February 20, 2019.*
    - *The City will retain Adams and Fagan Canyons as Expansion Areas in our 2040 General Plan Update.*
    - *The City's Sphere of Influence (SOI), the most recent update for the Santa Paula SOI was adopted by LAFCO on February 21, 2018 which removed Adams and Fagan Canyons from the City's SOI. The City's CURB line will remain unchanged.*
    - *The City highly values the Ventura-Santa Paula and Santa Paula-Fillmore Greenbelts and will seek to maintain those agreements.*
11. **Mineral Resources**. *City Comments: Though there are no oil refineries in the County, the oil industry will continue to play an important role in the local economy. The City will continue to ensure proper management of mineral resource lands in conformance with State law and advise the County maintain abutting land use compatibility strategies in place.*
12. **Noise**. *City Comments:* ***Airport****. The City acknowledges that noise contour calculations currently included in the County's General Plan have been modeled through 2020. Therefore, the City expects the noise contour calculations to be updated. Please note that the City's 2040 General Plan update includes policies and programs to enhance the Santa Paula Airport and maintain land use designations that support the operation of the airport and enhancement of airport facilities and services in conformance with Ventura County Airport Comprehensive Land Use Plan. Additionally, please note that the City works cooperatively with Santa Paula Airport officials to resolve operational noise concerns, including those*

resulting from aerobatics and air shows. ***Rail****. The City requests the County encourage railroad operators and the Ventura County Transportation Commission to properly maintain lines and establish operational restrictions during the early morning and late evening hours and/or install noise mitigation features to reduce impacts in residential neighborhoods and other noise sensitive areas.* ***Agriculture Operations****. The City requests the County work with farmers in and around the City to address any identified noise problems relating to the use of farm equipment and farm machinery on County streets.*

13. **Public Facilities, Services and Infrastructure**. *City Comments:* ***Solid Waste, Recycling, Composting****. Santa Paula is served by two active solid waste disposal/landfill sites and one recycling and transfer station: Toland Road Landfill, estimated to reach capacity in approximately 2028; Chiquita Canyon Landfill, which as of 2017 had reached its capacity of 63.9 million cubic yards, and an application for landfill expansion is currently being processed by Los Angeles County. The City encourages the County to take a leadership role in developing a coordinated approach to reducing solid waste and encouraging increased recycling and composting programs.* ***Police Protection****. The City's Police Department has been responsible for the security of City residents and businesses since 1923. The Department provides a broad range of law enforcement services, including administration, patrol, investigations, dispatch, records services, and custody/jail services. The Department also oversees animal control and graffiti removal. The Police Department has a mutual aid agreement with the County which the City remains fundamentally committed to ensuring.* ***Fire****. City Comments: Within the City, fire protection is provided by the Ventura County Fire Protection District while CalFire has primary responsibility in the City's SOI. The City reminds the County that portions of Santa Paula's Expansion Areas (primarily Adams Canyon and Fagan Canyon) are located within Moderate and Very High Fire Hazard State Responsibility Areas, and some areas within the City limits along the northern City boundary are designated Very High Fire Hazard Local Responsibility Areas or Moderate Fire Hazard State Responsibility Areas. Under state law, new essential public facilities, including hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, should be located outside of high fire risk areas. No essential public facilities are, nor should be, located or planned within a high fire hazard zone with the exception of Santa Paula Hospital. The City reminds the County that any proposed development within the fire hazard areas will require effective mitigation to minimize risks. The City requests that VCFPD work cooperatively with the City to ensure that persons and property are protected from fires and provide emergency medical services through the following strategies:*
    - *Locate firefighting facilities and resources where they can effectively serve the community.*
    - *Encourage partnerships and mutual aid agreements between VCFPD and other fire protection organizations.*
    - *Incorporate designs, systems and practices for fire safety, prevention and suppression in new developments.*
    - *Work with VCFPD to ensure that Santa Paula is served with the best available equipment and personnel.*
    - *Development should mitigate undue risks from fires.*
    - *A fire safety and equipment access standard should be appropriately designed and implemented.*
    - *A fire safety plan should be required of all businesses and multi-family occupancies.*
    - *A program for fire safety plans and training should be designed implemented.*

    Emergency Preparedness*. The City encourages the County continue to coordinate with the City, public and private agencies at the Federal, State, County and City levels, regarding preparation, mitigation, response, and recovery efforts. As part of the California Standardized Emergency Management System (SEMS)*

and the National Incident Management System (NIMS), the City has adopted an Emergency Operations Plan (EOP) addressing the City's planned response to extraordinary emergency situations.

14. **Recreation**. *City Comments: **Railroad**. The City views the Railroad Corridor as a tremendous regional recreational asset. Please be reminded that the railroad corridor has been studied by VCTC for the potential to create a recreational trail though the Heritage Valley between the cities of Ventura and Fillmore. In 2000, VCTC adopted the Santa Paula Branch Line Recreation Trail Master Plan and in 2015 prepared the Santa Paula Branch Line Recreational Trail Compatibility Survey. The City encourages the County make every effort to reinforce this vision. **Parks**. City residents have access to nearby county regional parks and open space areas of the Santa Clara Riverbed. Steckel Park is a 200-acre regional park located in the unincorporated area just north of the city. The park offers a variety of recreational activities including picnics, camping, hiking, biking, and wilderness exploring. South Mountain offers passive recreational opportunities including a golf course and hiking trails. Toland Regional Park is a 213-acre passive, natural open space park with restrooms, picnic tables and barbecues. The City requests that General Plan policies and programs ensure that these important regional assets are well maintained.*
15. **Transportation and Mobility**. *City Comments: **Roadway and Freeway Systems**. The City requests analysis of traffic impacts and/or potential traffic improvement measures for all roadways, intersections and freeways that support City mobility including an assessment of physical characteristics, level of service conditions, and collisions. Relevant goals and policies are found at the regional and countywide level from agencies including SCAG and VCTC. The City is highly supportive of the SCAG 2016-2040 RTP/SCS, which provides the regional planning framework for the six-county SCAG region, highlights the following regional goals and policies as they pertain to the roadway environment, thus framing the regional transportation setting:*
    - *RTP/SCS Goal 2 – Maximize mobility and accessibility for all people and goods in the region.*
    - *Goal 3 – Ensure travel safety and reliability for all people and goods in the region.*
    - *Goal 5 – Maximize the productivity of our transportation system.*
    - *Policy 6 – The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single-occupancy vehicle use, by leveraging advanced technologies.*
    - *Policy 7 – The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system, and sustainable outcomes in the long run.*

    Further, the City reminds the County that VCTC identifies the following particular actionable items that will facilitate Plan implementation in the City and neighboring jurisdictions, as they pertain to the roadway environment:
    - *Outcome 1: Status Quo, Action 4 - Reevaluate VCTC's Highway Project Priority List and project funding process to ensure those projects with the greatest value to the County, on needs-based criteria, receive funding.*
    - *Outcome 2: Community Connections, Action 1 – Conduct corridor studies on Ventura County's major transportation routes (US 101, SR 118, SR 126) to determine the best return on investments in improved connectivity.*
    - *Outcome 2: Community Connections, Action 3 - Continue collaborating with local jurisdictions, interest groups, agencies, and transit operators and provide the needed regional planning, funding, and policy support for implementing improved connectivity among all modes, including customer service objectives contained in the Regional Transit Study.*

    The City would like to underscore the importance of all surface streets connecting with the City – Foothill Rd, Santa Paula St, W Telegraph Rd, South Mountain Rd,

Orcutt Rd, N Ojai Rd – particularly with respect to pedestrian and bicycle safety and connectivity. Please note that the City embraces the Livable Corridors strategy seeks to revitalize commercial strips through integrated transportation and land use planning that results in increased economic activity and improved mobility options. ***Transit****. Public transit in Santa Paula is provided by the Ventura County Transportation Commission (VCTC), offering bus services. As Ventura County's transportation commission, VCTC has prepared numerous studies that support Santa Paula's public transit availability, including the 2009 Ventura County Transit Investment Study identifying transit gaps and project priority, and the 2013 Heritage Valley Transit System Study, which focuses on "maintaining current or equivalent levels of public transit service" operating in the Heritage Valley area, of which Santa Paula is a part. The City recognizes that transit relies on the synthesis of goals and policies at all governmental levels for successful implementation and creation of quality inter- and intra-community connectivity. The SCAG 20162040 RTP/SCS highlights the following regional strategies for fostering increased transit connectivity:*

- *Implement and expand transit priority strategies*
- *Implement regional and inter-county fare agreements and media*
- *Implement new BRT and limited-stop bus service*
- *Expand and improve real-time passenger information systems*
- *Implement local circulators*

Please note that the City's current Circulation Element identifies the following goals, objectives, and policies relating to public transit:

- *Public Transportation Goal 1.1 – Safe, convenient, efficient, and accessible transportation should be available to everyone.*
- *Public Transportation Goal 1.2 – Reliance on single-occupancy motor vehicles should be reduced and utilization of public transit and alternative transportation modes should be increased.*
- *Objective 1(a) – Policies and procedures should be developed which cause a greater utilization of bus services and result in a reduction of single passenger vehicle traffic.*
- *Objective 2(b) – Bus shelters and signage should be developed at designated transfer points between the two systems.*

Thank you again for the opportunity to comment.

Jeff Mitchem, AICP
Planning Manager
City of Santa Paula

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: (415) 552-7272 F: (415) 552-5816
www.smwlaw.com

Kevin P. Bundy
Attorney
Bundy@smwlaw.com

February 19, 2019

Via Electronic Mail Only

Ms. Susan Curtis
General Plan Update Manager
County of Ventura
Resource Management Agency, Planning Division
800 South Victoria Avenue, L #1740
Ventura, CA 93009-1740
E-Mail: susan.curtis@ventura.org

Re: Notice of Preparation of a Draft Environmental Impact Report for the Ventura County 2040 General Plan Update (Case No PL17-0141).

Dear Ms. Curtis:

On behalf of Citizens For Responsible Oil & Gas ("CFROG"), we write to comment on the Notice of Preparation of a Draft Environmental Impact Report ("DEIR") for Ventura County's 2040 General Plan Update ("GPU").

CFROG is committed to working constructively with the County to ensure that changes to land use policies in the County under the GPU do not impair the regional environment, natural resources, and quality of life for the County's residents. The County must undertake careful planning to ensure that the County accommodates growth and development in a manner that does not seriously impair the environment. To that end, CFROG is concerned that the NOP provides insufficient assurance that the County's EIR will fully and accurately evaluate the potential impacts associated with the GPU.

The recently released NOP is required to provide adequate and reliable information regarding the nature of the proposed Project and its probable environmental impacts, in order to "solicit guidance from public agencies as to the scope and content of

the environmental information to be included in the EIR." California Environmental Quality Act ("CEQA") Guidelines § 15375; *see also* CEQA Guidelines § 15082(a)(1).[1]

Unfortunately, the NOP provides little information about some critical aspects of the proposed Project, including the GPU alternatives and anticipated cumulative impacts. This makes it difficult to provide a comprehensive response to the NOP or the scope of the EIR. Set forth below are our initial comments relating to the information that has been provided. The County must ensure that the EIR for the Project provides extensive, thorough analysis of the topics described below.

I. The EIR must evaluate all potential environmental impacts.

The NOP fails to provide a description of the probable environmental effects of the proposed General Plan Update. The NOP also gives little indication of what the County believes to be the probability that the proposed Project will result in various environmental impacts. In the absence of more information, we can only request that the EIR will provide an exhaustive and detailed analysis of the Project's impacts in all relevant environmental issue areas, including but not limited to the specific areas discussed below.

A. Climate Change

The County should pay particular attention to its evaluation of impacts related to climate change. Reducing GHG emissions in order to minimize the harms from climate change is one of the most urgent challenges of our time. Given the far-ranging impacts of climate change and the direct harms already witnessed in Ventura County, the County must acknowledge the heightened responsibility for meeting the State's ambitious (but achievable) emissions-reduction goals. Accurate information about the General Plan's climate change impacts is particularly important because we have already exceeded the capacity of the atmosphere to absorb additional greenhouse emissions without risking catastrophic and irreversible consequences.

It is critical that the County commit adequate resources to researching and developing policies for the Climate Action Plan, that it seriously consider the ramifications of any delay in implementing effective policies, and that it develop enforceable mitigation measures to reduce greenhouse gas emissions. Because of the

[1] The CEQA Guidelines are codified at title 14, California Code of Regulations, section 15000 et seq.

importance of this policy topic, and to comply with state law and requirements, the County's Climate Action Plan must be comprehensive in scope. The Climate Action Plan also must set quantitative countywide emissions reduction targets consistent with both short-term and long-term statewide goals and policies,[2] and must contain specific, enforceable measures sufficient to meet these targets. *See generally* CEQA Guidelines § 15183.5.

Recent scientific reports highlighting the severity of the climate crisis and the urgency of emissions reductions[3] suggest that the County's greenhouse gas emissions threshold should be set either at zero (or "net zero"), or otherwise low enough to allow thorough review of development projects (including oil and gas projects) that may increase emissions. The County has an obligation to adapt its analysis to changing conditions as technology, climate impacts, and climate science evolve. *See Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497, 518. Discretionary review of development projects with special attention to greenhouse gas emissions will help the County meet this obligation and provide the necessary flexibility.

When informing the public about the County's greenhouse gas emissions, the County cannot ignore the fact that oil and gas produced within the County will result in increased emissions, wherever it is consumed. At a minimum, the General Plan must disclose this information so that the County's true contribution to climate change will be accurately portrayed. In calculating greenhouse emissions for Ventura County under the General Plan, therefore, the analysis should include not only direct emissions from mobile and stationary sources within the County, but also downstream emissions resulting from reasonable assumptions regarding use of the oil and gas produced in the County. *See, e.g.*, *Sierra Club v. Federal Energy Regulatory Commission* (D.C. Cir. 2017) 867 F.3d 1357, 1374. Because greenhouse gas emissions from refining and

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[2] See Health & Safety Code §§ 38560, 38566; Executive Orders S-3-05, B-30-15.

[3] *See, e.g.*, IPCC, 2018: Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp. Available at https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf.

combustion of oil and gas is a reasonably foreseeable environmental consequence of their production, these emissions must be disclosed.

The Climate Action Plan also should calculate emissions from different industry sectors, including oil and gas production, that capture both combustion and fugitive emissions. The analysis should identify factors that may contribute to higher emissions, for instance drilling and related processing involved in the extraction of tar sands, and enhanced oil recovery and well stimulation techniques (including emissions from both the production activities themselves and from any additional production that might occur as a result of implementing such techniques). Finally, the Climate Action Plan must also identify feasible, enforceable measures to reduce and mitigate emissions from oil and gas operations.

B. Air Quality

Given the unique geography and air quality challenges in Ojai Valley, it is critical that the General Plan Update maintain the air quality significance threshold of 5 pounds per day for Reactive Organic Compounds (ROC) and for Nitrogen Oxides (NOx) currently in the Ojai Area plan. In addition, to further improve air quality countywide, the General Plan Update should reduce the 25 pound countywide threshold for these pollutants.

A lower threshold of significance countywide would allow a more thorough investigation of discretionary projects with a potential to pollute, allowing the County more options to ensure the safety of the community. For instance, climate change is likely to increase harmful smog (ozone) levels and result in worsening air quality. Technology to mitigate greenhouse gas emissions is also likely to improve in the future. A more stringent threshold countywide, and discretionary review for new projects, would allow the County flexibility to adapt as circumstances related to climate change alter the environment.

C. Other Impacts of Oil and Gas Development

Exploration for and production of oil and gas may cause numerous potentially significant impacts in a wide range of areas including not only climate change and air quality, but also water quality, water supply, traffic, noise, odors, aesthetics, and hazards. To the extent that anything in the GPU affects oil and gas production, the EIR must analyze potentially significant effects in these and other relevant categories.

The EIR also must propose mitigation measures and consider alternatives that could reduce or avoid any significant effects. Specifically, to ensure that the impacts of General Plan policies regarding oil and gas development are adequately evaluated and meaningfully addressed on a case-by-case basis, the County should consider a mitigation measure requiring all new oil wells to receive discretionary permits. As CFROG has pointed out in prior comments, under Ventura County's current policies and practices, the vast majority of oil and gas development in the County is not subject to local CEQA review or conformance with current County policies and regulations. This is because the County requires only a zoning clearance for any additional oil wells drilled within the extensive areas covered by antiquated conditional use permits. Under County practices, these zoning clearances are considered to be ministerial and thus do not trigger CEQA's environmental review and mitigation requirements. We also understand that the County is not requiring compliance with updated regulations for these clearances. The General Plan Update should require discretionary review of all new drilling and expanded operations in order to ensure future drilling will comply with new policies and utilize best management practices to reduce GHG emissions and the numerous other impacts of oil and gas development. Moreover, to the extent the GPU anticipates that oil and gas development will continue under existing CUPs, the EIR should consider mitigation measures providing for comprehensive monitoring and enforcement of compliance with existing permit requirements.

II. The County should adopt thresholds of significance early in the process.

The County should prepare and publish proposed thresholds of significance for environmental impacts in advance of publishing the draft EIR for the GPU. *See* CEQA Guidelines § 15064.7. Thresholds of significance establish, for each impact area, the level of effect over which a project's impact is likely to be determined significant. The County should publish the thresholds of significance it proposes to use for each environmental impact area (e.g., air quality, biological resources, hydrology and water quality, transportation and circulation) analyzed in the EIR. In light of the County's extensive environmentally sensitive resources, and the potentially far-reaching consequences of the GPU, the public should have an opportunity to comment on the completeness and adequacy of proposed thresholds of significance at the earliest possible stage in the environmental review process. Ideally, draft proposed thresholds will be made public early, with opportunities to comment on them as part of the additional scoping sessions or workshops.

III. Project Alternatives

The County's evaluation of alternatives to the Project will be critically important. An EIR must describe a range of alternatives to the proposed project, and to its location, that would feasibly attain the project's basic objectives while avoiding or substantially lessening the project's significant impacts. Pub. Res. Code § 21100(b)(4); CEQA Guidelines § 15126.6(a). A proper analysis of alternatives is essential for the County to comply with CEQA's mandate that significant environmental damage be avoided or substantially lessened where feasible. Pub. Res. Code § 21002; CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15126.6(a); *Citizens for Quality Growth v. City of Mount Shasta*, 198 Cal. App. 3d 433, 443–45 (1988). As the California Supreme Court has explained, "[w]ithout meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process. . . . [Courts will not] countenance a result that would require blind trust by the public, especially in light of CEQA's fundamental goal that the public be fully informed as to the consequences of action by their public officials." *Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 404.

Unfortunately, the NOP fails to define the specific objectives for the proposed GPU. Without a thorough understanding of the proposed project's purpose, it is all but impossible for the County or the public to identify and evaluate reasonable and feasible project alternatives. Nor is it possible, in the absence of clearly defined project objectives, for members of the public or other public agencies to identify or provide meaningful input on alternatives or the scope of the EIR. The County must clearly articulate the project objectives, in order to systematically identify and analyze the significant effects of the proposed project and the feasible mitigation measures or alternatives that will avoid or substantially lessen such significant effects.

The County's NOP states only that the EIR will consider a reasonable range of alternatives. NOP at 7. The County must ensure that the EIR includes a robust discussion of alternatives to the proposed plan that would lessen the significant impacts of the Project. With respect to oil and gas development, those alternatives should include at a minimum adoption of specific policies to limit increases in the number of active and idle wells in the County and to reduce oil well emissions by at least 10% per year.

IV. Conclusion

We hope that the above will assist the County in preparing a thorough and legally adequate EIR for the GPU. Given the lack of detailed information in the NOP and the County's decision not to prepare an Initial Study, the public should have an opportunity to participate fully in the County's upcoming scoping process. To this end, we strongly recommend the County make information—such as proposed thresholds of

significance—available as early as possible and continue to hold public workshops throughout the process.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Kevin P. Bundy

cc: Citizens For Responsible Oil and Gas

1086420.4

RE: VC-GPU 2040 EIR NOP

2-19-19

To: Susan Curtis, et al.

Please address these comments as to issues for the CEQA EIR document.

1. As to Minerals: Flaring of natural gas on an ongoing basis throughout the county. Effects on air quality and GHG emissions. Inclusion of flaring in GHG/carbon emissions baseline, and possible effect of increase in oil and/or gas production. I note that flaring of natural gas is generally not permitted in Texas on an on-going basis (https://www.rrc.state.tx.us/about-us/resource-center/faqs/oil-gas-faqs/faq-flaring-regulation/).
2. Effect of possible phase out of oil and natural gas production. Oxnard City Council will vote on a resolution that includes looking at such a phase-out and move to renewable energy production.
3. As to Water resources: Look at the use of water by agriculture, which is often not efficient, and wasteful, done in the middle of the day, with significant run-off. Groundwater pumping also an issue, with depletion of aquifers, and affecting flows in the Santa Clara and Ventura Rivers.
4. Coastal issues include sea level rise, with potential salt water intrusion effects on agriculture and aquifers, and drinking water supply.
5. Air Quality: GHG emissions need to be accurately calculated, including transportation in and out of the County (per Sonoma County litigation); include port traffic/possibly expanding, both with the shipping, and trucking in and out of the port. Also, the Navy military traffic, ships and planes, should be included.
6. Air quality issue of dust blowing on the coast and inland, at times due to agricultural practices that leave bare dirt, causing increasing air pollution, especially inland, where air quality is already challenged.
7. Best management practices for agriculture, to favor carbon sequestration in the soils and organic materials. Effect of planting trees and other vegetation to sequester carbon, cool the air temperature, and help to lessen pollution.
8. Develop recommendation for Fire-safe plants, particularly native plants of the region.

Thank you for considering my comments.

Leslie Purcell
PO Box 815, Ventura, CA 93002

General Plan Update
EIR Scoping Notes
Ron Whitehurst, 108 Orchard Dr, Ventura, CA 93001

The context of the EIR must be that of a climate emergency. Business as usual is not an option.

Both the IPCC report issued in September and the California 4th Climate Assessment have stated emphatically that there is absolutely no time to lose: a transition to clean energy economy must happen as soon as possible.

The IPCC is a made up of conservative scientists working in a group which would make the outcome more conservative. Past assessments have been shown to be understated – that changes happened sooner than predicted. We may only have a couple years to bring CO2 emissions below 1990 levels. Some climate scientists say that multiple positive feedback loops have proceeded to the point that it is already not possible to turn it around.

The consequence of a 5 degree C temperature rise could be extinction of our species. Government officials are mandated to help businesses to keep making money. They have a fiduciary responsibility to support BUSINESS AS USUAL. They also hold the PUBLIC TRUST – a responsibility to take care of the health and well being of the citizens of their jurisdiction. In the context of a climate emergency, what is the goal of reviewing the Environmental Impacts of Climate Change or even of failure to mitigate Climate Change? At what point do we acknowledge that our house is on fire and focus on putting out the fire? Are we rearranging the deck chairs on the Titanic?

This is denial, California Style – yes climate change is real….now let's get back to BUSINESS AS USUAL, we have bills to pay and I need to drive my kids to soccer practice.

The cumulative effects of no action in Ventura County on reducing net CO2 emissions on global climate change (extinction) must be considered. The argument that the cost is too high, or not feasible, is not valid.

During this EIR we declare a climate emergency and call for a mobilization throughout all sectors. We are in a time of tough decisions that may be unpopular and/or deleterious to some industries, especially those of fossil fuel and industrial agriculture. The trade-off is continued health of the overall community.

We want a plan that achieves a JUST TRANSITION away from fossil fuels as quickly as possible through community engagement so that everyone will want to unite and sacrifice for the survival of living systems.

The words of 16 year old GretaThunberg speak to this situation. She gave this speech to the Economic Summit in Davos on January 25, 2019:

> *"Our house is on fire. I am here to say, our house is on fire."*
>
> *According to the IPCC (Intergovernmental Panel on Climate Change), we are less than 12 years away from not being able to undo our mistakes. In that time, unprecedented changes in all aspects of society need to have taken place, including a reduction of our CO2 emissions by at least 50%. When this plan is adopted we will not "have 10 years", we only have what we actually do next and next.*
>
> *We must also talk about equity, which is absolutely necessary to make the Paris agreement work on a global scale. We must be realistic about the probabilities of tipping points and feedback loops like the extremely powerful methane gas released from the thawing Arctic permafrost.*
>
> *At places like Davos, people like to tell success stories. But their financial success has come with an unthinkable price tag. And on climate change, we have to acknowledge we have failed. All political movements in their present form have done so, and the media has failed to create broad public awareness.*
>
> *But Homo sapiens have not yet failed.*
>
> *Yes, we are failing, but there is still time to turn everything around. We can still fix this if we recognize the overall failures of our current systems, we stand a chance.*
>
> *We are facing a disaster of unspoken sufferings for enormous numbers of people. And now is not the time for speaking politely or focusing on what we can or cannot say. Now is the time to speak clearly.*
>
> *Solving the climate crisis is the greatest and most complex challenge that Homo sapiens has ever faced. The main solution, however, is so simple that even a small child can understand it. We have to stop our emissions of greenhouse gases and draw carbon back into soil and living systems.*
>
> *Either we do that or we don't.*
>
> *To say that nothing in life is black or white is a very dangerous lie. Either we prevent 1.5C of warming or we don't. Either an irreversible chain reaction is avoided or not. Either we choose to go on as a civilization or we don't. That is as black or white as it gets. There are no grey areas when it comes to survival.*

We have a choice. We can create transformational action that will safeguard the living conditions for future generations. Or we can continue with our business as usual and fail.

That is up to you and me.

Some say we should not engage in activism. Instead we should leave everything to our politicians and just vote for a change instead. But what do we do when there is no political will? What do we do when the politics needed are nowhere in sight?

Here in Davos – just like everywhere else – everyone is talking about money. It seems money and growth are our main concerns.

And since the climate crisis has never once been treated as a crisis, people are simply not aware of the full consequences on our everyday life. People are not aware that there is such a thing as a carbon budget, and just how incredibly small that remaining carbon budget is. That needs to change today.

No other current challenge can match the importance of establishing a wide, public awareness and understanding of our rapidly disappearing carbon budget that should and must become our new global currency and the very heart of our future and present economics.

I'm striking from school to protest inaction on climate change – you should too

We are at a time in history where everyone with any insight of the climate crisis that threatens our civilisation – and the entire biosphere – must speak out in clear language, no matter how uncomfortable and unprofitable that may be.

We must change almost everything in our current societies. The bigger your carbon footprint, the bigger your moral duty. The bigger your platform, the bigger your responsibility.

Adults keep saying: "We owe it to the young people to give them hope." But I don't want your hope. I don't want you to be hopeful. I want you to panic. I want you to feel the fear I feel every day. And then I want you to act.

I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is.

-- Edited version of a speech given by Greta Thunberg at Davos January 25.. https://www.theguardian.com/environment/2019/jan/25/our-house-is-on-fire-greta-thunberg16-urges-leaders-to-act-on-climate

How can Ventura County not do its part to reverse Climate Change? That means nothing short of doing our part to keep the global temperature from rising 1.5 degrees C by 2030. The federal and state mandates will only become more urgent as 2030 approaches. It only makes sense to accept the latest science and search globally for mitigation measures for a climate emergency mobilization.

The Green New Deal is on the right track. It aims to reverse climate change focusing on the rapid transition away from using fossil fuels to clean energy. It describes a major role for management of natural resources to sequester carbon and for agriculture whose usual practices unnecessarily deplete soil carbon, pollute surface and groundwater, and exposes insects, fish, animals and humans to toxic chemicals. These negative environmental impacts absolutely can be mitigated. That the degrading and polluting practices in land and farm management cannot be mitigated is the most egregious conclusion of the EIR of the last VC General Plan. That type of conclusion is not acceptable with this update.

Industrial conventional agriculture represents BUSINESS AS USUAL, which is emitting CO2 with every crop removed that decreases soil organic matter. Organic agriculture is slightly positive with a small yearly increase in soil organic matter. Regenerative organic agriculture can store 10 tons of CO2 per acre per year. To reduce net CO2 emissions, half of Ventura County's agriculture and grazing land must transition to regenerative organic practices. ARB 2030 Implementation Plan for Natural and Working Lands speaks to this.

The Terra Count aerial mapping tool developed by the CA Department of Conservation will provide the carbon sinks and flux tracking metric to be able to set a goal for 2025 of 25% transition and for 2030 of 50% transition to regenerative organic practices on working lands. Proportionate goals are provided by ARB for natural lands and there can be goals set for expanding seagrass to sequester carbon. ARB says that all of these goals will be significantly increased as experience is gained with protocols.

The background document for the VC General Plan makes no mention of carbon loss and sequestration attributed to land management that includes agriculture. In a county with $2 billion ag income, ag must play its role in reducing net CO2 emissions by dramatically increasing soil organic matter on a yearly basis, and reducing its fossil fuel use.

This comment concludes with how climate change can be mitigated and food security improved through regenerative agriculture. I recommend that these measures be part of the Climate Action Plan and also an immediate Ventura County Green New Deal.

Green New Deal
Regenerative Agriculture Perspective

2-19-19 Ron Whitehurst, ron@rinconvitova.com

Basically follow agroecology principles, practice regenerative organic agriculture, and give rights to nature. Shift the U.S. policy focus from “cheap food for the consumer” to “quality food for the consumer on a regenerative basis.”

Ag section from House Resolution

(G) working collaboratively with farmers and ranchers in the United States to eliminate pollution and greenhouse gas emissions from the agricultural sector as much as is technologically feasible, including—

(i) by supporting family farming;

(ii) by investing in sustainable farming and land use practices that increase soil health; and

(iii) by building a more sustainable food system that ensures universal access to healthy food

Context: climate emergency. Agriculture and horticulture can increase the organic matter in the soil through regenerative organic practices to ward off extinction. Traditionally farmers are conservative – slow to change. Historically when a farmer lost a crop he and his family had less to eat, today a crop failure means he loses the farm and has to take a job in a factory, or stocking shelves at the local Walmart. It is simply a paradigm shift from fighting nature to working with nature. It is simple, difficult, and imperative.

Education: Schools can teach the principles of agroecology and integrated pest management. Curriculum can be encouraged to teach that synthetic fertilizers and toxic pesticides are not needed to produce our food or manage our landscape. Coop Extension and Master Gardeners can help farmers and gardeners transition off of chemical fertilizers and toxic pesticides to regenerative methods. Functionally most schools are serving as marketing arms of the chemical and pesticide companies. We must now examine this in context of the role that chemicals and pesticides have in degrading ecosystem function and the urgency of facing extinction.

Support initiatives that ensure social, economic, and environmental sustainability of agriculture while balancing the following goals:

(1) ensuring high-quality, healthy food for consumers that is free from industrial and agrichemical toxins;

(2) promoting health and longevity in farmers and in the population as a whole;

(3) protecting natural resources and the environment;

(4) cushioning farmers from the natural and financial instability unique to agriculture;

(5) enabling farmers to better pursue financial profitability; and

(6) restoring the vitality of family farms and rural communities.
Mandate the labeling of genetically engineered foods and declare a moratorium on the release of genetically engineered organisms until the ecological impact of such organisms is established.

Increase farm profits through field-tested techniques supported by scientific research, such as integrated pest management, integrated crop management, and organic methods.

Follow Organic principles:
No: synthetic pesticide, fertilizer, amendments, food additive
No GMOs (genetically engineered organisms) or products from GMOs
No radiation processing or radioactive materials
No sewage sludge
A healthy plant resists pests and disease.
Work with nature, plan to engineer ecology to support plants and animals instead of reacting with organic pesticides.

GND - NOT
Some “green new deals” have included “clean coal”, natural (actually not natural) gas as a bridge fuel, and nuclear power

Farming Carbon
Practices must increase soil organic matter
Fertilizer burns up organic matter by providing nitrogen needed by bacteria and fungi to use the carbon (carbohydrates) in the soil as food, converting it to CO2 that enters the atmosphere. Fertilizer should be regulated or taxed to represent the contribution to atmospheric CO2. All soils have all the minerals needed to grow crops, the limiting factor is biology (microbes) to mobilize the nutrients and supply these to the plant. - Elaine Ingham.
Most fertilizer has nitrates, and with bacterial action, the NOx leaves the soil. NOx are GHGs. Fertilizer should be regulated or taxed to represent the contribution to atmospheric NOx.
Herbicides, such as Roundup, destroy beneficial fungi that gives soil its tilth, leading to water run off and reduced carbon sequestration. Roundup degrades plant immune system and leads to plant disease. Roundup causes cancer in humans and animals. Synthetic herbicide should be regulated or taxed to represent its contribution to atmospheric CO2
Tillage increases oxidation of soil organic matter. Tillage should be regulated or taxed to represent its contribution to atmospheric CO2..
CAFOs put an extreme burden on local ecology and human health. CAFOs produce large amounts of CO2, methane and ammonia – all GHGs. Animals are not treated with

respect. Workers are not treated with respect. CAFOs should be phased out as soon as possible.

Corporate-owned factory hog farms, cattle feedlots, and poultry operations, as well as the corporations that supply them, while not in Ventura County, should be replaced by small integrated farms that supply meat, dairy and eggs locally in systems that maximally sequester carbon produced on the farm. Consider appropriate corporate or size restrictions.

Re-establishing small water cycles increases water in the soil, which can grow more plants, which pull CO2 out of the air. Michal Kravcik, New Water Paradigm, www.rainforclimate.com. New Water Paradigm should be taught and encouraged.

Rotational or mob grazing (Holistic Management) builds soil organic matter and is good for animal health. Methane-utilizing bacteria (methanotrophs) living in the soil digest methane. Holistic management should be encouraged.

Food traveling many miles has a higher carbon footprint. Food moving from an area breaks nutrient cycling. Food moving from an area exports water used to grow the food. Production for and development of local markets should be encouraged.

Farming communities support farmers. Farming communities should be supported to supply services to farmers.

Subsidized food exports disrupt farm economies in the receiving country. Commodity support payments lead to destructive land practices and lock farmers in a servile relationship. Commodity price supports should be eliminated.

Plant based diet uses less land than animal production. Animals can be grazed on land unsuitable for producing grain, orchard or vegetable crops, while building soil quality. Encourage a plant based diet, while accepting animal products produced with respect to the land and the animal.

Corporations are rewarded for destructive use of the environment. Change fiduciary role of CEO to take care of nature over shareholders.

Relocalize the Food Supply

Remove subsidies for shipping food out of the country, support Community Supported Agriculture (CSAs), farmer and consumer co-ops, and require that schools, hospitals and jails purchase local regenerative organic food.

Summary:

Follow agroecology principles,practice regenerative organic agriculture, and give rights to nature.

Follow Organic principles:

Take care of farmers.

No: synthetic pesticide, fertilizer, amendments, food additives

No GMOs (genetically engineered organisms) or products from GMOs

No radiation processing or radioactive materials

No sewage sludge

A healthy plant resists pests and disease.
Work with nature, plan to engineer ecology to support plants and animals instead of reacting with organic pesticides.
Farming Carbon
Practices must increase soil organic matter
Fertilizer should be regulated or taxed to represent the contribution to atmospheric CO2.
Fertilizer should be regulated or taxed to represent the contribution to atmospheric NOx.
Synthetic herbicide should be regulated or taxed to represent its contribution to atmospheric CO2
Tillage should be regulated or taxed to represent its contribution to atmospheric CO2.
Community rights should prevail over corporations that create nuisance situations. Consider appropriate corporate or size restrictions.
New Water Paradigm should be taught and encouraged.
Holistic range management should be encouraged.
Encourage production for local markets.
Farming communities should be supported to supply services to farmers.
Commodity price supports should be eliminated.
Educate consumers about the benefits to the community from buying local regenerative organic food.
Encourage a plant based diet.

References

Natural Law http://natural-law.org/platform/index.html
Agroecology https://en.wikipedia.org/wiki/Agroecology
Green New Deal https://assets.documentcloud.org/documents/5729033/Green-New-Deal-FINAL.pdf
https://www.dataforprogress.org/green-new-deal/
https://www.sunrisemovement.org/gnd/

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2019-CPA-0032

February 21, 2019

Susan Curtis, Manager, General Plan Update Section
Ventura County Resource Management Agency, Planning Division
800 South Victoria Avenue, L #1740
Ventura, California 93009-1740

Subject: Notice of Preparation of a Draft Programmatic Environmental Impact Report for the Ventura County 2040 General Plan Update

Dear Ms. Curtis:

We have reviewed the Notice of Preparation (NOP) of a Draft Programmatic Environmental Impact Report (DEIR) for the Ventura County 2040 General Plan Update (2040 General Plan Update). The 2040 General Plan Update would update the County's General Plan, which was last updated in 2005, that will set forth Ventura County's (County) vision of its future and express the goals, policies, and implementation programs that would guide future decisions concerning a variety of issues, including land use, health and safety, and resource conservation out to the year 2040.

The mission of the U.S. Fish and Wildlife Service (Service) is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. To assist in meeting this mandate, the Service provides comments on public notices issued for projects that may have an effect on those resources, especially federally-listed plants and wildlife. The Service's responsibilities also include administering the Endangered Species Act of 1973, as amended (Act). Section 9 of the Act prohibits the taking of any federally listed endangered or threatened wildlife species. "Take" is defined at Section 3(19) of the Act to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The Act provides for civil and criminal penalties for the unlawful taking of listed wildlife species. Such taking may be authorized by the Service in two ways: through interagency consultation for projects with Federal involvement pursuant to section 7, or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act.

We encourage you to coordinate with us to ensure that you have the most recent information regarding trust resources occurring in the County. Additionally, we believe that this is an excellent opportunity for us to assist in this planning effort in the hope that we can work together to develop a habitat conservation plan for Ventura County. Development of such a plan would

provide safeguards for fish, wildlife, and plants for our future generations by taking a proactive and strategic approach to development and conservation in Ventura County.

We appreciate the opportunity to provide comments on the NOP for the Ventura County 2040 General Plan Update DEIR and look forward to reviewing the draft document.. If you have any questions, please contact Mark A. Elvin of my staff at (805) 677-3317, or by electronic mail at mark_elvin@fws.gov.

Sincerely,

for Stephen P. Henry
Field Supervisor

Downing, Clay

From: Maribel.Bojorge@LW.com
Sent: Monday, February 25, 2019 11:11 AM
To: Curtis, Susan
Cc: Peter.Gutierrez@lw.com
Subject: Ventura County 2040 General Plan Update Case No. PL 17-0141
Attachments: Scanned from LA 7116 (Xerox 7855).pdf

Dear Ms. Curtis,

On behalf of Peter Gutierrez, please open the attached document. Thanks.

Maribel Bojorge
Legal Secretary

LATHAM & WATKINS LLP
355 South Grand Avenue, Suite 100
Los Angeles, CA 90071-1560
Direct Dial: +1.213.891.8521
Fax: +1.213.891.8763
Email: maribel.bojorge@lw.com
http://www.lw.com

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355 South Grand Avenue, Suite 100
Los Angeles, California 90071-1560
Tel: +1.213.485.1234 Fax: +1.213.891.8763
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February 25, 2019

VIA E-MAIL

Susan Curtis, Manager, General Plan Update Section
Ventura County Resource Management Agency
Planning Division
800 S. Victoria Ave., L #1740
Ventura, CA 93009-1740

Re: Comments to Notice of Preparation of Draft Environmental Impact Report for the Ventura County 2040 General Plan Update (Case No. PL 17-0141)

Dear Ms. Curtis:

We are writing on behalf of The Newhall Land and Farming Company ("Newhall"), a subsidiary of Five Point Holdings, LLC, to provide comments on the County of Ventura's ("County") Notice of Preparation ("NOP") of the Draft Environmental Impact Report ("DEIR") for the Ventura County 2040 General Plan Update ("Update"). Newhall owns approximately 16,050 acres in the County and its ownership dates back approximately 130 years. Newhall's property in the County adjoins thousands of acres it owns in the County of Los Angeles. Newhall's property in the County supports a variety of established uses that include commercial agriculture and grazing, mineral production, filming, habitat conservation and compensatory mitigation.

We understand the County has engaged in a substantial work effort and public outreach to identify issues of concern and that general policy guidance to prepare an Administrative Draft Update has been provided to staff by the Board of Supervisors ("Board"). Nevertheless, potential effects on the environment from the Update can be only be fully addressed after reviewing and assessing the proposed Update itself, which has yet to be released. Below we provide comments to the NOP based on our best understanding of what the Update is expected to contain.

We appreciate this opportunity to provide NOP comments, look forward to the release of the Administrative Draft Update and will supplement these comments if needed after review of that document.

Newhall's Property

Newhall's property in the County straddles Highway 126 and the Santa Clara River in the vicinity of the County's eastern boundary southeast of the unincorporated community of Piru. Most of the property is located within the Piru Planning Area and currently designated Agriculture and Open Space by Piru Area Plan. Zoning is designated primarily Agricultural Exclusive (A-E) with other portions zoned Open Space (O-S). Additionally, portions of the property are within a Mineral Resource Protection overlay zone.

Approximately 1,300 acres of Newhall's property are developed with active commercial agricultural operations that include orchards, cultivated fields, farm roads, fencing, river crossings, ranch offices and houses, maintenance and storage facilities, water wells and pipelines, drainage and flood control facilities, and related legally established structures and improvements. Undeveloped portions of the property are used for grazing and also regularly used for motion picture and television filming. Additionally, more than 100 active oil and gas wells are operated on the property pursuant to lease agreements or mineral rights ownership. All of these uses contribute to the vitality and strength of the County's economy.

According to the NOP, the proposed Update would not make changes to the Agricultural and Open Space land use designations outside of Exiting Community and Urban designated areas. (NOP, pg. 5.) However, policies and goals established in the Update that will include an update to the Piru Area Plan have the potential to affect Newhall's established land uses. Again, we welcome the opportunity to review the Update including the Piru Area Plan when released to assess whether further scoping comments are warranted.

Agricultural Resources

Agriculture is critical to the County's economy and makes up a large part of Newhall's operations in the County. Critical to the success of agriculture are necessary support uses and the ability to maintain related infrastructure. The *Vision and Guiding Principles* document recognizes the importance of promoting the County's agricultural economy and recognizes its dependence on water availability, land and farmworker housing. (*Vision and Guiding Principles*, May 8, 2018, pg. 1.) Consequently, the DEIR should address the Update's potential impact on agriculture holistically including potential impact on the various support uses needed to sustain agricultural operations such as ranch offices and houses, roads, wells and water delivery systems and farmworker housing. Policies that support and promote agriculture should ensure that these necessary ancillary uses are recognized and supported.

Biological Resources

The DEIR is required to assess potential conflict with local policies and ordinances that protect biological resources. Newhall's property includes land in the County within the Salt Creek Corridor that is the subject of a settlement agreement between Newhall and the County ("Settlement Agreement") that covers wildlife corridor management and dedication of land to the public. The Settlement Agreement, approved by the Board in 2003, expresses the County's policy with respect to wildlife movement and conservation in the Salt Creek Corridor. The

Settlement Agreement promotes and implements local habitat conservation on Newhall's property. Attached is a letter and attachments sent on behalf of Newhall to the County Planning Commission dated January 31, 2019 that explains in detail the history and purpose of the Settlement Agreement and its conservation commitments as well as other conservation commitments made by Newhall through various conservation instruments and development restrictions. The letter was prepared in response to the County's proposed Wildlife Movement Ordinance.

The DEIR should assess potential Update conflicts with the Settlement Agreement and any other such agreements or conservation plans applicable in the County. Because the Settlement Agreement establishes wildlife movement and conservation policies and commitments, the DEIR should address whether proposed Update policies as well as existing or proposed ordinances, including the County's proposed Wildlife Movement Ordinance, would conflict with the Settlement Agreement. A significant impact with respect to local policies and conservation plans contained in the Settlement Agreement would occur if the Update's proposed policies and related ordinances conflict with it.

Land Use

Like the Biological Resources section, the Land Use/Planning section of the DEIR requires analysis of any potential conflict with habitat conservation plans. Here again, the Update's potential impact on policies and conservation plans established by the Settlement Agreement need to be considered and assessed and potential conflicts disclosed and analyzed.

Housing

The Update's Housing Element will map future housing and population growth in the County. Consequently, the DEIR's Population/Housing analysis is critical to assess whether housing sufficient to accommodate the anticipated workforce needed for growth in local industries, including agriculture, is being planned. The *Vision and Guiding Principles* promote "economic and job growth" that is responsive to the evolving needs of the County. (*Id.*, pg. 1.) The Guiding Principles in that document related to agriculture recognize the importance of farmworker housing to support the County's agricultural economy. (*Id.*, pg. 1.) Job growth and housing go hand in hand. To adequately address the impact of potential job growth in the agricultural sector, the DEIR should assess the potential effect on the need and supply of adequate farmworker housing. Policies that encourage the growth of the agricultural industry should be accompanied by policies that ensure an adequate housing supply for the workers that support the industry.

Mineral Resources

The County's General Plan, Piru Area Plan and zoning currently allow mineral resource extraction and ancillary uses on Newhall's property. The DEIR should assess whether the Update, including the Piru Area Plan revisions, would affect mineral resources and their production. Since more than 100 active oil and gas wells are operated on the Newhall property,

potential impacts to such resources and the ability to extract them is important not only to Newhall, but to the County's economy as well.

Water Resources

The NOP states that the Update will include a Water Resources Element. (NOP, pg. 3.) Since water is vital to agriculture, water policies are critical to maintaining a healthy and vibrant agricultural industry. The DEIR's assessment of water resources should include assessment of water delivery systems and the balance between urban and agricultural water needs.

Climate Action Plan

The NOP states that the Update will include a Climate Action Plan that will describe how the County plans to reduce greenhouse gas emissions and adapt to the changing climate. (NOP, pg. 4.) The County should consider how to promote the development of renewable energy resources and assess potential impacts from such development. Development of renewable energy resources to harness solar and other potential renewable power sources should be analyzed.

Future Notices

We request that the following persons be added to your notice list to receive future mailings related to the Update:

Michael Alvarado
Chief Legal Officer
FivePoint
15131 Alton Parkway, 4th Floor
Irvine, CA 92616

Sandy Sanchez
Director Community Development
FivePoint
25124 Springfield Court, 3rd Floor
Valencia, CA 91355

Peter J. Gutierrez
Latham & Watkins
355 South Grand Avenue, Suite 100
Los Angeles, CA 90071-1560

Conclusion

We recognize that all of the Update sections are important and thank you for the opportunity to comment on the NOP and scope of the DEIR. Again, we look forward to the release of the Administrative Draft Update and working with staff as you prepare the DEIR and move forward with the Update.

Respectfully,

Peter J. Gutierrez
of LATHAM & WATKINS LLP

Attachment

cc: Michael Alvarado

ATTACHMENT

SheppardMullin

Sheppard, Mullin, Richter & Hampton LLP
Four Embarcadero Center, 17th Floor
San Francisco, California 94111-4109
415.434.9100 main
415.434.3947 fax
www.sheppardmullin.com

415.774.3232 direct
jrusk@sheppardmullin.com

January 31, 2019

File Number: 23BX-259117

VIA HAND DELIVERY

Ventura County Planning Commission
Hall of Administration
Resource Management Agency/Planning Division
800 S. Victoria Ave., L#1740
Ventura, CA 93009-1740

Re: Comments on Proposed Wildlife Movement Ordinance Amending the Ventura County General Plan and Articles 2, 3, 4, 5, 9 and 18 of the Ventura County Non-Coastal Zoning Ordinance, PL 16-0127

Dear Honorable Planning Commissioners:

We write on behalf of The Newhall Land and Farming Company (Newhall), a subsidiary of Five Point Holdings, LLC, to provide comments on the County of Ventura's (County) proposed amendments to the Ventura County General Plan and Articles 2, 3, 4, 5, 9 and 18 of the Ventura County Non-Coastal Zoning Ordinance, PL 16-0127 (collectively, the Ordinance). Newhall owns approximately 16,050 acres in Ventura County, including 8,792 acres that could be subject to the Ordinance as currently proposed (Exhibit 1). Newhall has owned the property for approximately 130 years, and its property supports a variety of established uses that are important to the County's economy and way of life, including commercial agriculture and grazing, filming, habitat conservation and compensatory mitigation.

I. Introduction and Summary

Newhall has a long history of supporting conservation efforts and promoting habitat values on its Ventura County property. Approximately 11,975 acres, or nearly 75 percent, of the property are already subject to various conservation instruments and binding commitments that restrict development and protect habitat values (Exhibit 2), **including a settlement agreement with the County that establishes a wildlife corridor on the property**. Newhall has worked with state and federal resource agencies, environmental advocacy organizations, and Native American tribes to preserve and enhance habitat values on the property, including wildlife movement and connectivity, while protecting valid existing uses that have been ongoing for decades.

Newhall's Ventura County property is also adjacent to property that Newhall owns in Los Angeles County, which includes thousands of acres dedicated to open space, habitat conservation, wildlife movement and related purposes. Much of this property is not only

protected from development but subject to active management, **in conjunction with the wildlife corridor already established on Newhall's Ventura County property**, to maintain and enhance its habitat functions and values. The proposed Ordinance does not appear to take into account either the County's settlement agreement with Newhall, or the larger habitat management strategy of which the agreement is a part.

Newhall shares the County's desire to protect wildlife habitat values, and has committed substantial resources to ensure that its property will provide opportunities for wildlife movement on a local and regional scale, now and in the future. Nonetheless, Newhall does not support the adoption of the Ordinance as currently proposed, due to serious concerns about (i) violation of the existing Newhall settlement agreement, (ii) the process the County has followed in developing the Ordinance, (iii) conflicts with existing uses and other legal requirements, and (iv) the outdated and incomplete factual basis for the proposed zoning overlay boundaries and the restrictions imposed by the Ordinance.

Conflict with settlement agreement. The County entered into a settlement agreement with Newhall in 2003 to resolve the County's claims that development on the Newhall Ranch property would adversely affect wildlife movement on Newhall's property within Ventura County. Newhall agreed to dedicate 1,517 acres of its Ventura County property to the public for a wildlife movement corridor, and to provide for perpetual management of that corridor. The agreement provides, among other things, that Newhall's existing agricultural uses within the corridor may continue. The proposed Ordinance would burden those existing uses, impose permitting requirements and restrictions on management of the conserved property, and exact thousands of additional acres of Newhall's property for wildlife corridor purposes, all in violation of the agreement.

Unlawful burdens on existing uses and property rights. The conflicts between the Ordinance and Newhall's existing uses are not limited to the area covered by the Newhall settlement agreement. As currently proposed, the Ordinance would burden thousands of additional acres of Newhall's property, imposing new restrictions that would arbitrarily restrict new development and impermissibly interfere with valid existing uses, including long-established commercial agricultural operations and legally required conservation activities on Newhall's property. It would obstruct important activities routinely undertaken for public safety and property protection, including vegetation management conducted to mitigate fire hazard and to maintain drainage and flood control infrastructure. As a result, in addition to violating the Newhall settlement agreement, the Ordinance will raise valid claims for due process violations and regulatory takings.

Process. Although nearly 9,000 acres of its property would be burdened by the Ordinance, Newhall received no notice of the proposed Ordinance and no opportunity to participate in workshops or meetings with Planning staff in 2017 and 2018. This lack of notice alone is a fatal flaw in the County's legislative process, and requires that the Planning Commission postpone any action on the Ordinance and direct Planning staff to obtain Newhall's input. In addition, the County has not complied with CEQA in developing the Ordinance, thereby depriving property owners, the public and County decision makers of important information about the environmental effects of adopting the Ordinance.

Basis for Ordinance. The Ordinance would define the boundaries of wildlife movement corridors based on dated information that was developed without field verification, does not account for current conditions and land uses, and was not intended to form the basis for regulatory action. The Ordinance also does not account for existing conservation commitments or the protections provided by state and federal law and permitting requirements, which make many of the restrictions in the Ordinance unnecessary to achieving the County's objectives. Newhall, and possibly other property owners, could have provided more accurate and up-to-date information to better inform the County's proposal, but the County's deficient process has foreclosed that opportunity.

In light of these concerns, Newhall requests that the Planning Commission:

(i) Delay consideration of any action on the proposed ordinance by at least six months, or longer if needed to remedy the procedural and substantive deficiencies identified in this letter;

(ii) Analyze and disclose the potential environmental effects of the County's action in compliance with CEQA;

(iii) Instruct Planning staff to work with Newhall (and other stakeholders, as appropriate) to evaluate possible revisions to the overlay zone boundaries in light of existing uses, conservation commitments and development constraints, including removing Newhall's property from the Habitat Connectivity and Wildlife Corridors (HCWC) overlay zone; and

(iv) Revise the language of the Ordinance as suggested below, to clarify exemptions for existing uses, avoid conflict with Newhall's settlement agreement and other laws and regulatory requirements, and allow activities necessary for public safety and related purposes.

II. Description of Newhall's Property and the County Settlement Agreement

This section provides an overview of Newhall's property in Ventura County and adjacent property within Los Angeles County, and describes the settlement agreement affecting the Ventura County property.

A. Ventura County Property

Newhall owns approximately 16,050 acres in eastern Ventura County, primarily south of SR126, including areas within the Santa Clara River and its adjacent floodplain, as well as rugged hill country (Exhibit 1). Approximately 1,300 acres of the property are developed with commercial agriculture uses, including orchards, cultivated fields, farm roads, fencing, river crossings, ranch offices and houses, maintenance and storage facilities, water wells and pipelines, drainage and flood control facilities, and related, legally established structures and improvements (Exhibit 3). Many of these improvements, including river crossings and drainage facilities, require regular maintenance, including vegetation modification, to preserve their functions and minimize safety risks. In particular, vegetation management in the vicinity of

roads, bridges, river crossings and areas around structures is important to minimize risks associated with wildfire, not only for fuel modification purposes but also to maintain clearance for access by emergency vehicles and safe egress in case of emergency.

Undeveloped portions of the property are also regularly used for filming of motion pictures, television programs and advertisements. In addition, oil and gas developers operate more than 100 active oil and gas wells within the property, pursuant to lease agreements or outright ownership of mineral rights. Easement holders such as Southern California Edison and SoCal Gas use and maintain utilities, water diversion facilities and related infrastructure on the property, including unpaved access roads.

B. Los Angeles County Property: the Newhall Ranch

Newhall's Ventura County property is adjacent to the 11,999-acre Newhall Ranch property, located in western Los Angeles County. The Newhall Ranch is subject to the Newhall Ranch Resource Management and Development Plan (RMDP), a conservation and development plan approved by the California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board (RWQCB) and other regulatory agencies. The RMDP and associated permits facilitate development of the Newhall Ranch Specific Plan approved by the County of Los Angeles. RMDP permit conditions and conditions of approval require Newhall to permanently conserve more than 8,000 acres of the Newhall Ranch property as natural open space, including 227 acres dedicated to conserving the San Fernando Valley spineflower, a 977-acre Special Management Area (SMA) that includes the Santa Clara River, and a 4,205-acre High Country SMA that includes the portion of the Salt Creek watershed (a tributary to the Santa Clara River that straddles the Los Angeles – Ventura County line) within Los Angeles County.

C. County Settlement Agreement

In 2000, the County sued Newhall, the County of Los Angeles and other parties, challenging Los Angeles County's determination that development of the Newhall Ranch Specific Plan would not impair the wildlife corridor functions of the portion of the Salt Creek watershed within Ventura County. *United Water Conservation District v. County of Los Angeles*, Kern County Sup. Ct., No 239324-RDR. To resolve the County's concerns, Newhall entered into a settlement agreement with the County in 2003 (the Wildlife Corridor Agreement, attached as Exhibit 5), by which Newhall agreed to dedicate to the public the portion of the Salt Creek watershed within Ventura County — an additional 1,517 acres of Newhall's property — and to ensure that the additional land would be managed "in conjunction with and in the same manner as the High Country [SMA]." (Wildlife Corridor Agreement, ¶ 6.) The Wildlife Corridor Agreement is intended to "give primary consideration to preservation of the wildlife corridor located within the Ventura County portion of the Salt Creek Corridor … ." (Wildlife Corridor Agreement, ¶ 9.)

The Wildlife Corridor Agreement requires Newhall to grant a conservation easement over the Salt Creek Corridor and to provide funding for management of the Corridor consistent

with the rest of the High Country SMA, which includes a management endowment and a per-unit assessment fee imposed on development. (Wildlife Corridor Agreement, ¶ 11.) The Wildlife Corridor Agreement provides that the Salt Creek Corridor, like the rest of the High Country SMA, will be managed according to the Resource Management Plan contained in the Newhall Ranch Specific Plan. The Agreement specifically provides (among other things) that, consistent with the Resource Management Plan, "**existing agricultural field operations within the Ventura County portion of the Salt Creek Corridor are permitted to continue**," though they cannot be expanded or intensified. (Wildlife Corridor Agreement, ¶ 8, emphasis added.) The Agreement includes an exhibit that identifies the boundaries of the Salt Creek Corridor and the existing agricultural field operations within the Corridor. (Wildlife Corridor Agreement, Exh. B.)

D. Additional Conservation Commitments

The Wildlife Corridor Agreement is not the only conservation commitment that Newhall has made on its Ventura County property. A total of approximately **11,975 acres** of Newhall's Ventura County property is subject to various conservation instruments, development restrictions and other conservation commitments, including the 1,517 acres required by the Wildlife Corridor Agreement. (Exhibit 2.)[1] These include:

- RMDP permit conditions and restrictive covenants that permanently prohibit new development within **595 acres** of the Santa Clara River and its floodplain;
- A settlement agreement with conservation organizations and Native American groups that restricts Newhall from proposing or undertaking residential, commercial or industrial development on approximately **9,100 acres** of its property;
- RMDP permit conditions that require a wildlife corridor conservation easement and a compensatory mitigation site and habitat enhancement project located in the Salt Creek Corridor;
- Restrictive covenants recorded under a candidate conservation agreement with the U.S. Fish and Wildlife Service, which permanently preserve approximately **700 acres** in a natural condition for the benefit of the San Fernando Valley spineflower and provide for habitat enhancement and spineflower introduction within portions of those areas; and
- An offer of dedication for a public access pedestrian trail easement running the length of Newhall's property along the Santa Clara River (allowing daytime use only).

[1] Note: areas described below may overlap to some extent with each other and/or with the area covered by the Wildlife Corridor Agreement; total affected acreage in Ventura County is approximately 11,975 acres (*see* Exhibit 2).

Importantly, these existing restrictions recognize and allow for continuation of existing uses within Newhall's property, including agricultural uses.

Considered together, the requirements of the Wildlife Corridor Agreement, the RMDP and these existing conservation commitments are more than adequate to ensure that Newhall's property will continue to provide wildlife habitat and movement opportunities on both local and regional scales.

III. The Ordinance Would Violate the Settlement Agreement.

As explained above, the Wildlife Corridor Agreement resolved the County's concerns about wildlife movement on Newhall's property. The Agreement explicitly provides that existing agricultural uses may continue within the Salt Creek Corridor and that the Corridor will be managed according to the Resource Management Plan that applies to the High Country SMA. The proposed Ordinance would violate those commitments.

A. The Ordinance Burdens Existing Agricultural Uses.

The Ordinance contains new permitting requirements, substantive standards and prohibitions that apply to outdoor lighting, wildlife-impermeable fencing, vegetation modification, new land uses or structures, and invasive plant species. These restrictions apply to all land uses within the HCWC overlay zone, as defined, regardless of the underlying zoning, except for activities that the ordinance specifically exempts.[2] Nearly 9,000 acres of Newhall's Ventura County property, including most of the 1,517 acres subject to the Wildlife Corridor Agreement, is within the proposed HCWC overlay zone. (Exhibit 2.) Additional restrictions apply to land within the Critical Wildlife Passage Areas (CWPA) overlay zone, which is a subset of the HCWC overlay zone.[3]

Among other restrictions that could interfere with Newhall's agricultural operations, the Ordinance establishes new permitting requirements, setback requirements from "surface water features" and wildlife crossing structures, and substantive standards that apply to all "development." (Ordinance, § 8109-4.8.3.1.) "Development" includes "vegetation modification," defined as "[h]uman-caused alteration of vegetation through direct actions including, but not limited to, complete removal, mowing, thinning or chaining." (Ordinance, § 8102-0.)

With limited exceptions, vegetation modification or other development requires a Planning Director-approved Planned Development Permit (PDP) if *any portion* of the development, including any related fuel modification, occurs within 200 feet of a wildlife crossing

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[2] In discussions with Planning staff, Newhall has been told that the Ordinance does not apply to commercial agriculture, but the language of the Ordinance does not reflect such a general exemption. If the County intends to provide a general exemption from the Ordinance for land zoned for agricultural use, and/or used for commercial agriculture, it should revise the Ordinance to clearly reflect this intention.

[3] Based on the County's Web-based GIS tool and the maps provided with the proposed Ordinance, Newhall understands that none of its property lies within the CWPA overlay zone.

structure or within a "surface water feature." (Ordinance, § 8109-4.8.3.4 – 4.8.3.5.) A surface water feature includes not only the actual extent of stream, river, wetland, seep or pond, but also the "riparian habitat area associated with the feature, as well as a development buffer that is 200 feet as measured from the farthest extent of the surface water feature and its associated riparian area." (Ordinance, § 8102-0.) Vegetation modification that is limited exclusively to removal of invasive plants within a surface water feature does not require a PDP, but still requires a Zoning Clearance, and the application for the Zoning Clearance imposes extensive and burdensome new information requirements including photographs of all vegetation proposed to be removed, identification of all invasive plants to be removed, the methods of removal, and measures to ensure "no native vegetation is damaged or removed." (Ordinance, § 8109-4.8.3.5(b).)

Any vegetation modification or other development requiring a discretionary permit (or modification thereto) must comply with new "development guidelines," which include: development must occur outside of surface water features and the buffer zones around wildlife crossing structures to the extent feasible; development must be "sited and conducted to minimize the removal and disturbance of biological resources, landscape features and undeveloped areas that have the potential to support functional connectivity and wildlife movement;" and development must be "sited and conducted to provide the largest possible contiguous undeveloped portion of land." (Ordinance, § 8109-4.8.3.8(b).)

The Ordinance includes exemptions for vegetation modification associated with certain activities, including planting or harvesting of commercial crops. (Ordinance, § 8109-4.8.3.2.) But it does not exempt other activities that are necessary components of Newhall's agricultural operations, including maintenance of farm roads and crossings of the Santa Clara River, vegetation modification to maintain adequate passage for emergency services vehicles and equipment, vegetation maintenance in drainage and flood control facilities necessary to prevent erosion and flood damage to existing agricultural fields and facilities, and fuel modification activities around structures and critical egress routes. Without the ability to perform these activities, Newhall cannot enjoy the right to continue its agricultural operations as guaranteed by the Wildlife Corridor Agreement.

The Ordinance provisions regarding wildlife-impermeable fencing and outdoor lighting also have the potential to significantly impact Newhall's agricultural operations. Significantly, the outdoor lighting restrictions not only apply to new lighting, but require replacement of existing lighting that is clearly part of Newhall's established operations within the area covered by the Wildlife Corridor Agreement.

B. The Ordinance Restricts Management of the Salt Creek Corridor.

The Wildlife Corridor Agreement states that the Salt Creek Corridor will be managed according to the Resource Management Plan contained in the Newhall Ranch Specific Plan. That Management Plan provides for a public entity or qualified conservation organization to hold and manage the land for purposes consistent with the RMDP approvals, including habitat conservation, wildlife movement and compensatory mitigation. Within the Salt Creek Corridor

are certain areas, such as habitat restoration sites, that will be subject to specific mitigation implementation and management plans. (*See* Exhibit 2).

The Ordinance would give the County Planning Director veto power over management of the Salt Creek Corridor, contrary to the management provisions of the Wildlife Corridor Agreement. Habitat enhancement activities, mitigation implementation, public trail maintenance, and other activities required by the RMDP permits that involve vegetation removal or other "development" would require a discretionary permit and would be subject to the Planning Director's judgment on whether the activities meets the County's "development guidelines." The same is true of fencing that may be required for such purposes as cattle exclusion and limiting public access to sensitive areas. Not only would this impose unnecessary costs and delay on a process that already includes oversight by the expert agencies charged with natural resource protection, but the County's refusal to authorize vegetation modification or other actions necessary to carry out the Resource Management Plan could prevent Newhall or another entity from complying with its legal obligations under the RMDP permits and approvals.

C. The Ordinance Seeks a Second Bite at Newhall's Property.

The County entered into the Wildlife Corridor Agreement to resolve its concerns about wildlife movement on Newhall's property and ensure that wildlife would have access to high quality habitat within the property, and be able to cross the property to access habitat in adjacent areas. The Salt Creek Corridor, managed in conjunction with the extensive habitat conserved within the Newhall Ranch, accomplishes that goal. The County cannot now impose new restrictions on thousands of *additional* acres of Newhall's property to accomplish the same goal — at minimum, the County's actions would violate the spirit of the Wildlife Corridor Agreement and deprive Newhall of the benefit of the bargain the parties made 15 years ago. Moreover, the fact that Newhall has already *dedicated outright* more than 1,500 acres of its Ventura County property to establish a wildlife corridor raises serious questions about whether the County has a rational basis for restricting *additional* thousands of acres to accomplish the same purpose, and whether doing so would constitute an uncompensated regulatory taking or unlawful exaction that lacks "nexus" and "proportionality" to an identified harm, as required by Supreme Court precedent. *See Nollan v. Cal. Coastal Comm'n*, 483 U.S. 825, 839 (1987); *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994).

To address these concerns, the Planning Commission should direct Planning staff to evaluate the need for including Newhall's property within the HCWC overlay zone, and consider removing Newhall's property from the zone if it finds that the existing Salt Creek Corridor provides effective opportunities for wildlife movement. To the extent the Planning Commission finds that portions of Newhall's property should remain in the overlay zone, it should consider, at minimum, the specific changes to the exemptions found in the Ordinance that are proposed below.

IV. The Ordinance Unlawfully Burdens Existing Uses and Property Rights.

As explained above, the Ordinance would restrict Newhall from carrying out critical activities related to its long-established agricultural uses that are protected by the Wildlife

Corridor Agreement, and would interfere with management of conservation lands within the Salt Creek Corridor. The same concerns apply to the thousands of acres of Newhall's property that are not subject to the Wildlife Corridor Agreement but would be within the proposed HCWC overlay zone (*see* Exhibit 2).

Among other issues, the restrictions on vegetation modification and other development would limit Newhall's ability to protect its property, including agricultural fields and facilities, against flooding, erosion and related threats, and from wildfire. The Ordinance would also limit Newhall's ability to use its property to provide compensatory mitigation for habitat impacts elsewhere — a right that existing restrictions on the property recognize and preserve. Such activities would now be subject to the County's new development guidelines and the Planning Director's discretionary approval.

Moreover, the development guidelines would severely restrict and limit Newhall's ability to develop its property with new uses. The Ordinance would create a new "buffer zone" within 200 feet of any riparian vegetation associated with the Santa Clara River (which traverses Newhall's entire property) and its tributaries, placing large areas of the most suitable lands off-limits to development. It would also impose a new presumption *against* development by requiring any new land use or structure to preserve the "largest possible contiguous undeveloped portion of land" (Ordinance, § 8109-4.8.3.8(b)) — a vague and unworkable standard that gives unfettered discretion to County Planning authorities.

These features of the Ordinance raise serious concerns about regulatory takings and due process violations. As explained in the comment letter dated January 28, 2019, and submitted by the law firm of Jeffer Mangels Butler & Mitchell LLP on behalf of the Ventura County Coalition of Labor, Agriculture, and Business (CoLAB Letter), property owners have a constitutionally protected right to maintain current uses of their property, and undue interference with that right may violate due process. *E.g., Livingston Rock and Gravel Co. v. County of Los Angeles*, 43 Cal.2d 121, 127 (1954). In addition, regulatory actions that impose excessive restrictions on a property owner's use of their property may work a regulatory taking. *See Penn Central Transp. Co. v. City of New York*, 438 U.S. 104 (1978). This letter incorporates by reference the comments and legal analysis found in the CoLAB Letter.

V. The County has not complied with applicable law in developing the ordinance.

In addition to the specific violations of the Wildlife Corridor Agreement, the County's development of the Ordinance has not complied with state law. Although the proposed Ordinance would burden nearly 9,000 acres of Newhall's property with new development restrictions and permitting requirements, the County failed to provide Newhall with notice that the Planning Commission intended to consider the Ordinance. Even more remarkable, given the extent of Newhall's property ownership within the proposed HCWC overlay zone, the County has not once consulted with Newhall, invited Newhall to participate in stakeholder meetings or workshops, or otherwise notified Newhall of the County's desire to develop a sprawling regional wildlife corridor running through the heart of Newhall's property. The County also has failed to undertake *any* compliance with CEQA, further limiting opportunities for Newhall, other property owners and the public to participate in the development of this major regional planning effort.

The Planning Commission must correct these fatal flaws before considering any action on the Ordinance.

1. The County did not provide notice to Newhall.

Before the County may adopt or amend a zoning ordinance such as the Ordinance, the Planning Commission must hold a public hearing and, thereafter, make a written recommendation to the County's Board of Directors. (Govt. Code §§ 65854, 65855.) Because the Ordinance affects the permitted uses or intensity of uses of real property, the Planning Commission must provide written notice to each affected property owner, at least 10 days in advance of the hearing. (Govt. Code §§ 65854, 65091(a)(1).) The notice must be mailed or hand-delivered, and must include the date, time, and place of the public hearing on the proposed ordinance, the hearing body, a general explanation of the matter, and a general description of the affected real property. (Govt. Code §§ 65091, 65094.)

Although Newhall owns more than 20 parcels within the proposed HCWC overlay zone (Exhibit 4), the County provided Newhall with no notice of the Planning Commission's hearing to consider the Ordinance on January 31, 2019. When questioned, County staff asserted that at least one postcard was sent to Newhall's office address, but Newhall has not received any such notice. Particularly given the extent of Newhall's landholdings and the potential effect on Newhall's interests, the County's efforts fall short of complying with the law, and have prejudiced Newhall's ability to protect its interests by participating in the County's development of the Ordinance.

Not only has the County failed to comply with specific requirements of the Planning and Zoning Law, but its failure to notify Newhall of proposed actions significantly affecting Newhall's property rights raises due process concerns. See *Calvert v. County of Yuba*, 145 Cal.App.4th 613, 622-23 (2006).) We note that the lack of notice appears to be part of a larger pattern, as the County also has not provided Newhall with any notice of its ongoing General Plan update process, which Newhall learned of only through its research into the Ordinance.

B. The County Must Comply with CEQA.

To date, the County has asserted that the adoption of the Ordinance is exempt from CEQA. As explained in the CoLAB letter, the Ordinance does not qualify for a CEQA exemption, because its adoption may have significant direct and indirect environmental effects. *See Union of Medical Marijuana Patients, Inc., v. City of San Diego*, 4 Cal.App.5th 103 (2016). *See also* CEQA Guidelines § 15300.2 (exceptions to CEQA exemptions). Those potential effects include, but are not limited to, increased fire hazards due to limits on fuel management, impacts to mineral resources from new restrictions applicable to mineral extraction operations, impacts to agricultural resources from restrictions on lighting, fencing, and other "development," impacts to traffic, circulation and community character from new restrictions on development that may shift development to other locations, and impacts to air quality and greenhouse gas emissions from those changes and from increased severity and frequency of wildfires. The County must prepare an Environmental Impact Report to analyze these and other potential environmental effects of its action, before considering adoption of the Ordinance.

VI. The County Has Not Identified a Valid Basis for the Ordinance.

The Ordinance proposes to establish the new HCWC overlay zone for wildlife movement based on habitat linkages mapped in a 2008 report titled *South Coast Missing Linkages (SCML)*. (Planning Commission Staff Report for PL16-0127, p. 5 (Staff Report).) The linkages mapped in *SCML* are, in turn, based on linkages identified in the 2001 report titled *Missing Linkages*. (Staff Report, p. 4.) As the CoLAB Letter explains, these documents were intended to be used as a starting point for regional planning, not as regulatory tools. Both the methods and the data on which the reports are based are outdated and, by current standards, scientifically flawed.

Because the County has conducted no CEQA review on the Ordinance, the reports have not been subject to appropriate review and scrutiny. However, an ECorp analysis of the biological modeling on which the reports and the Ordinance are based reveals serious problems, such as inaccurate classification of vegetation communities and habitat types, and outdated infrastructure mapping. (*See* CoLAB Letter, pp. 25-26.) The treatment of Newhall's property under the Ordinance highlights these concerns – as explained above, the proposed HCWC overlay zone includes portions of the property that have been used for commercial agriculture for decades, while the Ordinance and proposed overlay zone entirely fail to acknowledge the existing wildlife corridor that the County sought and obtained under the Wildlife Corridor Agreement, or the thousands of acres of adjacent open space associated with the Newhall Ranch RMDP.

The Ordinance and supporting materials also fail to acknowledge existing legal and regulatory protections for wildlife and its habitat, or to explain why these protections are not adequate and the County's action is needed. For example, both existing and future uses of Newhall's Ventura County property are subject to extensive regulation and oversight by the CDFW, USFWS, USACE, RWQCB, and other agencies charged with protecting wildlife and other natural resources. Fill activities within the Santa Clara River or its tributaries would require authorization from the USACE, RWQCB and CDFW; CDFW also regulates vegetation modification in those areas and adjacent riparian habitat to protect fish and wildlife values. Any activity that is likely to cause "take" of endangered or threatened species also requires authorization from the USFWS and/or CDFW under the federal Endangered Species Act and/or California Endangered Species Act. It is unclear what the Ordinance adds to the efforts of these expert agencies, other than additional delay and confusion.

The cumulative effect of these errors and oversights is that the record does not support the findings that are required by law to adopt the Ordinance. Among other issues, Government Code section 65358 requires the County to determine that the proposed General Plan amendment is in the public interest. In order to amend the County's zoning ordinance, the County must find that the proposed amendments would not be detrimental to the public health, safety or general welfare and would constitute good zoning practice. *See* NCZO § 8115-0. Due to the County's reliance on inaccurate, outdated information, and its failure to account for existing conservation mechanisms, the County's analysis overstates the potential benefits of the Ordinance, while understating its costs, and cannot provide a rational basis for these required findings.

VII. At Minimum, the County Must Clarify the Exemptions from the Ordinance.

The Ordinance suffers from many flaws that warrant reconsideration of the County's approach. However, if the Planning Commission intends to proceed with the Ordinance as proposed, it should, at minimum, direct revisions to the language of the Ordinance to minimize conflicts with existing uses and with important public safety and property management activities.

The following revisions to the draft Ordinance are proposed to clarify the scope and application of the vegetation modification exemptions in Section 8109-4.8.3.2.

Subsection (a). Revise to read as follows: "Vegetation modification or the installation of wildlife impermeable fencing that is required to comply with any federal, state or local law or regulation, or any condition or requirement of any permit, approval or order issued by any federal, state or local agency."

Subsection (l). Revise to read as follows: "Development, or a portion thereof, to the extent dependent upon being located within a surface water feature or a wildlife crossing structure setback area as described in Sec. 8109-4.8.3.4. Examples include instream mining, flood control improvements, road crossings and bridges, roadway improvements, and vegetation modification associated with the construction, maintenance, repair or replacement of such structures.

New subsection (o). Add a new subsection (o) that reads: "Vegetation modification reasonably required to maintain, repair or replace existing transportation, utility and public safety infrastructure. Examples include roads, bridges, pipelines, utility lines, flood control improvements, and drainage and irrigation ditches."

New subsection (p). Add a new subsection (p) that reads: "Development, including but not limited to vegetation modification, within any surface water feature that is authorized by any permit or approval issued by the California Department of Fish and Wildlife, Regional Water Quality Control Board, State Water Resources Control Board, U.S. Army Corps of Engineers, any of their successor agencies, or other local, state or federal agency responsible for protection of aquatic resources."

New subsection (q). Add a new subsection (q) that reads: "Vegetation modification carried out as part of a habitat preservation, restoration or enhancement project when specified by a mitigation plan, habitat conservation plan, or similar plan approved by the California Department of Fish and Wildlife, Regional Water Quality Control Board, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, or other local, state or federal agency responsible for conservation of wildlife resources."

Section 8109-4.8.3.5(b). Add the underlined language to acknowledge the possible application of vegetation modification exemptions: "A Zoning Clearance issued pursuant to Sec. 8111-1.1 is required to authorize any vegetation modification subject to and not prohibited by this Sec. 8109-4.8.3 that is limited exclusively to invasive plants within a surface water feature. …"

These revisions will not cure the legal flaws in the Ordinance, but they will help to make implementation of the Ordinance more manageable and less burdensome on property owners.

VIII. Conclusion

The County's proposed Ordinance would violate the Wildlife Corridor Agreement and raise serious due process and takings concerns, by restricting existing uses and arbitrarily limiting Newhall's ability to use its property. The County has failed to provide Newhall with adequate notice of its proposed actions or an opportunity to participate in development of the Ordinance, and has failed to comply with CEQA. Due to these flaws, and the County's inability to identify a valid basis for the proposed overlay zone and restrictions, the Ordinance faces serious legal vulnerabilities if adopted in its current form. Newhall has many other concerns about the proposed Ordinance, but, due to the County's failure to provide notice to Newhall or to engage Newhall in any stakeholder outreach, we have not had sufficient time to fully evaluate all flaws and potential defects of the Ordinance.

Newhall hopes to address its concerns with the Ordinance by working cooperatively with Planning staff to resolve the conflicts with the Wildlife Corridor Agreement and existing uses, and to revise the boundaries of the HCWC overlay zone as appropriate. As stated above, Newhall requests that the Planning Commission defer any action on the Ordinance until it has complied with CEQA, and that it direct Planning staff to engage with Newhall and other stakeholders to address the issues identified in this letter.

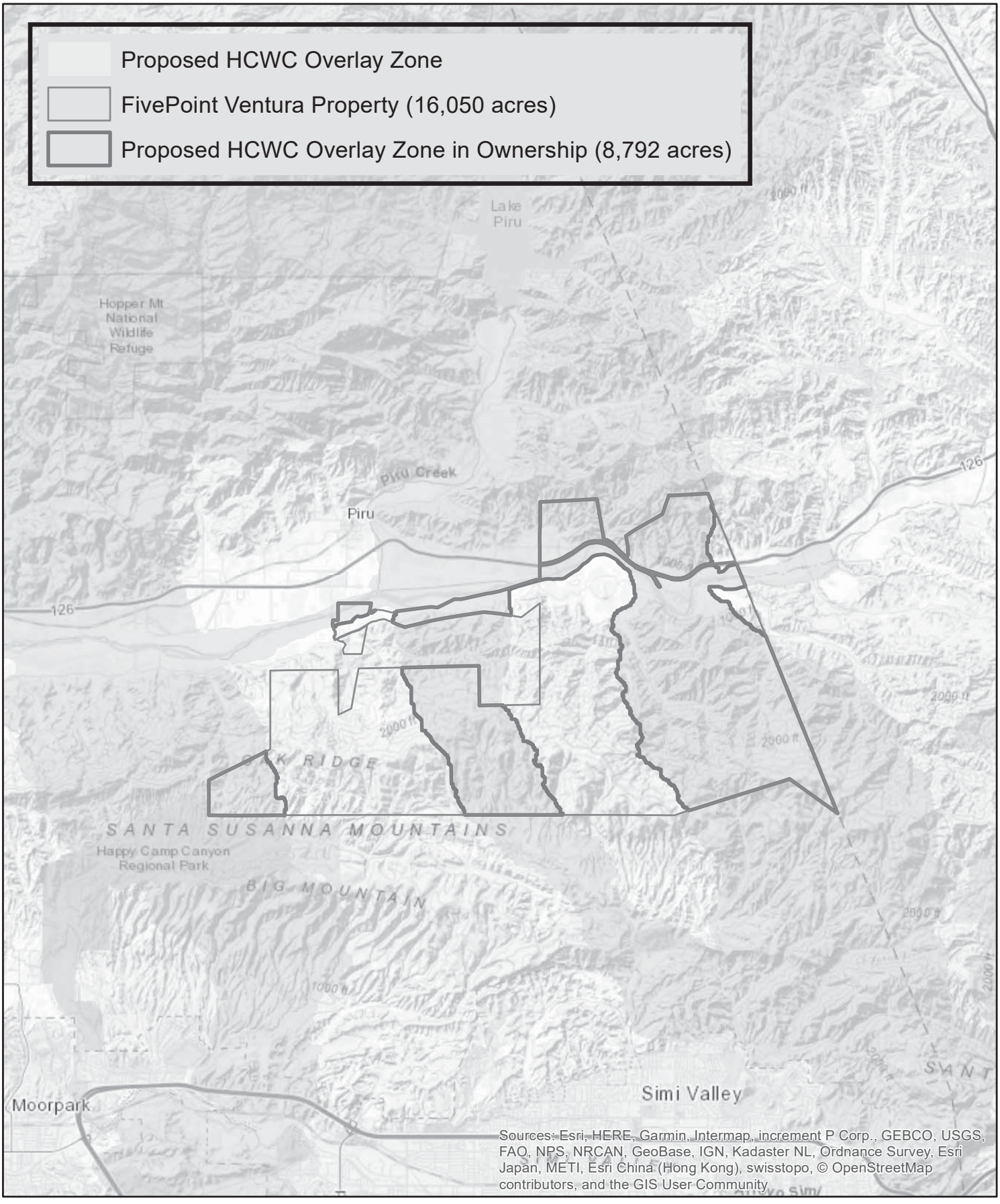
Sincerely,

James F. Rusk
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

SMRH:489353112.2
Attachments: Exhibits 1-5

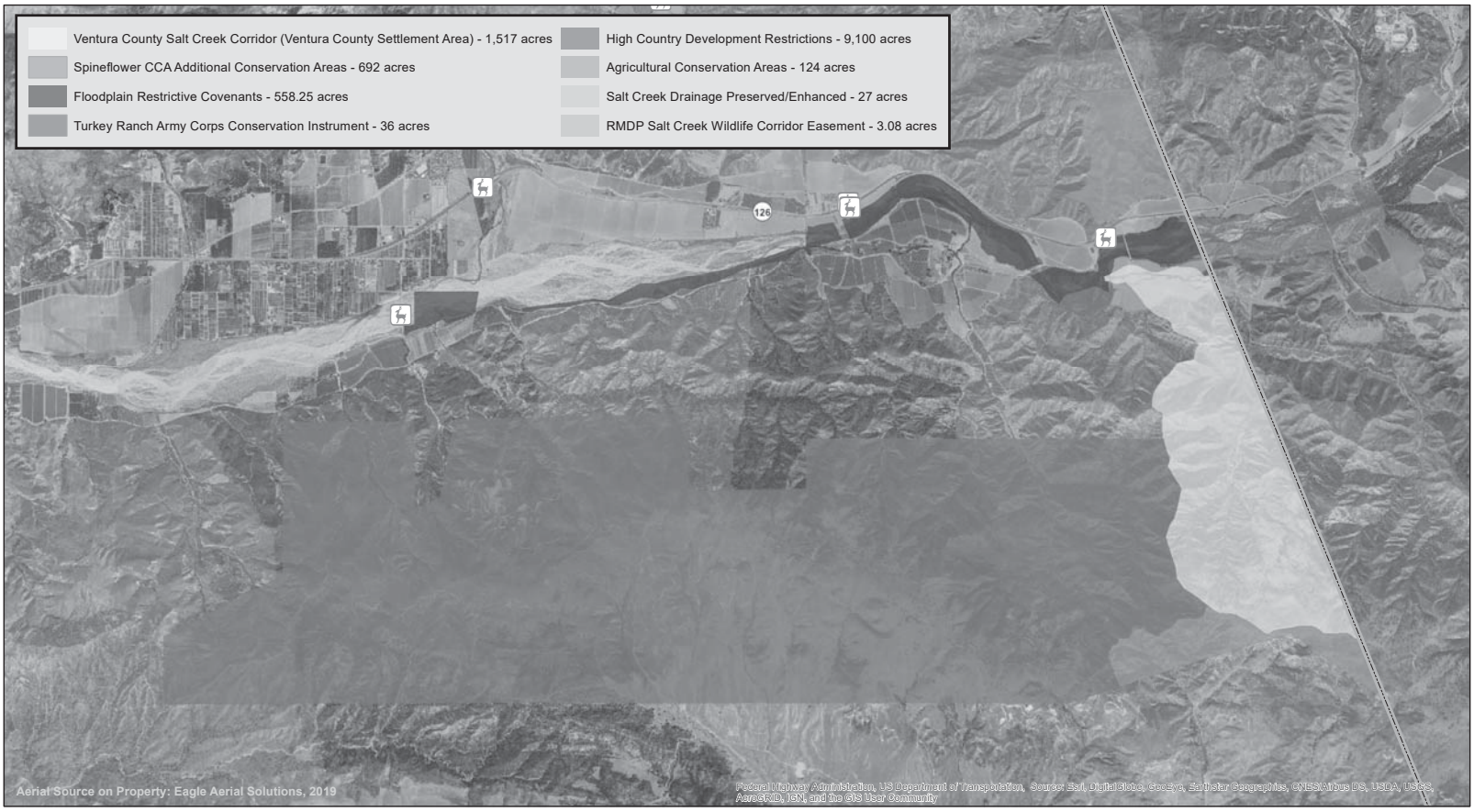
cc: Don Kimball, Newhall Ranch Community President, FivePoint
Matt Carpenter, Vice President Environmental Resources, FivePoint

EXHIBIT 1



FIVEPOINT VENTURA COUNTY PROPERTY OWNERSHIP
Ventura County Habitat Connectivity and Wildlife Corridor Ordinance

EXHIBIT 2



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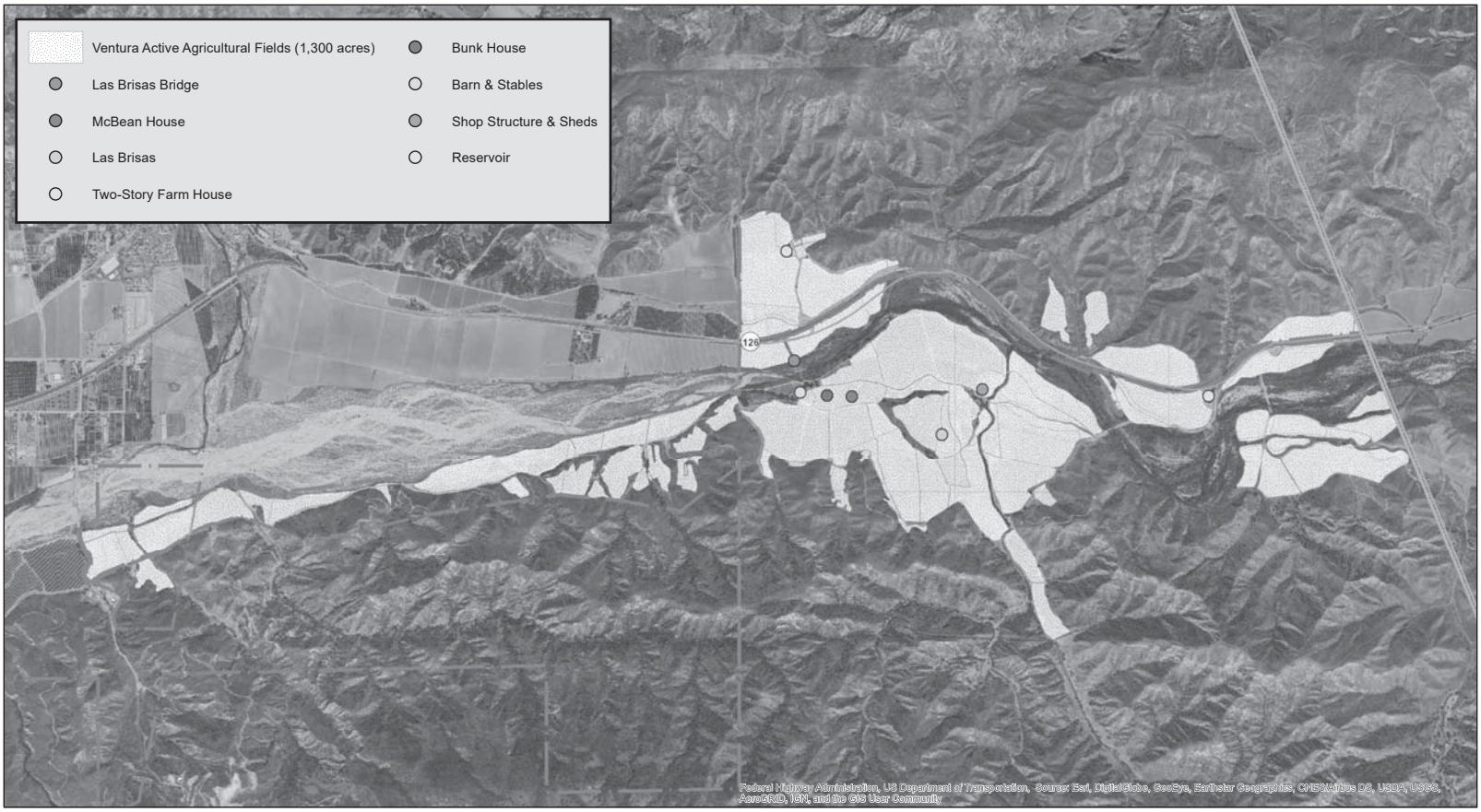
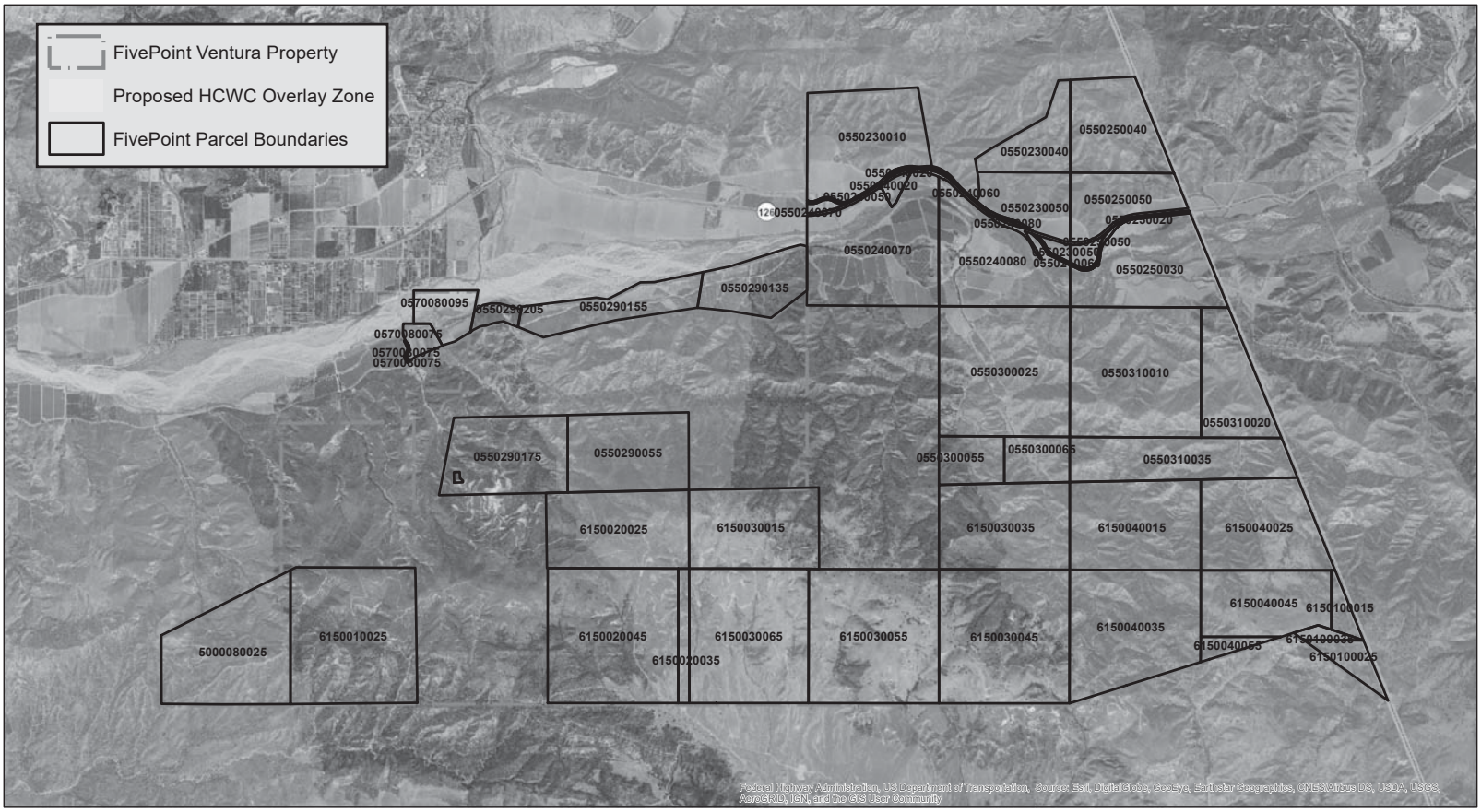
FIVEPOINT VENTURA COUNTY PROPERTY OWNERSHIP
Ventura County Habitat Connectivity and Wildlife Corridor Ordinance
FivePoint Existing Conservation Areas

EXHIBIT 3



FIVEPOINT VENTURA COUNTY PROPERTY OWNERSHIP
Ventura County Habitat Connectivity and Wildlife Corridor Ordinance
FivePoint Ventura Agricultural Operations

EXHIBIT 4



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FIVEPOINT VENTURA COUNTY PROPERTY OWNERSHIP
Ventura County Habitat Connectivity and Wildlife Corridor Ordinance
FivePoint Ownership APNs

EXHIBIT 5

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF KERN

UNITED WATER CONSERVATION DISTRICT,

Petitioner,

v.

COUNTY OF LOS ANGELES, *et al.*,

Respondents.

THE NEWHALL LAND AND FARMING COMPANY, *et al.*,

Real Parties in Interest.

MARIA VEGA, *et al.*,

Petitioners,

v.

COUNTY OF LOS ANGELES, *et al.*,

Respondents.

THE NEWHALL LAND AND FARMING COMPANY, *et al.*,

Real Parties in Interest.

[Continued on next page]

Case No. 239324-RDR
(Consolidated w/239325, 239326 and 239327-RDR)

Assignment for all purposes:
Honorable Roger D. Randall

STIPULATION RE: DISCHARGE OF COURT'S WRIT; AND [PROPOSED] ORDER

Date: October 14, 2003
Time: 8:30 a.m.
Place: Department 6

EXHIBIT 5

SIERRA CLUB, *et al.*,

Petitioners,

v.

COUNTY OF LOS ANGELES, *et al.*,

Respondents.

THE NEWHALL LAND AND FARMING COMPANY, *et al.*,

Real Parties in Interest.

COUNTY OF VENTURA, *et al.*,

Petitioners,

v.

COUNTY OF LOS ANGELES, *et al.*,

Respondents.

THE NEWHALL LAND AND FARMING COMPANY, *et al.*,

Real Parties in Interest.

The County of Los Angeles, *et al.*, The Newhall Land and Farming Company, *et al.*, and the County of Ventura, *et al.*, parties to the captioned action ("the Parties"), through their authorized counsel, stipulate as follows:

I. THE PARTIES AND PURPOSE OF THIS STIPULATION

1. The County of Ventura, the Ventura County Flood Control District, the Ventura County Air Pollution Control District, the City of Oxnard, the City of San Buenaventura, the City of Santa Paula and Fox Canyon Groundwater Management Agency (collectively, "Ventura County") are the named petitioners in Kern County Superior Court Case No. 239327 RDR ("the Ventura County Action"). Ventura County and the other entities are represented by Frank O. Sieh, County Counsel, County of Ventura, Dennis L. Slivinski, Assistant County Counsel.

2. The County of Los Angeles and the Board of Supervisors of the County of Los Angeles (collectively, "the County") are named respondents in the Ventura County Action. The County is represented by Lloyd W. Pellman, County Counsel, Richard D. Weiss, Principal Deputy, and Peter Gutierrez, Senior Deputy County Counsel.

3. The Newhall Land and Farming Company, a California limited partnership, Valencia Corporation, the Newhall Ranch Company, Newhall Management Limited Partnership and The Newhall Land and Farming Company, a California corporation (collectively, "Newhall") are the named real parties in interest in the Ventura County Action. Newhall is represented by Mark J. Dillon and Michael S. Haberkorn of Gatzke Dillon & Ballance LLP.

4. The purpose of this stipulation ("Stipulation") is to set forth the Parties' agreement with respect to the Salt Creek Corridor, one of the issues set forth in the Court's Peremptory Writ of Mandate, dated August 1, 2000 ("Writ"), and the issue raised by Ventura County in its written opposition to the County/Newhall's Return to Writ, filed on August 4, 2003. If approved by this Court, this Stipulation, set forth below, will result in the discharge of the Writ with respect to any and all issues raised, or that could have been raised, by Ventura County.

II. TERMS OF DISCHARGE OF WRIT ON SALT CREEK CORRIDOR

A. Newhall Ranch Additional Analysis

5. The Parties stipulate that, pursuant to the Writ, the Newhall Ranch Additional Analysis determined the effect caused by the shifting of wildlife into that portion of the Salt Creek Corridor situated in Ventura County. The Parties further stipulate that, pursuant to the Writ, the County's Board of Supervisors considered the Additional Analysis and adopted new Findings and a Statement of Overriding Considerations, pursuant to the California Environmental Quality Act ("CEQA"), including the imposition of an off-site condition (hereafter, "the Salt Creek Condition") requiring dedication in fee and/or conservation easement of 1,517 acres of land in the remaining Salt Creek watershed in Ventura County, adjacent to the Newhall Ranch Specific Plan.

B. Salt Creek Condition

6. The Salt Creek Condition adopted by the County's Board of Supervisors provides as follows:

> "**Salt Creek Condition.** Upon approval of the first tract map adjacent to Ventura County in the Oak Valley Village of the Newhall Ranch Specific Plan, the applicant has agreed to grant to the public in perpetuity the approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County. The applicant, or its designee, shall satisfy this condition by dedicating said land in fee and/or by conservation easement, as determined by the County in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the Newhall Ranch High Country Special Management Area (SMA). Said land *shall be managed in conjunction with and in the same manner as the High Country SMA*." (*See*, Newhall Ranch Additional Administrative Record ("AAR") 69:64392; *emphasis added.*)

The County and Newhall clarify that the above Salt Creek Condition will be triggered upon approval of the first tract map within the Oak Valley Village of the Newhall Ranch Specific Plan.

In addition, Ventura County desires, and the County and Newhall are willing to provide, confirmation that the Ventura County portion of Salt Creek Corridor "*shall be managed in conjunction with and in the same manner*" as the High Country Special Management Area ("High

Country SMA"). For a map depicting the Salt Creek Condition area, described as the "1,517-Acre Off-Site Salt Creek Conservation Easement/Dedication Area," please see Exhibit A, attached hereto and made a part of this Stipulation. The balance of this Stipulation addresses specific issues raised by Ventura County requiring confirmation by the County and Newhall.

C. Cattle Grazing

7. Pursuant to the Resource Management Plan contained in the adopted Newhall Ranch Specific Plan (Section 2.6), cattle grazing in the High Country SMA shall be prohibited, except when such activities are associated with long-term resource management programs:

> "The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with long-term resource management programs, and shall restrict recreation to the established trail system." (AAR 69:63360.)

In addition, the Resource Management Plan also specified that upon dedication of the High Country SMA, commercial grazing operations will cease within the phase dedicated, and grazing will only be permitted for the purpose of resource conservation. (AAR 69:63412, fn. 20.)

The County and Newhall confirm that upon dedication of the fee and/or conservation easement pursuant to the timing set forth in the Salt Creek Condition, the cattle grazing prohibitions contained in the Resource Management Plan shall be applied to the Ventura County portion of the Salt Creek Corridor in conjunction with and in the same manner as the High Country SMA.

D. Existing Agricultural Operations

8. The permitted uses and development standards for the High Country SMA are governed by the Development Regulations contained in the adopted Newhall Ranch Specific Plan (Chapter 3). (AAR 69:63358.) Under the Development Regulations, existing agricultural operations are permitted to continue within the High Country SMA (AAR 69:63402), however, if

such operations are proposed to be expanded beyond the historical areas of operation, any such proposed expansion must be reviewed under the County General Plan significant Ecological Area ("SEA") criteria, and Section 22.56.215 of the Los Angeles County Planning and Zoning Code (AAR 69:63402, 63412 fn. 18). Furthermore, any such proposed expansion of existing agricultural operations may require a Conditional Use Permit (AAR 69:63412, fn. 16).

The County and Newhall confirm that, because the Ventura County portion of the Salt Creek Corridor is to be managed in conjunction with and in the same manner as the High Country SMA, existing agricultural field operations within the Ventura County portion of the Salt Creek Corridor are permitted to continue; however, effective as of the date this Stipulation is signed by the Court, Newhall will not expand or intensify its existing agricultural field operations within the Ventura County portion of the Salt Creek Corridor. In order to clarify the location of Newhall's existing agricultural field operations within the Ventura County portion of the Salt Creek Corridor, the parties have attached the Figure entitled, "Salt Creek Condition," as Exhibit B, which is made a part of this Stipulation. Currently, the existing agricultural field operations within the Newhall County portion of the Salt Creek Corridor, as shown on Exhibit B, consists of row crops and orchards. These are the "existing agricultural field operations" within the Ventura County portion of the Salt Creek Corridor that will neither be intensified, nor expanded.

E. Conservation and Management Easement

9. Under the Resource Management Plan, prior to dedication of the High Country SMA, a conservation and management easement must be offered to the Center for Natural Lands Management ("the Center"). (AAR 69:63359.) The High Country SMA shall then be offered for dedication in fee to a joint powers authority consisting of Los Angeles County (four members), the City of Santa Clarita (two members) and the Santa Monica Mountains Conservancy (two members). *Ibid.* The Joint Powers Authority will have overall responsibility for recreation in and conservation of the High Country SMA. *Ibid.*

(two members). *Ibid.* The Joint Powers Authority will have overall responsibility for recreation in and conservation of the High Country SMA. *Ibid.*

The County and Newhall confirm that, prior to dedication of the Ventura County portion of the Salt Creek Corridor, a conservation and management easement must be offered to the Center. The Ventura County portion of the Salt Creek Corridor shall then be offered for dedication in fee and/or conservation easement to the Joint Powers Authority having overall responsibility for the High Country SMA. The timing of the Salt Creek dedication is specified in the Salt Creek Condition above (*i.e.*, upon approval of the first tract map in the Oak Valley Village of the Specific Plan).

It is the intent of this stipulation to give primary consideration to preservation of the wildlife corridor located within the Ventura County portion of the Salt Creek Corridor, and to discourage any activities inconsistent with this preservation policy.

F. Candidate Riparian Restoration/Enhancement Areas

10. Under the Resource Management Plan, mitigation for impacts of the Specific Plan on riparian resources will include restoration of riparian habitat and may include enhancement activities as well. (AAR 69:63336.) The general areas in which riparian restoration/enhancement activities may take place are shown in the Specific Plan's Resource Management Plan, Exhibit 2.6-3, entitled, "Candidate Riparian Restoration/Enhancement Areas." (AAR 69:63336-63337.)

The County and Newhall confirm that, like the High Country SMA, the Ventura County portion of the Salt Creek Corridor will include a "Candidate Riparian Restoration/ Enhancement Area," even though not required as mitigation for impacts of the Newhall Ranch Specific Plan. This candidate area is depicted on Exhibit B, referenced above.

/ / /

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G. Funding Provisions

11. Funding for management of the High Country SMA consists of a $2 million endowment (in 1997 dollars) to the Center by Newhall for the perpetual conservation management of the resources in the High Country, the River Corridor and Open Area, by that certain "Agreement for the Donation and Management of the Open Area, High Country and River Corridor of Newhall Ranch" ("the Newhall/Center Agreement;" AAR 69:70404-473). In addition, the Resource Management Plan includes a per unit assessment fee for the High Country SMA to be established under the authority of the County's Board of Supervisors. (AAR 69:63360, 64406.)

In order to treat the Ventura County portion of the Salt Creek Corridor in the same manner as the High Country SMA, the County and Newhall confirm that Newhall and the Center will amend the existing Newhall/Center Agreement to include the Ventura County portion of the Salt Creek Corridor for perpetual conservation management. In addition, the County and Newhall confirm that, like the High Country SMA, the Ventura County portion of Salt Creek Corridor will be included in the proposed assessment to be established under the authority of the County's Board of Supervisors.

H. Other Provisions

12. The agreement outlined above shall have no force or effect unless and until the Court issues an order approving this Stipulation. If the Court approves this Stipulation, the Parties mutually request that the Court find that the Writ has been satisfied with respect to the Salt Creek Corridor issue and, therefore, discharge the Writ with respect to any and all issues raised, or that could have been raised, by Ventura County.

13. The Parties to this Stipulation shall bear their own attorneys fees and costs in connection with this return to writ proceeding. Nothing contained in this Stipulation is intended to waive or otherwise affect in any way the County and Newhall's right to recover costs against the other named petitioners in this proceeding.

14. This Stipulation may be executed by facsimile signatures and executed in counterparts.

Lloyd W. Pellman, County Counsel

September __, 2003

By:_____
Peter J. Gutierrez, Senior Deputy
County Counsel

Attorneys for Respondents, the County of Los Angeles and Board of Supervisors

Gatzke Dillon & Ballance LLP

September __, 2003

By:_____
Mark J. Dillon

Attorneys for Real Parties in Interest, The Newhall Land and Farming Company, et al.

Frank O. Sieh
County Counsel, County of Ventura
Dennis L. Slivinski, Assistant County Counsel

October ~~September~~ 8, 2003

By: Dennis L. Slivinski
Dennis L. Slivinski
Assistant County Counsel

Attorneys for Petitioners, the County of Ventura, *et al.*

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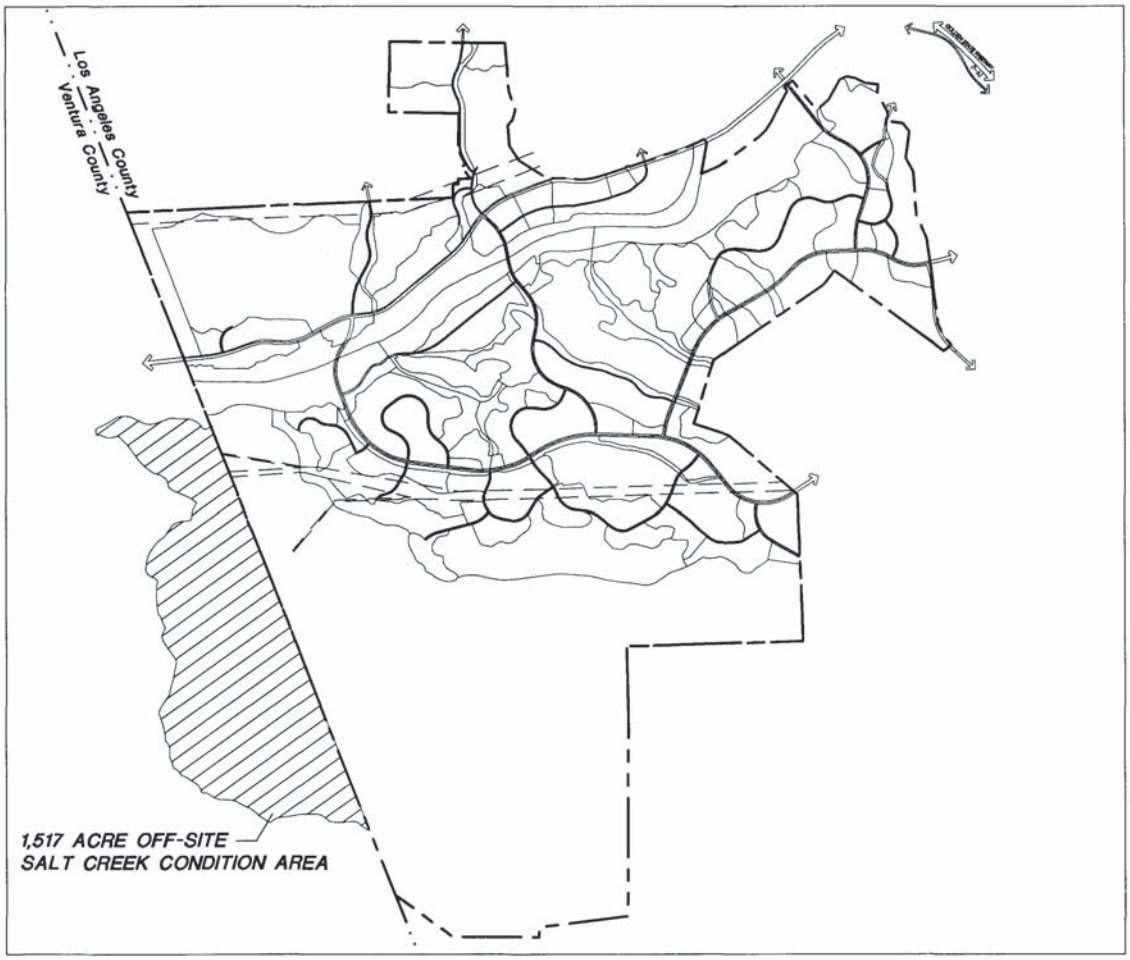
ORDER

After having considered this Stipulation, and for good cause shown, the Court finds that the Writ has been satisfied with respect to the Salt Creek Corridor issue and, therefore, discharges the Writ as to any and all issues raised, or that could have been raised, by Ventura County.

Dated:_____

_____
Honorable Roger D. Randall
Judge of the Kern County Superior Court



LEGEND

1,517 ACRE OFF-SITE SALT CREEK CONDITION AREA

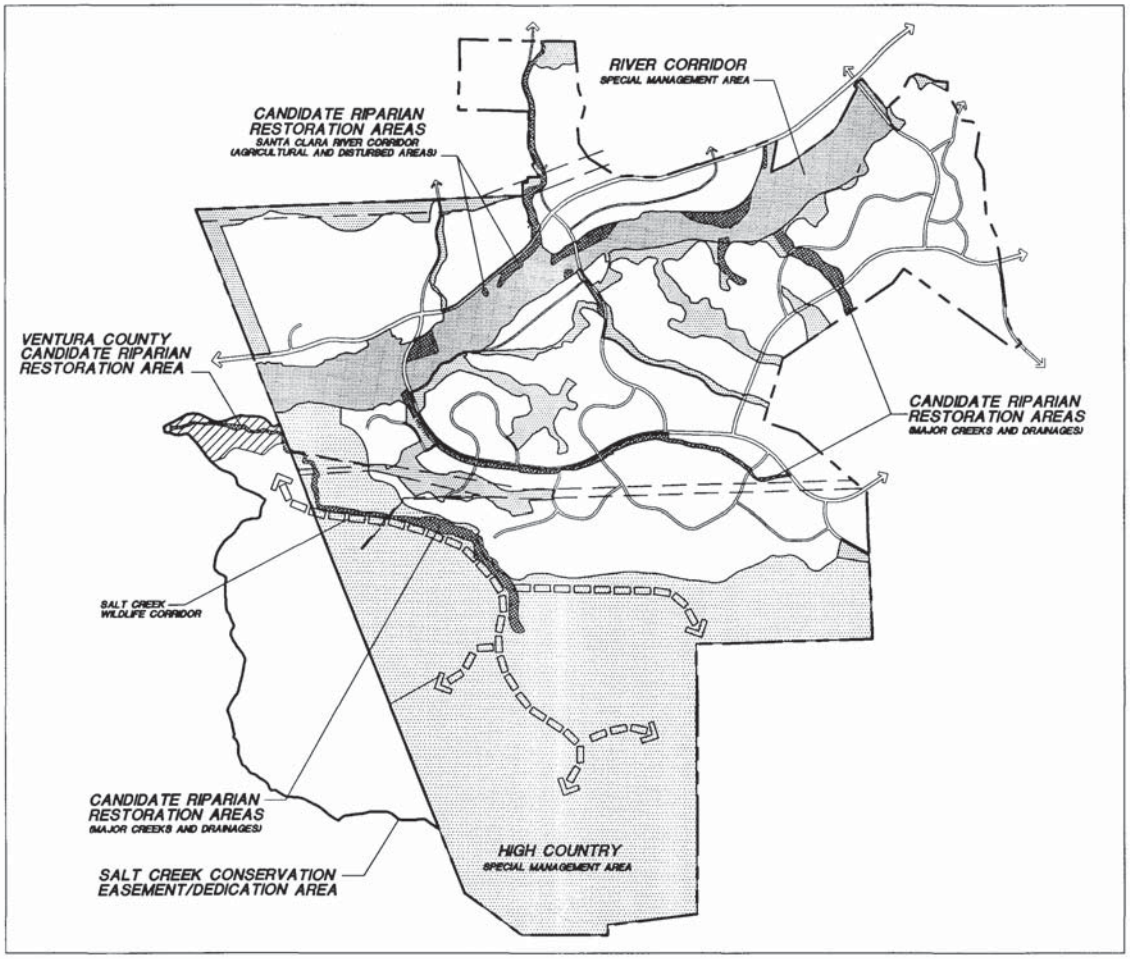
SPECIFIC PLAN BOUNDARY

COUNTY LINE

EXHIBIT 5

EXHIBIT A
OFF-SITE SALT CREEK CONDITION AREA IN RELATION TO NEWHALL RANCH SPECIFIC PLAN

MAY 2003



NEWHALL RANCH.
SPECIFIC PLAN

Prepared For: Newhall Ranch Company

LEGEND

- CANDIDATE RIPARIAN RESTORATION AREAS
- EXISTING AGRICULTURAL FIELDS IN SALT CREEK DEDICATION AREA
- OPEN AREA
- RIVER CORRIDOR SPECIAL MANAGEMENT AREA
- HIGH COUNTRY SPECIAL MANAGEMENT AREA
- WILDLIFE CORRIDOR

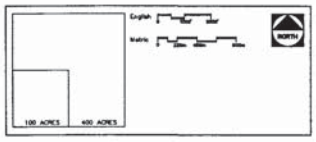


EXHIBIT B
SALT CREEK CONDITION

MAY 2003

EXHIBIT 5

Appendix B

Ventura County 2040 General Plan Update Background Report, Revised Public Review Draft January 2020

Ventura County 2040 GENERAL PLAN

VENTURA COUNTY
2040 GENERAL PLAN UPDATE

Background Report

Revised Public Review Draft
January 2020

Background Report Errata – January 2020

A general plan is typically comprised of two primary documents: a background report and a policy document. The Background Report for the 2040 General Plan is intended to provide a "snapshot" in time of the county's existing conditions. It is a wide-ranging and comprehensive document that presents the physical, social, and economic resource information required to support the preparation of the General Plan. It also serves as the foundation document from which subsequent planning policies and programs were formulated. The Background Report is also used to establish the environmental setting for the 2040 General Plan Program Environmental Impact Report (EIR). This eliminates both duplication of effort and the potential for inconsistent use of data between the General Plan and Program EIR.

The County published the public review draft of the Background Report in March 2017, followed by a revised public review draft in October 2017, and a subsequent revision in January 2018. The Background Report was received and filed by the Board of Supervisors on January 23, 2018.

During the time between publication of the draft Background Report in January 2018 and completion of the draft Program EIR, some changes have occurred relative to the environmental and regulatory environments. Where changes to the environmental or regulatory setting (e.g., new information, regulatory changes) have occurred since publication of the Background Report, and these changes are relevant to understanding the 2040 General Plan's potential impacts, additional background information is provided in the appropriate EIR resource section (as part of Sections 4.1 through 4.17). The reader is referred to this Background Report for all other setting information.

At the direction of the Board of Supervisors, two updates were made directly within this Background Report to develop the January 2020 version.

Section 8.2, Biological Resources
In the subsection on Habitat Connectivity/Wildlife Corridors, a map and description of regulations proscribing siting and permitting standards for new development in Habitat Connectivity and Wildlife Corridors (HCWC) was added to reflect amendments to the Non-Coastal Zoning Ordinance (Habitat Connectivity and Wildlife Corridor Ordinances (Ord. 4537 & Ord. 4539)) adopted on March 12, 2019.

Section 11.3, Wildfire Hazards
Figure 11-10, Wildfires History Map, was updated to reflect wildfires in the county through 2018, including the Thomas Fire that impacted parts of Ventura and Santa Barbara counties in late 2017.

Please see the next page.

ACKNOWLEDGEMENTS

Board of Supervisors

Steve Bennett, District 1

Linda Parks, District 2

Kelly Long, District 3

Bob Huber, District 4

John C. Zaragoza, District 5

Planning Commission

Phil White, Vice Chair, District 1

Nora Aidukas, Chair, District 2

W. Earl McPhail, District 3

Jim King, District 4

Richard Rodriguez, District 5

Cover Photo: County of Ventura

Lead County Staff

Kim Prillhart
Resource Management Agency Director
Dave Ward
Planning Division Director

General Plan Update Team

Susan Curtis, Manager - General Plan Update
Shelley Sussman, Senior Planner
Clay Downing, Associate Planner

Technical Advisory Committee (TAC)

Ed Williams, Agricultural Commissioner
Korinne Bell, Deputy Agricultural Commissioner
Mike Villegas, Air Pollution Control District
Charles Genkel, Environmental Health Division
Sue Hughes, County Executive Office
Christy Madden, County Executive Office
Jorge Rubio, Department of Airports
Massoud Araghi, Fire Protection District
Larry Williams, Fire Protection District
David Sasek, General Services Agency
Mark Sandoval, Harbor Department
Rigoberto Vargas, Health Care Agency
Brian Ganley, Information Technology Services Division
Jeff Pratt, Public Works Agency
Michaela Brown, Public Works Agency
Chris Cooper, Public Works Agency
David Fleisch, Public Works Agency
Kevin McGowen, Sheriff's Office
Nancy Schram, Ventura County Library
Glenn Shepard, Watershed Protection District

Agricultural Policy Advisory Committee (APAC)

Scott Deardorf, APAC Member, District 1
Sanger Hedrick, APAC Member, District 2
Gordon Kimball, APAC Member, District 3
Patty Waters, APAC Member, District 4
Bobby Jones, APAC Member, District 5

Municipal Advisory Councils (MAC)

Ojai Valley Municipal Advisory Council, District 1
Somis Municipal Advisory Council, District 2
Oak Park Municipal Advisory Council, District 2
Santa Rosa Valley Municipal Advisory Council, District 2
Casa Conejo Municipal Advisory Council, District 2
El Rio/Del Norte Municipal Advisory Council, District 5

Neighborhood Councils

Piru Neighborhood Councils, District 3

Lead Consultants to the County

Mintier Harnish

Jim Harnish, JD, Principal
General Plan Update Project Director

Rick Rust, AICP, GISP, Principal Planner
General Plan Update Project Manager
Renée Funston, Associate Planner

Supporting Consultants

Applied Development Economics (ADE)

Doug Svensson, AICP, President
Peter Cheng, Senior Associate

Ascent Environmental

Honey Walters, Principal
Andrew Martin, Senior Environmental Planner
Dan Krekelberg, Climate Planning Specialist

GHD

Jim Damkowitch, Senior Project Manager

Kennedy Jenks

Meredith Clement, Water Resources Project Manager
Catrina Paez, Water Resources Specialist

Moore Iacofano Goltsman (MIG)

Lisa Brownfield, Director of Planning Services
John Baas, Ph.D., Principal/Environmental Lead
Andy Pendoley, Project Manager/Outreach

ERM

Jennifer Lee, Principal
Ashley Rosia-Tremonti, Project Manager

True North Research, Inc.

Timothy McLarney, Ph.D., President

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Ventura County 2040 GENERAL PLAN

Chapter 1
Introduction

1 INTRODUCTION

This chapter describes the purpose and organization of the General Plan, and provides an overview of what a General Plan is, why it is prepared, and why it is important. This chapter also provides an overview of the purpose, format, and organization of the General Plan Background Report.

This chapter is organized into the following sections:

- What is a General Plan? (Section 1.1)
- Using the General Plan (Section 1.2)
- Regional Setting and Planning Boundaries (Section 1.3)
- Purpose of the Background Report (Section 1.4)
- Format of the Background Report (Section 1.5)
- Organization of the Background Report (Section 1.6)

SECTION 1.1 WHAT IS A GENERAL PLAN?

Introduction

California State Law requires each city and county in the state to adopt a general plan "for the physical development of the county or city, and of any land outside its boundaries which bears relation to its planning." A general plan serves as the jurisdiction's "constitution" or "blueprint" for future decisions concerning a variety of issues, including land use, health and safety, and resource conservation. All specific plans, area plans, subdivisions, public works projects, and zoning decisions must be consistent with the local jurisdiction's general plan. The Ventura County General Plan contains the goals and policies upon which the Board of Supervisors and Planning Commission base their land use decisions. Typically, the time horizon for a general plan ranges from 15 to 25 years. The horizon year for Ventura County's General Plan Update is 2040, resulting in a planning horizon of 20 years.

A general plan has four defining features:

- **General.** As the name implies, a general plan provides general guidance for future land use, transportation, environmental, and resource decisions.
- **Comprehensive.** A general plan addresses a wide range of social, economic, infrastructure, and natural resource topics. These topics include land use, urban development, housing, transportation, public facilities and services, recreation, agriculture, biological resources, and many other issues that impact the community.

- **Long-Range.** A general plan provides guidance on achieving a long-range vision of future growth and development for a jurisdiction. To achieve this vision, the general plan includes goals, policies, and implementation programs that address both near-term and long-term needs.
- **Integrated and Coherent.** The goals, policies, and implementation programs in a general plan present a comprehensive, unified approach to development, resource conservation, and other issues that impact the health and wellness of the community. A general plan uses a consistent set of assumptions and projections to assess future demands for housing, employment, and public services (e.g., infrastructure). For instance, projections prepared at the state level (by the California Department of Finance) or regional level (by the Southern California Association of Governments), actual historical growth rates experienced in the unincorporated areas of the county, and other projections provide the basis for assessing the potential land supply needed to meet demand associated with the projections. Land use density and intensity standards specify clearly how the County expects land to develop and what the holding capacity of the land is (in dwelling units or square footage). This information combines with unit-based assumptions for employment and population (e.g., square footage per employee, population per household) to provide the basis for determining how well a plan is addressing potential demand. A general plan has a coherent set of policies and implementation programs that enables citizens to understand the vision of the County and enables landowners, businesses, and industry to be more certain about how policies will be implemented.

A general plan is made up of "elements," or chapters, of which seven are mandatory. The seven State-mandated elements are (1) land use, (2) circulation, (3) housing, (4) conservation, (5) open space, (6) noise, and (7) safety. Communities may include other elements that address issues of particular local concern, such as agriculture or climate change. Communities can also organize their general plan any way they choose, as long as the required topics are addressed.

SECTION 1.2 USING THE GENERAL PLAN

The Board of Supervisors, Planning Commission, and County staff use the General Plan on a daily basis to make decisions with direct or indirect land use implications. The General Plan also provides a framework for inter-jurisdictional coordination of planning efforts among officials and staff of the county and other government agencies (e.g., federal, state, and local). County residents, property owners, and businesses also use the General Plan for guidance on county policies for particular geographic areas or for particular subjects of interest to them.

The General Plan is the basis for a variety of regulatory measures and administrative procedures. California planning law requires consistency between general plans and their implementing programs, such as zoning and subdivision ordinances, capital improvement programs, specific plans, area plans, environmental impact assessment procedures, and building codes. That said, a general plan should not be confused with zoning. Although both general plans and zoning ordinances designate how land may be developed, they do so in different ways. General plans have a long-term outlook. They identify the types of development that will be allowed, the spatial relationships among land uses, and the general pattern of future development. Zoning regulates development through specific standards such as lot size, building setback, and allowable uses. The land uses shown on general plan diagrams or maps will, however, typically be reflected in local zoning maps as well, as State law requires that they be consistent with one another. Development must not only meet the specific requirements of a zoning ordinance, but also the broader policies set forth in a general plan.

The Ventura County Zoning Ordinance is divided into the Coastal Zoning Ordinance (CZO) for coastal areas and the Non-Coastal Zoning Ordinance (NCZO), which covers all areas outside the Coastal Zone. Both codes exist to protect and promote the public health, safety, and general welfare; to provide the environmental, economic, and social benefits that result from an orderly, planned use of resources; to establish the most beneficial and convenient relationships among land uses; and to implement Ventura County's General Plan.

In addition to the zoning ordinances, the County's Initial Study Assessment Guidelines (ISAGs) also provide guidance related to the potential environmental effects of growth and development in the county. The purpose of the ISAGs is to inform the public, project applicants, consultants, and County staff of the threshold criteria and standard methodology used in determining if a project (individually or cumulatively with other projects) could have a significant effect on the environment. The ISAGs provide the framework for consistent, objective, and predictable evaluation of environmental effects. The guidance provided by the ISAGs must also be consistent with, and support the policies of, the General Plan. The ISAGs were comprehensively updated in 2011.

The Ventura County General Plan consists of two documents: the Background Report and the Policy Document, which are further described below.

- **Background Report.** The Background Report takes a "snapshot" of existing (2016) conditions and trends in Ventura County. It is divided into 12 chapters that cover a wide range of topics within the county, such as demographic and economic conditions, land use, public facilities, and environmental resources. Unlike the Policy Document, the Background Report is objective and policy-neutral and provides decision-makers, the public, and local agencies with context for making policy decisions. The Background Report also serves as the basis for the "Environmental Setting" section of the Environmental Impact Report (EIR) for the General Plan.
- **Policy Document.** The Policy Document is the essence of the General Plan. It contains the goals and policies that will guide future decisions within the county. It also identifies a set of implementation programs that will ensure the goals and policies in the General Plan are carried out. Finally, it includes land use designations and a land use diagram (or map) that specify the intended use of land throughout the unincorporated area of county.

  Over time, the county's population will increase, its goals will evolve, and the physical environment will change. For the county's General Plan to be a useful document, it must be monitored and periodically revised to respond to and reflect changing conditions, needs, and priorities. A general plan should be reviewed annually. A more comprehensive and thorough review and revision should be done every five to ten years to assess whether it needs to be refined to reflect changes in local conditions, new local priorities, or State law. State law permits a general plan to be amended up to four times in any calendar year, unless special conditions apply as defined by Government Code Sections 65358(c) and (d). Each amendment may contain more than one change to the general plan.

As part of the Ventura County General Plan update process, the County will also prepare the following General Plan supporting documents:

- **Alternatives Report.** The Alternatives Report will describe the development and evaluation of land use and/or policy alternatives. The report will be designed to frame an active discussion among stakeholders, community members, and County decision-makers, leading to direction

from the Board of Supervisors that will provide the basis for preparation of the Draft General Plan.

- **Environmental Impact Report.** An environmental impact report (EIR) presents detailed information about a proposed project's environmental effects, includes options for minimizing a project's significant environmental impacts, and presents reasonable alternatives that would create fewer environmental impacts than the one being proposed. The analysis presented in the EIR must comply with the requirements of the California Environmental Quality Act (Sections 15126, 15175, and 15176 of the CEQA Guidelines). The Planning Commission and Board of Supervisors will review the EIR to understand potential environmental implications associated with implementation of the General Plan and to identify feasible mitigation measures.

SECTION 1.3 REGIONAL SETTING AND PLANNING BOUNDARIES

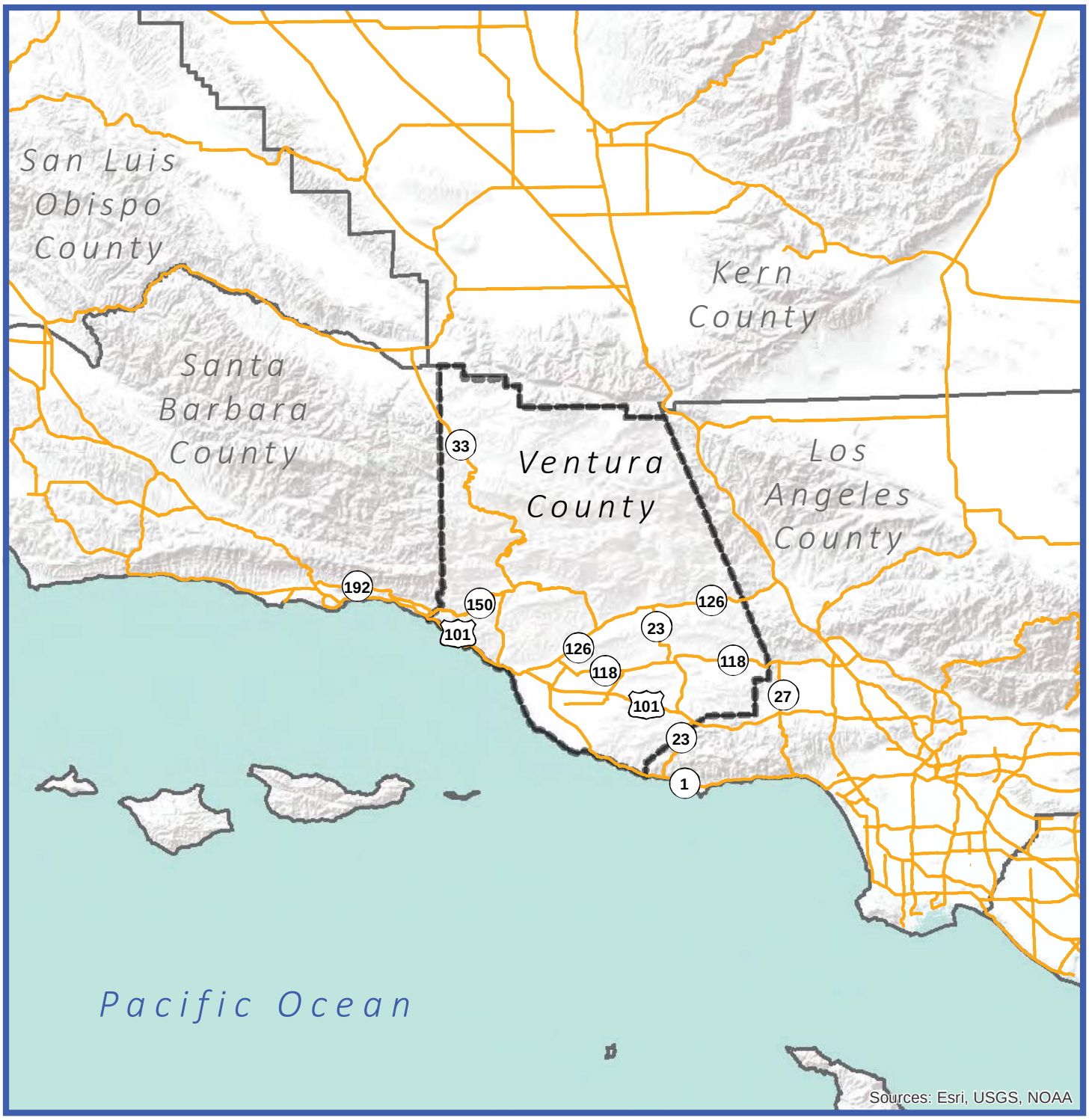
Ventura County formed on January 1, 1873, when it separated from Santa Barbara County. The county covers approximately 1.2 million acres spanning approximately 42 miles along the Pacific Coast. As shown on Figure 1-1, Ventura County is bordered by Los Angeles County to the east and south, Santa Barbara County to the west, and Kern County to the north. The Los Padres National Forest accounts for approximately 46 percent of the county's total land area.

The General Plan uses several terms to describe the county and areas beyond, including the following:

- **Area of Interest.** An Area of Interest is a major geographic area reflective of community and planning identity. The Ventura Local Agency Formation Commission (LAFCo) established "areas of interest" in Ventura County in the late 1960s. Areas of interest divide the south half of Ventura County (the non-Forest Service land) into 15 major geographic planning areas based primarily on topography and community identity (see Figure 3-3 in Chapter 3 of this Background Report). They are areas created by local policy that are not based on any legislative direction or mandate. The basic policies are to have no more than one city in any area of interest and to have areas of interest serve as planning referral lines between the County and cities for discretionary land use entitlements. Areas of interest have been reviewed and updated periodically in conjunction with the Guidelines for Orderly Development and the County of Ventura General Plan.
- **Area Plan.** Area plans are an integral part of a general plan. An area plan specifies the distribution, location, types and intensity of land uses, and provides specific policies concerning development in a distinct geographical area. The goals, policies, and programs of an area plan are designed to supplement, not duplicate the general plan, and, therefore, an area plan should be read in conjunction with the general plan. There are nine area plans in the county which are listed in Section 3.1 of this document.
- **City Limits.** The city limits include the area within a city's corporate and jurisdictional boundary, for which it exercises land use authority and provides public services.
- **County Boundary.** The jurisdictional boundary of the county. State law requires counties to adopt a general plan that addresses physical development within its county boundary.
- **Existing Community.** The Existing Community land use designation in the existing General Plan identifies existing urban residential, commercial, or industrial enclaves located outside

urban-designated areas. Several existing communities have been identified in Ventura County, including areas such as Bell Canyon and Camarillo Heights.

- **Planning Area.** A general plan, pursuant to State law, must address all areas within the jurisdiction's "planning area," which is defined as the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise its own judgment in determining what areas outside of its boundaries to include in the planning area. As a practical matter, the planning area for a countywide general plan is typically the county boundary, and this is the case with the Ventura County General Plan. This differs from municipal general plans, which may consider land outside of municipal boundaries in anticipation of potential expansion of jurisdictional responsibility (e.g., annexation of adjacent unincorporated areas). For statistical analysis purposes, Ventura County divides the county into geographical subareas, or "planning areas." In this case, the use of the term "planning area" is not synonymous with the term as defined in State planning law. These planning areas are based on the 10 incorporated cities and five subareas for unincorporated areas, as shown in Figure 3-1 in Chapter 3 of this Background Report; they do not necessarily represent the planning areas covered by municipal general plans according to the State planning law definition.
- **Sphere of Influence.** A Sphere of Influence (SOI) is the probable ultimate physical boundary and service area of a local agency, as adopted by LAFCo. An SOI includes both incorporated and unincorporated areas within which a city or special district will have primary responsibility for the provision of public facilities and services.
- **Unincorporated Urban Center**. An existing or planned community located in an Area of Interest where no city exists. The unincorporated urban center represents the focal center for community and planning activities within the Area of Interest. For example, the community of Piru represents the focal center in the Piru Area of Interest.



Ventura County Boundary

Counties

Major Roadways

Figure 1-1:
Regional Setting

Map Date: July 27, 2017

Source: Ventura County, 2016; Esri; USGS; NOAA.

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SECTION 1.4 PURPOSE OF THE BACKGROUND REPORT

The Background Report provides a "snapshot" in time of the County's existing conditions. It presents physical, social, and economic resource information to support the preparation of the General Plan. The data and information in the Background Report have a baseline date of June 2016.

The Background Report serves as the foundation document from which subsequent planning policies and programs will be formulated. The document is also used as the "environmental setting" section of the General Plan EIR.

SECTION 1.5 FORMAT OF THE BACKGROUND REPORT

Each topical section of each Background Report chapter includes the following:

- **Introduction.** The introduction provides a brief description of the issues covered in the section.
- **Major Findings.** Each section contains a brief summary of key findings. The findings present key facts and preliminary issues from the section. These findings serve as the basis for the identification of issues to be addressed in the Policy Document.
- **Existing Conditions.** This section describes existing conditions for each resource or issue area.
- **Regulatory Setting.** Each section summarizes the laws and regulations pertaining to the topics identified. Federal, State, and local regulations are described, as applicable. In the case of local regulations, each section cites where relevant content can be found in the 2005 General Plan, the Initial Study Assessment Guidelines, and the Non-Coastal and Coastal Zoning Ordinances.
- **Key Terms.** Each section contains a list of terms that is unique to the topical areas within each chapter in the Background Report.
- **References.** Each section contains a list of documents and websites referenced and persons consulted in preparing the Background Report.

SECTION 1.6 ORGANIZATION OF THE BACKGROUND REPORT

The Ventura County General Plan Background Report is divided into the following 12 chapters:

1. **Introduction.** This chapter provides background information on the purpose of the General Plan, describes the regional setting, and outlines the organization and content of the General Plan.
2. **Demographics and Economics.** This chapter describes the fiscal setting and economic conditions in Ventura County, as well as population and employment projections.
3. **Land Use.** This chapter summarizes existing land use, describes local and regional land use plans, and explains land use designations in Ventura County.

4. **Community Health and Well-Being.** This chapter describes public health and accessibility to food, active transportation, and economic opportunities.

5. **Housing.** This chapter describes the existing and projected housing needs for Ventura County.

6. **Transportation and Mobility.** This chapter describes the transportation networks in Ventura County, including roadways, active transportation, aviation facilities, and vehicle miles traveled.

7. **Public Facilities, Services, and Infrastructure.** This chapter describes all of the services offered by Ventura County and other local governments and agencies, including water supply, utilities, law enforcement, schools, and other local services.

8. **Natural Resources.** This chapter provides an overview of energy, mineral, and biological features, as well as cultural and paleontological resources in Ventura County.

9. **Agriculture.** This chapter provides an overview of agricultural trends and issues. Summaries of existing agricultural land patterns and production in the county are described and evaluated.

10. **Water Resources.** This chapter discusses water resources found in the county and focuses on water availability, quality, systems in place for delivery, and conservation measures.

11. **Hazards and Safety.** This chapter describes geologic, seismic, flood, fire, and human-made hazards, as well as noise and aviation hazards.

12. **Climate Change.** This chapter describes Ventura County's greenhouse gas emissions and the impact of climate change in Ventura County.

Ventura County 2040 GENERAL PLAN

Chapter 2
Demographics and Economics

2 DEMOGRAPHICS AND ECONOMICS

INTRODUCTION

This chapter summarizes the demographic and economic conditions for Ventura County. The conditions focus on Ventura County overall and include more detailed information about the unincorporated areas.

This chapter is organized into the following sections:

- Population and Household Trends (Section 2.1)
- Labor Force Patterns (Section 2.2)
- Regional Market Trends (Section 2.3)
- Population and Employment Projections (Section 2.4)
- Market Demand Measures for Different Land Uses (Section 2.5)

SECTION 2.1 POPULATION AND HOUSEHOLD TRENDS

Introduction

This section discusses the labor force in Ventura County, with a focus on the unincorporated areas. The analysis describes the relevant demographic characteristics of Ventura County's population and households, such as age, education, ethnicity, and income. The section is divided into the following sections:

- Population and Age Distribution
- Race
- Household and Income Distribution
- Educational Attainment

For each of these subjects, the discussion of the unincorporated areas describes the conditions within the Ventura County planning areas, as well as within the unincorporated communities as defined by Census-Designated Place (CDP) boundaries. For statistical analysis purposes, the county is divided into 15 planning areas, as defined by the County (see Figure 2-1). These planning areas encompass the entire county, although the data summarized here focuses only on the unincorporated area. There are 13 unincorporated CDPs in Ventura County, as defined by the United States Census Bureau (see Figure 2-2). CDPs are the statistical counterparts of incorporated places, and are delineated to provide data for settled concentrations of population that are identifiable by name, but are not legally incorporated under the laws of the state in which they are located.

Ventura County 2040 General Plan

Major Roadways

Planning Areas

Figure 2-1:
Ventura County Planning Areas

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

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Figure 2-2:
Census Designated Places in Ventura County

Map Date: July 27, 2017

Source: U.S. Census Cartographic Boundary Shapefiles - Places, 2016;
Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

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Census Designated Places
Major Roadways
Planning Areas

Major Findings

- Ventura County had a total population of 856,508 in 2016. The unincorporated area had a population of 98,323 in 2016, or approximately 11.4 percent of the total county population. Population in the unincorporated area has increased by 3,386 residents since 2010, a compound annual growth rate (CAGR) of 0.6 percent.
- The age distribution for Ventura County's population showed a loss of population under 18 years between 2010 and 2016. While total population increased 4 percent between 2010 and 2016, residents 65 and older increased by 16 percent (14,885 persons). In contrast, the number of children under 18 years declined by 1.3 percent (2,126 persons). Of this decline, 46 percent occurred in the unincorporated area, despite just 11.4 percent of the county's population residing in the unincorporated area.
- The racial and ethnic composition of Ventura County indicates that approximately 77.7 percent of the 2016 population identified as white and 41.2 percent identified as Hispanic (any race). Less that 10 percent of the population identified as Black/African-American (1.8 percent), Asian (7.0 percent), other race (8.5 percent), or two or more races (4.1 percent). In general, the unincorporated areas have a higher proportion of white residents (83.0 percent) and lower proportion of Hispanic residents (31.3 percent) and other races and ethnicities.[1]
- At the start of 2016, Ventura County had a total of 273,286 households, an increase of 6,366 households from 2010 (0.4 percent CAGR). The unincorporated areas accounted for 32,191 households, with only 261 new households since 2010 (0.1 percent CAGR).
- In 2014, the estimated mean household income in Ventura County was $100,397, while the median income was $77,335. The mean household income in the incorporated cities ($97,693) was lower than the mean for the unincorporated areas ($121,009). Approximately 37.4 percent of Ventura County households earn $100,000 or more annually, with approximately 43.1 percent of households in the unincorporated areas at that income level.
- The educational attainment of Ventura County residents shows approximately 31.6 percent of residents 25 years or older with at least a bachelor's degree and 17.0 percent with no high school diploma. Approximately 64.0 percent of the population 25 years or older have at least some college education. In general, the educational attainment in the unincorporated areas is slightly higher than the countywide average.

Existing Conditions

Population and Age Distribution

As Table 2-1 shows, Ventura County had a total population of 856,508 in 2016. This represented an increase of 33,190 between 2010 and 2016, for a CAGR of 0.7 percent. The incorporated cities in Ventura County had a total population of 758,185 in 2016, with a comparable increase of 0.7 percent CAGR and 29,804 residents between 2010 and 2016. The unincorporated areas in Ventura County accounted for 98,323 residents in 2016. The population in these unincorporated areas grew by 3,386 residents between 2010 and 2016 (0.6 percent CAGR).

[1] The analysis does not include trend comparisons with prior years due to inconsistencies observed in the mixed-race and other race classifications.

The age distribution trend in Ventura County shows a loss of population under 18 years of age between 2010 and 2016 (see Table 2-1). A disproportionately high percentage of this decline (46 percent) occurred in the unincorporated area. Concurrently, the population aged 65 years and over increased by 14,885 (an CAGR of 2.5 percent). The unincorporated areas make up approximately 13 percent of the growth in this category, which does not differ much from the unincorporated areas' share of the overall population.

TABLE 2-1
POPULATION AND AGE DISTRIBUTION: 2010 TO 2016
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

Age Distribution (2016)	Ventura County		Incorporated Cities		Unincorporated Areas	
	Population	% of Total	Population	% of Total	Population	% of Total
Total Population	**856,508**		**758,185**		**98,323**	
Under 18 Years	157,597	18.4%	140,570	18.5%	17,029	17.3%
18 to 24 years	85,651	10.0%	74,801	9.9%	10,849	11.0%
25 to 64 Years	505,340	59.0%	448,303	59.1%	57,038	58.0%
65 years and over	107,920	12.6%	94,511	12.5%	13,407	13.6%
Age Distribution (2010)	**Population**	**% of Total**	**Population**	**% of Total**	**Population**	**% of Total**
Total Population	**823,318**		**728,381**		**94,937**	
Under 18 Years	159,724	19.4%	141,707	19.5%	18,022	19.0%
18 to 24 years	80,685	9.8%	71,161	9.8%	9,521	10.0%
25 to 64 Years	489,874	59.5%	433,923	59.6%	55,959	58.9%
65 years and over	93,035	11.3%	81,590	11.2%	11,435	12.0%
2010 to 2016 Trend	**Population**	**% of Total**	**Population**	**% of Total**	**Population**	**% of Total**
Total Population	**33,190**	**4.0%**	**29,804**	**4.1%**	**3,386**	**3.6%**
Under 18 Years	-2,126	-1.3%	-1,138	-0.8%	-993	-5.5%
18 to 24 years	4,966	6.2%	3,640	5.1%	1,328	13.9%
25 to 64 Years	15,466	3.2%	14,381	3.3%	1,078	1.9%
65 years and over	14,885	16.0%	12,921	15.8%	1,973	17.2%

Source: ADE, Inc.; data from California Department of Finance City/County Population and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Population allocation and age distribution data comes from the ACS Five-Year Sample.
This data was adjusted to match the 2010 and 2016 DOF population totals.
Totals do not add up to 100% because some census tracts are not assigned to the Planning Areas shown.

As Table 2-2 shows, the planning areas with the largest populations are the Ojai, Oak Park, and Oxnard planning areas. Each of these planning areas has over 15,000 residents. The planning area with the most growth is the Camarillo planning area, where 1,698 new residents were added between 2010 and 2016. Similar to the countywide trend, all of the unincorporated planning areas (except Piru, Santa Paula, and Ventura) show a population decrease in the "Under 18 Years" age category. This is consistent with a general aging of the population, and the statewide trend that has seen residents in the "Under 18 Years" category decline from 18.2 to 16.9 percent of the California population between 2010 and 2016. In addition, the Camarillo, Fillmore, North Half, and Santa Paula planning areas show population decreases in the broader "25 to 64 Years" age category. In the Camarillo, Ojai, Oxnard, and Thousand Oaks planning areas, the "65 Years and Over" age category shows the largest population increase.

Among the 13 CDPs in Ventura County, the largest unincorporated areas are Oak Park, Mira Monte, and El Rio, as shown in Table 2-3. Each of these areas has over 5,000 residents. Between 2010 and 2016, Bell Canyon, Channel Islands Beach, Santa Susana, and Mira Monte each lost population, while all of the other CDPs showed population growth.

TABLE 2-2
POPULATION AND AGE DISTRIBUTION: 2010 TO 2016
UNINCORPORATED VENTURA COUNTY PLANNING AREAS

	2010					2016					2010 to 2016 Change				
Planning Area	Under 18	18-24	25-64	65 years+	Total Pop	Under 18	18-24	25-64	65 years+	Total Pop	Under 18	18-24	25-64	65 years+	Total Pop
Camarillo Area	2,069	779	6,138	1,614	10,600	1,700	2,548	6,053	1,997	12,298	(369)	1,769	(85)	383	1,698
Fillmore Area	673	170	1,219	228	2,290	285	116	924	252	1,577	(388)	(54)	(295)	24	(713)
Las Posas Area	584	616	1,666	607	3,473	540	421	1,794	698	3,453	(44)	(195)	128	91	(20)
Moorpark Area	234	47	480	119	880	73	171	762	260	1,266	(161)	124	282	141	386
North Half Area	114	55	511	145	825	59	66	409	123	657	(55)	11	(102)	(22)	(168)
Oak Park Area	3,738	871	8,857	1,109	14,575	3,492	1,049	9,359	1,398	15,298	(246)	178	502	289	723
Ojai Area	3,256	1,842	12,575	3,412	21,085	2,866	1,782	12,847	4,127	21,622	(390)	(60)	272	715	537
Oxnard Area	3,154	2,017	9,493	1,306	15,970	2,807	2,097	9,697	1,528	16,129	(347)	80	204	222	159
Piru Area	504	319	1,556	155	2,534	612	346	1,684	217	2,859	108	27	128	62	325
Santa Paula Area	341	863	2,058	209	3,471	697	616	1,832	273	3,418	356	(247)	(226)	64	(53)
Simi Valley Area	991	457	3,464	630	5,542	758	405	3,649	717	5,529	(233)	(52)	185	87	(13)
Thousand Oaks Area	1,937	866	4,848	1,133	8,784	1,724	731	5,101	1,459	9,015	(213)	(135)	253	326	231
Ventura Area	791	577	2,894	645	4,907	1,076	354	3,015	674	5,119	285	(223)	121	29	212

Source: ADE, Inc.; data from California Department of Finance City/County Population and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Population allocation and age distribution data comes from the ACS Five-Year Sample.
This data was adjusted to match the 2010 and 2016 population total.

TABLE 2-3
POPULATION AND AGE DISTRIBUTION: 2010 TO 2016
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES

	2010					2016					2010 to 2016 Change				
Census Designated Place	Under 18	18-24	25-64	65 years+	Total Pop	Under 18	18-24	25-64	65 years+	Total Pop	Under 18	18-24	25-64	65 years+	Total Pop
Bell Canyon	420	235	1,590	225	2,470	494	190	1,389	269	2,342	74	(45)	(201)	44	(128)
Casa Conejo	734	417	1,679	307	3,137	769	390	2,196	432	3,787	35	(27)	517	125	650
Channel Islands Beach	507	302	2,129	312	3,250	333	227	1,811	472	2,843	(174)	(75)	(318)	160	(407)
El Rio	1,182	866	3,440	699	6,187	1,361	875	4,035	674	6,945	179	9	595	(25)	758
Lake Sherwood	333	73	826	163	1,395	255	123	906	278	1,562	(78)	50	80	115	167
Meiners Oaks	605	315	2,038	580	3,538	558	268	2,269	625	3,720	(47)	(47)	231	45	182
Mira Monte	1,229	603	4,510	1,488	7,830	935	464	4,151	1,929	7,479	(294)	(139)	(359)	441	(351)
Oak Park	3,683	847	8,536	1,044	14,110	3,387	1,025	9,076	1,367	14,855	(296)	178	540	323	745
Oak View	681	430	2,591	279	3,981	645	530	2,808	467	4,450	(36)	100	217	188	469
Piru	270	154	974	86	1,484	387	264	1,308	168	2,127	117	110	334	82	643
Santa Rosa Valley	745	243	1,855	395	3,238	645	312	2,018	529	3,504	(100)	69	163	134	266
Santa Susana	361	26	850	71	1,308	78	83	796	56	1,013	(283)	57	(54)	(15)	(295)
Saticoy	246	54	438	171	909	393	53	669	125	1,240	147	(1)	231	(46)	331

Source: ADE, Inc.; data from California Department of Finance City/County Population and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Population allocation and age distribution data comes from the ACS Five-Year Sample.
This data was adjusted to match the 2010 and 2016 population total.

Race and Ethnicity

Race and ethnicity serve as indicators of diversity and potential geographic stratification by socioeconomic status. As shown in Table 2-4, the racial composition of Ventura County indicates that approximately 77.7 percent of the 2016 population is white, while 41.2 percent of the population is Hispanic (any race). Asian residents make up approximately 7.0 percent of the county population, while 8.5 percent of the population identifies as "some other race" and 4.1 percent identifies as two or more races. In general, the unincorporated areas have a higher proportion of white residents (83 percent) and lower proportion of Hispanic residents (31.3 percent).[2]

The unincorporated portions of Oxnard, Camarillo, Fillmore, Moorpark, Oak Park, Simi Valley, and Thousand Oaks each have over 80 percent of the population identifying themselves as white, as shown in Table 2-5. Oxnard, Piru, Santa Paula, and Ventura have the highest proportion of Hispanic residents, with each area having more than 50 percent of residents identifying as Hispanic (any race).

Among the unincorporated CDPs, Channel Islands Beach, El Rio, Lake Sherwood, Meiners Oaks, Mira Monte, Oak Park, and Oak View each had over 80 percent of the population identifying themselves as white, as shown in Table 2-6. El Rio, Piru, and Saticoy have the highest percentage of Hispanic residents, with over 50 percent of the population.

TABLE 2-4
POPULATION BY RACE AND ETHNICITY: 2016
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

2016 Population by Race and Ethnicity	Ventura County		Incorporated Cities		Unincorporated Areas	
	Population	% of Total	Population	% of Total	Population	% of Total
Total	**856,509**		**758,186**		**98,323**	
White alone	665,373	77.7%	583,718	77.0%	81,648	83.0%
Black or African American alone	15,408	1.8%	14,015	1.8%	1,393	1.4%
American Indian/Alaska Native alone	6,109	0.7%	5,283	0.7%	826	0.8%
Asian alone	59,929	7.0%	55,341	7.3%	4,591	4.7%
Native Hawaiian/Other Pacific Islander	1,418	0.2%	1,300	0.2%	119	0.1%
Some other race alone	72,758	8.5%	66,624	8.8%	6,137	6.2%
Two or more races	35,514	4.1%	31,905	4.2%	3,609	3.7%
Hispanic (any race)	353,060	41.2%	322,314	42.5%	30,759	31.3%
Non-Hispanic (any race)	503,448	58.8%	435,871	57.5%	67,564	68.7%

Source: ADE, Inc.; data from California Department of Finance City/County Populations and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 data).
Notes: Race and ethnicity data comes from the ACS 5-Year Sample.
This data was adjusted to match the 2016 population totals
Totals do not add up to 100% due to some Census Tracts not assigned to the Planning Areas shown.

[2] The analysis of race and ethnicity does not include trend comparisons with prior years due to inconsistencies observed in the mixed race and other race classifications.

TABLE 2-5
POPULATION BY RACE AND ETHNICITY: 2016
UNINCORPORATED VENTURA COUNTY PLANNING AREA

	White alone		Black or African American alone		American Indian and Alaska Native alone		Asian alone		Native Hawaiian/ Other Pacific Islander		Some other race alone		Two or more races		Hispanic (any race)		Non-Hispanic		
Planning Area	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	Total
Camarillo	10,206	83.0%	401	3.3%	48	0.4%	519	4.2%	10	0.1%	641	5.2%	472	3.8%	1,914	15.6%	10,384	84.4%	12,298
Fillmore	1,515	96.1%	-	0.0%	8	0.5%	6	0.4%	-	0.0%	8	0.5%	39	2.5%	593	37.6%	984	62.4%	1,576
Las Posas	2,437	70.6%	143	4.1%	19	0.6%	154	4.5%	5	0.1%	599	17.3%	99	2.9%	851	24.6%	2,603	75.4%	3,454
Moorpark	1,242	98.1%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	25	2.0%	-	0.0%	470	37.1%	796	62.9%	1,266
Oak Park	616	93.8%	-	0.0%	7	1.1%	5	0.8%	-	0.0%	4	0.6%	25	3.8%	1,073	163.3%	546	83.1%	657
North Half	12,577	82.2%	45	0.3%	18	0.1%	2,013	13.2%	-	0.0%	212	1.4%	432	2.8%	-	0.0%	14,225	93.0%	15,298
Ojai	19,383	89.6%	59	0.3%	260	1.2%	293	1.4%	26	0.1%	877	4.1%	724	3.3%	4,880	22.6%	16,742	77.4%	21,622
Oxnard	13,031	80.8%	313	1.9%	76	0.5%	451	2.8%	43	0.3%	1,345	8.3%	870	5.4%	11,091	68.8%	5,038	31.2%	16,129
Piru	2,022	70.7%	33	1.2%	21	0.7%	15	0.5%	-	0.0%	626	21.9%	141	4.9%	2,530	88.5%	329	11.5%	2,859
Santa Paula	2,567	75.1%	23	0.7%	46	1.3%	13	0.4%	6	0.2%	602	17.6%	161	4.7%	2,266	66.3%	1,152	33.7%	3,418
Simi Valley	4,590	83.0%	84	1.5%	109	2.0%	462	8.4%	-	0.0%	90	1.6%	194	3.5%	589	10.7%	4,940	89.3%	5,529
Thousand Oaks	7,587	84.2%	115	1.3%	48	0.5%	435	4.8%	10	0.1%	595	6.6%	224	2.5%	1,646	18.3%	7,368	81.7%	9,014
Ventura	3,830	74.8%	174	3.4%	166	3.2%	219	4.3%	18	0.4%	489	9.6%	222	4.3%	2,709	52.9%	2,411	47.1%	5,119
Total	**81,603**	**83.1%**	**1,390**	**1.4%**	**826**	**0.8%**	**4,585**	**4.7%**	**118**	**0.1%**	**6,113**	**6.2%**	**3,603**	**3.7%**	**30,612**	**31.2%**	**67,518**	**68.7%**	**98,239**

Source: ADE, Inc.; data from California Department of Finance City/County Populations and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Race and ethnicity distribution data comes from the ACS Five-Year Sample.
This data was adjusted to match the 2016 population totals.
The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas.

TABLE 2-6
POPULATION BY RACE AND ETHNICITY: 2016
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES (CDP)~~PLANNING AREAS~~

Census Designated Place~~CDP~~	White alone		Black or African American alone		American Indian and Alaska Native alone		Asian alone		Native Hawaiian/ Other Pacific Islander		Some other race alone		Two or more races:		Hispanic (any race)		Non-Hispanic		Total
	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	
Bell Canyon	1,809	38.6%	0	0.0%	109	2.3%	300	6.4%	0	0.0%	4	0.1%	122	2.6%	178	3.8%	2,165	46.2%	2,344
Casa Conejo	2,991	39.5%	20	0.3%	0	0.0%	246	3.2%	10	0.1%	416	5.5%	103	1.4%	1,237	16.3%	2,550	33.7%	3,786
Ch. Isl. Beach	2,530	44.5%	42	0.7%	0	0.0%	100	1.8%	0	0.0%	42	0.7%	129	2.3%	220	3.9%	2,624	46.1%	2,843
El Rio	5,670	40.8%	27	0.2%	41	0.3%	109	0.8%	0	0.0%	786	5.7%	313	2.3%	5,934	42.7%	1,011	7.3%	6,946
Lake Sherwood	1,368	43.8%	58	1.9%	39	1.2%	69	2.2%	0	0.0%	29	0.9%	0	0.0%	124	4.0%	1,438	46.0%	1,563
Meiners Oaks	3,155	42.4%	12	0.2%	98	1.3%	34	0.5%	0	0.0%	351	4.7%	70	0.9%	1,703	22.9%	2,017	27.1%	3,720
Mira Monte	6,927	46.3%	7	0.0%	24	0.2%	76	0.5%	0	0.0%	257	1.7%	188	1.3%	1,209	8.1%	6,270	41.9%	7,479
Oak Park	12,150	40.9%	45	0.2%	18	0.1%	1997	6.7%	0	0.0%	212	0.7%	432	1.5%	1,037	3.5%	13,818	46.5%	14,854
Oak View	4,046	45.5%	0	0.0%	47	0.5%	30	0.3%	0	0.0%	207	2.3%	120	1.3%	1,248	14.0%	3,202	36.0%	4,450
Piru	1,562	36.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	486	11.4%	79	1.9%	1,898	44.6%	229	5.4%	2,127
S. Rosa Valley	3,278	46.8%	75	1.1%	0	0.0%	118	1.7%	0	0.0%	10	0.1%	23	0.3%	300	4.3%	3,203	45.7%	3,504
Santa Susana	877	43.3%	76	3.8%	0	0.0%	0	0.0%	0	0.0%	59	2.9%	0	0.0%	199	9.8%	814	40.2%	1,012
Saticoy	839	33.8%	0	0.0%	82	3.3%	10	0.4%	0	0.0%	216	8.7%	93	3.8%	1,014	40.9%	226	9.1%	1,240
Total	**47,202**	**42.2%**	**362**	**0.3%**	**458**	**0.4%**	**3,089**	**2.8%**	**10**	**0.0%**	**3,075**	**2.8%**	**1,672**	**1.5%**	**16,301**	**14.6%**	**39,567**	**35.4%**	**55,868**

Source: ADE, Inc.; data from California Department of Finance City/County Populations and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 data).
Notes: Race and ethnicity distribution data comes from the ACS Five-Year Sample.
This data was adjusted to match the 2016 DOF county population totals.

Household and Income Distribution

Household counts and income distribution correlates to the types of local services and housing opportunities that a community can support, and serves as an indicator of the occupational skills and/or types of businesses represented in the region. According to data from the California Department of Finance, Ventura County had a total of 273,286 households at the start of 2016, as shown in Table 2-7. This represents an increase of 6,366 households from 2010 and a CAGR of 0.4 percent. The incorporated cities grew at a CAGR of 0.4 percent, with a total of 241,095 households in 2016. The unincorporated areas accounted for 32,191 households, with only 261 new households since 2010 (0.1 percent CAGR).

Income statistics cited in this section are derived from data provided by the United States Census Bureau's American Community Survey (ACS). The ACS reports its median income data according to pre-defined Census Bureau geography (i.e., statewide, countywide, CDP, census block). The income numbers for other geography (i.e., the unincorporated area, planning areas) is presented as mean income because of the need to aggregate census block-based ACS median income data and average the data according to locally-defined geography.

According to ACS five-year sample data (2010-2014), the estimated mean household income in Ventura County was $100,397 in 2014 dollars. The mean household income in the incorporated cities ($97,693) was lower than the mean for the unincorporated areas ($121,009). As shown in Table 2-7, approximately 37.4 percent of Ventura County households earned $100,000 or more annually in 2014. In the unincorporated areas, the proportion of households earning $100,000 or more increased to 43.1 percent. Countywide, approximately 21.5 percent of households earned less than $35,000 annually. The unincorporated and incorporated areas show similar trends.

Table 2-8 shows trends in household income between 2010 and 2016. The Camarillo, Las Posas, Moorpark, Oak Park, Simi Valley, and Thousand Oaks planning areas had the highest estimated mean income, with each averaging over $125,000 (2014 dollars). The lowest mean household incomes occurred in the Piru ($53,470) and North Half ($54,604) planning areas.

For the unincorporated CDPs, Lake Sherwood, Bell Canyon, Santa Rosa Valley, and Oak Park each had mean household incomes of over $150,000, while Piru and Saticoy each had mean household incomes of less than $60,000 (Table 2-8).

TABLE 2-7 HOUSEHOLD GROWTH AND INCOME DISTRIBUTION: 2010 TO 2016 VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS						
	Ventura County		Incorporated Cities		Unincorporated Areas	
(2016)	HH	% of Total	HH	% of Total	HH	% of Total
Households	273,286		241,095		32,191	
Less than $10,000	9,555	3.5%	8,158	3.4%	1,401	4.4%
$10,000 to $14,999	9,555	3.5%	8,484	3.5%	1,071	3.3%
$15,000 to $24,999	19,930	7.3%	18,021	7.5%	1,903	5.9%
$25,000 to $34,999	19,657	7.2%	17,317	7.2%	2,340	7.3%
$35,000 to $49,999	29,212	10.7%	26,410	11.0%	2,795	8.7%
$50,000 to $74,999	44,228	16.2%	39,588	16.4%	4,633	14.4%
$75,000 to $99,999	39,041	14.3%	34,782	14.4%	4,255	13.2%
$100,000 to $149,999	50,507	18.5%	44,533	18.5%	5,975	18.6%
$150,000 to $199,999	24,571	9.0%	21,594	9.0%	2,978	9.3%
$200,000 or more	27,028	9.9%	22,209	9.2%	4,839	15.0%
Mean Income (2014 Dollars)	$100,397		$97,693		$121,009	
(2010)	HH	% of Total	HH	% of Total	HH	% of Total
Households	266,920		234,990		31,930	
Less than $10,000	9,084	3.4%	7,947	3.4%	1,139	3.6%
$10,000 to $14,999	9,619	3.6%	8,690	3.7%	923	2.9%
$15,000 to $24,999	19,505	7.3%	17,609	7.5%	1,885	5.9%
$25,000 to $34,999	19,505	7.3%	17,431	7.4%	2,067	6.5%
$35,000 to $49,999	29,391	11.0%	26,016	11.1%	3,371	10.6%
$50,000 to $74,999	45,689	17.1%	40,286	17.1%	5,402	16.9%
$75,000 to $99,999	37,673	14.1%	33,832	14.4%	3,825	12.0%
$100,000 to $149,999	51,033	19.1%	45,278	19.3%	5,746	18.0%
$150,000 to $199,999	22,978	8.6%	19,924	8.5%	3,062	9.6%
$200,000 or more	22,444	8.4%	17,977	7.7%	4,511	14.1%
Mean Income (2010 Dollars)	$96,331		$93,581		$116,906	
2010 to 2016 Change	HH	% of Total	HH	% of Total	HH	% of Total
Total Households	6,366	2.4%	6,105	2.6%	261	0.8%
Less than $10,000	471	5.2%	211	2.7%	262	23.0%
$10,000 to $14,999	-63	-0.7%	-206	-2.4%	148	16.0%
$15,000 to $24,999	425	2.2%	413	2.3%	19	1.0%
$25,000 to $34,999	152	0.8%	-114	-0.7%	274	13.2%
$35,000 to $49,999	-178	-0.6%	394	1.5%	-576	-17.1%
$50,000 to $74,999	-1,461	-3.2%	-698	-1.7%	-768	-14.2%
$75,000 to $99,999	1,367	3.6%	950	2.8%	430	11.2%
$100,000 to $149,999	-525	-1.0%	-745	-1.6%	229	4.0%
$150,000 to $199,999	1,593	6.9%	1,670	8.4%	-83	-2.7%
$200,000 or more	4,585	20.4%	4,231	23.5%	328	7.3%
Mean Income (2010 to 2014)	$4,066		$4,111		$4,103	

Source: ADE, Inc.; data from California Department of Finance City/County Populations and Housing Estimates 2016, and American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

Notes: Income distribution and mean income data come from the ACS Five-Year Sample, and reflect nominal income with no inflation adjustment.

The 2016 estimate of households is based on the 2010-2014 ACS Five-Year Sample data and adjusted based on the California DOF household data for 2016, while the 2010 estimate is based on the 2006-2010 ACS Five-Year Sample data.

TABLE 2-8
HOUSEHOLD GROWTH AND INCOME: 2010 TO 2016 TREND
VENTURA COUNTY PLANNING AREAS AND CENSUS DESIGNATED PLACES
(UNINCORPORATED ONLY)

	2010		2016		Change	
Planning Areas	Households	Mean Income ($2010)	Households	Mean Income ($2014)	Households	Mean Income
Camarillo Area	3,689	$140,352	3,902	$147,011	213	$6,659
Fillmore Area	658	$109,583	522	$94,174	-136	$(15,409)
Las Posas Area	1,050	$129,348	1,159	$132,691	109	$3,343
Moorpark Area	296	$145,114	412	$127,762	116	$(17,352)
North Half Area	388	$63,046	324	$54,604	-64	$(8,442)
Oak Park Area	5,337	$145,418	5,516	$163,543	179	$18,125
Ojai Area	8,078	$94,374	7,990	$96,563	-88	$2,189
Oxnard Area	4,633	$81,834	4,448	$86,208	-185	$4,374
Piru Area	650	$56,721	794	$53,470	144	$(3,251)
Santa Paula Area	648	$85,094	691	$71,986	43	$(13,108)
Simi Valley Area	1,834	$162,366	1,946	$140,711	112	$(21,655)
Thousand Oaks Area	2,853	$171,165	2,916	$168,959	63	$(2,206)
Ventura Area	1,806	$79,315	1,559	$84,614	-247	$5,299
Census Designated Places (CDPs)						
Bell Canyon	810	$177,788	764	$208,508	(46)	$30,720
Casa Conejo	898	$97,770	1,068	$89,432	170	$(8,338)
Chan Islands Beach	1,403	$117,133	1,253	$120,428	(150)	$3,295
El Rio	1,553	$58,595	1,734	$66,461	181	$7,866
Lake Sherwood	513	$310,550	560	$332,628	47	$22,078
Meiners Oaks	1,351	$89,179	1,278	$83,003	(73)	$(6,176)
Mira Monte	3,127	$83,739	3,017	$95,282	(110)	$11,543
Oak Park	5,156	$142,693	5,366	$159,512	210	$16,819
Oak View	1,417	$103,797	1,547	$91,323	130	$(12,474)
Piru	377	$64,258	579	$59,395	202	$(4,863)
Santa Rosa Valley	1,047	$144,432	1,170	$162,639	123	$18,207
Santa Susana	406	$135,034	426	$87,386	20	$(47,648)
Saticoy	272	$41,398	288	$49,030	16	$7,632

Source: ADE, Inc.; data from California Department of Finance City/County Populations and Housing Estimates 2016, American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Income data comes from the ACS Five-Year Sample, and reflects nominal income with no inflation adjustment.
The 2016 estimate of households is based on the 2010-2014 ACS Five-Year Sample data and adjusted based on the California DOF household data for 2016, while the 2010 estimate is based on the 2006-2010 ACS Five-Year Sample data.
The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas.

As shown in Table 2-9, Ventura County's overall median household income was $77,335 during the five-year period between 2010 and 2014.[3] This was above the statewide median income of $61,489. Among the cities and unincorporated CDPs in Ventura County, only Piru and Saticoy had median incomes that fell below 80 percent of the statewide median. Falling below the 80 percent threshold classifies these places as "economically disadvantaged communities" according to the State. Because Saticoy falls below 60 percent of the statewide median household income, the state considers it to be a "severely economically disadvantaged community."

TABLE 2-9
MEDIAN HOUSEHOLD INCOME: 2014 (FIVE-YEAR AVERAGE)
CALIFORNIA, VENTURA COUNTY, CITIES, AND CENSUS DESIGNATED PLACES

Area	Median Household Income ($2014)	Percent of State Median Income
California	$61,489	
Ventura County	$77,335	125.8%
Camarillo city	$87,120	141.7%
Casa Conejo CDP	$89,432	145.4%
Channel Islands Beach CDP	$90,521	147.2%
El Rio CDP	$59,179	96.2%
Fillmore city	$54,519	88.7%
Lake Sherwood CDP	$230,000	374.1%
Meiners Oaks CDP	$70,430	114.5%
Mira Monte CDP	$70,905	115.3%
Moorpark city	$99,353	161.6%
Oak Park CDP	$117,326	190.8%
Oak View CDP	$72,137	117.3%
Ojai city	$60,714	98.7%
Oxnard city	$62,349	101.4%
Piru CDP	$46,601	75.8%
Port Hueneme city	$52,826	85.9%
San Buenaventura (Ventura) city	$66,485	108.1%
Santa Paula city	$53,692	87.3%
Saticoy CDP	$35,926	58.4%
Simi Valley city	$89,595	145.7%
Thousand Oaks city	$99,115	161.2%
Bell Canyon CDP	$208,508	339.1%
Casa Conejo CDP	$89,432	145.4%
Santa Rosa Valley CDP	$162,639	264.5%
Santa Susana CDP	$87,386	142.1%

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 data).

[3] Because the indicators for the Ventura County Planning Areas are aggregated together from census tract level data, the median income was not included for these areas.

As shown in Table 2-10, the poverty rate in Ventura County averaged approximately 11.1 percent during the five-year period between 2010 and 2014. This was below the statewide average of 16.4 percent. Two unincorporated CDPs, El Rio and Saticoy, had poverty rates above 20 percent.

TABLE 2-10
POVERTY RATE: 2014 (FIVE-YEAR AVERAGE)
CALIFORNIA, VENTURA COUNTY, CITIES, AND CENSUS DESIGNATED PLACES

Area	Poverty Rate
California	16.4%
Ventura County	11.1%
Camarillo city	5.5%
Casa Conejo CDP	12.6%
Channel Islands Beach CDP	0.3%
El Rio CDP	20.9%
Fillmore city	24.7%
Lake Sherwood CDP	3.7%
Meiners Oaks CDP	16.1%
Mira Monte CDP	14.1%
Moorpark city	7.2%
Oak Park CDP	5.7%
Oak View CDP	8.2%
Ojai city	14.1%
Oxnard city	16.0%
Piru CDP	9.7%
Port Hueneme city	18.3%
San Buenaventura (Ventura) city	10.8%
Santa Paula city	18.7%
Saticoy CDP	44.4%
Simi Valley city	6.6%
Thousand Oaks city	7.0%
Bell Canyon CDP	2.1%
Casa Conejo CDP	12.6%
Santa Rosa Valley CDP	6.0%
Santa Susana CDP	11.7%

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 data).

When considering child poverty and accounting for the cost of living, the Public Policy Institute of California (PPIC) found that the Central Coast region had a poverty rate of 29.6 percent, compared with 25 percent for all of California.[4/5] Within Ventura County, the child poverty rate was below the state average in Simi Valley (14.8 percent), Thousand Oaks (16.3 percent), Camarillo/Moorpark (19.1 percent), and Ventura (20.9 percent). Oxnard/Port Hueneme (41.6 percent) and Santa Paula/Fillmore/Ojai (41.1 percent) had child poverty rates well above the state average.

[4] Public Policy Institute of California; *Geography of Child Poverty in California*; February 2017.
[5] The PPIC report defines the Central Coast region as Ventura, Santa Barbara, San Luis Obispo, Monterey, and San Benito counties.

Homelessness in Ventura County

The broad picture of homelessness and those who are at-risk of becoming homeless across the county can be illustrated by the following statistics:

- Approximately 11 percent of Ventura County residents live below the federal poverty level.
- Over 44,000 households in Ventura County are spending 35 percent or more of household income on rent, which puts these households at increased risk for falling into homelessness.
- In 2015, the "2-1-1 Ventura County" program received 8,440 calls for housing-related assistance and emergency shelter. This program is an information and referral service, connecting over 20,000 Ventura County callers each year with information about health and human services available to them.
- The countywide Healthcare for the Homeless program, served 10,070 unduplicated patients that self-identified as homeless in 2015. This number includes persons who are doubled and tripled up, "couch surfing," or paying for a motel for temporary shelter.
- The Ventura County Office of Education last reported in 2014 that over 6,500 students met the definition of homeless under the McKinney-Vento Homeless Education Assistance Act.
- The 2016 Ventura County Homeless Count and Subpopulation Survey Report found that 53 percent of the chronically homeless reported they had a chronic illness and 48 percent reported they had a mental health problem. See Section 4.3 in Chapter 4 (Health and Well-Being) for further discussion of socioeconomic status and economic opportunity.

Another measure of homelessness in Ventura County is the number of "unsheltered" and "sheltered" people counted on a single night in Ventura County. This count is referred to as the Point-In-Time (PIT) Homeless Count, which was first conducted in 2007. In Ventura County, the unsheltered population has been slowly trending downward. The 2016 unsheltered count for the county (inclusive of cities) was 777 persons including 17 families. The sheltered count in 2016, including those people in interim sheltering programs such as emergency shelters, safe havens, and transitional housing, totaled an additional 494 people. The total number of homeless individuals counted during the 2016 PIT Homeless Count was 1,271; this is the lowest number counted since 2007. The highest number of homeless people counted occurred in 2009, when the total was 2,193.

The County of Ventura provides staff to the Countywide Continuum of Care which is the oversight planning group addressing homelessness in the county. The County contributes resources to addressing homelessness including transitional housing, funding for shelter and housing and supportive services for all subpopulations of homeless including families, youth, seniors, veterans, and people with disabilities.

Disadvantaged Communities

State law requires local governments in California to address the needs of disadvantaged communities in various ways. First, SB 244 (2011) requires cities, counties, and LAFCos to identify disadvantaged unincorporated communities that are underserved by public water, sewer, and other services and "…to begin to address the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities." SB 244 and Ventura County's compliance with it are discussed in Section 3.11 of Chapter 3 in this Background Report. In addition, SB

1000 was adopted in 2016 and is focused on environmental justice concerns. It requires local governments to identify disadvantaged communities according to criteria established by the California Environmental Protection Agency (CalEPA) and to develop strategies that mitigate and reduce the adverse effects of their environmental burden. Figure 4-13 in Chapter 4 (Health and Well-Being) identifies the disadvantaged communities in Ventura County according to the CalEPA criteria.

Educational Attainment

The educational attainment by the local labor force correlates to the types of industries that can be attracted into a region and can serve as a potential opportunity or limitation to business expansion and economic development. The educational attainment of residents countywide shows approximately 31.6 percent of residents 25 years or older with at least a bachelor's degree, and 83.0 percent with at least a high school diploma, as shown in Table 2-11. Approximately 64.0 percent of the population 25 years or older have at least some college education. In general, the educational attainment in the unincorporated areas is slightly higher than the countywide average.

Looking at the four-year change trend (comparison of the 2010-2014 and 2006-2010 five-year sampling averages in Table 2-11), the majority of the growth in the 25+ aged population occurred with college-educated residents, with approximately 46.6 percent of the total growth coming from residents with at least a bachelor's degree. The growth among residents with at least a bachelor's degree occurred at a higher rate in the incorporated cities than in the unincorporated areas.

The planning areas with the highest proportions of residents with at least a bachelor's degree are Oak Park (60.7 percent), Camarillo (49.2 percent), Simi Valley (40.6 percent), and Thousand Oaks (40.2 percent), not including the incorporated cities (Table 2-12). The planning areas with the highest concentrations of residents 25 years and over without a high school diploma are Piru (46.7 percent), Santa Paula (34.5 percent), and Oxnard (30.0 percent).

The CDPs with the highest concentrations of residents with at least a bachelor's degree are Lake Sherwood (58.4 percent), Oak Park (60.0 percent), and Bell Canyon (65.3 percent), as shown in Table 2-13. The CDPs with high concentrations of residents 25 years and over without a high school diploma are Saticoy (44.6 percent), El Rio (42.7 percent), and Piru (39.1 percent).

TABLE 2-11
EDUCATIONAL ATTAINMENT: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

Educational Attainment (2010-2014 Average)	Ventura County		Incorporated Cities		Unincorporated Areas	
	Population	% of Total	Population	% of Total	Population	% of Total
Population 25 years and over	544,266		480,517		63,749	
Less than 9th grade	52,794	9.7%	47,875	10.0%	4,919	7.7%
9th to 12th grade, no diploma	39,731	7.3%	35,858	7.5%	3,873	6.1%
High school graduate (includes equivalency)	103,411	19.0%	91,677	19.1%	11,734	18.4%
Some college, no degree	128,447	23.6%	113,031	23.5%	15,416	24.2%
Associate's degree	47,895	8.8%	42,859	8.9%	5,037	7.9%
Bachelor's degree	108,309	19.9%	94,682	19.7%	13,627	21.4%
Graduate or professional degree	63,679	11.7%	54,395	11.3%	9,284	14.6%
Educational Attainment (2006-2010 Average)	**Population**	**% of Total**	**Population**	**% of Total**	**Population**	**% of Total**
Population 25 years and over	516,739		455,662		61,077	
Less than 9th grade	51,157	9.9%	46,509	10.2%	4,648	7.6%
9th to 12th grade, no diploma	40,306	7.8%	36,843	8.1%	3,463	5.7%
High school graduate (includes equivalency)	102,314	19.8%	91,306	20.0%	11,008	18.0%
Some college, no degree	121,950	23.6%	106,796	23.4%	15,154	24.8%
Associate's degree	41,856	8.1%	37,016	8.1%	4,840	7.9%
Bachelor's degree	101,281	19.6%	88,089	19.3%	13,192	21.6%
Graduate or professional degree	57,875	11.2%	48,996	10.8%	8,879	14.5%
Four-Year Trend	**Population**	**% Change**	**Population**	**% Change**	**Population**	**% Change**
Population 25 years and over	27,527	5.3%	24,855	5.5%	2,672	4.4%
Less than 9th grade	1,637	3.2%	1,366	2.9%	271	5.8%
9th to 12th grade, no diploma	-574	-1.4%	-984	-2.7%	410	11.8%
High school graduate (includes equivalency)	1,096	1.1%	370	0.4%	726	6.6%
Some college, no degree	6,496	5.3%	6,235	5.8%	262	1.7%
Associate's degree	6,040	14.4%	5,843	15.8%	196	4.1%
Bachelor's degree	7,028	6.9%	6,593	7.5%	435	3.3%
Graduate or professional degree	5,804	10.0%	5,399	11.0%	405	4.6%

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Education attainment data comes from the ACS Five-Year Sample.
Source:

TABLE 2-12
EDUCATIONAL ATTAINMENT: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS)

Planning Area	Pop 25 years and over	Less than 9th grade	9th - 12th grade, no diploma	HS graduate (incl GED)	Some college, no degree	Associate's degree	Bachelor's degree	Graduate or prof degree
2006-2010 Average								
Camarillo	7,110	192	235	861	1,904	708	1,877	1,339
Fillmore	1,274	75	118	219	337	86	156	280
Las Posas	2,125	227	74	431	586	148	388	270
Moorpark	562	24	57	88	103	49	107	114
North Half	631	46	68	120	173	29	124	71
Oak Park*	9,144	61	153	800	1,549	839	3,450	2,296
Ojai	14,744	680	684	3,206	4,218	1,184	2,892	1,867
Oxnard	9,182	1,918	939	1,919	2,105	633	924	708
Piru	1,482	465	222	282	308	99	79	27
Santa Paula	2,115	478	344	458	442	125	196	81
Simi Valley	3,786	53	159	751	1,028	275	999	516
Thousand Oaks	5,808	26	298	1,091	1,438	333	1,599	1,016
Ventura	3,114	366	216	795	957	243	419	263
2010-2014 Average								
Camarillo	7,384	106	224	1,132	1,724	598	2,095	1,542
Fillmore	1,109	37	86	187	321	120	169	203
Las Posas	2,255	237	112	353	605	154	465	328
Moor-park	962	43	103	324	150	39	133	157
North Half	520	13	28	120	150	40	135	34
Oak Park	9,757	75	160	971	1,896	740	3,339	2,581
Ojai	15,498	924	1,142	2,946	4,667	1,382	2,795	1,644
Oxnard	9,445	1,887	945	2,287	2,107	466	1,232	649
Piru	1,534	561	155	268	322	81	106	38
Santa Paula	1,824	467	161	400	416	122	135	104
Simi Valley	4,040	75	172	708	1,041	388	1,141	499
Thousand Oaks	6,090	79	372	1,192	1,555	456	1,377	1,069
Ventura	3,297	379	408	837	676	170	508	312
Four-Year Growth Trend								
Camarillo	274	(86)	(11)	271	(180)	(110)	218	203
Fillmore	(165)	(38)	(32)	(32)	(16)	34	13	(77)
Las Posas	130	10	38	(78)	19	6	77	58
Moorpark	400	19	46	236	47	(10)	26	43
North Half	(111)	(33)	(40)	-	(23)	11	11	(37)
Oak Park	613	14	7	171	347	(99)	(111)	285
Ojai	754	244	458	(260)	449	198	(97)	(223)
Oxnard	263	(31)	6	368	2	(167)	308	(59)
Piru	52	96	(67)	(14)	14	(18)	27	11
Santa Paula	(291)	(11)	(183)	(58)	(26)	(3)	(61)	23
Simi Valley	254	22	13	(43)	13	113	142	(17)
Thousand Oaks	282	53	74	101	117	123	(222)	53
Ventura	183	13	192	42	(281)	(73)	89	49

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Education attainment data comes from the ACS Five-Year Sample.

TABLE 2-13
EDUCATIONAL ATTAINMENT: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY CENSUS DESIGNATED PLACES (UNINCORPORATED TOTALS)

CDP	Pop 25 years and over	Less than 9th grade	9th - 12th grade, no diploma	HS graduate (incl GED)	Some college, no degree	Associate's degree	Bachelor's degree	Graduate or prof degree
2006-2010 Average								
Bell Canyon	1,733	28	87	203	232	52	629	503
Casa Conejo	1,883	-	179	550	629	111	288	124
Chan Island Beach	2,270	-	59	386	606	275	511	434
El Rio	3,580	1,343	544	988	448	122	75	61
Lake Sherwood	985	17	-	107	164	23	339	335
Meiners Oaks	2,390	163	153	617	595	131	550	184
Mira Monte	5,471	186	306	1,236	1,603	498	853	793
Oak Park	8,787	62	141	747	1,503	826	3,383	2,126
Oak View	2,625	47	71	546	882	299	551	228
Piru	936	252	126	206	232	69	44	7
Santa Rosa Valley	2,132	32	17	254	473	245	659	454
Santa Susana	800	-	18	153	290	143	164	32
Saticoy	530	226	42	85	64	75	38	-
2010-2014 Average								
Bell Canyon	1,733	28	87	203	232	52	629	503
Casa Conejo	1,883	-	179	550	629	111	288	124
Chan Island Beach	2,270	-	59	386	606	275	511	434
El Rio	3,580	1,343	544	988	448	122	75	61
Lake Sherwood	985	17	-	107	164	23	339	335
Meiners Oaks	2,390	163	153	617	595	131	550	184
Mira Monte	5,471	186	306	1,236	1,603	498	853	793
Oak Park	8,787	62	141	747	1,503	826	3,383	2,126
Oak View	2,625	47	71	546	882	299	551	228
Piru	936	252	126	206	232	69	44	7
Santa Rosa Valley	2,132	32	17	254	473	245	659	454
Santa Susana	800	-	18	153	290	143	164	32
Saticoy	530	226	42	85	64	75	38	-
Four-Year Growth Trend								
Bell Canyon	(141)	(28)	(66)	(26)	50	28	(91)	(9)
Casa Conejo	518	65	97	117	82	50	22	87
Chan Island Beach	(124)	-	(31)	(8)	(33)	(168)	197	(80)
El Rio	472	(261)	104	224	241	36	115	12
Lake Sherwood	151	(3)	7	79	54	24	9	(19)
Meiners Oaks	260	192	247	(135)	(36)	(33)	(60)	81
Mira Monte	100	(8)	90	(272)	313	87	88	(197)
Oak Park	664	14	1	198	378	(89)	(104)	265
Oak View	346	170	116	102	24	(8)	(117)	57
Piru	245	89	(6)	42	50	7	32	31
Santa Rosa Valley	223	20	21	59	17	(148)	116	135
Santa Susana	6	-	-	(16)	22	(67)	66	1
Saticoy	173	(38)	84	147	(18)	(56)	28	26

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: Education attainment data comes from the ACS Five-Year Sample.

Regulatory Setting

There is no regulatory setting for this section.

Key Terms

Compound Annual Growth Rate (CAGR). The CAGR is the annual year-to-year growth rate during a period of time.

Labor Force. The labor force includes all persons classified as employed or unemployed. (Bureau of Labor Statistics)

County Planning Areas. Large areas defined by Ventura County as distinct geographic regions for purposes of land use and transportation planning. See Chapter 3 (Land Use) for further description of these areas.

Census Designated Places (CDPs). Unincorporated communities for which the U.S. Census provides population, demographic and housing data.

Economically Disadvantaged Community. An "economically disadvantaged community" is defined as one with a median household income of less than 80 percent of the statewide median income. The term "severely economically disadvantaged community" is defined pursuant to Health and Safety Code Sec. 116760.2 as a community with a median household income of less than 60 percent of the statewide median income.

References

Websites

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American Community Survey, http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml, July 2016.

Bureau of Labor Statistics (BLS), http://www.bls.gov, July 2016.

Health Matters in Ventura. www.healthmattersinvc.org

SECTION 2.2 LABOR FORCE PATTERNS

Introduction

This section discusses the industry and occupational characteristics of workers who live in Ventura County, as well as the unincorporated areas by planning area and census designated place. The discussion of the labor force focuses on the workers. Section 2.3 will focus on the jobs in Ventura County. The section is divided into two subsections: Labor Force by Occupation and Labor Force by Industry.

Major Findings

- The civilian labor force in Ventura County averaged 394,105 employed residents 16 years of age and over during the five-year period between 2010 and 2014. The composition of the county labor force by occupation shows that the largest proportion of these employed residents was in the management, business, science, and arts occupations. The unincorporated areas of Ventura County show an average of 44,204 employed residents 16 years of age and over during the five-year period between 2010 and 2014. These areas have a higher representation of the labor force in management, business, science, and arts occupations with 41.4 percent of the employed residents.
- The civilian labor force in Ventura County by industry sector shows that the retail, health care, and manufacturing industries accounted for the highest proportion of the civilian workers age 16 years and over. ("Industries" represent types of businesses with operations that can include many different types of occupations.) Compared to the cities, the unincorporated areas of Ventura County had a higher representation of the labor force in the professional, scientific, and technical services industry, and a lower representation of the labor force in manufacturing industries.

Existing Conditions

Labor Force by Occupation

Occupations are types of jobs or professions, which are associated with many different types of industries. Identifying the labor force based on occupation can indicate the concentrations of skills present in a region, which in turn can serve as an indicator of the types of businesses that the region can support.

In 2015, the unemployment rate for Ventura County showed an annual average of 5.7 percent (not seasonally adjusted), which was lower than the 6.1 statewide annual average, as shown in Table 2-14. However, an analysis by the Economic Development Corporation of Ventura County (EDC-VC) indicates that the county's competitive position within California has steadily declined since 2011. In 2011, Ventura County's unemployment rate ranked 12th among California counties. This ranking declined to 16th by 2015, and down to 18th by 2016 (rolling 12-month average for the time period ending in September 2016). Furthermore, the California unemployment rate for September 2016 (5.3 percent) was lower than the county average (5.5 percent).

Within Ventura County, the incorporated and unincorporated communities with the lowest unemployment rates in 2015 include Camarillo, Channel Islands Beach, El Rio, Meiners Oaks, and Moorpark. Each of these communities had an unemployment rate below 5.0 percent. The communities in Ventura County with an unemployment rate above 8.0 percent include Oak View, Piru, and Port Hueneme.

TABLE 2-14 UNEMPLOYMENT RATE: 2015 (ANNUAL AVERAGE) CALIFORNIA, VENTURA COUNTY, CITIES, CDPS	
Area	**Unemployment Rate**
California	6.2%
Ventura County	5.7%
Camarillo city	4.8%
Casa Conejo CDP	6.9%
Channel Islands Beach CDP	4.7%
El Rio CDP	4.5%
Fillmore city	6.4%
Meiners Oaks CDP	3.1%
Moorpark city	4.4%
Oak Park CDP	5.8%
Oak View CDP	9.5%
Ojai city	7.6%
Oxnard city	6.2%
Piru CDP	8.1%
Port Hueneme city	8.5%
San Buenaventura (Ventura) city	5.8%
Santa Paula city	7.4%
Simi Valley city	5.0%
Thousand Oaks city	5.5%

Source: California Employment Development Department, Labor Market Information Division, 2015 annual averages.
Notes: Data is not seasonally adjusted. The data does not include unincorporated CDP of Bell Canyon, Lake Sherwood, Santa Rosa Valley, and Santa Susana.

According to American Community Survey data, the five-year sample trend (2010-2014) shows that the civilian labor force in Ventura County averaged 394,105 employed residents 16 years of age and over. As shown in Table 2-15, the composition of the county labor force shows that the largest percentage of residents were in management, business, science, and arts occupations, with over 147,300, or 37.4 percent of employed residents. The next largest occupational group in Ventura County was sales and office occupations, with over 97,700, or 16.9 percent of employed residents. As shown in Table 2-16 and Table 2-17, the unincorporated areas of Ventura County show 44,204 employed residents 16 years of age and over during the five-year period between 2010 and 2014. These areas have a higher representation of the labor force in management, business, science, and arts occupations at 41.4 percent of employed residents.

A comparison of the four-year change trend between 2010 and 2014 with the period between 2006 and 2010 shows that the employed labor force increased slightly. As shown in Table 2-18 and Table 2-19, most of the occupational categories showed increases in the labor force. The largest increases (19 percent) occurred in service occupations, which include food service, building maintenance, health care support, and personal care occupations. The sales and office occupations were the only category that showed employment decline countywide. In the unincorporated areas, the management, business, science, and arts occupations showed a decline of 4.1 percent. Agricultural jobs are most prominently represented in the "Natural resources, construction, and maintenance" category, which includes farming occupations. Other agricultural jobs are represented in the "Production, transportation, and material moving" category.

TABLE 2-15
LABOR FORCE BY OCCUPATION: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

	Ventura County		Incorporated Cities		Unincorporated Areas	
Labor Force by Occupation (2010 to 2014 Average)	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**
Management, business, science, and arts occupations	147,373	37.4%	129,056	36.9%	18,317	41.4%
Service occupations	66,509	16.9%	59,204	16.9%	7,305	16.5%
Sales and office occupations	97,758	24.8%	87,704	25.1%	10,054	22.7%
Natural resources, construction, and maintenance occupations	43,745	11.1%	38,710	11.1%	5,035	11.4%
Production, transportation, and material moving occupations	38,720	9.8%	35,227	10.1%	3,493	7.9%
Total (civilian employed population 16 years and over)	**394,105**		**349,901**		**44,204**	
Labor Force by Occupation (2006 to 2010 Average)	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**
Management, business, science, and arts occupations	143,867	37.3%	124,759	36.5%	19,108	44.1%
Service occupations	60,974	15.8%	54,856	16.0%	6,118	14.1%
Sales and office occupations	99,923	25.9%	89,770	26.2%	10,153	23.5%
Natural resources, construction, and maintenance occupations	43,141	11.2%	38,432	11.2%	4,709	10.9%
Production, transportation, and material moving occupations	37,357	9.7%	34,164	10.0%	3,193	7.4%
Total (civilian employed population 16 years and over)	**385,262**		**341,981**		**43,281**	
Four-year Trend	**Labor Force**	**% Change**	**Labor Force**	**% Change**	**Labor Force**	**% Change**
Management, business, science, and arts occupations	3,506	2.4%	4,297	3.4%	-791	-4.1%
Service occupations	5,535	9.1%	4,348	7.9%	1,187	19.4%
Sales and office occupations	-2,165	-2.2%	-2,066	-2.3%	-99	-1.0%
Natural resources, construction, and maintenance occupations	604	1.4%	278	0.7%	326	6.9%
Production, transportation, and material moving occupations	1,363	3.6%	1,063	3.1%	300	9.4%
Total (civilian employed population 16 years and over)	8,843	2.3%	7,920	2.3%	923	2.1%

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

TABLE 2-16
LABOR FORCE BY OCCUPATION: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS)

Labor Force by Occupation (2010 to 2014 Average)	Camarillo Area	Fillmore Area	Las Posas Area	Moor-park Area	North Half Area	Oak Park Area	Ojai Area
Management, business, science, and arts occupations	2,816	386	653	245	120	4,252	3,944
Service occupations	894	113	246	77	23	691	2,179
Sales and office occupations	1,325	114	353	273	41	1,695	1,964
Natural resources, construction, and maintenance occupations	248	153	196	8	27	257	1,159
Production, transportation, and material moving occupations	297	32	70	70	13	122	635
Total (civilian employed population 16 years and over)	**5,580**	**798**	**1,518**	**673**	**224**	**7,017**	**9,881**
Labor Force by Occupation (2006 to 2010 Average)	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moor-park Area**	**North Half Area**	**Oak Park Area**	**Ojai Area**
Management, business, science, and arts occupations	2,716	454	624	209	202	4,346	4,148
Service occupations	436	105	203	48	82	472	1,875
Sales and office occupations	1,025	144	378	86	41	1,836	2,183
Natural resources, construction, and maintenance occupations	378	214	187	71	39	261	1,087
Production, transportation, and material moving occupations	361	30	126	34	4	125	799
Total (civilian employed population 16 years and over)	**4,917**	**947**	**1,518**	**448**	**368**	**7,040**	**10,092**
Four-year Trend	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moor-park Area**	**North Half Area**	**Oak Park Area**	**Ojai Area**
Management, business, science, and arts occupations	99	-68	30	36	-82	-94	-204
Service occupations	458	8	43	29	-59	219	304
Office and administrative support occupations	173	-3	-51	107	16	68	-129
Natural resources, construction, and maintenance occupations	-129	-61	9	-63	-12	-4	72
Production, transportation, and material moving occupations	-64	2	-56	36	9	-3	-164
Total (civilian employed population 16 years and over)	**663**	**-149**	**0**	**225**	**-144**	**-23**	**-211**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas.
The Oak Park Planning Area also includes Ahmanson Ranch.
Totals do not add up to 100% due to some Census Tracts not assigned to the Planning Areas shown.

TABLE 2-17
LABOR FORCE BY OCCUPATION: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS, CONT.)

Labor Force by Occupation (2010 to 2014 Average)	Oxnard Area	Piru Area	Santa Paula Area	Simi Valley Area	Thousand Oaks Area	Ventura Area
Management, business, science, and arts occupations	1,546	210	256	1,503	1,743	643
Service occupations	1,020	193	221	323	787	537
Office and administrative support occupations	1,535	252	303	584	1,124	491
Natural resources, construction, and maintenance occupations	1,434	151	458	220	456	268
Production, transportation, and material moving occupations	1,276	287	110	77	236	269
Total (civilian employed population 16 years and over)	**6,811**	**1,093**	**1,348**	**2,707**	**4,346**	**2,208**
Labor Force by Occupation (2006 to 2010 Average)	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Management, business, science, and arts occupations	1,599	268	451	1,420	1,919	752
Service occupations	1,087	226	259	227	700	398
Office and administrative support occupations	1,746	191	222	667	1,111	522
Natural resources, construction, and maintenance occupations	1,058	242	226	275	267	405
Production, transportation, and material moving occupations	913	168	85	150	179	219
Total (civilian employed population 16 years and over)	**6,402**	**1,095**	**1,243**	**2,739**	**4,176**	**2,296**
Four-year Trend	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Management, business, science, and arts occupations	-53	-58	-195	83	-176	-109
Service occupations	-67	-33	-38	96	87	139
Office and administrative support occupations	-143	5	-2	-186	-26	-15
Natural resources, construction, and maintenance occupations	376	-91	232	-55	189	-137
Production, transportation, and material moving occupations	363	119	25	-73	57	50
Total (civilian employed population 16 years and over)	**409**	**-2**	**105**	**-32**	**170**	**-88**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas.
The Oak Park Planning Area also includes Ahmanson Ranch.
Totals do not add up to 100% due to some Census Tracts not assigned to the Planning Areas shown.

TABLE 2-18
LABOR FORCE BY OCCUPATION: 2010 TO 2014 FIVE-YEAR AVERAGES
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES

Labor Force by Occupation (2010 to 2014 Average)	Bell Canyon	Casa Conejo	Channel Islands Beach	El Rio	Lake Sherwood	Meiners Oaks	Mira Monte
Management, business, science, and arts occupations	770	502	647	516	435	677	1,468
Service occupations	99	487	63	502	56	721	638
Sales and office occupations	307	476	492	670	179	225	752
Natural resources, construction, and maintenance occupations	0	278	220	551	45	136	307
Production, transportation, and material moving occupations	4	134	113	871	14	151	163
Total (civilian employed population 16 years and over)	**1,180**	**1,877**	**1,535**	**3,110**	**729**	**1,910**	**3,328**
Labor Force by Occupation (2006 to 2010 Average)	**Bell Canyon**	**Casa Conejo**	**Channel Islands Beach**	**El Rio**	**Lake Sherwood**	**Meiners Oaks**	**Mira Monte**
Management, business, science, and arts occupations	717	460	730	369	472	664	1,502
Service occupations	128	360	188	582	48	466	635
Sales and office occupations	329	475	483	655	108	331	835
Natural resources, construction, and maintenance occupations	21	105	225	435	0	156	390
Production, transportation, and material moving occupations	14	92	111	604	5	100	321
Total (civilian employed population 16 years and over)	**1,209**	**1,492**	**1,737**	**2,645**	**633**	**1,717**	**3,683**
Four-year Trend	**Bell Canyon**	**Casa Conejo**	**Channel Islands Beach**	**El Rio**	**Lake Sherwood**	**Meiners Oaks**	**Mira Monte**
Civilian employed population 16 years and over	-29	385	-202	465	96	193	-355
Management, business, science, and arts occupations	53	42	-83	147	-37	13	-34
Service occupations	-29	127	-125	-80	8	255	3
Sales and office occupations	-22	1	9	15	71	-106	-83
Natural resources, construction, and maintenance occupations	-21	173	-5	116	45	-20	-83
Production, transportation, and material moving occupations	-10	42	2	267	9	51	-158
Total (civilian employed population 16 years and over)	**-29**	**385**	**-202**	**465**	**96**	**193**	**-355**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

TABLE 2-19
LABOR FORCE BY OCCUPATION: 2010 TO 2014 FIVE-YEAR AVERAGES
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES (CONT.)

Labor Force by Occupation (2010 to 2014 Average)	Oak Park	Oak View	Piru	Santa Rosa Valley	Santa Susana	Saticoy
Management, business, science, and arts occupations	4,074	725	146	894	243	70
Service occupations	691	443	158	112	104	179
Sales and office occupations	1,648	316	225	414	61	69
Natural resources, construction, and maintenance occupations	257	413	117	40	11	86
Production, transportation, and material moving occupations	122	155	229	69	29	59
Total (civilian employed population 16 years and over)	**6,792**	**2,052**	**875**	**1,529**	**448**	**463**
Labor Force by Occupation (2006 to 2010 Average)	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Management, business, science, and arts occupations	4,177	841	146	915	282	65
Service occupations	442	356	150	93	13	52
Sales and office occupations	1,768	486	133	252	143	22
Natural resources, construction, and maintenance occupations	261	280	184	130	134	72
Production, transportation, and material moving occupations	125	101	71	70	41	21
Total (civilian employed population 16 years and over)	**6,773**	**2,064**	**684**	**1,460**	**613**	**232**
Four-year Trend	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Management, business, science, and arts occupations	-103	-116	0	-21	-39	5
Service occupations	249	87	8	19	91	127
Sales and office occupations	-120	-170	92	162	-82	47
Natural resources, construction, and maintenance occupations	-4	133	-67	-90	-123	14
Production, transportation, and material moving occupations	-3	54	158	-1	-12	38
Total (civilian employed population 16 years and over)	**19**	**-12**	**191**	**69**	**-165**	**231**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

Labor Force by Industry

Industries represent types of businesses with operations that can include many different types of occupations. As shown in Table 2-20, the five-year sample trend from the American Community Survey for Ventura County (2010-2014) shows that the retail, health care, and manufacturing industries accounted for the highest proportion of the civilian workers age 16 years and over, with each of these industries accounting for over 40,000 workers (more than 10 percent of the labor force). Unlike Table 2-15, Table 2-20 reflects the labor force by industry type in Ventura County, not the jobs that are located in the county. Many workers commute out of the county to work. Other industries with large concentrations of workers in Ventura County include: professional, scientific, and technical services; educational services; construction; and accommodations and food service. Each of these industries accounted for more than 20,000 workers. Compared to the incorporated cities, the unincorporated areas of Ventura County had a higher representation of the labor force in the professional, scientific, and technical services category (4,248 workers or 9.6 percent, compared to 7.4 percent, or nearly 26,000 workers in the cities), and a lower representation of the labor force in manufacturing (8.1 percent or 3,581 workers), compared to 10.6 percent or 37,245 workers in the cities).

The four-year change trend comparing the 2010-2014 period to the 2006-2010 period shows that agricultural industries had the largest labor force increase. This category accounted for approximately half of the labor force increase countywide (4,614 new workers), with 601 of these new workers residing in the unincorporated area. The other large increases in the labor force by industry occurred in accommodation and food service (743 new unincorporated workers); health care and social assistance (191 new unincorporated workers); educational services (591 new unincorporated workers), and retail trade (decline of 96 unincorporated workers). Each of these industry categories added more than 1,700 workers to the countywide labor force, although retail workers declined in the unincorporated area. In addition, professional, scientific, and technical services added 1,261 workers countywide and 309 in the unincorporated area.

The largest decreases in the labor force countywide occurred in construction (decline of 1,310 workers), information (decline of 1,375 workers), and public administration (decline of 1,090 workers). The unincorporated area also saw declines in information and public sector workers, as well as wholesale distribution workers (-284). However, the unincorporated area gained 41 construction workers during the 2010-2014 period.

Among the unincorporated Ventura County planning areas, agricultural workers generally had the highest concentration around Oxnard, Ojai, and Santa Paula, ranging from 333 to 881 workers, more than 50 percent of the unincorporated area total in 2014 (Table 2-21 and Table 2-22). Workers in the professional, scientific, and technical services were more concentrated around the Camarillo, Ojai, and Oak Park planning areas, ranging from 643 to 1,284 workers and comprising 62 percent of the unincorporated total. The Ojai planning area also had the highest concentration of workers in educational services (1,368 workers).

This discussion, and the prior tables describing occupational trends, suggest that the unincorporated area supports a diverse labor force with representation by workers in many industries and occupations similar to the incorporated cities. The recent trends, however, indicate a loss of management, business, and science occupations, which tend to be higher paying, and an increase in service occupations, which tend to be lower paying, compared to the cities. In addition, construction, maintenance, production, and transportation workers grew more rapidly in the unincorporated area. These jobs are often described as "middle skill" jobs and often provide living wages provided the work is steady.

Regulatory Setting

There is no regulatory setting for this section.

Key Terms

Industry. A group of enterprises that produce similar products or provide similar services. For example, all enterprises that manufacture automobiles are in the same industry. A given industry, or even a particular enterprise in that industry, might have employees in dozens of occupations. (Bureau of Labor Statistics)

Labor Force. The labor force includes all persons classified as employed or unemployed. Statistics typically distinguish between the civilian labor force, for which data are provided in this section, and military personnel. (Bureau of Labor Statistics)

Occupation. A set of activities or tasks that employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they work in the same industry. Some occupations are concentrated in a few particular industries; other occupations are found in many industries. (Bureau of Labor Statistics)

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TABLE 2-20
LABOR FORCE BY INDUSTRY: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

	Ventura County		Incorporated Cities		Unincorporated Areas	
Labor Force by Industry (2010 to 2014 Average) (NAICS Code)	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**
Agriculture, forestry, fishing and hunting (11)	19,559	5.0%	17,230	4.9%	2,329	5.3%
Mining, quarrying, and oil and gas extraction (21)	1,078	0.3%	903	0.3%	175	0.4%
Construction (23)	23,225	5.9%	19,844	5.7%	3,381	7.6%
Manufacturing (31-33)	40,826	10.4%	37,245	10.6%	3,581	8.1%
Wholesale trade (42)	14,367	3.6%	12,951	3.7%	1,416	3.2%
Retail trade (44-45)	44,560	11.3%	40,370	11.5%	4,190	9.5%
Transportation and warehousing (48-49)	9,093	2.3%	8,081	2.3%	1,012	2.3%
Utilities (22)	2,872	0.7%	2,503	0.7%	369	0.8%
Information (51)	10,307	2.6%	9,100	2.6%	1,207	2.7%
Finance and insurance (52)	24,100	6.1%	21,654	6.2%	2,446	5.5%
Real estate and rental and leasing (53)	8,625	2.2%	7,267	2.1%	1,358	3.1%
Professional, scientific, and technical services (54)	30,240	7.7%	25,992	7.4%	4,248	9.6%
Management of companies and enterprises (55)	218	0.1%	202	0.1%	16	0.0%
Administrative and support and waste management services (56)	16,928	4.3%	14,963	4.3%	1,965	4.4%
Educational services (61)	31,686	8.0%	27,597	7.9%	4,089	9.3%
Health care and social assistance (62)	41,939	10.6%	37,640	10.8%	4,299	9.7%
Arts, entertainment, and recreation (71)	9,206	2.3%	7,764	2.2%	1,442	3.3%
Accommodation and food services (72)	26,926	6.8%	24,088	6.9%	2,838	6.4%
Other services, except public administration (81)	18,868	4.8%	16,660	4.8%	2,208	5.0%
Public administration (92)	19,482	4.9%	17,847	5.1%	1,635	3.7%
Total (civilian employed population 16 years and over)	**394,105**		**349,901**		**44,204**	
Labor Force by Industry (2006 to 2010 Average) (NAICS Code)	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**	**Labor Force**	**% of Total**
Agriculture, forestry, fishing and hunting (11)	14,945	3.9%	13,217	3.9%	1,728	4.0%
Mining, quarrying, and oil and gas extraction (21)	1,087	0.3%	767	0.2%	320	0.7%
Construction (23)	24,535	6.4%	21,195	6.2%	3,340	7.7%
Manufacturing (31-33)	41,759	10.8%	38,183	11.2%	3,576	8.3%
Wholesale trade (42)	13,923	3.6%	12,223	3.6%	1,700	3.9%
Retail trade (44-45)	42,652	11.1%	38,366	11.2%	4,286	9.9%
Transportation and warehousing (48-49)	9,785	2.5%	8,750	2.6%	1,035	2.4%
Utilities (22)	2,961	0.8%	2,588	0.8%	373	0.9%
Information (51)	11,682	3.0%	10,078	2.9%	1,604	3.7%
Finance and insurance (52)	24,502	6.4%	21,981	6.4%	2,521	5.8%
Real estate and rental and leasing (53)	9,334	2.4%	8,004	2.3%	1,330	3.1%
Professional, scientific, and technical services (54)	28,979	7.5%	25,040	7.3%	3,939	9.1%
Management of companies and enterprises (55)	455	0.1%	407	0.1%	48	0.1%
Administrative and support and waste management services (56)	17,885	4.6%	15,973	4.7%	1,912	4.4%
Educational services (61)	29,985	7.8%	26,487	7.7%	3,498	8.1%
Health care and social assistance (62)	39,761	10.3%	35,653	10.4%	4,108	9.5%
Arts, entertainment, and recreation (71)	8,208	2.1%	6,706	2.0%	1,502	3.5%
Accommodation and food services (72)	23,144	6.0%	21,049	6.2%	2,095	4.8%
Other services, except public administration (81)	19,108	5.0%	16,792	4.9%	2,316	5.4%
Public administration (92)	20,572	5.3%	18,522	5.4%	2,050	4.7%
Total (civilian employed population 16 years and over)	**385,262**		**341,981**		**43,281**	
Four-Year Growth Trend	**Labor Force**	**% Change**	**Labor Force**	**% Change**	**Labor Force**	**% Change**
Agriculture, forestry, fishing and hunting (11)	4,614	30.9%	4,013	30.4%	601	34.8%
Mining, quarrying, and oil and gas extraction (21)	-9	-0.8%	136	17.7%	-145	-45.3%
Construction (23)	-1,310	-5.3%	-1,351	-6.4%	41	1.2%
Manufacturing (31-33)	-933	-2.2%	-938	-2.5%	5	0.1%
Wholesale trade (42)	444	3.2%	728	6.0%	-284	-16.7%
Retail trade (44-45)	1,908	4.5%	2,004	5.2%	-96	-2.2%
Transportation and warehousing (48-49)	-692	-7.1%	-669	-7.6%	-23	-2.2%
Utilities (22)	-89	-3.0%	-85	-3.3%	-4	-1.1%
Information (51)	-1,375	-11.8%	-978	-9.7%	-397	-24.8%
Finance and insurance (52)	-402	-1.6%	-327	-1.5%	-75	-3.0%
Real estate and rental and leasing (53)	-709	-7.6%	-737	-9.2%	28	2.1%
Professional, scientific, and technical services (54)	1,261	4.4%	952	3.8%	309	7.8%
Management of companies and enterprises (55)	-237	-52.1%	-205	-50.4%	-32	-66.7%
Administrative and support and waste management services (56)	-957	-5.4%	-1,010	-6.3%	53	2.8%
Educational services (61)	1,701	5.7%	1,110	4.2%	591	16.9%
Health care and social assistance (62)	2,178	5.5%	1,987	5.6%	191	4.6%
Arts, entertainment, and recreation (71)	998	12.2%	1,058	15.8%	-60	-4.0%
Accommodation and food services (72)	3,782	16.3%	3,039	14.4%	743	35.5%
Other services, except public administration (81)	-240	-1.3%	-132	-0.8%	-108	-4.7%
Public administration (92)	-1,090	-5.3%	-675	-3.6%	-415	-20.2%
Total (civilian employed population 16 years and over)	**8,843**	**2.3%**	**7,920**	**2.3%**	**923**	**2.1%**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

TABLE 2-21
LABOR FORCE BY INDUSTRY: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS)

Labor Force by Industry (2010 to 2014 Average)	Camarillo Area	Fillmore Area	Las Posas Area	Moorpark Area	Oak Park Area	North Half Area	Ojai Area
Agriculture, forestry, fishing and hunting (11)	127	83	153	17	50	9	333
Mining, quarrying, and oil and gas extraction (21)	16	0	3	0	0	0	48
Construction (23)	229	100	115	39	181	24	960
Manufacturing (31-33)	462	43	117	29	469	0	515
Wholesale trade (42)	126	9	58	56	149	3	221
Retail trade (44-45)	530	37	188	19	456	9	876
Transportation and warehousing (48-49)	97	0	16	20	107	0	277
Utilities (22)	15	48	19	0	0	8	114
Information (51)	71	0	53	6	363	5	146
Finance and insurance (52)	251	41	62	120	860	0	370
Real estate and rental and leasing (53)	243	0	24	25	295	15	258
Professional, scientific, and technical services (54)	643	99	99	116	1,284	21	720
Management of companies and enterprises (55)	0	0	0	0	0	0	11
Administrative support and waste management services (56)	148	0	59	68	208	66	456
Educational services (61)	782	82	96	7	708	25	1,369
Health care and social assistance (62)	654	64	118	95	867	41	798
Arts, entertainment, and recreation (71)	245	0	119	0	228	28	403
Accommodation and food services (72)	294	38	62	41	347	18	939
Other services, except public administration (81)	299	93	79	0	294	4	611
Public administration (92)	266	61	101	15	151	8	456
Total (civilian employed population 16 years and over)	**5,580**	**798**	**1,518**	**673**	**7,017**	**224**	**9,881**
Labor Force by Industry (2006 to 2010 Average)	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moorpark Area**	**Oak Park Area**	**North Half Area**	**Ojai Area**
Agriculture, forestry, fishing and hunting (11)	139	81	151	10	17	57	120
Mining, quarrying, and oil and gas extraction (21)	12	47	7	0	0	0	150
Construction (23)	306	115	112	38	224	26	1,004
Manufacturing (31-33)	503	38	103	49	671	4	636
Wholesale trade (42)	150	16	67	0	193	0	407
Retail trade (44-45)	501	90	151	20	606	51	869
Transportation and warehousing (48-49)	80	0	34	16	118	2	321
Utilities (22)	121	52	0	0	13	0	94
Information (51)	117	25	67	0	405	16	190
Finance and insurance (52)	179	28	80	13	901	8	279
Real estate and rental and leasing (53)	99	18	54	34	355	21	227
Professional, scientific, and technical services (54)	579	41	97	47	1,066	37	711
Management of companies and enterprises (55)	0	0	0	0	0	0	40
Administrative support and waste management services (56)	192	11	71	35	191	0	386
Educational services (61)	378	71	63	49	848	62	928
Health care and social assistance (62)	584	21	148	15	519	20	1,210
Arts, entertainment, and recreation (71)	216	17	160	18	264	0	401
Accommodation and food services (72)	231	46	27	49	125	41	823
Other services, except public administration (81)	229	110	106	12	290	11	651
Public administration (92)	375	120	78	43	234	12	645
Total (civilian employed population 16 years and over)	**4,917**	**947**	**1,518**	**448**	**7,040**	**368**	**10,092**
Four-Year Trend (Percentage Change)	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moorpark Area**	**Oak Park Area**	**North Half Area**	**Ojai Area**
Agriculture, forestry, fishing and hunting (11)	-8.5%	2.5%	1.3%	70.0%	-84.2%	194.1%	177.5%
Mining, quarrying, and oil and gas extraction (21)	37.6%	-100.0%	-63.2%	n/a	n/a	n/a	-68.0%
Construction (23)	-25.3%	-13.0%	3.2%	2.6%	-7.7%	-19.2%	-4.4%
Manufacturing (31-33)	-8.1%	13.2%	14.4%	-40.8%	-100.0%	-30.1%	-19.0%
Wholesale trade (42)	-16.1%	-43.8%	-12.5%	n/a	n/a	-22.8%	-45.7%
Retail trade (44-45)	5.9%	-58.9%	24.7%	-5.0%	-82.4%	-24.8%	0.8%
Transportation and warehousing (48-49)	21.3%	n/a	-52.3%	25.0%	-100.0%	-9.3%	-13.7%
Utilities (22)	-87.6%	-7.7%	n/a	n/a	n/a	-100.0%	21.3%
Information (51)	-39.1%	-100.0%	-21.5%	n/a	-68.8%	-10.4%	-23.2%
Finance and insurance (52)	40.3%	46.4%	-21.7%	823.1%	-100.0%	-4.6%	32.6%
Real estate and rental and leasing (53)	146.5%	-100.0%	-55.7%	-26.5%	-28.6%	-16.9%	13.7%
Professional, scientific, and technical services (54)	11.1%	141.5%	2.8%	146.8%	-43.2%	20.5%	1.3%
Management of companies and enterprises (55)	n/a	n/a	n/a	n/a	n/a	n/a	-72.5%
Administrative support and waste management services (56)	-22.8%	-100.0%	-17.1%	94.3%	n/a	8.9%	18.1%
Educational services (61)	107.0%	15.5%	52.8%	-85.7%	-59.7%	-16.5%	47.5%
Health care and social assistance (62)	12.1%	204.8%	-20.5%	533.3%	105.0%	67.1%	-34.0%
Arts, entertainment, and recreation (71)	13.3%	-100.0%	-25.4%	-100.0%	n/a	-13.6%	0.5%
Accommodation and food services (72)	27.4%	-17.4%	131.1%	-16.3%	-56.1%	177.6%	14.1%
Other services, except public administration (81)	30.8%	-15.5%	-25.2%	-100.0%	-63.6%	1.4%	-6.1%
Public administration (92)	-29.2%	-49.2%	29.0%	-65.1%	-33.3%	-35.5%	-29.3%
Total (civilian employed population 16 years and over)	**13.5%**	**-15.7%**	**0.0%**	**50.2%**	**-39.1%**	**-0.3%**	**-2.1%**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas.
The Oak Park Planning Area also includes Ahmanson Ranch.

TABLE 2-22
LABOR FORCE BY INDUSTRY: 2010 TO 2014 FIVE-YEAR AVERAGES
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS, CONT.)

Labor Force by Industry (2010 to 2014 Average)	Oxnard Area	Piru Area	Santa Paula Area	Simi Valley Area	Thousand Oaks Area	Ventura Area
Agriculture, forestry, fishing and hunting (11)	883	155	364	12	59	85
Mining, quarrying, and oil and gas extraction (21)	47	5	8	9	29	10
Construction (23)	648	58	109	280	437	200
Manufacturing (31-33)	732	198	86	268	511	150
Wholesale trade (42)	414	72	38	37	114	118
Retail trade (44-45)	730	125	194	281	477	268
Transportation and warehousing (48-49)	284	45	43	36	35	52
Utilities (22)	81	0	4	19	24	37
Information (51)	71	10	0	271	189	22
Finance and insurance (52)	240	41	9	128	278	45
Real estate and rental and leasing (53)	220	11	5	73	161	28
Professional, scientific, and technical services (54)	333	13	21	325	487	86
Management of companies and enterprises (55)	0	0	0	0	5	0
Administrative and support and waste management services (56)	523	56	31	120	186	104
Educational services (61)	239	68	200	179	161	173
Health care and social assistance (62)	485	90	95	317	443	232
Arts, entertainment, and recreation (71)	129	63	8	42	96	81
Accommodation and food services (72)	337	7	59	123	307	265
Other services, except public administration (81)	192	28	54	94	269	190
Public administration (92)	277	48	20	93	78	62
Total (civilian employed population 16 years and over)	**6,811**	**1,093**	**1,348**	**2,707**	**4,346**	**2,208**
Labor Force by Industry (2006 to 2010 Average)	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Agriculture, forestry, fishing and hunting (11)	569	217	263	32	11	62
Mining, quarrying, and oil and gas extraction (21)	45	15	0	0	22	22
Construction (23)	600	54	55	231	221	354
Manufacturing (31-33)	565	130	96	287	285	209
Wholesale trade (42)	391	46	35	50	271	74
Retail trade (44-45)	803	60	136	274	512	213
Transportation and warehousing (48-49)	201	26	91	0	112	34
Utilities (22)	25	0	3	21	34	10
Information (51)	151	23	26	235	262	87
Finance and insurance (52)	298	63	10	225	348	89
Real estate and rental and leasing (53)	182	0	26	183	78	53
Professional, scientific, and technical services (54)	411	53	10	253	524	110
Management of companies and enterprises (55)	0	0	0	0	8	0
Administrative and support and waste management services (56)	503	82	22	212	134	73
Educational services (61)	213	101	161	168	229	228
Health care and social assistance (62)	422	93	116	284	384	292
Arts, entertainment, and recreation (71)	152	21	9	116	106	22
Accommodation and food services (72)	199	27	111	78	234	104
Other services, except public administration (81)	199	52	67	70	294	225
Public administration (92)	343	32	6	20	107	35
Total (civilian employed population 16 years and over)	**6,402**	**1,095**	**1,243**	**2,739**	**4,176**	**2,296**
Four-Year Trend	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Agriculture, forestry, fishing and hunting (11)	55.2%	-28.6%	38.4%	-62.5%	436.4%	37.1%
Mining, quarrying, and oil and gas extraction (21)	4.4%	-66.7%	n/a	n/a	31.8%	-54.5%
Construction (23)	8.1%	7.4%	98.2%	21.2%	97.7%	-43.5%
Manufacturing (31-33)	29.5%	52.3%	-10.4%	-6.6%	79.3%	-28.2%
Wholesale trade (42)	6.0%	56.5%	8.6%	-26.0%	-57.9%	59.5%
Retail trade (44-45)	-9.2%	108.3%	42.6%	2.6%	-6.8%	25.8%
Transportation and warehousing (48-49)	41.2%	73.1%	-52.7%	n/a	-68.8%	52.9%
Utilities (22)	223.3%	n/a	33.3%	-9.5%	-29.4%	270.0%
Information (51)	-52.9%	-56.5%	-100.0%	15.3%	-27.9%	-74.7%
Finance and insurance (52)	-19.4%	-34.9%	-10.0%	-43.1%	-20.1%	-49.4%
Real estate and rental and leasing (53)	20.7%	n/a	-80.8%	-60.1%	106.4%	-47.2%
Professional, scientific, and technical services (54)	-19.0%	-75.5%	110.0%	28.5%	-7.1%	-21.8%
Management of companies and enterprises (55)	n/a	n/a	n/a	n/a	-37.5%	n/a
Administrative and support and waste management services (56)	4.0%	-31.7%	40.9%	-43.4%	38.8%	42.5%
Educational services (61)	12.6%	-32.7%	24.2%	6.5%	-29.7%	-24.1%
Health care and social assistance (62)	14.9%	-3.2%	-18.1%	11.6%	15.4%	-20.5%
Arts, entertainment, and recreation (71)	-15.2%	200.0%	-11.1%	-63.8%	-9.4%	268.2%
Accommodation and food services (72)	69.5%	-74.1%	-46.8%	57.7%	31.2%	154.8%
Other services, except public administration (81)	-3.4%	-46.2%	-19.4%	34.3%	-8.5%	-15.6%
Public administration (92)	-19.3%	50.0%	233.3%	365.0%	-27.1%	77.1%
Total (civilian employed population 16 years and over)	**6.4%**	**-0.2%**	**8.4%**	**-1.2%**	**4.1%**	**-3.8%**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).
Notes: The areas shown in this table estimate the population allocation for the unincorporated portion of the Ventura County Planning Areas. The Oak Park Planning Area also includes Ahmanson Ranch.

TABLE 2-23
LABOR FORCE BY INDUSTRY: 2010 TO 2014 FIVE-YEAR AVERAGES
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES

Labor Force by Industry (2010 to 2014 Average)	Bell Canyon	Casa Conejo	Channel Islands Beach	El Rio	Lake Sherwood	Meiners Oaks	Mira Monte
Agriculture, forestry, fishing and hunting (11)	0	28	48	349	38	12	131
Mining, quarrying, and oil and gas extraction (21)	20	287	198	280	24	158	241
Construction (23)	51	192	133	381	146	89	122
Manufacturing (31-33)	31	33	165	207	5	0	67
Wholesale trade (42)	160	283	97	426	58	216	302
Retail trade (44-45)	4	7	48	152	14	20	114
Transportation and warehousing (48-49)	0	6	27	36	0	16	12
Utilities (22)	66	74	20	27	17	26	30
Information (51)	138	116	190	214	99	31	233
Finance and insurance (52)	103	90	83	116	51	16	128
Real estate and rental and leasing (53)	35	26	107	98	48	15	105
Professional, scientific, and technical services (54)	289	140	172	113	185	92	305
Management of companies and enterprises (55)	0	5	0	0	0	0	0
Administrative support and waste management services (56)	67	81	215	300	22	78	239
Educational services (61)	84	33	48	130	15	352	435
Health care and social assistance (62)	163	146	167	177	46	211	290
Arts, entertainment, and recreation (71)	22	28	62	28	14	21	169
Accommodation and food services (72)	36	179	36	115	42	379	225
Other services, except public administration (81)	12	202	0	151	0	138	203
Public administration (92)	37	37	105	24	4	71	210
Total (civilian employed population 16 years and over)	**1,180**	**1,877**	**1,535**	**3,110**	**729**	**1,910**	**3,328**

Labor Force by Industry (2006 to 2010 Average)	Bell Canyon	Casa Conejo	Channel Islands Beach	El Rio	Lake Sherwood	Meiners Oaks	Mira Monte
Agriculture, forestry, fishing and hunting (11)	0	0	19	191	0	0	72
Mining, quarrying, and oil and gas extraction (21)	0	13	45	0	9	0	118
Construction (23)	0	73	176	296	11	113	352
Manufacturing (31-33)	40	92	125	310	61	126	181
Wholesale trade (42)	50	57	82	237	48	82	174
Retail trade (44-45)	90	254	99	351	64	79	303
Transportation and warehousing (48-49)	0	70	73	71	5	94	162
Utilities (22)	21	12	15	0	0	10	11
Information (51)	76	85	12	80	34	46	65
Finance and insurance (52)	110	101	158	56	116	55	76
Real estate and rental and leasing (53)	58	28	107	40	0	42	55
Professional, scientific, and technical services (54)	235	95	282	73	126	129	267
Management of companies and enterprises (55)	0	8	0	0	0	0	0
Administrative support and waste management services (56)	30	24	0	378	27	24	92
Educational services (61)	103	72	75	52	11	149	358
Health care and social assistance (62)	205	133	136	196	48	150	546
Arts, entertainment, and recreation (71)	64	13	62	63	18	95	85
Accommodation and food services (72)	24	92	51	70	36	298	282
Other services, except public administration (81)	57	228	49	138	9	150	219
Public administration (92)	46	42	171	43	10	75	265
Total (civilian employed population 16 years and over)	**1,209**	**1,492**	**1,737**	**2,645**	**633**	**1,717**	**3,683**

Four-Year Trend (Percentage Change)	Bell Canyon	Casa Conejo	Channel Islands Beach	El Rio	Lake Sherwood	Meiners Oaks	Mira Monte
Agriculture, forestry, fishing and hunting (11)	n/a	n/a	36.8%	69.6%	n/a	n/a	56.9%
Mining, quarrying, and oil and gas extraction (21)	n/a	7.7%	-51.1%	n/a	-11.1%	n/a	-84.7%
Construction (23)	n/a	293.2%	12.5%	-5.4%	118.2%	39.8%	-31.5%
Manufacturing (31-33)	27.5%	108.7%	6.4%	22.9%	139.3%	-29.4%	-32.6%
Wholesale trade (42)	-38.0%	-42.1%	101.2%	-12.7%	-89.6%	-100.0%	-61.5%
Retail trade (44-45)	77.8%	11.4%	-2.0%	21.4%	-9.4%	173.4%	-0.3%
Transportation and warehousing (48-49)	n/a	-90.0%	-34.2%	114.1%	180.0%	-78.7%	-29.6%
Utilities (22)	-100.0%	-50.0%	80.0%	n/a	n/a	60.0%	9.1%
Information (51)	-13.2%	-12.9%	66.7%	-66.3%	-50.0%	-43.5%	-53.8%
Finance and insurance (52)	-6.4%	-10.9%	-47.5%	107.1%	-56.0%	-70.9%	68.4%
Real estate and rental and leasing (53)	-39.7%	-7.1%	0.0%	145.0%	n/a	-64.3%	90.9%
Professional, scientific, and technical services (54)	23.0%	47.4%	-39.0%	54.8%	46.8%	-28.7%	14.2%
Management of companies and enterprises (55)	n/a	-37.5%	n/a	n/a	n/a	n/a	n/a
Administrative support and waste management services (56)	123.3%	237.5%	n/a	-18.8%	125.9%	2245.8%	688.0%
Educational services (61)	-18.4%	-54.2%	-36.0%	150.0%	36.4%	136.2%	21.5%
Health care and social assistance (62)	-20.5%	9.8%	22.8%	-9.7%	-4.2%	40.7%	-46.9%
Arts, entertainment, and recreation (71)	-65.6%	115.4%	0.0%	-55.6%	-22.2%	-77.9%	98.8%
Accommodation and food services (72)	50.0%	94.6%	-29.4%	64.3%	16.7%	27.2%	-20.2%
Other services, except public administration (81)	-78.9%	-11.4%	-100.0%	9.4%	-100.0%	-8.0%	-7.3%
Public administration (92)	-19.6%	-11.9%	-38.6%	-44.2%	-60.0%	-5.3%	-20.8%
Total (civilian employed population 16 years and over)	**-2.4%**	**25.8%**	**-11.6%**	**17.6%**	**15.2%**	**11.2%**	**-9.6%**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

TABLE 2-24
LABOR FORCE BY INDUSTRY: 2010 TO 2014 FIVE-YEAR AVERAGES
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES (CONT.)

Labor Force by Industry (2010 to 2014 Average)	Oak Park	Oak View	Piru	Santa Rosa Valley	Santa Susana	Saticoy
Agriculture, forestry, fishing and hunting (11)	50	51	117	20	0	34
Mining, quarrying, and oil and gas extraction (21)	181	371	46	78	12	52
Construction (23)	469	116	180	138	84	10
Manufacturing (31-33)	149	18	32	50	0	30
Wholesale trade (42)	456	149	125	91	32	37
Retail trade (44-45)	107	55	45	0	10	29
Transportation and warehousing (48-49)	0	66	0	0	0	4
Utilities (22)	355	30	10	18	98	0
Information (51)	1,122	115	34	202	18	0
Finance and insurance (52)	827	79	34	125	18	0
Real estate and rental and leasing (53)	295	36	0	77	0	0
Professional, scientific, and technical services (54)	1,200	95	3	301	51	8
Management of companies and enterprises (55)	0	0	0	0	0	0
Administrative support and waste management services (56)	208	59	31	73	0	43
Educational services (61)	674	264	37	33	19	30
Health care and social assistance (62)	815	161	90	290	46	40
Arts, entertainment, and recreation (71)	228	102	52	69	0	5
Accommodation and food services (72)	347	146	7	62	10	118
Other services, except public administration (81)	294	177	28	75	44	23
Public administration (92)	137	77	38	29	24	0
Total (civilian employed population 16 years and over)	**6,792**	**2,052**	**875**	**1,529**	**448**	**463**
Labor Force by Industry (2006 to 2010 Average)	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Agriculture, forestry, fishing and hunting (11)	17	8	165	24	0	18
Mining, quarrying, and oil and gas extraction (21)	0	32	0	0	0	0
Construction (23)	224	298	46	107	74	48
Manufacturing (31-33)	657	113	83	183	132	12
Wholesale trade (42)	193	24	0	43	0	0
Retail trade (44-45)	594	191	32	134	27	22
Transportation and warehousing (48-49)	118	33	26	0	0	15
Utilities (22)	13	47	0	110	0	0
Information (51)	405	39	0	8	34	0
Finance and insurance (52)	874	125	0	60	41	6
Real estate and rental and leasing (53)	355	49	0	33	16	0
Professional, scientific, and technical services (54)	992	95	33	166	15	0
Management of companies and enterprises (55)	0	18	0	0	0	0
Administrative support and waste management services (56)	177	90	37	43	164	0
Educational services (61)	823	195	59	55	29	43
Health care and social assistance (62)	477	269	78	190	68	49
Arts, entertainment, and recreation (71)	251	79	21	87	13	0
Accommodation and food services (72)	125	115	27	78	0	0
Other services, except public administration (81)	290	104	45	81	0	19
Public administration (92)	188	140	32	58	0	0
Total (civilian employed population 16 years and over)	**6,773**	**2,064**	**684**	**1,460**	**613**	**232**
Four-Year Trend (Percentage Change)	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Agriculture, forestry, fishing and hunting (11)	194.1%	250.0%	-32.1%	-16.7%	n/a	88.9%
Mining, quarrying, and oil and gas extraction (21)	n/a	-28.1%	n/a	n/a	n/a	n/a
Construction (23)	-19.2%	24.5%	0.0%	-27.1%	-83.8%	8.3%
Manufacturing (31-33)	-28.6%	2.7%	116.9%	-24.6%	-36.4%	-16.7%
Wholesale trade (42)	-22.8%	-25.0%	n/a	16.3%	n/a	n/a
Retail trade (44-45)	-23.2%	-22.0%	290.6%	-32.1%	18.5%	68.2%
Transportation and warehousing (48-49)	-9.3%	66.7%	73.1%	n/a	n/a	93.3%
Utilities (22)	-100.0%	40.4%	n/a	-100.0%	n/a	n/a
Information (51)	-12.3%	-23.1%	n/a	125.0%	188.2%	n/a
Finance and insurance (52)	-5.4%	-36.8%	n/a	108.3%	-56.1%	-100.0%
Real estate and rental and leasing (53)	-16.9%	-26.5%	n/a	133.3%	-100.0%	n/a
Professional, scientific, and technical services (54)	21.0%	0.0%	-90.9%	81.3%	240.0%	n/a
Management of companies and enterprises (55)	n/a	-100.0%	n/a	n/a	n/a	n/a
Administrative support and waste management services (56)	741.2%	372.2%	243.2%	69.8%	-100.0%	n/a
Educational services (61)	-18.1%	35.4%	-37.3%	-40.0%	-34.5%	-30.2%
Health care and social assistance (62)	70.9%	-40.1%	15.4%	52.6%	-32.4%	-18.4%
Arts, entertainment, and recreation (71)	-9.2%	29.1%	147.6%	-20.7%	-100.0%	n/a
Accommodation and food services (72)	177.6%	27.0%	-74.1%	-20.5%	n/a	n/a
Other services, except public administration (81)	1.4%	70.2%	-37.8%	-7.4%	n/a	21.1%
Public administration (92)	-27.1%	-45.0%	18.8%	-50.0%	n/a	n/a
Total (civilian employed population 16 years and over)	**0.3%**	**-0.6%**	**27.9%**	**4.7%**	**-26.9%**	**99.6%**

Source: ADE, Inc.; data from American Community Survey Five-Year Sample (2010-2014 and 2006-2010 data).

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SECTION 2.3 REGIONAL MARKET TRENDS

Introduction

This section describes the market trends for employment and other economic indicators in Ventura County and its unincorporated communities. It also includes more focused discussions for economic sectors of particular importance in the unincorporated areas, such as agriculture, tourism, oil and gas production, aggregate mining, higher education, and film production. This section is organized into the following subsections: Employment by Industry, Industry Output, and Industry Snapshots.

The analysis in this section focuses on the types of jobs that exist in Ventura County. This differs from the labor force analysis in Section 2.2 in that employment represents jobs based within a specific geographic area, while the labor force represents the workers who reside within a specific area.

Major Findings

- In 2015, Ventura County had an employment base of 319,588 jobs, not including military employment. The job base has large concentrations of jobs in agriculture, forestry, fishing and hunting; retail trade; manufacturing; and health care and social assistance. Other industries with significant job levels include accommodations and food service and public administration.
- The unincorporated areas accounted for 32,889 (10.3 percent) of the Ventura County job base in 2015. The largest concentration of jobs in 2015 in the unincorporated areas was in agriculture, with smaller concentrations in construction, manufacturing, and education. While substantial numbers of workers living in the unincorporated area are employed in these types of industries, most agricultural workers in the county live in the cities. There are even higher concentrations of workers in the unincorporated area employed in professional, scientific, and technical services industries; health care; and retail trade (see Section 2.2).
- The industry output[6] for Ventura County indicates that the value of economic activity within the county totals more than $70.8 billion. Overall, the Ventura County economy showed a slight decline in constant dollar (inflation-adjusted) terms between 2007 and 2014, while the California state economy showed a 10 percent increase during the same period. The largest output is from the manufacturing sector, at $14.1 billion, which represents a higher concentration of manufacturing than the state average.
- Ventura County's farm product value reached $2.1 billion in 2014, an increase of approximately 50 percent in constant dollar terms since the year 2000, similar to the statewide average. Agriculture supports nearly 27,000 direct jobs in farming and approximately 5,800 additional jobs in related sectors and food processing. Combined with related distribution services and food processing, the agriculture industry cluster is estimated to generate $3.5 billion in economic activity (output). Agricultural production employment (not including food processing and related sectors) in the unincorporated areas totaled over 14,400 jobs in 2015, based on State Employment Development Department (EDD) records. However, it should be noted that many companies

[6] This term refers to the sum of economic activity for an industry or business establishment within a specific geographic area. This includes the sum of commodity inputs, labor income, taxes, property income, and other value-added components.

report their field jobs as located at their administrative office, which probably results in many farm jobs showing up as located within cities rather than on farmland.

- The unincorporated areas host many of the scenic destinations that draw visitors to Ventura County. Between 2005 and 2014, the unincorporated areas increased their share of lodging revenues from 1.8 percent to 2.3 percent. Hospitality industries (accommodations and food service) grew to over 30,000 jobs in Ventura County in 2015, an increase of nearly 6,000 jobs from 2002. Hospitality employment in the unincorporated areas totaled over 800 jobs in 2015, which is about the same as the job count from 2002.
- Oil and gas production supported 3,211 direct jobs and over $652 million in labor income in Ventura County (not including retail gas stations) in 2013. The industry supports a very high worker productivity of nearly $700,000 in industry output per job, which is much higher than the average $157,000 in output per worker for all Ventura County industries. The industry also has high wages and salaries, averaging $118,400.
- Aggregate mining accounted for nearly 150 jobs in Ventura County in 2015. The average income per worker for this activity in 2015 came out to nearly $58,500, which was above the countywide average income per worker of $52,700. In addition, the mining industry had an average industry output per worker of over $353,000 in 2015, which was more than double the average worker productivity for all industries in Ventura County.
- Ventura County has multiple institutions of higher learning located throughout the county. These institutions supported a total of 5,800 positions in 2015, an increase of nearly 800 jobs compared to 2002. Two of these institutions are located in the unincorporated area, California State University Channel Islands (CSUCI) and Thomas Aquinas College (information on other educational facilities may be found in Chapter 7, Public Facilities). CSUCI opened in 2002 and is located in the Oxnard Planning area. The campus currently supports 6,167 students, 175 full-time faculty, and 753 total full-time equivalent staff. Based on the campus Capital Expansion Plan, the University is projected to grow to 11,500 students by 2025. Thomas Aquinas College is a private, liberal arts college located north of Santa Paula, with an enrollment of 378 students.
- The Naval Base Ventura County (NBVC) was established in 2000 through the merger of the former Naval Air Station Point Mugu and Construction Battalion Center Port Hueneme. The Point Mugu facility is in the unincorporated Oxnard planning area, while NBVC Port Hueneme is located within the city of Port Hueneme. The NBVC supports approximately 17,000 armed forces, civilian, and contractor jobs. The various commands located at the bases are responsible for a significant amount of research into new technologies and material for defense applications. A number of private firms work closely with the military to research and develop these new systems. NBVC Point Mugu's primary mission is to provide support for aircraft and test range operations at the installation and surrounding airspace, including training, operations and research, development, acquisition, and test and evaluation missions. Direct jobs with the military in Ventura County accounted for nearly 5,200 jobs in 2015, with another 5,400 civilians employed in the military. In addition, Ventura County's military operations support approximately 5,500 private sector contracting positions and 2,500 military reserve (Ready Reserve) positions.
- Ventura County's location near Hollywood and the San Fernando Valley and its numerous scenic and historical sites make it a natural location for filming activity. Based on 2015 data from the Ventura County Film Commission, there were 1,964 days of filming activity in the county, which benefits more than 3,500 trade workers and professionals. Total film activity in the county generated $39.3 million in economic activity in 2015, which was more than double the $16.8 million in economic activity that film production created in 2013. In addition, the $20.1 million

economic impact in the unincorporated areas in 2015 was also nearly double the $10.7 million economic impact from 2013.

Existing Conditions

Employment by Industry

While the labor force indicates the supply of workers residing in a geographic location (as described in Section 2.2), the employment-by-industry analysis identifies the demand for workers. In 2015, Ventura County had an employment base of 319,588 jobs, according to data from Economic Modeling Specialists Int'l (EMSI), as shown in Table 2-25.[7] The largest concentrations of jobs in Ventura County included: agriculture, forestry, fishing, and hunting; retail trade; manufacturing; health care and social assistance; accommodations and food service; and public administration. Each of these industries accounted for at least nine percent of the total employment in Ventura County.

The unincorporated areas accounted for 33,068 (10.3 percent) of the Ventura County job base, while housing 44,402 (11.2 percent) of its workforce, as discussed earlier in Section 2.2.[8] The largest concentration of jobs in 2015 in the unincorporated areas was the "agriculture, forestry, fishing, and hunting" category. These resource-based jobs accounted for at least 43 percent of the jobs in unincorporated Ventura County, and the unincorporated areas accounted for at least 53 percent of the agricultural jobs in Ventura County. It should be noted that many of these jobs might be physically located in the unincorporated areas, but have their business establishment locations in the incorporated cities.

Other industries in the unincorporated areas with over 1,000 jobs in 2015 included construction, manufacturing, administrative services, educational services, health care, accommodations and food services, and public administration.

Among the unincorporated Ventura County planning areas, Oxnard had the highest number of 2015 jobs with 12,132 positions (Table 2-26 and Table 2-27). Over 66 percent of the jobs in the unincorporated Oxnard Planning Area were in agriculture and related industries. In addition, another 945 jobs in public administration were located in the unincorporated Oxnard area.[9] Other unincorporated planning areas with at least 2,000 jobs include Camarillo, Las Posas, Ojai, and Ventura. Areas with at least half of the job base in agriculture include Fillmore, Las Posas, Moorpark, and Santa Paula.

The data for CDPs in Ventura County indicates that El Rio, Oak Park, and Saticoy had the highest 2015 employment among the Ventura County CDPs (Table 2-28 and Table 2-29). Each of these CDPs had at least 1,000 jobs.

[7] The EMSI dataset includes the employment counts from the Quarterly Census of Employment and Wages (QCEW) database compiled by the U.S. Bureau of Labor Statistics (BLS). This data is specific to Ventura County and includes all QCEW-covered and non-QCEW jobs. The data does not include military jobs. In order to protect the privacy of individual businesses, some numbers are suppressed by BLS. EMSI uses a quantitative model to estimate the job counts for those non-disclosed categories.
[8] The allocation by geographic area within Ventura County relied on the Longitudinal Employer-Household Dynamics (LEHD) dataset from the U.S. Department of Commerce.
[9] The job allocation in the public administration category in 2002 does not match up with the 2014 data. This is likely due to LEHD assigning those jobs strictly into incorporated areas, with no provision for jobs in the unincorporated areas.

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TABLE 2-25
EMPLOYMENT TREND: 2002 TO 2015 EMPLOYMENT CHANGE
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

2015 Employment	County Total		Incorporated		Unincorporated	
	Jobs	% of Total	Jobs	% of Total	Jobs	% of Total
Agriculture, Forestry, Fishing and Hunting (11)	26,866	8.4%	12,408	4.3%	14,458	43.7%
Mining, Quarrying, and Oil and Gas Extraction (21)	1,108	0.3%	924	0.3%	184	0.6%
Utilities (22)	1,070	0.3%	711	0.2%	359	1.1%
Construction (23)	14,519	4.5%	12,501	4.4%	2,018	6.1%
Manufacturing (31-33)	30,180	9.4%	28,717	10.0%	1,463	4.4%
Wholesale Trade (42)	12,504	3.9%	11,796	4.1%	708	2.1%
Retail Trade (44-45)	39,330	12.3%	38,355	13.4%	976	3.0%
Transportation and Warehousing (48-49)	4,951	1.5%	4,533	1.6%	418	1.3%
Information (51)	5,058	1.6%	4,960	1.7%	98	0.3%
Finance and Insurance (52)	13,747	4.3%	13,598	4.7%	149	0.5%
Real Estate and Rental and Leasing (53)	4,347	1.4%	3,795	1.3%	552	1.7%
Professional, Scientific, and Technical Services (54)	15,790	4.9%	14,925	5.2%	865	2.6%
Management of Companies and Enterprises (55)	1,897	0.6%	1,805	0.6%	91	0.3%
Administration and Support, Waste Management (56)	16,812	5.3%	15,499	5.4%	1,314	4.0%
Educational Services (61)	26,184	8.2%	22,341	7.8%	3,843	11.6%
Health Care and Social Assistance (62)	38,877	12.2%	37,703	13.2%	1,174	3.6%
Arts, Entertainment, and Recreation (71)	5,119	1.6%	4,275	1.5%	844	2.6%
Accommodation and Food Services (72)	30,070	9.4%	29,225	10.2%	844	2.6%
Other Services (excluding Public Administration) (81)	10,999	3.4%	10,121	3.5%	878	2.7%
Public Administration (92)	20,342	6.4%	18,510	6.5%	1,831	5.5%
Total	**319,767**		**286,699**		**33,068**	
2002 Employment	**Jobs**	**% of Total**	**Jobs**	**% of Total**	**Jobs**	**% of Total**
Agriculture, Forestry, Fishing and Hunting (11)	19,406	6.4%	9,922	3.6%	9,484	39.6%
Mining, Quarrying, and Oil and Gas Extraction (21)	733	0.2%	527	0.2%	206	0.9%
Utilities (22)	865	0.3%	663	0.2%	202	0.8%
Construction (23)	16,206	5.3%	14,352	5.1%	1,854	7.7%
Manufacturing (31-33)	37,567	12.4%	35,700	12.8%	1,867	7.8%
Wholesale Trade (42)	11,533	3.8%	10,749	3.9%	784	3.3%
Retail Trade (44-45)	34,062	11.2%	33,373	12.0%	689	2.9%
Transportation and Warehousing (48-49)	4,992	1.6%	4,563	1.6%	429	1.8%
Information (51)	7,973	2.6%	7,755	2.8%	218	0.9%
Finance and Insurance (52)	17,579	5.8%	17,378	6.2%	201	0.8%
Real Estate and Rental and Leasing (53)	4,603	1.5%	4,221	1.5%	382	1.6%
Professional, Scientific, and Technical Services (54)	13,728	4.5%	13,034	4.7%	694	2.9%
Management of Companies and Enterprises (55)	3,336	1.1%	3,300	1.2%	36	0.2%
Administration and Support, Waste Management (56)	19,692	6.5%	18,245	6.5%	1,447	6.0%
Educational Services (61)	24,817	8.2%	22,297	8.0%	2,521	10.5%
Health Care and Social Assistance (62)	23,849	7.9%	23,354	8.4%	495	2.1%
Arts, Entertainment, and Recreation (71)	4,181	1.4%	3,528	1.3%	654	2.7%
Accommodation and Food Services (72)	24,165	8.0%	23,300	8.3%	864	3.6%
Other Services (excluding Public Administration) (81)	12,581	4.2%	11,666	4.2%	915	3.8%
Public Administration (92)	21,203	7.0%	21,201	7.6%	2	0.0%
Total	**303,070**		**279,126**		**23,945**	
2002 to 2015 Employment Change	**Jobs**	**% Change**	**Jobs**	**% Change**	**Jobs**	**% Change**
Agriculture, Forestry, Fishing and Hunting (11)	7,460	38.4%	2,486	25.1%	4,975	52.5%
Mining, Quarrying, and Oil and Gas Extraction (21)	375	51.2%	397	75.2%	-22	-10.5%
Utilities (22)	204	23.6%	48	7.2%	157	77.4%
Construction (23)	-1,687	-10.4%	-1,851	-12.9%	163	8.8%
Manufacturing (31-33)	-7,387	-19.7%	-6,983	-19.6%	-404	-21.7%
Wholesale Trade (42)	971	8.4%	1,047	9.7%	-76	-9.7%
Retail Trade (44-45)	5,269	15.5%	4,982	14.9%	287	41.7%
Transportation and Warehousing (48-49)	-42	-0.8%	-30	-0.7%	-11	-2.6%
Information (51)	-2,915	-36.6%	-2,795	-36.0%	-120	-55.0%
Finance and Insurance (52)	-3,832	-21.8%	-3,780	-21.8%	-52	-25.9%
Real Estate and Rental and Leasing (53)	-257	-5.6%	-426	-10.1%	170	44.5%
Professional, Scientific, and Technical Services (54)	2,062	15.0%	1,891	14.5%	171	24.7%
Management of Companies and Enterprises (55)	-1,439	-43.1%	-1,495	-45.3%	55	154.1%
Administration and Support, Waste Management (56)	-2,880	-14.6%	-2,746	-15.1%	-134	-9.2%
Educational Services (61)	1,366	5.5%	44	0.2%	1,322	52.5%
Health Care and Social Assistance (62)	15,028	63.0%	14,349	61.4%	679	137.1%
Arts, Entertainment, and Recreation (71)	937	22.4%	747	21.2%	190	29.1%
Accommodation and Food Services (72)	5,905	24.4%	5,925	25.4%	-20	-2.3%
Other Services (excluding Public Administration) (81)	-1,582	-12.6%	-1,545	-13.2%	-37	-4.0%
Public Administration (92)	-861	-4.1%	-2,690	-12.7%	1,829	-99.9%
Total	**16,697**	**5.5%**	**7,573**	**2.7%**	**9,124**	**38.1%**

Source: ADE, Inc.; data from Longitudinal Employer-Household Dynamics, and Economic Modeling Specialists, Int'l.
Notes: The countywide employment totals come from the EMSI database. Geographic allocation into unincorporated communities comes from the LEHD data.

TABLE 2-26
EMPLOYMENT TREND: 2002 TO 2015 EMPLOYMENT CHANGE
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS)

2015 Employment	Camarillo Area	Fillmore Area	Las Posas Area	Moor-park Area	North Half Area	Oak Park Area	Ojai Area
Agriculture, Forestry, Fishing and Hunting (11)	1,548	537	1,552	1,067	27	0	153
Mining, Quarrying, and Oil and Gas Extraction (21)	0	27	0	42	0	0	12
Utilities (22)	2	3	3	0	0	0	84
Construction (23)	152	46	187	134	24	62	244
Manufacturing (31-33)	137	8	9	504	97	27	67
Wholesale Trade (42)	44	14	22	5	0	14	63
Retail Trade (44-45)	34	21	117	24	0	14	229
Transportation and Warehousing (48-49)	6	0	0	3	0	4	49
Information (51)	7	0	15	0	1	20	10
Finance and Insurance (52)	55	0	5	2	0	13	24
Real Estate and Rental and Leasing (53)	81	4	7	11	2	52	62
Professional, Scientific, and Technical Services (54)	269	5	53	6	17	93	108
Management of Companies and Enterprises (55)	3	0	0	0	0	12	0
Administration and Support, Waste Management (56)	146	143	73	85	7	48	139
Educational Services (61)	1,202	10	49	15	0	443	503
Health Care and Social Assistance (62)	425	4	27	0	1	151	198
Arts, Entertainment, and Recreation (71)	107	42	80	4	3	18	15
Accommodation and Food Services (72)	83	22	6	0	0	59	442
Other Services (excluding Public Administration) (81)	114	67	158	8	0	38	144
Public Administration (92)	27	0	12	0	0	0	0
Total	**4,442**	**952**	**2,378**	**1,909**	**179**	**1,068**	**2,546**
2002 Employment	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moor-park Area**	**North Half Area**	**Oak Park Area**	**Ojai Area**
Agriculture, Forestry, Fishing and Hunting (11)	1,010	763	602	27	15	0	120
Mining, Quarrying, and Oil and Gas Extraction (21)	2	5	0	26	0	0	2
Utilities (22)	1	1	9	2	0	1	50
Construction (23)	298	48	142	17	2	57	195
Manufacturing (31-33)	498	5	29	381	0	11	26
Wholesale Trade (42)	48	0	84	0	2	10	13
Retail Trade (44-45)	8	22	95	16	3	23	166
Transportation and Warehousing (48-49)	33	21	0	14	0	5	18
Information (51)	7	0	11	0	5	6	7
Finance and Insurance (52)	63	4	13	0	34	13	37
Real Estate and Rental and Leasing (53)	25	15	76	0	7	16	60
Professional, Scientific, and Technical Services (54)	56	1	37	3	8	51	73
Management of Companies and Enterprises (55)	0	0	0	0	0	0	0
Administration and Support, Waste Management (56)	431	0	117	165	1	47	90
Educational Services (61)	119	6	72	0	5	354	555
Health Care and Social Assistance (62)	95	0	13	1	10	3	238
Arts, Entertainment, and Recreation (71)	98	34	85	16	1	9	17
Accommodation and Food Services (72)	95	49	18	0	0	71	406
Other Services (excluding Public Administration) (81)	106	12	48	16	1	26	153
Public Administration (92)	0	0	2	0	0	0	0
Total	**2,995**	**986**	**1,453**	**684**	**94**	**703**	**2,227**
2002 to 2015 Employment Change	**Camarillo Area**	**Fillmore Area**	**Las Posas Area**	**Moor-park Area**	**North Half Area**	**Oak Park Area**	**Ojai Area**
Agriculture, Forestry, Fishing and Hunting (11)	538	-226	951	1,040	12	0	33
Mining, Quarrying, and Oil and Gas Extraction (21)	-2	22	0	17	0	0	10
Utilities (22)	1	2	-5	-2	0	-1	33
Construction (23)	-146	-2	45	117	22	5	50
Manufacturing (31-33)	-361	3	-21	123	97	17	41
Wholesale Trade (42)	-5	14	-62	5	-2	3	50
Retail Trade (44-45)	26	-1	22	8	-3	-9	63
Transportation and Warehousing (48-49)	-27	-21	0	-11	0	-1	31
Information (51)	0	0	5	0	-4	14	3
Finance and Insurance (52)	-8	-4	-7	2	-34	1	-13
Real Estate and Rental and Leasing (53)	56	-11	-69	11	-4	35	3
Professional, Scientific, and Technical Services (54)	213	4	16	3	9	42	35
Management of Companies and Enterprises (55)	3	0	0	0	0	12	0
Administration and Support, Waste Management (56)	-285	143	-44	-81	6	1	49
Educational Services (61)	1,083	4	-23	15	-5	89	-52
Health Care and Social Assistance (62)	330	4	14	-1	-9	148	-40
Arts, Entertainment, and Recreation (71)	8	7	-5	-13	2	9	-2
Accommodation and Food Services (72)	-12	-26	-12	0	0	-12	35
Other Services (excluding Public Administration) (81)	8	55	110	-8	-1	12	-9
Public Administration (92)	27	0	10	0	0	0	0
Total	**1,447**	**-34**	**925**	**1,225**	**85**	**365**	**319**

Source: ADE, Inc.; data from Longitudinal Employer-Household Dynamics, and Economic Modeling Specialists, Int'l.
Notes: The countywide employment totals come from the EMSI database. Geographic allocation into unincorporated communities comes from the LEHD data.

TABLE 2-27
EMPLOYMENT TREND: 2002 TO 2015 EMPLOYMENT CHANGE
VENTURA COUNTY PLANNING AREAS (UNINCORPORATED TOTALS, CONT.)

2015 Employment	Oxnard Area	Piru Area	Santa Paula Area	Simi Valley Area	Thousand Oaks Area	Ventura Area
Agriculture, Forestry, Fishing and Hunting (11)	8,072	154	1,045	6	44	252
Mining, Quarrying, and Oil and Gas Extraction (21)	27	8	0	0	0	68
Utilities (22)	18	1	0	39	1	207
Construction (23)	364	4	118	86	106	491
Manufacturing (31-33)	160	15	119	0	126	194
Wholesale Trade (42)	315	55	24	34	12	108
Retail Trade (44-45)	190	124	14	26	29	155
Transportation and Warehousing (48-49)	281	2	13	0	6	53
Information (51)	11	0	14	4	9	7
Finance and Insurance (52)	27	0	4	3	13	2
Real Estate and Rental and Leasing (53)	122	0	7	5	26	171
Professional, Scientific, and Technical Services (54)	56	4	31	39	116	68
Management of Companies and Enterprises (55)	11	0	64	0	0	1
Administration and Support, Waste Management (56)	102	8	20	118	77	347
Educational Services (61)	1,151	23	172	84	136	55
Health Care and Social Assistance (62)	81	20	15	31	153	67
Arts, Entertainment, and Recreation (71)	6	0	23	46	254	247
Accommodation and Food Services (72)	98	0	6	10	65	55
Other Services (excluding Public Administration) (81)	94	14	21	32	73	117
Public Administration (92)	945	27	4	0	0	817
Total	**12,132**	**457**	**1,710**	**564**	**1,247**	**3,484**
2002 Employment	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Agriculture, Forestry, Fishing and Hunting (11)	5,431	51	635	0	53	791
Mining, Quarrying, and Oil and Gas Extraction (21)	53	0	2	75	1	40
Utilities (22)	12	0	0	0	0	119
Construction (23)	418	2	135	52	130	344
Manufacturing (31-33)	222	0	139	1	217	338
Wholesale Trade (42)	253	0	117	121	39	99
Retail Trade (44-45)	182	0	15	2	48	95
Transportation and Warehousing (48-49)	231	0	17	0	4	85
Information (51)	2	0	1	117	5	61
Finance and Insurance (52)	7	0	11	10	34	10
Real Estate and Rental and Leasing (53)	77	4	2	5	44	35
Professional, Scientific, and Technical Services (54)	91	0	56	99	102	123
Management of Companies and Enterprises (55)	35	0	0	0	1	0
Administration and Support, Waste Management (56)	139	0	3	105	97	249
Educational Services (61)	1,177	0	66	4	92	77
Health Care and Social Assistance (62)	43	1	5	7	51	38
Arts, Entertainment, and Recreation (71)	5	3	11	112	254	9
Accommodation and Food Services (72)	81	0	14	0	23	51
Other Services (excluding Public Administration) (81)	134	0	19	196	53	142
Public Administration (92)	0	0	0	0	0	0
Total	**8,594**	**61**	**1,248**	**906**	**1,246**	**2,706**
2002 to 2015 Employment Change	**Oxnard Area**	**Piru Area**	**Santa Paula Area**	**Simi Valley Area**	**Thousand Oaks Area**	**Ventura Area**
Agriculture, Forestry, Fishing and Hunting (11)	2,641	103	409	6	-9	-539
Mining, Quarrying, and Oil and Gas Extraction (21)	-26	8	-2	-75	-1	28
Utilities (22)	6	1	0	39	1	89
Construction (23)	-53	2	-17	34	-24	146
Manufacturing (31-33)	-62	15	-20	-1	-90	-144
Wholesale Trade (42)	63	55	-93	-87	-27	9
Retail Trade (44-45)	8	124	-1	24	-20	60
Transportation and Warehousing (48-49)	50	2	-4	0	2	-31
Information (51)	8	0	12	-114	4	-53
Finance and Insurance (52)	20	0	-7	-7	-20	-8
Real Estate and Rental and Leasing (53)	44	-4	5	0	-17	137
Professional, Scientific, and Technical Services (54)	-35	4	-25	-60	15	-56
Management of Companies and Enterprises (55)	-24	0	64	0	-1	1
Administration and Support, Waste Management (56)	-37	8	16	13	-20	99
Educational Services (61)	-26	23	106	80	45	-22
Health Care and Social Assistance (62)	38	19	10	25	103	29
Arts, Entertainment, and Recreation (71)	1	-3	12	-66	0	238
Accommodation and Food Services (72)	18	0	-9	10	42	4
Other Services (excluding Public Administration) (81)	-40	14	1	-164	21	-25
Public Administration (92)	945	27	4	0	0	817
Total	**3,538**	**396**	**462**	**-342**	**2**	**778**

Source: ADE, Inc.; data from Longitudinal Employer-Household Dynamics, and Economic Modeling Specialists, Int'l.
Notes: The countywide employment totals come from the EMSI database. Geographic allocation into unincorporated communities comes from the LEHD data.

TABLE 2-28
EMPLOYMENT TREND: 2002 TO 2015 EMPLOYMENT CHANGE
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES

2015 Employment (NAICS Code)	Bell Canyon	Casa Conejo	Channel Islands Beach	El Rio	Lake Sherwood	Meiners Oaks	Mira Monte
Agriculture, Forestry, Fishing and Hunting (11)	6	0	0	630	3	1	42
Mining, Quarrying, and Oil and Gas Extraction (21)	0	0	0	12	0	0	0
Utilities (22)	0	0	5	7	0	10	19
Construction (23)	13	11	39	179	1	30	71
Manufacturing (31-33)	0	0	0	108	0	33	2
Wholesale Trade (42)	3	2	2	168	3	18	23
Retail Trade (44-45)	15	0	21	159	0	111	70
Transportation and Warehousing (48-49)	0	0	0	151	0	1	26
Information (51)	4	5	5	0	0	0	4
Finance and Insurance (52)	6	1	1	20	2	0	3
Real Estate and Rental and Leasing (53)	0	0	38	67	2	3	34
Professional, Scientific, and Technical Services (54)	30	2	1	11	9	23	18
Management of Companies and Enterprises (55)	0	0	0	11	0	0	0
Administration and Support, Waste Management (56)	18	11	3	20	5	28	59
Educational Services (61)	8	57	296	377	1	51	208
Health Care and Social Assistance (62)	46	42	7	57	15	59	29
Arts, Entertainment, and Recreation (71)	9	3	1	1	174	4	5
Accommodation and Food Services (72)	10	0	21	30	26	132	176
Other Services (excluding Public Administration) (81)	24	0	3	74	35	9	26
Public Administration (92)	0	0	0	0	0	0	0
Total	**192**	**134**	**443**	**2,081**	**274**	**512**	**815**
2002 Employment (NAICS Code)	**Bell Canyon**	**Casa Conejo**	**Channel Islands Beach**	**El Rio**	**Lake Sherwood**	**Meiners Oaks**	**Mira Monte**
Agriculture, Forestry, Fishing and Hunting (11)	0	0	0	1,129	8	0	8
Mining, Quarrying, and Oil and Gas Extraction (21)	0	0	0	1	1	0	0
Utilities (22)	0	0	7	4	0	4	18
Construction (23)	10	10	16	158	12	16	86
Manufacturing (31-33)	0	0	0	97	0	11	0
Wholesale Trade (42)	2	0	0	54	3	0	0
Retail Trade (44-45)	3	2	16	107	0	34	60
Transportation and Warehousing (48-49)	0	0	1	122	0	0	8
Information (51)	25	0	0	1	1	0	2
Finance and Insurance (52)	11	1	0	1	28	21	15
Real Estate and Rental and Leasing (53)	8	11	22	28	2	3	17
Professional, Scientific, and Technical Services (54)	47	1	2	23	5	10	15
Management of Companies and Enterprises (55)	0	0	0	3	0	0	0
Administration and Support, Waste Management (56)	1	0	3	29	8	16	35
Educational Services (61)	2	39	0	311	1	134	51
Health Care and Social Assistance (62)	3	20	0	19	2	61	6
Arts, Entertainment, and Recreation (71)	7	1	0	0	198	3	0
Accommodation and Food Services (72)	0	7	57	11	0	54	202
Other Services (excluding Public Administration) (81)	42	1	12	86	21	16	35
Public Administration (92)	0	0	0	0	0	0	0
Total	**161**	**93**	**136**	**2,184**	**291**	**383**	**558**
2002 to 2015 Employment Change	**Bell Canyon**	**Casa Conejo**	**Channel Islands Beach**	**El Rio**	**Lake Sherwood**	**Meiners Oaks**	**Mira Monte**
Agriculture, Forestry, Fishing and Hunting (11)	6	0	0	-499	-6	1	34
Mining, Quarrying, and Oil and Gas Extraction (21)	0	0	0	11	-1	0	0
Utilities (22)	0	0	-2	3	0	6	1
Construction (23)	4	2	23	21	-11	14	-15
Manufacturing (31-33)	0	0	0	11	0	22	2
Wholesale Trade (42)	1	2	2	114	0	18	23
Retail Trade (44-45)	11	-2	5	53	0	76	10
Transportation and Warehousing (48-49)	0	0	-1	29	0	1	18
Information (51)	-22	5	5	-1	-1	0	1
Finance and Insurance (52)	-5	0	1	18	-26	-21	-12
Real Estate and Rental and Leasing (53)	-8	-11	16	38	0	0	16
Professional, Scientific, and Technical Services (54)	-17	1	-1	-12	4	13	4
Management of Companies and Enterprises (55)	0	0	0	8	0	0	0
Administration and Support, Waste Management (56)	17	11	0	-9	-3	12	24
Educational Services (61)	6	18	296	66	0	-83	157
Health Care and Social Assistance (62)	43	22	7	38	13	-2	24
Arts, Entertainment, and Recreation (71)	2	2	1	1	-24	0	5
Accommodation and Food Services (72)	10	-7	-36	19	26	78	-26
Other Services (excluding Public Administration) (81)	-17	-1	-9	-12	13	-7	-9
Public Administration (92)	0	0	0	0	0	0	0
Total	**31**	**41**	**307**	**-103**	**-16**	**129**	**257**

Source: ADE, Inc.; data from Longitudinal Employer-Household Dynamics, and Economic Modeling Specialists, Int'l.
Notes: The countywide employment totals come from the EMSI database. Geographic allocation into unincorporated communities comes from the LEHD data.

TABLE 2-29
EMPLOYMENT TREND: 2002 TO 2015 EMPLOYMENT CHANGE
UNINCORPORATED VENTURA COUNTY CENSUS DESIGNATED PLACES (CONT.)

2015 Employment	Oak Park	Oak View	Piru	Santa Rosa Valley	Santa Susana	Saticoy
Agriculture, Forestry, Fishing and Hunting (11)	0	3	120	15	0	129
Mining, Quarrying, and Oil and Gas Extraction (21)	0	10	0	0	0	0
Utilities (22)	0	52	1	0	0	2
Construction (23)	52	53	0	51	0	219
Manufacturing (31-33)	27	16	0	2	0	79
Wholesale Trade (42)	14	11	55	2	5	46
Retail Trade (44-45)	14	32	106	9	0	25
Transportation and Warehousing (48-49)	4	22	2	4	0	46
Information (51)	20	1	0	6	0	0
Finance and Insurance (52)	11	16	0	6	0	1
Real Estate and Rental and Leasing (53)	52	11	0	36	0	121
Professional, Scientific, and Technical Services (54)	89	24	3	21	9	6
Management of Companies and Enterprises (55)	12	0	0	0	0	0
Administration and Support, Waste Management (56)	46	26	8	47	73	284
Educational Services (61)	443	19	23	37	0	0
Health Care and Social Assistance (62)	108	16	18	16	5	12
Arts, Entertainment, and Recreation (71)	15	2	0	6	0	6
Accommodation and Food Services (72)	59	73	0	37	0	11
Other Services (excluding Public Administration) (81)	38	23	6	26	6	81
Public Administration (92)	0	0	27	0	0	0
Total	**1,004**	**408**	**368**	**321**	**99**	**1,067**
2002 Employment	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Agriculture, Forestry, Fishing and Hunting (11)	0	6	49	23	0	104
Mining, Quarrying, and Oil and Gas Extraction (21)	0	0	0	2	0	2
Utilities (22)	1	28	0	0	0	2
Construction (23)	57	28	2	75	5	213
Manufacturing (31-33)	11	10	0	4	0	122
Wholesale Trade (42)	10	8	0	4	3	19
Retail Trade (44-45)	21	41	0	0	0	44
Transportation and Warehousing (48-49)	5	7	0	10	0	48
Information (51)	4	0	0	5	0	23
Finance and Insurance (52)	8	0	0	6	0	0
Real Estate and Rental and Leasing (53)	13	13	0	1	0	5
Professional, Scientific, and Technical Services (54)	25	23	0	31	0	12
Management of Companies and Enterprises (55)	0	0	0	0	0	0
Administration and Support, Waste Management (56)	47	3	0	66	50	184
Educational Services (61)	354	35	0	60	0	45
Health Care and Social Assistance (62)	3	14	0	30	0	5
Arts, Entertainment, and Recreation (71)	5	8	3	4	0	0
Accommodation and Food Services (72)	71	85	0	36	0	13
Other Services (excluding Public Administration) (81)	23	30	0	26	1	81
Public Administration (92)	0	0	0	0	0	0
Total	**657**	**341**	**54**	**383**	**59**	**922**
2002 to 2015 Employment Change	**Oak Park**	**Oak View**	**Piru**	**Santa Rosa Valley**	**Santa Susana**	**Saticoy**
Agriculture, Forestry, Fishing and Hunting (11)	0	-4	71	-8	0	24
Mining, Quarrying, and Oil and Gas Extraction (21)	0	10	0	-2	0	-2
Utilities (22)	-1	24	1	0	0	0
Construction (23)	-6	25	-2	-25	-5	7
Manufacturing (31-33)	17	6	0	-2	0	-43
Wholesale Trade (42)	3	3	55	-2	3	28
Retail Trade (44-45)	-7	-9	106	9	0	-19
Transportation and Warehousing (48-49)	-1	15	2	-5	0	-2
Information (51)	16	1	0	2	0	-23
Finance and Insurance (52)	3	16	0	1	0	1
Real Estate and Rental and Leasing (53)	39	-2	0	35	0	115
Professional, Scientific, and Technical Services (54)	64	1	3	-10	9	-7
Management of Companies and Enterprises (55)	12	0	0	0	0	0
Administration and Support, Waste Management (56)	-1	23	8	-19	23	99
Educational Services (61)	89	-17	23	-23	0	-45
Health Care and Social Assistance (62)	105	1	18	-14	5	7
Arts, Entertainment, and Recreation (71)	10	-6	-3	2	0	6
Accommodation and Food Services (72)	-12	-13	0	0	0	-2
Other Services (excluding Public Administration) (81)	16	-7	6	-1	5	0
Public Administration (92)	0	0	27	0	0	0
Total	**347**	**67**	**313**	**-62**	**40**	**145**

Source: ADE, Inc.; data from Longitudinal Employer-Household Dynamics, and Economic Modeling Specialists, Int'l.
Notes: The countywide employment totals come from the EMSI database. Geographic allocation into unincorporated communities comes from the LEHD data.

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Industry Output and Business-to-Business Transactions

The industry output for Ventura County indicates that the value of economic activity within the county totals more than $70.8 billion, as shown in Table 2-30. This value represents the sum total of commodity inputs, labor income, property income, taxes, profit, and other components of value added. The largest industry output was generated by manufacturing sectors, at $14.1 billion or more than one-quarter of the total. Ventura County has a higher concentration of manufacturing than the statewide average. Other large industry categories with over $3 billion in output include construction, retail trade, information technology, finance and insurance, real estate, professional services, health care, and public administration. In California, the industry output totals $3.9 trillion, as shown in Table 2-31. While manufacturing ($739.2 billion) is the largest economic sector, it comprises less than 19 percent of the statewide economic activity. This indicates less concentration of manufacturing activity compared to Ventura County, and a broader diversity of activity across other sectors.

Overall, the Ventura County economy showed a slight decline in constant dollar (inflation-adjusted) terms between 2007 and 2014. The largest declines occurred in manufacturing and finance. The largest gains occurred in mining, quarrying, and oil/gas extraction; information technology; and real estate.

By comparison, California as a whole showed a 10.4 percent increase in overall industry output between 2007 and 2014. The largest increases occurred in manufacturing, information technology, professional services, and health care. The largest declines across the state occurred in construction and finance.

In addition, industry output for each industry sector also supports economic activity in other sectors throughout the region. This ancillary activity is known as an economic multiplier effect. Multiplier effects occur because businesses need to engage in buyer-supplier (business-to-business) relationships with other businesses in order to operate.

30 also shows the multiplier values for different sectors. For example, the manufacturing sector has a multiplier value of 1.21.[10] This means that for every dollar of industry output that an average manufacturing generates, it will support another $0.21 of industry output across the rest of the Ventura County economy. These multiplier values will vary by sector. Multipliers also depend on the level of supplier support needed to operate businesses within a given industry sector, and the extent to which that business-to-business activity occurs within Ventura County.

While manufacturing is a very important economic sector in Ventura County, several other sectors have even higher business-to-business multipliers, including finance and insurance; information, professional, technical, and scientific services; health and education; and arts and entertainment. These sectors have more highly developed buyer-supplier networks within Ventura County and procure higher amounts of services and supplies.

[10] The multiplier values described in this section correspond to industry output, and are limited to the indirect effects that result from the business-to-business supplier relationships needed to support business activity within an industry sector. These multipliers were generated using the IMPLAN Pro input-output model. The IMPLAN model can also estimate multipliers for employment, labor income, and other economic measures. In addition, other multipliers (including Type II and Type SAM) can also account for the economic effects that result from employee spending. The employee-generated multiplier effects result more from local consumption spending and are not included in the Type I multipliers.

TABLE 2-30 INDUSTRY OUTPUT TREND: 2007 TO 2014 VENTURA COUNTY					
Industry Description	**2014 Industry Output**	**2007 Industry Output (2014 Dollars)**	**Output Change**	**Percent Change**	**2014 Output Multiplier (Type I)**
Agriculture, Forestry, Fishing and Hunting	$2,225,972,224	$1,768,522,554	$457,449,670	25.9%	1.08
Mining, Quarrying, and Oil and Gas Extraction	$1,835,292,544	$596,106,621	$1,239,185,923	207.9%	1.08
Utilities	$684,332,672	$665,931,130	$18,401,542	2.8%	1.29
Construction	$3,741,740,288	$4,250,593,950	-$508,853,662	-12.0%	1.35
Manufacturing	$14,130,055,168	$18,000,990,751	-$3,870,935,583	-21.5%	1.21
Wholesale Trade	$4,291,299,328	$3,789,218,444	$502,080,884	13.3%	1.29
Retail Trade	$3,897,598,976	$4,082,443,559	-$184,844,583	-4.5%	1.29
Transportation and Warehousing	$1,087,407,104	$878,248,672	$209,158,432	23.8%	1.32
Information	$3,366,845,184	$2,309,642,787	$1,057,202,397	45.8%	1.47
Finance and Insurance	$5,307,856,384	$6,734,040,469	-$1,426,184,085	-21.2%	1.50
Real Estate and Rental and Leasing	$8,857,994,240	$7,255,090,455	$1,602,903,785	22.1%	1.32
Professional, Scientific, and Technical Services	$4,426,741,248	$4,259,167,712	$167,573,536	3.9%	1.41
Management of Companies and Enterprises	$445,150,656	$905,403,249	-$460,252,593	-50.8%	1.36
Administration and Support, Waste Management and Remediation	$1,937,471,360	$1,807,086,635	$130,384,725	7.2%	1.24
Educational Services	$420,918,656	$379,501,747	$41,416,909	10.9%	1.33
Health Care and Social Assistance	$3,943,744,512	$3,413,891,717	$529,852,795	15.5%	1.30
Arts, Entertainment, and Recreation	$544,786,624	$512,963,624	$31,823,000	6.2%	1.46
Accommodation and Food Services	$2,135,504,384	$1,980,092,100	$155,412,284	7.8%	1.27
Other Services (excluding Public Administration)	$1,664,995,712	$1,875,922,373	-$210,926,661	-11.2%	1.21
Public Administration	$5,858,593,280	$5,397,533,538	$461,059,742	8.5%	1.06
Total	**$70,804,300,544**	**$70,862,392,089**	**-$58,091,545**	**-0.1%**	

Source: ADE, Inc.; data from IMPLAN Pro input-output model.
Notes: The 2007 industry output data was adjusted to 2014 dollars using the deflator values built into the IMPLAN model, which are industry specific.
Type I multipliers estimate the indirect economic effects that result from the business-to-business transactions needed to support business activity within an industry sector.

TABLE 2-31
INDUSTRY OUTPUT TREND: 2007 TO 2014
CALIFORNIA

Industry Description	2014 Industry Output	2007 Industry Output (2014 Dollars)	Output Change	Percent Change	2014 Output Multiplier (Type I)
Agriculture, Forestry, Fishing and Hunting	$66,837,037,056	$56,115,237,926	$10,721,799,130	19.1%	1.24
Mining, Quarrying, and Oil and Gas Extraction	$36,791,169,024	$21,364,593,993	$15,426,575,031	72.2%	1.29
Utilities	$67,435,053,056	$67,257,480,810	$177,572,246	0.3%	1.39
Construction	$186,328,940,544	$225,601,559,115	-$39,272,618,571	-17.4%	1.69
Manufacturing	$739,224,649,728	$621,724,180,813	$117,500,468,915	18.9%	1.76
Wholesale Trade	$205,526,794,240	$175,507,159,991	$30,019,634,249	17.1%	1.37
Retail Trade	$178,591,334,400	$185,901,741,674	-$7,310,407,274	-3.9%	1.32
Transportation and Warehousing	$115,945,988,096	$92,235,267,044	$23,710,721,052	25.7%	1.60
Information	$316,299,444,224	$245,934,546,714	$70,364,897,510	28.6%	1.42
Finance and Insurance	$228,330,127,360	$251,399,933,536	-$23,069,806,176	-9.2%	1.45
Real Estate and Rental and Leasing	$441,988,317,184	$415,293,824,859	$26,694,492,325	6.4%	1.33
Professional, Scientific, and Technical Services	$348,538,470,400	$280,503,463,230	$68,035,007,170	24.3%	1.36
Management of Companies and Enterprises	$59,544,649,728	$53,301,183,496	$6,243,466,232	11.7%	1.37
Administration and Support, Waste Management and Remediation	$102,135,717,888	$98,860,329,218	$3,275,388,670	3.3%	1.31
Educational Services	$30,987,257,856	$28,346,096,401	$2,641,161,455	9.3%	1.34
Health Care and Social Assistance	$227,923,836,928	$193,714,140,321	$34,209,696,607	17.7%	1.38
Arts, Entertainment, and Recreation	$48,273,477,632	$45,189,500,643	$3,083,976,989	6.8%	1.41
Accommodation and Food Services	$110,126,170,112	$106,656,221,867	$3,469,948,245	3.3%	1.46
Other Services (excluding Public Administration)	$94,490,198,016	$95,753,009,254	-$1,262,811,238	-1.3%	1.28
Public Administration	$304,876,879,872	$280,113,693,505	$24,763,186,367	8.8%	1.10
Total	$3,910,195,513,344	$3,540,773,164,410	$369,422,348,934	**10.4%**	

Source: ADE, Inc.; data from IMPLAN Pro input-output model.
Notes: The 2007 industry output data was adjusted to 2014 dollars using the deflator values built into the IMPLAN model, which are industry specific.
Type I multipliers estimate the indirect economic effects that result from the business-to-business transactions needed to support business activity within an industry sector.

Other Comparative Economic Indicators

According to a comparative ranking of economic indicators by the Brookings Institution's Metro Monitor, the county has not kept pace with other large metropolitan areas throughout the country and in Southern California, particularly since 2010.[11] The Brookings study ranked the 100 largest U.S. metropolitan areas based on three aggregated measures: growth, prosperity, and inclusion.

The growth measure looks at a combination of jobs, gross metropolitan product, and jobs at young firms to assess economic growth and entrepreneurial activity. Between 2010 and 2015, the Oxnard-Thousand Oaks-Ventura Metropolitan Area ranked 90th out of the 100 largest U.S. metropolitan areas. The Los Angeles-Long Beach-Anaheim and Riverside-San Bernardino-Ontario areas each ranked higher on the growth indicators, at 52nd and 22nd respectively. When looking back to 2005, the Oxnard-Ventura area ranked 41st out of 100, which was more consistent with the Los Angeles-Long-Beach-Anaheim and Riverside-San Bernardino-Ontario areas, at 49th and 31st respectively. This indicates that the economic growth performance of Ventura County eroded considerably after 2010, after years of tracking more closely with the rest of Southern California.

The prosperity ranking considers changes in productivity, standard of living, and average annual wages. On this measure, the Oxnard-Thousand Oaks-Ventura Metropolitan Area ranks 66th among the 100 largest U.S. metro areas between 2010 and 2015. This ranks well below the Los Angeles-Long Beach-Anaheim and Riverside-San Bernardino-Ontario areas, at 25th and 22nd respectively. Between 2005 and 2015, the Oxnard-Thousand Oaks-Ventura Metropolitan Area ranked 56th in the prosperity measures, which was also well below the Los Angeles-Long Beach-Anaheim area (11th), but well above the Riverside-San Bernardino-Ontario area (81st).

The inclusion measure looks at changes to the employment rate, median wage, and relative poverty to assess how well the economic benefits of the region are distributed. Between 2010 and 2015, Ventura County ranked 82nd on the inclusion measures, which was well below the other Southern California regions. For the ten-year period from 2005 to 2015, the Oxnard-Thousand Oaks-Ventura Metropolitan Area ranked 34th for inclusion, which was higher than Riverside-San Bernardino-Ontario area (48th) and below the Los Angeles-Long Beach-Anaheim area (7th).

Table 2 32 summarizes the rankings among Southern California's major metropolitan areas according to the 2017 Brookings Institution Metro Monitor.

TABLE 2-32
ECONOMIC DEVELOPMENT INDICATORS: SOUTHERN CALIFORNIA
Rankings Among Nation's 100 Largest Metropolitan Area

Metro Area	2010 to 2015			2005 to 2015		
	Growth	Prosperity	Inclusion	Growth	Prosperity	Inclusion
Oxnard-Thousand Oaks-Ventura	90	66	82	41	56	34
Los Angeles-Long Beach-Anaheim	52	25	36	49	11	7
Riverside-San Bernardino-Ontario	22	31	68	31	81	48

Source: Brookings Institution, Metro Monitor Dashboard, February 23, 2017.

[11] Brookings Institution; Metro Monitor 2017 Dashboard.
https://www.brookings.edu/interactives/metro-monitor-2017-dashboard/

Industry Snapshots

The unincorporated areas of the county feature certain economic activities that are appropriate for the land resources, environmental constraints, and character of unincorporated communities. This section of the report highlights those economic sectors that are particularly important for the unincorporated areas and may be affected by County land use and planning policies.

Agriculture

Ventura County is recognized as a premier agricultural area with very high produce values per acre. The latest Agricultural Commissioner's Crop and Livestock Report (November 2015) indicates the county's farm product value reached $2.1 billion in 2014, an increase of approximately 50 percent in constant dollar terms since the year 2000.

Agriculture is the subject of Chapter 9 in this Background Report, but as an economic sector, agriculture supports almost 27,000 direct jobs in farming and additional jobs in related support sectors and food processing (see Table 2-25). In Ventura County, the agricultural production and services sector is heavily concentrated in the unincorporated areas, with over half of the employment in these areas. In addition, food processing and beverage employment directly accounts for over 1,400 jobs. According to input-output modeling data, supplier purchases made by the food processing and beverage companies in Ventura County support over 100 agriculture jobs, mostly in fruit production. However, this is a very small percentage of total agricultural activity in the county. If these jobs follow the same pattern as other manufacturing industries, approximately 100 of the food processing and beverage jobs are in the unincorporated areas.

Combined with related distribution services and food processing, the agriculture industry cluster is estimated to have generated $3.5 billion in economic activity in Ventura County as of 2014, representing five percent of the county's total economic output. Nearly all the production of agricultural products occurs in the unincorporated areas of the county. Due to the highly productive nature of Ventura County soils and recent shifts to more labor-intensive crops, much of the farm labor in the county is year-round and agricultural workers tend to represent a permanent segment of the county population and workforce.[12] However, the county is also affected by labor shortages that many agricultural areas have experienced due to uncertainties in federal immigration policy.

Market Outlook: With continued population growth in California and worldwide, there will be increased demand for agricultural products from Ventura County. However, farm employment is projected to grow by a relatively slow 0.3 percent annual rate out to 2040. The availability and cost of water is anticipated to be a limiting factor in expanding land under cultivation. In addition, cost pressures from global competition will continue to push growers to develop less labor-intensive farming practices where possible. As presented in Chapter 9, Agriculture of this Background Report, there may be market demand for increasing value-added food processing, organic farming, commodity packing, shipping, and distribution in the county.[13] Resource and policy constraints may, however, limit future job growth in response to this demand. The County SOAR Ordinance, approved by the voters in 2016, allows an additional 12 acres of food processing activity on agricultural land. The specific implementing policies will be addressed in the General Plan Update, but, if fully built out, this additional food processing could

[12] Bruce Stenslie, President and CEO, Economic Development Collaborative – Ventura County (EDC-VC), personal communication.
[13] Applied Development Economics and the Hatamiya Group. "Food Processing in Ventura County." December 2015.

add approximately 200 agricultural manufacturing jobs. Other market expansion opportunities face water, land, and labor supply constraints that may result in replacing existing jobs with new jobs, with little net job gain.

FIGURE 2-3
COMPOSITION OF AGRICULTURAL CLUSTER
Ventura County
2014

Tourism

Many of the scenic destinations that draw visitors to Ventura County are in the unincorporated area. The coastline includes parks and beach areas that draw many visitors. The new Class I bike trail along the coast and the trail from Ventura to Ojai attract bicycle enthusiasts to the county. In addition, the mountain areas in the north part of the county feature wild areas for hiking and camping, as well as recreational lakes. Channel Islands Harbor is owned by the County of Ventura and provides lodging, restaurants, and a marina that serve as a launching point for visitors to the Channel Islands and other destinations along the Central Coast. Ventura County also draws work-related visitors, including those associated with military operations (e.g., NBVC, Point Mugu Sea Range) and businesses supporting operations at the Port of Hueneme.

Most of the lodging facilities in the county are located in the cities, but the unincorporated area has increased its share of lodging revenues over the past ten years from 1.8 percent to 2.3 percent, as shown in Table 2-33. The Ojai area has shown the most growth in lodging revenues. A portion of the Ventura area

was annexed by the City of Ventura in 2013, but lodging revenue has increased elsewhere along the coast, which has helped to offset that revenue loss. The Oxnard area, which includes the Channel Islands Harbor lodging, ranked third in County lodging revenues in 2014.

Hospitality industries (accommodations and food service) grew to over 30,000 jobs in Ventura County in 2014, an increase of nearly 6,000 jobs from 2002. Hospitality employment in the unincorporated areas totaled nearly 1,200 jobs in 2014, with the largest concentrations of hospitality jobs in the unincorporated areas of the Camarillo, Oak Park, Ojai, and Thousand Oaks planning areas.

Market Outlook. Employment in Accommodations and Food Services in the unincorporated county area declined slightly between 2002 and 2015, while such employment grew in the cities by 24 percent, or 1.8 percent per year (see Table 2-25). Statewide, the number of visitor trips is projected to grow at an average rate of 2.2 percent annually between 2016 and 2020.[14] This would represent a slower rate of growth than the 3.3 percent average annual growth that occurred in California between 2010 and 2015. In Ventura County, tourism employment growth is projected to continue at approximately 1.9 percent annually through 2020 and then more slowly over the long term for a 1.0 percent annual rate between 2012 and 2040 (Table 2-34).

Overall, Ventura County is underserved with lodging compared to other coastal counties in California. Of the 15 coastal counties, Ventura ranks at the bottom, with Los Angeles County, in terms of the percentage of travel spending devoted to lodging, at 16.8 percent.[15] Santa Barbara, San Luis Obispo, Monterey and Santa Cruz counties all have 25 percent or more lodging revenues compared to total travel spending. The fact that the Southern California counties all rank near the bottom of this list is indicative of the large internal travel spending in these counties and the quantity of high cost recreational attractions. However, Ventura County should be able to obtain lodging ratios closer to the other Central Coast counties. In addition to its coastal and mountain recreation amenities, Ventura County may be well-positioned to expand lodging as part of an increased emphasis on agri-tourism.

Agri-tourism has become a significant economic development strategy in many agricultural parts of the state. The University of California at Davis maintains a Directory of Agricultural Tourism programs and facilities in California (www.calagtour.org) and many counties offer farm and wine trails, ranch stays, and a wide variety of local farm experiences. In Ventura County, ten different farms and ranches are currently listed in the Directory with various foods and experiences. Further analysis will be conducted in the Alternatives phase of the General Plan Update to determine whether County land use policies would be conducive to expansion of the agri-tourism sector. It is possible that new lodging would be located in the cities rather than the unincorporated areas, but increased visitors from agri-tourism could help drive demand for those lodging facilities.

[14] Tourism Economics. "California Travel and Tourism Outlook," February 2016.
[15] Dean Runyan Associates. "California Travel Impacts by County, 1992-2015." April 2015.

TABLE 2-33 TRANSIENT OCCUPANCY TAX TRENDS: 2005 TO 2014 VENTURA COUNTY UNINCORPORATED AREA							
Zip Code	Area	2005	2010	2011	2012	2013	2014
93001	Ventura	$58,957	$58,068	$69,180	$74,473	$103,455	$123,983
93003	Ventura	$26,106	$9,681	$12,570	$8,024	-	-
93013	Coast	-	-	$6,016	$16,765	$20,860	$20,071
93022	Oak View	$12,951	$13,282	$14,912	$15,813	$16,336	$14,025
93023	Ojai	$45,841	$72,749	$90,356	$106,719	$123,098	$166,066
93035	Oxnard	$81,199	$56,715	$55,326	$80,781	$91,891	$115,754
93040	Piru	$4,773	$101	-	-	$3,600	$10,660
Total Unincorporated		$229,827	$210,596	$248,360	$302,575	$359,240	$450,559
Countywide		$12,721,000	$13,677,000	$14,755,000	$16,346,000	$17,894,000	$19,726,000
Unincorporated Percent		1.8%	1.5%	1.7%	1.9%	2.0%	2.3%

Source: ADE, Inc.; data from Ventura County Tax Collector, 2005 to 2014

Oil and Gas Production

Oil and gas production occurs both onshore and offshore in the unincorporated areas of the county. The Los Angeles Economic Development Corporation (LAEDC) estimated in 2013 that this industry supported 3,211 direct jobs and over $652 million in labor income in Ventura County (not including retail gas stations). The highest concentrations of jobs are in oil/gas extraction, and natural gas distribution, which combine for nearly 2,100 jobs. The 2013 dataset from the IMPLAN input-output model indicates that the industry supports a very high worker productivity of nearly $700,000 in industry output per job, which is much higher than the average $157,000 in output per worker for all Ventura County industries.

The industry also has high wages, with an average of over $118,400 in wage and salary income per job, compared to the countywide average of $53,400.[16] The LAEDC also estimated that oil and gas production activity in Ventura County supports approximately 2.0 percent of the jobs in the county, yet also accounts for a higher proportion of the total labor income (3.8 percent), value added (3.7 percent), and industry output (3.2 percent) in the county.

Market Outlook. Oil and gas production exists in a cyclical market, competing on the global stage due to commodity prices. As a result, prices are subject to fluctuation as the market cycles. For instance, in 2013, crude oil prices dropped from over $100 per barrel to less than $50 per barrel; as of November 2016, the price was approximately $43. The forecast for 2017 is for prices to remain below $50 per barrel. This price trend has had the effect of rendering some oil extraction operations uneconomic and has reduced both employment and oil related tax revenues in neighboring Kern County, which produces 70 percent of the oil in California. Production throughout the state had been declining since the 1980s, as oil reserves in the state have diminished. In recent years, the drilling of oil wells and well stimulation (including hydraulic fracturing), has been reduced in response to current oil prices.

[16] Data provided by Economic Modeling Specialists, Int'l (EMSI) for 2015.

Aggregate Mining

Aggregate mining occurs in the hills in the central part of the county. In addition, the County Watershed Protection District removes thousands of cubic yards of sand and silt each year from waterways to maintain critical drainage channels. Mining of aggregates and other nonmetallic minerals accounted for nearly 150 jobs in Ventura County in 2015. The average income per worker for this activity in 2015 was nearly $58,500, which was above the countywide average income per worker of $52,700. In addition, according to data from the IMPLAN input-output model, the mining industry had an average industry output per worker of over $353,000, which is more than double the average worker productivity for all industries in Ventura County.

Market Outlook. According to a 2012 California Geological Survey report, Ventura County had a projected demand of 298 million tons of aggregates over 50 years. However, the permitted aggregate reserves of 96 million tons meant that Ventura County had approximately 11 to 20 years' worth of aggregate reserves compared to projected demand.[17] Therefore, the county can expect increased demand for new or expanded aggregate mining operations if additional reserves can be identified. In addition, the county may see increased proposals for permanent or portable concrete recycling activities to meet future demand for aggregates.

The Green Economy

Companies that produce goods and services that benefit the environment or conserve natural resources are part of the Green Economy. In 2011, the U.S. Bureau of Labor Statistics (BLS) estimated that the Green Economy accounted for 2.6 percent of all jobs nationally and EDD determined that 3.8 percent of jobs in California were provided by green businesses. Green business sectors are not identified by distinct NAICS codes, but rather fall within a number of conventional industry sectors, including manufacturing, construction, professional, scientific and technical services, waste management services, and wholesale trade. While there are no firm estimates of Green Economy jobs in Ventura County, Next 10, a company that focuses on policy issues involving the economy, the environment, and quality of life issues in California, includes Ventura in its annual Green Innovation Index.[18] In 2016, Ventura County ranked 7th among 26 Metropolitan Statistical Areas (MSAs) in California in the number of green technology patents issued. This suggests a relatively high concentration of firms in the county are engaged in Green Economy activities. The county also ranked 16th to 18th in commercial, industrial, and residential solar installations, which would also be a major source of Green Economy jobs in the county.

Market Outlook. California State laws and policies addressing the reduction of greenhouse gases are driving significant investments by utilities, consumers, and other industries to increase the production of renewable energy sources and adopt a host of other measures, such as electric cars. Many large-scale solar and wind generation facilities have located in the Central Valley and desert areas, and there may be some potential in Ventura County as well. In addition, there have been proposals in Ventura County for facilities to recycle green waste into soil amendment products. The county's strong manufacturing sector is an asset in helping to develop new technologies within the Green Economy, as evidenced by the high number of patents issued in recent years. There is some risk that the current federal administration will enact policies to undermine the momentum that the Green Economy has begun to see, but in many cases

[17] California Geological Survey; Aggregate Sustainability in California; 2012.
[18] Next 10. Green Innovation Index 8th Edition, June 2016.

industries are adopting energy saving and pollution reduction measures because of the cost efficiencies they create, which drives growth in this sector beyond the scope of governmental policy.

Higher Education

Ventura County has multiple institutions of higher learning, including California State University, Channel Islands (CSUCI), California Lutheran University, St. John's Seminary, Thomas Aquinas College, Moorpark College, Oxnard College, and Ventura College. Data from EMSI shows that colleges and universities (both public and private) in Ventura County had a total employment of 5,800 positions in 2015, an increase of nearly 800 jobs compared to 2002. Note that prior to the opening of CSUCI as an independent campus in 2002, the CSUCI site supported employment as a satellite of CSU Northridge (CSUN Ventura), as well as the location for administrative employees supporting the establishment of CSUCI.

Of the universities mentioned above, CSUCI and Thomas Aquinas are located within the unincorporated area. As of Fall 2016, CSUCI (located within the Oxnard Planning Area) had 6,611 students.[19] As of Fall 2015, the campus supported 184 full-time faculty[20] and 796 total full-time equivalent staff (including part-time and full-time faculty).[21] Thomas Aquinas College (located within the Santa Paula Planning Area) has approximately 400 students and 38 faculty (including full-time and part-time). [22]

Market Outlook. Based on its Capital Expansion Plan, CSUCI is projected to grow to 11,500 students by 2025.[23] This expected enrollment growth will generate additional growth in faculty and staffing levels.

Military

Naval Base Ventura County (NBVC) was established in 2000 through the merger of the former Naval Air Station Point Mugu and Construction Battalion Center Port Hueneme.[24] NBVC supports approximately 17,000 armed forces, civilian, and contractor jobs. The various commands located at the bases are responsible for a significant amount of research into new technologies and material for defense applications. A number of private firms work closely with the military to research and develop these new systems. The Point Mugu facility is in the unincorporated Oxnard Planning Area, and supports operations for airborne command and control training, testing, logistics, and other support activities tied to airborne operations. The Point Mugu Sea Range, which is the world's largest instrumented over-water range, supports local employment in testing and training for the U.S. Navy and allied forces.

Market Outlook. Growth and decline at military installations is affected by a wide range of national and international factors, national defense priorities, and federal spending levels. Defense spending nationally has been declining since 2011. Since the 1990s, the Defense Department has undergone a process of closing many older military bases and periodically reviews future potential base closures, which last occurred in 2005. To date, NBVC has not been listed for base realignment or closure. With its heavy emphasis on technological research and development, it would appear that the base would be part of the Navy's long-term modernization program. In addition, the base operates joint programs with the China

[19] http://www.csuci.edu/about/facts-history/index.htm
[20] https://www2.calstate.edu/csu-system/faculty-staff/employee-profile
[21] https://www2.calstate.edu/csu-system/faculty-staff/employee-profile
[22] https://thomasaquinas.edu/about/fact-sheet
[23] http://www.csuci.edu/news/releases/2014-capitalexpansionplan2025.htm
[24] http://www.cnic.navy.mil/content/cnic/cnic_hq/regions/cnrsw/installations/navbase_ventura_county/_jcr_content/par/pdfdownload/file.res/Home_Partners4CompatibleFuture.pdf

Lake Naval Air Weapons Station, which also has a significant research function. However, the base supports 80 different commands and defense priorities may change for these various operations at any time. With the overall downward trend in military spending, EMSI projects an 8 percent decrease in active military personnel in Ventura County over the next ten years. This could have a commensurate impact on related civilian jobs and population associated with the defense industry in the county.

Film Production

Ventura County's location near Hollywood and the San Fernando Valley and its numerous scenic and historical sites make it a natural location for filming activity. This includes areas that fall within the "Studio Zone," which is a 30-mile radius used by union film projects to determine per diem rates and driving distances for crew members. The center of the Studio Zone, also known as the "Thirty-Mile Zone" or TMZ, is located at the southeast corner of West Beverly Boulevard and North La Cienega Boulevard in Los Angeles. There are also several locations outside the 30-mile radius boundary that are generally recognized as being within the Studio Zone, including Piru and the Metro-Goldwyn-Mayer Ranch property near Thousand Oaks.

In 2015, the county attracted 1,964 days of filming activity, up 8.6 percent from the prior year. More than half of these days were spent in the county unincorporated area. The cumulative film days also created lodging demand for 3,666 room-nights.

The Ventura County Film Commission indicates that the local film industry benefits more than 3,500 trade workers and professionals who live in Ventura County. The Film Commission estimates that total film activity in the county generated $39.3 million in economic activity in 2015, which was more than double the $16.8 million in economic activity that film production created in 2013. In addition, the $20.1 million economic impact in the unincorporated areas in 2015 was also nearly double the $10.7 million economic impact from 2013.

Market Outlook. The available projections for the film industry suggest strong growth over the next 3-5 years, with Price Waterhouse Coopers projecting growth in the U.S. film industry of 4.9 percent per year between 2015 and 2019, more than twice the rate of growth projected for the U.S. economy as a whole.[25] Positive market factors include significant growth in international markets, particularly China and India, the State of California's aggressive tax incentive program, an increase in available formats, both in terms of premium theater formats and also widespread internet outlets, and an increase in movie "universes" such as the various Marvel superhero characters now getting film exposure.[26] At the same time, some observers are reporting a glut of product that has led to some notable box office failures in 2016 and predictions of a major overhaul for the industry in the coming years.[27] There is also some concern that the increasing market in China and restrictions on showing "foreign" movies there will speed relocation of parts of the U.S. film industry to China. The presence of areas within the 30-mile Studio Zone does, however, provide Ventura County a relative advantage over other domestic locations.

Creative Economy

A broader trend in the greater Los Angeles region has been the expansion of the "creative economy." The types of industries built around creativity encompass a diverse range of categories, such as architecture, design, entertainment, fashion, communications, digital media, publishing, and the arts. This includes the film and recording industries. Creative enterprises are highly concentrated in Southern California.

[25] https://www.statista.com/statistics/259984/filmed-entertainment-revenue-in-the-us/
[26] http://www.fool.com/investing/general/2016/03/14/3-trends-that-will-shape-the-movie-industry-in-201.aspx
[27] http://www.hollywoodreporter.com/news/steven-spielberg-predicts-implosion-film-567604

According to a 2017 study prepared on behalf of Otis College of Art and Design by the LAEDC, the Los Angeles/ Orange County metro area has 8.6 percent of its wage and salary jobs in creative industries.[28]

In addition, the LAEDC/Otis study found that the creative economy has a very high proportion of self-employed individuals. Altogether, the study found that the Los Angeles/Orange County metro area had 411,200 total wage and salary workers in 2014, and nearly 175,000 self-employed individuals in the creative economic sectors.

Using data sources comparable to the LAEDC/Otis study, the creative economy in Ventura County generated a total of 7,050 wage and salary jobs in 2014.[29] This represents approximately 2.2 percent of the total wage and salary employment in Ventura County. This concentration of jobs is considerably lower than Los Angeles/Orange County (8.6 percent) and California as a whole (5.4 percent).[30] Most of the jobs are in entertainment, fashion, furniture/decorative arts, and publishing industries.

In addition, Ventura County also has nearly the same number of self-employed individuals (7,044 non-employer establishments) as wage and salary employees.[31] This represents a very high concentration of jobs, and 10.6 percent of the overall self-employment in Ventura County. Most of the self-employed creative workers are in communication arts and visual and performing arts.

Market Outlook. The LAEDC forecasts that creative sector employment in the Los Angeles/Orange County metro area will grow by 5.2 percent between 2015 and 2020 (compound annual growth rate of 1.0 percent), while California creative jobs will grow at a slower rate of 3.3 percent. For Ventura County, the EMSI projections for 2015 through 2020 show virtually no change in wage and salary employment. EMSI projects that the largest job gains will occur in entertainment, fashion, and industrial design, while losses will occur in furniture/decorative arts, architecture, and publishing.

Nonprofit Sector

Nonprofit organizations serve a diverse range of vital functions that enhance the quality of life across communities and regions. Organizations can include large-scale establishments such as hospitals, universities, and arts foundations. Nonprofits can also include community service providers, religious organizations, environmental groups, and other public benefit providers.

According to the 2017 State of the Region report from the Ventura County Civic Alliance, the county had a total of 2,543 nonprofit organizations registered with the IRS.[32] Altogether, these organizations declared revenues of $2.7 billion and assets of $5.1 billion in 2015. Since 2005, nonprofits have roughly doubled both their revenues and assets.

The top three revenue-generating nonprofits in Ventura County in 2015 were Community Memorial Hospital in Ventura, the Kavli Foundation (a scientific research foundation that has since relocated to Los Angeles), and California Lutheran University. Approximately 45 percent of the nonprofit organizations in Ventura County are either human services or public benefit organizations. Other large concentrations of nonprofit groups are involved in education (15 percent) and religious (17 percent) activities.

While revenues and asset valuations have grown considerably, Ventura County nonprofits continue to lag behind neighboring counties and California as a whole. The per capita nonprofit revenues in 2015 for

[28] Los Angeles Economic Development Corporation; *Otis Report on the Creative Economy*; May 2017.
[29] EMSI QCEW covered employment.
[30] Los Angeles Economic Development Corporation.
[31] U.S. Census Bureau Nonemployer Statistics, 2014.
[32] The totals reported by the Ventura County Civic Alliance include those organizations that filed a Form 990 with the Internal Revenue Service.

Ventura County ($3,173) were less than half the per capita revenue for Santa Barbara County ($7,273) and California ($7,733), and roughly half that for Los Angeles County ($6,075).

Market Outlook. Growth rates in revenues and assets for nonprofit organizations in Ventura County have outpaced the rest of the state since 2005. However, the gap in local philanthropy, compared to other communities, has persisted. The outlook for nonprofit organizations will depend on whether Ventura County's base of nonprofit organizations continues to grow and whether those organizations can continue to close the gap compared to neighboring counties. Actions at a local level include engaging and connecting philanthropists, the business community, nonprofit leaders, and government. The Center for Nonprofit Leadership at California Lutheran University has formed a local task force that seeks to engage the various constituent groups and has begun to further analyze the data used in the State of the Region reports to try and develop strategic actions that can further grow the nonprofit sector in Ventura County.[33]

Economic Infrastructure

Economic prosperity depends on a number of physical conditions and facilities that support the efforts of both the private and public sectors to create jobs. These factors include land supply, utilities (e.g., water supply, wastewater treatment), and the transportation system. Many of these factors are addressed in other sections of this Background Report, but two factors not extensively summarized elsewhere, are mentioned here: the broadband capacity available to residents and businesses in the county and the Port of Hueneme, which serves as a vital global link for both outgoing and incoming products to the county.

Broadband

Studies have shown a strong correlation between investments in broadband capacity and improved economic performance.[34] Ventura County is part of the Broadband Coalition of the Pacific Coast (BCPC), which also includes Santa Barbara and San Luis Obispo counties. The consortium is one of many regional organizations around the state dedicated to improving broadband capacity and connectivity to all areas in the state. Using a widely accepted methodology for assessing broadband services on an A to F scale, BCPC has rated Ventura County with a "C" grade (2.1 average), which indicates that its primary infrastructure is generally consistent with California's average broadband capacity and is occasionally superior. However, the best broadband capacity is along the Highway 101 and SR 118 corridors. Several other areas, including much of the unincorporated area, received grades below a "C." Ratings are also mixed for business-specific connections, although Ventura County does have good regional connections along the Highway 101 corridor to the major hubs in Los Angeles and Silicon Valley. Further improvement is needed in rural areas of the county to help support entrepreneurship in those areas. BCPC recommends further analysis to identify where telephone and cable companies have access to broadband-capable infrastructure, and which commercial and industrial areas are a high priority for investment in broadband services. BCPC also recommends that the three counties collaborate to recruit companies interested in pursuing fundable broadband infrastructure projects, including projects that could be funded through the California Advanced Services Fund, which is operated by the California Public Utilities Commission. For a more detailed discussion of telecommunications services in Ventura County, see Section 7.4 in Chapter 7 (Public, Facilities, Services, and Infrastructure) of this Background Report.

[33] McLean, Kate and Bryan McQueeney; Ventura County Star; "Everyone Benefits when we give where we live"; May 13, 2017.
[34] Blair Levin and Denise Linn, The Next Generation Network Connectivity Handbook. The Benton Foundation. 2016. p. 9.

The Port of Hueneme

Originally built in 1937 to provide California's central coast agriculture with an ocean link, the Port today serves customers importing from Asia, Europe, and South and Central America. In 2014, its total import goods were valued at $8 billion and included automobiles, fruit and vegetables, and farm materials such as fertilizer.[35] The Port also exported $1.2 billion in goods, much of it agricultural produce from Ventura County. It is estimated that in 2014, the Port supported $1.2 billion in total economic activity, with $~~69~~ 93 million in state and local taxes from maritime activities, and more than 10,000 jobs. Located on ~~154~~ 120 acres, the Port is owned and operated by the Oxnard Harbor District and is the license holder for the Oxnard World Trade Center. The Port offers a Foreign Trade Zone with up to 2,000 acres for storage and light assembly under a duty-deferred status. One of its key programs is the Maritime Advanced Systems and Technology (MAST) Lab, which is a collaborative research facility dedicated to fostering leading edge technology innovation in the port and maritime environment, open 365 days a year. The Port offers short line rail access to the main Union Railroad line near Downtown Oxnard and surface road access to Highway 101. To keep pace with the evolution of the maritime industry toward larger-capacity vessels and modern cargo handling practices, the Port has identified a series of capital improvement projects over the next several years, including deepening the channel to 40 feet, providing ~~onshore~~ shore side power infrastructure for ships, climate controlled warehouses, and improved surface transportation out to Highway 101, among other projects.

Regulatory Setting

There is no regulatory setting for this section.

Key Terms

Transient Occupancy Tax. The "TOT" is a tax on hotel rooms and other forms of short-term lodging. This tax is collected by individual cities, as well as the County government for unincorporated areas.

Industry Output. This term refers to the sum of economic activity for an industry or business establishment within a specific geographic area. This includes the sum of commodity inputs, labor income, taxes, property income, and other value added components.

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SECTION 2.4 POPULATION AND EMPLOYMENT PROJECTIONS

Introduction

This section provides projections of population and employment for Ventura County and its unincorporated areas through 2040.

Major Findings

- Southern California Association of Governments (SCAG) projections for Ventura County show a projected population of 965,400 residents (12.7 percent increase over 2016) by 2040, with the unincorporated areas projected to increase to 113,600 residents (15.5 percent increase over 2016) by 2040. This is a slower rate of growth than the county has experienced in the past.
- The California Department of Finance projects that older age groups will comprise an increasing share of total population as the Baby Boomers continue to age.
- The Hispanic and Asian populations in the county are projected to grow more rapidly than other racial/ethnic groups.
- Household projections indicate that the overall county total will increase to 312,300 by 2040, with the unincorporated areas increasing to 37,500 households.
- The projected employment in Ventura County will total approximately 412,300 jobs by 2040, based on projections from the consulting firm Applied Development Economics (ADE). This is an increase of 31.9 percent over 2015, with unincorporated areas expecting a job total of 38,700 by 2040 (increase of 17.7 percent over 2015). This is slightly slower than the county has experienced in the past.
- Employment is projected to grow at an annual rate of 1.0 percent through 2040. This is higher than the rate between 2002 and 2015 (0.4 percent), but lower than the rate between 1992 and 2015 (1.4 percent).
- The highest employment growth is projected to occur in construction, retail, tourism, health care and education, all of which could occur in the unincorporated area.
- Employment growth is projected to occur more rapidly than population growth, leading to an increase in the number of jobs per household from 1.2 to 1.3. In 2015, it is estimated there are 1.6 workers per households in Ventura County.
- The California Economic Forecast projects that per capita income in Ventura County will increase in real terms twice as fast as the population, meaning that future residents should have more disposable income.

Existing Conditions

Population and Demographic Projections

The future growth in Ventura County and the unincorporated area will be significantly affected by both County and city land use policy and market demand. For the current County General Plan Update, the detailed analysis to consider land use policy options comprehensively will be undertaken in the Alternatives phase of the process. Therefore, for the Background Report, this section reports on existing projections from major State and regional agencies charged with forecasting growth at the countywide and sub-county level, including the Southern California Association of Governments (SCAG), the State Department of Finance (DOF), and Caltrans. In addition, ADE has prepared a combined employment projection that integrates growth assumptions from SCAG, Caltrans, and Woods & Poole Economics, a nationally-recognized economics forecasting firm.

These projections are presented herein to provide context only; they do not necessarily reflect current County policies, including those that could affect the type, extent, and location of development in the unincorporated area (e.g., the Guidelines for Orderly Development, SOAR, existing greenbelt agreements). If alternative growth projection methodologies are developed and adopted as part of the General Plan Update project, future growth projections may be different. In addition, the Background Report does not prescribe locations within the unincorporated area where growth may be accommodated.

SCAG projections for Ventura County, which were developed through an extensive analytical and local consultation process to support regional transportation and air quality planning, show a projected population of 965,400 by 2040, as shown in Table 2-34. This is an increase of 130,000, with a compound annual growth rate (CAGR) of 0.52 percent. SCAG projects the shorter-term (2012 to 2020) CAGR to be higher (0.74 percent) and then to decrease to 0.43 percent between 2020 and 2040. The population in the unincorporated area is projected to increase to 113,600 by 2040, with a slightly higher CAGR of 0.58 percent than countywide. Growth in the unincorporated area is also expected to ramp down after 2020.

TABLE 2-34
POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS: 2012 TO 2040
VENTURA COUNTY, INCORPORATED AND UNINCORPORATED AREAS

Projected Population	2012	2020	CAGR 2012-2020	2040	CAGR 2020-2040	CAGR 2012-2040
Ventura County Total	835,400	886,400	0.74%	965,400	0.43%	0.52%
Incorporated Ventura County	738,700	784,400	0.75%	851,800	0.41%	0.51%
Unincorporated Ventura County	96,700	102,000	0.67%	113,600	0.54%	0.58%
Projected Households	**2012**	**2020**	**CAGR 2012-2020**	**2040**	**CAGR 2020-2040**	**CAGR 2012-2040**
Ventura County Total	269,400	285,300	0.72%	312,300	0.45%	0.53%
Incorporated Ventura County	237,300	251,400	0.72%	274,800	0.45%	0.53%
Unincorporated Ventura County	32,100	33,900	0.68%	37,500	0.51%	0.56%
Projected Employment	**2012**	**2020**	**CAGR 2012-2020**	**2040**	**CAGR 2020-2040**	**CAGR 2012-2040**
Ventura County Total	332,200	374,300	1.50%	419,800	0.58%	0.84%
Incorporated Ventura County	300,400	338,600	1.51%	381,100	0.59%	0.85%
Unincorporated Ventura County	31,800	35,700	1.46%	38,700	0.40%	0.70%

Source: ADE, Inc.; data from Southern California Association of Governments, 2016.

It is important to note that the projected average growth rates for the county as a whole and for the combined incorporated areas are affected by the very low growth rates in the cities of Port Hueneme (0.10 percent CAGR) and Thousand Oaks (0.11 percent CAGR). The low growth rate in these two cities has the effect of skewing the countywide average rate and the average incorporated cities rate so that they are lower than the unincorporated area rate. When the growth rates for Port Hueneme and Thousand Oaks are removed from the calculated average growth rate, the projected growth rates for the county as a whole and for the combined incorporated areas would be higher than for the unincorporated area.

As Table 2-35 shows, SCAG's projected 2012-to-2020 CAGR of 0.74 percent is similar to the 2010-to-2016 countywide rate of 0.69 percent, but considerably lower than longer-term trends. The SCAG projections for the unincorporated area, however, exceed the historical trends, both recent and longer-term.

TABLE 2-35
HISTORIC POPULATION GROWTH
VENTURA COUNTY

Year/Period	Incorporated	Unincorporated	Total
Population			
1990	579,650	87,100	666,750
2000	657,474	91,458	748,932
2010	727,063	95,045	822,108
2016	758,185	98,323	856,508
Compound Annual Growth Rates (CAGR)			
1990-2000	1.27%	0.49%	1.17%
2000-2010	1.01%	0.39%	0.94%
1990-2016	1.04%	0.47%	0.97%
2000-2016	0.89%	0.45%	0.84%
2010-2016	0.70%	0.57%	0.69%

Source: California Department of Finance

Household projections indicate that the overall county total will increase to 312,300 by 2040, with a CAGR of 0.5 percent. Over the same period, unincorporated area households will increase by 5,400 to 37,500, a CAGR of 0.6 percent. This matches the population trend, meaning that the average household size is not expected to change.

The SCAG population projection for Ventura County in 2040 (i.e., 965,400) is very similar to the California Department of Finance (DOF) projections of 966,100. DOF also projects the age demographics and racial/ethnic composition of the future population. As shown in Table 2-36, DOF projects the older age cohorts to grow more rapidly than the younger age groups, as the Baby Boomer generation continues to age. There is some variation of this pattern, however, as the young age groups of 0-17 years are projected to increase between 2020 and 2030 and the "Young Retirees" age group of 65-74 year is projected to decrease between 2030 and 2040.

TABLE 2-36 POPULATION PROJECTIONS BY AGE GROUP: 2010-2040 VENTURA COUNTY								
	Age Group							
Year	Total (All ages)	Preschool Age (0-4 years)	School Age (5-17 years)	College Age (18-24 years)	Working Age (25-64 years)	Young Retirees (65-74 years)	Mature Retirees (75-84 years)	Seniors (85 or more years)
2010	825,193	55,220	156,143	81,988	434,694	51,929	30,968	14,251
	100.0%	6.7%	18.9%	9.9%	52.7%	6.3%	3.8%	1.7%
2020	876,124	54,288	142,916	83,393	452,926	84,910	40,374	17,317
	100.0%	6.2%	16.3%	9.5%	51.7%	9.7%	4.6%	2.0%
2030	927,304	58,407	144,228	78,674	450,720	106,019	66,224	23,032
	100.0%	6.3%	15.6%	8.5%	48.6%	11.4%	7.1%	2.5%
2040	966,084	57,182	153,106	80,246	459,572	94,618	83,450	37,910
	100.0%	5.9%	15.8%	8.3%	47.6%	9.8%	8.6%	3.9%

Source: California Depart of Finance P-1 County Projections 2010-2060.

The demographic projections also indicate a reduction in both White and African American populations in the county and an increase in Asian and Hispanic groups, as well as Non-Hispanic mixed-race persons (37).

TABLE 2-37 POPULATION PROJECTIONS BY RACE/ETHNICITY: 2010-2040 VENTURA COUNTY								
	Year							
	2010		2020		2030		2040	
Race/Ethnicity	Persons	Percent	Persons	Percent	Persons	Percent	Persons	Percent
Total All Races	825,193	100.0%	876,124	100.0%	927,304	100.0%	966,084	100.0%
White	402,278	48.7%	393,042	44.9%	381,311	41.1%	358,679	37.1%
Black	13,302	1.6%	13,326	1.5%	12,979	1.4%	12,115	1.3%
American Indian	2,434	0.3%	2,553	0.3%	2,457	0.3%	2,159	0.2%
Asian	54,928	6.7%	58,562	6.7%	62,863	6.8%	68,207	7.1%
Native Hawaiian/Pacific Islander	1,390	0.2%	1,516	0.2%	1,590	0.2%	1,608	0.2%
Hispanic	333,046	40.4%	384,250	43.9%	436,716	47.1%	486,861	50.4%
Two or More Races, Not Hispanic	17,815	2.2%	22,875	2.6%	29,388	3.2%	36,455	3.8%

Source: CA DOF P-2 County Projections 2010-2060.

Employment Projections

The projected employment in Ventura County anticipates a higher growth rate than the population growth rate, according to SCAG. By 2040, countywide employment will total 419,800 jobs, with a CAGR of 0.8 percent (Table 2-38). For comparison, the county saw employment growth of 0.4 percent per year between 2002 and 2015, but going back to the longer-term trend, the county had a CAGR growth of 1.4

percent annually between 1992 and 2015. The unincorporated areas are expected to have a CAGR of 0.7 percent, with a job total of 38,700 by 2040. Ventura County has approximately 1.6 workers per household, but in 2012 had only 1.2 jobs per household. With employment projected to increase faster than population, this ratio would ~~improve~~ change to approximately 1.3 jobs per household by 2040.

While the SCAG projections are available for each jurisdiction in Ventura County, they are not very detailed in terms of projected industry growth. Other sources of detailed employment projections are available and are presented below for comparison and to provide a more detailed industry analysis.

The California Economic Forecast (Caltrans). Caltrans has regularly commissioned Dr. Mark Schneipp at the California Economic Forecast to produce projections for the state and all 58 counties. The projections published in 2015 extend to 2040 and provide a wide range of indicators including employment by major industry group, population, housing, and economic output.

Woods & Poole (W&P). W&P is an independent economic forecasting firm that provides projections for all counties in the U.S. based on an econometric model that forecasts U.S. economic conditions and creates state, regional, and county forecasts based on changing conditions. The 2016 projections were released in April 2016 and extend to 2050, including population, employment by major industry, and a number of other indicators. W&P uses the U.S. Bureau of Economic Analysis (BEA) definition of employment, which includes self-employed and other non-employer jobs. The job figures, therefore, are always higher than wage and salary employment, which has been used for the past trends analysis in the Background Report, but the growth rates provide a good projected economic growth in the county.

Table 2-38 compares the three employment projections, starting with the SCAG base year of 2012 and including 2020 and 2040. Comparing the 2012 figures to the official EDD estimates for that year, the Caltrans figures, at 309,350 jobs, are much closer to the actual job level, meaning that SCAG may have overestimated the recovery from the recession by projecting 332,200 jobs in 2012.

Over the long term, the SCAG projections represent a mid-range between the lower Caltrans projections and the higher projections from Woods & Poole. SCAG projects Ventura County to grow jobs at an annual rate of 0.8 percent between 2012 and 2040, while Caltrans projects a slower rate of 0.5 percent per year. Woods & Poole sees stronger growth of 1.5 percent per year. All of the projections anticipate stronger growth in the short term up to 2020 and then more moderate growth rates between 2020 and 2040.

ADE has prepared a new projection by calibrating the 2012 employment levels to actual EDD figures and then averaging the Caltrans and Woods and Poole growth rates for most of the individual business sector out to 2040. This initially resulted in a total employment level of 421,700 in 2040, slightly above the SCAG figure. However, in consultation with local economic development authorities, the projections for retail development and the construction industry were much higher than local experience would warrant, so these sectors were brought more into alignment with projected population growth. The revised projections result in approximately 412,300 jobs in 2040, a 1.0 percent annual growth rate (Table 2-38).

The high growth sectors are education, health care, and other services, with fairly strong growth in the leisure and hospitality sectors as well. These latter sectors have some potential in the unincorporated area in terms of future tourism growth, but agriculture is projected to have relatively modest growth, as discussed in the previous section. Manufacturing is projected to have moderate growth, and food manufacturing could be a factor in the unincorporated area depending on County land use policies. Education and health care could also see growth in the unincorporated area as CSU Channel Islands

continues to grow and as trends toward more dispersed health care delivery lead to additional clinics and residential care homes in unincorporated communities.

TABLE 2-38
EMPLOYMENT PROJECTIONS: 2012-2040
VENTURA COUNTY

Projection Source/Industry Sector	2012	2020	2040	CAGR 2012-2020	CAGR 2020-2040	CAGR 2012-2040
SCAG	332,200	374,300	419,800	1.5%	0.6%	0.8%
Caltrans	309,350	335,538	357,894	1.0%	0.3%	0.5%
Woods & Poole	431,486	496,367	652,050	1.8%	1.4%	1.5%
ADE	309,804	341,244	412,263	1.2%	0.9%	1.0%
Agriculture, Forestry, Fishing and Hunting	27,090	27,880	29,590	0.4%	0.3%	0.3%
Mining, Quarrying, Oil and Gas Extraction	1,270	1,180	1,510	-0.9%	1.2%	0.6%
Utilities	1,000	1,100	1,200	1.2%	0.4%	0.7%
Construction	11,780	15,800	17,460	3.7%	0.5%	1.4%
Manufacturing	29,890	30,560	33,690	0.3%	0.5%	0.4%
Wholesale Trade	12,600	13,060	13,930	0.4%	0.3%	0.4%
Retail Trade	37,330	41,380	45,720	1.3%	0.5%	0.7%
Transportation and Warehousing	4,740	5,030	5,420	0.7%	0.4%	0.5%
Information	5,150	5,200	6,040	0.1%	0.8%	0.6%
Finance and Insurance	19,600	19,020	17,270	-0.4%	-0.5%	-0.5%
Professional, Scientific, and Technical Services	34,900	36,860	45,820	0.7%	1.1%	1.0%
Educational Services	24,990	29,840	44,800	2.2%	2.1%	2.1%
Health Care and Social Assistance	37,104	43,770	67,390	2.1%	2.2%	2.2%
Arts, Entertainment, and Recreation	4,765	5,490	6,730	1.8%	1.0%	1.2%
Accommodation and Food Services	28,005	31,900	36,290	1.6%	0.6%	0.9%
Other Services (excluding Public Administration)	9,420	11,870	15,250	2.9%	1.3%	1.7%
Public Administration	20,170	21,300	24,170	0.7%	0.6%	0.6%

Source: ADE, Inc.; data from Southern California Association of Governments, 2016; The California Economic Forecast, 2015; Woods & Poole Economics, 2016.

Regulatory Setting

There is no regulatory setting for this section.

References

Reports/Publications

California Economic Forecast. "California County-Level Economic Forecast, 2015-2040." September 2015.

Southern California Association of Governments. "2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction". April 7, 2016.

Woods & Poole Economics. "2016 State Profile, California." 2016.

Key Terms

Compound Annual Growth Rate (CAGR). The CAGR is the annual year-to-year growth rate during a period of time.

SECTION 2.5 MARKET DEMAND MEASURES FOR DIFFERENT LAND USES

Introduction

This section builds on Sections 2.3 and 2.4 to analyze potential land demand for economic uses in the unincorporated area and the extent to which the existing supply of developable land could support future growth as expressed in the current SCAG projections. As noted in the introduction to Section 2.4, the County is not under any obligation to fulfill the SCAG projections. They are used here simply to reflect the assumptions currently built into regional planning programs. In this section, the analysis is generally conducted at a countywide level.

Major Findings

- If the county were to meet the SCAG growth projections through 2040, the demand for new dwelling units in the unincorporated area would total 5,670 units.
- Based on the parcel-specific estimates prepared for the 2014 Housing Element, the unincorporated area has the potential to accommodate 1,361 dwelling units on vacant land currently zoned for residential uses, which totals 722.9 acres.
- The unincorporated county's remaining residential development potential on vacant residential land yields an average of 1.9 dwelling units per acre (722.9 acres/1,361 dwelling units). At this density, vacant residential land would support approximately 24 percent of the SCAG-projected dwelling unit growth of 5,670 units between 2012 and 2040. Accommodating the remainder of the projected residential growth at this density (i.e., 4,309 units at 1.9 dwelling units per acre), would require rezoning up to 2,268 acres of land.
- If the total residential development growth projected by SCAG (5,670 dwelling units) was to be accommodated by a combination of the existing average development density of 1.9 units/acre and the maximum development density of 20 units/acre, approximately 30 percent of vacant residential land (238 acres) would need to be "upzoned" to 20 dwelling units per acre, and approximately 70 percent of vacant residential land could be developed at the existing average of 1.9 dwelling units per acre.
- There is also residential development potential associated with second units, farmworker housing (individual dwelling units and complexes), and principal dwelling units on vacant parcels zoned OS, AE, and RA. The remaining residential development capacity of these residential dwelling types is approximately 28,200 dwelling units. (This total assumes no subdivision of OS, AE or RA-zoned land.)
- Construction completion data for the unincorporated area shows that over the last ten years, second dwelling unit construction averaged 19 units per year, individual farmworker dwelling units averaged three units per year, and farmworker complexes averaged 14 dwelling units per year (see Land Use Chapter, Section 3.7 Development Holding Capacity and Remaining Development Potential). These historical construction completion averages are far lower than the theoretical capacity associated with these dwelling types.

- Based on employment projections, there is an estimated deficit of approximately 43.2 acres of commercial land and approximately 6.6 acres of industrial land in the unincorporated area.

Existing Conditions

The detailed employment projections provided in Section 2.4 indicate that the county will add nearly 111,900 jobs between 2012 and 2040. Based on estimates of employment in the cities and the unincorporated area in Table 2-39, the unincorporated areas support approximately 10.3 percent of jobs in the county (2015). This varies by type of job, however, and the county areas have much higher proportions of farm labor and private sector utility jobs (e.g., power, telecommunications), as well as education and recreation jobs. While the unincorporated area increased its share of employment between 2002 and 2015, over the long term, SCAG projects the unincorporated area to support a slightly decreasing share of countywide employment, although a slightly increasing share of housing. Based on SCAG's forecast, there would be demand for approximately 251 acres of non-residential development, based on County zoning standards and typical development patterns.[36]

SCAG also projects the growth of approximately 16,900 residents in 5,400 new households in the unincorporated area between 2012 and 2040. Adding a 5 percent vacancy allowance, this would indicate the demand for 5,670 new dwelling units in the unincorporated area during this period.

Chapter 3, Land Use, describes the County land use and zoning designations and provides an estimate of the development potential remaining in the unincorporated area. For an explanation of the methodology used to calculate remaining development potential see Chapter 3, Appendix 3 (Holding Capacity and Remaining Development Methodology). Table 2-40 converts the land demand by economic sector from Table 2-39 into land demand according to broad land use categories (Residential, Commercial, and Industrial.) Table 2-40 also shows the remaining development potential within each category, as well as by the economic sectors within those broad categories.

Based on the parcel-specific estimates prepared for the 2014 Housing Element, the unincorporated area has the potential to accommodate 1,361 residential units on vacant land currently zoned for residential uses, which totals 722.9 acres (see Table 3-19 in the Land Use Chapter). As described in Section 2.4, SCAG projects demand for 5,670 new units in the unincorporated area between 2012 and 2040. The county's remaining residential development potential on vacant residential land yields an average of 1.9 dwelling units per acre (722.9 acres/1,361 dwelling units). At this density, vacant residential land would support approximately 24 percent of the projected dwelling unit demand of 5,670 units between 2012 and 2040. Accommodating the remainder of the projected residential demand at this density (i.e., 4309 units at 1.9 dwelling units per acre), would require rezoning up to 2,268 acres of land (see Table 2-40). However, the County has residential zones that allow considerably higher densities. For instance, the County's Residential High Density (RHD) zone and the Residential/Mixed Use (R/MU) zone in Saticoy allow 20 units per acre. If the total SCAG-projected dwelling unit need (5,670 units) was to be accommodated by a combination of the existing average development density of 1.9 units per acre and the maximum development density of 20 units per acre, approximately 30 percent of vacant residential

[36] Growth in farm labor does not factor into this calculation. Agricultural employment changes have more to do with changes in farming practices and the crop mix. Farm jobs are estimated to have changed from 19,400 in 2002 to 26,900 in 2015, during which time the acreage under cultivation declined nearly 10,000 acres (Table 9-3, Agriculture Chapter). In addition, land for mineral extraction has been prorated based on projected employment growth, but the Industry Snapshot in Section 2.3 above reports that existing aggregate reserves are only one-third of demand over the next 30 years. Demand for additional oil development is also unknown.

land (238 acres) would need to be "upzoned" to 20 units per acre, and approximately 70 percent of vacant residential land could be developed at the existing average of 1.9 units per acre.

TABLE 2-39
LAND DEMAND TO SUPPORT FUTURE EMPLOYMENT GROWTH PROJECTIONS 2012-2040
Countywide and Unincorporated Area (UA)

Economic Sector	2012-2040 Growth	UA 2015 Share	UA Job Growth 2012-2040	Assumed Floor-Area Ratio	UA Land Demand[1]
Agriculture, Forestry, Fishing and Hunting[2]	2,500	51.6%	1,289	n/a	n/a
Mining and Quarrying[3]	240	15.9%	38	n/a	37.2
Utilities	200	32.2%	64	0.20	3.7
Construction	5,680	13.3%	757	0.20	43.4
Manufacturing	3,800	23.3%	884	0.20	50.8
Wholesale Trade	1,330	5.5%	73	0.20	4.2
Retail Trade	8,390	0.6%	105	0.40	3.0
Transportation and Warehousing	680	8.1%	55	0.20	3.1
Information	890	1.8%	16	0.40	0.5
Finance and Insurance	-2,330	1.1%	-25	0.40	-0.4
Professional, Scientific, and Technical Services	10,920	6.3%	689	0.40	11.9
Educational Services[4]	19,810	6.5%	1,279	0.40	13.8
Health Care and Social Assistance	30,286	2.9%	871	0.40	25.0
Arts, Entertainment, and Recreation	1,965	15.8%	311	0.40	8.9
Accommodation and Food Services	8,285	2.7%	222	0.40	6.4
Other Services (excluding Public Admin)	5,830	7.7%	447	0.40	12.8
Public Administration	4,000	8.6%	345	0.40	9.9
Total	**102,476**	**5.6%**	**7,420**		**234.2**

Notes:
*[1] Most job sectors are estimated to support one job per 500 sq. ft. of building space. However, for Finance, Insurance, Professional, Technical and Scientific services the ratio is one job per 300 sq. ft. Unincorporated land demand calculated as follows: [Job Growth in Number of Jobs] / [% Bldg Lot Coverage] * [sq. ft. / employee] / [1 Acre / 43,560 sq.ft] = [Number of Acres].*
[2] Growth in farm jobs does not presume change in agricultural land inventory.
[3] Mining land demand calculated as a ratio of jobs/acre based on existing mineral resource acreage in Table 3-2.
[4] UA Education job growth based on estimated increase for CSUCI plus expansion of local education facilities in proportion to projected population growth. However, CSUCI job growth is not included in land demand calculation.
Note: Totals may not add due to rounding.
Source: ADE Inc., based on data in Table 2-34 and Table 2-38.

In addition, as discussed in Chapter 3 of this Background Report, there is also residential development potential associated with second units, farmworker housing (individual units and complexes), and principal dwelling units on vacant parcels zoned Open Space, Agricultural Exclusive, and Rural Agriculture. The remaining residential development capacity of these residential dwelling types is approximately 28,200 units (this total assumes no subdivision of OS, AE or RA-zoned land). Based on historical development trends, the capacity associated with these types of residential use is not accounted for in the land demand calculations in Table 2-40, since the demand for such housing is limited and would constitute only a small percentage of overall demand. Construction completion data from the County shows that over the last ten years, second dwelling unit construction averaged 19 units per year (although recent changes in state law may result in an increased number of second dwellings in the future); individual farmworker dwelling units averaged three units per year; and farmworker complexes averaged

14 units per year (see Land Use Chapter, Section 3.7, Development Holding Capacity and Remaining Development Potential). These historical construction completion averages are far lower than the theoretical capacity associated with these dwelling types. As described in Chapter 3, a greater diversity of units than is currently planned will be needed to accommodate residential demand through 2040.

For commercial development, the unincorporated county has land available in several zones, including Neighborhood Commercial, Commercial Planned Development, and the Town Center zone in the Saticoy Area Plan. The allowable uses in these zones are fairly broad, so all retail, services and other office uses are grouped within the Commercial category in Table 2-40. The County Zoning Ordinance has other commercial zones, including Coastal Commercial and Harbor Planned Development that would support accommodations and tourist-oriented commercial uses, but the analysis in Chapter 3 of this Background Report indicates there is no remaining development potential in those zones. Based on the available land supply data, the county has a deficit of approximately 43.2 acres of commercial land in the unincorporated area to meet projected demand, including land within and outside of city spheres of influence. These projections address growth in commercial demand if the unincorporated area sees population growth as projected by SCAG. It should be noted, however, that these calculations do not factor in a margin for supply over demand. Typically, communities plan for the land supply to exceed demand by 25 to 30 percent in order to avoid reaching demand saturation. In areas without such "excess" supply, land costs tend to escalate and development tends to slow down due to lack of available sites.

For industrial development, there is a greater variation in development patterns than for commercial development, so projection of land demand based on employment growth is more difficult than for commercial development. Certain employment sectors, such as utilities, and construction, tend to need more land (e.g., for yard space). Other types of manufacturing, transportation, warehousing, and wholesale uses tend to have more uniform floor-area-ratios, although this is also dependent on the amount of truck traffic and parking that needs to be accommodated. The actual countywide industrial development potential will, in part, be a function of land availability. The calculations in Table 2-40 show a 6.6-acre deficit of industrial land in the unincorporated area. As with the Commercial category, there is no excess supply margin in the Industrial category, which is important to maintain an efficient real estate market.

TABLE 2-40
COMPARISON OF LAND SUPPLY AND DEMAND, 2012-2040
Unincorporated Area

Land Use Category	Acres	Units/ Jobs
Residential		
Supply*	722.9	1,361
Demand** (Land demand is based on assumed development density)	722.9 to 2,984.2**	5,670
Surplus/(Deficit)	***0 to (2,268)***	***(4,309)***
Commercial		
Supply	48.5	1,709
Demand	91.7	3,460
Retail Trade	3.0	105
Information	0.5	16
Finance and Insurance	-0.7	-25
Professional, Scientific, and Technical Services	11.9	689
Educational Services	13.8	479
Health Care and Social Assistance	25.0	871
Arts, Entertainment, and Recreation	8.9	311
Accommodation and Food Services	6.4	222
Other Services (excluding Public Administration)	12.8	447
Public Administration	9.9	345
Surplus/(Deficit)	***(43.2)***	***(1,751)***
Industrial		
Supply	135.9	2,475
Demand	142.5	1,871
Mining and Quarrying	37.2	38
Utilities	3.7	64
Construction	43.4	757
Manufacturing	50.8	884
Wholesale Trade	4.2	73
Transportation and Warehousing	3.1	55
Surplus/(Deficit)	***(6.6)***	***604******

** Reflects acreage of vacant residential parcels and associated development potential. Does not account for residential potential associated with ancillary units which include 16,000 second units, 980 farmworker housing units, 9,350 farmworker complex dwelling units, 242 non-student dwelling units at California State University Channel Islands, and 295 dwelling units on vacant land zoned OS, AE, and RA, assuming no subdivision of land.*

*** Lower end of range assumes rezoning of available residential land to accommodate a combination of 238 acres developed at 20 units per acre (per County's Residential High Density zone) and 485 acres developed at 1.9 dwelling units per acre; upper end reflects a development density of 1.9 dwelling units per acre for all 5,670 dwelling units needed through 2040.*

**** The apparent "surplus" of employment capacity is due to the low employee density assumed for mining on the demand side.*

Source: ADE Inc., based on data in Tables 2-36, 3-19, and 3-23.

Regulatory Setting

The land supply and development capacity in the unincorporated area is governed by County land use and zoning policy and designations, as described in Chapter 3, Land Use.

Key Terms

Floor Area-Ratio (FAR). The ratio of allowable building space per land area on a development site.

Ventura County 2040 GENERAL PLAN

Chapter 3
Land Use

3 LAND USE

INTRODUCTION

This chapter provides an overview of land use and development within Ventura County as of November 2016. It is organized into the following sections:

- Planning Boundaries (Section 3.1)
- The Local Agency Formation Commission (LAFCo) and Spheres of Influence (Section 3.2)
- Annexation and Development Trends (Section 3.3)
- Existing Assessor Land Use Categories (Section 3.4)
- General Plan and Area Plan Land Use Designations (Section 3.5)
- Existing Zoning (Section 3.6)
- General Plan Development Capacity and Buildout Potential (Section 3.7)
- City General Plans (Section 3.8)
- Other Agency Plans (Section 3.9)
- Military Institutions and Installations (Section 3.10)
- Disadvantaged Unincorporated Communities (Section 3.11)

SECTION 3.1 PLANNING BOUNDARIES

Introduction

This section describes the geographic borders and boundaries of both incorporated and unincorporated land within Ventura County.

Major Findings

- Ventura County covers approximately 1.2 million acres and is bordered by the Pacific Ocean to the southwest, Los Angeles County to the southeast and east, Santa Barbara County to the west, and Kern County to the north. The Los Padres National Forest accounts for approximately 574,000 acres, or 47 percent of the county's total land area. The balance of the county includes approximately 528,000 acres of land in the unincorporated area (43 percent) and approximately 121,000 acres of land in cities (10 percent).

Existing Conditions

Ventura County is one of the six counties that collectively form the Central Coast region of California. It was created on January 1, 1873, when it separated from Santa Barbara County. Ventura County covers

1.2 million acres bordered by the Pacific Ocean to the southwest, Los Angeles County to the southeast and east, Santa Barbara County to the west, and Kern County to the north. The Los Padres National Forest accounts for approximately 574,000 acres, or 47 percent of the county's total land area. This includes privately-owned inholdings within the national forest (e.g., Lockwood Valley). Outside of the Los Padres, there are approximately 528,000 acres of land in the unincorporated area (43 percent) and 121,000 acres in the county's 10 incorporated cities (10 percent). In addition to the mainland part of the county, two of the eight Channel Islands off the coast (San Nicolas Island and Anacapa Island) are also part of Ventura County. They are located within Channel Islands National Park. San Nicolas Island encompasses approximately 14,000 acres and is located 65 miles south of Naval Base Ventura County Point Mugu; it serves as a launch platform for short- and medium-range missile testing and as an observation facility for missile testing. Anacapa Island covers approximately 3,200 acres and is located 14 miles from the coast of Ventura County; it is one of the most visited islands of Channel Islands National Park because of its proximity to the mainland.

Planning Areas

For statistical analysis purposes, the existing General Plan divides the county into geographical subareas. These subareas were aggregations of "Analysis Zones" that were established by the Ventura County Transportation Commission (VCTC) for transportation modeling and correspond approximately to Areas of Interest established by LAFCo. The planning areas are based on the 10 incorporated cities and five subareas for unincorporated areas. As shown in Figure 3-1, the 15 planning areas cover the entire county and consist of the following:

- Ahmanson Ranch Area
- Camarillo Area
- Fillmore Area
- Las Posas Area
- Moorpark Area
- North Half Area
- Oak Park Area
- Ojai Area
- Oxnard Area
- Piru Area
- Port Hueneme Area
- Santa Paula Area
- Simi Valley Area
- Thousand Oaks Area
- Ventura Area

Area Plans

The County has 10 area plans that include goals, policies, programs, and land use designations for geographically specific unincorporated communities. These are discussed in detail in Section 3.5 and shown in Figure 3-12 through Figure 3-24. The following areas are covered by area plans:

- Coastal Area
- El Rio/Del Norte
- North Ventura Avenue
- Oak Park
- Ojai Valley
- Piru
- Saticoy
- Thousand Oaks
- Lake Sherwood/Hidden Valley
- Ahmanson Ranch

Major Roadways

Planning Areas

Figure 3-1:
Ventura County Planning Areas

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Regulatory Setting

State

California Government Code Section 65301

Section 65301 of the California Government Code requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise its own judgment in determining what areas outside of its boundaries to include in the Planning Area.

Local

Ventura County General Plan

The General Plan covers planning boundaries in the Land Use Appendix, adopted October 22, 2013.

Key Terms

Areas of Interest. A plan adopted by LAFCO which divides the county into major geographic areas reflective of community and planning identity. Within each Area of Interest, there is to be no more than one city (but there will not necessarily be a city in each Area). Areas of Interest also serve as planning referral boundaries of the County Planning Division.

Area Plans. Area plans serve as the land use plans for specific geographic subareas within the unincorporated area. The area plans govern the distribution, general location, and extent of uses of the land for housing, business, industry, open space, agriculture, and public facilities.

City Limits. A political boundary that defines land that has been incorporated into a city.

Planning Area. Fifteen geographic subareas of the county that bear a relationship to Areas of Interest established by LAFCo. They also reflect zones within the county historically used by VCTC for countywide transportation planning.

Unincorporated Areas. Areas of the county outside of the city limits over which Ventura County has direct land use jurisdiction.

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SECTION 3.2 LOCAL AGENCY FORMATION COMMISSION (LAFCO) AND SPHERES OF INFLUENCE

Introduction

This section provides an overview of Ventura Local Agency Formation Commission (LAFCo) and spheres of influence (SOIs) in Ventura County.

Major Findings

- There are no major findings related to the description of LAFCo and its responsibilities. See Section 3.3, Annexation and Development Trends, for a discussion of LAFCo-related trends and activities.

Existing Conditions

LAFCos are independent, quasi-legislative agencies created by the State to oversee the formation of new local governmental agencies and for changes in the organization of existing agencies (e.g., annexations, detachments, dissolutions, consolidations, mergers, and dis-incorporations). Each of California's 58 counties has a LAFCo that operates according to the following general objectives and authorities:

Objectives

- Encourage the orderly formation and expansion of local government agencies;
- Preserve agricultural land resources; and
- Discourage urban sprawl.

Authorities

- Regulate boundary changes;
- Establish spheres of influence (SOIs), which are the probable physical boundaries and service areas of a city of special district;
- Conduct Municipal Service Reviews (MSRs), which review public services, and special studies;
- Initiate special district consolidations or dissolutions; and
- Act on out-of-agency service agreements between public agencies and between agencies and private parties.

In exercising these authorities, LAFCos must consider a wide range of land use and growth factors. LAFCos have no general governmental powers, and thus no authority to regulate the uses of land, property development, or subdivision design (e.g., roads, sizes of water lines). LAFCos do, however, engage in indirect land use decisions by approving or denying boundary changes to cities and special districts. LAFCo boundary decisions control access to public facilities and services that may be growth-inducing (e.g., sewer services to an undeveloped area), growth-supporting (e.g., boundary changes that affect already-developed areas), or non-growth-related (e.g., services provided by districts for rural areas).

Ventura LAFCo maintains a Commissioner's Handbook that addresses State legal requirements for written policies and procedures. The Handbook is a compilation of all the of the written policies and procedures adopted by the Ventura LAFCo. These policies and procedures do not reiterate or interpret State law. Rather, they are intended to supplement State law.

Spheres of Influence

A sphere of influence (SOI) is a plan for the probable physical boundaries and service area of a local agency, as determined by the Commission. LAFCos are responsible for establishing an SOI for each city and district whose boundaries are regulated by LAFCo. Typically, an SOI is the territory a city or district is expected to annex. Thus, SOIs are usually larger in area than the actual boundaries of a city or district, although they can be the same as the city or district boundaries.

Cities and districts cannot provide services outside their SOIs except in very limited circumstances. With the passage of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act), LAFCos are required to update SOIs every five years either in conjunction with, or after completing, municipal service reviews (MSRs). The CKH Act also specifies the process that LAFCos must follow and the written determinations LAFCos must make in order to update or amend a SOI. Figure 3-2 shows the SOIs for cities in Ventura County.

The Ventura LAFCo 2013-2017 Work Plan lists proposed MSRs and SOI updates. Ventura LAFCo plans to complete all MSRs/ SOI updates for cities in 2017. The list below shows the most recent reviews and updates completed by LAFCo.

- Santa Paula – reviewed 3/20/2013
- Simi Valley – reviewed 3/20/2013
- Fillmore – reviewed 1/16/2013
- Ventura – updated 1/16/2013
- Thousand Oaks – reviewed 11/14/2012
- Moorpark – reviewed 11/14/2012
- Ojai – reviewed 11/14/2012
- Oxnard – reviewed 11/14/2012
- Camarillo – updated 11/14/2012
- Port Hueneme – reviewed 3/18/2009

In addition to the 10 cities, all special districts within Ventura County have SOIs. The following is a list of the types of special districts and number of each type of district with a SOI:

- Cemetery District – 3
- Community Services District – 4
- Conservation District – 3
- Drainage District – 2
- Fire Protection District – 1
- Groundwater Management Agency – 2
- Harbor District – 1
- Health Care District – 1
- Memorial District – 1
- Port District – 1
- Recreation and Park District – 3
- Sanitary/Sanitation District – 5
- Water District – 7
- Watershed Protection District – 1
- Waterworks District – 5

Areas of Interest

The Ventura LAFCo established "areas of interest" in Ventura County in the late 1960s. Areas of interest divide the south half of Ventura County (i.e., the non-Forest Service land) into 15 geographic areas based primarily on topography and community identity (see Figure 3-3). They are created by local policy and

are not based on any legislative direction or mandate. The basic policies are to have no more than one city in any area of interest and to have areas of interest serve as planning referral lines between the County and cities for discretionary land use entitlements. Areas of interest have been reviewed and updated periodically in conjunction with the Guidelines for Orderly Development and the County of Ventura General Plan. Areas of interest do not apply to special districts and are separate from greenbelts, SOAR and CURB lines, and SOIs. (See Section 3.3 of this Chapter, Annexation and Development Trends, for definitions and additional discussions on greenbelts, SOAR and CURB.)

Municipal Service Review

The CKH Act requires LAFCo to conduct an MSR prior to updating an SOI. The MSR must consist of written determinations relating to the following seven factors:

- Growth and population projections for the affected area.
- The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence.
- Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged, unincorporated communities within or contiguous to the sphere of influence.
- Financial ability of agencies to provide services.
- Status of, and opportunities for, shared facilities.
- Accountability for community service needs, including governmental structure and operational efficiencies.
- Any other matter related to effective or efficient service delivery, as required by Commission policy.

In 2012, Ventura LAFCo prepared MSRs for all of the cities in the county, except Port Hueneme. Ventura LAFCo did not examine Port Hueneme because the city is surrounded by Oxnard on three sides and the Pacific Ocean on the fourth. The City of Port Hueneme boundary and SOI are coterminous. Because there is no further opportunity for Port Hueneme to expand beyond its existing boundary and SOI, LAFCo has determined that no SOI review or MSR is necessary.

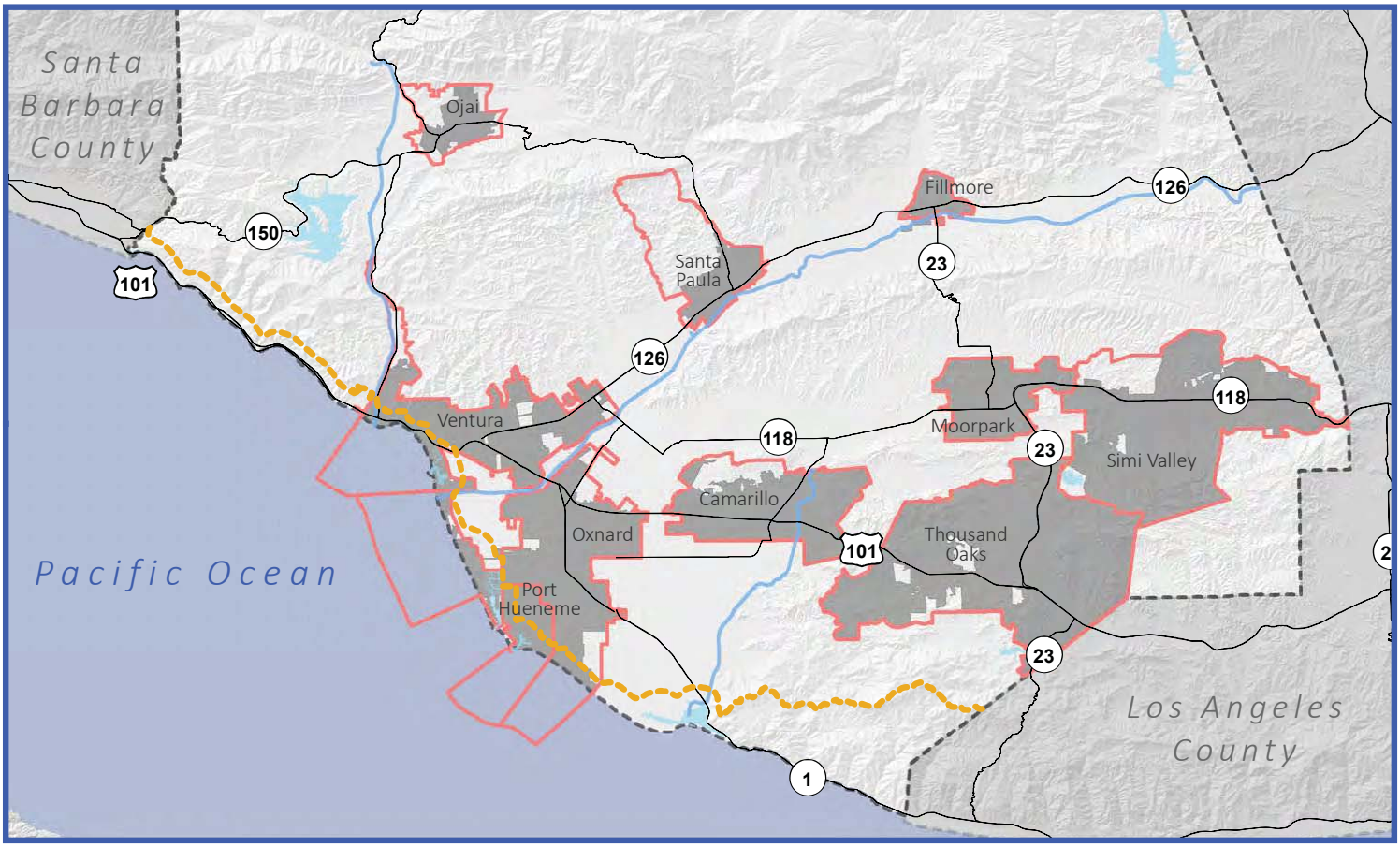

Figure 3-2:
City Spheres of Influence

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Coastal Zone Boundary
Major Roadways
Major Waterways
Water Bodies
City Sphere of Influence (SOI)
Cities

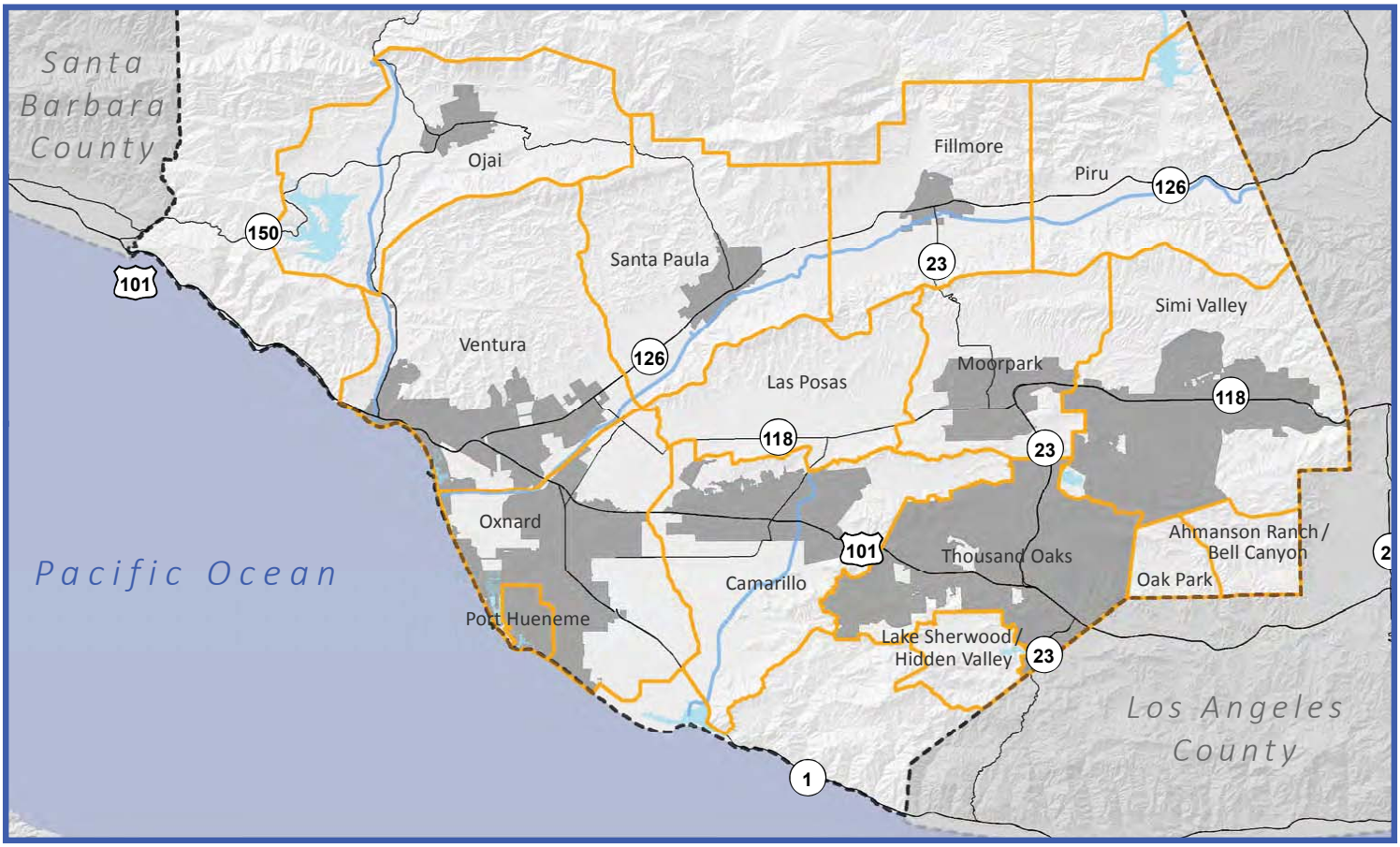

Figure 3-3:
Areas of Interest

Map Date: November 17, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Ventura County Boundary
Areas of Interest
Major Roadways
Major Waterways
Water Bodies
Cities

Regulatory Setting

State

Cortese Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act)

The Cortese Knox Hertzberg Local Government Reorganization Act established procedures for local agency changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.) While LAFCo does not have any direct land use authority, the CKH Act assigns LAFCo a significant role in planning issues by requiring them to consider a wide range of land use and growth factors when they consider proposed boundary changes. California Government Code Section 56001 specifically states that "the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing that development with sometimes competing State interests of discouraging urban sprawl, preserving open space and prime agricultural lands, [and] efficiently extending government services."

Key Terms

Annexation. The process by which land is incorporated into an existing district or city, with a resulting change in the boundaries of the annexing jurisdiction.

Local Agency Formation Commission (LAFCo). A commission within each county that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, and merger of districts with cities.

Municipal Service Review. LAFCos are required to conduct service reviews every five years based on guidelines developed by the State. As a part of the service review process, LAFCos must render written determinations of evaluation categories such as local accountability and governance, and cost avoidance. Recommendations from these determinations may ultimately lead to the consideration of identified government structure options (e.g. consolidations or dissolutions of districts). Service reviews will also be used for other LAFCo decisions and as information resources for service providers and the public. LAFCos must conduct service reviews either prior to, or in conjunction with, required updates of spheres of influence.

Sphere of Influence (SOI). The probable physical boundaries and service area of a local agency, as determined by LAFCo.

References

Reports/Publications/Data

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SECTION 3.3 ANNEXATION AND DEVELOPMENT TRENDS

Introduction

This section provides an overview of the annexation history and development trends in Ventura County.

Major Findings

- A majority of city annexations and boundary changes in western Ventura County occurred earlier than 1960. After 1960, the eastern cities incorporated, beginning with Thousand Oaks (1964) and followed by Camarillo (1964), Simi Valley (1969), and Moorpark (1982).
- The majority of growth and development in Ventura County has occurred in the incorporated cities. Between 2000 and 2016, 94.3 percent of the county's population growth occurred in incorporated cities.
- The County, cities within the county, and LAFCo adopted the Guidelines for Orderly Development in 1969 to direct urban-level development and services to the incorporated areas.
- Greenbelts are voluntary agreements between the County and one or more cities to limit development of agricultural and/or open space areas within the unincorporated county. Through greenbelt agreements, cities commit to not annex any property within a greenbelt while the County agrees to restrict development to uses consistent with existing agricultural or open space zoning. There are seven greenbelts in Ventura County covering approximately 164,000 acres collectively.
- Save Open Space & Agricultural Resources (SOAR) refers to a series of voter initiatives that have been adopted for 8 of the 10 cities and the unincorporated area (Ojai and Port Hueneme have not adopted SOAR measures). The city SOAR measures establish voter-controlled urban growth boundaries, known as City Urban Restriction Boundaries (CURBs). CURBs are lines around each city that require voter approval to allow City annexation and development of land outside of the CURB boundary. The County SOAR ordinance requires voter approval to amend the Open Space, Agriculture, and Rural General Plan land designations, and the goals and policies as they specifically apply to those land use designations unless such amendment is approved by a vote of the people.

Existing Conditions

Incorporation and Annexation History

Ventura County was created on January 1, 1873, when it split from Santa Barbara County. At that time, the City of Ventura (San Buenaventura) was the county's only incorporated community. Since then, nine other cities incorporated, as shown in Table 3-1.

TABLE 3-1
VENTURA COUNTY CITY INCORPORATION DATES

City	Incorporation Date
Ventura	4/02/1866
Santa Paula	4/22/1902
Oxnard	6/30/1903
Fillmore	7/10/1914
Ojai	8/5/1921
Port Hueneme	3/24/1948
Thousand Oaks	10/7/1964
Camarillo	10/22/1964
Simi Valley	10/10/1969
Moorpark	7/1/1983

The rapid growth in population starting in the 1950s in Ventura County spurred the expansion of cities. A majority of the annexations and boundary changes in the cities in western Ventura County occurred prior to 1960. After 1960, the eastern cities incorporated, beginning with Thousand Oaks (1964) and followed by Camarillo (1964), Simi Valley (1969), and Moorpark (1982). The incorporation of the eastern cities significantly reduced the percentage of population in the unincorporated county. In 1960, the unincorporated area accounted for 50 percent of county population. This share declined to 13 percent in 1990 and 11 percent in 2016. Figure 3-4 shows the change in the incorporated-unincorporated population distribution since 1880 and Figure 3-5 shows annexation history by decade through 2015.

Development Management and Trends

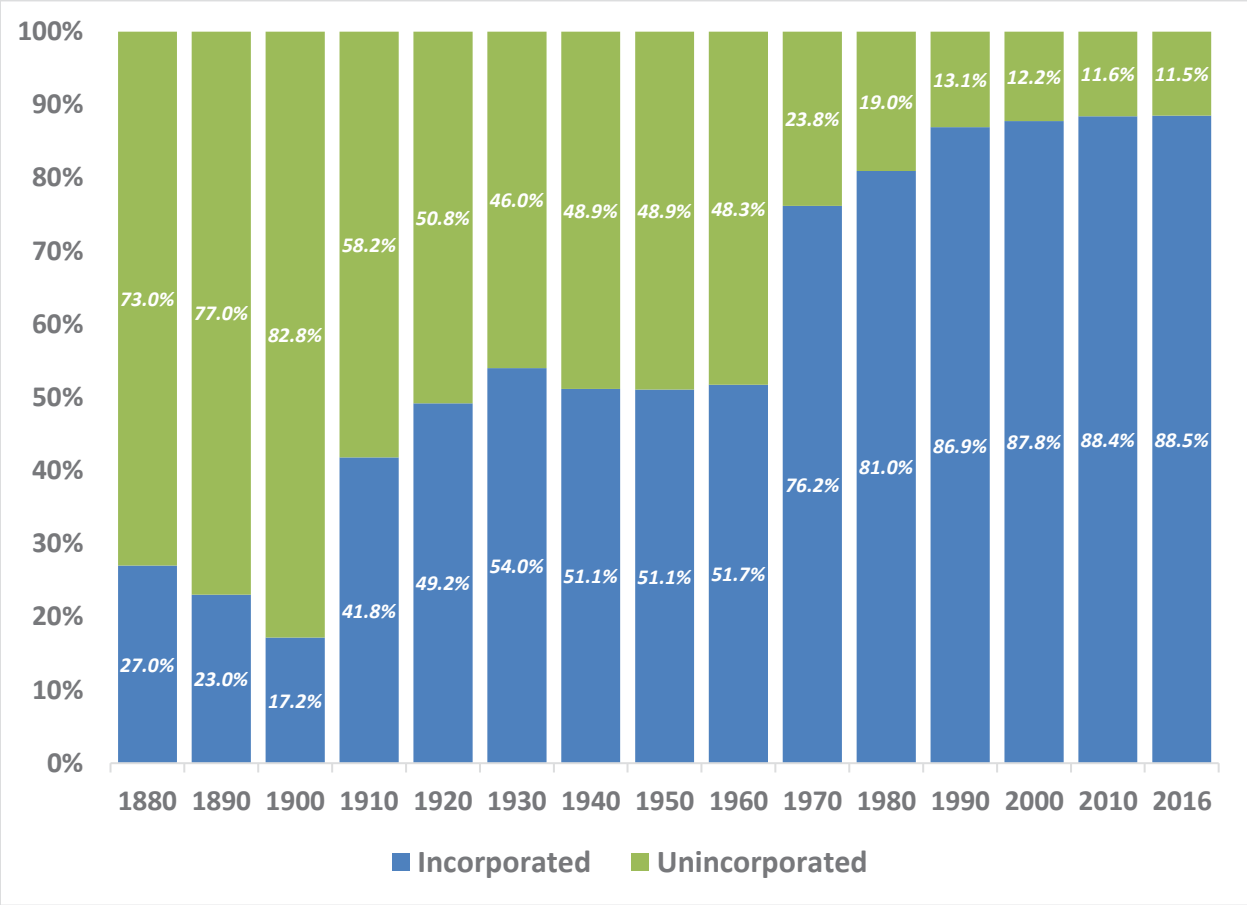
Between 2000 and 2016, 94.3 percent of the county's population growth occurred in incorporated cities, two-thirds of which occurred in just three cities: Oxnard, Simi Valley, and Thousand Oaks. This reflects a longstanding trend in the county of accommodating growth primarily in the cities, which, in turn, reflects Ventura County's policy emphasis on preservation of agriculture and open space lands. The County and the cities in the county have taken several actions to direct growth away from agricultural and open space lands including the development of, and adherence to, the Guidelines for Orderly Development, greenbelt agreements, and a voter-initiative referred to as Save Open Space & Agricultural Resources, commonly known as SOAR.

Guidelines for Orderly Development

Ventura County's "Guidelines for Orderly Development" (Guidelines) were originally adopted by the Board of Supervisors, all city councils within Ventura County, and LAFCo in 1969. The Guidelines

represent a unique, collaborative commitment to: encourage urban development within cities whenever and wherever practical; enhance the regional responsibility of County government; and facilitate orderly planning and development in Ventura County. The Guidelines were revised and adopted in December 1996, culminating in an effort to improve the clarity of relationships between local agencies with respect to urban development projects. For example, as articulated in the Guidelines, "urban development" is defined as the need for a new community sewer system, or the expansion of an existing community sewer system, the creation of residential lots less than two acres in area, or the establishment of commercial or industrial uses that are not related to agriculture or the production of mineral resources.

FIGURE 3-4
VENTURA COUNTY INCORPORATED AND UNINCORPORATED POPULATION



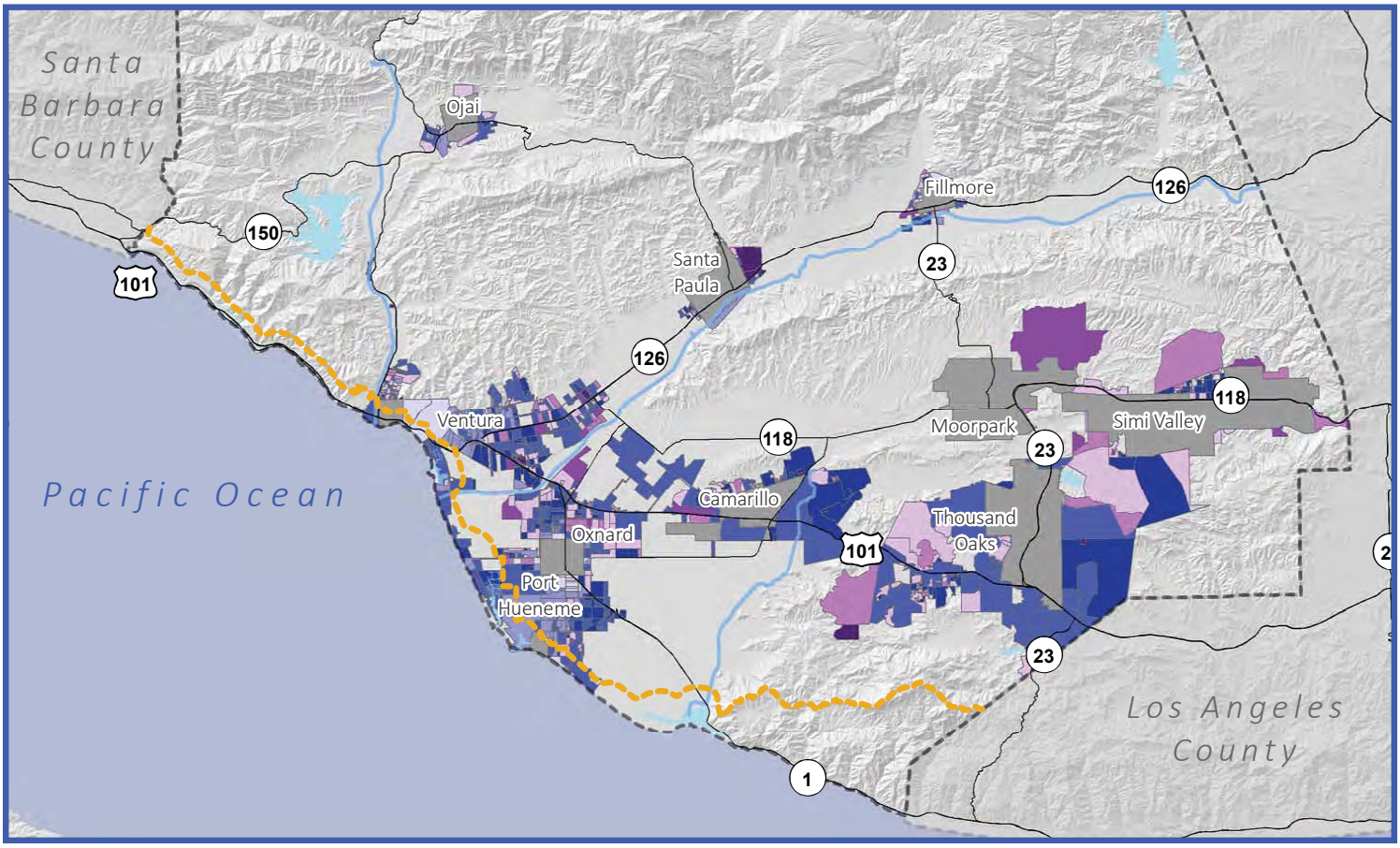


Figure 3-5:
Ventura County Annexation History

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Major Roadways
Major Waterways
Water Bodies
Ventura County Boundary
Coastal Zone Boundary

Annexation Period

Initial Incorporation
Earlier than 1950
1950 to 1960
1960 to 1970
1970 to 1980
1980 to 1990
1990 to 2000
2000 to 2010
2010 to 2015

The intent of the Guidelines for Orderly Development is threefold: (1) Clarify the relationship between the cities and the county with respect to urban planning; (2) facilitate a better understanding regarding development standards and fees; and (3) identify the appropriate governmental agency responsible for making determinations on land use requests.

The policies in the Guidelines outline different approaches for land located within the different policy boundaries established in the county. Within city spheres of influence (see Figure 3-2), the Guidelines call for applicants for land use permits or entitlements for urban uses to apply to the city rather than the County and to annex to the city prior to development occurring. In cases where the County approves development within spheres of influence, the standards for such development should be equal to, or more restrictive than, land uses allowed by the city.

Within established areas of interest associated with cities, but outside their spheres of influence, the Guidelines call for cities and the County to collaborate in considering applications for discretionary land use permits or entitlements (Figure 3-3 shows the areas of interest). While the County is primarily responsible for local land use planning in these areas, decisions should account for the general land use goals and objectives of the city. Within established areas of interest that are not associated with cities, the County is solely responsible for land use planning and for providing municipal services. Urban development in these areas should be allowed only in Unincorporated Urban Centers or Existing Communities as designated in the County General Plan. In Unincorporated Urban Centers, urban development should only be allowed when an Area Plan has been adopted by the County.

The County's existing General Plan integrates the Guidelines for Orderly Development through Land Use Goal 3.1.1-5, and Policies 3.1.2-1 (Land Use Maps) and 3.1.2-11 (Discretionary Permit Consistency with the Guidelines).

Greenbelt Agreements

Beginning in 1967, several cities and the County began adopting greenbelt agreements. Greenbelts are voluntary agreements between the County and one or more cities to limit urban development in agricultural and/or open space areas within the unincorporated county. Greenbelts protect open space and agricultural lands to prevent premature conversion to uses incompatible with agricultural uses. Through greenbelt agreements, cities commit to not annex any property within a greenbelt while the County agrees to restrict development to uses consistent with existing zoning. The description, terms, conditions, and features of greenbelt agreements are in effect for an indefinite time period.

Once the County and one or more cities approve a greenbelt agreement, LAFCo must endorse and certify the greenbelt. By doing so, LAFCo commits to act in a manner consistent with the greenbelt agreement and thus will not approve any proposal from a city or the County that is in conflict with a greenbelt agreement, unless exceptional circumstances exist. Section 2.5.3 of the LAFCo Commissioner's Handbook outlines the process allowing parties to amend a greenbelt agreement prior to the filing of a proposal that potentially conflicts with the agreement. The seven greenbelts in Ventura County are described below and shown in Figure 3-6.

The Ventura County General Plan and Non-Coastal Zoning Ordinance regulate the uses in a greenbelt. The existing General Plan designations for greenbelts include Agriculture, Open Space, Rural, and Existing Community. In general, the zoning designations within a greenbelt typically include Agriculture-Exclusive (AE), Rural Agricultural (RA), and Open Space (OS).

Ventura-Santa Paula Greenbelt

The cities of Ventura and Santa Paula and Ventura County adopted the Ventura-Santa Paula Greenbelt in 1967. The Ventura-Santa Paula Greenbelt is comprised of 27,884 acres. The greenbelt is bounded on the north by the Ventura and the Santa Paula area of interest boundaries, on the east by the Santa Paula Sphere of Influence and parcel lines, on the south by the Ventura and Santa Paula area of interest boundaries, and on the west by the Ventura Sphere of Influence boundary, the eastern boundary of the City of Ventura's Hillside Voter Participation Area (HVPA), and parcel lines.

Santa Paula-Fillmore Greenbelt

The Cities of Santa Paula and Fillmore and Ventura County adopted the Santa Paula-Fillmore Greenbelt in 1980. The Santa Paula-Fillmore Greenbelt includes 31,743 acres. The greenbelt is bounded on the north by the southern boundary of the Los Padres National Forest, on the east by the Fillmore City Urban Restriction Boundary (CURB) and the western boundary of the Fillmore-Piru Greenbelt, on the south by the southern boundaries of the Fillmore and Santa Paula areas of interest, and on the west by the eastern boundary of the Santa Paula City Urban Restriction Boundary (CURB).

Oxnard-Camarillo Greenbelt

The Cities of Oxnard and Camarillo and Ventura County adopted the Oxnard-Camarillo Greenbelt in 1982. The Oxnard-Camarillo Greenbelt originally included only land south of U.S. Highway 101, but has grown to include 27,679 acres. The Greenbelt is bounded on the southwest side by State Route 1, on the southeast side by Conejo Mountain, on the northeast side by Camarillo, on the west side by Oxnard, and to the north by Ventura.

Ventura-Oxnard Greenbelt

The Cities of Ventura and Oxnard and Ventura County adopted the Ventura-Oxnard Greenbelt in 1994. The Greenbelt includes 5,062 acres and is bounded on the southwest by the City of Oxnard Sphere of Influence, on the north and northwest by the city of Ventura Sphere of Influence, and on the south and southeast by the city of Oxnard Sphere of Influence.

Santa Rosa Valley Greenbelt

The City of Camarillo and Ventura County adopted the Santa Rosa Valley Greenbelt in 1985. Although the Santa Rosa Valley Greenbelt abuts the city of Thousand Oaks boundaries, Thousand Oaks is not a signatory to this agreement. The Greenbelt includes 6,134 acres and encompasses areas to the north and east of the city of Camarillo, and northwest of a rural residential community in the eastern portion of the Santa Rosa Valley.

Fillmore-Piru Greenbelt

The City of Fillmore and Ventura County adopted the Fillmore-Piru Greenbelt in 2000. Although the Fillmore-Piru Greenbelt abuts the Ventura/Los Angeles County boundary, Los Angeles County declined to participate in the Greenbelt Agreement. The Fillmore-Piru Greenbelt is the largest greenbelt in the county and includes 62,396 acres. The Greenbelt is bounded on the west by the eastern boundaries of the city of Fillmore General Plan Study Area, on the north by the Los Padres National Forest, on the east by Los Angeles County, and on the south by the ridgeline of Oak Ridge and the Santa Susana Mountains. The Fillmore-Piru Greenbelt area excludes the unincorporated historic town of Piru.

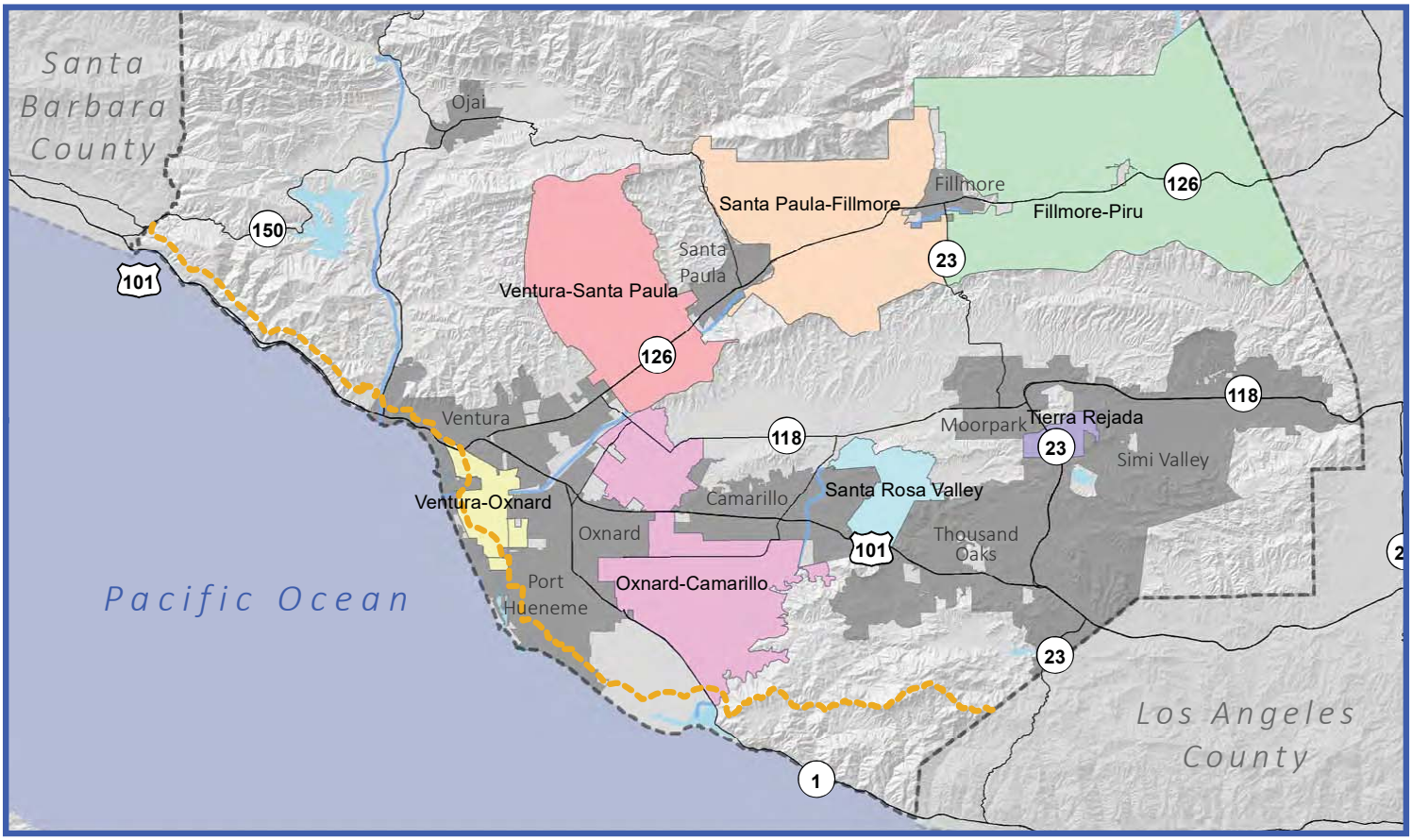


Figure 3-6:
Ventura County Greenbelts

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Major Roadways
Major Waterways
Water Bodies
Cities
Ventura County Boundary
Coastal Zone Boundary

Greenbelt
Fillmore-Piru
Oxnard-Camarillo
Santa Paula-Fillmore
Santa Rosa Valley
Tierra Rejada
Ventura-Oxnard
Ventura-Santa Paula

Tierra Rejada Greenbelt

The cities of Moorpark, Simi Valley, and Thousand Oaks and Ventura County originally adopted the Tierra Rejada Greenbelt in 1983. The Tierra Rejada Greenbelt is comprised of 2,331 acres and is bounded on the west by the Arroyo Santa Rosa and the Las Posas Hills; on the north by the Tierra Rejada Road, the Tierra Rejada Valley Watershed, and the cities of Moorpark and Simi Valley; on the east by the city of Simi Valley; and on the south by the cities of Simi Valley and Thousand Oaks.

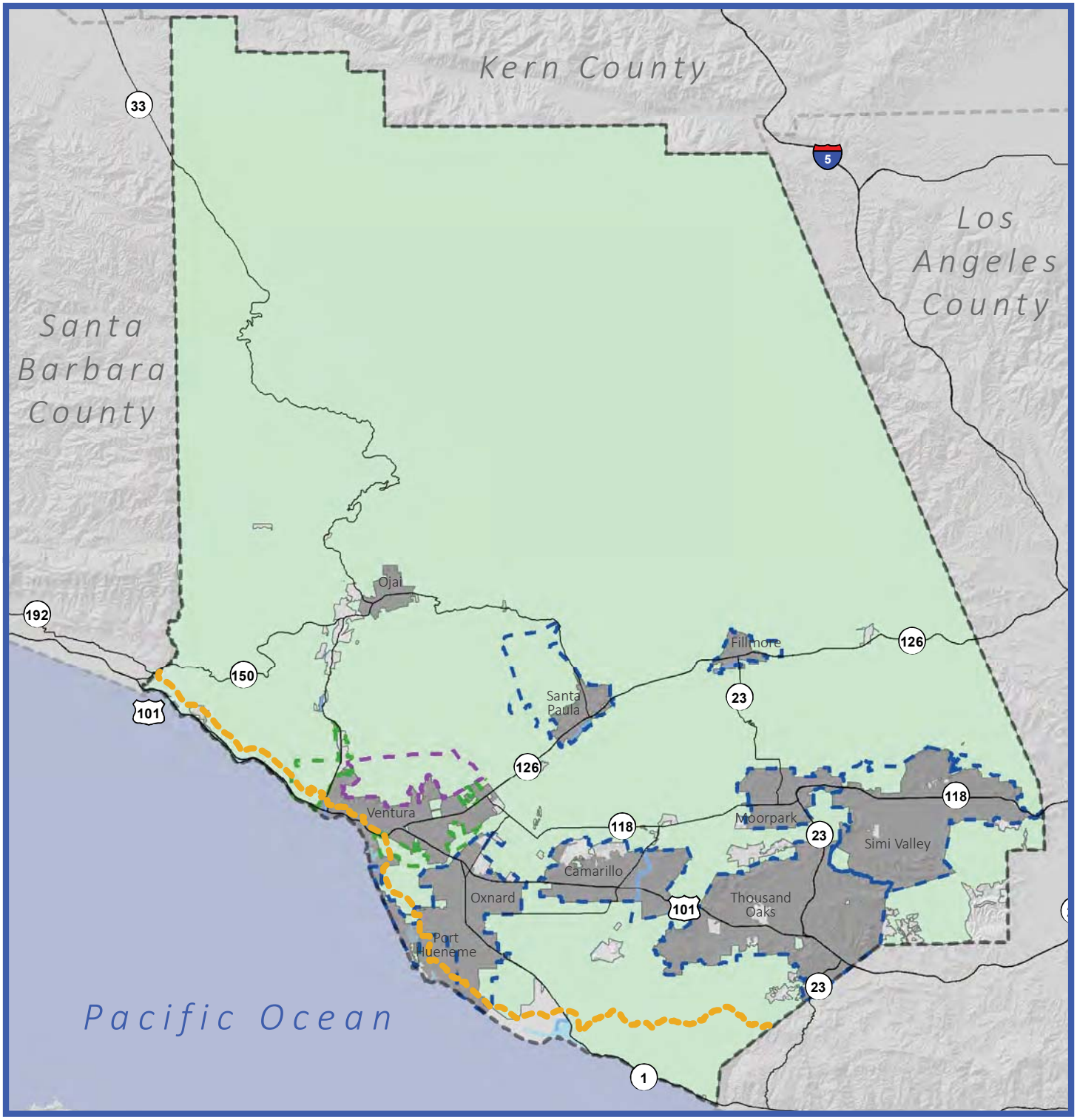
Save Open Space & Agricultural Resources (SOAR)

Save Open Space & Agricultural Resources (SOAR) refers to a series of voter initiatives that individual jurisdictions adopted to protect open space and agricultural land. Ventura County first adopted the countywide SOAR ordinance in 1998. The County SOAR ordinance requires countywide voter approval of any change to the General Plan involving the Agricultural, Open Space, or Rural land use designations, or any changes to a General Plan goal or policy related to those land use designations. Figure 3-7 shows the land in the County affected by SOAR.

In addition to the County SOAR ordinance, eight of the 10 cities in the county have enacted SOAR ordinances/initiatives: Ventura (1995 and 2001), Camarillo (1998), Oxnard (1998), Simi Valley (1998), Thousand Oaks (1998), Moorpark (1999), Santa Paula (2000), and Fillmore (2002). The cities of Camarillo, Fillmore, Moorpark, Oxnard, Santa Paula, Simi Valley, and Thousand Oaks adopted SOAR ordinances to establish voter-controlled urban growth boundaries, known as City Urban Restriction Boundaries (CURBs). CURBs are lines around each city that require voter approval to allow city annexation and development of land outside of the CURB boundary.

The City of Ventura has two measures to protect open space and agricultural land: the original SOAR ordinance and the Hillside Voter Participation Act (HVPA). The City of Ventura SOAR ordinance requires voter approval of any change to the General Plan involving the Agriculture land use designation. The HVPA requires voter approval for any urban development within the HVPA boundary line.

Each of the SOAR ordinances/initiatives contains a limited number of exceptions to the general requirement for voter approval. Most of the original SOAR ordinances/initiatives were structured to stay in effect until December 31, 2020; the exceptions were the cities of Ventura and Thousand Oaks, which were scheduled to stay in effect until December 31, 2030. In November 2016, the voters of Ventura County and eight of the county's ten cities renewed the SOAR ordinances and extended their controls through 2050. Ojai and Port Hueneme were not covered by the Measure C, the 2016 ballot initiative that extended the SOAR ordinances. Ojai will continue to rely on locally-adopted planning measures, while Port Hueneme is landlocked, with no room to expand beyond its current boundaries.



Ventura County 2040 GENERAL PLAN

Figure 3-7: Unincorporated Land Subject to SOAR

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

N

0 5 10 Miles

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary
- County SOAR
- City Urban Restriction Boundary (CURB)
- City of Ventura Hillside Voter Participation Act (HVPA)
- City of Ventura SOAR

Regulatory Setting

State

Cortese Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act)

The Cortese Knox Hertzberg Local Government Reorganization Act established procedures for local agency changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.) While LAFCo does not have any direct land use authority, the CKH Act assigns LAFCos a significant role in planning issues by requiring them to consider a wide range of land use and growth factors when they consider proposed boundary changes. California Government Code Section 56001 specifically states that "the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing that development with sometimes competing State interests of discouraging urban sprawl, preserving open space and prime agricultural lands, [and] efficiently extending government services."

Local

2005 Ventura County General Plan

The General Plan covers annexation and development trends in the Introduction.

Key Terms

Annexation. The process by which land is incorporated into an existing district or city, with a resulting change in the boundaries of the annexing jurisdiction.

Greenbelt Agreement. A joint resolution between interested cities and the county to protect open space and agricultural lands. Cities commit to not annex any property within a greenbelt while the Board of Supervisors agrees to restrict development to uses consistent with existing zoning.

Local Agency Formation Commission (LAFCo). A commission within each county that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, and merger of districts with cities.

Sphere of Influence (SOI). The probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission (LAFCo).

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Reports/Publications

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Ventura, County of. An Ordinance of the Board of Supervisors of the County of Ventura Regarding the Santa Paula-Fillmore Greenbelt. Adopted June 22, 2010.

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Ventura, County of and City of Camarillo. A Joint Resolution of the City Council of the City of Camarillo and the Ventura County Board of Supervisors Establishing a Greenbelt for the Area North and East of the City of Camarillo. Adopted January 23, 1985.

Ventura, County of, City of Oxnard, and City of Camarillo. A Joint Resolution of the City Councils of the City of Camarillo and the City of Oxnard and the County of Ventura Establishing a Greenbelt Between and North and South of the Two Cities. Adopted February 7, 1984.

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SECTION 3.4 EXISTING ASSESSOR LAND USE CATEGORIES

Introduction

This section describes existing land uses and their distribution within unincorporated Ventura County. An understanding of the type and distribution of existing development in the county is critical to the formulation of an updated land use diagram and development standards for Ventura County. Data analysis on existing land uses is based on data from the County of Ventura Assessor's Office and GIS files from Ventura County. The existing land uses discussed in this section do not correspond to land use designations identified in the General Plan, which are discussed in Section 3.5.

Major Findings

- Open space (defined by the Assessor as greenbelt, forest, water areas, brush hills, pasture grazing land) is the most common land use, accounting for over 75 percent of the unincorporated county, or 800,943 acres. The northern half of the county is mostly open space and includes the Los Padres National Forest.
- Agriculture is the second most common type of land use at 13 percent of the unincorporated area. Orchards and row crops are the most prominent agricultural uses in the county, accounting for over 90,000 acres of land. Agricultural uses are primarily located in the Santa Clara River Valley and on the Oxnard Plain.
- Public/quasi-public is the third most common land use accounting for approximately five percent of land in the unincorporated county. Public/quasi-public uses include areas dedicated to transportation, communication, utilities and public services and the majority are found in urbanized areas in the southern portion of the county.

Existing Conditions

Ventura County is distinguished by its 42 miles of coastline and open space lands. Most of the population in the unincorporated county resides in the southern portion of the county because the northern portion of the county is largely within the Los Padres National Forest. The population in the unincorporated county is clustered in small communities. For purposes of appraising land for property tax assessments, the County Assessor classifies all parcels in the county according to a set of approximately 200 "site use codes" that indicate how the property is being used. These codes fall into the following nine broad categories:

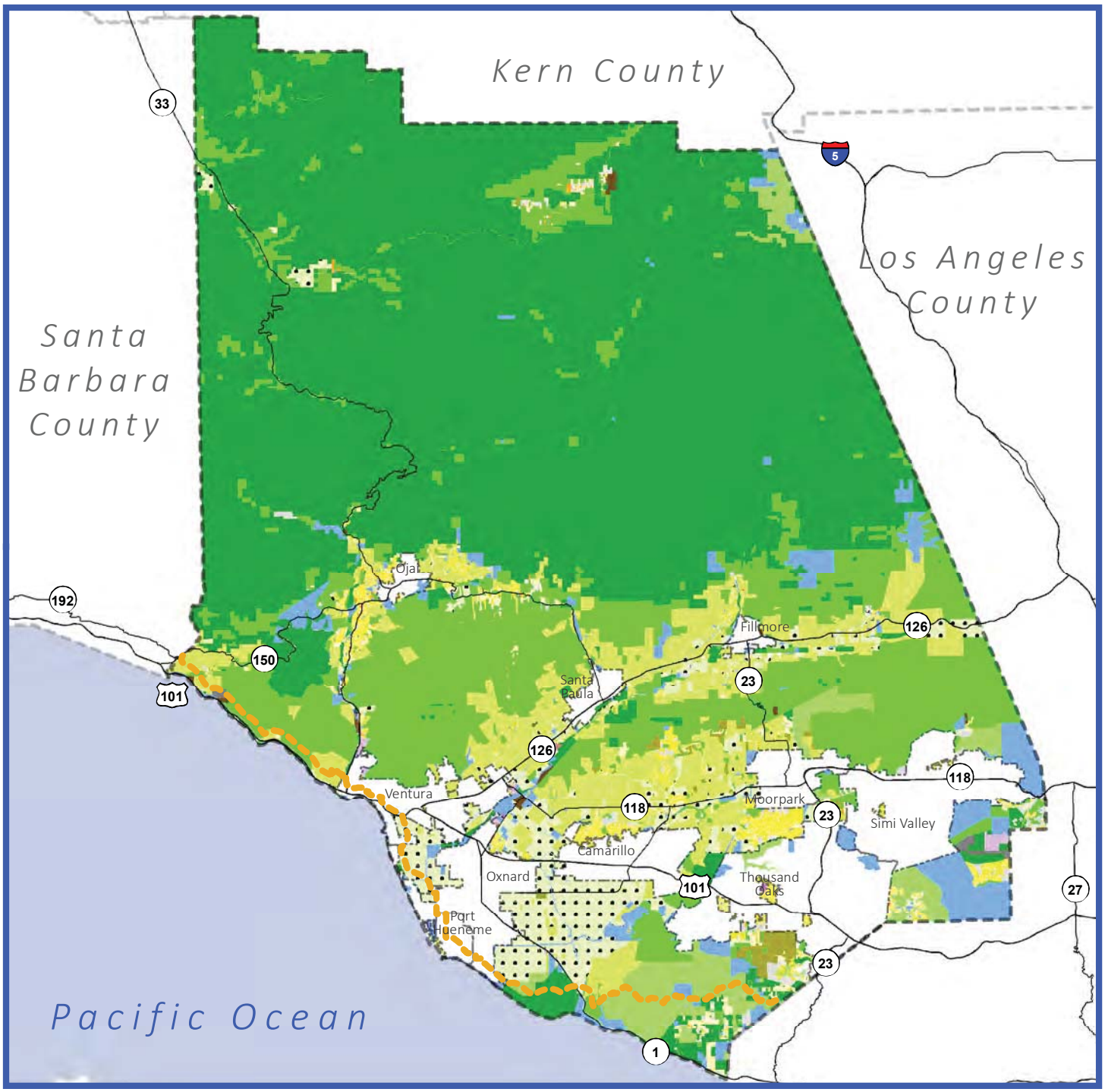
- 01 Residential
- 02 Commercial
- 03 Industrial
- 04 Public/Quasi-Public
- 05 Agriculture
- 06 Mineral Resource
- 07 Recreation
- 08 Open Space
- 00 Vacant

To characterize the general pattern of existing uses based on the Assessor's classifications, the larger list of codes has been aggregated into smaller subset of codes within each of these broad categories. Table 3-2 summarizes the amount of land falling into these categories within the unincorporated county and Figure 3-8 shows where these land use types are located.

TABLE 3-2
EXISTING ASSESSOR LAND USE CATEGORIES
Ventura County
2015

Existing Land Use	Parcels	Acres	Percentage of Uninc. County	Percentage of Total County
Residential				
Rural Residential	502	6,644.5	0.6%	0.6%
Single Family	23,392	15,419.4	1.4%	1.3%
Multifamily	2,143	299.6	0.0%	0.0%
Manufactured/Mobile Homes	610	747.1	0.1%	0.1%
Subtotal	*26,647*	*23,110.6*	*2.2%*	*1.9%*
Commercial				
Retail	207	165.0	0.0%	0.0%
Office	87	48.3	0.0%	0.0%
Subtotal	*294*	*213.3*	*0.0%*	*0.0%*
Industrial				
Light Industrial	181	1,165.0	0.1%	0.1%
Industrial	6	115.9	0.0%	0.0%
Subtotal	*187*	*1,280.9*	*0.1%*	*0.1%*
Recreation				
Recreation	426	33,458.0	3.1%	2.8%
Subtotal	*426*	*33,458.0*	*3.1%*	*2.8%*
Public/Quasi-Public				
Public/Quasi-Public	2,308	55,816.6	5.2%	4.7%
Subtotal	*2,308*	*55,816.6*	*5.2%*	*4.7%*
Agriculture				
Field Crops	1,033	44,678.9	4.2%	3.7%
Orchards/Vineyards	1,924	92,159.6	8.6%	7.7%
Livestock/Dairy/Poultry	121	4,856.1	0.5%	0.4%
Agricultural Production	18	137.1	0.0%	0.0%
Subtotal	*3,096*	*141,831.7*	*13.3%*	*11.9%*
Mineral Resource				
Mineral Resource	48	1,136.1	0.1%	0.1%
Subtotal	*49*	*1,136.1*	*0.1%*	*0.1%*
Open Space				
Pasture/Grazing	1,999	209,685.0	19.7%	17.6%
Open Space	1,846	591,257.9	55.5%	49.6%
Subtotal	*3,845*	*800,942.9*	*75.1%*	*67.2%*
Vacant/Unimproved				
Vacant Residential	4,846	7,109.6	0.7%	0.6%
Vacant Commercial	56	21.6	0.0%	0.0%
Vacant Industrial	81	1,118.6	0.1%	0.1%
Subtotal	*4,983*	*8,249.8*	*0.8%*	*0.7%*
Unincorporated County Total	***41,834***	***1,066,039.9***	***100.0%***	***89.4%***
Cities Total	**--**	***126,114.2***	**--**	***10.1%***
Total County	**--**	**1,192,154.1**	**--**	**100.0%**

Source: Ventura County, 2016; County of Ventura Assessor's Office, 2015.



Ventura County 2040 General Plan

Figure 3-8: Existing Assessor Land Use Categories

Map Date: February 09, 2017

Source: Ventura County Resource Management Agency (RMA) GIS, 2016; County of Ventura Assessor's Office, 2015.

0 5 10 Miles

N

- Coastal Zone Boundary
- Ventura County Boundary
- Major Roadways
- Cities

Existing Land Use

- Rural Residential
- Single Family
- Multifamily
- Manufactured/Mobile
- Retail
- Office
- Light Industrial
- Industrial
- Public/Quasi-Public
- Field Crops
- Orchards/Vineyards
- Livestock/Dairy/Poultry
- Ag Production
- Mineral Resource
- Recreation
- Pasture/Grazing
- Open Space
- Vacant Residential
- Vacant Commercial
- Vacant Industrial

Open Space

Open space is the most widely-applied site use code in the county, accounting for 75.1 percent of the unincorporated county, or 800,943 acres, 576,000 of which are in the Los Padres National Forest and are non-taxable. The open space site use code covers parcels that the Assessor classifies as pasture/grazing, greenbelts, forests, water areas, and brush hills. Most of the privately-owned (taxable) land classified as open space by the Assessor is used for pastures and rangeland. Note that the Assessor's Open Space site use code is not the same as the County's General Plan designation or zoning category.

Residential

Subcategories of residential uses are rural residential, single-family, multifamily, and manufactured/mobile homes. The unincorporated county contains approximately 23,111 acres of residential uses. Single-family is the most common residential use accounting for 15,419 acres (67 percent of all residential acreage) in the unincorporated county.

Commercial

Commercial uses account for the smallest portion of land in the unincorporated county at 213 acres. Subcategories of commercial uses are retail and office. Examples of commercial uses include hotels, shopping centers, banks, and movie theaters.

Industrial

Industrial uses account for a small portion of land in the unincorporated county, at approximately 1,281 acres. This analysis categorizes light industrial uses as industrial buildings, such as warehouses and storage yards, whereas industrial uses include major manufacturing. Light industrial uses account for 181 parcels at 1,165 acres, in comparison to industrial uses at six parcels and 116 acres.

Recreation

Recreation uses account for 3.1 percent, or 33,458 acres, of total land in the unincorporated county. Recreation uses include large-scale, entertainment-oriented areas including sports facilities, golf courses, camps, nontaxable parks, and resorts.

Public/Quasi-Public

Public/quasi-public uses account for 5.2 percent, or 55,817 acres, of total land in the unincorporated county. Public/quasi-public uses include areas dedicated to transportation, communications, utilities, and public services.

Agriculture

Agriculture is the second most common land use in the county accounting for 13.3 percent of the unincorporated county, or 141,832 acres. Subcategories of agriculture are field crops, orchards, livestock/dairy/poultry, and agricultural production. Orchards are the largest agricultural use in the county accounting for over 92,000 acres. Field crops are also a significant agricultural activity in the county accounting for nearly 45,000 acres.

Mineral Resource

Land classified by the County Assessor as being used for mineral resource development account for 0.1 percent, or 1,136 acres, in the unincorporated area of the county. Mineral resource uses include land dedicated to natural gas, oil, and mining. The Assessor-classified mineral resource lands only apply to surface activities and not to subsurface rights to produce mineral resources on land throughout the unincorporated county.

Vacant/Unimproved Land

The Assessor classifies "land that lacks the essential, appurtenant improvements required to make it useful" as vacant or unimproved. The Assessor classifies 8,250 acres of land in the unincorporated county as vacant. Vacant land is further categorized as either residential, commercial, or industrial; this categorization was originally based on zoning, but the Assessor's office has not maintained this information, as much of it is out-of-date. As shown in Table 3-2, vacant residential makes up the largest portion of land classified by the Assessor as vacant land (7,110 acres), followed by vacant industrial (1,119 acres) and vacant commercial (22 acres). Because the Assessor's definition of vacant or unimproved land differs from the definition typically used in land use planning, the "vacant land" statistics can be misleading. Whereas planners often use the term to mean land that is available for development, that is not necessarily the case with the Assessor, in part because the Assessor does not account for constraints on development (e.g., policy, ownership, physical). For a discussion of development capacity, see Section 3.7, Development Holding Capacity and Remaining Development Potential, (starting on page 3-89).

Regulatory Setting

None.

Key Terms

Assessor's Use Code. Land use codes used by the County Assessor to determine the value of property for property tax purposes.

Vacant Land. Land that is not actively used for any purpose, including land that is not improved with buildings or site facilities and is sizeable in area to accommodate development.

References

Reports/Publications/Data

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SECTION 3.5 GENERAL PLAN AND AREA PLAN LAND USE DESIGNATIONS

Introduction

The following discussion provides an overview of the existing County of Ventura General Plan (2005) that addresses growth and development policies for the unincorporated area. The purpose of this section is to provide a summary of the existing General Plan and to determine the implications of growth and development in the unincorporated area. The acreages discussed in this section may differ from the acreages discussed in Section 3.3, Annexation and Development Trends. This is attributed to the fact that the General Plan utilizes different land use categories than the County of Ventura Assessor's Office.

Major Findings

- This section describes the status of existing plans, but contains no critical evaluation of these plans. Thus, there are no major findings related to general plans and area plans.

Existing Conditions

Existing General Plan

The Ventura County Board of Supervisors adopted the existing General Plan on May 24, 1988. Although the General Plan has not been comprehensively revised since 1988, a major revision was approved in 2005. These revisions focused on extending the time horizon from 2010 to 2020, integrating the 2020 traffic model and updating population forecasts. In addition to this major revision, the Board has amended the Plan several times to assure compliance with State law and accuracy of technical background information. The General Plan sets forth the goals, policies, and programs that the County implements to manage future growth and land use in the unincorporated county.

Land Use Designations

The existing General Plan includes six land use designations. These designations describe the purpose of the designation and prescribe the allowed uses, density, intensity, and lot size.

Figure 3-9 shows the General Plan land use designations. The General Plan Land Use Map covers the mainland only. Anacapa Island is designated Open Space, and San Nicolas Island is designated State or Federal Facility. Table 3-3 shows the total acreage for the land use designations in the unincorporated county and descriptions of each designations follow.

TABLE 3-3
EXISTING GENERAL PLAN LAND USE DESIGNATIONS
Unincorporated Ventura County
2016

General Plan Designation	Acres	Percent
Existing Community	13,344.5	1.3%
Rural	9,071.2	0.9%
Agricultural	92,659.9	8.9%
Open Space	921,920.9	88.1%
State or Federal Facility	7,087.4	0.7%
Urban	2,222.1	0.2%
Total[1]	**1,046,306.0**	**100.0%**

Note: [1] This total reflects all unincorporated area land within a city sphere of influence and included in the Urban Reserve Overlay Designation equaling 24,025 acres and 2.3 percent of the unincorporated County.

Source: Ventura County Resource Management Agency (RMA) GIS, 2016; Ventura County General Plan, 1988.

Urban

The Urban designation identifies existing and planned urban centers, which include commercial and industrial uses, as well as residential uses where the density is greater than one principal dwelling unit per two acres. This designation has been applied to land within city spheres of influence as established by LAFCo and unincorporated urban centers within their own Areas of Interest which may be candidates for future incorporation. As shown on Figure 3-9, the General Plan Land Use Map applies the Urban designation to all of the cities in the county, as well as to Ahmanson Ranch, portions of the Oak Park area, and Piru.

Existing Community

The Existing Community designation identifies existing urban residential, commercial, or industrial enclaves located outside Urban-designated areas. The Existing Community designation applies to areas that include uses, densities, building intensities, and zoning designations that are normally found in Urban-designated areas, but which do not qualify as urban centers. The County established this designation to recognize existing uses in unincorporated areas that have been developed with urban building intensities and urban land uses; to contain these enclaves within specific areas to prevent further expansion; and to limit the building intensity and land use to previously established levels.

Rural

The Rural designation specifies a two-acre minimum parcel size and identifies areas suitable for low-density and low-intensity land uses. This includes areas with residential estates of two or more acres, areas that are maintained in conjunction with agricultural and horticultural uses, or areas that include the keeping of farm animals for recreational purposes. The Rural designation also allows institutional uses such as boarding and non-boarding elementary and secondary schools. Additionally, the designation is used for recreational uses such as retreats, camps, recreational vehicle parks, and campgrounds.

Agricultural

The Agricultural designation applies to irrigated land suitable for cultivating crops and raising livestock. It specifies a 40-acre minimum parcel size.

Open Space

The Open Space land use designation specifies a 10-acre minimum parcel size, unless a property is contiguous with the Agricultural designation, in which case the minimum parcel size is 20 acres. It encompasses land as defined under Government Code Section 65560 as any parcel or area of land or water that is essentially unimproved and devoted to an open-space use, and which is designated on a local, regional, or State open space plan as any of the following: preservation of natural resources (e.g., wetlands, rivers, wildlife habitat); managed production of resources (e.g., rangelands, areas required for groundwater recharge); outdoor recreation (e.g., parks and trails); public health and safety (e.g., flood plains); support of the mission of military installations (e.g., areas adjacent to military installations, military training routes, and underlying restricted air space); or protection of places, features, and objects (as described in Sections 509.9 and 5097.993 of California's Public Resources Code); and open space to promote the formation and continuation of cohesive communities by defining the boundaries and by helping to prevent urban sprawl.

As shown in Table 3-3, Open Space is the predominant land use designation in the unincorporated area. Although most of Open Space lands are publicly-owned (federal, State of California, County of Ventura, special district), a significant amount of Open Space-designated land is privately-owned. For example, of the approximately 921,000 acres of Open Space land, over half (i.e., approximately 561,000 acres) lies within the Los Padres National Forest. The State of California owns approximately 27,000 acres of land designated as Open Space, and various local government entities own approximately 30,000 acres. The remaining 300,000 acres of Open Space-designated land is privately-owned. Of the 300,000 privately-owned acres, the 2015 Ventura County Crop and Livestock Report estimates that approximately 198,000 acres are in rangeland. (See Chapter 7, Table 7-23 for additional information related to Open Space land ownership by public agencies.)

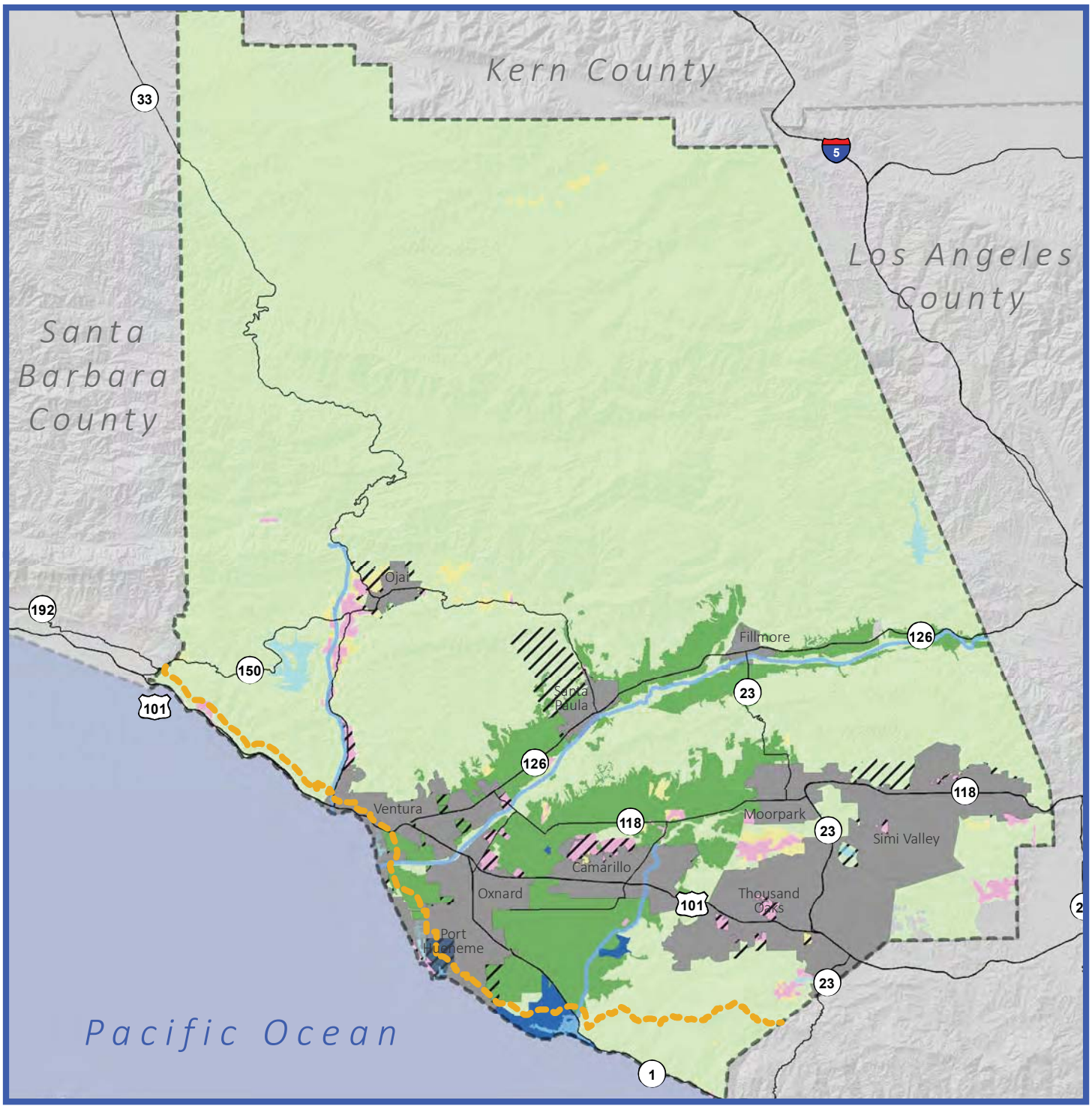
Due to the wide array of Open Space uses and allowed development, as shown in Appendix 3.B (Non-Coastal Zoning Ordinance Article 5: Uses and Structures by Zone and Coastal Zoning Ordinance Article 4: Permitted Uses), and the large number of private land owners, approximately one-third of the Open Space-designated land in the county is not accessible to the public.

State or Federal Facility

The State or Federal Facility land use designation applies to areas with Federal and State facilities, excluding forest and park lands, over which the County has no or limited land use authority. Areas so designated include land under Federal or State ownership on which governmental facilities are located.

Urban Reserve Overlay

The Urban Reserve Overlay designation, which applies to all unincorporated areas within city SOIs. Although LAFCo has determined these areas to be appropriate for eventual annexation and urbanization, the Urban designation was not applied to all lands within SOIs because it could result in urban development being permitted without annexation. Accordingly, unincorporated lands within SOIs have been designated as Existing Community, Rural, Agricultural, or Open Space. Under these designations, within city SOIs, more intense development could not occur on affected lands until they are annexed.



Ventura County 2040 General Plan

Figure 3-9: Existing General Plan Land Use Designations – Countywide

Map Date: December 01, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 7.5 15 Miles

N

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Coastal Zone Boundary

Existing General Plan

- Urban
- Existing Community
- State or Federal Facility
- Rural
- Open Space
- Agricultural
- Urban Reserve Overlay

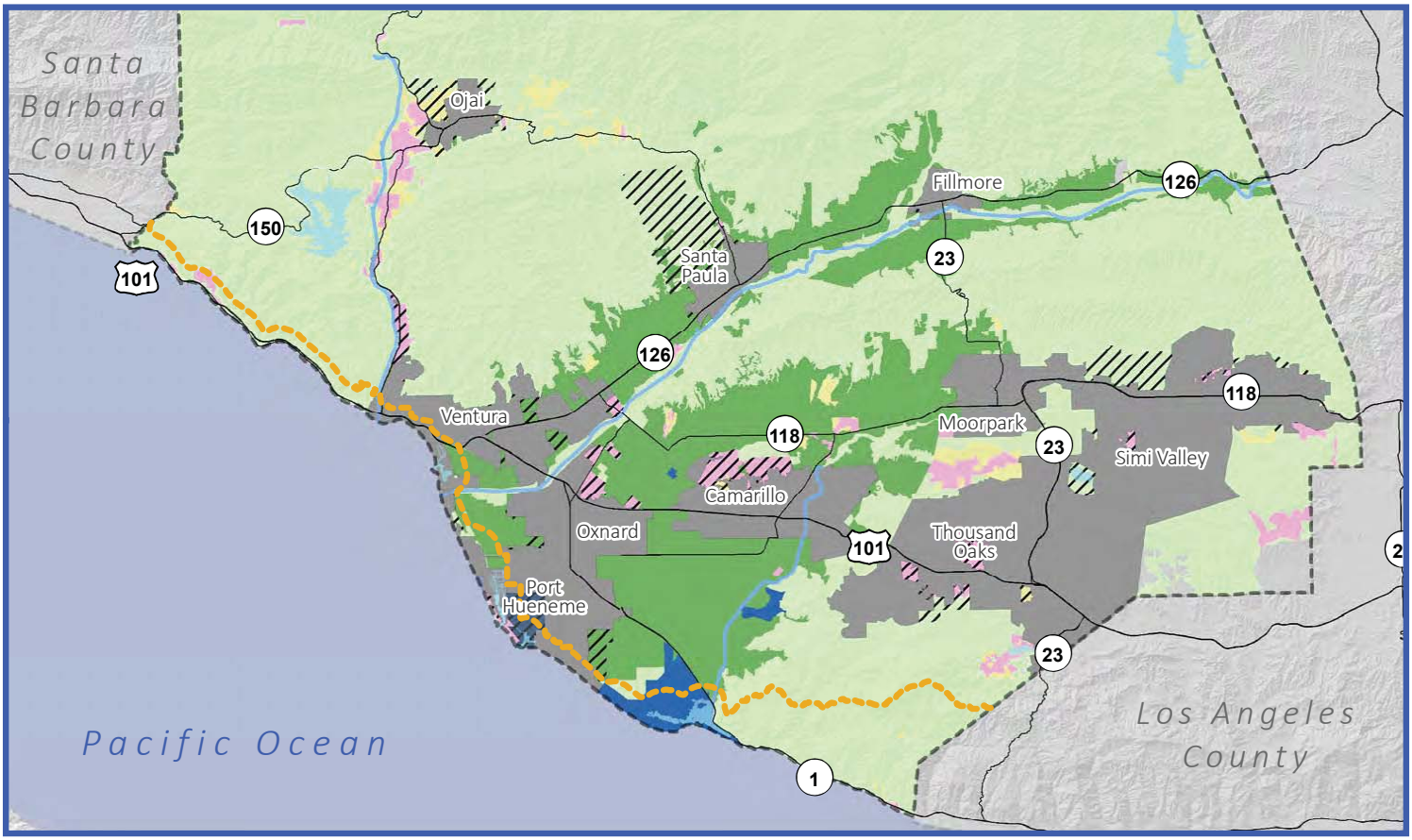


Figure 3-10: Existing General Plan Land Use Designations – Southern Half

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 5 10 Miles

N

Major Roadways
Major Waterways
Water Bodies
Cities
Ventura County Boundary
Coastal Zone Boundary

Existing General Plan

Urban
Existing Community
State or Federal Facility
Rural
Open Space
Agricultural
Urban Reserve Overlay

Existing Communities

As described above under the Existing Community land use designation discussion, existing communities are existing urban enclaves in the unincorporated area of the county. The General Plan identifies 20 such communities. They are listed in Table 3-4, which also shows the estimated population and employment in each community, and shown in Figure 3-11.

TABLE 3-4
POPULATION AND EMPLOYMENT DENSITY
Ventura County Existing Communities
2016

Existing Community	Total Acres	Residential			Commercial/Industrial		
		Acres	Allowed Dwelling Units	Pop	Acres	Bldg Sq. Ft.	Employ-ment
Bell Canyon	1,133.3	1,131.2	1,444	3,833	2.1	13,400	26
Box Canyon	68.0	68.0	134	308	--	--	--
Camarillo Heights	768.2	768.2	1,771	4,460	--	--	--
Home Acres	207.0	207.0	451	1,312	--	--	--
La Cumbre Road	235.4	235.4	256	828	--	--	--
Las Posas Estates	781.2	781.2	1,081	2,722	--	--	--
Lewis Road	57.7	57.7	1,729	5,377	--	--	--
Matilija Canyon	131.6	131.6	131	213	--	--	--
Mission Rock Road	91.1	--	--	--	91.1	258,000	516
North Fork Springs	46.4	46.4	46	28	--	--	--
North Santa Paula	38.9	38.9	40	105	--	--	--
North Simi	120.8	120.8	372	1,126	--	--	--
Santa Rosa	1,191.6	1,191.6	1,163	3,617	--	--	--
Santa Susana	223.2	223.2	863	2,613	--	--	--
Saticoy Country Club	69.2	69.2	97	313	--	--	--
Somis	96.0	54.0	276	892	42	387,900	901
Tapo Canyon	6.9	6.9	6	13	--	--	--
Ventura Avenue	6.5	--	--	--	6.5	57,000	113
West Santa Paula	3.2	3.2	17	45	--	--	--
West Simi	140.8	140.8	306	925	--	--	--
Total	**5,416.9**	**5,275.3**	**10,183**	**28,780**	**141.7**	**716,300**	**1,556**

Source: Ventura County General Plan – Goals, Policies & Programs, 2015.

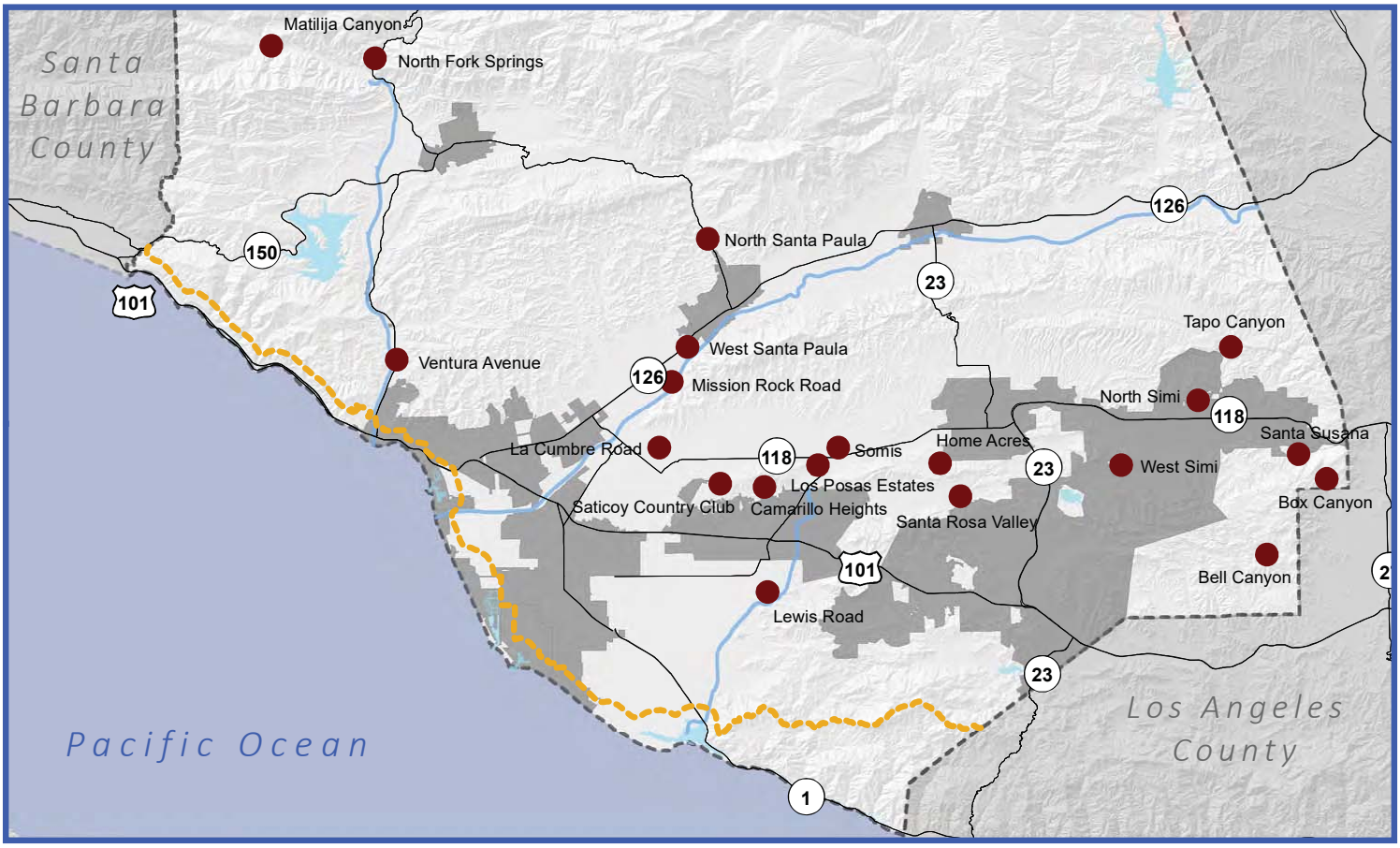


Figure 3-11:
Existing Communities

Map Date: November 09, 2016

Source: Ventura County, Existing General Plan, Adopted May 24, 1988, Last Amended October 20, 2015.

0 5 10 Miles

N

- Coastal Zone Boundary
- Existing Communities
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Area Plans

Area plans are an integral part of the County's General Plan, providing the basis for future land use development in specifically defined areas. These plans govern the distribution, general location, and extent of uses of the land for housing, business, industry, open space, agriculture, and public facilities. There are ten adopted area plans, each of which includes goals, policies, programs, and land use designations for smaller, unincorporated communities. They are as follows:

- Coastal Area
- El Rio/Del Norte
- North Ventura Avenue
- Oak Park
- Ojai Valley
- Piru
- Saticoy
- Thousand Oaks
- Lake Sherwood/Hidden Valley
- Ahmanson Ranch

The land within the Ahmanson Ranch Area Plan was sold to the State of California in 2003 and, based on related agreements and documents, the Area Plan and its associated development agreement will expire in September 2018. For this reason, the revised General Plan will not incorporate an area plan for Ahmanson Ranch. All other existing area plans are described in the following section.

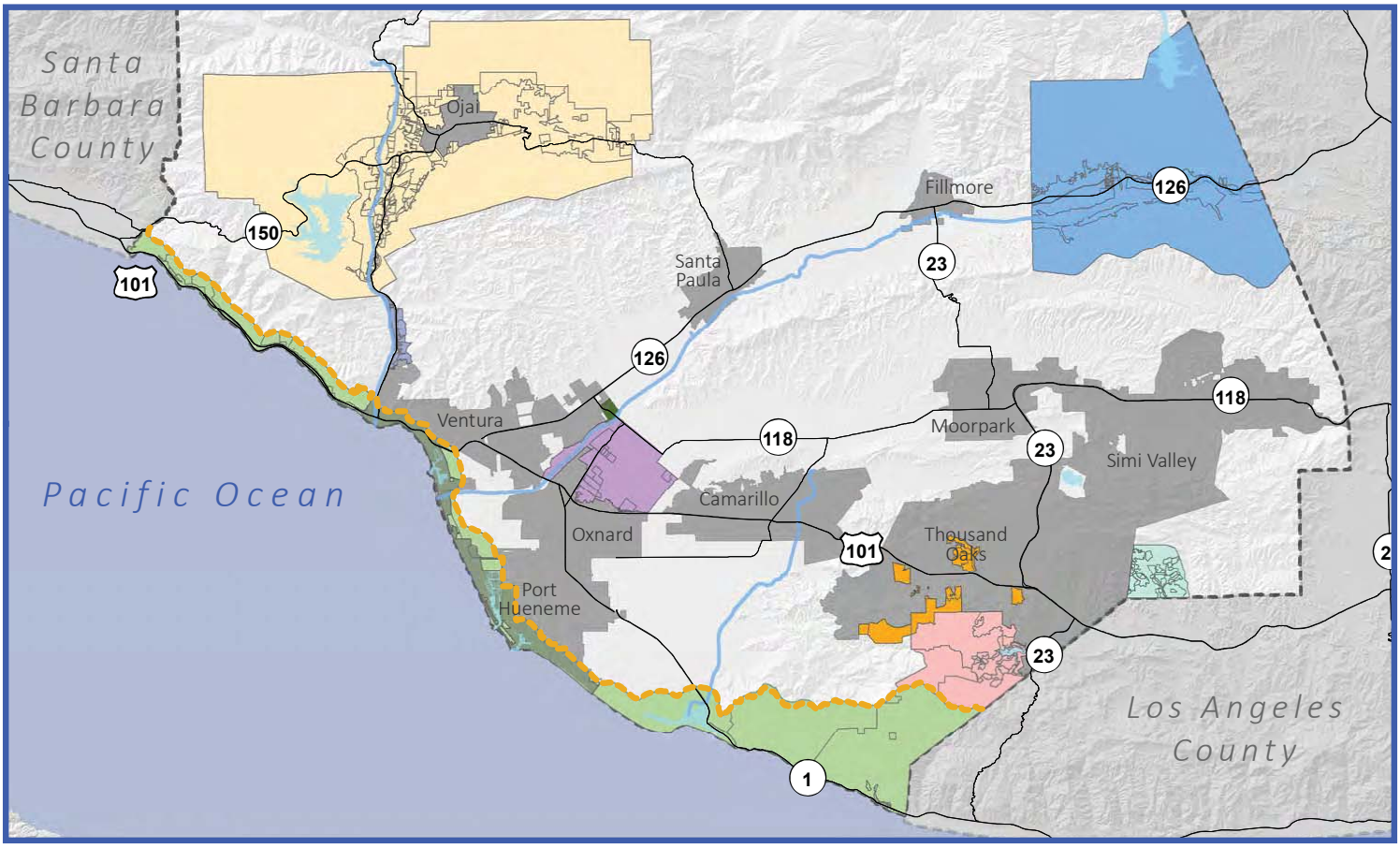


Figure 3-12:
Overview of Area Plans

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

Coastal Area Plan

Through the Coastal Act, the State mandates that coastal communities manage the conservation and development of coastal resources through creation and adoption of a Local Coastal Program. Ventura County's Coastal Area Plan and the Coastal Zoning Ordinance together constitute the Local Coastal Program for the unincorporated county. The primary goal of the Local Coastal Program is to ensure that the County's land use plans, policies, and actions meet the requirements of and implement the provisions and policies of the Coastal Act within the county.

The Coastal Zoning Ordinance contains the zoning regulations for the coastal zone in the unincorporated county. It identifies the location, type, densities, and other regulations for development in the coastal zone. The Board of Supervisors and the Coastal Commission specifically exempt certain categories of development from Coastal Development Permit requirements through Categorical Exclusion Order E-83-1. The County outlines these exemptions in Article 4, Section 8174-6.3.5, of the Coastal Zoning Ordinance. In cases of discrepancies between Categorical Exclusion Order E-83-1 and the Coastal Zoning Ordinance, Categorical Exclusion Order E-83-1 preempts the Coastal Zoning Ordinance.

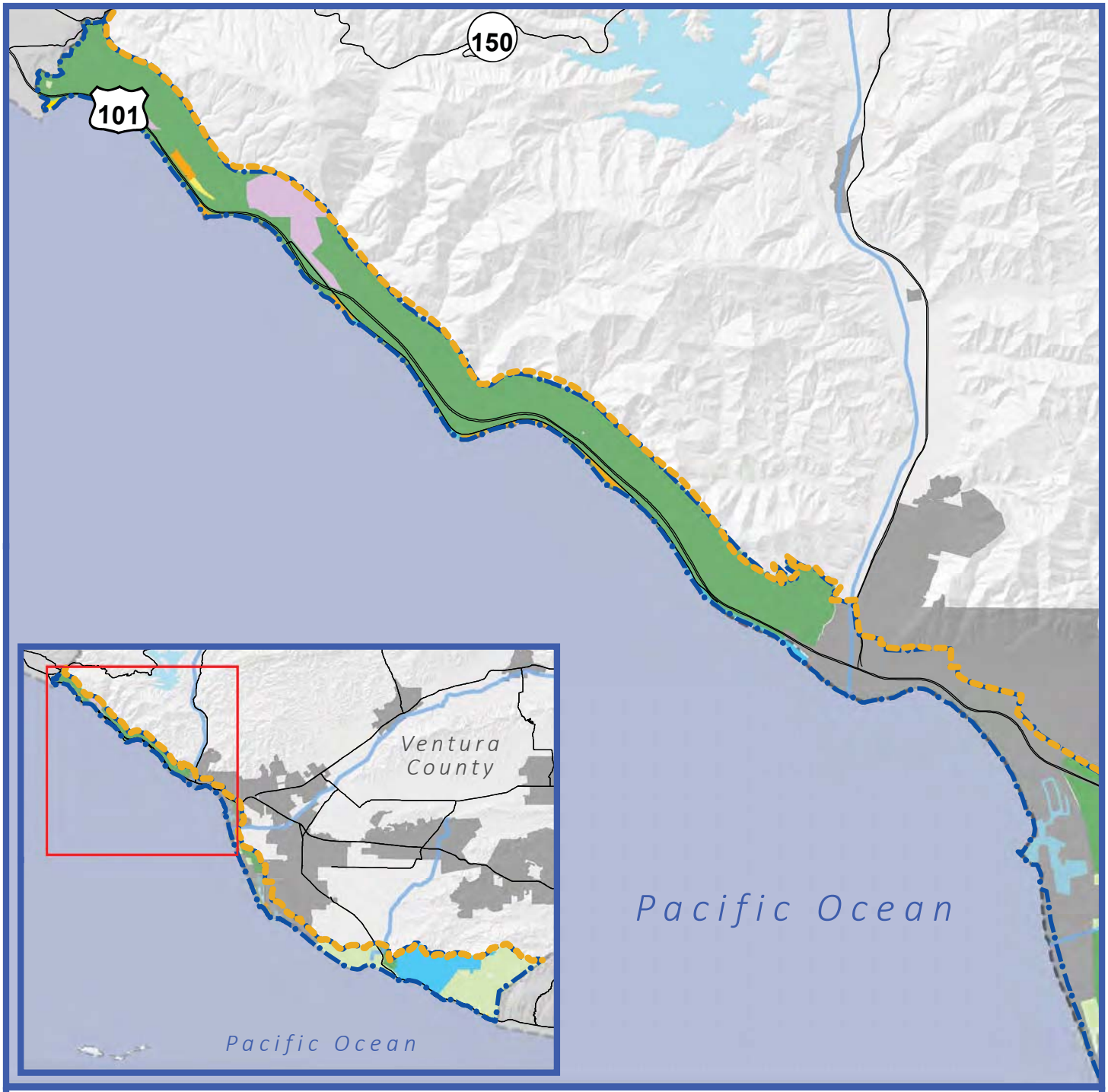
The Coastal Area Plan covers the land within the Coastal Zone Boundary along the Pacific Coast, sharing borders with Santa Barbara and Los Angeles counties. The coastal area includes portions of the cities of Ventura and Port Hueneme. The Coastal Area Plan was adopted in 1980 and addresses shoreline access and public trails; development in scenic areas, coastal hazards, and coastal bluffs; environmentally sensitive habitat areas; cultural resources; transportation; and public services. Objectives of the Coastal Area Plan include the following:

- To recognize that archaeological sites in the county's coastal zone are as significant to an understanding of human and environmental history. To protect Coast archaeological sites from destruction to the maximum extent feasible.
- To protect public safety and property from beach erosion as provided in existing ordinances, and within the constraints of natural coastal processes.
- To protect wetlands in the Central Coast and encourage their acquisition, restoration or enhancement by the State to perpetuate their value to onshore and nearshore coastal life, and to the people of California.
- To encourage the State to adequately control access to the sand dunes and protect them against degradation.

The Coastal Area Plan land use designations are summarized below. These designations describe the purpose of the designation and regulate the allowed uses and density. Figure 3-13, Figure 3-14, and Figure 3-15 show the Coastal Area Plan land use designations. Table 3-5 shows the relationships between the Coastal Area Plan land use designations and the Coastal Zoning Ordinance zoning districts.

- **Open Space (10 acres minimum).** The Open Space designation provides for the preservation and enhancement of valuable natural and environmental resources while allowing reasonable and compatible uses of land.
- **Agriculture (40 acres minimum).** The Agriculture designation identifies and preserves agricultural land for the cultivation of plant crops and the raising of animals.

- **Recreation.** The Recreation designation identifies facilities in the Coastal Zone that provide recreational opportunities or access to the shoreline (e.g., parks with facilities for picnicking, camping, riding, and hiking).
- **Residential Designations.** There are four residential designations in the Coastal Zone.
  - **Rural Intensity.** This is the lowest intensity residential designation, with one dwelling unit per two acres.
  - **Low Intensity.** The Low Intensity designation is for single-family dwellings with 1-2 dwelling units per acre.
  - **Medium Intensity.** The Medium Intensity designation is for single-family dwellings with 2.1 to 6 dwelling units per acre.
  - **High Intensity.** The majority of residential development in the unincorporated Coastal Zone is within this intensity. Principal permitted uses are one- and two-family dwellings. The intensity is 6.1 to 36 dwelling units per acre.
- **Commercial.** The Commercial designation is mostly used for commercial uses, including small, neighborhood-serving uses to meet visitor needs. This includes grocery stores, bakeries, drug stores, fruit and vegetable stores, hardware stores, restaurants, cafes, and other uses that are normally considered as neighborhood-serving.
- **Industrial.** The Industrial designation applies to existing industrial uses found in the unincorporated Coastal Zone or where expansion of existing industrial uses is logical.
- **Stable Urban Boundary Line.** The Stable Urban Boundary Line is used on maps to generally separate areas intended for agricultural uses from areas intended for urban uses.



Ventura County 2040 GENERAL PLAN

Figure 3-13: Coastal Area Plan Northern Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

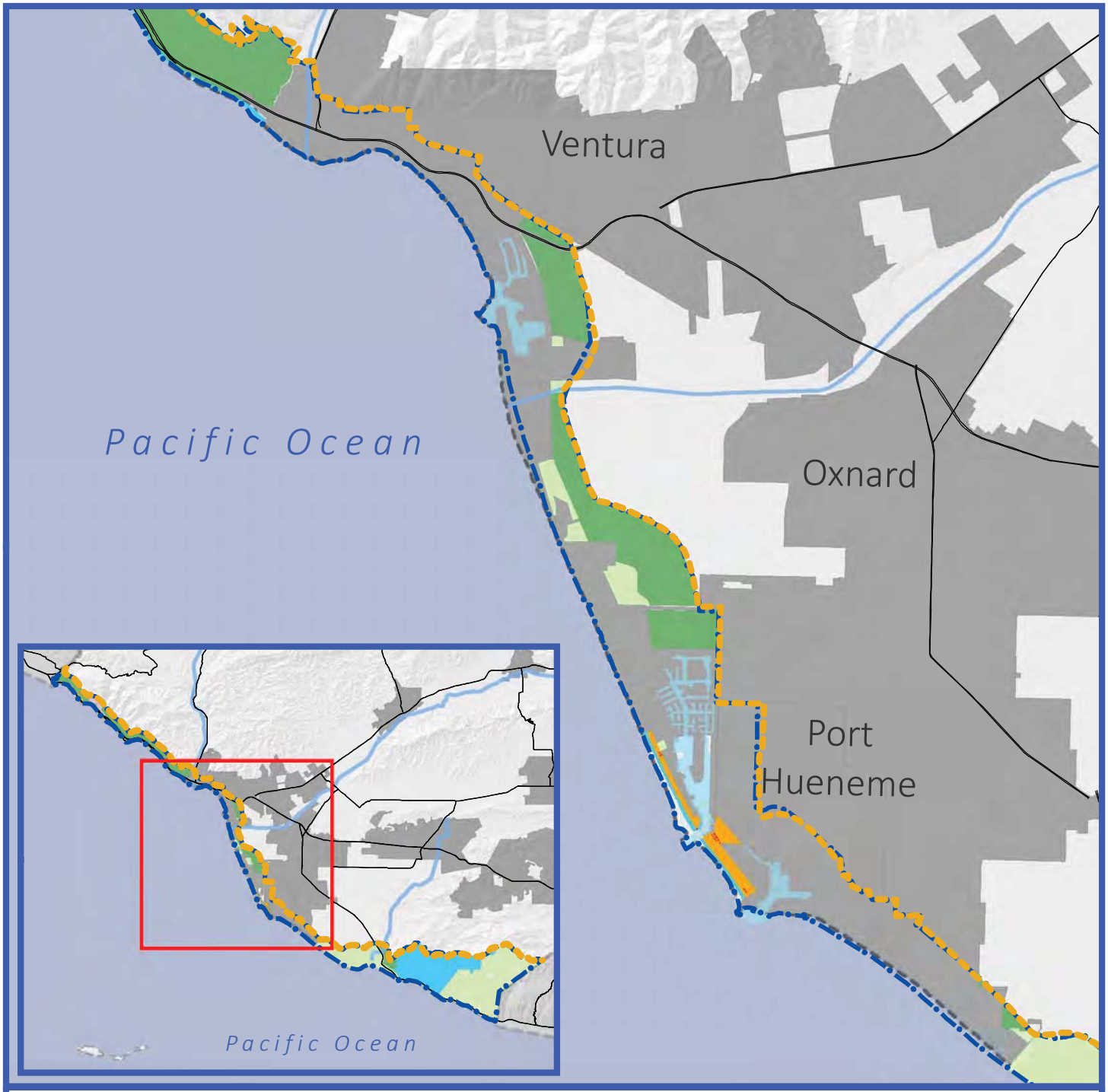
0 1.5 3 Miles

N

- Coastal Area Plan Boundary
- Coastal Zone Boundary
- Ventura County Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Coastal Area Plan

- Residential - Rural Intensity
- Residential - Low Intensity
- Residential - Medium Intensity
- Residential - High Intensity
- Commercial
- Industrial
- Recreation
- Open Space
- Agriculture



Ventura County 2040 General Plan

Figure 3-14:
Coastal Area Plan
Central Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 1 2 Miles

N

- Coastal Area Plan Boundary
- Ventura County Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Coastal Zone Boundary

Coastal Area Plan

- Residential - Rural Intensity
- Residential - Low Intensity
- Residential - Medium Intensity
- Residential - High Intensity
- Commercial
- Industrial
- Recreation
- Open Space
- Agriculture

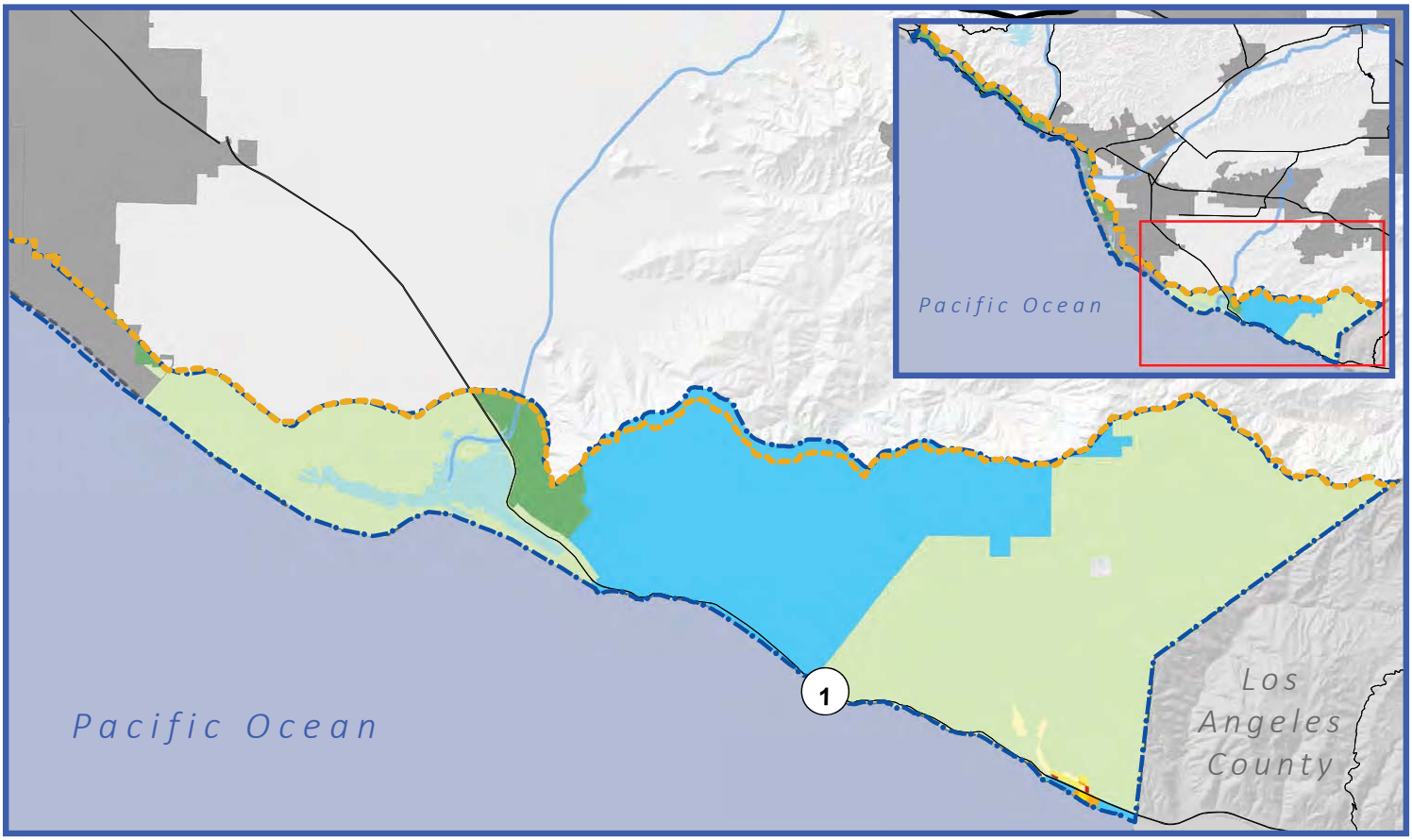


Figure 3-15:
Coastal Area Plan
Southern Portion

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 1 2 Miles

N

Coastal Zone Boundary
Ventura County Boundary
Major Roadways
Major Waterways
Water Bodies
Cities

Coastal Area Plan Boundary

Coastal Area Plan

Residential - Rural Intensity
Residential - Low Intensity
Residential - Medium Intensity
Residential - High Intensity

Commercial
Industrial
Recreation
Open Space
Agriculture

TABLE 3-5
COASTAL AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2008

Coastal Area Plan Designations	Zoning Designations										
	Coastal Open Space (COS) (10 ac min.)	Coastal Agricultural (CA)	Coastal Rural (CR)	Coastal Rural Exclusive (CRE)	Coastal One-Family Residential (CR1)	Coastal Two-Family Residential (CR2)	Residential Beach (RB)	Residential Beach Harbor (RBH)[1]	Coastal Residential Planned Dev. (CRPD)	Coastal Commercial (CC)	Coastal Industrial (CM)
Open Space (10 ac min.)	X	X									
Agriculture (40 ac min.)		X									
Recreation	X										
Rural Residential (2 ac min.)			X	X							
Low Intensity Residential			X	X							
Medium Intensity Residential					X				X (min. den 6 du/ac)		
High Intensity Residential						X	X	X	X (min. den 36 du/ac)		
Commercial										X	
Industrial											X

[1] 1,750 SF per single-family dwelling and 3,000 SF per duplex.
Source: Ventura County General Plan Coastal Area Plan, 2008.

El Rio/Del Norte Area Plan

The El Rio/Del Norte area covers nearly 7,000 acres of unincorporated land northeast of U.S. Highway 101 and Oxnard and south of the Santa Clara River. The area is within the City of Oxnard Sphere of Influence (SOI).

The El Rio/Del Norte Area Plan was adopted in 1996 and covers the topics of resources, hazards, land use, and public facilities and services. Goals in the El Rio/Del Norte Area Plan include the following:

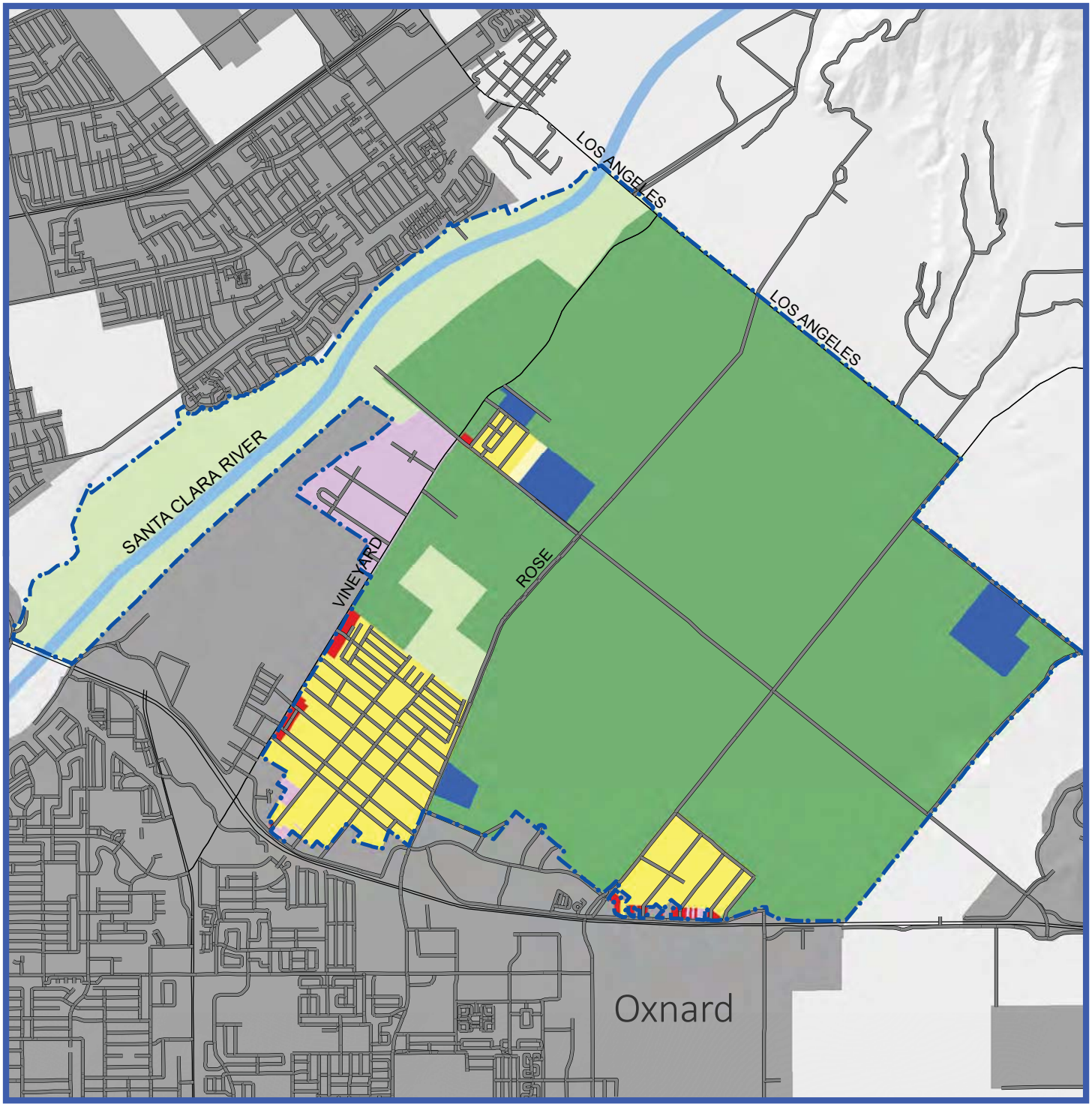
- Protect the Oxnard Forebay Basin and its recharge area within the El Rio/Del Norte area to protect groundwater resources.
- Protect the biological resources of the Santa Clara River and adjoining natural habitat areas including significant stands of Southern Willow within the Santa Clara River bounding the El Rio/Del Norte area.
- Protect and, if possible, improve the viewshed from U.S. Highway 101 (Ventura Freeway), Highway 118 (Los Angeles Avenue), State Route 232 (Vineyard Avenue), Rose Avenue, Santa Clara Avenue, and Central Avenue within the El Rio/Del Norte Area Plan boundary.
- Preserve the character of the El Rio/Del Norte area. The character of the El Rio/Del Norte area is defined by its small town, semi-rural qualities, consisting of several separate and distinct neighborhoods situated within the Oxnard agricultural plain, and comprising one community of common social and political interest.
- Preserve the essentially undeveloped lands which surround the Existing Community-designated areas of the El Rio/Del Norte area to protect lands which contain biological and mineral resources and water recharge/storage basins.

The El Rio/Del Norte Area Plan land use designations are summarized below. They describe the purpose of the designation and regulate the allowed uses and density. Figure 3-16 shows the El Rio/Del Norte Area Plan land use designations and Table 3-6 shows the relationship between the El Rio/Del Norte Area Plan designations and the County's zoning districts.

- **Agricultural (40 acres minimum).** The purpose of the Agricultural designation is to preserve irrigated agricultural lands and minimize incompatibilities between agricultural operations and other land uses. Land within the El Rio/Del Norte Area Plan boundary that does not fit the Existing Community or Rural designations, or land suitable for agricultural production, is designated Agricultural and zoned Agricultural Exclusive (A-E).
- **Open Space.** The purpose of the Open Space designation is to preserve the essentially undevelopable lands that surround the Existing Community-designated areas within the El Rio/Del Norte Area Plan boundary to protect lands that contain biological and mineral resources and water recharge/storage basins.
- **Institutional (10 acres minimum).** The purpose of the Institutional designation is to accommodate the educational and institutional uses that require large acreage.
- **Residential Designations.** There are two residential designations in the El Rio/Del Norte Area Plan:

- **Rural Residential (5 acres minimum).** The purpose of the Rural Residential designation is to recognize and plan for low-density, large-lot residential development and other compatible uses in a rural setting.
- **Urban Residential.** The purpose of the Urban Residential designation is to ensure that existing and future land use patterns result in cohesive and consolidated neighborhoods.

- **Commercial.** The purpose of the Commercial designation is to meet the shopping and service needs of the community and to minimize incompatible land uses.
- **Industrial.** The purpose of the Industrial designation is to meet the industrial employment needs of the community and to limit urban industrial land uses to existing industrial areas.



Ventura County 2040 General Plan

Figure 3-16:
El Rio/Del Norte Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.5 1 Miles

N

- El Rio/Del Norte Area Plan Boundary
- Local Roads
- Major Roadways
- Major Waterways
- Cities

El Rio/Del Norte Area Plan

- Rural Residential
- Urban Residential
- Commercial
- Institutional
- Industrial
- Open Space
- Agricultural

TABLE 3-6
EL RIO/DEL NORTE AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2011

El Rio/Del Norte Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Open Space																X (min. lot 40 ac)	X (min. lot 40 ac)
Agricultural (40 ac min.)																X	
Institutional (10 ac min.)														X			X (min. lot 10 ac)
Rural Res (5 ac min.		X												X			
Urban Res	X	X		X	X									X			
Commercial								X									
Industrial										X							

Source: Ventura County General Plan El Rio/Del Norte Area Plan, 2011.

North Ventura Avenue Area Plan

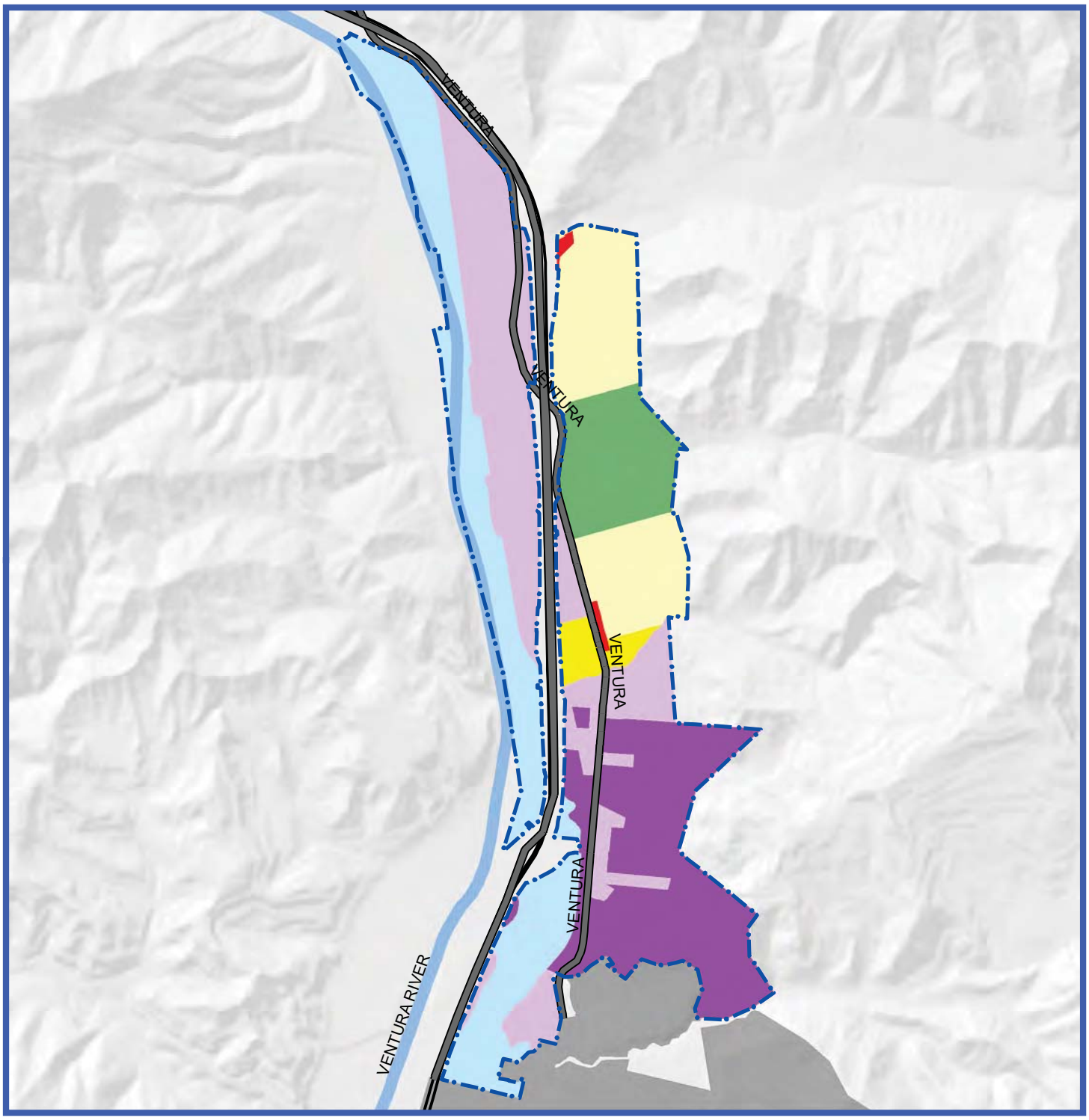
The North Ventura Avenue Area Plan covers the land bounded by Buenaventura Academy Road (extended) on the south, the City of Ventura sanitary treatment facility and urban designated properties north of the treatment facility on the north, the westerly property lines abutting the Ventura River to the west, and the easterly property lines of parcels at the base of the hillside area to the east.

The North Ventura Avenue Area Plan was adopted in 1984 and covers the topics of land use, conservation and open space, circulation, and scenic highways. In 1981, LAFCo defined the City of Ventura SOI as including the North Ventura Avenue area. The Plan, which was prepared jointly and adopted by the County and the City of Ventura, assumes that annexation of the area to the City of Ventura will proceed slowly and that most development will occur under County jurisdiction. Therefore, the Plan contains policies compatible with each jurisdiction and it recognizes the County and City general plans as they apply to the North Ventura Avenue area.

Long-term oilfield uses and oil-related industry constitute the majority of the existing urban development in the area. Given the stability of the existing residential areas and the importance of the oilfield development, the overriding intent of land use designations in this area is to protect the quality and integrity of the existing residential neighborhoods, to provide the expansion and upgrading of the industrial areas, and to protect the scenic vistas and environmental quality of the hills and river.

The North Ventura Avenue Area Plan land use designations are summarized below. These designations describe the purpose of the designation and regulate the allowed uses and density. Figure 3-17 shows the North Ventura Avenue Area Plan land use designations and Table 3-7 shows the relationship between these designations and the county's zoning districts.

- **Residential Designations.** There are two residential designations in the North Ventura Avenue Area Plan.
  - **Residential, Single Family (maximum density of 7 du/ac).** The purpose of the Residential, Single Family designation is to preserve existing neighborhoods and to ensure future land use patterns result in cohesive and consolidated neighborhoods.
  - **Residential, Multiple Family (maximum density of 13 du/ac).** The purpose of the Residential, Multiple Family designation is to designate land for the existing mobile home parks. The mobile home parks are surrounded by industrial uses, and at such a time that the mobile home park ceases to exist then it is appropriate for the designation to be changed to Industrial to be compatible with surrounding land uses.
- **General Commercial.** The purpose of the General Commercial designation is to retain the character of the existing commercial areas, to permit the development and continuation of commercial services for residential neighborhoods and the industrial area.
- **Industrial.** Industrial development is "general" in nature and includes activities such as manufacturing.
- **Oilfield Industrial.** The primary distinction between Industrial and Oilfield Industrial uses is Oilfield Industrial uses do not require extensive public services, such as water, sewers, and roads.
- **Agriculture.** The Agriculture designation should be applied to lands identified for agricultural uses in the City of Ventura's Open Space Element.
- **Floodplain.** The Floodplain designation is applied to land in the 100-year floodplain for the Ventura River.



Ventura County 2040 General Plan

Figure 3-17: North Ventura Avenue Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.5 1 Miles

N

North Ventura Avenue Area Plan Boundary
Regional Roads
Major Roadways
Major Waterways
Cities

North Ventura Avenue Area Plan

Residential Single Family
Residential Multiple Family
Commercial
Industrial
Oilfield Industrial
Floodplain
Agriculture

TABLE 3-7
NORTH VENTURA AVENUE AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
1990

North Ventura Avenue Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Residential, Single Family		X		X (max. den 7 du/ac)										X			
Residential, Multiple Family				X (max. den 13 du/ac)													
Commercial							X	X									
Industrial										X	X						
Oilfield Ind										X	X						X
Agriculture																X	X (min. lot 40 ac)
Floodplain										X	X					X	X

Source: Ventura County General Plan North Ventura Avenue Area Plan, 1990.

Oak Park Area Plan

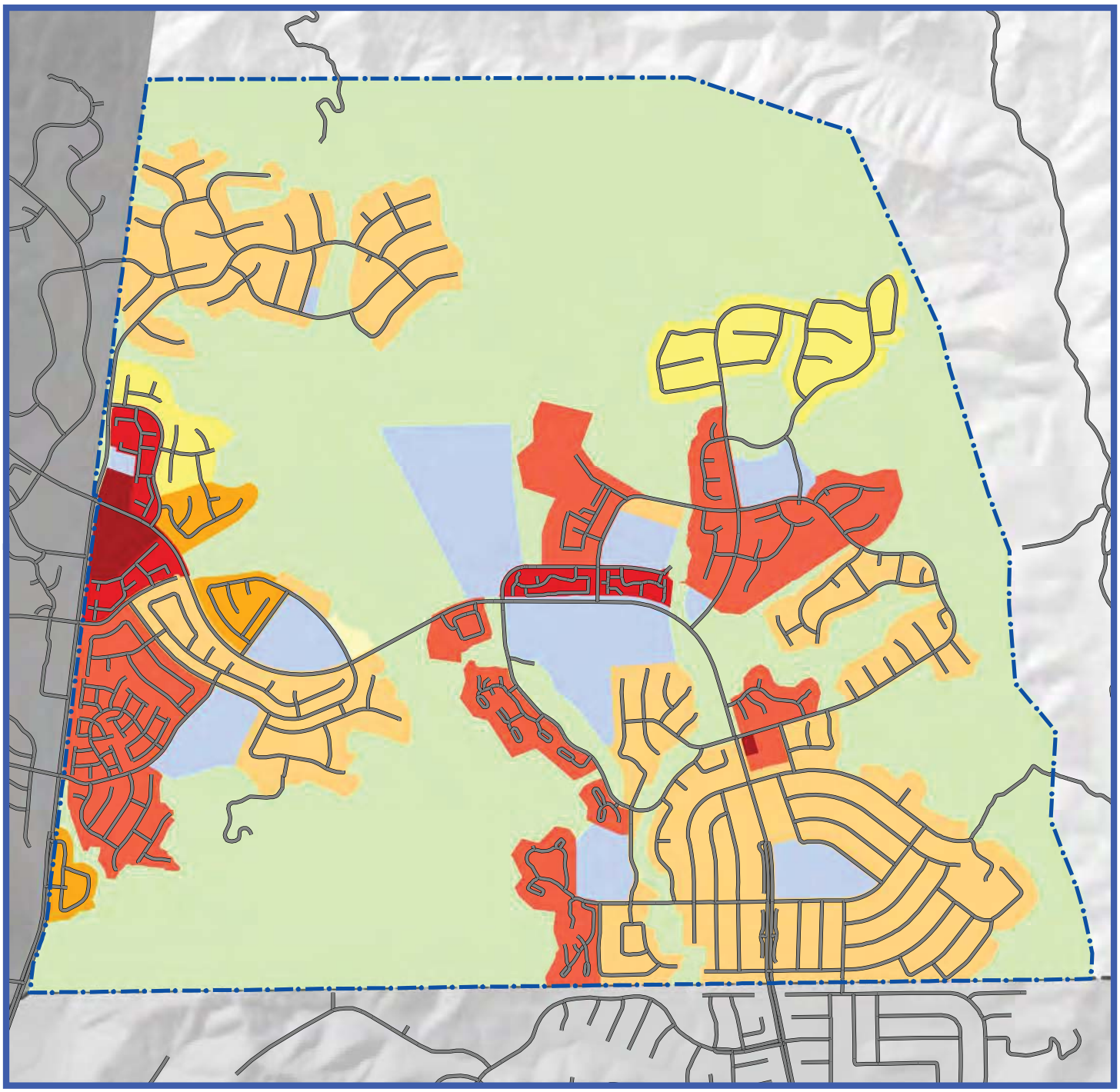
The Oak Park area consists of 869 acres in eastern Ventura County, adjacent to Thousand Oaks and the Los Angeles County line. The first 600 dwelling units in Oak Park were developed in the mid-1960s. In 1974, the County amended its General Plan, rezoned Oak Park, and approved the Oak Park Master Plan and Development Program in order to accommodate development of the Oak Park community. The goals, policies, and programs for this plan are derived from the original Oak Park Master Plan and Development Program, the Environmental Impact Report prepared for the Oak Park Community in 1977, the EIR Supplement prepared in 1983, the three existing Oak Park specific plans, and from other existing plans and policies previously adopted by the Board of Supervisors.

The Oak Park Area Plan was adopted in 1988 and covers the topics of resources, hazards, land use, and public facilities and services. Goals in the Oak Park Area Plan include the following:

- Preserve and protect the significant open views and vistas of the natural features endemic to the Oak Park Area of Interest.
- Further the knowledge and understanding of the history of human use of the Oak Park area.
- Provide for new development within a compact urban community while preserving the bulk of the Oak Park area as open space or public recreation.

The Oak Park Area Plan land use designations are summarized below. These designations describe the purpose of the designation and regulate the allowed uses and density. Figure 3-18 shows the Oak Park Area Plan land use designations and Table 3-8 shows the relationship between these designations and the county's zoning districts.

- **Public Open Space.** The purpose of the Public Open Space designation is to identify lands devoted to natural parks, passive recreation areas, and landscaped areas owned and maintained by a public recreation area or a homeowners' association.
- **Residential.** The purpose of the Residential designation is to identify areas where residential development of 1 du/ac or greater is permitted. Within this category there are six designations:
  - Residential 1-2 (1-2 du/ac)
  - Residential 2-4 (2-4 du/ac)
  - Residential 4-6 (4-6 du/ac)
  - Residential 6-8 (6-8 du/ac)
  - Residential 8-12 (8-12 du/ac)
  - Residential 16-20 (16-20 du/ac)
- **Commercial.** The purpose of the Commercial designation is to identify areas for neighborhood shopping and necessary commercial services for residents.
- **Community Facilities.** The purpose of the Community Facilities designation is to identify land required for schools, parks, and other governmental and institutional facilities.



Ventura County 2040 General Plan

Figure 3-18:
Oak Park Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.5 1 Miles

N

Oak Park Area Plan Boundary
Local Roads
Cities

Oak Park Area Plan

- Residential 1-2 du/ac
- Residential 2-4 du/ac
- Residential 4-6 du/ac
- Residential 6-8 du/ac
- Residential 8-12 du/ac
- Residential 16-20 du/ac
- Commercial
- Community Facilities
- Public Open Space

TABLE 3-8
OAK PARK AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2005

Oak Park Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Pub Open Space	X	X	X	X									X	X		X	X
Res 1-2	X			X									X	X (min. lot 20k)			X
Res 2-4	X	X (min. lot 10k)		X									X	X			X
Res 4-6	X	X		X									X	X			X
Res 6-8	X	X		X									X	X			X
Res 8-12	X	X	X	X									X	X			X
Res 16-20	X	X	X	X									X	X			X
Commercial						X	X	X									
Commun Fac	X	X	X	X		X	X	X					X	X			X

Source: Ventura County General Plan Oak Park Area Plan, 2005.

Ojai Valley Area Plan

The Ojai Valley area encompasses approximately 74,000 acres and is generally bound on the north by the Nordhoff Ridge, on the south by the Sulphur Mountain ridgeline, on the east by the mountain ridge between Bear Canyon and Santa Paula Canyon, and on the west by the Lake Casitas/Ventura River.

The first Area Plan for Ojai Valley was adopted by the Board of Supervisors in 1979. The existing Ojai Valley Area Plan was adopted in 1995 and covers the topics of resources, hazards, land use, and public facilities and services. Goals in the Ojai Valley Area Plan that include the following:

- Discourage the expansion of Rural and Existing Community designations into the East Ojai and Upper Ojai Valleys.
- Preserve and protect the significant visual quality and aesthetic beauty of the Ojai Valley which includes, but is not limited to, surrounding mountains, hills, and ridgelines, arroyos, barrancas, and protected trees.
- Maintain the existing rural, small town character of the Ojai Valley.

The Ojai Valley Area Plan land use designations are summarized below. Figure 3-19 shows the Ojai Valley Area Plan land use designations and Table 3-9 shows the relationships between the Ojai Valley Area Plan land use designations and the County's zoning districts.

- **Open Space (10 acres minimum).** The Open Space land use designation is intended to preserve the undeveloped land that surrounds the urban and rural communities of the Ojai Valley to retain the natural, scenic, and agricultural resources of the area and to prevent development from occurring in areas where it would exceed the ability to provide public facilities and services.
- **Rural Institutional (20 acres minimum).** The purpose of the Rural Institutional land use designation is to recognize the camps and educational uses in the Ojai Valley that require large acreage and are in a rural environment.
- **Residential Designations.** There are two residential designations in the Ojai Valley Area Plan:
  - **Rural Residential (2 acres minimum).** The purpose of the Rural Residential designation is to recognize and plan for low-density, large-lot residential development and similar compatible land uses in a rural setting.
    - RR 2 (2 acres minimum)
    - RR 5 (5 acres minimum)
  - **Urban Residential (1-20 du/ac).** The Urban Residential designation is intended to ensure the existing and future land use patterns result in cohesive and consolidated neighborhoods.
    - UR 1-2 (1-2 du/ac)
    - UR 2-4 (2-4 du/ac)
    - UR 4-6 (4-6 du/ac)
    - UR 6-10 (6-10 du/ac)
    - UR 10-20 (10-20 du/ac)
- **Commercial.** The purpose of the Commercial designation is to provide commercially-designated property to meet the shopping and service needs for residents, to minimize land use incompatibility, and to discourage the expansion of strip commercial development.
- **Industrial.** The Industrial designation is applied to existing industrial uses, and is intended to minimize incompatible land uses.

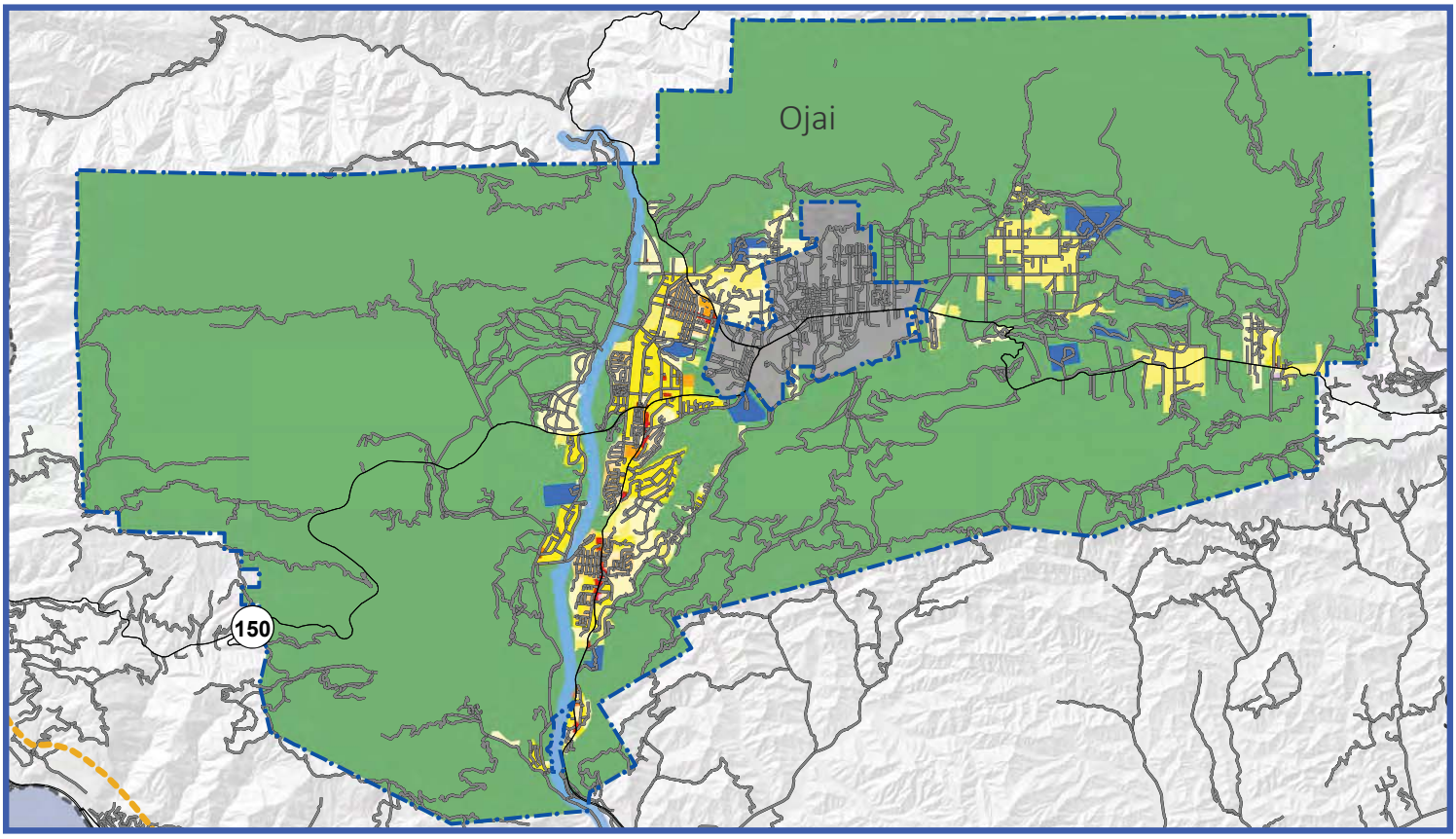


Figure 3-19:
Ojai Valley Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 1 2 Miles

N

Ojai Valley Area Plan Boundary
Major Roadways
Local Roads
Major Waterways
Cities
Coastal Zone Boundary

Ojai Valley Area Plan

Rural Residential 2 ac min.
Rural Residential 5 ac min.
Urban Residential 1-2 du/ac
Urban Residential 2-4 du/ac
Urban Residential 4-6 du/ac
Urban Residential 6-10 du/ac
Urban Residential 10-20 du/ac
Commercial
Industrial
Rural Institutional
Open Space

TABLE 3-9
OJAI VALLEY AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2015

Ojai Valley Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Rural Inst (20 ac)														X	X		
Rural Res (2 ac)	X											X		X	X		
Rural Res (5 ac.)	X											X		X	X		
Urban Res (1-2)		X (min. lot 20k)		X								X		X (min. lot 20k)	X		
Urban Res (2-4)	X	X (min. lot 10k)		X													
Urban Res (4-6)		X		X													
Urban Res (6-10)			X	X													
Urban Res (10-20)				X													
Commercial								X									
Industrial									X	X	X						

Source: Ventura County General Plan Ojai Valley Area Plan, 2015.

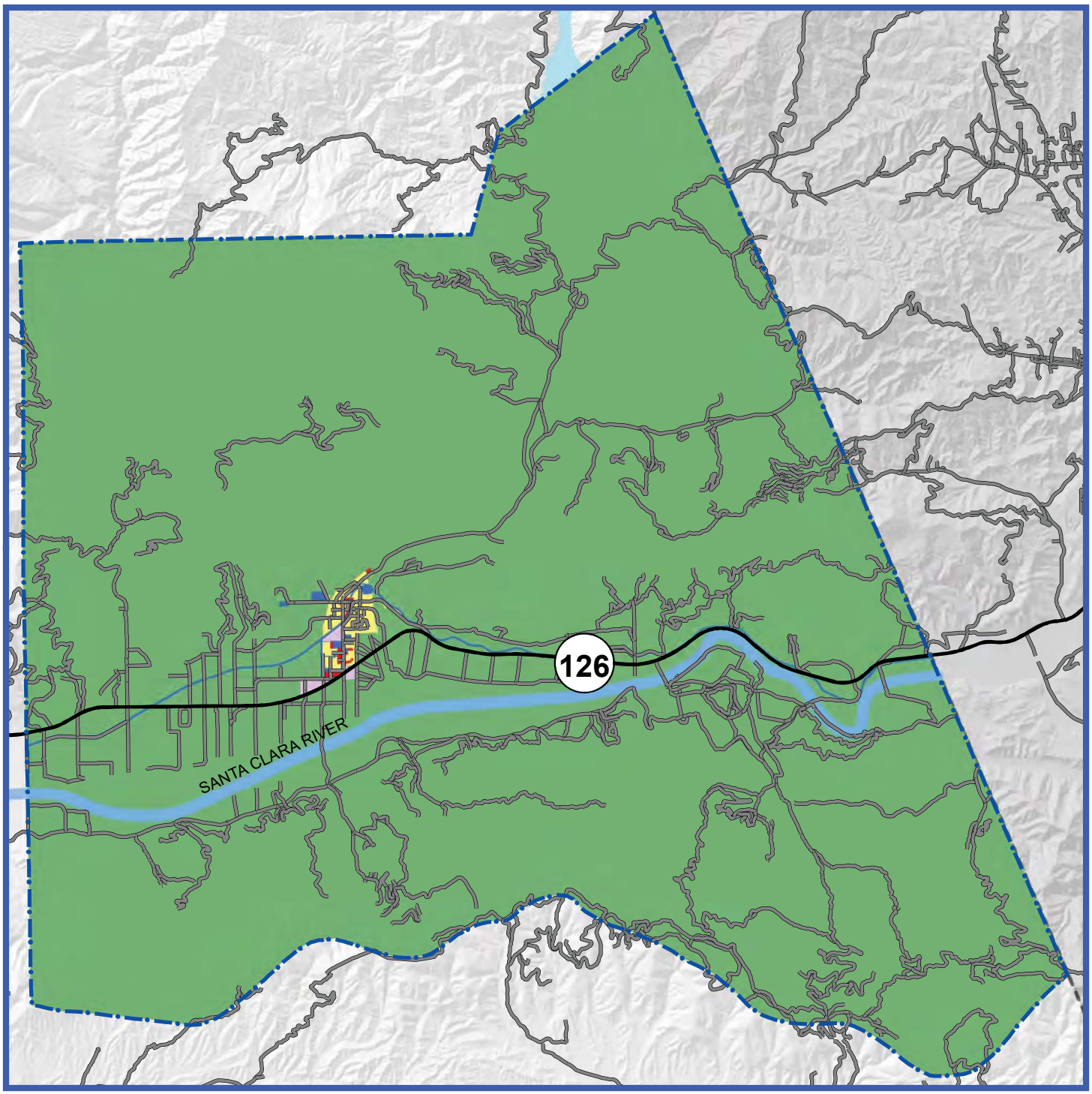
Piru Area Plan

The Piru area is in eastern Ventura County, straddling Highway 126 and extending to the Los Angeles County line. The Piru Area Plan covers the topics of resources, hazards, land use, and public facilities and services. It dates back to 1963, when the Board of Supervisors adopted the "1985" General Plan for Ventura County, including an Area Plan for the Fillmore-Piru area. In 1974, the Board of Supervisors amended the Fillmore-Piru Area Plan to remove the Fillmore portion and amend the Piru portion to accommodate a proposed paper/plastic cup manufacturing business. The County has continued to refine and update the plan over the years, and the plan was last amended in 2011. Goals in the Piru Area Plan include the following:

- Protect certain important views which lend identity to Piru, or which have been historically enjoyed by the residents.
- Preserve and to protect the cultural resources of Piru and its Area of Interest, including archaeological and historical properties, and unique, ethnic and social values.
- Protect the Piru Creek wildlife migration corridor between the Los Padres National Forest on the north and the Santa Clara River and Oak Ridge Big Mountain habitat on the south.
- Encourage the maintenance of aquifer recharge operations at the Piru Spreading Grounds.
- Maintain the existing early 1900s small town character of Piru.

The Piru Area Plan land use designations are summarized below. These designations describe the purpose of the designation and regulate the allowed uses and density. Figure 3-20 and Figure 3-21 show the Piru Area Plan land use designations. Table 3-10 shows the relationship between the Piru Area Plan designations and the County's zoning districts.

- **Commercial.** The purpose of the Commercial designation is to provide commercial uses that meet the shopping, service, and entertainment needs of residents and visitors.
- **Industrial.** The purpose of the Industrial designation is to meet the service and employment needs of the community.
- **Residential.** The purpose of the Residential designation is to promote a diversity of housing types, tenure, and price for persons of all income levels.
- **Community Facility.** The purpose of the Community Facility designation is to recognize existing and future public, homeowner association, and utility-owned properties that are or will be developed for schools, parks, pedestrian/bike trails, agricultural buffers, cemeteries, town greens, community centers, fire stations, utility facilities, railroad depots, and railroad rights-of-way.
- **Agriculture and Open Space.** The purpose of the Agriculture and Open Space designation is to maintain the existing rural scenic character and to limit conversion of agricultural lands into urban uses.



Ventura County 2040 General Plan

Figure 3-20:
Piru Area Plan

Map Date: November 09, 2016

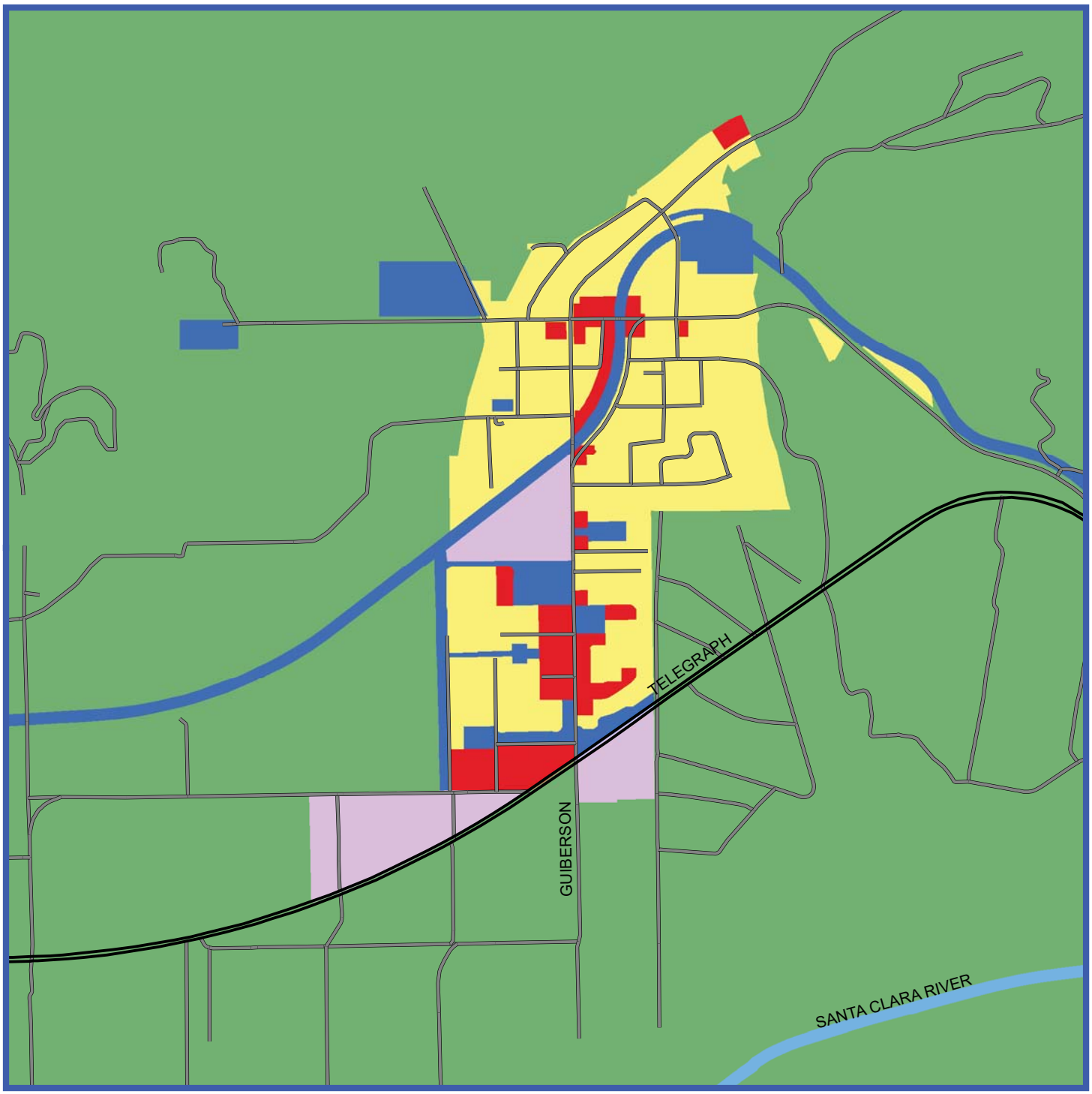
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

Piru Area Plan Boundaries
Major Roadways
Local Roads
Major Waterways

Piru Area Plan
Residential
Commercial
Industrial
Community Facility
Agriculture and Open Space

0 1 2 Miles

N



Ventura County 2040 General Plan

Figure 3-21:
Piru Area Plan
Central Portion

Map Date: December 01, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.25 0.5 Miles

N

Major Roadways
Local Roads
Major Waterways

Piru Area Plan
Residential
Commercial
Industrial
Community Facility
Agriculture and Open Space

TABLE 3-10
PIRU AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2011

Piru Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Open Space																X (min. lot size of 80 ac)	X (min. lot size of 80 ac)
Agriculture																X	
Residential	X	X		X	X									X			
Commercial							X	X									
Industrial									X	X							
Community Facility		X		X				X						X		X	X

Source: Ventura County General Plan Piru Area Plan, 2011.

Saticoy Area Plan

The Saticoy Area Plan boundary includes approximately 240 acres and is bounded by the Santa Clara River to the south, Aster Street to the north, Brown Barranca and the city of Ventura to the west, and the Franklin Barranca and agricultural uses to the east. Saticoy has a long and rich history as a regional agricultural center and railroad hub, and the development patterns that exist today still embody some of that history. There are three subareas within Saticoy: Old Town Saticoy, South Industrial Section, and West Industrial Section.

The first Saticoy land use plan, titled Saticoy Community Study and Improvement Plan, was adopted in 1967 and focused on the original townsite. The Saticoy Area Plan was adopted in 1990, and a comprehensive update to the Area Plan was adopted in 2015. The Saticoy Area Plan includes sections covering the following: local setting; guiding principles; land use; resources; public facilities; hazards; road classifications; Old Town Saticoy Design Guidelines; zoning; Old Town Saticoy Development Code; and the Permit Processing Guide for Cultural Heritage Sites. Goals in the Saticoy Area Plan include the following:

- Natural habitats within and adjacent to the Santa Clara River, or the Brown and Franklin Barrancas, are maintained and enhanced to serve stormwater management, recreation, and wildlife.
- Development within Old Town Saticoy is visually pleasing and exemplifies the community's small town character.
- Creation of a multimodal network that provides alternative modes of transportation for pedestrians, bicyclists, and transit users.
- New revenue sources, such as assessments from a community facilities district or business improvement district, are used to provide and maintain necessary infrastructure.

The Saticoy Area Plan land use designations describe the purpose of the designation and regulate the allowed uses and density. These designations are summarized below. Figure 3-22 shows the Saticoy Area Plan land use designations.

- **Commercial.** The Commercial designation contains commercial uses appropriate for a pedestrian oriented, neighborhood-serving commercial center. Residential development is also allowed as a secondary use.
- **Mixed Use (maximum residential density of 20 du/ac).** The purpose of the Mixed Use designation is to provide opportunities for higher-intensity residential use and compatible commercial use.
- **Residential.** The purpose of the Residential designation is to accommodate a range of residential uses including single family dwellings, duplexes, triplexes, and quadplexes.
- **Industrial.** The purpose of the Industrial designation is to accommodate a wide range of industrial uses from light to heavy industrial.

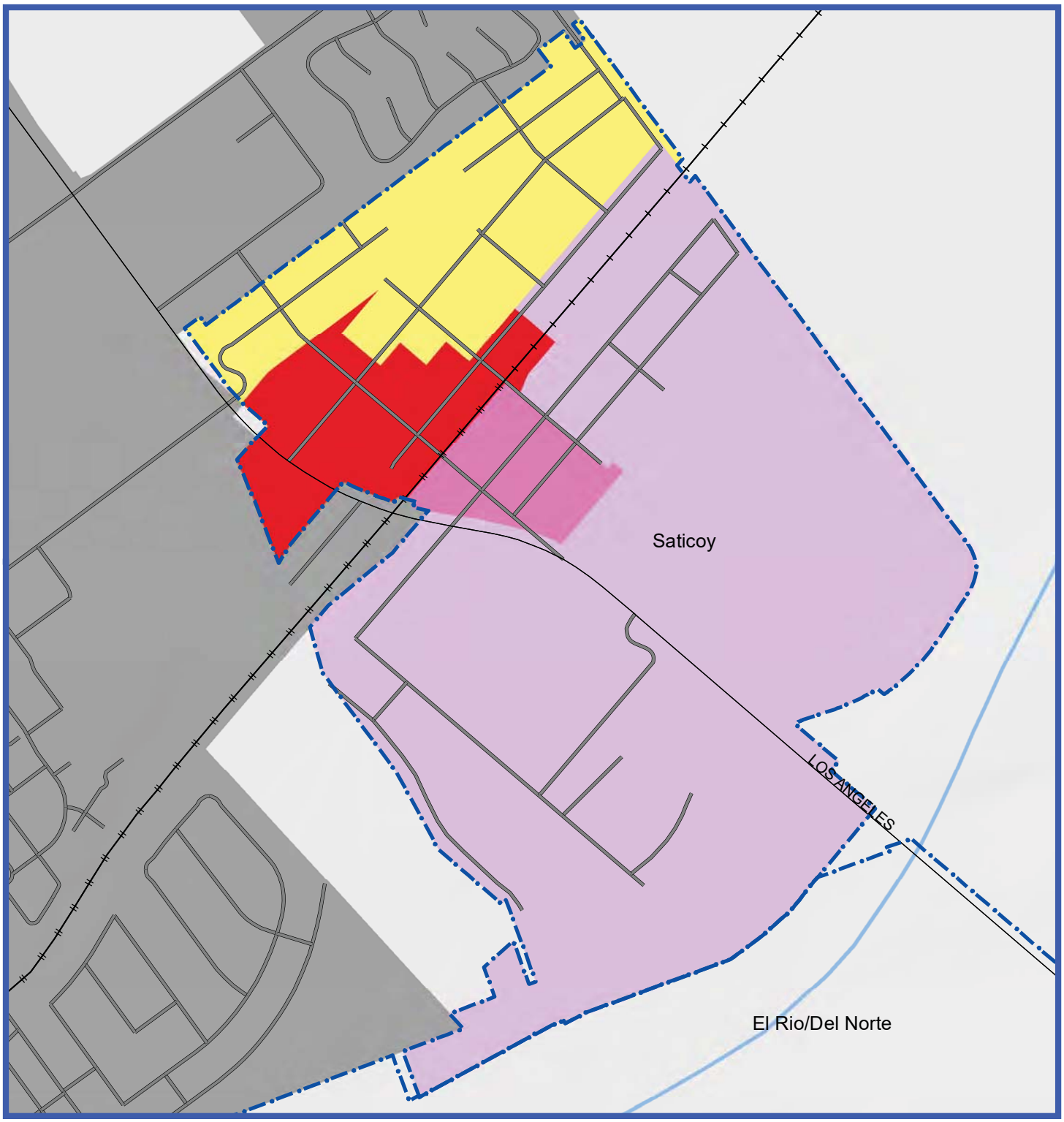


Figure 3-22:
Saticoy Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

N

0 0.25 0.5 Miles

Area Plan Boundaries
Railroad
Major Roadways
Local Roads
Major Waterways

Saticoy Area Plan
Residential
Commercial
Mixed Use
Industrial
Cities

Thousand Oaks Area Plan

The Thousand Oaks Area Plan covers approximately 3,767 acres of unincorporated land adjacent to the city of Thousand Oaks and within the Thousand Oaks Area of Interest. The Area Plan includes 11 planning sub-areas: Lynn Ranch, Casa Conejo, Broome Ranch, Rancho Sierra Vista-Satwiwa, White Stallion Ranch, Upper Kelly Estates, Kelly Estates, Ventura Park, Upper Ventura Park, Rolling Oaks, and Miller Ranch.

The Thousand Oaks Area Plan was adopted in 1992 and covers the topics of resources, hazards, land use, and public facilities and services. Goals in the Thousand Oaks Area Plan include the following:

- Protect the significant stands of major plant communities: Southern oak woodland, oak savannah, chaparral, coastal and inland sage scrub, riparian woodland, and grassland.
- Promote educational and preservation programs to further the understanding of community culture and history.
- Strive to maintain the existing semirural residential character of the Thousand Oaks area.
- Preserve in perpetuity the "Public Open Space" areas within the Thousand Oaks area.
- Preserve and protect the significant visual quality and aesthetic beauty of the Thousand Oaks *Area of Interest.* This shall include, but not be limited to, protected trees, arroyos, barrancas, and surrounding hills and mountains.

The Thousand Oaks Area Plan land use designations are summarized below. Figure 3-23 shows the Thousand Oaks Area Plan land use designations and Table 3-11 shows the relationship between the Area Plan designations and the County's zoning districts.

- **Public Open Space.** The purpose of the Public Open Space designation is to identify lands devoted to natural parks and recreation areas, owned and maintained by a public agency.
- **Open Space.** The purpose of the Open Space designation is to preserve land in a predominantly open, undeveloped character while permitting very low density residential development and agriculture, in accordance with the goals and policies of the County General Plan and the specific goals and policies of this Area Plan. Within this category, there are two land use designations:
  - Open Space 20 (20-40 acres minimum), and
  - Open Space 40 (40-80 acres minimum).
- **Rural Residential 2 (two acres minimum).** The purpose of the Rural Residential designation is to identify areas where low density (two to 10 acre) parcel size residential development may occur.
- **Urban Residential.** The purpose of the Urban Residential designation is to identify areas where residential development at urban densities (less than two acres per dwelling) is permitted. Within this category, there are five land use designations:
  - Urban Residential 1 (1 du/ac),
  - Urban Residential 2 (1-2 du/ac),
  - Urban Residential 4 (2-4 du/ac),
  - Urban Residential 8 (6-8 du/ac), and
  - Urban Residential 16 (12-16 du/ac).
- **Industrial.** The purpose of the Industrial designation is to identify areas necessary to meet the service and employment needs of the Thousand Oaks area.

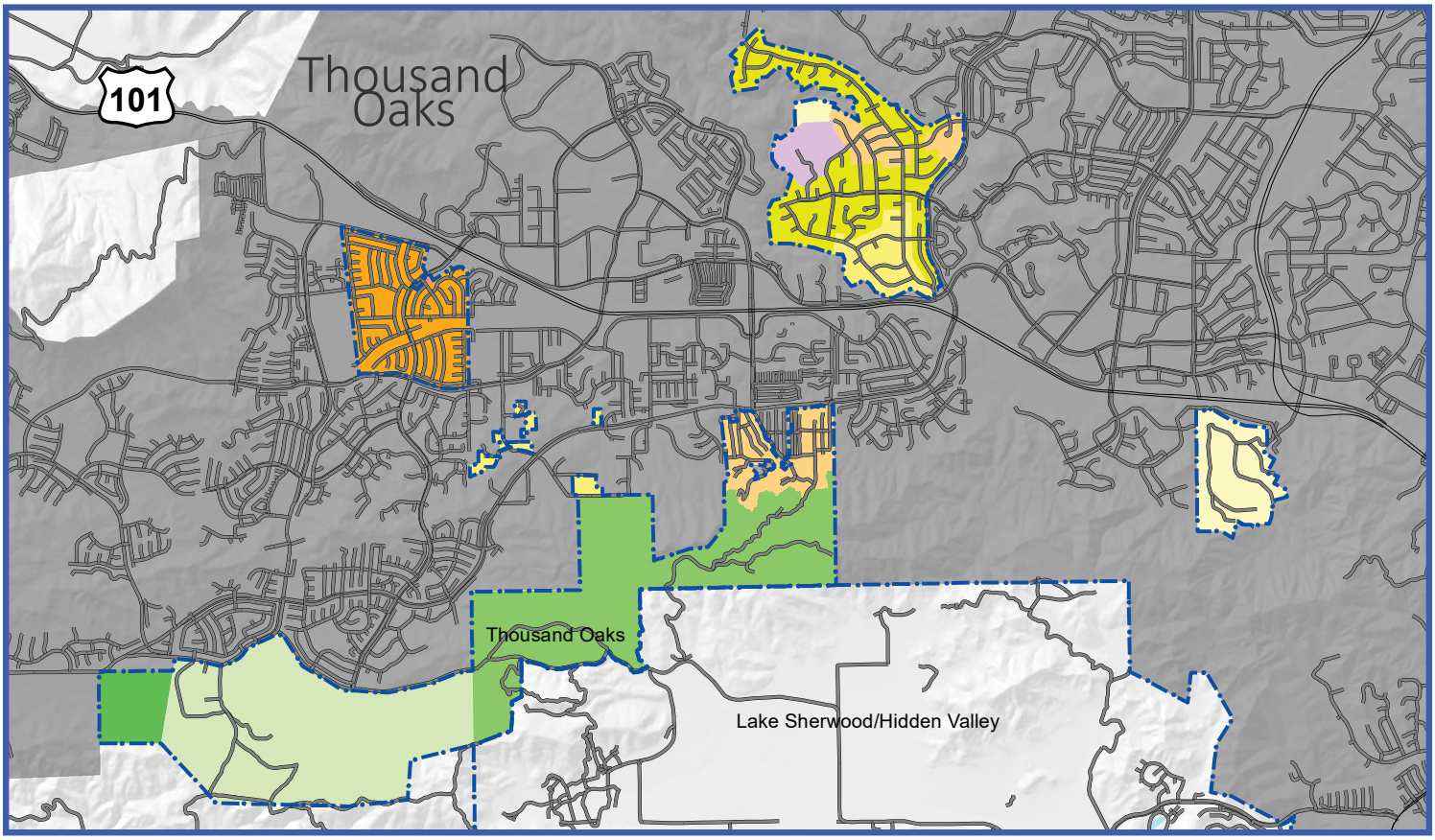


Figure 3-23:
Thousand Oaks Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.75 1.5 Miles

N

Area Plan Boundaries
Major Roadways
Local Roads
Cities

Thousand Oaks Area Plan

Rural Residential 2 ac min.
Urban Residential 1 du/ac
Urban Residential 1-2 du/ac
Urban Residential 2-4 du/ac
Urban Residential 6-8 du/ac
Urban Residential 12-16 du/ac
Industrial
Public Open Space
Open Space 20-40 ac min.
Open Space 40-80 ac min.

TABLE 3-11
THOUSAND OAKS AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2015

Thousand Oaks Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Public Open Space																	X
Open Space 20																X	X
Open Space 40																X	X
Rural Res 2	X													X	X		
Urban Res 1	X													X	X		
Urban Res 2	X			X										X (min. lot 20k)	X		
Urban Res 4	X	X (min. lot 10k)		X										X	X		
Urban Res 8		X		X													
Urban Res 16			X	X													
Industrial									X								

Source: Ventura County General Plan Thousand Oaks Area Plan, 2015.

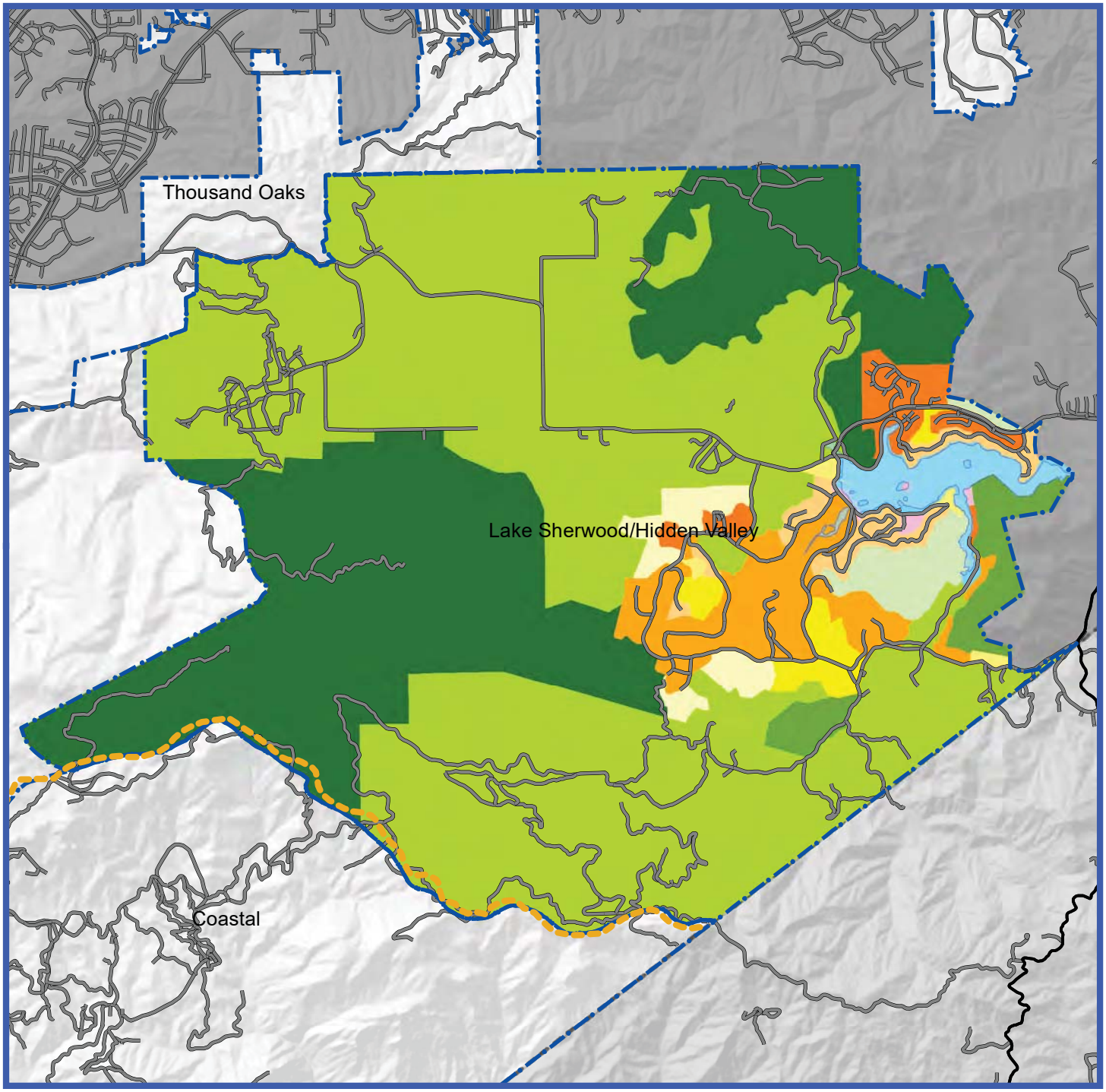
Lake Sherwood/Hidden Valley Area Plan

The Lake Sherwood/Hidden Valley area of interest is comprised of 8,252 acres in the Lake Sherwood drainage basin. The Lake Sherwood/Hidden Valley Area Plan was adopted in 1987 and covers the topics of resources, hazards and constraints, land use, and public facilities and services. Goals in the Lake Sherwood/Hidden Valley Area Plan that distinguish the area include:

- Maintain, as much as practical, the existing residential and recreational character of the Lake Sherwood area.
- Protect the significant biological resources of the Lake Sherwood/Hidden Valley Area.
- Preserve and protect the unique cultural resources of the Lake Sherwood/Hidden Valley Area, including unique archaeological and historical sites and unique ethnic and social resources.
- Protect important views and vistas which have historically lent identity to the Lake Sherwood/Hidden Valley Area.

The Lake Sherwood/Hidden Valley Area Plan land use designations are summarized below. These designations describe the purpose of the designation and regulate the allowed uses and density. Figure 3-24 shows the Lake Sherwood/Hidden Valley Area Plan land use designations and Table 3-12 shows the relationship between these designations and the County's zoning districts.

- **Lake.** The purpose of the Lake designation is to recognize and protect the area inundated by Lake Sherwood, including its shoreline.
- **Park and Recreation.** The purpose of the Park and Recreation designation is to identify and preserve recreation areas.
- **Open Space.** The purpose of the Open Space designation is to preserve open space land while permitting very low density residential development and agriculture, in accordance with the goals and policies of the existing County General Plan. There are four Open Space designations based on acreage:
  - Open Space 10 (10-20 acres minimum)
  - Open Space 20 (20-40 acres minimum)
  - Open Space 40 (40-80 acres minimum)
  - Open Space 80 (80+ acres minimum)
- **Residential Designations.** There are two residential designations in the Lake Sherwood/Hidden Valley Area Plan:
  - **Rural Residential.** The purpose of the Rural Residential designation is to identify areas where low density residential development may occur.
    - Rural Residential 2 (2-5 acres minimum)
    - Rural Residential 5 (5-10 acres minimum)
  - **Urban Residential.** The purpose of the Urban Residential designation is to identify areas where residential development at urban densities (1 dwelling unit per parcel less than 2 acres) is permitted.
    - Urban Residential 1 (1 du/ac)
    - Urban Residential 1-2 (1-2 du/ac)
    - Urban Residential 2-4 (2-4 du/ac)



Ventura County 2040 General Plan

Figure 3-24: Lake Sherwood/Hidden Valley Area Plan

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

0 0.5 1 Miles

N

- Area Plan Boundaries
- Major Roadways
- Local Roads
- Water Bodies
- Cities
- Coastal Zone Boundary

Lake Sherwood/Hidden Valley Area Plan

- Rural Residential 2-4 ac min.
- Rural Residential 2-5 ac min.
- Rural Residential 5-10 ac min.
- Urban Residential 1 du/ac
- Urban Residential 1-2 du/ac
- Urban Residential 2-4 du/ac
- Park and Recreation
- Lake
- Open Space 10-20 ac
- Open Space 20-40 ac
- Open Space 40-80 ac
- Open Space 80 ac min.

TABLE 3-12
LAKE SHERWOOD/HIDDEN VALLEY AREA PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX
Ventura County
2010

Lake Sherwood/ Hidden Valley Area Plan Designations	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)
Lake																	X (min. lot 160 ac)
Parks and Recreation														X (min. lot 5 ac)			X
Open Space 10																X	X
Open Space 20																X	X
Open Space 40																X	X
Open Space 80																X	X
Rural Res 2	X													X	X		X
Rural Res 5	X													X	X		X
Urban Res 1	X													X	X		X
Urban Res 1-2	X			X										X			X
Urban Res 2-4	X	X		X										X			

Source: Ventura County General Plan Lake Sherwood/Hidden Valley Area Plan, 2010.

Table 3-13 shows the year that the County adopted each area plan and the date of the most recent comprehensive amendment.

TABLE 3-13
AREA PLAN ADOPTIONS AND COMPREHENSIVE AMENDMENTS
Ventura County
2016

Area Plan	Year of Adoption	Date of Comprehensive Amendment
Coastal Area	1980	Initiated 2016/ Pending Adoption
El Rio/Del Norte	1996	1996
North Ventura Avenue	1984	1988
Oak Park	1988	1988
Ojai Valley	1995	1996
Piru	1986	2008
Saticoy	1990	2015
Thousand Oaks	1992	2005
Lake Sherwood/Hidden Valley	1987	2005
Ahmanson Ranch[1]	1992	1998

[1] The development agreement for the Ahmanson Ranch Area Plan expires in 2018, and therefore will not be included in the General Plan Update.
Source: Ventura County General Plan 2016 Annual Report, 2016.

Regulatory Setting

State

General Plan Law (California Government Code Section 65300)

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning."

California Coastal Act (California Public Resources Code Section 30000)

The California Coastal Act governs the decisions of the Coastal Commission and created the standards of development within the Coastal Zone. The California Coastal Act also created a mandate for coastal counties and cities to manage the conservation and development of coastal resources through the Local Coastal Program.

Key Terms

Area of Interest. A major geographic area reflective of community and planning identity. Within each Area of Interest there should be no more than one city or Unincorporated Urban Center, but there will not necessarily be a city or Unincorporated Urban Center in each Area of Interest.

Area Plan. A long-range plan that is the basis for future land use development in a distinct area. An Area Plan specifies the distribution, location, types and intensity of land uses, and provide specific policies concerning development in the area. The goals, policies, and programs of an Area Plan supplement the General Plan, and therefore the Area Plan should be read in conjunction with the General Plan.

Density. The number of permanent residential dwelling units per acre of land. Densities specified in the general plan may be expressed in units per gross acre or per net developable acre.

Dwelling Unit. A room or group of rooms (including sleeping, eating, cooking, and sanitation facilities, but not more than one kitchen), which constitutes an independent housekeeping unit, occupied or intended for occupancy by one household on a long-term basis.

Land Use Designation. A specific geographic designation with associated land use or management policies and regulations.

Local Coastal Program. A comprehensive planning and regulatory program created and used by Counties and Cities neighboring the coast to govern decisions that determine the short- and long-term conservation and use of coastal resources. Local Coastal Programs must be consistent with the California Coastal Act, and protect public access and coastal resources.

Sphere of Influence (SOI). The probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission (LAFCo). The Sphere of Influence represents the area that an incorporated community is expected to annex in the future.

Unincorporated Urban Center. An existing or planned community which is located in an Area of Interest where no city exists. The unincorporated urban center represents the focal center for community and planning activities within the Area of Interest.

References

Reports/Publications/Data

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Ventura, County of. General Plan, North Ventura Avenue Area Plan. Adopted April 17, 1984, Last Amended December 11, 1990.

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Ventura, County of. General Plan, Thousand Oaks Area Plan. Adopted March 24, 1992, Last Amended March 24, 2015.

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SECTION 3.6 EXISTING ZONING

Introduction

This section summarizes the Ventura County Zoning Ordinance (VCZO), which is the primary tool used by the to implement the General Plan.

Major Findings

- The Ventura County Zoning Ordinance has two sections: non-coastal and coastal. The Coastal Zoning Ordinance applies to land between the Coastal Zone Boundary and the Pacific Coast. The Non-Coastal Zoning Ordinance applies to land east of the Coastal Zone Boundary. Among the zoning districts, the applied open space and agricultural zones to the greatest proportion of land in the unincorporated county.
- The Non-Coastal Zoning Ordinance establishes 21 base zones and three overlay zones. Among the 21 base zones, there are 7 residential zones, 3 commercial zones, 4 industrial zones, and 7 other zones that are primarily related to open space, agriculture, timberland, and other resource-related uses. The Open Space (OS) zoning district includes approximately 780,000 acres, and the Agricultural Exclusive (AE) zoning district includes nearly 205,000 acres.
- The Coastal Zoning Ordinance establishes 12 base zones and 1 overlay zone. Among the 12 base zones, there are 4 residential zones, 1 commercial zone, 1 industrial zone, 2 planned development zones, and 4 other zones that are related to open space, agriculture, and rural-related land uses. The Coastal Open Space (COS) zoning district includes approximately 22,600 acres and the Coastal Agricultural (CA) zoning district includes approximately 4,800 acres.

Existing Conditions

Ventura County relies on its zoning regulations to implement the policies and programs of its General Plan. The major difference between the General Plan and Zoning Ordinance is that the General Plan provides general guidance on the location, type, and intensity of new growth and development over the long term, while zoning provides detailed development and use standards for each parcel of land. The Zoning Ordinance divides the county into zoning districts and specifies the uses that are permitted, conditionally permitted, and in some instances prohibited within each zone.

The County's Zoning Ordinance describes districts that allow a variety of land uses including residential, commercial, agricultural, and industrial, and establishes special regulations for coastal, historic preservation, and other specific concerns. For each district, the County's Zoning Ordinance includes an explanation of the purpose of the zoning district, a list of principal permitted and conditionally permitted uses, and standards for minimum lot size, density, height, lot coverage, setback, and parking. The minimum lot size determines the density of residential development (i.e., the number of dwellings per acre), and establishes a direct relationship between the size of commercial and industrial parcels and the extent of development that may be allowed on them. The Zoning Ordinance also describes procedures for discretionary approvals.

Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance establishes 21 base zones and 3 overlay zones. Among the 21 base zones, there are 7 residential zones, 3 commercial zones, 4 industrial zones, and 7 other zones that are mainly related to open space, agriculture, timberland, and other resource-related land uses, shown on Figure 3-25 through Figure 3-28 and Table 3-14. Table 3-15 shows the relationship between the existing General Plan land use designations and Non-Coastal zones. The specific uses and allowed development within each zone district are described in Appendix 3.B (Non-Coastal Zoning Ordinance Article 5: Uses and Structures by Zone and Coastal Zoning Ordinance Article 4: Permitted Uses) of this chapter.

Of the 21 zones, 4 are specific to the Old Town Saticoy Development Code (OTSDC), as described in the Saticoy Area Plan. The four zones within the Saticoy area are Town Center (TC), Residential/Mixed Use (R/MU), Residential (RES), and Light Industrial (IND). The County applies these zones only to the Saticoy area.

The three overlay zones are Scenic Resource Protection (SRP), Mineral Resource Protection (MRP), and Community Business District (CBD). The County has only applied the Community Business District (CBD) overlay to 11 acres of land zoned Commercial Planned Development (CPD). The County has applied the Mineral Resource Protection (MRP) overlay to approximately 21,000 acres of land zoned Agricultural Exclusive (A-E), Open Space (O-S), Rural Exclusive (R-E), Industrial Park (M-1), and Limited Industrial (M-2). The County has applied the Scenic Resource Protection (SRP) overlay to more than 55,000 acres of land.

TABLE 3-14
NON-COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
Base Zones				
Open Space	OS	The purpose of this zone is to provide for any of the following on parcels or areas of land or water that are essentially unimproved: a. The preservation of natural resources including, but not limited to: areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and, coastal beaches, lakeshores, banks of rivers and streams, and watershed lands. b. The managed production of resources, including but not limited to: forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and, areas containing major mineral deposits, including those in short supply. c. Outdoor recreation, including but not limited to: areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and, areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors. d. The public health and safety, including, but not limited to areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones,	10 acres	781,075

TABLE 3-14
NON-COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
		unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality. e. The formation and continuation of cohesive communities by defining the boundaries and by helping to prevent urban sprawl. f. The promotion of efficient municipal services and facilities by confining urban development to defined development areas. g. Support of the mission of military installations that comprises areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands. h. The protection of places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.		
Agricultural Exclusive	AE	Preserve and protect commercial agricultural lands as a limited and irreplaceable resource, to preserve and maintain agriculture as a major industry in Ventura County and to protect these areas from the encroachment of nonrelated uses which, by their nature, would have detrimental effects upon the agriculture industry	40 acres	213,356
Rural Agricultural	RA	Provide for and maintain a rural setting where a wide range of agricultural uses are permitted while surrounding residential land uses are protected	1 acre	6,586
Rural Exclusive	RE	Provide for rural residential and horticultural activity, and a limited range of service and institutional uses compatible with rural residential	10,000 sq. ft.	10,866

TABLE 3-14
NON-COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
Single-Family Estate	RO	Provide single-family residential estates and a range of horticultural activities and animals for recreational purposes	20,000 sq. ft.	787
Single-Family Residential	R1	Provide single-family dwellings on individual lots	6,000 sq. ft.	1,606
Two-Family Residential	R2	Provide two single-family dwelling units or two-family dwelling units on lots which meet the minimum area requirements of this zone	7,000 sq. ft.	17
Residential Planned Development	RPD	Provide areas for communities which will be developed utilizing modern land planning and unified design techniques; this zone provides a flexible regulatory procedure in order to encourage: a. Coordinated neighborhood design and compatibility with existing or potential development of surrounding areas; b. An efficient use of land particularly through the clustering of dwelling units and the preservation of the natural features of sites; c. Variety and innovation in site design, density and housing unit options, including garden apartments, townhouses and single-family dwellings; d. Lower housing costs through the reduction of street and utility networks; and e. A more varied, attractive and energy-efficient living environment as well as greater opportunities for recreation than would be possible under other zone classifications.	As specified by permit	1,914
Residential High Density	RHD	Provide multifamily residential housing at densities considered by State law to be affordable by design to lower-income households	0.80 acre [1]	13
Commercial Office	CO	Provide suitable locations for offices and services of a professional, clerical, or administrative nature	No requirement	0

TABLE 3-14
NON-COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
Neighborhood Commercial	C1	Provide areas for retail convenience shopping and personal services to meet the daily needs of neighborhood residents	No requirement	10
Commercial Planned Development	CPD	Encourage the development of coordinated, innovative, and efficient commercial sites and to provide areas for a wide range of commercial retail and business uses, including stores, shops, and offices supplying commodities or performing services for the surrounding community	No requirement	230
Industrial Park	M-1	Provide areas for the exclusive development of light industrial, service, technical research, and related business office uses in an industrial park context	10,000 sq. ft.	133
Limited Industrial	M-2	Provide a broad range of industrial and quasi-industrial activities including light manufacturing, processing, or fabricating, while providing appropriate safeguards for neighboring uses including industrial and nonindustrial uses	10,000 sq. ft.	736
General Industrial	M-3	Provide general manufacturing, processing, and fabricating activities that do not require highly restrictive performance standards for adjoining uses; provide for uses involving the kinds of uses that are specifically excluded from the M-1 zone	10,000 sq. ft.	653
Timberland Preserve	TP	Maintain availability of timberland	160 acres	56
Specific Plan	SP	Provide for unified planning and diversified urban communities which reflect modern site design standards and concepts and incorporate a variety of uses, while providing for the separation of incompatible uses; encourage the provision of a broad range of community facilities, including recreational and commercial; and provide for flexibility in the design and development of such communities	Established by a specific plan	2,775

TABLE 3-14
NON-COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
Old Town Saticoy Development Code				
Residential	RES	Provide primarily for single-family and duplex developments, and triplex and quadplex developments on larger lots	OTSDC[2]	26
Residential Mixed Use	R/MU	Provide multifamily dwelling units with a maximum density of 20 dwelling units per acre, and compatible commercial uses	OTSDC[2]	9
Town Center	TC	Provide commercial uses and compatible light industrial uses, and residential use is allowed as a secondary use	OTSDC[2]	11
Industrial	IND	Accommodate light industrial, manufacturing, and commercial uses that are compatible with adjacent residential and commercial uses	OTSDC[2]	20
Overlay Zones				
Scenic Resource Protection	/SRP	Preserve and protect the visual quality of selected lakes, adopted scenic highways, and other locations as determined by an Area Plan	Not applicable	55,156
Mineral Resource Protection	/MRP	Protect and preserve mineral resources	Not applicable	21,778
Community Business District	/CBD	Provide districts with unique historic character and encourage mixed-use development projects that encourage walkability, site development potential, and an active environment	Not applicable	17

[1] California Planning and Zoning Law Section 65583.2(h) prescribes a minimum of 16 dwelling units per site.
[2] Development standards are set forth by the Old Town Saticoy Development Code.
Source: Ventura County Resource Management Agency (RMA) GIS, 2016; Ventura County Non-Coastal Zoning Ordinance, 2016.

TABLE 3-15
2005 GENERAL PLAN/ZONING DESIGNATIONS CONSISTENCY MATRIX: NON-COASTAL ZONES
Ventura County
2016

General Plan Designation	Zoning Designations																
	Single-Family Estate (R-O)	Single-Family Residential (R-1)	Two-Family Residential (R-2)	Residential Planned Development (RPD)	Residential High Density (RHD)	Commercial Office (C-O)	Neighborhood Commercial (C-1)	Commercial Planned Development (CPD)	Industrial Park (M-1)	Limited Industrial (M-2)	General Industrial (M-3)	Timberland Preserve (T-P)	Specific Plan (S-P)	Rural Exclusive (R-E)	Rural Agricultural (R-A)	Agricultural Exclusive (A-E)	Open Space (O-S)[1]
Urban	X (lot 20k)	X (lot 6k)	X (3,500 sf /du)	X	X (20 du/ac)	X	X	X	X	X	X	X	X	X (lot 10k)	X (lot 1 ac)	X (lot 40 ac)	X (lot 10 ac)
State/ Federal Facility																	X (lot 40 ac)
Existing Community	X	X	X	X	X (20 du/ac)	X	X	X	X	X	X			X	X		
Rural	X (lot 2 ac)													X (lot 2 ac)	X (lot 2 ac)		
Agricultural																X (lot 40 ac)	
Open Space																X (lot 40 ac)	X (lot 10 ac)

[1] Open Space interpretations granted prior to May 17, 1983, and permitting parcel sizes less than those specified in the existing General Plan, are considered consistent with the existing General Plan. Additionally, zoning designations that are consistent with the purpose and intent of the Open Space interpretations are considered consistent with the existing General Plan.
Source: Ventura County General Plan, 2005, and Ventura County Zoning Ordinance, 2016.

Figure 3-25: Non-Coastal Zones Northeast Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zones

- Community Business District (CBD)
- Mineral Resource Protection (MRP)
- Scenic Resource Protection (SRP)

Base Zones

- Rural Exclusive (R-E)
- Rural Agricultural (R-A)
- Single-Family Estate (R-O)
- Single-Family Residential (R-1)
- Two-Family Residentia (R-2)
- Residential (RES)
- Residential Planned Development (RPD)
- Residential High Density (RHD)
- Residential Mixed Use (R/MU)
- Neighborhood Commercial (C-1)
- Commercial Office (C-O)
- Commercial Planned Development (CPD)
- Specific Plan (S-P)
- Planned Community (PC2)
- Town Center (T-C)
- Industrial Park (M-1)
- Limited Industrial (M-2)
- General Industrial (M-3)
- Industrial (IND)
- Timberland Preseve (T-P)
- Agricultural Exclusive (A-E)
- Open Space (O-S)

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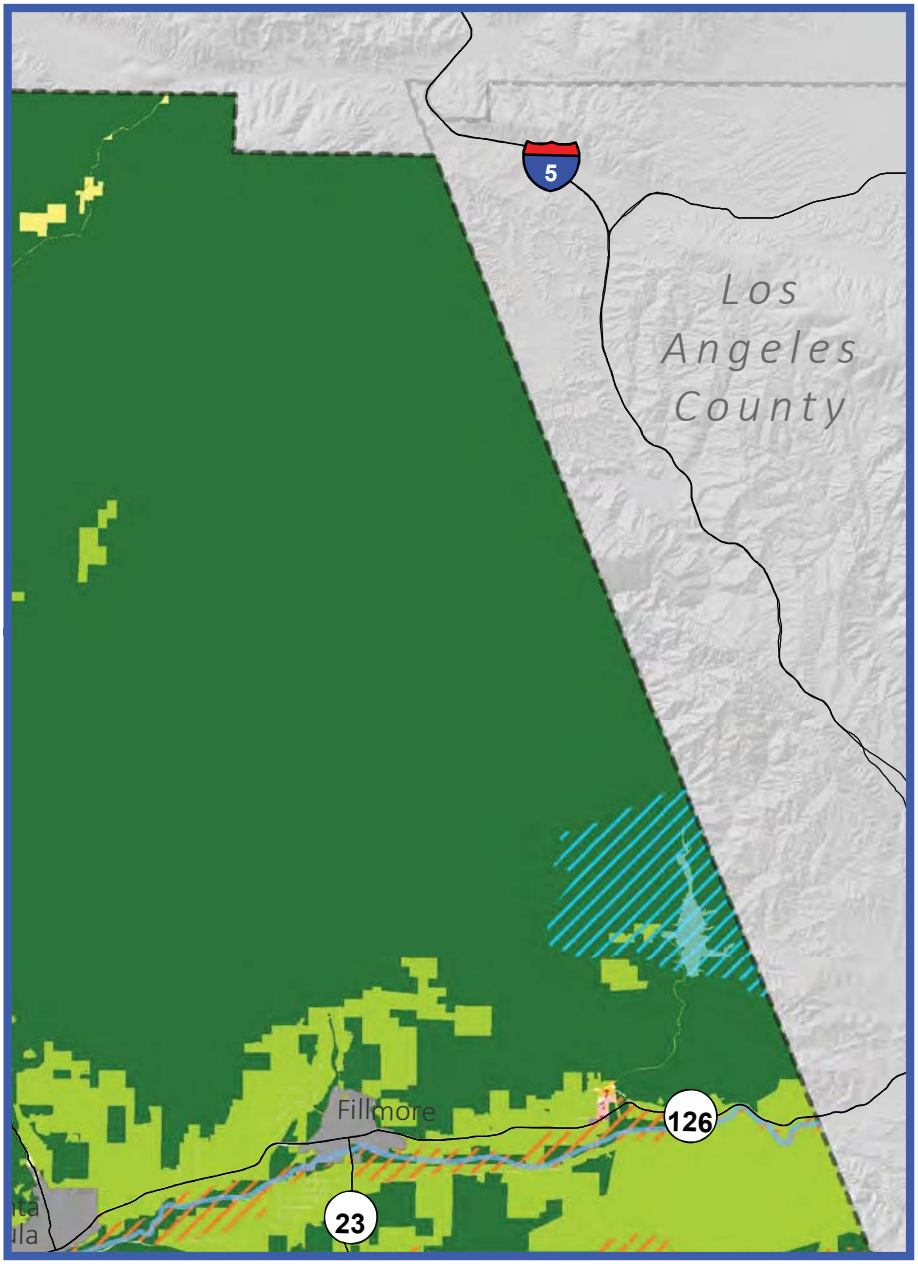


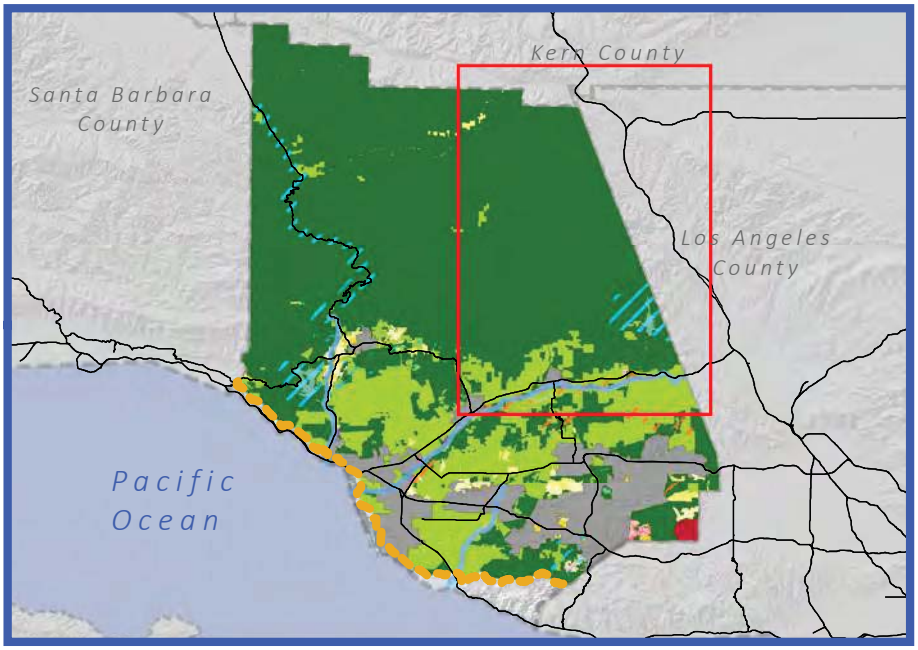


Figure 3-26: Non-Coastal Zones Southwest Portion

Map Date: January 03, 2018

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zones

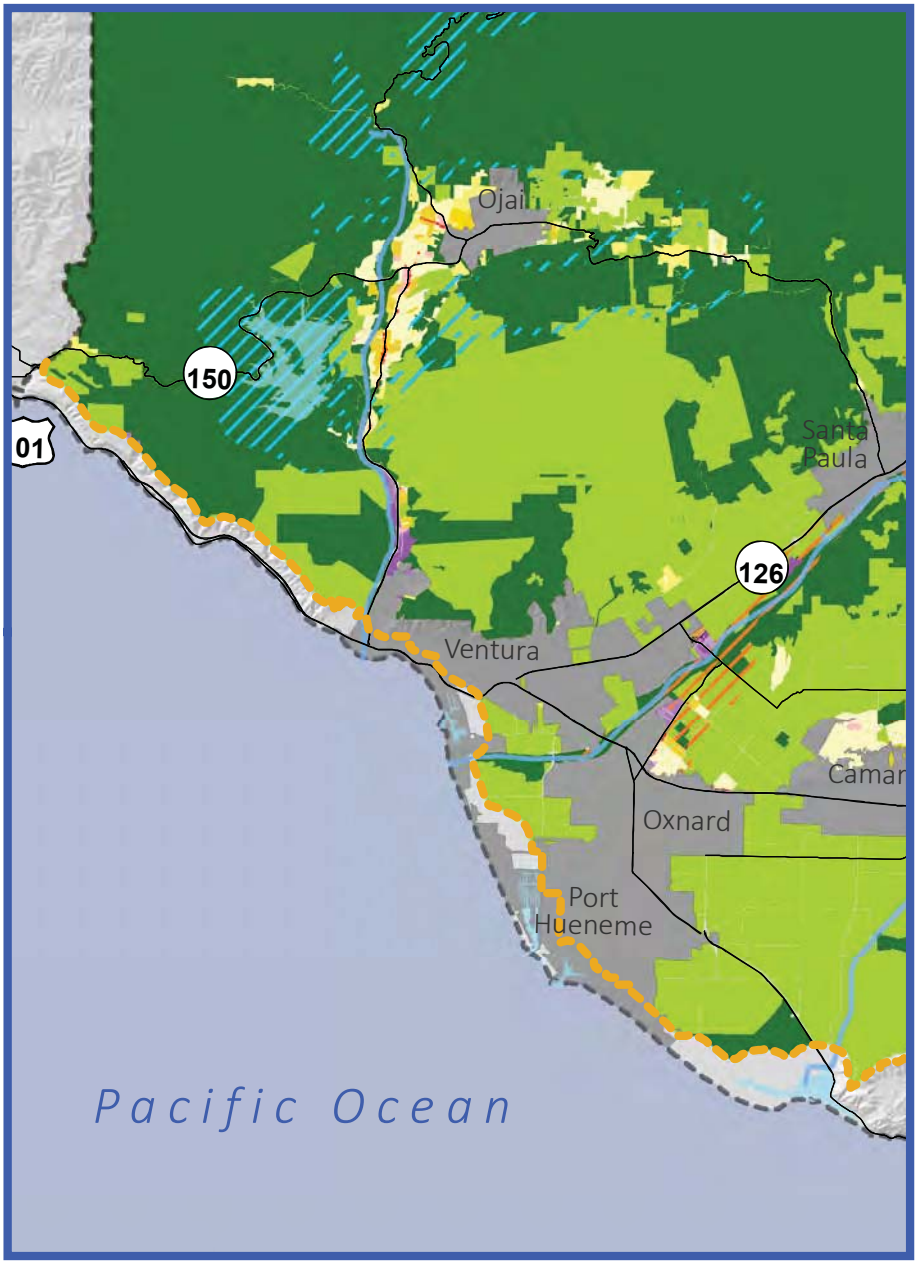
- Community Business District (CBD)
- Mineral Resource Protection (MRP)
- Scenic Resource Protection (SRP)

Base Zones

- Rural Exclusive (R-E)
- Rural Agricultural (R-A)
- Single-Family Estate (R-O)
- Single-Family Residential (R-1)
- Two-Family Residentia (R-2)
- Residential (RES)
- Residential Planned Development (RPD)
- Residential High Density (RHD)
- Residential Mixed Use (R/MU)
- Neighborhood Commercial (C-1)
- Commercial Office (C-O)
- Commercial Planned Development (CPD)
- Specific Plan (S-P)
- Planned Community (PC2)
- Town Center (T-C)
- Industrial Park (M-1)
- Limited Industrial (M-2)
- General Industrial (M-3)
- Industrial (IND)
- Timberland Preseve (T-P)
- Agricultural Exclusive (A-E)
- Open Space (O-S)

N

0 5 10 Miles



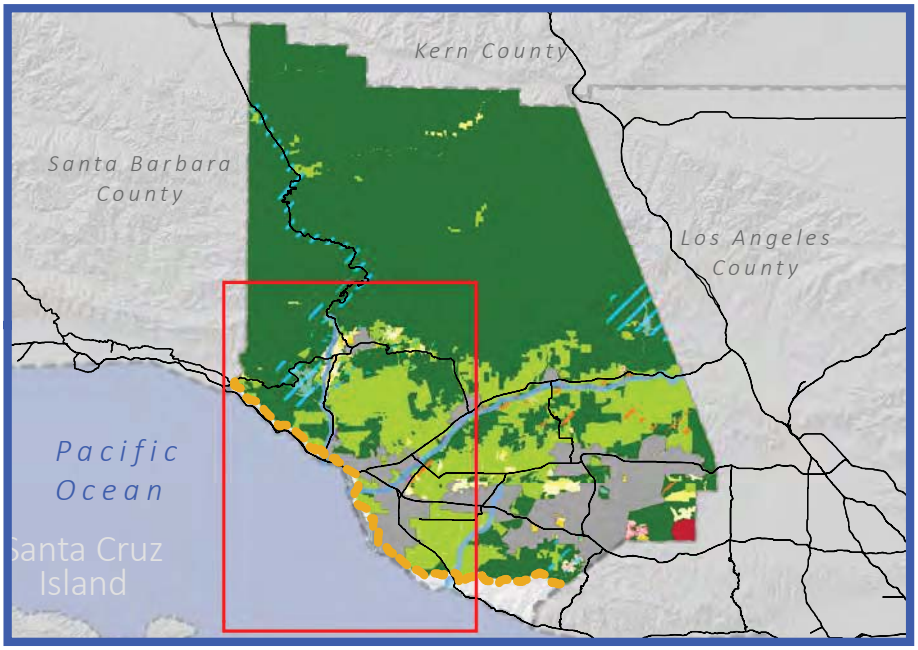


Figure 3-27: Non-Coastal Zones Southeast Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zones

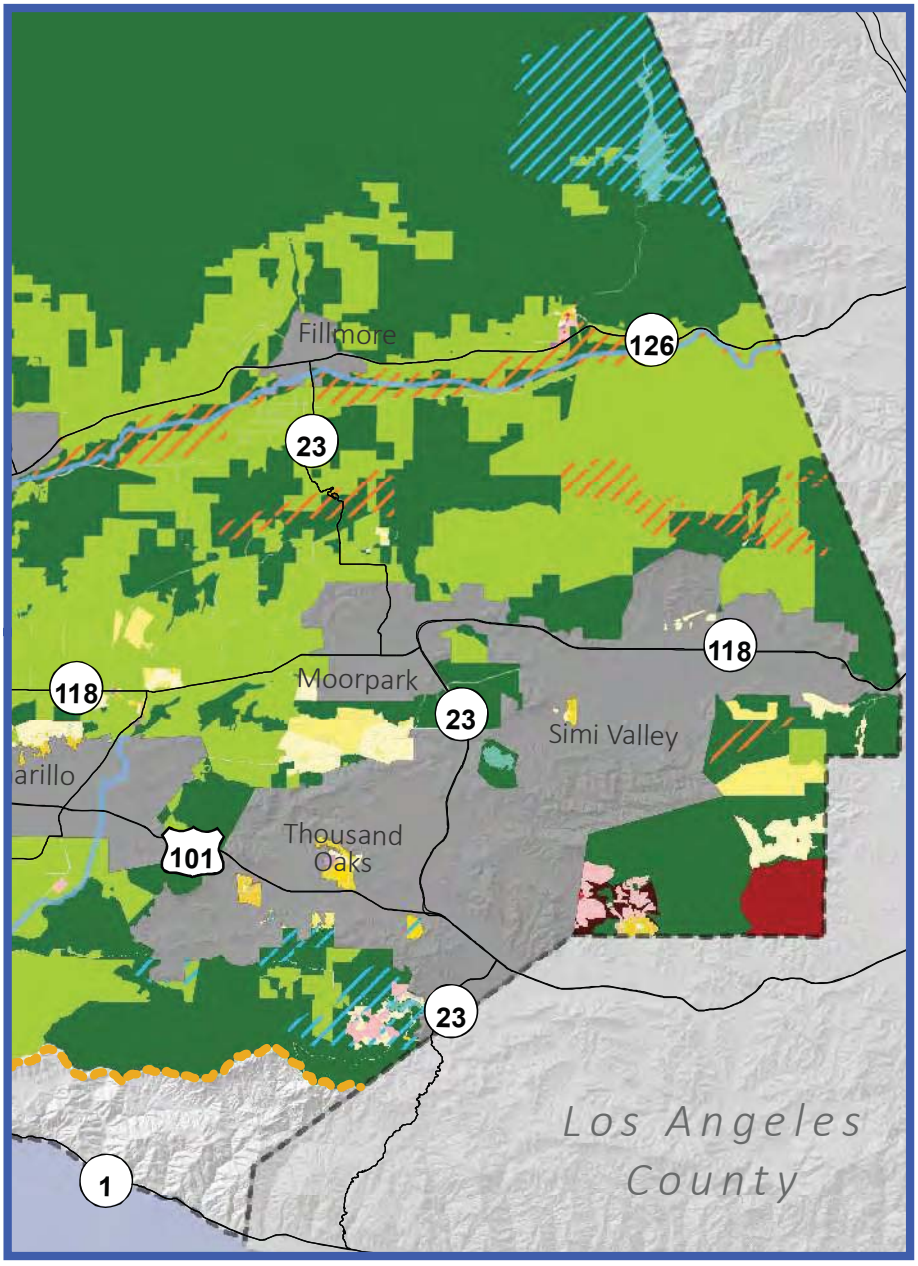
- Community Business District (CBD)
- Mineral Resource Protection (MRP)
- Scenic Resource Protection (SRP)

Base Zones

- Rural Exclusive (R-E)
- Rural Agricultural (R-A)
- Single-Family Estate (R-O)
- Single-Family Residential (R-1)
- Two-Family Residentia (R-2)
- Residential (RES)
- Residential Planned Development (RPD)
- Residential High Density (RHD)
- Residential Mixed Use (R/MU)
- Neighborhood Commercial (C-1)
- Commercial Office (C-O)
- Commercial Planned Development (CPD)
- Specific Plan (S-P)
- Planned Community (PC2)
- Town Center (T-C)
- Industrial Park (M-1)
- Limited Industrial (M-2)
- General Industrial (M-3)
- Industrial (IND)
- Timberland Preseve (T-P)
- Agricultural Exclusive (A-E)
- Open Space (O-S)

N

0 5 10 Miles



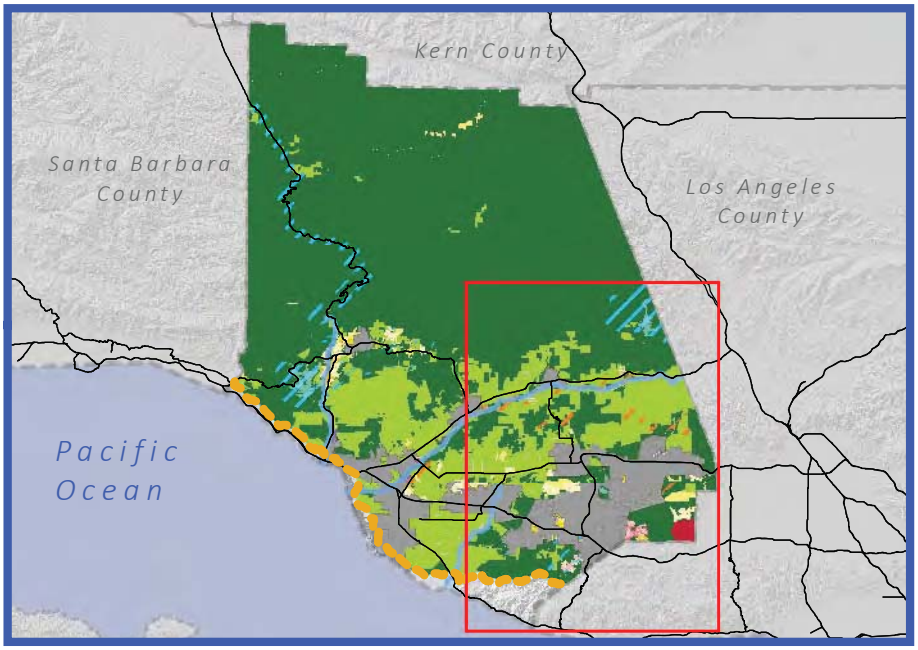


Figure 3-28: Non-Coastal Zones Southwest Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zones

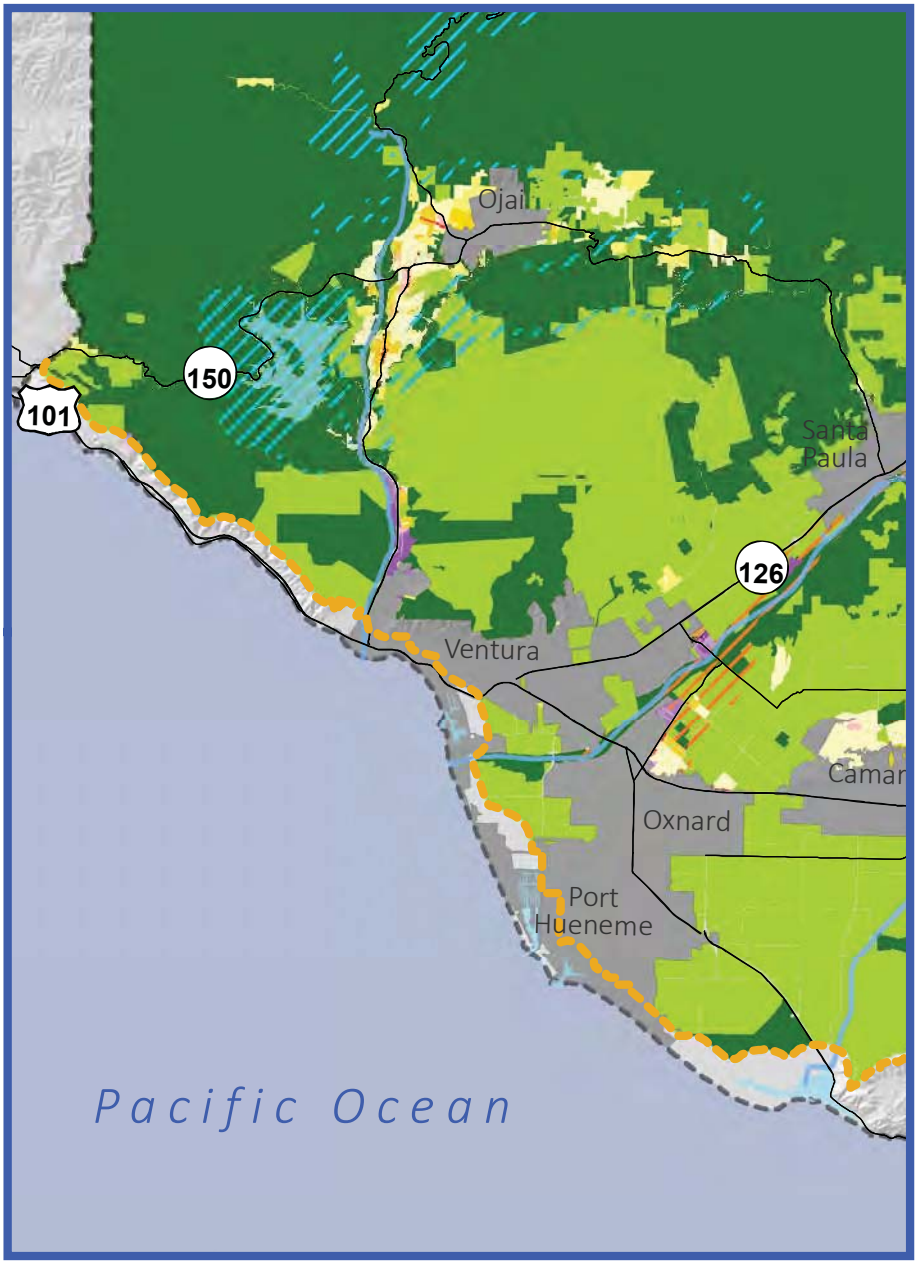
- Community Business District (CBD)
- Mineral Resource Protection (MRP)
- Scenic Resource Protection (SRP)

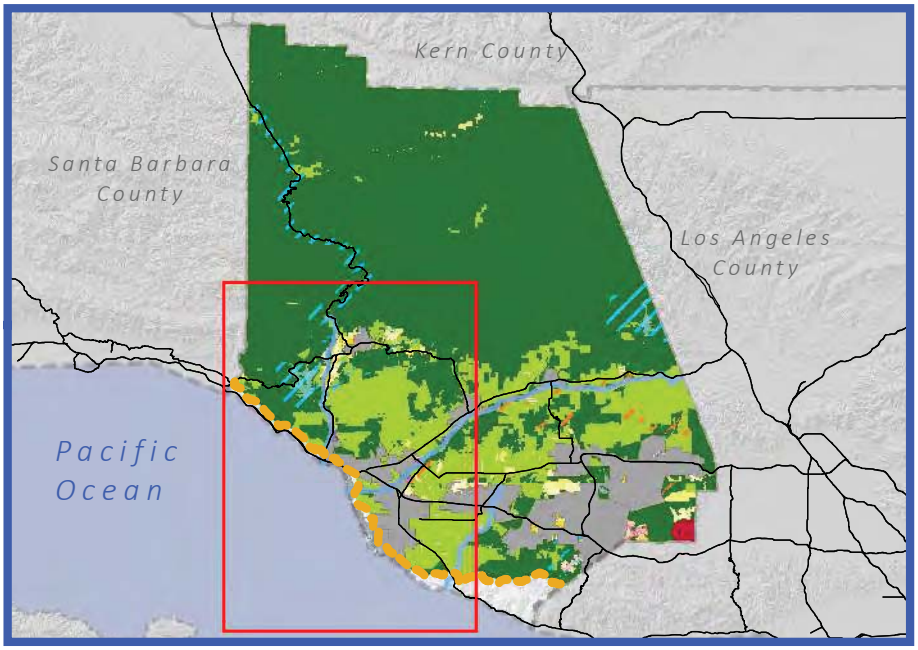
Base Zones

- Rural Exclusive (R-E)
- Rural Agricultural (R-A)
- Single-Family Estate (R-O)
- Single-Family Residential (R-1)
- Two-Family Residentia (R-2)
- Residential (RES)
- Residential Planned Development (RPD)
- Residential High Density (RHD)
- Residential Mixed Use (R/MU)
- Neighborhood Commercial (C-1)
- Commercial Office (C-O)
- Commercial Planned Development (CPD)
- Specific Plan (S-P)
- Planned Community (PC2)
- Town Center (T-C)
- Industrial Park (M-1)
- Limited Industrial (M-2)
- General Industrial (M-3)
- Industrial (IND)
- Timberland Preseve (T-P)
- Agricultural Exclusive (A-E)
- Open Space (O-S)

N

0 5 10 Miles





Coastal Zoning Ordinance

The 1976 Coastal Act created a mandate for the conservation and managed development of coastal resources through a comprehensive planning and regulatory program called the Local Coastal Program. As previously discussed in Section 3.4, the Coastal Zoning Ordinance and the Coastal Area Plan together constitute the Local Coastal Program for Ventura County that is mandated by the Coastal Act.

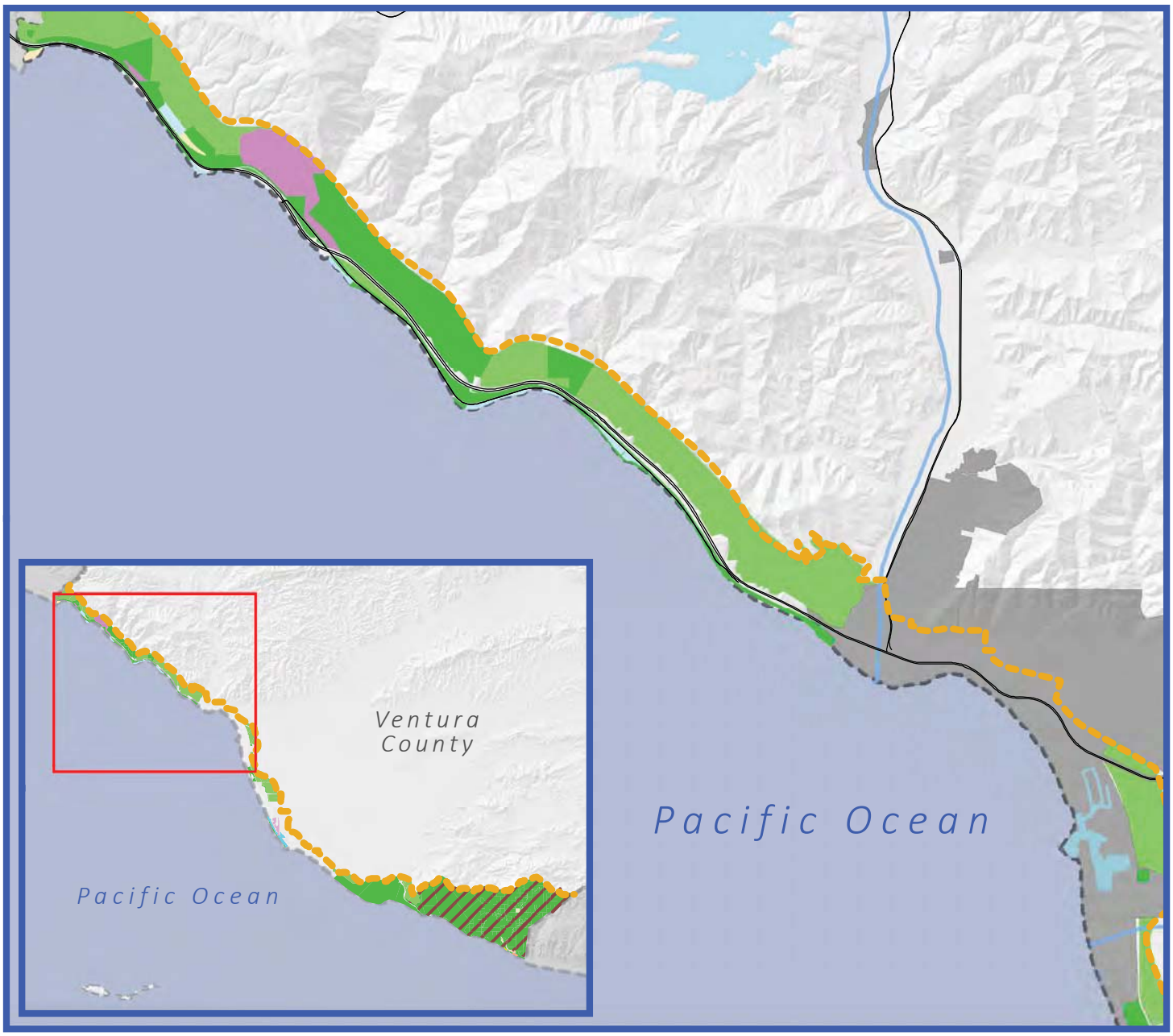
The Coastal Zoning Ordinance establishes 12 base zones and 1 overlay zone. Among the 12 base zones, there are 4 residential zones, 1 commercial zone, 1 industrial zone, 2 planned development zones, and 4 other zones that are related to open space, agriculture, and rural-related land uses, as shown on Figure 3-29 through Figure 3-31 and Table 3-16. Each zoning district includes development standards that are designed to protect and promote public health, safety, and general welfare and to implement the policies of the Coastal Area Plan. Each district contains regulations related to land use, lot size and coverage, building heights, and parking. The specific uses and allowed development within each zone district are described in Appendix 3.B (Non-Coastal Zoning Ordinance Article 5: Uses and Structures by Zone and Coastal Zoning Ordinance Article 4: Permitted Uses) of this Chapter.

TABLE 3-16
COASTAL ZONING DISTRICTS
Ventura County
2016

Zoning District	Map Code	Purpose	Minimum Lot Area	Acres Zoned
Base Zones				
Coastal Open Space	COS	Provide for the preservation, maintenance, and enhancement of natural and recreation resources	10 acres	22,617.9
Coastal Agricultural	CA	Preserve and protect commercial agricultural lands	40 acres	4,802.2
Coastal Rural	CR	Provide for and maintain a rural residential setting where a variety of agricultural uses are also permitted	1 acre	42.6
Coastal Rural Exclusive	CRE	Provide for residential areas with semirural atmosphere	20,000 sq. ft.	109.2
Coastal One-Family Residential	CR1	Provide for, and maintain, areas along the coast for single-family homes on lots significantly larger than those permitted in the RB or RBH zones	7,000 sq. ft.	38.1
Coastal Two-Family Residential	CR2	Provide for, and maintain, areas for single and two-family dwellings on lot sizes significantly larger than those permitted in the RB or RBH zones	7,000 sq. ft.	4.3
Residential Beach	RB	Provide for the development and preservation of small-lot, beach-oriented residential communities	3,000 sq. ft.	81.6
Residential Beach Harbor	RBH	Provide for development and preservation of beach-oriented	1,750 sq. ft. per single-	156.3

TABLE 3-16 COASTAL ZONING DISTRICTS Ventura County 2016				
Zoning District	**Map Code**	**Purpose**	**Minimum Lot Area**	**Acres Zoned**
		residential communities with small lot subdivision patterns	family dwelling; 3,000 sq. ft. per two-family dwellings	
Coastal Residential Planned Development	CRPD	Provide a method for land to be designated and developed as a unit for residential use by taking advantage of innovative site planning techniques	As specified by permit	26.7
Coastal Commercial	CC	Provide for the development of retail and service commercial uses that are intended to be neighborhood-serving or visitor-serving	20,000 sq. ft.	9.3
Coastal Industrial	CM	Establish an industrial zone consistent with features of the coastal zone	10 acres	351.4
Harbor Planned Development	HPD	Provide for uses consistent with harbor- and tourist-oriented developments	As specified by permit	146.2
Coastal Overlay Zones				
Santa Monica Mountains	M	Provide protective measures to the unique, rare, and endangered plant and animal species of the Santa Monica Mountains	Not Applicable	17,181.2

Source: Ventura County Coastal Zoning Ordinance, 2016.



Ventura County 2040 General Plan

Figure 3-29: Coastal Zones Northern Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zone

- Santa Monica Mountains (M)

Coastal Zones

- Coastal Rural Exclusive (CRE)
- Coastal One-Family Residential (CR1)
- Coastal Two-Family Residential (CR2)
- Residential Beach (RB)
- Residential Beach Harbor (RBH)
- Coastal Residential Planned Development (CRPD)
- Coastal Commercial (CC)
- Harbor Planned Development (HPD)
- Coastal Industrial (CM)
- Coastal Rural (CR)
- Coastal Agricultural (CA)
- Coastal Open Space (COS)

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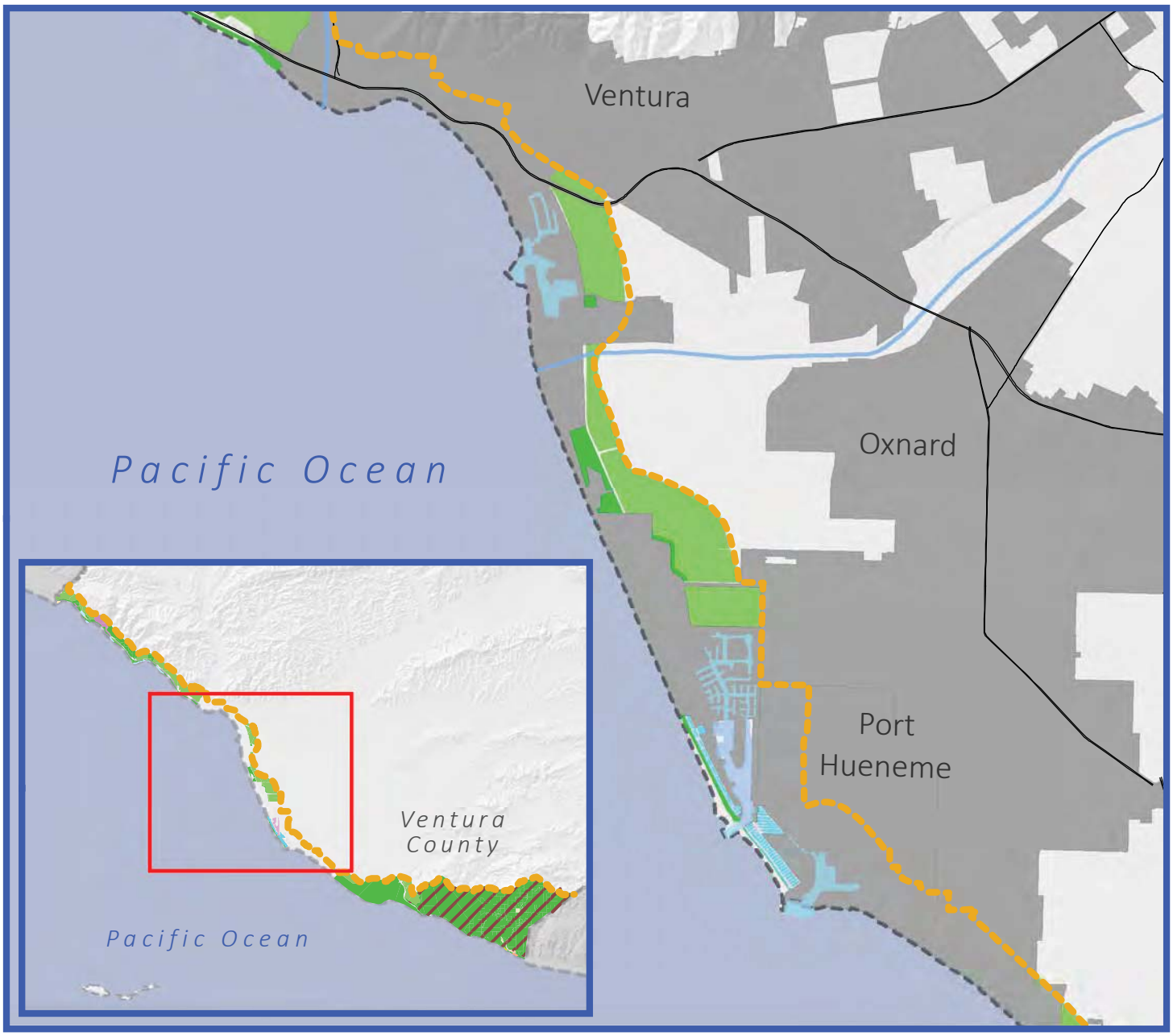
N



Ventura County 2040 General Plan

Figure 3-30: Coastal Zones Central Portion

Map Date: November 09, 2016

Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

- Major Roadways
- Major Waterways
- Water Bodies
- Cities
- Ventura County Boundary
- Coastal Zone Boundary

Overlay Zone

- Santa Monica Mountains (M)

Coastal Zones

- Coastal Rural Exclusive (CRE)
- Coastal One-Family Residential (CR1)
- Coastal Two-Family Residential (CR2)
- Residential Beach (RB)
- Residential Beach Harbor (RBH)
- Coastal Residential Planned Development (CRPD)
- Coastal Commercial (CC)
- Harbor Planned Development (HPD)
- Coastal Industrial (CM)
- Coastal Rural (CR)
- Coastal Agricultural (CA)
- Coastal Open Space (COS)

0 1 2 Miles

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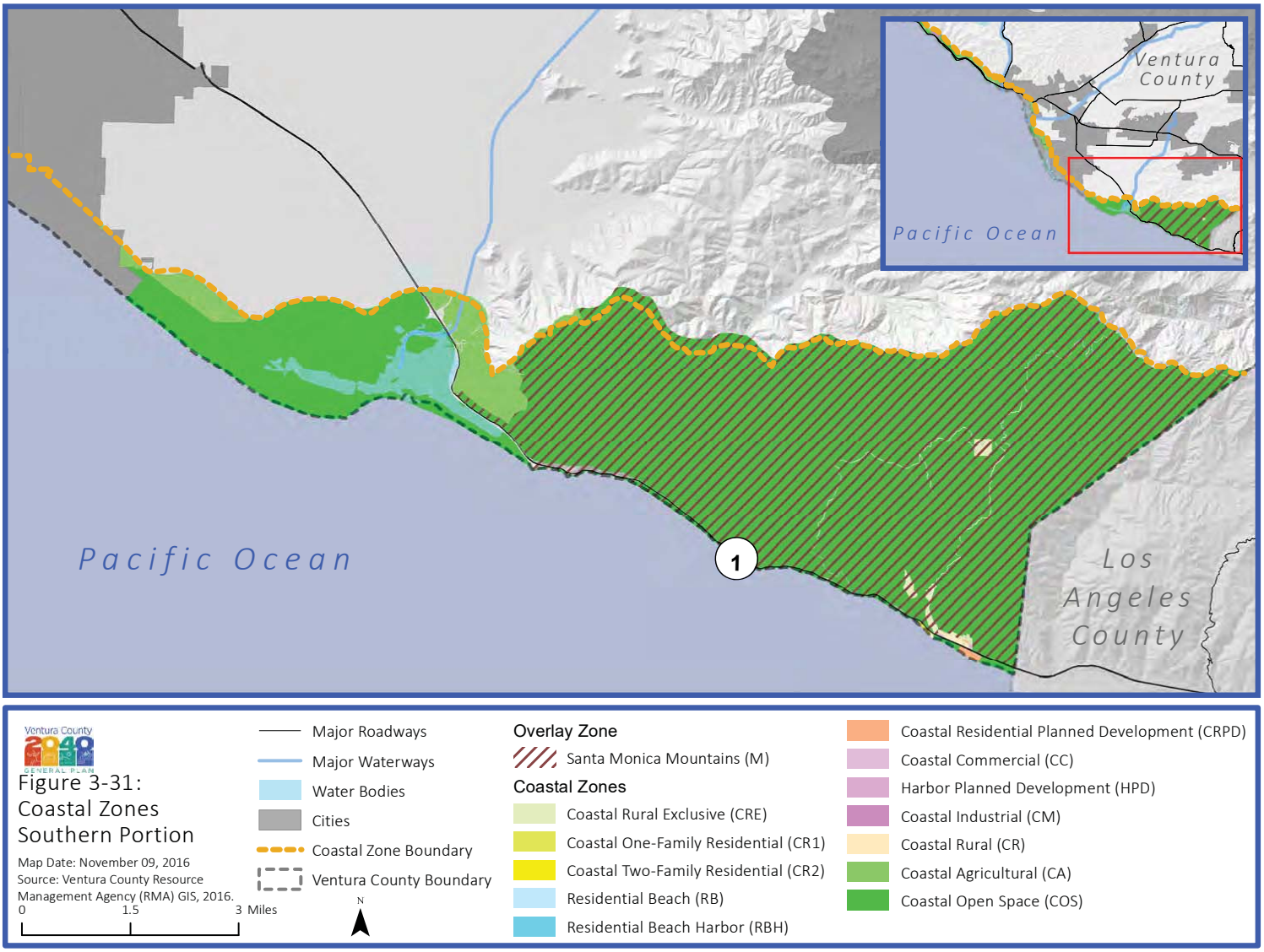

Figure 3-31:
Coastal Zones
Southern Portion

Map Date: November 09, 2016
Source: Ventura County Resource Management Agency (RMA) GIS, 2016.

Regulatory Setting

State

California Coastal Act (California Public Resources Code Section 30000). The California Coastal Act governs the decisions of the Coastal Commission and created the standards of development within the Coastal Zone. The California Coastal Act also created a mandate for coastal counties and cities to manage the conservation and development of coastal resources through the Local Coastal Program.

California Government Code Section 65860. In counties, general law cities, and charter cities with a population of more than two million, zoning provisions must be consistent with the general plan. Charter cities with a population of under two million are exempt from the zoning consistency requirement unless their charters provide otherwise.

Local

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates zoning in the non-coastal portions of the county.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates zoning in the coastal portions of the county.

Key Terms

Overlay Zone. An overlay zone adds special requirements to those which are part of the base zone on which the overlay zone is placed.

Zoning. The division of a city or county by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the general plan.

Zoning District. A designated section of the county for which prescribed land use requirements and building and development standards are uniform.

Zoning Ordinance. The adopted zoning regulations of a city or county.

References

Websites

Ventura, County of. Municipal Code.
https://www2.municode.com/library/ca/ventura_county/codes/code_of_ordinances, May 19, 2016.

SECTION 3.7 DEVELOPMENT HOLDING CAPACITY AND REMAINING DEVELOPMENT POTENTIAL

Introduction

This section summarizes the total development holding capacity in Ventura County and the remaining development potential in the unincorporated county.

Major Findings

- Based on adopted city and unincorporated county general plans and zoning, the vast majority of development capacity lies within the county's ten incorporated cities, and in the unincorporated areas located within spheres of influence. This includes 89.1 percent of the dwelling unit capacity, 90.0 percent of the population capacity, 92.0 percent of the non-residential building potential, and 90.3 percent of the employment potential.
- Based on the parcel-specific estimates prepared for the 2014 Housing Element, the unincorporated area has the potential to accommodate 1,361 dwelling units on vacant land currently zoned for residential uses, which totals 722.9 acres.
- The county's remaining residential development potential on vacant residential land yields an average of 1.9 dwelling units per acre (722.9 acres/1,361 dwelling units). At this density, vacant residential land would support approximately 24 percent of the dwelling unit demand projected by the Southern California Association of Governments (i.e., 5,670 units between 2012 and 2040). Accommodating the remainder of the projected residential demand at this density (i.e., 4,309 units at 1.9 dwelling units per acre), would require rezoning up to 2,268 acres of land.
- If the total projected residential development demand (5,670 dwelling units) was to be accommodated by a combination of the existing average development density of 1.9 units/acre and the maximum development density of 20 units/acre, approximately 30 percent of vacant residential land (238 acres) would need to be "upzoned" to 20 dwelling units per acre, and approximately 70 percent of vacant residential land could be developed at the existing average of 1.9 dwelling units per acre.
- There is also residential development potential associated with second units, farmworker housing (individual dwelling units and complexes), and principal dwelling units on vacant parcels zoned OS, AE, and RA. The remaining residential development capacity of these residential dwelling types is approximately 28,200 dwelling units. (This total assumes no subdivision of OS, AE or RA-zoned land.)
- Construction completion data shows that over the last ten years, second dwelling unit construction averaged 19 units per year, individual farmworker dwelling units averaged three units per year, and farmworker complexes averaged 14 units per year. These historical construction completion averages are far lower than the theoretical capacity associated with these dwelling types. As a practical matter, it is unlikely that the majority of residential demand could be filled by those unit types. Therefore, a greater diversity of units to accommodate a wider range of residential housing demand through 2040 will be needed. To determine how best to support the County's housing goals, it would be prudent to evaluate the overall supply of land and subdivision potential during the alternatives development and evaluation phase of the General Plan Update.

- There is limited land available for commercial and industrial development in the unincorporated county, at approximately 184.4 acres. This land would accommodate 4,183 jobs, which falls below the projected commercial and industrial employment growth in the unincorporated area of approximately 5,330 jobs by 2040.
- Based on employment projections, there is an estimated deficit of approximately 43.2 acres of commercial land and approximately 6.6 acres of industrial land in the unincorporated area. This suggests that limited land supply could constrain job growth in the unincorporated area. To determine how best to support the County's economic development goals, it would be prudent to evaluate the overall supply of land designated for non-residential uses during the alternatives development and evaluation phase of the General Plan Update.

Existing Conditions

Total Development Holding Capacity

The development "holding capacity" of a community is the theoretical maximum amount of development that could occur in the community based on the "build-out" of adopted plans (or zoning). The Land Use Appendix from the County's 2005 General Plan includes a detailed calculation of holding capacity for the entire county, based on adopted city and unincorporated county general plans and zoning. The holding capacity estimates account for both residential capacity (dwelling units and associated population) and non-residential capacity (building square footage and associated employment). The estimates are aggregated by planning areas, within which they are broken down into two categories: (1) areas outside city spheres, which consists of unincorporated area land; and (2) areas within city spheres, which includes both land within a city and land within the unincorporated area. See Appendix 3.A, for a more detailed description of the methodology used to calculate the development holding capacity in this section.

Table 3-17 summarizes the residential holding capacity, and Table 3-18 summarizes the non-residential holding capacity. In both cases, the estimates reflect the "High Range" as estimated in the 2005 General Plan. It is important to note that the holding capacity estimates reflect total, not incremental, capacity, as of 2005. The incremental capacity, or remaining development potential, is discussed separately below.

As Table 3-17 shows, the vast majority of the countywide residential development capacity lies within city SOIs, with 89.1 percent of the dwelling unit capacity and 90.0 percent of the population capacity. The same is true for non-residential development capacity (Table 3-18), with 92.0 percent of the building square footage potential and 90.3 percent of the employment potential occurring within city SOIs. This reflects the collaborative agreements memorialized in Ventura County's "Guidelines for Orderly Development," which—among other provisions—call for urban development to occur within cities whenever and wherever practical.

For unincorporated areas outside of city SOIs, Table 3-17 shows that the Oak Park Planning Area has the greatest theoretical residential holding capacity (10,277 units and 24,400 population). The Piru Planning Area has the next largest theoretical residential development holding capacity, at 4,757 units and a population of 14,963. For non-residential development outside of city SOIs, the largest concentrations of employment capacity are in the Oxnard and Moorpark Planning Areas, with 15,410 and 11,901 potential employees, respectively. This represents 38.8 and 30.0 percent of the total potential employment in the unincorporated areas outside of city SOIs.

TABLE 3-17
TOTAL RESIDENTIAL AND POPULATION HOLDING CAPACITY

Planning Area	Outside City SOIs (unincorporated area)			Inside City SOIs (includes unincorporated area within SOI)			Total Holding Capacity (cities and unincorporated area)		
	Acres	DUs	Pop	Acres	DUs	Pop	Acres	DUs	Pop
Ahmanson Ranch Area	3,657	4,131	12,104	-	-	-	3,657	4,131	12,104
Camarillo Area	32,808	3,843	11,374	8,139	27,400	81,103	40,947	31,243	92,477
Fillmore Area	43,292	3,444	11,331	2,741	16,237	53,418	46,033	19,681	64,749
Las Posas Area	32,906	3,042	9,340	-	-	-	32,906	3,042	9,340
Moorpark Area	23,684	2,256	7,332	5,489	10,368	33,698	29,173	12,624	41,030
North Half Area	573,741	2,559	7,167	-	-	-	573,741	2,559	7,167
Oak Park Area	7,542	10,277	24,402	-	-	-	7,542	10,277	24,402
Ojai Area	64,519	4,762	11,524	31,976	12,216	29,560	96,495	16,978	41,084
Oxnard Area	22,319	1,142	3,654	7,670	71,405	228,497	29,989	72,547	232,151
Piru Area	37,702	4,757	14,963	-	-	-	37,702	4,757	14,963
Port Hueneme Area	-	-	-	2,139	9,489	26,568	2,139	9,489	26,568
Santa Paula Area*	44,908	3,568	11,771	1,417	11,994	37,662	46,325	15,562	49,433
Simi Valley Area	28,341	4,002	11,606	44,876	54,523	158,118	73,217	58,525	169,724
Thousand Oaks Area	21,166	2,980	8,283	22,371	120,057	333,759	43,537	123,037	342,042
Ventura Area	49,718	3,630	9,836	16,113	111,530	302,246	65,831	115,160	312,082
Total	**986,303**	**54,393**	**154,687**	**142,931**	**445,219**	**1,284,629**	**1,129,234**	**499,612**	**1,439,316**

County of Ventura 2005 General Plan, Land Use Appendix, Figure 3.2.2, October 2013.
**Data does not match Figure 3.2.2 in Land Use Appendix due to anomalies in calculation methodology.*

TABLE 3-18
TOTAL NON-RESIDENTIAL AND EMPLOYMENT HOLDING CAPACITY

Planning Area	Unincorporated Area Outside City SOIs			Inside City SOIs (includes unincorporated area within SOI)			Total Holding Capacity (cities and unincorporated area)		
	Acres	Bldg Sq Ft	Emp	Acres	Bldg Sq Ft	Emp	Acres	Bldg Sq Ft	Emp
Ahmanson Ranch Area	-	-	-	-	-	-	-	-	-
Camarillo Area	17,641	408,000	2,058	2,901	18,438,000	32,762	20,542	18,846,000	34,820
Fillmore Area	11,543	-	577	447	3,496,000	7,163	11,990	3,496,000	7,740
Las Posas Area	19,264	332,000	1,635	-	-	-	19,264	332,000	1,635
Moorpark Area	980	5,381,102	11,901	-	-	-	980	5,381,102	11,901
North Half Area	582	70,000	175	-	-	-	582	70,000	175
Oak Park Area	203	917,000	1,015	-	-	-	203	917,000	1,015
Ojai Area	572	1,017,000	1,841	956	3,504,000	4,323	1,528	4,521,000	6,164
Oxnard Area	15,958	9,413,000	15,410	7,060	116,528,000	124,290	23,018	125,941,000	139,700
Piru Area	5,104	1,175,000	1,217	-	-	-	5,104	1,175,000	1,217
Port Hueneme Area	-	-	-	1,310	7,265,000	18,106	1,310	7,265,000	18,106
Santa Paula Area	11,592	266,000	1,123	765	4,989,000	10,329	12,357	5,255,000	11,452
Simi Valley Area	2,530	1,273,000	1,997	6,043	38,177,000	85,837	8,573	39,450,000	87,834
Thousand Oaks Area	-	-	-	3,848	27,340,000	52,621	3,848	27,340,000	52,621
Ventura Area	5,214	248,000	738	2,438	15,912,000	33,168	7,652	16,160,000	33,906
Total	**91,183**	**20,500,102**	**39,687**	**25,768**	**235,649,000**	**368,599**	**116,951**	**256,149,102**	**408,286**

County of Ventura 2005 General Plan, Land Use Appendix, Figure 3.2.3, October 2013.

Remaining Development Potential

Residential

In conjunction with the 2014 Housing Element update, the County prepared a detailed inventory of sites suitable for housing to accommodate the County's regional housing needs assessment (RHNA). The result was an estimated residential development potential that was disaggregated by income categories consistent with the RHNA. In preparing the inventory, the County separated housing potential into the following categories:

- Parcel-specific inventory of vacant, residentially-zoned land suitable for development.
- Opportunities for second units based on County Assessor data.
- Housing proposed for California State University, Channel Islands (CSUCI)
- Piru Expansion Area housing
- Farmworker/animal caretaker housing west (including Limoneira Company project)
- Cabrillo Economic Development Corporation in Piru
- Land suitable for group residential care facilities
- Opportunities for emergency shelter

Table 3-19 summarizes the remaining residential potential in the unincorporated county by Planning Area. It is based on the Housing Element's parcel-specific evaluation based on zoning and known projects. This includes the units in the Piru Expansion Area, the Limoneira farmworker housing complex near Santa Paula, and the Cabrillo Economic Development Corporation project in Piru. It does not include assumptions for second units, farmworker housing, and units proposed for California State University at Channel Islands; these are described below.

Table 3-19 also estimates the potential population capacity for new units based on population-per-dwelling unit assumptions specified in the Housing Element for each Planning Area.

TABLE 3-19
REMAINING RESIDENTIAL DEVELOPMENT POTENTIAL: PARCEL-SPECIFIC CAPACITY BY PLANNING AREA

Planning Area	Acres	Units	Pop/DU*	Pop
Camarillo Area	154.8	116	2.96	343
Las Posas Area	6.8	11	3.07	34
Oak Park Area	0.2	4	2.39	10
Ojai Area	12.6	51	2.42	123
Oxnard Area	12.7	249	3.20	797
Piru Area	59.1	406	3.66	1,486
Santa Paula Area	245.1	73	3.31	242
Simi Valley Area	95.2	100	2.90	290
Thousand Oaks Area	111.1	189	2.78	525
Ventura Area	25.3	162	2.71	439
Total	**722.9**	**1,361**		**4,289**

Source: Ventura County General Plan Housing Element, 2014. Figures 3.3.7-7, 3.3.7-8, 3.3.7-10, 3.3.10-1 and 3.3.10-2. Also includes Limoneira Company farmworker housing in Santa Paula and Cabrillo Economic Development Corporation housing project in Piru.
**As specified in the General Plan Land Use Appendix, Figure 3.2.2.*

Table 3-20 summarizes the remaining residential development potential by zone. It covers both the Non-Coastal and Coastal zoning. Table 3-20 does not include estimates of population capacity because the Housing Element does not include population-per-dwelling unit assumptions by zone.

TABLE 3-20
REMAINING RESIDENTIAL DEVELOPMENT POTENTIAL: PARCEL-SPECIFIC CAPACITY BY ZONE

Non-Coastal Zones	Zone Label	Acres	Potential Units
Open Space	OS	1.2	1
Agricultural Exclusive	AE	242.9	70
Rural Exclusive	RE	302.9	272
Single-Family Estate	RO	12.3	10
Single-Family Residential	R1	23.6	139
Two-Family Residential	R2	4.8	57
Residential Planned Development	RPD	92.8	401
Residential High Density	RHD	12.5	250
Non-Coastal Subtotal		**693.0**	**1,200**
Coastal Zones			
Coastal Rural	CR	11.8	10
Coastal Rural Exclusive	CRE	0.2	1
Residential Beach	RB	12.5	80
Residential Beach Harbor	RBH	3.6	66
Coastal Residential Planned Development	CRPD	1.8	4
Coastal Subtotal		**29.9**	**161**
Total		**722.9**	**1,361**

Source: Ventura County General Plan Housing Element, 2014. Figures 3.3.7-7, 3.3.7-8, 3.3.7-10, 3.3.10-1 and 3.3.10-2. Also includes Limoneira Company farmworker housing in Santa Paula and Cabrillo Economic Development Corporation housing project in Piru. As discussed in the Housing Element, because there is a substantial surplus in the inventory of land suitable for both moderate and above-moderate income units, the summary of vacant land presented in Figure 3.3.7-10, and relied upon to inform Table 3-20, did not include all of the land available in the Rural, Agricultural, and Open Space designated areas that could be used for moderate or above-moderate income units. See Table 3-21 of this chapter for a summary of vacant Rural Agricultural, Agricultural, and Open Space designated lands.

As explained above, the totals shown in Table 3-19 and Table 3-20 are derived from parcel-specific estimates from the Housing Element. There is also considerable residential development potential beyond that summarized in Table 3-19 and Table 3-20, as explained below.

- **Second Units:** The 2014 Housing Element included an analysis demonstrating that approximately 16,000 second units could be added to parcels with existing single-family dwellings on land zoned RA, AE, OS, and all residential zones.
- **Farmworker Housing (Individual Units):** According to the county's Non-Coastal Zoning Ordinance, parcels zoned AE, OS, or RA that also meet certain requirements can accommodate housing for farmworkers or animal caretakers. The Housing Element estimated that such parcels had the capacity to accommodate approximately 980 units of farmworker housing. This total

excluded sites that may be suitable for animal caretaker dwellings or farmworker housing complexes, which would require discretionary permits.

- **Farmworker Complexes:** Parcels zoned AE or OS allow for the development of farmworker housing complexes through a discretionary Planned Development Permit. Based on the criteria established in the NCZO, the Housing Element identified 105 parcels suitable for farmworker housing complexes. After accounting for agricultural buffers and parking requirements, the Housing Element estimated that these parcels could accommodate approximately 9,350 dwelling units at an assumed density of 25 units per acre.
- **California State University, Channel Islands:** Based on information provided by the University, the Housing Element includes 242 proposed units that have not yet been constructed. (These proposed units are not student housing, but rather units available to CSUCI staff, faculty, and the community-at-large.)

In addition to the potential housing described above, the county also allows principal single-family dwellings on parcels zoned OS, AE, and RA. Based on an analysis of County Assessor data and accounting for development constraints (e.g., slope, sensitive habitat), there are 295 vacant parcels that are at least one acre in size, which is the minimum size for RA-zoned parcels to accommodate new units. Table 3-21 shows the number and associated acreage of these parcels by Planning Area. Assuming one unit per parcel, these properties could accommodate 295 single-family dwelling units.

TABLE 3-21
VACANT OS, AE, RA PARCELS WITH SINGLE-FAMILY RESIDENTIAL POTENTIAL*

	Open Space (OS)		Agricultural Exclusive (AE)		Rural Agricultural (RA)		Total	
Planning Area	Parcels/ Units	Acreage	Parcels/ Units	Acreage	Parcels/ Units	Acreage	Parcels/ Units	Acreage
Camarillo Area	6	24.2	1	1.1	3	20.9	10	46.3
Fillmore Area	3	4.9	2	6.3	-	-	5	11.2
Las Posas Area	21	235.5	6	24.5	16	67.1	43	327.0
Moorpark Area	9	185.3	2	11.6	7	47.4	18	244.3
North Half Area	9	48.0	-	-	43	100.7	52	148.7
Oak Park Area	-	-	-	-	-	-	-	-
Ojai Area	14	192.8	-	-	3	5.0	17	197.8
Oxnard Area	-	-	9	19.1	-	-	9	19.1
Piru Area	2	5.4	2	10.5	-	-	4	15.9
Santa Paula Area	1	1.0	5	13.2	-	-	6	14.2
Simi Valley Area	69	338.6	-	-	-	-	69	338.6
Thousand Oaks Area	53	299.1	-	-	3	3.7	56	302.8
Ventura Area	5	48.7	-	-	1	3.0	6	51.7
Total	**192**	**1,383.4**	**27**	**86.3**	**76**	**247.8**	**295**	**1,717.5**

**Excludes public land, parcels constrained by floodways, sensitive habitats, and slopes (above 20 percent), and parcels in the Ojai Traffic Impact Area. Vacant land defined by Ventura County Assessor (codes 101, 201, 501, 601).*

Table 3-22 summarizes the remaining residential development potential based on the Housing Element and the additional potential for units on parcels zoned OS, AE, and RA. As Table 3-21 shows, the remaining residential development capacity is approximately 28,200 units. This remaining potential is scattered throughout the planning areas, with the largest concentrations in the Piru and Oxnard areas.

TABLE 3-22 REMAINING RESIDENTIAL DEVELOPMENT POTENTIAL	
Type	**Units**
Parcel-specific capacity by zone (from Table 3-19)	1,361
Second Units	16,000
Farmworker Housing (Individual Units)	980
Farmworker Complexes	9,350
Cal State Channel Islands Housing	242
Principal Dwelling Units on Vacant Land Zoned OS, AE, RA	295
Total	**28,228**

Source: Ventura County General Plan Housing Element, 2014. Ventura County GIS, 2016.

As shown in Table 2-34 in Chapter 2 of this Background Report, the unincorporated area population is projected to increase to approximately 113,600 by 2040 based on annual growth rate of 0.6 percent. This represents an increase of 15,275 over the 2016 unincorporated area population of 98,325. Based on overall remaining dwelling unit potential shown in Table 3-22, there appears to be a sufficient supply of land with residential development potential to accommodate population growth through 2040. However, 90 percent of the potential units are either second units or farmworker complexes, and as a practical matter, it is unlikely that the majority of residential demand could be filled by those unit types, as explained in more detail below.

Construction completion data on the total number of second dwelling units, farmworker dwelling units, and farmworker complexes built within the unincorporated county between 2006 and 2015 was analyzed to determine the number of units built annually over a ten-year period. During this period, second dwelling unit construction averaged 19 units per year, hitting a peak of construction in 2006 with 38 units, and steadily declining until 2012, when only seven units were constructed. At the ten-year average rate of 19 units annually, 437 second dwelling units would be constructed through 2040 (the horizon year for the General Plan). If the peak rate of 38 units annually were sustained through 2040, 875 units would be constructed over the 23-year period (i.e., 2017 to 2040).

In September 2016, Governor Brown signed three bills related to the creation and regulation of second units (or accessory dwelling units). Assembly Bill 2299 (AB 2299) and Senate Bill 1069 (SB 1069) streamlined the accessory unit approval process, eliminated certain parking requirements, limited utility fees charged when existing building space or structures are converted to accessory units, and modified the minimum size of accessory units. AB 1069 and AB 2299, which went into effect at the beginning of 2017, cross-reference and in some cases overlap each other. The third bill, Assembly Bill 2406 (AB 2406), defined and established a new class of accessory units, "junior accessory dwelling units." Under the provisions of AB 2406, these units are (1) created within the walls of an existing structure and (2) capture an existing bedroom. Junior accessory units are required to have an internal doorway to primary living space, a second doorway to the outside, a full bath, and limited cooking facilities. Collectively, these three bills should increase the number of accessory units developed in the county. However, this Background Report does not include any estimates of additional development, nor are any potential increases in accessory dwelling unit construction accounted for in the above analysis.

On March 14, 2017, the Board of Supervisors adopted Ordinance No. 4507 (Accessory Dwelling Unit Interim Ordinance), which implemented amendments to Government Code Section 65852.2 (New ADU Law) regulating ADUs and effectuated a 45-day interim ordinance as an urgency measure to allow time for County staff to develop new and permanent ADU regulations for consideration by the Board of Supervisors. On April 18, 2017, the Board of Supervisors adopted an Urgency Ordinance Extending the provision of Ordinance No. 4507 (PL17-0008) through March 13, 2018. The Planning Division will

return to the Board prior to the expiration of the Urgency Ordinance with proposed regulations before drafting a permanent ordinance.

The trend for the construction of farmworker dwelling units is similar to the trend for second dwelling units during the same period. At its peak, construction of farmworker units reached eight units in 2012 but has remained stable at an average of three units per year between 2006 through 2015. If the three-unit annual average were maintained through 2040, another 69 units would be constructed. If the peak annual production of eight units were maintained, 184 units would be constructed by 2040.

The trend for farmworker complexes for this same period is significantly lower. In 2009, the Valle Naranjal farmworker housing complex located in the unincorporated community of Piru was completed and includes 66 farmworker dwelling units. This same year, the Limoneira farmworker housing complex located in the unincorporated area near Santa Paula was completed and includes 74 farmworker dwelling units. No other farmworker complexes were built in the unincorporated county between 2006 through 2015. Based on the 2009 total, the average number of units per year over a ten-year period equals 14 farmworker dwelling units per year. If projected through 2040, this ten-year average would result in an additional 322 units by 2040.

These historical construction completion averages are far lower than the theoretical capacity associated with these dwelling types. Given these trends, a greater diversity of units to accommodate a wider range of residential housing demand through 2040 will be needed. While the 2014 Housing Element demonstrated adequate capacity to meet its RHNA obligation through 2021, the supply of land to support the full range of residential development, including higher-density multi-family units, appears limited beyond 2021.

Non-Residential

To estimate remaining non-residential development and employment potential in the unincorporated area, the County identified vacant land zoned for commercial and industrial uses in the unincorporated area based on Assessor's data and use codes. The County then filtered these results to exclude land not suited for further development based on zoning standards and other factors. Using building intensity and employment density assumptions derived from the development holding capacity analysis summarized in Table 3-17, the County then calculated potential employment. Table 3-23 summarizes the results of these calculations by non-residential zoning classifications, both within and outside of city spheres of influence. Table 3-24 summarizes the same information by planning area. As Table 3-23 and Table 3-24 show, there is limited land available for commercial and industrial development in the unincorporated county, at approximately 184.4 acres (86 percent of which is in the Ojai and Ventura planning areas). This land would accommodate 4,183 jobs, which falls below the unincorporated area projected commercial and industrial employment growth of approximately 5,330 by 2040, as shown in Table 2-39 in Chapter 2 of this Background Report. While the projections shown in Table 2-39 account for employment categories in addition to commercial and industrial uses, the limited amount of land available for employment-supporting uses could constrain job growth.

Table 2-40 in Chapter 2 summarizes potential land demand to accommodate projected employment by type of job and compares the potential demand with the commercial and industrial land supply shown in Table 3-23 and Table 3-24. As Table 2-40 shows, there would be a 43.2-acre deficit of commercial land and a 6.6-acre deficit of industrial land. To determine how best to support the County's economic development goals, it would be prudent to evaluate the overall supply of land designated for non-residential uses during the alternatives development and evaluation phase of the General Plan Update. This would include an evaluation of the spatial distribution of commercial and industrial land.

TABLE 3-23
REMAINING COMMERCIAL AND INDUSTRIAL EMPLOYMENT POTENTIAL BY ZONE

Zoning Classifications		Building Coverage (% Lot Area)*	SF / Emp[1]	Unincorporated Area (inside city SOIs)		Unincorporated Area (outside city SOIs)		Total	
Non-Coastal Zones	**Zone Label**			**Acreage**	**Employees[2]**	**Acreage**	**Employees[2]**	**Acreage**	**Employees[2]**
Neighborhood Commercial	C1	40%	500	-	-	0.4	13	0.4	13
Commercial Planned Development	CPD	40%	500	29.9	1,044	16.9	589	46.9	1,633
Industrial Park	M1	20%	500	-	-	8.3	145	8.3	145
Limited Industrial	M2	20%	500	67.3	1,172	9.5	166	76.8	1,339
General Industrial	M3	20%	500	38.2	665	8.6	150	46.8	816
Subtotal				**135.4**	**2,881**	**43.8**	**1,064**	**179.2**	**3,945**
Saticoy Development Code Zones									
Town Center	TC	60%	500	1.2	63	-	-	1.2	63
Industrial	IND	50%	500	4.0	175	-	-	4.0	175
Subtotal				**5.2**	**238**	**-**	**-**	**5.2**	**238**
Total				**140.6**	**3,119**	**43.8**	**1,064**	**184.4**	**4,183**

[1]Assumptions for building coverage and square footage per employee are derived from the Ventura County General Plan Land Use Appendix Figure 3.2.3, Employment Holding Capacity. Building coverage assumptions are based on average of building intensity assumptions in Figure 3.2.3, as well as typical industry standards.

*[2]Potential employee yield from available land calculated as follows: [Number of Acres] * [% Bldg Lot Coverage] ÷ [Employee / Sq.ft.] * [43,560 Sq.ft. / 1 Acre] = [Number of Employees]*

TABLE 3-24
REMAINING COMMERCIAL AND INDUSTRIAL EMPLOYMENT POTENTIAL BY PLANNING AREA

County Planning Area	Unincorporated Area (inside city SOIs)		Unincorporated Area (outside city SOIs)		Total	
	Acreage	Employees	Acreage	Employees	Acreage	Employees
Ahmanson Ranch	-	-	-	-	-	-
Camarillo	-	-	0.7	12	0.7	12
Fillmore	-	-	-	-	-	-
Las Posas	-	-	0.2	8	0.2	8
Moorpark	-	-	-	-	-	-
North Half	-	-	-	-	-	-
Oak Park	-	-	-	-	-	-
Ojai	27.2	948	25.4	727	52.6	1,675
Oxnard	7.4	176	-	-	7.4	176
Piru	-	-	8.7	162	8.7	162
Santa Paula	-	-	8.6	150	8.6	150
Simi Valley	-	-	0.1	5	0.1	5
Thousand Oaks	-	-	-	-	-	-
Ventura	106.1	1,995	-	-	106.1	1,995
Total	**140.6**	**3,119**	**43.8**	**1,064**	**184.4**	**4,183**

Regulatory Setting

State

Assembly Bill 2299 (AB 2299) and Senate Bill 1069 (SB 1069)

These bills, passed in 2016, streamline the accessory dwelling unit (ADU) approval process, eliminate certain parking requirements, limit utility fees charged when existing building space or structures are converted to ADUs, and modify the minimum size of ADUs. Both bills took effect in January 2017.

Assembly Bill 2406 (AB 2406)

AB 2406 authorizes local agencies to develop an ordinance allowing for Junior accessory dwelling units, which are defined as new dwelling units constructed within the walls of an existing main structure and include an existing bedroom.

Local

2005 Ventura County General Plan

The General Plan cover summarizes holding capacity in Section 3.2 of the Land Use Appendix (Figures 3.2.2 and 3.2.3) and addresses residential development potential in Section 3.3 of the Land Use Appendix.

Ventura County Guidelines for Orderly Development

Ventura County's Guidelines for Orderly Development are a collaborative commitment to encourage urban development to occur within cities whenever and wherever practical; enhance the regional responsibility of County government; and facilitate orderly planning and development in Ventura County. The intent of the Guidelines is threefold: (1) Clarify the relationship between the Cities and the County with respect to urban planning; (2) Facilitate a better understanding regarding development standards and fees; and (3) Identify the appropriate governmental agency responsible for making determinations on land use requests. See discussion in Section 3.3 for more detail.

Key Terms

Farmworker Complex. Farmworker camp (five or more dwelling units) on existing farms or ranches and licensed by the State and exempt from local building inspection; or farmworker housing projects developed by non-profit corporations and subsidized with Federal, State and/or local funding. In Ventura County, Farmworker Housing Complexes are allowed in the AE and OS zones and are subject to the setback and height standards of those zones. The building coverage standards of those zones do not apply to Farmworker Housing Complexes. The parking standards for lower-income housing projects may be adjusted based on reduced demand for parking spaces.

Farmworker Housing (Individual Units). Housing for farmworkers or animal caretakers permitted by the Ventura County Non-Coastal Zoning Ordinance on parcels zoned AE, OS, or RA that also meet certain requirements. Farmworker units are occupied by a farmworker, and his or her family, employed full time and working on the same lot on which the dwelling unit is located or on other land that is under the same ownership or lease as the subject lot.

Holding Capacity is the theoretical amount of development that could occur in the community based on "build-out" of adopted plans (or zoning).

Remaining Development Potential is the amount of development that could occur in a community beyond that which is already developed and accounting for constraints to future development.

Second Unit (Accessory Dwelling Unit). As defined by the Ventura County Non-Coastal Zoning Ordinance, a dwelling unit that is accessory to a principal dwelling. Second dwelling units include, but are not limited to, guest quarters, guesthouses, maid's quarters, granny flats, and sleeping rooms. Where a room or rooms have bathing facilities (i.e., a shower or bathtub) or a kitchen, or both, and no means of internal access to the principal residence, the room or rooms shall be a second dwelling unit.

References

Websites

http://www.vcrma.org//planning/ordinances/planning-ordinances.html.

SECTION 3.8 CITY GENERAL PLANS

Introduction

This section discusses the general plans of neighboring cities because the land use portion of these plans can affect growth and development within Ventura County.

Major Findings

None.

Existing Conditions

Ventura County contains 10 incorporated cities which account for 759,262 residents, or about 88.5 percent of the total county population. Half of the incorporated cities have populations less than 50,000. Table 3-25 shows the ten cities and their percentage of Ventura County population in 2017.

TABLE 3-25
POPULATION DISTRIBUTION
Ventura County
2017

Incorporated Cities	Population	Percent of County
Camarillo	69,923	8.2%
Fillmore	15,683	1.8%
Moorpark	36,828	4.3%
Ojai	7,553	0.9%
Oxnard	207,772	24.2%
Port Hueneme	22,808	2.7%
Santa Paula	30,654	3.6%
Simi Valley	127,309	14.8%
Thousand Oaks	131,457	15.5%
Ventura	109,275	12.7%
Incorporated Cities Subtotal	*759,262*	*88.5%*
Unincorporated Area	*98,424*	*11.5%*
County Total	**857,686**	**100.0%**

Source: California Department of Finance, May 2017.

Each city has adopted a general plan that contains goals, policies, and programs that guide land use decisions. This section describes the areas covered by each city's general plan and the policy focus of each plan, including issues regarding growth, annexation, and projected development. Following descriptions of each city's general plan, Table 3-26 summarizes the dates of adoption, horizon years, and population holding capacity for each general plan.

Oxnard General Plan

Oxnard, the most populous city in Ventura County, is located along the Pacific coast between the cities of Ventura, Port Hueneme, and Camarillo on U.S. Highway 1. The City of Oxnard adopted its 2030 General Plan in September 2011. The 2030 General Plan focuses on directing future growth and development within the CURB through a mixture of transit- and pedestrian-oriented development, transitioning underutilized industrial sites into mixed-use areas, and restoring the Ormond Beach wetlands. It identifies the following key issues: global warming, climate change, and renewable and alternative energy production and conservation; revitalization of existing neighborhoods and new development within the community; and the geographic and functional relationship to the Naval Base Ventura County (NBVC) facilities and operations. The Oxnard 2030 General Plan estimates that the city has the capacity for a total of 23,880 dwelling units and a population of 285,000. This would amount to an increase of 77,228 residents over the estimated 2017 population of 207,702.

Thousand Oaks General Plan

Thousand Oaks is located inland along U.S. Highway 101 to the north of the Santa Monica Mountains, east of Camarillo, and southwest of Simi Valley. The City of Thousand Oaks adopted its General Plan in 1970 and has amended the General Plan goals and policies through resolution in 1994, 1996, and 1997. The City has updated elements of the General Plan individually. As of June 2016, the most recent updates are to the Safety and Housing Elements, which were adopted in 2014. The General Plan goals and policies direct future development to low-lying areas to preserve open space in the hills and mountains around the city. The Thousand Oaks General Plan does not include an estimate of the buildout capacity of the city. The 2014 Housing Element does, however, estimate that the city has the capacity to accommodate 1,638 additional dwelling units. Assuming the average household size cited in the Housing Element (2.73), these units would accommodate an additional 4,472 residents.

Simi Valley General Plan

Simi Valley is the easternmost city in Ventura County and is located north of Thousand Oaks, east of Moorpark, and along State Route 118. The City of Simi Valley adopted its 2030 General Plan in June 2012. The vision of the 2030 General Plan is to "provide a safe, functional, healthy, and environmentally sustainable community while expanding to meet the needs of the future where people can live, work, and recreate in peace and tranquility." The 2030 General Plan has a buildout potential of 163,690 persons, which would be a 23 percent increase from the estimated 2017 population of 127,309, for a population increase of 36,381. The 2030 General Plan identifies land from the north to southeast of the existing SOI as an area of interest. The City will monitor activities taking place within the area of interest, such as landfill operations at the Simi Valley Landfill, mineral excavations, and oil extraction, to encourage the future agricultural or open space activities in the area. The 2030 General Plan directs future growth and development to lands within the CURB, and promotes use of greenbelts and mixed-use development.

Ventura General Plan

Ventura is located on the Pacific Coast, along U.S. Highway 101 and State Route 126. The City of Ventura adopted its 2005 General Plan in August 2005. The vision of the 2005 General Plan encompasses the environment, economy, planning design, and circulation, social activity, and collaboration. The 2005 General Plan describes the City's commitment to an "Infill First" strategy of directing new development to vacant land within the city and SOI (with the exception of SOAR land) to avoid sprawl. The General Plan identifies an increase in buildout potential from 39,176 residential units in 2004 to 69,086 units in

2025, for an increase of 29,910 units. The City's 2013 Housing Element, however, identified vacant and underutilized residential land with a capacity for only 4,599 units. Assuming the City's General Plan would actually accommodate a total of 69,086 units, Ventura would have a total population capacity of 177,551 (at the average household size of 2.57 cited in the 2013 Housing Element). This would amount to an increase of 68,276 residents over Ventura's estimated 2017 population of 109,275.

Camarillo General Plan

Camarillo is located east of the cities of Ventura and Oxnard along U.S. Highway 101. The City of Camarillo adopted its General Plan in 2004. The General Plan includes both a Camarillo Urban Restriction Boundary (CURB) Element and Land Use Element, which demonstrates an emphasis on preservation of open space and agricultural lands. The main theme of the General Plan is the preservation of quality of life. The Camarillo General Plan estimates a buildout population of 77,764, which represents an increase of 7,841 over the city's estimated 2017 population of 69,923.

Moorpark General Plan

Moorpark is located west of Simi Valley, north of Thousand Oaks, and along State Route 118. The City has updated elements of the existing General Plan individually, with the most recent updates to the Housing Element in 2014, Safety in 2001, and Noise in 1998. The City adopted the Land Use Element in 1992, and adopted the most recent text amendments in 2009. The Land Use Element emphasizes balanced community growth, land use compatibility, revitalizing downtown, preserving open space, and maintaining suburban rural community character in the periphery of the city. The Land Use Element estimates a buildout potential of 40,856, assuming an average household size of 2.74 and 14,911 potential dwelling units. According to the Department of Finance, Moorpark had an estimated population of 36,828 in 2017, which suggests a remaining population capacity of 4,028.

Santa Paula General Plan

Santa Paula covers approximately 4.7 square miles and is located north of the Santa Clara River and State Route 126 between Ventura and Fillmore. The City of Santa Paula adopted its General Plan in 1998 with a planning horizon to the year 2020. The vision of the General Plan is for the city to grow responsibly at a rate commensurate with the community's conservative growth. The City amended the General Plan in November 2000 through the passage of SOAR, which established the CURB. The City updated the Land Use Element in 2013, which includes the updated SOI that LAFCo amended in 2007. The 1978 SOI was almost contiguous with existing city limits, while the 2007 SOI spans 460 acres. The General Plan describes four expansion areas (Adams Canyon, Fagan Canyon, West Area 2, and South Mountain) and one planning area (East Area 2). The City plans for urbanization and development in these areas, with development of South Mountain limited to open space and recreational uses. The General Plan outlines a buildout potential of existing city limits and phased annexations of 10,493 dwelling units by 2020, which is an annual growth rate of 1.4 percent from 8,441 dwelling units in 1997. This would result in a total population capacity of 37,920, which is 7,266 more than Santa Paula's estimated 2017 population of 30,654.

Port Hueneme General Plan

Port Hueneme covers approximately 4.7 square miles between Oxnard and the Pacific Coast. The City of Port Hueneme updated its Housing Element in 2013 and all of its other general plan elements in 1998. Because the majority of land in Port Hueneme is urbanized, the General Plan focuses on vacant and

underutilized areas for redevelopment and economic revitalization. The Land Use Element identifies key sites and areas for future development, including Market Street, the Sunkist Site, and the Naval Civil Engineering Laboratory (NCEL) Reuse Site. According to the Land Use Element (1998), Port Hueneme has the capacity to accommodate an additional 317 dwelling units over the 20-year time frame of the General Plan, which represented an annual growth rate of 0.2 percent from 7,902 dwelling units in 1995. The 2013 Housing Element estimated that Port Hueneme had the capacity to accommodate only 2 new dwelling units, meaning the city is essentially built-out.

Fillmore General Plan

Fillmore covers approximately 3.4 square miles and is located north of the Santa Clara River and along State Route 126 to the east of Santa Paula. The City adopted its General Plan in 1988 with a planning horizon to the year 2010. The City updated the Land Use Element in 2005, which included adoption of a vision statement: "Foster a thriving small-town atmosphere in which civic pride, personal well-being, and a balanced economy are nurtured and protected." The 2005 Land Use Element also includes implementation measures to amend the SOI to include three areas totaling 481 acres. One of the areas is along east of Pole Creek, known as the PanAmSat site or Expansion Area 1. The second area is south of the SOI and will be included in the Southeast Specific Plan. The third area is the Johanson Site or Expansion Area 2, which is north of State Route 126 and east of the existing SOI. The Land Use Element also includes an implementation measure to establish an urban growth boundary to limit further expansion of the SOI. The total residential buildout potential is based on development within city limits, potential growth within the SOI, and potential growth within expansion areas is 6,610 dwelling units in 2020. The buildout potential represents an annual growth rate of 3 percent from the 2002 estimate of 3,898 existing dwelling units. The Land Use Element estimates a population of 22,693 at full buildout of the General Plan, which is 7,010 more than Fillmore's estimated 2017 population of 15,683.

Ojai General Plan

Ojai covers approximately 4.4 square miles and is located along State Routes 33 and 150 north of the city of Ventura and south of the Los Padres National Forest. The City of Ojai adopted elements of its General Plan in various combinations ranging from the Open Space, Conservation, and Recreation Elements in May 1987 to the Land Use and Circulation Elements in May 1997. The emphasis of the Land Use Element is preservation of Ojai's small-town character. The Land Use Element assumes a probable buildout potential of 3,838 dwelling units and 9,327 residents in 2050 based on an increase of 11 dwelling units per year. This would represent a remaining population capacity of 1,774, based on Ojai's estimated 2017 population of 7,553.

TABLE 3-26
CITY GENERAL PLAN POPULATION HOLDING CAPACITY
Ventura County
2017

City	General Plan Adoption	General Plan Horizon	2017 Population	General Plan Buildout Population	Remaining Population Capacity
Camarillo	2003	2020	69,923	77,764	7,841
Fillmore	2005	2010	15,683	22,693	7,010
Moorpark	1992	2010	36,828	40,856	4,028
Ojai	1997	2017	7,553	9,327	1,774
Oxnard	2011	2030	207,772	285,000	77,228
Port Hueneme	2009	2015	22,808	22,808	
Santa Paula	1998	2020	30,654	37,920	7,266
Simi Valley	2012	2030	127,309	163,690	36,381
Thousand Oaks	1997	2030	131,457	135,929	4,472
Ventura	2005	2025	109,275	177,551	68,276
Total			**759,262**	**973,538**	**214,276**

Source: City General Plans (see references at end of section); California Department of Finance, May 2017.

Regulatory Setting

State

General Plan Law (California Government Code Section 65300)

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning."

Key Terms

Buildout. Development of land to its full potential or theoretical capacity as permitted under current or proposed planning or zoning designations.

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SECTION 3.9 OTHER AGENCY PLANS

Introduction

This section discusses the plans, policies, and regulations of other agencies that affect growth and development within Ventura County. Regional, state, and federal agencies are generally not subject to the policies and plans adopted by local governments. Therefore, understanding the roles and responsibilities of these agencies is vital to ensure effective inter-jurisdictional cooperation and coordination.

Major Findings

- The 2016-2040 SCAG Regional Transportation Plan/Sustainable Communities Strategy highlights the potential for Port of Hueneme to be a preferred port for specialized cargo, such as automobiles and military cargo.
- The U.S. Forest Service Land Management Plan – Part 2 Los Padres National Forest Strategy provides a comprehensive, long-range forest plan for land and resource management.
- The Airport Comprehensive Land Use Plan for Ventura County protects the public from the adverse effects of aircraft noise, prevents concentration of people and facilities in areas that are susceptible to aircraft accidents, and ensures that no structures or activities encroach upon or adversely affect the use of navigable airspace. The plan applies to four airports: Camarillo and Oxnard Airports, Santa Paula Airport, and Naval Air Station (NAS) Point Mugu.

Existing Conditions

SCAG Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the metropolitan planning organization (MPO) for the counties of Ventura, Imperial, Los Angeles, Orange, Riverside, and San Bernardino. In April 2016, SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is a long-range plan with a combination of transportation and land use strategies to achieve the region's goals of balancing future mobility and housing needs with economic, environmental, and public health goals. The preferred scenario in the 2016 RTP/SCS sees a significant portion of residential and commercial growth in High-Quality Transit Areas (HQTAs) and Transit Priority Areas (TPAs). For planning purposes, an HQTA is defined as an area within one-half mile of a well-serviced fixed guideway transit stop, and it includes bus transit corridors where buses pick up passengers every 15 minutes or less during peak commute hours. A TPA is defined as location where two or more high-frequency transit routes intersect. In Ventura County, HQTAs are located in the urban centers of Oxnard and Ventura, at the Metrolink stations in Simi Valley and Moorpark, and along Highway 101 and Highway 33. The RTP/SCS estimates that three percent of the county's population and seven percent of the county's jobs were located within HQTAs as of 2012, and the vast majority were within incorporated cities (mostly Ventura and Oxnard). The RTP/SCS complements its focus on transit-oriented infill with a strong conservation framework that emphasizes redirecting growth from high-value agricultural and natural open space areas to existing urbanized areas. In doing so, it recognizes Ventura County's SOAR Initiative as an important safeguard in protecting agricultural assets.

Land Management Plan – Part 2 Los Padres National Forest Strategy

Los Padres National Forest spans approximately 1,950,000 acres through the counties of Ventura, Kern, San Luis Obispo, Santa Barbara, and Los Angeles. National forests are managed by the United States Forest Service (USFS), which is part of the U.S. Department of Agriculture. While land use decisions and resource management within national forests are outside the jurisdiction of Ventura County, USFS seeks input on major land use and policy decisions.

USFS published the Land Management Plan – Part 2 Los Padres National Forest Strategy in September 2005 to provide a comprehensive, long-range forest plan that includes details on land and resource management. The management plan emphasizes objectives with the likelihood of resulting in long-term sustainability (social, economic, and ecological) of the national forest over the next 10 to 15 years. The management plan focuses on the following areas:

- Protecting and enhancing watersheds;
- Providing world-class recreation;
- Providing world-class wilderness opportunities; and
- Promoting uses of the forest as a "living laboratory" for ecological diversity and scientific research.

USFS has divided Los Padres National Forest into five administrative units with district offices in Ojai, King City, Santa Maria, Santa Barbara, and Frazier Park.

Airport Comprehensive Land Use Plan for Ventura County

The Ventura County Airport Land Use Commission adopted the Airport Comprehensive Land Use Plan for Ventura County in July 2000. The purpose of the Airport Comprehensive Land Use Plan for Ventura County is to promote the safety and welfare of residents near military- and public-use airports. The plan seeks to protect the public from the adverse effects of aircraft noise, to prevent concentration of people and facilities in areas that are susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace. The plan considers three areas of land use compatibility:

- Compatibility of surrounding land uses with airport noise levels;
- Compatibility of surrounding land uses with respect to the safety of persons; and
- Protection of airspace needed for safe navigation.

The existing Ventura County General Plan includes policies to ensure compatible land use with airports, including the designation of land near airport approach and departure zones as agriculture or open space, and restriction of noise-sensitive land uses. The plan applies to four airports: Camarillo and Oxnard Airports, Santa Paula Airport, and Naval Air Station (NAS) Point Mugu.

Camarillo Airport

Camarillo Airport is located in Camarillo, three miles southwest of the city's central business district, less than one mile south of the U.S. Highway 101, and seven miles west of the Pacific coast. Camarillo

Airport is owned by Ventura County and operated by the Ventura County Department of Airports. Camarillo Airport serves as a general aviation reliever airport for the Los Angeles metropolitan area by providing an alternative to general aviation users. The land northeast of the Camarillo Airport is residential, while commercial and industrial development surrounds the U.S. Highway 101. The land northwest and southwest of the Camarillo Airport is covered by the Oxnard-Camarillo Greenbelt Agreement, which designates a large tract of the land as agriculture and open space permanently. Ventura County also adopted the Camarillo Airport Master Plan in July 2011.

Oxnard Airport

Oxnard Airport is less than two miles east of the Pacific coast on approximately 216 acres of land. Oxnard Airport has primary regional access through the U.S. Highway 101, which is located four miles north of the airport, and State Highway 1, which lies one mile east of the airport. The Ventura County Department of Airports operates Oxnard Airport. Oxnard Airport is a primary commercial service airport, although it is also a non-hub commercial airport because it enplanes less than 0.05 percent of U.S. domestic passengers. Most of the land to the south and east of the Oxnard Airport is urbanized with residential, commercial, and industrial activity. The majority of the land northwest of the airport is agricultural. Ventura County also adopted the Oxnard Airport Master Plan in August 2004.

Santa Paula Airport

Santa Paula Airport is located in Santa Paula between State Route 126 and the Santa Clara River. Santa Paula Airport is a privately-owned airport that is open for public use. The land to the north of the airport is developed for urban uses, the majority of which are residential. Most of the land to the south of the airport is agriculture and undeveloped lands.

NAS Point Mugu

The U.S. Navy operates three facilities, including NAS Point Mugu, which comprise Naval Base Ventura County. Naval Air Station (NAS) Point Mugu lies less than seven miles southeast of the city of Oxnard on the Pacific coast. Residential areas lie to the west, while most of the land surrounding NAS Point Mugu are agricultural. More information on Naval Base Ventura County is below and in Section 3.8, Military Institutions and Installations.

Naval Base Ventura County Joint Land Use Study

The Ventura County Transportation Commission published the Naval Base Ventura County Joint Land Use Study for Ventura County in September 2015. The Naval Base Ventura County (NBVC) Joint Land Use Study (JLUS) is a cooperative planning effort conducted as a joint venture between NBVC, surrounding cities and counties, state and federal agencies, organizations, and the public. The plan has three main objectives:

- Convene community and military representatives to identify, confirm, and understand the compatibility issues in an open forum, taking into consideration both community and NBVC perspectives and needs.
- Encourage cooperative land use and resource planning by NBVC, Federal and State agencies, and neighboring jurisdictions so that future plans and development are compatible with the training and operational missions at NBVC. Concurrently, seek ways to reduce operational impacts on adjacent lands within the Study Area.

- Provide a set of mutually supported tools, activities, and procedures (strategies) that local jurisdictions, Federal and State agencies, and NBVC can implement in order to avoid and reduce compatibility issues. The strategies proposed include both operational measures to mitigate installation impacts on surrounding communities and local government and agency approaches to reduce community impacts on military operations.

The NBVC JLUS Study Area is designed to address all lands near NBVC that may impact current or future military operations or be impacted by the military operations. The Study Area includes the facilities at NBVC Point Mugu, NBVC Port Hueneme, and NBVC San Nicolas Island; the nearby cities of Camarillo, Oxnard, and Port Hueneme; and Ventura County. More information on Naval Base Ventura County is in Section 3.10, Military Institutions and Installations.

Channel Islands Harbor Public Works Plan

Channel Islands Harbor (Harbor) is located, between Ventura Harbor and Port Hueneme, approximately five miles southeast of the mouth of the Santa Clara River. The County's Harbor Department manages the 310 acres that comprise the Harbor, of which 200 acres are on land, and 110 acres are under water. The Harbor is owned in fee and operated by the County of Ventura. All development and ground leases at the Harbor are approved by the Ventura County Board of Supervisors. The land portion of the Harbor lies within the municipal boundaries of the City of Oxnard, while the water area of the Harbor is within the unincorporated area of the county. Land uses within the Harbor are governed by a Public Works Plan certified by the California Coastal Commission, adopted first in time. There is a Channel Islands Harbor overlay within the City's Local Coastal Program (LCP).

The land use planning for the Harbor is done through the County Harbor Department, which implements the Channel Islands Public Works Plan working directly with the California Coastal Commission. The Public Works Plan addresses coastal issues and development policies related to public access and recreation, recreational boating, commercial fishing, biological and marine resources, traffic and circulation, dredging, and general land use and permitted uses. The Public Works Plan, and any amendments thereto, are reviewed and approved by the California Coastal Commission. The County issues all construction permits and other approvals for Harbor development that is authorized pursuant to the approved Public Works Plan.

Regulatory Setting

Federal

Forest and Rangeland Renewable Resources Planning Act (RPA) and National Forest Management Act (NFMA)

The Forest and Rangeland Renewable Resources Planning Act (RPA) established long-range planning and management of the national forests. In 1976 the National Forest Management Act (NFMA) amended the RPA. These laws require comprehensive, long-range forest plans to be prepared for each national forest that includes land use and management. These laws also require regular reports on the status of renewable resource trends.

State

Airport Land Use Commission Plans (Public Utilities Code Section 21674.7 (b) and 21675(a))

The purpose of Airport Land Use Commission Plans (ALUCPs) is to discourage incompatible land uses near existing airports. Prior to granting permits for the renovation or remodeling of an existing building, structure, or facility, and before the construction of a new building within any area governed by an Airport Land Use Commission Plan, a local agency must consider the height, use, noise, safety, and density criteria established by the ALUCP.

Government Code Section 65302.3

The General Plan and applicable specific plans shall be consistent with the ALUCP required under PUC Section 21675.

SB 1468, Government Code Section 65302 (a)(2)

Pursuant to Government Code section 65302 (a)(2), the land use element "shall consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace." Any development that seriously impacts or hinders the capacity of military bases, installations, and operating and training areas to carry out their routine activities is considered "encroachment" or incompatible land use.

Key Terms

None.

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SECTION 3.10 MILITARY INSTITUTIONS AND INSTALLATIONS

Introduction

This section describes the influence of active military installations in and around Ventura County. Analysis of existing military installations in the General Plan is intended to minimize incompatible land use in the vicinity of military installations to safeguard mission training requirements and military readiness areas.

Major Findings

- The Naval Base Ventura County (NBVC) is located along the Central Coast of Ventura County. NBVC is comprised of three separate Navy bases: NBVC Point Mugu, NBVC Port Hueneme, and NBVC San Nicolas Island.
- The Instrument Route-200 (IR-200) missile corridor is located primarily over rural land in Ventura County. Development within the IR-200 corridor could threaten the mission-critical testing and evaluation operations.

Existing Conditions

Naval Base Ventura County is located in Ventura County, see Figure 3-32. In addition to NBVC, the Instrument Route-200 (IR-200) missile corridor also passes through Ventura County.

Naval Base Ventura County

Naval Base Ventura County is located along the Central Coast of Ventura County. NBVC was established October 11, 2000, when the Navy consolidated two commands, Naval Air Station (NAS) Point Mugu and Construction Battalion Center (CBC) Port Hueneme. On October 1, 2004, San Nicolas Island was transferred to NBVC after several years under Naval Air Warfare Center, Weapons Division. There are more than 80 military commands located at NBVC that continue to support the diverse mission of the Department of Defense.

The areas surrounding the Navy military bases are designated as Military Compatibility Areas (MCAs). MCAs are geographic areas where military operations may impact local communities, and where local activities may affect the military's ability to conduct its mission(s). MCAs promote an orderly transition between community and military land uses to ensure land uses remain compatible.

NBVC Point Mugu MCA

NBVC Point Mugu MCA covers 4,486 acres of land and is surrounded by mostly unincorporated areas near the cities of Oxnard and Camarillo. NBVC Point Mugu is bordered by State Highway 1 to the north and east, the Pacific Ocean to the south and west, Ventura County Game Reserve to the west and northwest, and Ormond Beach to the west. The NBVC Point Mugu MCA encompasses the entire Sea Range, San Nicolas Island, portions of the commercial shipping lane, restricted airspace, and military training routes. NBVC Point Mugu MCA supports aviation operations from two runways, and provides training facilities for active duty and reserve aviation units.

NBVC Port Hueneme MCA

NBVC Port Hueneme MCA occupies about 1,615 acres of land and is the Navy's only deep water port between San Diego and Washington State. NBVC Port Hueneme MCA is located directly south of the cities of Port Hueneme and Oxnard. The NBVC Port Hueneme MCA includes the Force Protection Unobstructed Clear Zone Area (20 feet from the fence line of NBVC Port Hueneme) and the 500-foot clearance zone for mobilization corridor outside the fence line to connect to U.S. Highway 101 and State Highway 1. The NBVC Port Hueneme MCA operational area interacts with commercial shipping and port operations, and the city of Oxnard. Guidance for the NBVC Port Hueneme MCA includes requiring landscaping barriers, vertical height limits, and a safety area along the roadways to ensure safe mobilization of equipment and troops.

NBVC San Nicolas Island

NBVC San Nicolas Island is a Navy-owned island encompassing 17,427 acres of land. San Nicolas Island is one of eight islands that comprise the Channel Islands. San Nicolas Island is approximately 60 miles southwest of NBVC Point Mugu. The island contains critical weapons testing facilities, and combined with the Sea Range, provides the Navy with research, development acquisition, and testing and evaluation of and training with weapons systems. There is also one runway facility on the island.

Instrument Route-200 (IR-200)

The Instrument Route-200 (IR-200) missile corridor connects the Point Mugu Sea Range and the Naval Air Weapons Station (NWS) China Lake. The corridor spans Santa Barbara, Ventura, Los Angeles, and Kern counties. The IR-200 corridor is located primarily over rural land in Ventura County, namely the Los Padres National Forest. The Navy uses IR-200 in conjunction with the Sea Range for cruise missile testing, which is the only corridor for this purpose on the west coast. Cruise missile testing allows the military to deliver large warheads over long distances with high accuracy. Development within the IR-200 corridor could threaten the mission-critical testing and evaluation operations. The Ventura County Non-Coastal Zoning Ordinance does not identify the IR-200 corridor as a military mission footprint.

Channel Islands Air National Guard Base

The Channel Islands Air National Guard Base is home to the 146th Airlift Wing of the California Air National Guard. The 146th Airlift Wing moved from San Fernando Valley to the new facility built on 204 acres of State-owned land adjacent to Naval Base Ventura County, Point Mugu. The 146th Airlift Wing also utilizes NBVC Point Mugu airfield runways for take-offs and arrivals. The Channel Islands Air National Guard Base began operation at NBVC Point Mugu in 1990 and conducts nearly 2,000 operations annually.

FIGURE 3-32
MILITARY INSTITUTIONS AND INSTALLATIONS

Regulatory Setting

Federal

Federal Aviation Act and 14 CFR Part 77

The Federal Aviation Act and 14 CFR Part 77 provides the basis for evaluation of vertical obstruction compatibility. This regulation determines compatibility based on the height of proposed structures or natural features relative to their distance from the ends of a runway. The 500-foot rule states that every citizen has a "public right of freedom of transit in air commerce through the navigable air space. *Aaron v. United States* states that flights 500 feet or more above ground level do not represent a compensable taking because flights of this height or more enjoy a right of free passage without liability to the owners below.

State

SB 1468, Government Code Section 65302 (a)(2)

Pursuant to Government Code section 65302 (a)(2), the land use element "shall consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace." Any development that seriously impacts or hinders the capacity of military bases, installations, and operating and training areas to carry out their routine activities is considered "encroachment" or incompatible land use.

AB 1108, PRC Section 21083.9

AB 1108 amended the California Environmental Quality Act (CEQA) to require CEQA lead agencies to notify military installations when a proposed project could potentially impact military operations.

Key Terms

Decibel (dB). A physical unit commonly used to describe noise levels. It is a unit for describing the amplitude of sound, as heard by the human ear.

Military Installation. A base, camp, post, station, yard, center, homeport facility for any ship, or other area under the jurisdiction of the U.S. Department of Defense.

Military Training Route (MTR). The airspace established for the conduct of military aircraft training flights. MTRs are similar to complex systems of interrelated and interdependent highways in the sky that connect military installations and training ranges. They are used by the U.S. Department of Defense to conduct low-altitude navigation and tactical training.

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SECTION 3.11 ENVIRONMENTAL JUSTICE AND DISADVANTAGED COMMUNITIES

Introduction

This section describes the existing conditions and regulatory framework for addressing environmental justice and the needs of disadvantaged communities through the planning process. It first describes environmental justice concerns in general and State legislation addressing environmental justice. It then describes Senate Bill 244 (SB 244) as it pertains to Ventura County and includes an analysis in response to SB 244's requirements (as prepared in conjunction with the County's 2013 Housing Element).

Major Findings

- The Piru community meets the definition of a disadvantaged, legacy community, although no needs or deficiencies that require major improvements were identified that cannot be handled through private development opportunities.
- There are other unincorporated area communities that meet the definition of a DUC, (i.e., Saticoy and Nyeland Acres), but these communities are within the spheres of influence of Ventura and Oxnard, respectively.

Existing Conditions

Environmental Justice

According to California Code section 65040.12, "environmental justice" is the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." Throughout California, communities with lower incomes, lower levels of education, and higher proportions of minority residents often bear a disproportionate burden of environmental hazards. These environmental inequities are largely a result land use and development decisions that have led to higher levels of exposure to air and water pollution in lower income communities. Environmental justice laws seek to eliminate these inequities by ensuring that people of all socioeconomic backgrounds are treated equitably in the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. The focus of such laws is protecting socioeconomically disadvantaged communities that are already disproportionally burdened by remedying their burdens.

History of Environmental Justice in California

While requirements for addressing environmental justice through the planning process are relatively new, the issue of environmental justice in California is as old as 18th century Spanish colonization and loss of Native American lands. In more recent California history, the implementation of workplace protections for farmworkers, such as efforts to increase protection from toxic pesticides organized by Cesar Chavez in the 1960s, shows the progression of effort to address environmental injustice. The siting of a hazardous waste facilities in and near disadvantaged communities has also prompted considerable environmental justice concerns in California. For example, in Kettleman City, a toxic waste incinerator was proposed in the predominantly low-income farmworker and primarily Latino community that already had one of the

largest hazardous waste landfills in the nation (ultimately the proposal was withdrawn after three years of protest). Along with these anecdotal examples, several studies in the 1980s found race as a factor in the processes leading to the location of a disproportionately higher number of hazardous waste and toxic-producing facilities in poor and communities with more residents of racial minority groups.

Federal and State Efforts to Address Environmental Justice

United States EPA

The Federal government, through the Environmental Protection Agency (EPA), began addressing environmental justice issues by establishing the Environmental Equity Workgroup in 1990, followed by the establishment of the Office of Environmental Equity (now the Office of Environmental Justice) in 1992. In 1994, President Clinton signed Executive Order 12898, directing Federal agencies to develop strategies for addressing environmental and human health impacts in low-income and minority communities.

Senate Bill 115

California was the first state to address environmental justice in law, when Governor Davis signed Senate Bill 115 (SB 115) in 1999. The bill defined environmental justice and directed CalEPA to develop and implement environmental justice laws. Following SB 115, California has since instituted a series of laws protecting communities from environmental injustices, requiring consideration of the issue in policies, programs, and activities.

Senate Bill 1000

In response to increasing concerns about vulnerable communities in California experiencing instances of environmental injustice, the State Legislature passed and Governor Brown signed Senate Bill 1000 (SB 1000). SB 1000 requires that general plans adopted after January 2018 include either a stand-alone environmental justice element or goals, policies, and objectives addressing environmental justice integrated in other elements. The law requires general plans to do the following:

- Identify disadvantaged communities within the area covered by the general plan of a city, county, or city and county.
- Identify the policies to reduce health risks in disadvantaged communities, including reduction of pollution exposure; air quality improvement; and the promotion of public facilities, food access, safe and sanitary homes, and physical activity.
- Identify objectives and policies to promote civil engagement in the public decision-making process.
- Adoption of environmental justice goals, policies, and objectives, either in an environmental justice element or in other elements of the general plan. This requirement is triggered by the concurrent adoption or revision of two or more elements of the general plan on or after January 1, 2018. These objectives and policies should prioritize improvements and programs that address the needs of disadvantaged communities.

The primary tool used by to identify disadvantaged communities as defined by SB 1000 is the CalEPA CalEnviroScreen 3.0 mapping tool, which was developed and continues to be maintained by California's Office of Environmental Health Hazard Assessment. CalEnviroScreen is a screening methodology that

helps identify communities that are disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution. Chapter 4, Health and Well-Being, of this Background Report includes a discussion of the scoring system and factors used in identifying disadvantaged communities. Figure 4-13, in Section 4.4 (Active and Healthy Living Disadvantaged Communities) of Chapter 4, shows disadvantaged communities in Ventura County, as identified by CalEnviroScreen. This includes census tracts in the southeastern and northwestern Oxnard Planning Area and along Ventura Avenue in the Ventura Planning Area~~, southern Santa Paula Area, and the entire Piru Area~~.

Senate Bill 244

Senate Bill 244 (SB 244) requires cities, counties, and local agency formation commissions (LAFCO) to identify disadvantaged unincorporated communities and provide an analysis of water, wastewater, stormwater, drainage, and structural fire protection needs or deficiencies. SB 244 defines a "disadvantaged unincorporated community" as a fringe, island, or legacy community in which the median household income is 80 percent or less than the statewide median household income. See the following discussion for more details on SB 244 and how the County has addressed its requirements.

Senate Bill 244 and Disadvantaged Unincorporated Communities

The State Legislature passed SB 244 (Wolk) in 2011 and later amended with clarifying language in 2012 (SB 1090). According to the Governor's Office of Planning and Research's (OPR) Technical Advisory for Senate Bill 244: Land Use, General Plans, and Disadvantaged Communities, the purpose of this legislation is to identify disadvantaged communities underserved by public water, sewer and other services and "…to begin to address the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities."

SB 244 requires local governments to update the Land Use Element based on available data with "an identification of each legacy community within the boundaries of the county that is a disadvantaged unincorporated community, but not including any area within the sphere of influence of any city." The identification is to include a description of the community and map of its location. In addition, local governments are required to provide an analysis of water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies for each identified legacy community. Further, the statute requires an analysis of benefit assessment districts or other financing alternatives that could make the extension of services to identified communities financially feasible.

In conjunction with preparation and adoption of its 2013 General Plan Housing Element, the County completed an evaluation of disadvantaged unincorporated communities in Ventura County per the requirements of SB 244. The following discussion is excerpted from the 2013 Housing Element.

Identification of Disadvantaged Communities

Pursuant to the OPR Technical Advisory, counties are directed to identify DUCs in addition to those corresponding with Census Designated Places (CDPs) as defined by the U.S. Census Bureau. As recommended by OPR, the County consulted LAFCo staff and the 2012 Municipal Service Review LAFCo completed to identify the disadvantaged communities that met the state's definition of a DUC. LAFCo staff identified two communities: Nyeland Acres, and Saticoy. Because these communities lie within the spheres of influence of the cities of Oxnard and Ventura, the respective city must provide the analysis required by Government Code Section 65302.10.

OPR's Technical Advisory recommends that further analysis be conducted to identify any additional disadvantaged, legacy communities in the unincorporated areas of the county. A disadvantaged, legacy community is defined as a community with the following characteristics:

- Has an average median household income less than 80 percent of the state median income;
- Contains no less than 10 dwellings that are adjacent or in close proximity;
- Is geographically isolated;
- Has existed for 50 years or longer; and
- Is not located within a sphere of influence.

To comply with these provisions, the County conducted a GIS survey based on available American Community Survey (ACS) data (2007-2011, 5-year estimates) to determine if and where, disadvantaged communities exist in the unincorporated area. Based on the ACS Census tract data, three of the existing communities identified in the existing General Plan met the income criteria. They include Matilija Canyon, Northfork Springs, and Piru.

After conducting a review of the Matilija Canyon and Northfork Springs communities, the County found that neither community met the standards for a disadvantaged community based on OPR's Technical Advisory. As a result, these communities were not further evaluated for the analysis. Because the Census Tract that includes both Matilija Canyon and Northfork Springs includes all of the North Half of Ventura County, which is located in the Los Padres National Forest, the income data was not representative of these two smaller communities. Therefore, by using Department of Finance data, County Assessor's data and information available on the Internet, the County determined that neither the Matilija Canyon or Northfork Springs communities meet the definition of a disadvantaged community as provided in the statute. Matilija Canyon is a remote canyon with a resort and hot springs that is owned by a homeowner's association. Dwellings within Matilija Canyon are used for a mixture of homeowner, vacation rentals, and second vacation homes. In addition, Matilija Canyon is served by private wells and septic systems. Although there is a mix of residence types, it does not meet the income profile of a disadvantaged community as described above. Northfork Springs is also located in the National Forest, and this community includes approximately 30 to 35 parcels, many of which are vacant. The properties in the Northfork Springs community are large, ranging in size from just under one acre to two and a half acres. County Assessor's Office information indicates the property values exceed the range of affordability for lower income households as described in Table 3-27.

TABLE 3-27
HUD AFFORDABILITY CATEGORIES[1]
Ventura County
2010

Income Category	Percent of Median Household Income	Annual Household Income
Above-moderate income	>120%	> $104,040
Moderate income	80 - 120%	$69,360 - $104,040
Low income	50 – 80%	$43,350 - $69,360
Very low income	30 – 50%	$26,010 - $43,350
Extremely low income	<30%	< $26,010

Note: [1]Assumes a four-person household and a median household income of $86,700.
Source: U.S. Department of Housing and Urban Development, [find source date]. .

Beyond what is recommended by the OPR Technical Advisory, the County considered all existing communities within the unincorporated county to determine whether they meet the criteria for a disadvantaged, legacy community as described above. The County only identified the Piru community as a disadvantaged, legacy community.

Piru Community

Piru is an unincorporated community located along SR 126 within the Piru Area of Interest. The community is located approximately 6 miles east of Fillmore, within the Santa Clara River Valley in eastern Ventura County. (The Piru community is identified in Figure 3-20 and Figure 3-21 in Section 3.5.) The Piru Area Plan regulates land use in the Piru community, and it contains several maps that depict the land use designations for the area. Piru does meet the criteria of a disadvantaged, legacy community based on its isolated location, location outside a city sphere of influence, existence for over 50 years, population size, and low-income level.

In 2013, there were recent upgrades made to Piru's water and wastewater service. Data is available for Piru based on three certified Environmental Impact Reports (EIR) including the Focused Update to the Piru Area Plan EIR (2008), the Cabrillo Economic Development Corporation (CEDC) Valle Naranjal Farmworker Housing Project EIR (2009), and the Final Supplemental EIR for Housing Element Amendments (2011). The following analysis is based on the three recent project EIRs, along with updates, to fulfill the SB 244 requirements.

Water

The Piru community has adequate water service to serve existing development. Developers of new development will be required to pay connection and facility fees to meet any deficiencies including a new storage tank, new support well, and additional infrastructure. These fees will be assessed through the conditions of approval for three previously approved residential tract maps plus any additional new development, and are anticipated to cover the cost of the necessary water infrastructure improvements.

The Piru community receives potable water from Warring Water Service, Inc. (Warring Water). Warring Water's supply comes from groundwater from the underlying Piru Basin, which is managed by the United Water Conservation District (UWCD). The Piru Basin lies within the Santa Clara River watershed. Groundwater recharge occurs through percolation or runoff from surface water (Piru Creek, Hopper Canyon Creek, and Santa Clara River), direct percolation of precipitation, subsurface flow, and return of irrigation waters. Additionally, water from Lake Piru is diverted to percolation basins near the Piru community to provide recharge.

The Piru Basin is not currently adjudicated. Therefore, no set pumping limits have been established. The Piru Basin recovers to its historic highs because of the large volume of recharge it receives during wet cycles. Approximately 96 percent of the total groundwater that is pumped from the basin is for agricultural use.

Warring Water is supplied by three water wells that are capable of producing approximately 2.046 gallons per minute (gpm). With respect to water distribution and fire flow, the Warring Water system is capable of providing sufficient potable water and required flow for emergency situations to current accounts. However, previous assessment of water supply facilities prepared for the CEDC Valle Naranjal Farmworker Housing EIR indicates that cumulative new development in the Piru Community would require infrastructure upgrades for the supply, storage and distribution system. Required improvements include the addition of a new support well, upgrades and extension of piping, and additional storage

capacity including a new storage tank to accommodate additional demand for the Piru Expansion Area (394 units) and the CEDC Valle Naranjal Farmworker Housing project, which has 66 units. Construction of the CEDC Valle Naranjal project was completed in 2012. To address the water supply deficiencies, CEDC added a new emergency generator and infrastructure improvements to accommodate the Valle Naranjal project.

As indicated previously, it is anticipated that water storage capabilities will need to be enhanced to accommodate cumulative development. Warring Water has planned for these improvements. However, it is expected that the costs of these improvements would be shared by each new unit that is anticipated by the Piru Area Plan and other new developments via connection fees. New residential units for these sites would also pay new connection fees to the water purveyor when the water service is initiated. New connection fees were estimated for the Valle Naranjal project at $4,220 per unit. Similarly, connection fees would also be calculated and paid for by any other residential project developer. Payment of connection fees and implementation of needed infrastructure improvements will address distribution and storage system deficiencies. In 2009, three tentative tract maps were approved totaling 349 new units (also known as the Piru Expansion Area). These projects will be required to pay connection fees that will be used for necessary water system improvements. Although construction has not begun for these projects, the tract maps are valid until December 2018.

The following excerpt from the Piru Area Plan Update FEIR (2008) further describes the cumulative impacts for the area:

> *The cumulative build out of the Piru Community would add an additional estimated 283 new domestic users plus any additional future water demands from local industrial, and commercial, or agricultural connections. Therefore, the cumulative development will exceed Warring Water Service storage tank capacity. This will result in a significant impact to Warring's water storage capacity. The PUC has already approved plans for an additional tank. Warring has the right to charge new users "Facility Fees" as permitted by the PUC. This $2,000 (142pprox..) per-home-fee contributes to monies set aside for future facilities (such as storage tanks, pumps, etc.) that are necessary for the community. This will help pay for the new tank that will have to be built.*

Another component of the water supply in the Piru area includes reclaimed water from the Piru Wastewater Treatment Plant (PWWTP). The PWWTP capacity was recently expanded. Additional upgrades, including water recycling programs that will capture up to 500,000 gallons per day of reclaimed water for agricultural and landscape irrigation within the Piru area, is planned to be constructed in 2015 (see additional discussion below under wastewater). This planned improvement would provide a maximum potential increase of 284,000 gallons per day (up from the existing 216,000 gallons per day), that could serve new development in the form of landscaping irrigation throughout the Piru community. The use of reclaimed water for landscaping would make additional potable water available from Warring Water to serve domestic water needs of new development.

In summary, water service in the Piru community is adequate to serve the existing development. Developers of new development will be required to pay connection fees, and possibly facility fees, to meet any deficiencies including a new storage tank, new support well, and additional infrastructure. These fees will be assessed through the conditions of approval for three previously approved residential tract maps plus any additional new development, and are anticipated to cover the cost of the necessary water infrastructure improvements.

Wastewater

The Piru community is served by Ventura County Waterworks District (VCWD) # 16 for sanitary sewer service. Liquid wastes in Piru are treated at the Piru Wastewater Treatment Plant (PWWTP) that is owned and operated by VCWD #16. The PWWTP is located approximately 1.5 miles southwest of the Piru Community. Expansion of, and upgrades to, the PWWTP to improve the quality of the effluent and increase the capacity were completed in February 2010. The expansion upgraded the capacity of the treatment plant from 260,000 gallons per day (gpd) to 500,000 gpd. According to the Director of Water and Sanitation, the upgraded PWWTP is able to accommodate full buildout of the Piru Community with available capacity of approximately 99,000 gallons per day. Because the PWWTP expansion was designed to accommodate full buildout of the Piru Community, wastewater capacity can accommodate new development that is consistent with the General Plan. Therefore, no deficiencies to wastewater service were identified and no improvements to the sewer plant are necessary to continue to serve existing and new development.

The PWWTP was completed and placed in service in February 2010 to comply with the Los Angeles Regional Water Quality Control Board (LARWQCB) permit requirements. Total cost of the project was approximately $14.0 million. The County received about $ 8.5 million in American Reinvestment and Recovery Act (ARRA) grant funds, and the balance of the funds are from the State Water Resources Control Board – State Revolving Fund (SWRCB SRF) loan with a 1.0 percent interest for 30 years. No other infrastructure needs or deficiencies related to the PWWTP were identified.

The reclaimed water system is planned to be constructed by 2015 with a $3.5 million Proposition 84 grant. It will produce 500,000 gpd of reclaimed water that will be available only at full build-out capacity. At this time, the inflow of reclaimed water to the PWWTP is only about 210,000 gpd. When the reclaimed water facility is completed, the County plans to use this water for agricultural purposes in close proximity of the PWWTP to reduce water transport and overall costs. For a developer to use recycled water from the PWWTP, the infrastructure costs will be expensive because of the distance and elevation of the proposed developments in Piru area. However, if this becomes a development requirement from the County, the Water and Sanitation District will work with the developers to make this happen.

Storm Water Drainage

Piru, along with Fillmore, Santa Paula, East Ventura, El Rio, Oxnard, and Port Hueneme, are all located within the Santa Clara River Watershed (Zone 2). In the unincorporated area of Piru, the Ventura County Watershed Protection District (WPD) exercises regulatory jurisdiction over certain storm drainage detention basins and storm water drainages which are known as "red line" channels. The District manages 181.23 miles of red line channels in Zone 2, which can either be improved or unimproved. The red line channels in the vicinity of Piru include Piru Creek to the east and Warring Canyon Wash to the west.

Piru Creek drains towards the south from the Los Padres National Forest and the Lake Piru water reservoir to the Santa Clara River. Flows from the reservoir are controlled at the dam. Warring Wash is an unimproved ditch that generally extends along the western border of the Piru Community and flows south then west to join with the Real Canyon Wash and then south again towards the Santa Clara River. According to the County's Floodplain Manager, the Piru Community is intersected by the 100-year flood plain. The community of Piru receives an average of 17.36 inches of rain annually.

In 2005, heavy rains and storm waters flooded some parts of the Piru community and some residents were temporarily evacuated. The proposed Piru Expansion Area, where the three residential tract maps were approved in 2008, was not flooded in 2005. Although there was no flooding of the Colina Vista and

Citrus View residences, many residents left their homes as a precautionary measure as the Piru Creek filled with water but never topped its banks.

Within the past five years, the Ventura County Public Works Agency (PWA) installed a 24-inch diameter storm drain in Main Street with road funds, but as of 2013 PWA had no other drainage improvement plans. The storm drain along Main Street and its associated box culvert at Highway 126 is not a red-line channel, but is regulated by County PWA. Although additional storm drain improvements in the Piru community may be necessary with new development, a communitywide assessment has not been completed. The County requires any additional storm drain improvements or on-site storm water retention facilities to be installed at the developer's expense.

According to the PWA Development and Inspection Services Manager, the extent of mapped floodplains on the west side of the community, based on the FEMA Flood Insurance Rate Maps (FIRMs), can most likely be reduced with future improvements, including earth fill to minimize flooding. If the areas remain rural and agricultural, the lower or central part of the Piru community most likely would not experience flooding. However, according to the County's floodplain manager, a hydraulic analysis would be required as part of a building permit to determine the regulatory floodway and the actual floodplain boundaries for any new development. Based on the results of that analysis, permitting, siting, and construction of a residential development would, by regulation, need to occur outside the boundaries of the regulatory floodway and any development within the floodplain would need to be consistent with all Federal, State, and local regulations governing such development. While it is not clear where, if any, improvements will be necessary, new information suggests that portions of the Piru community may fall within the regulatory floodway. Additional hydraulic analysis would be necessary to determine the exact boundaries of the regulatory floodway and the water volume capacity of the existing drainages.

Although the Piru community may need some storm water drainage improvements, there is no comprehensive study available that identifies specific deficiencies. Generally, any new development project applicant is required to bear the cost burden of necessary improvements to protect their property from flooding. To more definitively define the floodway boundaries, a hydraulic study would be necessary. The cost of such a study is typically the property owner/developer's responsibility.

Structural Fire Protection

The Ventura County Fire Station Number 28, which is located on North Church Street in Piru, provides fire protection services in the Piru and east Santa Clara Valley area. The station was built in 1950 and was extensively remodeled in 2008. The station has been a strong center for the volunteer firefighter program over the years, producing many full-time firefighters from the ranks of volunteers. In 2013, the Firefighter position was upgraded to Firefighter/Paramedic. The Piru Fire Station is staffed daily by three firefighters and houses a medic/engine, a brush engine and a patrol (Patrol-16). During the height of fire season, Patrol-16 is staffed and assigned to the Lockwood Valley area.

The Piru community is not located within the mapped High Fire Hazard Areas (Figure 2.13.2b of the existing General Plan Hazards Appendix). Therefore, existing personnel, equipment, and facilities for the Piru community are adequate and provide the necessary response capability.

As indicated previously, Warring Water Service is the water purveyor in this area. In a previous EIR, Warring Water Service noted that, "…with its current obligations to existing customers, Warring has determined that no additional services can be added to the system without additional storage being provided, since the existing system is at its limits" (Warring Water Service 2008). Existing 2013 customer needs are being met, but additional storage capacity and upgrades are needed for both domestic and

emergency water needs for new development. The County expects that the costs of these improvements would be shared by each new unit that is anticipated by the Piru Area Plan via connection fees. The County would assess connection fees for all new residential units payable to the water purveyor when the water service is initiated. New connection fees were estimated for the Valle Naranjal project at $4,220 per unit. Payment of connection fees and implementation of needed infrastructure improvements would address distribution and storage system deficiencies. In 2013 there were no identified needs or deficiencies related to fire protection, therefore no financing for improvements is needed.

Benefit Assessment Districts/Financing Alternatives

Government Code section 65302.10 also requires "an analysis...of benefit assessment districts or other financing alternatives that could make the extension of services to identified communities financially feasible." Financing for the upgrades that were made to the PWWTP in 2010 were discussed above under wastewater. Potential new development in the Piru Community may be subject to the preparation of a hydraulic study to determine flooding susceptibility, or the extension of infrastructure to utilize recycled water for irrigation. Costs for service extensions to use recycled water for irrigation would be the responsibility of the developer. However, neither one of these possible requirements constitute a community wide deficiency in services. As indicated in the analysis, no specific needs or deficiencies were identified that would require major funding efforts in the Piru community.

Summary

In summary, although the Piru community meets the definition of a disadvantaged, legacy community, no needs or deficiencies that require major improvements were identified that cannot be handled through private development opportunities.

Regulatory Setting

State

Senate Bill 244 Disadvantaged Communities (Government Code Section 65302.10)

Senate Bill (SB) 244 requires that each city and county must complete the Disadvantaged Communities analysis in the Land Use Element on or before the adoption of its Housing Element. Municipalities must base the Disadvantaged Communities analysis on available data, including, but not limited to, the data and analysis developed pursuant to Section 56430, of unincorporated island, fringe, or legacy communities inside or near its boundaries.

Senate Bill 1000 (SB 1000)

SB 1000 was passed in 2016, and requires jurisdictions to identify environmentally disadvantaged communities and develop measures to mitigate the adverse effects. SB 1000 uses the California Environmental Protection Agency definition of disadvantaged communities, which is based on Senate Bill 535. The definition of an environmentally disadvantaged community is based on scores derived from CalEnviroScreen 2.0. Census tracts that rank within the highest (worst) 25 percent of all scores are defined as a disadvantaged community.

Local

Ventura County General Plan

The existing General Plan provides the disadvantaged unincorporated communities analysis in the Land Use Appendix, which was adopted in October 22, 2013.

Key Terms

Community. An inhabited area within a city or county that is comprised of no less than 10 dwelling units adjacent or in close proximity to one another.

Disadvantaged Unincorporated Community (DUC). A fringe, island, or legacy community in which the median household income is 80 percent or less than the statewide median household income.

Island Community. Any inhabited and unincorporated territory that is surrounded or substantially surrounded by one or more cities or by one or more cities and a county boundary or the Pacific Ocean.

Fringe Community. Any inhabited and unincorporated territory that is within a city sphere of influence.

Legacy Community. A geographically isolated unincorporated community that is inhabited and has existed for at least 50 years.

Municipal Service Review (MSR). A study conducted by LAFCo for a city, county, or special district that examines all public service needs for the area and recommends action to promote the efficient provision of public services.

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Persons Consulted

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APPENDIX 3.A HOLDING CAPACITY AND REMAINING DEVELOPMENT METHODOLOGY

This appendix describes how the holding capacity estimates and the remaining development potential estimates that appear in Section 3.7 were calculated.

Total Development Holding Capacity

The County's 2005 General Plan includes a detailed calculation of holding capacity for the entire county, including incorporated areas, based on existing plans and zoning (the County's and the cities'). The holding capacity estimates account for both residential capacity (dwelling units and associated population) and non-residential capacity (building square footage and associated employment). The estimates are aggregated to the County's Planning Areas, within which they are broken down by areas within city spheres of influence (SOIs) and those outside SOIs. This information is presented in Figures 3.2.2 (page 3) and 3.2.3 (page 12) in the current General Plan Land Use Appendix (10-22-13 Edition). The total development holding capacity summary depicted in Tables 3-17 and 3-18 is derived from these tables. To facilitate manipulation of the data in Figures 3.2.2 and 3.2.3, the tables were first converted into Excel spreadsheets. In doing so, Excel data fields were created to correspond with the source information in the Land Use Appendix figures. Table 3.A-1 shows how the data fields in the Excel spreadsheet were derived from the Land Use Appendix figures, first for residential and then for non-residential.

With this information converted into Excel data, summary tables were prepared according to geography (e.g., Planning Area, SOI) and land use designation (which in some cases included zoning categories). For Table 3-17 (residential) and Table 3-18 (non-residential), existing holding capacity was summarized by County Planning Area, with a distinction between areas within spheres of influence and outside of spheres of influence.

TABLE 3.A-1 DEVELOPMENT HOLDING CAPACITY SOURCE DATA	
Field	**Source in LU Appendix Figures 3.2.2 and 3.2.3**
Residential (Table 3-17)	
Planning Area	Land Use Designation column
City-Area-Community	Land Use Designation column
SOI	Land Use Designation column
Land Use Designation	Land Use Designation column
Gen. Plan Acres	Gen Plan Acres
Low Range DU/Ac	Low Range DU/Ac
High Range DU/Ac	High Range DU/Ac
Low Range DUs	Low Range DUs
High Range DUs	High Range DUs
Year 2020 Pop/DU	Year 2020 Pop/DU
Low Range Pop	Low Range Pop
High Range Pop	High Range Pop
Low Range Pop/Ac	Low Range Pop/Ac
High Range Pop/Ac	High Range Pop/Ac
Non-Residential (Table 3-18)	
Planning Area	Land Use Designation column
City-Area-Community	Land Use Designation column
SOI	Land Use Designation column
Designation	Land Use Designation column
General Plan Acres	Gen Plan Acres
Building Intensity (%)	Building Intensity (%)
Floor Area	Floor Area
Building Sq Ft	Building Sq Ft
Emp/Ksf	Emp/Ksf
Total Emp	Total Emp
Emp/Acre	Emp/Acre

Remaining Development Potential Estimation Methodology

Residential

The characterization of remaining development potential for residential uses is based entirely on the County's 2014 Housing Element Update, which included a detailed inventory of sources of land that could be suitable for housing to accommodate the County's RHNA. Section 3.3.7 (Inventory of Land Available for Residential Development) of the Land Use Appendix (10-22-13 Edition) documents the Housing Element analysis (starting on page 117). Similar to the total development holding capacity analysis, data was "mined" from the Land Use Appendix to create an Excel-based data table. This, in part, allowed for the creation of geographic summary information by linking the parcel-based Housing Element data to the GIS-derived parcel data created for the GP Update. Table 3.A-2 describes the Housing Element data used to create an Excel table with over 600 records that provides the basis for characterizing residential development potential summarized in Table 3-19 and Table 3-22. Table 3-22 is a composite of the parcel-specific data and the estimates that were presented in aggregate form in the

Housing Element (e.g., second units, farmworker units). For the latter, there was no individual parcel information, so the development potential was not associated with geography.

TABLE 3.A-2
HOUSING ELEMENT DEVELOPMENT CAPACITY SOURCES

Category	Sources (Land Use Appendix)
Parcel-specific inventory of vacant, residentially zoned land suitable for development. This information is the basis for Table 3-19 in the Background Report.	▪ Figure 3.3.7-1 (Residential High Density Zoned Parcels) ▪ Figure 3.3.7-7 (Piru Expansion Area: Rieder, Jensen, Finch Properties) ▪ Limoneira Company Farmworker Housing Complex near Santa Paula (APNs provided in Housing Element narrative on page 126) ▪ Cabrillo Economic Development Corporation in Piru (APN provided in Housing Element narrative on page 126) ▪ Figure 3.3.10-1 (Vacant Parcels Suitable for Moderate-Income Residential Development) ▪ Figure 3.3.10-2 (Vacant Parcels Suitable for Above-Moderate Income Residential Development)
Second Units	▪ Narrative starting on page 118, including Figure 3.3.7-2 (Potential Second Dwelling Units). This amounts to approximately 16,000 units.
Farmworker Units (Ministerial)	▪ Narrative starting on page 121. The Housing Element estimated a capacity of 983 farmworker units. This capacity was not associated with specific parcels.
Farmworker Complexes	▪ Narrative starting on page 122. The Housing Element estimated a theoretical capacity of 9,349 units in farmworker complexes. This capacity was not associated with specific parcels.
CSUCI Housing	▪ Starting on page 124, there is a description of the potential for 242 units at CSUCI.

In addition to the sources shown in Table 3.A-2, the vacant parcels on land zoned OS, AE, and RA were analyzed to identify potential development available for principal dwelling units. The following constraints were applied to all vacant parcels within these zones to identify land considered suitable for development: public lands, steep slopes that exceed 20%, sensitive habitats (Threatened, endangered or rare species), land within a floodway, designation of either urban or existing community), parcels within the Ojai Traffic Impact Area, and parcels less than one acre in size. This resulted in the identification of 295 vacant parcels that could accommodate a principal dwelling unit. This total assumes no subdivision of OS, AE or RA zoned land. While these parcels can accommodate a principal single-family unit and a second unit, the potential second units on these parcels have been accounted for in Table 3.A-2. Table 3-21 summarizes these parcels by Planning Area.

Non-Residential (Commercial and Industrial)

The non-residential development potential summarized in Table 3-23 and Table 3-24 is based on an Excel-based data table that was built from the GIS database prepared for the GP Update project. The parcel-based data table includes records for every parcel in the unincorporated county (approximately 43,000 parcels). The estimation of remaining non-residential development and employment potential in the unincorporated area consisted of the following steps:

1. **Isolation of Vacant Non-Residential Land:** This entailed "filtering" the records to include only those parcels identified by the County Assessor as vacant (based on the use codes shown in Table 3.A-3). The Assessor classifies "land that lacks the essential, appurtenant improvements required to make it useful" as vacant or unimproved. This includes approximately 5,000 parcels or 8,250 acres of land as of 2016.

TABLE 3.A-3
ASSESSOR'S USE CODES: VACANT LAND

Use Code	Description
1011	Vacant Land to 5 Acres (Not Zoned for Multi-Family and Not Tract)
1012	Vacant Land over 5 Acres (Not Zoned for Multi-Family)
1013	Vacant Land Zoned for Multi-Family, R-2 and Up
1014	Vacant Land to 5 Acres, Residential Tract Only (Not Zoned for Multi-Family)
2011	Vacant Industrial Land to 5 Acres
2012	Vacant Industrial Land over 5 Acres
5011	Vacant Commercial Land to 5 Acres
5012	Vacant Commercial Land over 5 Acres
6011	Vacant Land (C-O, P-O, etc.)

2. **Isolation of Commercial and Industrial Land:** This consisted of filtering the 5,000 vacant parcels to focus only on those zoned for commercial or industrial uses (as summarized in Table 3.A-3. This resulted in 116 vacant parcels with commercial or industrial zoning.

TABLE 3.A-4
ZONING CLASSIFICATIONS: VACANT LAND

Zone	Zone Label
Neighborhood Commercial	C1
Commercial Planned Development	CPD
Industrial Park	M1
Limited Industrial	M2
General Industrial	M3
Town Center (Saticoy)	TC
Industrial (Saticoy)	IND
Coastal Commercial	CC
Coastal Industrial	CM

3. **Elimination of Substandard Parcels:** To further isolate developable land, parcels that did not meet minimum lot size requirements were filtered out. For instance, 10 parcels zoned CC-20,000 were eliminated because they were smaller than 20,000 square feet and over 60 parcels zoned M2-10,000 were eliminated because they were smaller than 10,000 square feet. This filtering process resulted in the isolation of approximately 100 developable commercial and industrial parcels totaling approximately 450 acres.

4. **Spot Check for Anomalies:** Based on a spot check using a combination of GIS data, Google Earth/Google Street View reconnaissance, and Assessor's parcel maps, several parcels were eliminated from the developable category. This included three parcels associated with the Rincon

onshore filtering facility that are zoned for industrial uses, but categorized by the Assessor as vacant; these parcels totaled over 260 acres.

This screening process resulted in the identification of 87 developable commercial and industrial parcels totaling 184.4 acres. Of these, 44 parcels (140.6 acres) are inside city spheres of influence and 43 parcels (43.8 acres) are outside of city spheres of influence, as summarized in Table 3-23. The same building intensity and employment density assumptions used for the development capacity analysis were applied to calculate potential employment, also shown in Table 3-23.

Additional Holding Capacity Assumptions

In addition to the development capacity methodology described above, Chapter 2, Demographics and Economics presents the economic and market demand measures for different land uses. Specifically, Table 2-40 includes calculations for the amount of vacant residential, commercial and industrial land (supply) available for development compared with the demand for these land uses based on projected population and employment growth through 2040.

Residential land supply in Table 2-40 does not account for residential development potential associated with a total of 26,867 ancillary dwelling units. These units comprise the following breakdown: 16,000 second units, 980 farmworker housing units, 9,350 farmworker complex dwelling units, 242 non-student dwelling units at California State University Channel Islands, and 295 dwelling units on vacant land zoned OS, AE, and RA which can accommodate an additional 295 principal dwelling units.

Residential land demand in Table 2-40 assumes that the County's remaining residential development potential on vacant residential land yields an average of 1.9 dwelling units per acre (722.9 acres/1,361 dwelling units). At this density, vacant residential land would support approximately 24 percent of the projected dwelling unit demand of 5,670 units between 2012 and 2040. Accommodating the remainder of the projected residential demand at this density (i.e., 4,309 units at 1.9 dwelling units per acre), would require rezoning up to 2,268 acres of land.

APPENDIX 3.B NON-COASTAL ZONING ORDINANCE ARTICLE 5/COASTAL ZONING ORDINANCE ARTICLE 4

This appendix includes the entirety of Ventura County's Non-Coastal Zoning Ordinance[1] *Article 5: Uses and Structures by Zone* and Coastal Zoning Ordinance[2] *Article 4: Permitted Uses*. The appendix presents the uses and structures that are allowed in each zone district and indicates the type of land use entitlement or permit required to establish a particular use in that zone.

[1] Ventura County Non-Coastal Zoning Ordinance, effective date April 18, 2017.
[2] Ventura County Coastal Zoning Ordinance, effective date July 1, 2017.

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ARTICLE 5:
USES AND STRUCTURES BY ZONE

(AM ORD. 4317 – 03-15-05)

Sec. 8105-0 - Purpose

Section 8105-4 and 8105-5 list in matrix form the land uses and structures that are allowed in each zone, under this Chapter, and indicate the type of land use entitlement required to establish a particular use in that zone. Land uses permitted herein may also require additional licensing/permitting from other Ventura County, State of California, or United States government agencies. (AM. ORD. 4092 - 6/27/95; AM. ORD. 4291 - 7/29/03)

Sec. 8105-0.5 Old Town Saticoy Development Code

All land uses and structures on parcels located within the Old Town Saticoy boundary, as specified in the Saticoy Area Plan and Old Town Saticoy Development Code (Article 19, Figure 1.1.2), shall be governed by the Old Town Saticoy Development Code. (ADD. ORD. 4479 – 9/22/15)

Sec. 8105-1 - Use of Matrices

Sec. 8105-1.1 - Key To Matrices

Except as otherwise provided in Section 8111-1.2.1.6, (specific to the RPD zone), the following symbols indicate the type of permit required for uses allowed in each zone: (AM. ORD. 4377 – 1/29/08)

	= Not Allowed
E	= Allowed, but exempt from obtaining a Zoning Clearance.
△	= Zoning Clearance, or other ministerially approved permit unless specifically exempted.
▲	= Zoning Clearance or other ministerially approved permit with signed waivers.
○	= Planning Director-approved Planned Development Permit
⊗	= Planning Commission-approved Planned Development Permit
●	= Board of Supervisors-approved Planned Development Permit
□	= Planning Director-approved Conditional Use Permit
⊠	= Planning Commission-approved Conditional Use Permit
■	= Board of Supervisors-approved Conditional Use Permit

(ADD. ORD. 3749 - 10/29/85; AM. ORD. 4092 - 6/27/95)

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

Sec. 8105-1.2

Italicized notes appearing in this Zoning Ordinance are editorial in nature and are not a part of the Ordinance or its regulatory scheme. (AM. ORD. 4187 - 5/25/99 - grammar)

Sec. 8105-1.3

No use or structure is allowed unless expressly identified in Section 8105-4 and 8105-5 (Matrices) or determined to be equivalent in accordance with Section 8105-2 or Section 8101-4.10. Furthermore, prior to the commencement of any use listed in the matrices, the entitlement identified as required for the use shall be obtained. Each use is subject to all of the provisions of this chapter even if it is exempt from a Zoning Clearance. (AM. ORD. 4291 - 7/29/03)

Sec. 8105-1.4

For the purposes of this Article, changing type style indicates where language is indented. Any use listed in matrix form which is indented shall be construed as a subheading of the heading under which it is indented.

Sec. 8105-1.5

Any use requested as an accessory use which is listed in the matrix at Sections 8105-4 and 8105-5 as a principal use shall be processed in accordance with the indicated requirements of the principal use. (AM. ORD. 3730 - 5/7/85; AM. ORD. 3749 - 10/29/85; AM. ORD. - 5/5/87; AM. ORD. 4092 - 6/27/95)

Sec. 8105-1.6

The abbreviations used in Sections 8105-4 and 8105-5 are to be interpreted as follows:

agric. - agriculture

CCR - California Code of Regulation

GFA - gross floor area

H.&S.C. - California Health and Safety Code

prelim. - preliminary

sq.ft. - square feet

W.&I.C. - California Welfare and Institutions Code

(ADD. ORD. 3810 - 5/5/87; AM. ORD. 4092 - 6/27/95; AM. ORD. 4187 - 5/25/99)

Sec. 8105-1.7

The following list of specifically prohibited uses is provided for informational purposes, and is not intended to be comprehensive:

a. Nuclear power plants;

b. Public polo events

c. Racetracks for horses or motorized vehicles, except motocross/OHV parks otherwise permitted:

d. Stadiums;

e. The parking of motor vehicles on vacant land containing no principal use;

f. Retail sales from wheeled vehicles, except as permitted pursuant to Sections 8105-4 and 8105-5.

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

g. Retail sales in the OS, AE, RA, RE, RO, R1, R2, RPD, and TP zones, except as expressly permitted by this Ordinance or as an accessory use as expressly allowed in the discretionary permit conditions. (ADD. ORD. 3810 - 5/5/87 AM. ORD. 4092 - 6/27/95; AM. ORD. 4118 - 7/2/96: AM. ORD. 4216 - 10/24/00; AM. ORD. 4377 – 1/29/08)

h. The operation of medical cannabis dispensaries, and the manufacturing, processing, storage or sales of medical cannabis or medical cannabis products. This prohibition does not apply to the delivery and transport of medical cannabis and does not apply to uses by a qualified patient or primary caregiver for which a permit is not required pursuant to Business and Professions Code section 19319. The definitions in Business and Professions Code section 19300.5 shall apply to this paragraph. (ADD. ORD. 4484 – 1/26/16)

i. The cultivation of medical cannabis as those terms are defined in Business and Professions Code section 19300.5 for which a license is required pursuant to Health and Safety Code section 11362.777. (ADD. ORD. 4484 – 1/26/16)

Sec. 8105-2 - Equivalent Uses Not Listed

Where a proposed land use is not identified in this Article, the Planning Director shall review the proposed use when requested to do so by letter and, based upon the characteristics of the use, determine which of the uses listed in this Article, if any, is equivalent to that proposed. (AM. ORD. 4092 - 6/27/95)

Sec. 8105-2.1

Upon a written determination by the Planning Director that a proposed unlisted use is equivalent in its nature and intensity to a listed use, the proposed use shall be treated in the same manner as the listed use in determining where it is allowed, what permits are required and what standards affect its establishment.

Sec. 8105-2.2

Determinations that specific unlisted uses are equivalent to listed uses shall be recorded by the Planning Department, and shall be considered for incorporation into the Zoning Ordinance in the next scheduled ordinance amendment.

(ADD. ORD. 3749 - 10/29/85; AM. ORD. 3810 - 5/5/87)

Sec. 8105-3 - Allowed Uses Exempt From Planning Entitlements

Exempted uses do not require a Planning Division issued entitlement if the uses meet and are maintained in accordance with the requirements of Section 8111-1.1.1b and all other provisions of this Chapter. (AM. ORD. 3730 - 5/7/85; AM. ORD. 3749 - 10/29/85; AM. ORD. 3810 - 5/5/87; AM. ORD. 4092 - 6/27/95)

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

Sec. 8105-4 - Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
AGRICULTURE AND AGRICULTURAL OPERATIONS										
Animal Husbandry										
Domestic Animals Per Art. 7	E	E	E	E	E					
more animals than are permitted by Art. 7 *(3, 19)*	☐	☐	☐	☐	☐					
Reduced Animal Setbacks Per Table 2 (Sec. 8107-2.5.1) *(16)*	▲	▲	▲	▲	▲					
Apiculture * *(2, 15)*	△	△	△							△
Aquaculture/Aquiculture *(15)*	☐	☐	☐	☐						
Insectaries for Pest Control *(3, 6, 15)*		See Principal Structures Related to Agriculture								
Vermiculture * *(16)*										
up to 5,000 sq. ft. of open beds	△	△	△	△	△					△
over 5,000 sq. ft. of open beds	☐	☐	☐	☐						
Wild Animals, Not Inherently Dangerous * *(16, 19)*	☐	☐	☐	☒	☒					
Inherently Dangerous Animals *(16)*	☒	☒								
Agricultural Contractors' Service And Storage Yards And Buildings *(15, 19)*	☐	☐	☐							
Crop and Orchard Production *(6,12,42)*	E	E	E	E	E	E	E	E	E	E
Packing, Storage Or Preliminary Processing Involving No Structures	E	E	E	E						E
Timber Growing And Harvesting, And Compatible Uses										
protected trees		Pursuant to Articles 7 and 9								
other trees	E	E	E	E						E
Principal Structures Related To Agriculture (Greenhouses, Hot Houses, Structures for Prelim. Packing, Storage and Preservation of Produce & Similar Structures; Cumulative GFA Per Lot) Except Agricultural Shade/Mist Structures * (*See Sec. 8106-6.4 & 8107-20)* *(15)*										
Up to 1,000 sq. ft. *(6)*	△	△	△	△						△
Over 1,000 sq. ft. to 20,000 sq. ft. *(15)*	△	△	☐							
Over 20,000 sq. ft. to 100,000 sq. ft.	☐	☐	☒							
Over 100,000 sq. ft. *(6)*	☒	☒								
Wineries (Including Processing, Bottling & Storage)*(2, 15)*										

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Up to 2,000 sq. ft. structure	△	△	△							
Over 2,000 to 20,000 sq. ft. structure	☐	☐	☒							
Over 20,000 sq. ft. structure	☒	☒	☒							
With public tours or tasting rooms	☒	☒	☒							
ACCESSORY USES AND STRUCTURES * *(15)*										
Accessory Structures Related to Agriculture and Animal Husbandry/Keeping * (e.g. Barns, Storage Buildings, Sheds; Cumulative GFA Per Lot) *(15, 25)*										
up to 2,000 sq. ft. *(15, 25)*	△	△	△	△	△	△		△		△
over 2,000 sq. ft. to 5,000 sq. ft. *(15, 25)*	△	△	☐	☐	☐	☐		☐		☐
over 5,000 sq. ft. to 20,000 sq. ft. *(25)*	△	△	☒							
over 20,000 sq. ft. to 100,000 sq. ft. *(25)*	☐	☐								
over 100,000 sq. ft. *(25)*	☒	☒								
exceeding height limits *(25)*	☐	☐	☐							
Offices * *(7, 19, 25)*	See Article 7									
Accessory bathrooms * (*See Sec. 8107-1.9*) *(25)*	△	△	△							
Agricultural Sales Facilities * *(16, 19)*										
Small facilities: up to 500 sq. ft., meeting standards established by Section 8107-6.2 *(25)*	△	△	△							△
Meeting standards of Sections 8107-6.2.1, 8107-6.2.2, and 8107-6.3.4 *(25)*	☐	☐	☐							
Large facilities: over 500 to 2,000 sq. ft. *(25)*	☐	☐	☒							
Large facilities: over 2,000 to 5,000 sq. ft. *(25)*	☒	☒	☒							
Wholesale nurseries for propagation: with sales facilities up to 500 sq. ft. *(26, 34)*	△	△	△							
with sales facilities of over 500 to 2,000 sq. ft. *(26, 34)*	☐	☐	☒							
with sales facilities of over 2,000 to 5,000 sq. ft. *(26, 34)*	☒	☒	☒							
with sales of non-agricultural items or materials not propagated on site. *(26, 34)*	☒	☒	☒							

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Agricultural Shade/Mist Structures * *(16, 25, 34)*										
up to 1,000 sq. ft. *(25)*	△	△	△	△						△
over 1,000 sq. ft. to 20,000 sq. ft. *(25)*	△	△	△	☐						
over 20,000 sq. ft. or 15% of lot area (whichever is greater) *(25)*	△	△	☐							
over 15% of lot area *(25)*	☐	☐								
Animal Shade Structures *(26)*										
Up to 500 sq. ft. *(26)*	△	△	△	△						△
Over 500 sq. ft. to 1,000 sq. ft. *(26)*	△	△	△	☐						☐
Over 1,000 sq. ft. to 10,000 sq. ft. *(26)*	△	△	△	☐						
Over 10,000 sq. ft. or up to 7.5% of lot area (whichever is greater) *(26)*	△	△	☐	☐						
Over 20,000 sq. ft. or up to 15% of lot area (whichever is greater), Permeable Structures only *(26)*	☐	☐	☐							
Over 15% of lot area, Permeable Structures only *(26)*	☐	☐								
Over 7.5% of lot area, Impermeable Structures only *(26)*	☐	☐	☐	☐						☐
Farmworker Dwelling Units * *(15, 25)*	△	△	△							△
not meeting standards established by Sec. 8107-26.1 & 2 *(25, 32)*	☐	☐	☐							☐
Animal Caretaker Dwelling Units *(26)*	△	△	△							△
not meeting standards established by Sec. 8107-26.1 & 2 *(26, 32)*	☐	☐	☐							☐
Open Storage Per Art. 7 *(6, 15, 25)*	**E**	**E**	**E**	**E**						**E**
Fuel Storage *(6, 25)*	△	△	△							△
Underground Fuel Storage Permitted By Other County Agencies *(25)*	**E**	**E**	**E**	**E**						**E**
Agricultural Promotional Uses *(26)*	☒	☒	☒							☒
ANIMAL KEEPING, NON-HUSBANDRY ***(6, 2, 15)***										
Domestic Animals Per Art. 7	**E**	**E**	**E**	**E**	**E**	☐		**E**		**E**
More Animals Than Are Permitted By Art. 7 *(15)*	☐	☐	☐	☐	☐	☐		☐		☐
Horses And Other Equines Per Art. 7 *(15)*	**E**	**E**	**E**	**E**	**E**	☐		**E**		**E**
More Animals Than Are Permitted By Art. 7 *(15)*	☐	☐	☐	☐	☐	☐		☐		☐

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Kennels/Catteries *(2, 15, 19)*	☐	☐	☐	☐						
Equestrian Centers *(16, 19)*	☐		☐	☐	☒					
Wild Animals, Not Inherently Dangerous *(15, 19)*	☐	☐	☐	☐	☐	☐		☐		☐
Inherently Dangerous Animals *(16)*	☒	☒	☒							
Reduced Animal Setbacks Per Table 2 (Sec.8107-2.5.1) (16)	▲	▲	▲	▲	▲	▲		▲		▲
Accessory Structures		See Accessory Structures Related to Agriculture and Animal Husbandry/Keeping; Animal Shade Structures; Animal Caretaker Dwelling Units *(32)*								
AIRFIELDS AND LANDING PADS AND STRIPS, PRIVATE	☒	☒	☒	☒						
ASSEMBLY USES *(39)*			☒	☒	☒	☒	☒	☒		
BOARDING HOUSES AND BED-AND-BREAKFAST INNS* *(2) (35)*	☒	☒	☒	☒		☒	☒	☒		
On Designated Cultural Heritage Sites *(29, 34)*	☒	☒	☒	☒		☒	☒	☒		
CARE FACILITIES *(SEE ALSO H. & S. C. AND W. & I. C.)*										
Day Care Centers *(19)*			☐	☐		☒	☒	☒		
Family Day Care Home *(28, 42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	
Intermediate: Care Of 7 Or More Persons *(2, 42)*			☒	☒		☒	☒	☒	☒	
Residential: Care Of 6 Or Fewer Persons *(42)*	△	△	△	△	△	△	△	⊗	⊗	
Care Of 7 Or More Persons *(7)*			☒	☒		☒	☒	☒		
CEMETERIES * *(SEE SEC. 8107-27) (15)*	☒		☒	☒	☒	☒	☒	☒		
Accessory Crematories, Columbaria And Mausoleums	☒		☒	☒						
COMMUNICATIONS FACILITIES * *(15, 46)*										
Non-Commercial Antenna, Ground-Mounted *(45)*	This use only applies if the facility is an accessory structure to a dwelling, as outlined in §8106-7.1 and §8107-1.1. For other types of Non-Commercial Antenna, see Wireless Communication Facility use below.									
Up to 40 ft. in height *(16, 19, 42, 46)* (see Section 8107-1.1)	△	△	△	△	△	△	△	△	△	△
Over 40 ft. to 75 ft. in height *(6, 42, 46)*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Wireless Communication Facility *(45)*										
Stealth Facilities (Building-Concealed, Flush-Mounted, etc.) 80 feet or less in height (see §8107-45.4) *(45)*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Non-Stealth Facilities, 50 feet or less in height *(45)*	☐	☐	☐	☐	☐					☐
Non-Stealth Facilities, over 50 feet in height, or Stealth Facilties over 80 feet (See § 8107-45.4(f)) *(45)*	☒	☒	☒	☒	☒					☒
CULTURAL/HISTORIC USES *(29)*										
Cultural Heritage Sites with Ordinance Deviations *(29)*		Pursuant to Article 7 and principal or accessory uses								
Historic Repository *(29) (40)*			☒	☒						
Interpretive Centers *(29)*	☒	☒	☒	☒	☒	☒		☒		
DWELLINGS *(43)*										
Dwellings, Single-Family * (Mobilehomes - See Sec. 8107-1.3)	△	△	△	△	△	△	△	⊗		△
Mobilehome, Continuing Nonconforming *(15)*	☐	☐	☐	☐	☐	☐	☐	☐		☐
Dwellings, Two-Family, Or Two Single-Family Dwellings							△	⊗		
Dwellings, Multi-Family *(42)(43)(44)*								⊗	△	
Farmworker Housing Complex *(31)*	⊗	⊗								
Dwellings, Accessory Structures To										
Buildings For Human Habitation: *(3, 19)*										
temporary buildings during construction * (19, 42)	△	△	△	△	△	△	△	△	△	△
second dwelling unit * *(2, 11, 15, 33)*	△	△	△	△	△	△	△	△		△
Buildings Not For Human Habitation Or Agricultural And Animal Husbandry/Keeping Purposes (E.G. Garage, Storage Building): *(3, 15, 19, 27)*										
up to 2,000 sq. ft. GFA per lot *(3, 6, 19,42)*	△	△	△	△	△	△	△	△	△	△
over 2,000 sq. ft. GFA per lot *(3, 6, 15, 19, 42)*	○	○	○	○	○	⊗	⊗	⊗	△	
exceeding height limits of main structure *(18, 42)*	☐	☐	☐	☐	☐	☐	☐	⊗	⊗	☐
accessory bathrooms * *(18, 42)*	△	△	△	△	△	△	△	△	△	△
Other Structures *(18)*										
freestanding light fixtures *per sec. 8106-8.6*	○	○	○	○	○	○	○	○		○
nonmotorized wheeled conveyances, within standards * *(19,42)*	△	△	△	△	△	△	△	△	△	△
which exceed standards *(42)*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Non-Commercial Antennas, Ground-Mounted* *(46)*	See Communication Facilities									

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Patios, Paving And Decks Not More Than 30" Above Finished Grade, Per Art. 6 *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Play Structures, Outdoor Furniture, Mailboxes And Similar Structures Exempt From Setback Requirements Of Art. 6 *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Swimming, wading and ornamental pools less that 18" depth capacity *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Soil and geologic testing for water wells, foundations, septic systems and similar construction *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Dwellings, Accessory Uses To										
Keeping Of Animals; Nonhusbandry *										
equines and other domestic animals per art. 7 *(19)*	E	E	E	E	E	☐		E		E
more animals than are permitted *by art. 7 (3, 15)*	☐	☐	☐	☐	☐	☐		☐		☐
pet animals in accordance with standards of art. 7 *(42)*	E	E	E	E	E	E	E	E	E	E
more animals than are permitted *by art. 7 (3, 15)*	☐	☐	☐	☐	☐	☐	☐	☐		☐
wild animals as pets *(sec. 8107-2.3.1) (15)*	△	△	△	△	△	△		△		△
more wild animals than are permitted *(16)*	☐	☐	☐	☐	☐	☐		☐		☐
inherently dangerous animals		Not permitted								
youth projects * *(16)*	▲	▲	▲	▲	▲	▲		▲		▲
Commercial uses, minor, for project residents *(See sec. 8109-1.2.5) (4)*								⊗		
Garage/yard sales *(See definition)(42)*	E	E	E	E	E	E	E	E	E	E
Home occupations * *(3, 42)*	△	△	△	△	△	△	△	△	△	△
Open storage, per art. 7 * *(19, 42) (See Section 8107-15)*	E	E	E	E	E	E	E	E	E	E
EDUCATION AND TRAINING										
Colleges and universities *(40)*			☒							
Schools, elementary and secondary (boarding and nonboarding)			☒	☒	☒	☒	☒	☒		
ENERGY PRODUCTION FROM RENEWABLE SOURCES *(3)*	☒	☒	☒							
FENCES AND WALLS 6' HIGH OR LESS PER ART. 6 *(42)*	E	E	E	E	E	E	E	E	E	E

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Over 6' High Per Art. 6 *(18, 42)*	△	△	△	△	△	△	△	△	△	△
FESTIVALS, ANIMAL SHOWS, AND SIMILAR EVENTS, TEMPORARY OUTDOOR *(35)*	☐	☐	☐							
FILMING ACTIVITIES * *(2, 15)*										
Permanent		Not permitted								
Temporary	☐	☐	☐	☐						
Occasional For Current News Programs/ Noncommercial Personal Use *(42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Occasional Per Sec. 8107-11.1 *(42)*	△	△	△	△	△	△	△	△	△	△
Occasional With Waivers *Per Sec. 8107-11.2*	▲	▲	▲	▲	▲	▲				
Occasional, Not Meeting Standards *(18)*	☐	☐	☐	☐	☐	☐				
FIREWOOD OPERATIONS *(3, 12)*	☐	☐	☐							
GOVERNMENT BUILDINGS *(2) (40)*		☒	☒	☒	☒	☒	☒	☒		
Correctional Institutions	☒		☒							
Fire Stations	☐	☐	☐	☒	☒	☒	☒	☒		
Law Enforcement Facilities	☐		☐	☒	☒	☒	☒	☒		
Public Works Projects Not Otherwise Listed As Uses In This Section Constructed By The County Or Its Contractors	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**		**E**
GRADING (*A PWA GRADING PERMIT MAY STILL APPLY) (7, 42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Within An Overlay Zone		Pursuant to Article 9								
HOSPITALS								☒		
LIBRARIES			☒	☒	☒	☒	☒	☒		
MAINTENANCE, ROUTINE/MINOR REPAIRS TO BUILDINGS, NO STRUCTURAL ALTERATIONS *(42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
MINERAL RESOURCE DEVELOPMENT * *(1)*	☒	☒	☒							
Mining And Accessory Uses * *(1)*	☒	☒	☒							
Less Than 1 Year In Duration (1, 22)	☐	☐	☐	☐						
Public Works Maintenance *(1,22,36)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**		**E**
Reclamation Plan (22)		Following a public hearing where a reclamation plan is required per SMARA in conjunction with a land use entitlement								

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Mining, Agricultural Site * *(22)*	▲	▲								
Oil And Gas Exploration And Production *(7)*	☐	☐	☐	☐						
Drilling, Temporary Geologic (Testing Only)	☐	☐	☐	☐						☐
MOBILE FOOD FACILITIES * *(18, 42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
MOBILEHOME PARKS *			☒	☒	☒	☒	☒	☒		
MODEL HOMES/LOT SALES: 2 YEARS * *(42)*			△	△	△	△	△	△	△	
More Than 2 Years *(42)*			☐	☐	☐	☐	☐	☐	☐	
ORGANICS PROCESSING OPERATIONS (COMPOSTING, VERMICOMPOSTING, CHIPPING AND GRINDING) *(24)*										
Biosolids Composting Operations ***** *(24)*	☒									
Commercial Organics Processing Operations ***** *(24)*										
Small-Scale (up to 200 cubic yards on-site) ***** *(24)*	△	☐	△	☐						△
Medium-Scale (over 200 cubic yards to 1,000 cubic yards on-site) ***** *(24)*	☐	☐	☐							☐
Large-Scale (over 1,000 cubic yards on-site) ***** *(24)*	☒	☒	☒							☒
PIPELINES/TRANSMISSION LINES, ABOVEGROUND * *(42)*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
PUBLIC SERVICE/UTILITY FACILITIES *(27)*										
Small Utility Structures *(17)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**		**E**
Excluding Office And Service Yards *(28)*	☒	☒	☒	☒	☒	☒	☒	☒		
Public Service/Utility Offices And Service Yards, When Located On Lots Containing The Majority Of The Agency's Facilities *(28)*	☒			☒						
RECREATIONAL, SPORT AND ATHLETIC FACILITIES *(40)*										

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Botanic Gardens and Arboreta* *(35)*	☒									
Camps * (8) (35)	☒		☒	☒						
Campgrounds * *(8)*	☒		☒	☒						
Fields, athletic, without buildings, With Or Without Night Lighting *(7, 19, 27)*				☐	☐	☐	☐	☐		
Without Night Lighting *(18, 27)*	☐									
Geothermal Spas with or without accessory commercial eating facilities *(7)*	☒									
Golf Courses And/Or Driving Ranges, Except Miniature Golf *(15)*	☒		☒	☒	☒	☒	☒	☒		
Motocross/Off-Highway Vehicle Parks **(17)*	☒									
Parks *(6)*	△	☐	△	△	△	△	△	⊗		
With Buildings	☐	☒	☐	☐	☐	☐	☐	☒		
Periodic Outdoor Sporting Events *(7)*	☐									
Recreational Vehicle Parks *	☒		☒	☒						
Recreation Projects, County-Initiated *(5)*	■	■	■	■	■	■	■	■		
Caretaker Recreational Vehicle, Accessory * *(5)*	△	△	△	△	△	△	△	△		
Retreats, Without Sleeping Facilities * *(8)*	☐		☐	☐						
With Sleeping Facilities *(8)*	☒		☐	☐						
Shooting Ranges And Outdoor Gun Clubs *(4)*	■									
SIGNS PER ARTICLE 10 *UNLESS EXEMPT FROM ZONING CLEARANCE PER SEC. 8110-3 (7, 42)*	△	△	△	△	△	△	△	△	△	△
SOIL AMENDMENT OPERATIONS *(16)*	☐	☐	☐							
STORAGE OF BUILDING MATERIALS, TEMPORARY * (3, 42)	△	△	△	△	△	△	△	△	△	△
TREES AND NATIVE VEGETATION: REMOVAL, RELOCATION OR PRUNING *(7, 12)*										

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Protected Trees, And Vegetation In Overlay Zone*		Pursuant to Articles 7 and 9								
Other Trees And Vegetation *(42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
USES AND STRUCTURES, ACCESSORY (OTHER THAN TO AGRICULTURE, ANIMALS OR DWELLINGS) *(42)*	△	△	△	△	△	△	△	△	△	□
Freestanding Light Fixtures *Per Sec. 8106-8.6*	○	○	○	○	○	○	○	○		○
Organics Processing Operations **(24)*										
On-Site Composting Operations (not related to normal farming activities) **(24)*										
Small-scale (up to 10 cubic yards on-site) * *(24, 42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Medium-scale (over 10 cubic yards to 200 cubic yards on-site) * *(24)*	△	△	△	△	△			□		△
Large-scale (over 200 cubic yards on-site) * *(24)*	□	□	□	□				□		
Waste Handling, Waste Disposal and Recycling Facilities *(24)*										
Household/CESQG Hazardous Waste Collection Facilities And Hazardous Waste Collection, Treatment and Storage Facilities * *(24)*	☒									
Recyclable Household/CESQG Hazardous Waste Collection Facilities * *(24)*	**E**									
Not meeting standards established by Section 8107-36.3.7 * *(24)*	□									
Soil And Geologic Testing For Water Wells Foundations, Septic Systems And Similar Construction *(19, 42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**
Stockpiling Of Construction Related Debris and/or Fill Material for Non-agricultural Operations *(28)*										
Less Than 1,000 Cu. Yds. *(28)*	△		△	△						
1,000 Cu. Yds Or More *(28)*	□		□	□						

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Swimming, Wading, And Ornamental Pools Less Than 18" Depth Capacity *(19, 42)*	E	E	E	E	E	E	E	E	E	E
Patios, Paving And Decks Not More Than 30" Above Finished Grade, Per Art. 6 *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Play Structures, Outdoor Furniture And Similar Structures Exempt From Setback Requirements Of Art. 6 *(18, 42)*	E	E	E	E	E	E	E	E	E	E
Open Storage Per Art. 7 * *(42)*	E	E	E	E	E	E	E	E	E	E
Parking/Storage of Large Vehicles *(38)*		Pursuant to Article 8 Sec. 8108-3.4								
To A Use Requiring A PD Permit Or CUP *(2)*		Pursuant to Article 11 Sec. 8111-6.1								
Dwelling, Caretaker										
VETERINARY HOSPITALS FOR LARGE ANIMALS *	☒	☒								
WASTE HANDLING, WASTE DISPOSAL AND RECYCLING FACILITIES *(24)*										
Disposal Facilities, Hazardous Waste * *(24)*	■									
Disposal Facilities, Oilfield Waste * *(24)*	☒									
Disposal Facilities, Solid Waste * *(24)*	■									
Recyclables Collection And Processing Facilities **(24)*	☒									
Recyclables Collection Centers * *(24)*	△		△	△	△	△	△	△		
Temporary Collection Activities **(24, 42)*	△	△	△	△	△	△	△	△	△	
Waste Collection And Processing Activities To Mitigate An Emergency **(24)*		Pursuant to Sec. 8107-36.3.12								
Waste Processing Facilities And Transfer Stations * *(24)*	☒									
WASTEWATER/SEWAGE TREATMENT FACILITIES										

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
Individual Sewage Disposal Systems *(42)*	△	△	△	△	△	△	△	△	△	△
On-Site Wastewater Treatment Facilities *(19, 42)*	☒	☒	☒	☒	☒	☒	☒	☒	☒	
Community Wastewater Treatment Facilities *(19)*	■	■	■	■				■		
WATER PRODUCTION, STORAGE, TRANSMISSION, & DISTRIBUTION FACILITIES: *(6)*										
4 Or Fewer Domestic Service Connections (Privately Operated)	△	△	△	△	△	△	△	△		△
5 Or More Domestic Service Connections (Privately Operated)	☐	☐	☐	☐	☐	☐	☐	☐		☐
For Agricultural Purposes (Privately Operated)	△	△	△							
Well Drilling For Use Only On Lot Of Well Location *(42)*	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

Sec. 8105-5 - Permitted Uses in Commercial and Industrial Zones

	CO	C1	CPD	M1	M2	M3
AIRFIELDS AND LANDING PADS AND STRIPS, PRIVATE				☒	☒	☒
AIRPORTS						☒
AMUSEMENT AND RECREATIONAL FACILITIES *(SEE DEFINITIONS)*			○			
Amusement Parks And Carnivals			☒			
Arcades			☐			
Batting Cages And Golf Driving Ranges, Indoor *(3, 15)*				☐		
Bicycle Racing Tracks, Outdoor *(3)*				☒		
Gymnasiums (See Definitions) (3, 15)			○	☐		
Motion Picture Theaters, Outdoor (Drive-In)			☒			
Racetracks (For Motorized Vehicles), Outdoor Shooting Ranges And Stadiums	Prohibited					
Shooting Ranges, Indoor				■	■	■
ASSEMBLY USES *(39)*	☐	☐	☐	☐	☐	
ART GALLERIES, MUSEUMS AND BOTANICAL GARDENS			○			
AUTOMOBILE SERVICE STATIONS		○	○			
BANKS AND RELATED FINANCIAL OFFICES AND INSTITUTIONS	○	○	○			
BARS, TAVERNS AND NIGHTCLUBS *			☐			
CARE FACILITIES: *(SEE ALSO H. & S.C. AND W. & I. C.) (6)*						
Day Care Center *(2, 15, 27)*	☐	☐	☐	☐		
Intermediate And Residential, Care Of 7 Or More Persons *(6)*	☒		☒			
Emergency Shelter *(42)*			△			
CAR WASHES, SELF-SERVICE OR AUTOMATIC *(2, 15)*			☒		☐	☐
CEMETERIES, COLUMBARIA AND MAUSOLEUMS				☐	☐	
Crematories, Accessory				☒	☒	
CLUB PROJECTS, TEMPORARY OUTDOOR		☐	☐			
COMMUNICATIONS FACILITIES *(46)*						

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Non-Commercial Antenna, Ground Mounted *(46)*	This use only applies if the facility is an accessory structure to a dwelling (See § 8105-4)					
Wireless Communication Facility *(45)*						
Stealth Facilities (Building-Concealed, Flush-Mounted, etc.) 80 feet or less in height (see §8107-45.4) *(45)*	☐	☐	☐	☐	☐	☐
Non-Stealth Facilities, 50 feet or less in height (See § 8107-45.4(f)(4)) *(45)*				☐	☐	☐
Non-Stealth Facilities, over 50 feet in height, or Stealth Facilties over 80 feet (See § 8107-45.4(f)(4)) *(45)*				☒	☒	☒
CONFERENCE CENTER/CONVENTION CENTER *(9)*			☒			
CONTRACTORS' SERVICE AND STORAGE YARDS AND BUILDINGS					○	○
CROP PRODUCTION *(12)*	**E**	**E**	**E**	**E**	**E**	**E**
USES AND STRUCTURES, ACCESSORY				△	△	△
Dwelling, Farm Worker (Maximum One Per Lot)				☐	☐	☐
Fuel Storage				△	△	△
Underground Fuel Storage Permitted By Other County Agencies				**E**	**E**	**E**
Offices				☐	☐	☐
Packing, Preliminary Processing Or Storage Of Crops; Without Structures				△	△	△
Agricultural Sales Facility; Small Up To 500 Sq. Ft. * *(15)*		△	△	△	△	△
not meeting standards established by Section 8107-6.2		☐	☐	☐	☐	☐
CULTURAL/HISTORIC USES *(29)(40)*						
Cultural Heritage Sites with Ordinance Deviations *(29)*	Pursuant to Article 7 and principal or accessory uses					
Historic Repository *(29)*			☐	☐	☐	
Interpretive Centers *(29)*	☒	☒	☐	☐	☐	☐
Museums		☐	☐	☐	☐	
DOG AND CAT GROOMING			○			
EDUCATION AND TRAINING (41)						
COLLEGES AND UNIVERSITIES	☒		○			
SCHOOLS; ELEMENTARY AND SECONDARY (NONBOARDING ONLY)	☒		○			
Professional and Vocational	☐	☐	○	○	☐	
Art, Craft, and Self-Improvement	☐	☐	○	○		

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
ENERGY PRODUCTION FROM RENEWABLE SOURCES *(3)*					☐	☐
FENCES AND WALLS 6' HIGH OR LESS PER ART. 6	**E**	**E**	**E**	**E**	**E**	**E**
Over 6' High Per Art. 6 *(18)*	△	△	△	△	△	△
FESTIVALS, ANIMAL SHOWS, AND SIMILAR EVENTS, TEMPORARY OUTDOOR *(3) (35)*			☐			
FILMING ACTIVITIES * *(2, 15)*						
Permanent		○	○	○	☐	☐
Temporary	☐	☐	☐	☐	☐	☐
Occasional For Current News Programs/Noncommercial Personal Use	**E**	**E**	**E**	**E**	**E**	**E**
Occasional Per Sec. 8107-11.1	△	△	△	△	△	△
Occasional With Waivers *Per Sec. 8107-11.2*	▲	▲	▲	▲	▲	▲
Occasional, Not Meeting Standards *(18)*	☐	☐	☐	☐	☐	☐
GOVERNMENT BUILDINGS, EXCLUDING CORRECTIONAL INSTITUTIONS *(2)*	○	○	○	○		
Correctional Institutions * *(30)*					☒	
Public Works Projects Not Otherwise Listed As Uses In This Section Constructed By The County Or Its Contractors	**E**	**E**	**E**	**E**	**E**	**E**
Fire Stations *(15)*	○	○	○	○	○	○
GRADING (A PWA GRADING PERMIT MAY STILL APPLY) (3)	**E**	**E**	**E**	**E**	**E**	**E**
Within An Overlay Zone	Pursuant to Article 9					
HEALTH SERVICES SUCH AS PROFESSIONAL OFFICES AND OUT-PATIENT CLINICS	○	○	○			
Ambulance Services	☒		○	○		
Hospitals	☒		☒			
Pharmacy, Accessory Retail, For Prescription Pharmaceuticals Only	○	○	○			
HOTELS, MOTELS AND BOARDING HOUSES			○			
KENNELS/CATTERIES *(15)*						☐
LABORATORIES; RESEARCH AND SCIENTIFIC				○	○	○
Medical And Dental	○		○	○	○	
LIBRARIES AND INFORMATION CENTERS	○	○	○			
MANUFACTURING INDUSTRIES						

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Apparel And Related Products				○	○	○
Dressmaking And Tailor Shops		○	○			
Chemicals *(See Definitions)*, Gases And Related Products Excluding Nerve Gas						☒
Drugs, Pharmaceuticals, Perfumes, Cosmetics And The Like				○	○	○
Soaps, Detergents And Cleaners						○
Electrical And Electronic Machinery, Equipment And Supplies				○	○	○
Batteries					☒	○
Household Appliances				☒	○	○
Transmission And Distribution Equipment, And Industrial Apparatus *(15)*				□	○	○
Food And Related Products				☒	○	○
Alcoholic Beverages						○
Bakery Products				○	○	○
Meat, Seafood And Poultry Packing Plants					☒	☒
Slaughtering; Refining And Rendering Of Animal Fats And Oils						☒
Sugar Refining						☒
Furniture And Related Fixtures					○	○
Instruments; Measuring, Analyzing And Controlling				○	○	○
Jewelry, Silverware, And Plated Ware				○	○	○
Leather And Leather Products				○	○	○
Tanning, Curing And Finishing Of Hides And Skins						☒
Lumber And Wood Products And Processes					○	○
Cabinet Work				○	○	○
Firewood Operations *(3, 12)*				□	□	□
Plywood, Particleboard And Veneer Manufacture; Wood Preserving						○
Sawmills And Planing Mills						○
Machinery, Except Electrical					○	○
Office, Computing And Accounting Machines				○	○	○
Metal Industries, Primary						☒
Rolling, Drawing And Extruding					□	○
Metal Products, Fabricated					○	○
Ammunition						☒
Machine Shops *(3)*				○	○	○
Plating, Polishing, Anodizing, Engraving And Related Operations				□	○	○
Musical Instruments, Including Pianos And Organs				○	○	○
Paper And Related Products						☒
Products From Paper And Paperboard, Including Containers				○	○	○

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Pens, Pencils And Other Office And Artists' Materials				○	○	○
Personal Goods				○	○	○
Petroleum Refining And Related Industries						☒
Photographic, Medical And Optical Goods, And Watches And Clocks				○	○	○
Printing, Publishing And Related Industries				○	○	○
Print Shops (Up To 1,500 Sq. Ft. Of GFA) *(3)*			○			
Rubber And Plastics Products *(2)*					☒	☐
Tire Retreading And Recapping					○	○
Signs And Advertising Displays				○	○	○
Soil Amendment Operations *(16)*				☐	☐	☐
Stone, Clay And Glass Products *(4)*					☒	○
Asbestos Products						☒
Cement, Concrete, Gypsum And Plaster, And Products Fabricated Therefrom *(2)*					☒	☐
Glass And Glassware, Pressed And Blown, Including Flat Glass						☐
Glass Product, Made Of Purchased Glass				○	○	○
Rock Crushing And Sandblasting Plants						☒
Textile Mill Products						○
Tobacco Products					○	○
Toys And Amusement, Sporting And Athletic Goods				○	○	○
Transportation Equipment *(15)*					☐	○
Motorcycles, Bicycles And Related Parts					○	○
MINERAL RESOURCE DEVELOPMENT *(1)*						☒
Mining And Accessory Uses * *(1, 19)*						☒
Less Than 1 Year In Duration *(1, 22)*				☐	☐	☐
Public Works Maintenance *(1,22,36)*	**E**	**E**	**E**	**E**	**E**	**E**
Reclamation Plan *(22)*	Following a public hearing where a reclamation plan is required per SMARA in conjunction with a land use entitlement					
Oil And Gas Exploration And Production *				☐	☐	☐
Drilling, Temporary Geologic (Testing Only)				☐	☐	☐
MIXED USE DEVELOPMENT WITHIN THE CBD OVERLAY ZONE PER SECTION 8109-4.5.5 *(37)*			○			
OFFICE; BUSINESS, PROFESSIONAL & ADMINISTRATIVE, EXCEPT HEALTH & VETERINARY *(6, 15)*	○	○	○	○	☐	
Telemarketing Offices *(21)*	○	○	○	○	☐	☐
ORGANICS PROCESSING OPERATIONS (COMPOSTING, VERMICOMPOSTING, CHIPPING AND GRINDING) *(24)*						

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Biosolids Composting Operations *(24)*					☒	☒
Commercial Organics Processing Operations (All Types) *(24)*					□	□
PARKING FACILITIES *(38)*	○	○	○	○	○	○
PIPELINES/TRANSMISSION LINES, ABOVEGROUND *(19)*	□		□	□	□	□
PROPULSION (ENGINE) TESTING						☒
PUBLIC UTILITY FACILITIES	☒	☒	☒	☒	☒	☒
Small Utility Structures *(19)*	**E**	**E**	**E**	**E**	**E**	**E**
Offices Only	○	○	○	○	○	○
Service Yards					○	○
RADIO STUDIOS (see §8107-45.2.3) *(45)*			□	○	○	○
RECORDING STUDIOS *(3, 15)*			○	□		
RENTAL AND LEASING OF DURABLE GOODS *(6, 15, 19)*			☒	□	□	□
Bicycle Rental			○			
REPAIR AND RECONDITIONING SERVICES *(2)*			□	□	○	○
Automobile Bodywork And Painting					○	○
Automobile Repair, Including Component Repair *(15)*			□	□	○	○
Electrical And Electronic Machinery And Equipment *(3, 6, 15)*				○	○	○
Heavy Machinery Repair, Including Trucks, Tractors And Buses					○	○
Instruments, Including Musical Instruments *(3, 6)*				○	○	
Office, Computing And Accounting Machines *(3, 6)*				○	○	
Photographic And Optical Goods *(3, 6)*				○	○	
Repair Of Personal Goods Such As Jewelry, Shoes And Saddlery		○	○			
RETAIL TRADE (SEE DEFINITIONS) (2, 19)		○	○			
Christmas Tree Sales * *(3)*		△	△			
Eating Establishments * *(18)*		○	○	□	□	
Feed Stores			□			
Lumber And Building Materials Sales Yards *(6, 15)*			☒		□	
Mail Order Houses (Nonstore)			○	○		
Mobile Food Facilities * *(18)*	**E**	**E**	**E**	**E**	**E**	**E**
More Than 30 Minutes In One Location *(18)*	△	△	△	△	△	△

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Motor Vehicle, Mobilehome, Recreational Vehicle And Boat Dealers			☐			
Nurseries			☐			
Uses And Structures, Accessory						
Outdoor Sales And Services, Temporary *(See Definitions) * (2)*		△	△			
Repair Of Products Retailed		△	△			
SALES/LEASING OF COMMERCIAL/INDUSTRIAL OFFICE SPACE IN EXISTING BUILDING ON SAME SITE AS UNIT/UNITS BEING SOLD/LEASED *(18)*	**E**	**E**	**E**	**E**	**E**	**E**
SALVAGE YARDS, INCLUDING AUTOMOBILE WRECKING YARDS WITH ANCILLARY RETAIL SALES OF SALVAGED MATERIALS						☒
SERVICE ESTABLISHMENTS						
Business (See Definitions)	○		○	○		
Auction Halls, Not Involving Livestock *(2)*			☐	☐	○	
Disinfecting And Exterminating Services *(6)*			☒	☒	☐	☐
Exhibits, Building Of				○	○	○
Industrial Laundries And Dry Cleaning Plants					○	○
Sign Painting And Lettering Shops			○	○	○	
Personal		○	○			
SIGNS PER REQUIREMENTS OF ARTICLE 10 *UNLESS EXEMPT FROM ZONING CLEARANCE PER SEC. 8110-3 (7, 15)*	△	△	△	△	△	△
Freestanding Off-Site Advertising Signs					☐	☐
SWAP MEETS *(15)*			☒	☐	☐	☐
TAXIDERMY			○			
TRANSPORTATION SERVICES *(SEE DEFINITIONS)*				☐	○	○
Bus And Train Terminals			☒			
Stockyard, Not Primarily For Fattening Or Selling Livestock						☒
Truck Storage, Overnight, And Waste Hauling Yards *(7, 23)*					○	○
TREES AND NATIVE VEGETATION: REMOVAL, RELOCATION OR DAMAGE *(7, 12)*						
Protected Trees, And Vegetation In Overlay Zone *	See Articles 7 and 9					
Other Trees And Vegetation	**E**	**E**	**E**	**E**	**E**	**E**
USES AND STRUCTURES, ACCESSORY, OTHER THAN LISTED ABOVE *(19)*						
Animals, Security, Per Art. 7 *(See Sec. 8107-2.4.4)*	**E**	**E**	**E**	**E**	**E**	**E**
More Animals Than Permitted	☐	☐	☐	☐	☐	☐

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Dwelling, For Superintendent Or Owner *(2, 6)*		☐	☐	☐	☐	☐
Dwelling, Caretaker *(3, 6)*				☐	☐	☐
Game Machines; Three Or Fewer		△	△			
Organics Processing Operations *(24)*						
On-Site Composting Operations *(24)*						
Small-Scale (up to 10 cubic yards on-site) *(24)*	**E**	**E**	**E**	**E**	**E**	**E**
Medium-Scale (over 10 cubic yards to 200 cubic yards on-site) *(24)*	☐	☐	☐	△	△	△
Large-Scale (over 200 cubic yards on-site) *(24)*				☐	☐	☐
Waste Handling, Waste Disposal and Recycling Facilities *(24)*						
Recyclable Household/CESQG Hazardous Waste Collection Facilities*(24)*		**E**	**E**	**E**	**E**	**E**
not meeting standards established by Sec. 8107-36.3.7 *(24)*		☐	☐	☐	☐	☐
Patios, Paving, And Decks Not More Than 30" Above Finished Grade Per Article 6 *(19)*	**E**	**E**	**E**	**E**	**E**	**E**
Recreational Facilities, Restaurants And Cafes; For Employees Only				○	○	○
Retail Sale Of Products Manufactured On-Site				△	△	△
Soil And Geologic Testing For Water Wells, Foundations, Septic Systems, And Similar Construction	**E**	**E**	**E**	**E**	**E**	**E**
Swimming, Wading, And Ornamental Pools Less Than 18" Depth Capacity *(19)*	**E**	**E**	**E**	**E**	**E**	**E**
Temporary Buildings During Construction * *(2)*			△	△	△	△
Vaccination Clinics, Temporary, For Pet Animals * *(5)*		△	△			
Play Structures, Outdoor Furniture, Similar Structures Exempt From Setback Requirements Of Article 6	**E**	**E**	**E**	**E**	**E**	**E**
Ordinary Maintenance/Minor Repairs To Buildings; No Structural Alterations	**E**	**E**	**E**	**E**	**E**	**E**
Vending Machines Not Displacing Required Parking Or Landscaping, Nor Blocking Pedestrian Access *(19)*	**E**	**E**	**E**	**E**	**E**	**E**
VETERINARY CLINICS, PET ANIMALS ONLY * *(2, 15)*		☒	○	○	○	○
WAREHOUSING AND STORAGE, INCLUDING MINISTORAGE ETC.				○	○	○
Automobile Impound Yards; Dead Storage Of Trucks, Buses And The Like *(2, 4)*						☒
Building Materials, Movers' Equipment And The Like; Indoor *(1, 8)*				○	○	○
Outdoor *(2)*						☒

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

	CO	C1	CPD	M1	M2	M3
Ministorage, with or without RV Storage * *(27)*			☐		○	○
Fertilizer And Manure						⊠
Hazardous Materials, Including Pesticides And Herbicides *(7)*						⊠
Petroleum And Gas (Butane, Propane, Lpg, Etc.); Explosives And Fireworks						⊠
Recreational Vehicle					○	○
Storage Of Building Materials, Temporary * *(3)*	△	△	△	△	△	△
WASTE HANDLING, WASTE DISPOSAL AND RECYCLING FACILITIES *(24)*						
Disposal Facilities, Oilfield Waste *(24)*						⊠
Disposal Facilities, Solid Waste *(24)*						■
Household/CESQG Hazardous Waste Collection Facilities And Hazardous Waste Collection, Treatment And Storage Facilities *(24)*					⊠	⊠
Recyclables Collection And Processing Facilities *(24)*				⊠	☐	☐
Recyclables Collection Centers *(24)*	△	△	△	△	△	△
Recyclable Household/CESQG Hazardous Waste Collection Facilities *(24)*					☐	☐
Reuse Salvage Facilities (Indoor Or Outdoor) *(24)*			☐	☐	☐	☐
Temporary Collection Activities, Outdoor *(24)*	△	△	△	△	△	△
Waste Collection And Processing Activities To Mitigate An Emergency *(24)*	△	△	△	△	△	△
Waste Processing Facilities And Transfer Stations *(24)*					■	■
WASTEWATER/SEWAGE TREATMENT FACILITIES						
Individual Sewage Disposal Systems	△	△	△	△	△	△
On-Site Wastewater Treatment Facility			⊠	⊠	⊠	⊠
Community Wastewater Treatment Facility					■	■
WATER PRODUCTION, STORAGE, TRANSMISSION, & DISTRIBUTION FACILITIES:						
4 Or Fewer Domestic Service Connections (Privately Operated) *(6, 15)*	△	△	△	△	△	△
5 Or More Domestic Service Connections (Privately Operated)	☐	☐	☐	△	△	△
Well Drilling For Use Only On Lot Of Well Location (Privately Operated)	**E**	**E**	**E**	**E**	**E**	**E**
WHOLESALE TRADE				○	○	○
ZOOLOGICAL GARDENS, ANIMAL EXHIBITS AND COMMERCIAL AQUARIUMS			⊠			

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

(1) ADD. ORD. 3723 - 3/12/85
(2) AM. ORD. 3730 - 5/7/85
(3) ADD. ORD. 3730 - 5/7/85
(4) AM. ORD. 3749 - 10/29/85
(5) ADD. ORD. 3749 - 10/29/85
(6) AM. ORD. 3810 - 5/5/87
(7) ADD. ORD. 3810 - 5/5/87
(8) AM. ORD. 3881 - 12/20/88
(9) ADD. ORD 3881 - 12/20/88
(10) ADD. ORD. 3895 - 4/25/89
(11) AM. ORD. 3920 - 12/19/89
(12) AM. ORD. 3993 - 2/25/92
(13) AM. ORD. 3995 - 3/24/92
(14) ADD. ORD. 3995 - 3/24/92
(15) AM. ORD. 4092 - 6/27/95
(16) ADD. ORD. 4092 - 6/27/95
(17) ADD. ORD. 4118 - 7/2/96
(18) ADD. ORD. 4123 - 9/17/96
(19) AM. ORD. 4123 - 9/17/96
(20) AM. ORD. 4166 - 4/14/98
(21) AM. ORD. 4175 - 10/6/98
(22) AM. ORD. 4187 - 5/25/99
(23) AM. ORD. 4214 - 10/24/00
(24) ADD. ORD. 4214 - 10/24/00
(25) AM. ORD. 4215 - 10/24/00
(26) ADD. ORD. 4215 - 10/24/00
(27) AM. ORD. 4216 - 10/24/00
(28) ADD. ORD. 4216 - 10/24/00
(29) ADD. ORD. 4220 - 12/5/00
(30) ADD. ORD. 4227- 1/9/01
(31) ADD. ORD. 4281 -5/6/03
(32) AM. ORD. 4281 - 5/6/03
(33) AM. ORD. 4282 - 5/20/03
(34) AM. ORD. 4291 - 7/29/03
(35) AM. ORD. 4317 – 3/15/05
(36) AM. ORD. 4389 – 9/16/08
(37) ADD. ORD. 4393 – 12/16/08
(38) AM. ORD. 4407 – 10/20/09
(39) ADD. ORD. 4411 – 3/2/10
(40) AM. ORD. 4411 – 3/2/10
(41) AM. ORD. 4417 – 10/05/10
(42) ADD.ORD. 4436 – 06/28/11
(43) AM. ORD. 4455 – 10/22/13
(44) AM.ORD. 4461 – 3/18/14
(45) ADD. ORD. 4470 – 3/24/15
(46) AM. ORD. 4470 – 3/24/15

**There are specific regulations for this use; see Article 7.*
Italicized numbers refer to amendment history at end of use matrices.
Legend: see Section 8105-1.1

ARTICLE 4:
PERMITTED USES

(REPEALED AND REENACTED ORD. 4451-12/11/12)

Sec. 8174-1 – Purpose

The purposes of this Article are to list the *uses* or types of *uses* allowed in each zone, and to indicate the type of permit required to establish a particular *use* in that zone.

Sec. 8174-2 – Interpretation

Sec. 8174-2.1
Each *use* is subject to all provisions of this Chapter.

Sec. 8174-2.2
Any *use* requested as an *accessory use* that is not listed as such in Sec. 8174-5, but is listed as a *principal use*, shall be subject to the indicated requirements of the *principal use*.

Sec. 8174-2.3
More than one principal *use* or principal structure may legally exist on a lot (e.g., *agriculture*, oil production, a *wireless communication facility* and/or a residence.) (AM.ORD.4498-07/01/17)

Sec. 8174-2.4
For the purposes of this Article, any *use* listed in matrix form that is indented shall be construed as a subheading of the heading under which it is indented.

Sec. 8174-3 - Original Permit Jurisdiction

Within the areas described below, the Coastal Commission retains original permit authority under the Coastal Act. All applicants for *development* proposed within these areas must obtain a *Coastal Development Permit* from the Coastal Commission in addition to any permits required by the County.

a. *Tidelands*;

b. Submerged lands;

c. Public trust lands, whether filled or unfilled;

d. Ports covered by Chapter 8 (commencing with Section 30700) of the Coastal Act (Port Hueneme);

e. State universities or colleges.

Sec. 8174-4 - Environmentally Sensitive Habitat Areas (ESHA)

Within an ESHA as defined in Article 2, or a *buffer area*, only the following *uses*, subject to all applicable standards and policies, are permitted:

a. Nature study;

b. *Developments* where the primary function is *habitat* enhancement or restoration;

c. *Shoreline protective devices*;

d. Passive recreational *uses* not involving *structures*;

e. *Uses* dependent on *habitat* values such as aquiculture and scientific research;

f. *Public Works facilities* in accordance with this Article and Sec. 8175-5.9, and all other applicable provisions of this Chapter and the LCP Land Use Plan.

Exceptions:

Within a *buffer area*, no new *principal structures* will be permitted unless prohibition of the *structure* from the buffer will preclude the utilization of the larger *parcel* for its designated *use*. When it is necessary to allow *structures* within the buffer they shall be located as far from the *habitat* resource as possible and mitigations shall be required to eliminate or reduce their impacts to an insignificant level. If a *principal structure* exists as of the adoption of this Plan, it may be rebuilt within the buffer zone if it is destroyed by fire or a natural disaster. If it is an otherwise *nonconforming use* it shall not be rebuilt within the buffer.

Sec. 8174-5 – Permitted Uses by Zone

The following zoning matrix establishes the type of permit required for land *uses* permitted in each zoning district. However, if a property is determined to be all or in part within an *environmentally sensitive habitat area* (ESHA) or *buffer area*, only limited *uses* are permitted. (See Sec. 8174-4 for *uses* permitted in an ESHA, and Sec. 8178-2 for specific standards applicable to an ESHA.)

Additionally, properties located within the Santa Monica Mountains Overlay Zone (denoted by /M after the base zoning) are subject to specific *development* standards (see Sec. 8177-4).

LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
AGRICULTURE AND AGRICULTURAL OPERATIONS (No Retail Except Produce Stands)												
Animal Husbandry (see Sec. 8175-5.2)	PDP	PDP										
• Apiculture (see Sec. 8175-5.2.1)	PDP	PDP										
• Structures for up to 25 Animal Units	PDP	PDP										
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC										
• Structures for More Than 25 Animal Units	CUP	CUP										
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC										
• More Animals Than Are Permitted By Sec. 8175-5.2.4	CUP	CUP										
Wild Animals	CUP											
Aquiculture	PDP	PDP										
Contractors' Service and Storage Yards and Buildings		CUP										
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5		ZC										
Crop Production	E	E	E	E	E	E	E	E	E	E	E	

E = Exempt* **ZC** = Zoning Clearance* **PD** = Planned *Development* Permit	**PDP** = PD Permit, Principally-Permitted** **PW** = Public Works Permit **CUP** = Conditional Use Permit	**Not Allowed**	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

**Not Appealable to the Coastal Commission*
***Principally-permitted uses are only appealable to the Coastal Commission in accordance with the criteria in Public Resources Code Sec. 30603(a) 1-3 and 5.*

LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
• With Brush or Vegetation Removal	Permit May Be Required. See "Brush or Vegetation Removal"											
• With Grading, Excavation or Fill	Permit May Be Required. See "Grading, Excavation or Fill"											
Growing, Packing, Storage or Preliminary Processing, in Structures												
• Total Floor Area Per Lot												
up to 20,000 sq. ft.	PD	PD	PD									
over 20,000 to 100,000 sq. ft.	PD	PD	CUP									
over 100,000 sq. ft.	CUP	CUP										
• If exempt per Sec. 8174-6.1, 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5												
Total Floor Area up to 100,000 sq. ft.	ZC	ZC	ZC									
Total Floor Area over 100,000 sq. ft.	ZC	ZC										
Improvements to Agricultural Structures	See "Improvements to Structures, Other Than Single Family Dwellings or Public Works Facilities"											
Uses and Structures, Accessory	PD	PD	PD									
• If exempt per Sec. 8174-6.1, 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	ZC	ZC	ZC									
• Dwellings, Farm Worker or Animal Caretaker:												
one on lot meeting the minimum lot size per zone		PDP										
one on lot not meeting the minimum lot size per zone		CUP										
more than one per lot		CUP										
If exempt per Sec. 8174-6.2, 8174-6.3.2, or 8174-6.3.5		ZC										
• Fences and walls	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
If exempt per Sec. 8174-6.1, 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	

E = Exempt*
ZC = Zoning Clearance*
PD = Planned *Development* Permit
PDP = PD Permit, Principally-Permitted**
PW = Public Works Permit
CUP = Conditional Use Permit

Not Allowed	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

**Not Appealable to the Coastal Commission*
***Principally-permitted uses are only appealable to the Coastal Commission in accordance with the criteria in Public Resources Code Sec. 30603(a) 1-3 and 5.*

LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
• Fuel Storage, 10,000 Gallons Maximum		PD										
If exempt per Sec. 8174-6.3.2		ZC										
• Offices		PD										
If exempt per Sec. 8174-6.1, 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5		ZC										
• Packing, Storage or Preliminary Processing of Crops (No Structures)	ZC	ZC										
within a maximum 20,000 sq. ft. structure per lot	PD	PD										
• Produce Stands, Retail, Accessory to Crop Production (Sec. 8175-5.8)		PD										
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5		ZC										
AIRFIELDS AND LANDING PADS AND STRIPS, PRIVATE	CUP	CUP									CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC									ZC	
AMBULANCE SERVICES										PD		
ANIMALS, KEEPING OF (See Sec. 8175-5.2)	PDP	PDP										
Apiculture (see Sec. 8175-5.2.1)	PDP	PDP										
Structures:												
• For Up To 25 Animal Units	PDP	PDP										
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC										
• For More Than 25 Animal Units	CUP	CUP										
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC										
More Animals Than Are Permitted By Sec. 8175-5.2.4	CUP	CUP										

E = Exempt* **ZC** = Zoning Clearance* **PD** = Planned *Development* Permit	**PDP** = PD Permit, Principally-Permitted** **PW** = Public Works Permit **CUP** = Conditional Use Permit	**Not Allowed**	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

**Not Appealable to the Coastal Commission*
***Principally-permitted uses are only appealable to the Coastal Commission in accordance with the criteria in Public Resources Code Sec. 30603(a) 1-3 and 5.*

LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Wild Animals	CUP											
ART GALLERIES										PDP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
AUTOMOBILE REPAIRING										CUP		
If exempt per Sec. 8174-6.3.4 or 8174-6.3.5										ZC		
AUTOMOBILE SERVICE STATIONS										PD		
If exempt per Sec. 8174-6.3.4 or 8174-6.3.5										ZC		
BANKS, SAVINGS AND LOANS AND RELATED OFFICES AND INSTITUTIONS										PD		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
BARBER AND BEAUTY SHOPS										PDP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
BARS, TAVERNS AND NIGHTCLUBS										CUP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
BOARDINGHOUSES, ROOMING HOUSES AND BED-AND-BREAKFAST INNS				CUP	CUP					CUP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5				ZC	ZC					ZC		
BRUSH OR VEGETATION REMOVAL	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
If exempt per Sec. 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	

E = Exempt*
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PD = Planned *Development* Permit
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Not Allowed	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
With tree alteration and removal	See Tree Alteration and Removal Below and Sec. 8178-7											
BUS TERMINALS										PDP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
CARE FACILITIES												
Day												
• Care of Six or Fewer Persons	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
If exempt per Sec. 8174-6.2, 8174-6.3.2, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
• Care of Seven or More Persons			CUP	CUP	CUP	CUP						
If exempt per Sec. 8174-6.2, 8174-6.3.2, or 8174-6.3.5			ZC	ZC	ZC	ZC						
Residential: Care of Six or Fewer Persons	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
• If exempt per Sec. 8174-6.2, 8174-6.3.2, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
CARWASHES, SELF–SERVICE OR AUTOMATIC										CUP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
CHURCHES AND OTHER BUILDINGS USED FOR RELIGIOUS WORSHIP			PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC		
CLUBHOUSES			CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP		PD
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC		ZC
CONFERENCE CENTERS/CONVENTION CENTERS										CUP		CUP
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		ZC

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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
DOG GROOMING										PDP		
DREDGING	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
If exempt per Sec. 8174-6.3.1 or 8174-6.3.2	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
DRILLING, TEMPORARY GEOLOGIC (Testing Only)	PD	PD	PD	PD							PD	
DWELLINGS												
Demolition of Single Family Dwellings and Accessory Structures	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
• If exempt per Sec. 8174-6.2 or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
Improvements to Residential Structures												
• Improvements to Single Family Dwellings and Accesory Structures	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• If exempt per Sec. 8174-6.2, 8174-6.3.2 or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
• Improvements to Other Dwellings and Accessory Structures	See "Improvements to Structures, Other Than Single Family Dwellings or Public Works Facilities"											
One Single-Family	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
• If exempt per Sec. 8174-6.2, 8174-6.3.2 or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
One Two-Family or Two Single-Family (also see Sec. 8175-3.10)						PDP	PDP	PDP	PDP			
• If exempt per Sec. 8174-6.2, 8174-6.3.2 or 8174-6.3.5						ZC	ZC	ZC	ZC			
Multi-Family									PDP			
• If exempt per Sec. 8174-6.2, 8174-6.3.2 or 8174-6.3.5									ZC			
Mobilehome, Continuing Nonconforming	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP				

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
DWELLINGS – ACCESSORY USES AND STRUCTURES												
Animals												
Apiculture (see Sec. 8175-5.2.1)	PD	PD										
Aviaries (see Sec. 8175-5.2.2)	PD	PD	PD	CUP	CUP							
Board and Care of Horses on Lots of 10 Acres or More	CUP		CUP									
Farm, Including Private Stables (see Sec. 8175-5.2.4b)	PD	PD	PD									
Pet Animals (consistent with Sec. 8175-5.2.4a)	E	E	E	E	E	E	E	E	E			
More Than Are Permitted By Sec. 8175-5.2.4	CUP	CUP										
Wild Animals	CUP											
Non-Commercial Antennas, Freestanding, above 40 feet (see Sec. 8175-5.1i). See "wireless communication facilities" for all other antenna facilities.	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• If exempt per Sec. 8174-6.3.4 or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
Exterior Storage consistent with Sec. 8174-6.2.5 and 8175-5.1j	E	E	E	E	E	E	E	E	E			
Fences and Walls	PD	PD	PD	PD	PD	PD	PD	PD	PD	See "Uses and Structures accessory to a Commercial or Industrial Use"		
• If exempt per Sec. 8174-6.2, 8174-6.3.5, or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	See "Uses and Structures accessory to a Commercial or Industrial Use"		

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Home Occupations (see Sec. 8175-5.1f)	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
Mobilehome/RV as Temp. Dwelling During Construction, consistent with standards in Sec. 8175-5.1e	PD	PD	PD	PD								
• If exempt per Sec. 8174-6.3.6	ZC	ZC	ZC	ZC								
Second Dwellings (see Sec. 8175-5.1g)	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• If exempt per Sec. 8174-6.2, 8174-6.3.2, 8174-6.3.5, or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
Septic Systems, Construction or Expansion of	PD	PD	PD	PD	PD	PD	PD	PD	PD			
Water Wells, Construction or Expansion	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• Incidental, appropriate and subordinate to a principally-permitted use	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
• With Brush or Vegetation Removal	Permit May Be Required. See "Brush or Vegetation Removal"											
• With Grading, Excavation or Fill	Permit May Be Required. See "Grading, Excavation or Fill"											
Water Wells, Testing to Determine Water Availability	See "Water Facilities"											
Accessory Uses and Structures Not Otherwise Listed	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• If exempt per Sec. 8174-6.2, 8174-6.3.2, 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
ENERGY FACILITIES, Including Energy Production From Renewable Sources	CUP										CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC										ZC	
FILM PRODUCTION, TEMPORARY (See Sec. 8175-5.6)												

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Lasting up to 14 days per production See Sec. 8175-5.6.1.1 for exceptions that require a PD permit	ZC	ZC	ZC	ZC	ZC	ZC	See Sec. 8175-5.6.5		ZC	ZC	ZC	
Lasting 15 to 180 days	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
Conducted in beach areas												
• Lasting up to 14 days per production. See Sec. 8175-5.6.1.2.1	ZC			ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	
Conducted with film pyrotechnics as defined in Article 2.	PD	PD	PD							PD	PD	
Conducted solely for non-commercial student projects or personal, private, or family use.	E	E	E	E	E	E	E	E	E	E	E	
• Except where Sec. 8175-5.6.1.1 applies.	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
• Except where Neighborhood Consent is required per Sec. 8175-5.6.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	
Conducted for purposes of reporting on current news events	E	E	E	E	E	E	E	E	E	E	E	
FIRE STATIONS	PD	PD	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	
GRADING, EXCAVATION, OR FILL, Pursuant To Sec. 8175-5.17	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• If exempt per Sec. 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
GEOTECHNICAL AND SOILS TESTING												
Without Brush or Vegetation Removal, and Without Grading	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
With Brush or Vegetation Removal	Permit May Be Required. See Brush or Vegetation Removal											
With Grading, Excavation or Fill	Permit May Be Required. See Grading, Excavation or *Fill*											
HARBOR USES (See Definitions)												PD

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Fleet Base Activities, Accessory to Offshore Drilling												CUP
Fuel Storage and Sales												CUP
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5												ZC
HEALTH CLINICS										PDP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
HOTELS, MOTELS, AND BOATELS										CUP		CUP
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		ZC
IMPROVEMENTS TO STRUCTURES, OTHER THAN SINGLE FAMILY DWELLINGS OR PUBLIC WORKS FACILITIES	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
KENNELS	PD											
LABORATORIES; RESEARCH, SCIENTIFIC, MEDICAL OR DENTAL										CUP	CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC	ZC	
LAUNDRY AND DRY CLEANING ESTABLISHMENTS: 5 OR FEWER EMPLOYEES										PDP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
LIBRARIES			CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC		
MAINTENANCE/REPAIRS, No Additions or Enlargements	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
• If exempt per Sec. 8174-6.3.2 or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
MOBILEHOME PARKS (See Sec. 8175-5.5)			CUP	CUP	CUP	CUP	CUP	CUP	CUP			
• If exempt per Sec. 8174-6.2, 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC	ZC	ZC	ZC	ZC	ZC			
OFFICES: BUSINESS, PROFESSIONAL AND ADMINISTRATIVE, Excluding Storage, Wholesale Trade and Veterinary Clinics										PD	PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC	ZC	
OIL AND GAS: EXPLORATION AND PRODUCTION, UNLESS PREEMPTED (See Sec. 8175-5.7)	CUP	CUP								CUP	CUP	
Refining, Processing, Manufacture, and Bulk Storage											CUP	
• If exempt per Sec. 8174-6.3.2											ZC	
PARKING LOTS, PUBLIC										CUP		PD
PIPELINES AND TRANSMISSION LINES, AND APPURTENANT STRUCTURES	CUP	CUP	CUP								CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC								ZC	
PUBLIC UTILITY FACILITIES												
Without Service Yards	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
With Service Yards	CUP		CUP							CUP	CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	ZC		ZC							ZC	ZC	

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	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Offices Only										PD	PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6										ZC	ZC	
PUBLIC WORKS FACILITIES (See Sec. 8175-5.9)	See "Wireless Communication Facilities" for antenna installations.											
County Initiated	PW	PW	PW	PW	PW	PW	PW	PW	PW	PW	PW	PW
• If exempt per Sec. 8174-6.3.2 or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
Not County-Initiated	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP
• If exempt per Sec. 8174-6.3.2 or 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
REAL ESTATE TRACT OFFICES, TEMPORARY (See Sec. 8175-5.1k)	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC			
RECREATIONAL USES												
Campgrounds (see Sec. 8175-5.3)	CUP		CUP									
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC		ZC									
Camps (see Sec. 8175-5.4)			CUP	CUP								
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC								
Community Centers										CUP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
Fields, Athletic (Seating: Portable Only, for Not More Than 100 People)			CUP	CUP	CUP	CUP			CUP	CUP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5			ZC	ZC	ZC	ZC			ZC	ZC		

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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Golf Courses, Except Miniature Golf	CUP											
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC											
Outdoor Festivals, Temporary, and Outdoor Sporting Events	CUP											
Parks and Picnic Grounds	PD		PDP	PDP	PDP	PDP	PDP	PDP	PDP	PD	PD	PD
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC		ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
Recreational Vehicle Parks (see Sec. 8175-5.10)	CUP		CUP									
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC		ZC									
Recreational Uses (as Permitted by This Table), County Initiated	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC		
Caretaker Recreational Vehicle, Accessory, pursuant to the standards in Sec. 8175-5.15	E	E	E	E	E	E	E	E	E	E		
Riding Stables	PD		CUP									
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC		ZC									
• With Accessory Lodging Facilities	CUP											
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC											
Swimming and Tennis Clubs, and the Like										CUP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
Youth Hostels										PD		

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• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
REPAIR OF PERSONAL GOODS (Such As Jewelry, Shoes And Small Appliances)										PDP		
RESTAURANTS, CAFES, AND CAFETERIAS										PDP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
RETAIL TRADE (See Definitions)										PDP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
Liquor Stores										CUP		
Nurseries										CUP		
SCHOOLS, Public or Private, Nonboarding					CUP		CUP	CUP				
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5					ZC		ZC	ZC				
SHORELINE PROTECTIVE DEVICES (See Sec. 8175-5.12.2)	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• If exempt per Sec. 8174-6.3.2	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
Signs												
Sign, Permanent, Freestanding See Sec. 8175-5.13.6(a)	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
Sign, Illuminated		PD								PD		
Sign Mural										PD		
Sign Program		PD								PD	PD	
Sign, Temporary (in ESHA or ESHA buffer) See Sec. 8175-5.13.3(c)	PD											
Sign Alterations See Sec. 8175-5.13.5(a)	ZC	ZC								ZC	ZC	ZC

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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Signs Affixed to a Structure See Sec. 8175.5.13.5(b)	ZC	ZC								ZC	ZC	ZC
• If exempt per Sec. 8174-6.3.5 Disaster Replacement of Structures	ZC	ZC								ZC	ZC	ZC
Signs, Promotional Temporary See Sec. 8175-5.13.5(d)	ZC	ZC								ZC	ZC	ZC
Identification Sign & Flags See Sec. 8175-5.13.4(a) & (c)	E	E	E	E	E	E	E	E	E	E	E	E
Repair and Maintenance Activities See Sec. 8175-5.13.4(d)	E	E	E	E	E	E	E	E	E	E	E	E
Natural Gas, Chilled Water and Steam Facility Signs See Sec. 8175-5.13.4(e)	E	E	E	E	E	E	E	E	E	E	E	E
Sign, Temporary (not in ESHA) See Sec. 8175-5.13.4(f)	E	E	E	E	E	E	E	E	E	E	E	E
Sign, Incidental See Sec. 8175-5.13.4(f)	E	E								E	E	E
STORAGE OF *BUILDING* MATERIALS, TEMPORARY (See Sec. 8175-16)	Same permit as principal use											
SUBDIVISIONS:												
Parcel Map Waivers	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• Lot Line Adjustments	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
• If exempt per Sec. 8174-6.3.6	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC
Tentative Maps (TM)	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP
Tentative Parcel Maps (TPM)	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
TAILOR SHOPS										PDP		
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
USES AND STRUCTURES, ACCESSORY TO A COMMERCIAL OR INDUSTRIAL USE										PD	PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC	ZC	

E = Exempt*
ZC = Zoning Clearance*
PD = Planned *Development* Permit
PDP = PD Permit, Principally-Permitted**
PW = Public Works Permit
CUP = Conditional Use Permit

Not Allowed	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

**Not Appealable to the Coastal Commission*
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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
Brush or Vegetation Removal	Permit May Be Required. See "Brush or Vegetation Removal"											
Dwelling, for Proprietor or Employee (2ND or 3rd Floor Only)										PDP	PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC	ZC	
Fences and walls	See "Dwelling – Accessory Uses and Structures"									PD	PD	PD
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	See "Dwelling – Accessory Uses and Structures"									ZC	ZC	ZC
Game Machines, Three or Fewer										PD		
Grading, Excavation or Fill	Permit May Be Required. See "Grading, Excavation or Fill"											
Improvements to Structures	See "Improvements to Structures, other than Single Family Dwellings or Public Works Facilities"											
Recreational Facilities, Restaurants and Cafes: For Employees Only											PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5											ZC	
Repair of Products Retailed										PD		
Temporary Buildings During Construction (see Sec. 8175-5.14)										PD	PD	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC	ZC	
USES AND STRUCTURES, ACCESSORY, NOT OTHERWISE LISTED	Same permit as principal use											
TREE ALTERATION AND REMOVAL:												
TREE REMOVAL												
Removal or transplantation of a protected tree per Sec. 8178-7.5.1	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
Except for historical and heritage trees, the removal of a non-native or	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	

E = Exempt* **ZC** = Zoning Clearance* **PD** = Planned *Development* Permit	**PDP** = PD Permit, Principally-Permitted** **PW** = Public Works Permit **CUP** = Conditional Use Permit	**Not Allowed**	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
invasive tree during bird nesting season pursuant to Sec. 8178-7.5.2												
TREE ALTERATION												
Tree alteration or encroachment into the tree protected zone of a protected tree, pursuant to Sec. 8178.7.5.1	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
Minor alteration of a non-native or invasive tree during bird nesting season pursuant to Sec. 8178-7.5.2	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	
Minor alteration of a protected tree pursuant to Sec. 8178-7.5.2.1 (* inspection required)	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	ZC*	
EMERGENCY TREE ALTERATION OR REMOVAL	See Sec. 8178-7.5.4											
VETERINARY CLINICS, Excluding Livestock										CUP		
If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5										ZC		
WASTE TREATMENT AND DISPOSAL	See also "Public Works Facilities"											
Waste Disposal, Including Sanitary Landfills	CUP										CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6	ZC										ZC	
Waste Treatment											CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6											ZC	
Recycling Facilities and Centers											CUP	
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, 8174-6.3.5, or 8174-6.3.6											ZC	
WATER FACILITIES	See also "Public Works Facilities"											
Water Storage and Distribution Facilities: Private Agencies	PD	PD	PD	PD	PD	PD	PD	PD		PD	PD	

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ZC = Zoning Clearance*
PD = Planned *Development* Permit
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LAND USE CATEGORY	PERMIT REQUIREMENTS BY ZONE											
	COS	CA	CR	CRE	CR1	CR2	RB	RBH	CRPD	CC	CM	HPD
• If exempt per Sec. 8174-6.3.2, 8174-6.3.4, or 8174-6.3.5	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC		ZC	ZC	
Water Wells, Testing to Determine Water Availability	PD	PD	PD	PD	PD	PD	PD	PD	PD			
• Incidental, appropriate and subordinate to a principally-permitted use	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP			
• With Brush or Vegetation Removal	Permit May Be Required. See "Brush or Vegetation Removal"											
• With Grading, Excavation or Fill	Permit May Be Required. See "Grading, Excavation or Fill"											
WIRELESS COMMUNICATION FACILITIES	See "Dwellings – Accessory Uses and Structures", "Antennas, Freestanding" for non-commercial antenna/amateur radios installed as an accessory to a dwelling.											
Stealth facilities, except in the public road right-of-way (see Sec.8175-5.20.3)	CUP	CUP	CUP	CUP	CUP	CUP				CUP	CUP	
Stealth facilities exclusively located within the public road right-of-way (see Sec. 8175-5.20.3,4)	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	
Non-Stealth facilities (see Sec. 8175-5.20.3(b))	CUP	CUP									CUP	
Data Collection Units on existing utility poles within the public road right-of-way (see Sec. 8175-5.20.4)	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	

E = Exempt* **ZC** = Zoning Clearance* **PD** = Planned *Development* Permit	**PDP** = PD Permit, Principally-Permitted** **PW** = Public Works Permit **CUP** = Conditional Use Permit	**Not Allowed**	Exempt	Approved by *Planning Director* or Designee	Approved by Planning Commission	Approved by Board of Supervisors

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Ventura County 2040 GENERAL PLAN

Chapter 4
Health and Well-Being

4 HEALTH AND WELL-BEING

INTRODUCTION

This chapter summarizes various factors that contribute to the health and well-being of a community. Research has found that where people live can have a profound effect on health outcomes, including life expectancy. It influences access to resources that foster better health, such as safe streets, nutritious foods, quality and affordable housing, good jobs, access to health care, and excellent schools. These resources and the distribution of these resources can be influenced by decisions concerning land use, transportation mobility, and urban design. Decisions around these resources and issues can promote a positive physical, social, and economic environment that supports the overall well-being of its residents.

This chapter is organized into the following sections:

- A Healthy Community Model (Section 4.1)
- Food Security and Food Environment (Section 4.2)
- Socioeconomic Status and Economic Opportunity (Section 4.3)
- Active and Healthy Living (Section 4.4)

Much of the information contained within this chapter pertains to programs and data compiled and managed by the Ventura County Public Health Department (VCPH). Unlike some other functions performed by Ventura County that are limited to the unincorporated areas, programs managed by VCPH are available to both incorporated and unincorporated area residents of the county. Similarly, the data gathered and managed by VCPH combines information from the cities and the unincorporated area. Therefore, it is difficult to isolate health data for unincorporated Ventura County. In some cases, however, it is possible to extrapolate data that can applied to unincorporated areas; such analyses are included herein, when applicable and feasible.

The VCPH maintains a website that includes information about the health status of Ventura County residents. The data included therein is intended for community residents, stakeholders, and decision-makers and is updated regularly. A subset of the data available online at www.healthmattersinvc.org has been summarized herein.

SECTION 4.1 A HEALTHY COMMUNITY MODEL

Introduction

Health and wellness are influenced by the homes, neighborhoods and communities in which people live, work, and play. Good physical and mental health depend, in part, on factors outside of the public health and health care system, such as affordable and secure housing, and sustainable and economically vital neighborhoods that provide access to employment opportunities and public resources.

Policy can promote communities designed to support health and safety, such as places to play and be active, access to affordable healthy foods, and streetscapes designed to prevent injury. Health and

wellness requires that all environments, including homes, schools, communities and worksites, have clean air and water and are free from toxins and physical hazards. A healthy environment gives people the opportunity to make healthy choices and decrease their risk for heart disease, cancer, obesity, diabetes, respiratory diseases such as asthma, and injuries.

Major Findings

- Ventura County ranked 8th in overall health outcomes out of the 58 California counties.
- Leading causes of death in Ventura County are cancer, coronary heart disease, cerebrovascular disease (stroke), Alzheimer's Disease, and chronic lower respiratory disease (CLRD); of these five, four are greatly influenced by the built environment.
- According to the 2016 Ventura County Community Health Survey conducted by VCPH Ventura County residents believe that:
    - Healthy behaviors and lifestyles, low crime/safe neighborhoods, a clean environment, and access to health care make a healthy community;
    - Aging, mental health, and lack of good paying jobs are the three most important health problems in the county;
    - Being overweight/obese, alcohol abuse, drug abuse, poor eating habits, and lack of exercise are behaviors that have the greatest impact on overall community health; and
- Almost 90 percent of respondents believe that Ventura County is "somewhat healthy" to "healthy."
- Ventura County is designated as a "serious" non-attainment area for the federal ozone air quality standard, and currently exceeds the standard on an average of 14 days per year. This means on those days the air is considered unhealthy, especially for children, the elderly, and people with respiratory problems. It is important to note that this air quality standard is rarely exceeded in the coastal portion of the county (Ventura, Oxnard, Port Hueneme, and Camarillo) and the Conejo Valley.

Existing Conditions

In January 2015, the Ventura County Board of Supervisors formally adopted a Health in All Policies Resolution, which states in part (full text can be found in Chapter 7):

> *The policy recognizes that the physical, economic, and social environments in which people live, learn, work, and play influences the adoption of healthy practices by making it either more or less difficult for individuals to choose behaviours that either promote or diminish health. These environments are significantly shaped by policy decisions developed by County agencies and departments outside of the health sector such as those dealing with housing, transportation, education, air quality, parks, criminal justice and employment.*

The Health in All Policies (HiAP) framework was developed by the World Health Organization, but the HiAP concept can be implemented at all levels of government. Ventura County Public Health has worked to further refine the HiAP concept and has developed a model for the ideal healthy community.

According to the County Health Rankings & Roadmaps Report, in 2016, Ventura County ranked 8th in overall health outcomes out of the 58 California counties. VCPH monitors population health outcomes such as quality of life, disease incidence and prevalence, life expectancy, and death to assess the health of county residents. There are numerous other indicators that help quantify how the built environment supports health. Table 4-1 below includes a small selection of indicators for Ventura County; the data is managed by VCPH, and is continually updated on www.healthmattersinvc.org.

TABLE 4-1
SELECTED INDICATORS FOR THE BUILT ENVIRONMENT
2016

Indicator	Measure	Ventura County	California
Solo driver with a long commute	Proportion of commuters who drive alone to work and commute for more than 30 minutes (2010-2014)	33.1%	37.7%
Liquor Store Density	Number of liquor stores per 100,000 population (2014)	15.2	10
Adults who are Obese	Percentage of adults aged 18 and older who are obese (2014)	25%	27%
Bicycle-Involved Collision Rate	Number of bicyclist-involved collisions resulting in injury or death, per 100,000 population (2013)	29.5	35.1
Youth who Smoke	Percentage of middle and high school students who are current smokers	13.8%	13.8%
Frequent Mental Distress	Percent of adults who experience frequent mental distress (2014)	10.1%	10.0%

Source: Ventura County Public Health, 2016
Note: Additional health and the built environment indicators maintained and continually updated by VCPH at www.healthmattersinvc.org include: Access to Exercise Opportunities; Age-Adjusted Death Rate due to Motor Vehicle Traffic Collisions; Age-Adjusted Death Rate due to Unintentional Injuries; Annual Ozone Air Quality; Annual Particle Pollution; Children with Low Access to a Grocery Store; Farmers' Market Density; Fast Food Restaurant Density; Grocery Store Density; Pedestrian Death Rate, Recreation and Fitness Facilities; Violent Crime Rate; Adults who Smoke; Adults with Asthma; Age-Adjusted ER Rate due to Asthma; Age-Adjusted ER Rate due to COPD; Age-Adjusted ER Rate due to Pediatric Asthma; Children and Teens with Asthma.

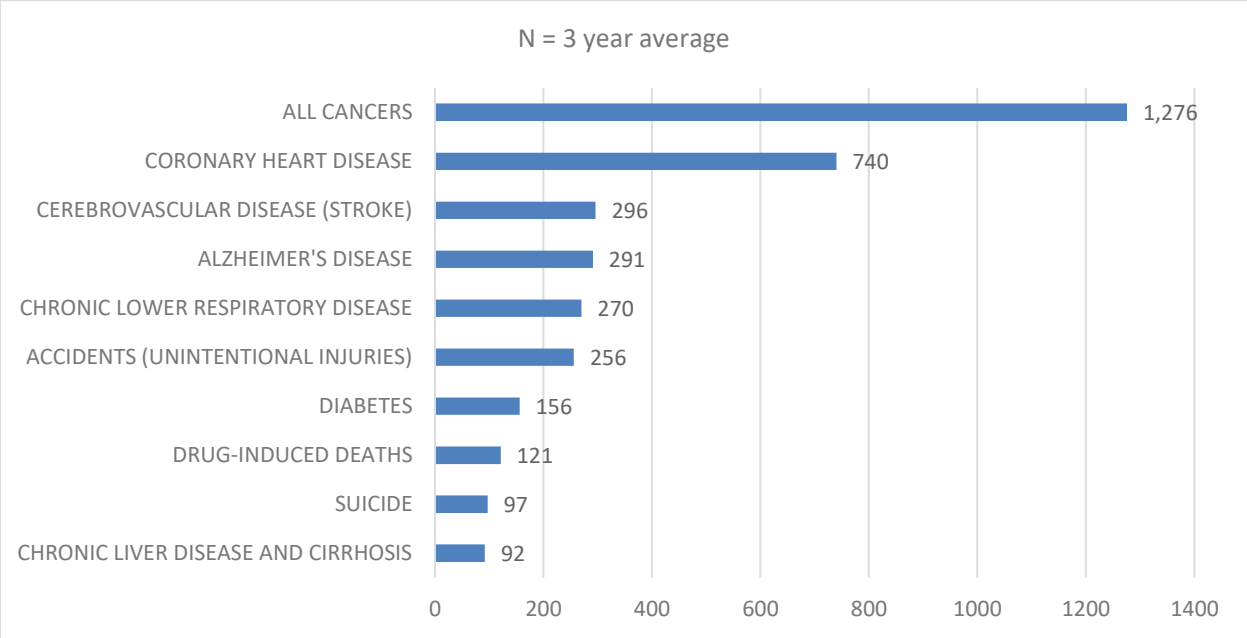
Social Determinants and the Built Environment

The concept of "social determinants of health" touches on all facets of daily life. According to the U.S. Department of Health and Human Services, social determinants of health impact how people live, learn, work, play, worship, and age. Social determinants of health include factors such as socioeconomic status (SES), access to affordable and safe housing, healthy foods, adequate health care, safe modes of transportation, and natural open spaces.

The built environment also impacts health and wellness; good physical and mental health depend on factors outside of the public health and health care systems. Figure 4-1 shows a chart of the leading causes of death in Ventura County. Of the top five, four are greatly influenced by the built environment: cancer, coronary heart disease, stroke, and chronic lower respiratory disease. Alzheimer's is the fourth leading cause of death in Ventura County, but is mainly a result of age, family history, and genetics. The

built environment, however, can greatly facilitate or hinder access to the appropriate health care for those with Alzheimer's.

FIGURE 4-1
LEADING CAUSES OF DEATH
Ventura County
2012-2014



Source: California Department of Public Health, County Health Status Profiles, 2016.

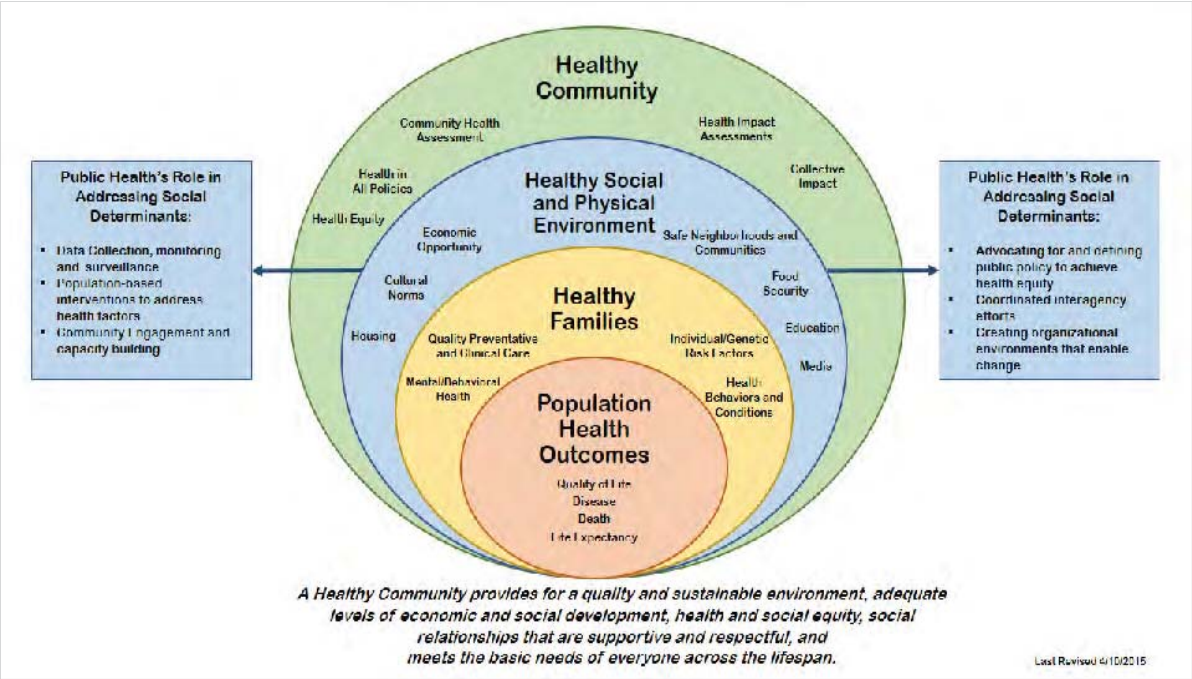
Policy can promote community design that supports health and safety by, for example, incorporating places to play and be active, facilitating access to affordable healthy foods, and designing streetscapes to prevent injury. Health requires that all environments, including homes, schools, communities and worksites, have clean air and water and are free from toxins and physical hazards.

Finally, although these conditions are often related to behaviors such as lack of physical activity, poor nutrition, and tobacco and/or alcohol use, SES and other social determinants of health greatly influence someone's access to health care and their ability to make health-conscious decisions. See Section 4.3 for an expanded discussion of SES.

Ventura County Public Health Model for a Healthy Community

Based on Ventura County Public Health's Model for a Healthy Community (VCPH Model) shown in Figure 4-2, a healthy community provides a sustainable environment, adequate levels of economic and social development, health and social equity, relationships that are supportive and respectful, while also meeting basic needs throughout a lifespan. The VCPH Model further suggests that it is most productive to shift the focus from addressing health factors to addressing the social and environmental determinants of health, which are described in Section 4.2.

FIGURE 4-2
VENTURA COUNTY PUBLIC HEALTH MODEL FOR A HEALTHY COMMUNITY



Source: Ventura County Public Health, 2016.

Population Health Outcomes

Health outcomes refer to the change in health status that result from an intervention or program instituted to address a health issue; health outcomes help to measure the success of these interventions and programs. VCPH monitors population health outcomes such as quality of life, disease incidence and prevalence, life expectancy, and death to assess the health of families in Ventura County. According to the theory of social determinants of health, targeting interventions to improve health outcomes is considered downstream to upstream causes such as social inequalities related to class, race/ethnicity, gender, and immigration status. To improve health outcomes, health interventions must target the upstream causes. Upstream causes also include the institutional power of corporations, government agencies, and schools, as well as social and physical neighborhood conditions, including land use, transportation, and housing. All of these upstream factors can work together to either improve or worsen health indicators like mortality, cancer, obesity, chronic lower respiratory disease, and life expectancy. For instance, people who are experiencing chronic stress over long periods of time are at higher risk of developing heart disease, high blood pressure, diabetes, depression, anxiety disorder, and others. Chronic stress brought on by routine responsibilities, such as driving through traffic, or living in an unsafe neighborhood, can often be addressed through planning policy.

Healthy Families

Healthy families need access to quality preventive and clinical care, including mental and behavioral health services. The health of a family is affected by individual/genetic risk factors as well as health behaviors and conditions. In addition, a healthy social and physical environment play a significant role in achieving overall family health.

Healthy Social and Physical Environment

Adequate housing can support occupants throughout their life stages, promote health and safety, and support mental and emotional health. Neighborhood characteristics have significant impact on health outcomes because they influence an individual's ability to adopt behaviors that promote health. For example, people in low-income neighborhoods often have limited access to affordable, healthy food options, but instead may have ample access to cheap fast-food outlets. Cultural norms can influence beliefs about health care, behaviors that contribute to food choices, attitudes regarding mental health and values concerning social status. Living in poverty and being unemployed are associated with poor physical and mental health outcomes across all races and ethnicities. People with higher levels of educational attainment consistently experience lower risks for a wide array of illnesses and increased life expectancy.

The County Health Rankings and Roadmap uses social associations to measure social isolation, social capital, and community interaction. Membership associations are used as a proxy for social associations because they provide a way for the community to interact. This includes membership-driven organizations like civic, sports, religious, business, or professional organizations. This methodology is limiting, however, because it does not account for the social support a person receives from family relationships or close friendships. In 2016, Ventura County had 6.0 membership associations per 10,000 population, which is slightly higher than California (5.8 associations/10,000), but much lower than the national 90th percentile (22.1 associations/10,000). Planning and development policy can contribute to supporting healthy social interaction by encouraging the provision of shared spaces and discouraging development forms that foster separation and isolation.

Healthy Community

According to the Centers for Disease Control and Prevention (CDC), health equity is achieved when every person has the opportunity to "attain his or her full health potential" and no one is "disadvantaged from achieving this potential because of social position or other socially determined circumstances." VCPH is committed to conducting periodic community health assessments and utilizing the Health in All Policies (HiAP) framework to improve the accountability of decision-makers to recognize the health impacts at all levels of policy-making. The VCPH Model helps define those social determinants as well as public health actions that can be taken to begin to address them.

Ventura County 2016 Community Health Survey

Through the work of VCPH, the County addresses Healthy Community components through the collection of data that is used to inform policy development, engage stakeholders, and support organizational changes that result in the development of healthy communities. As part of this work, VCPH conducts periodic community health assessments, the most current of which will be released in early 2017.

During the summer of 2016, as part of a series of General Plan Update community workshops held throughout the county, workshop participants were asked to complete a VCPH Community Health Survey. Of the 254 workshop participants, 141 people completed the survey. It was further administered at multiple venues over the course of the summer and fall of 2016; a total of 960 completed surveys were submitted to VCPH. The results from the larger dataset will be published in the 2017 VCPH Community Health Assessment. Data included here represents the responses of the 141 General Plan Update workshop participants.

The 2016 Community Health Survey included (but was not limited to) five questions related to respondents' ideas of what constitutes a healthy community:

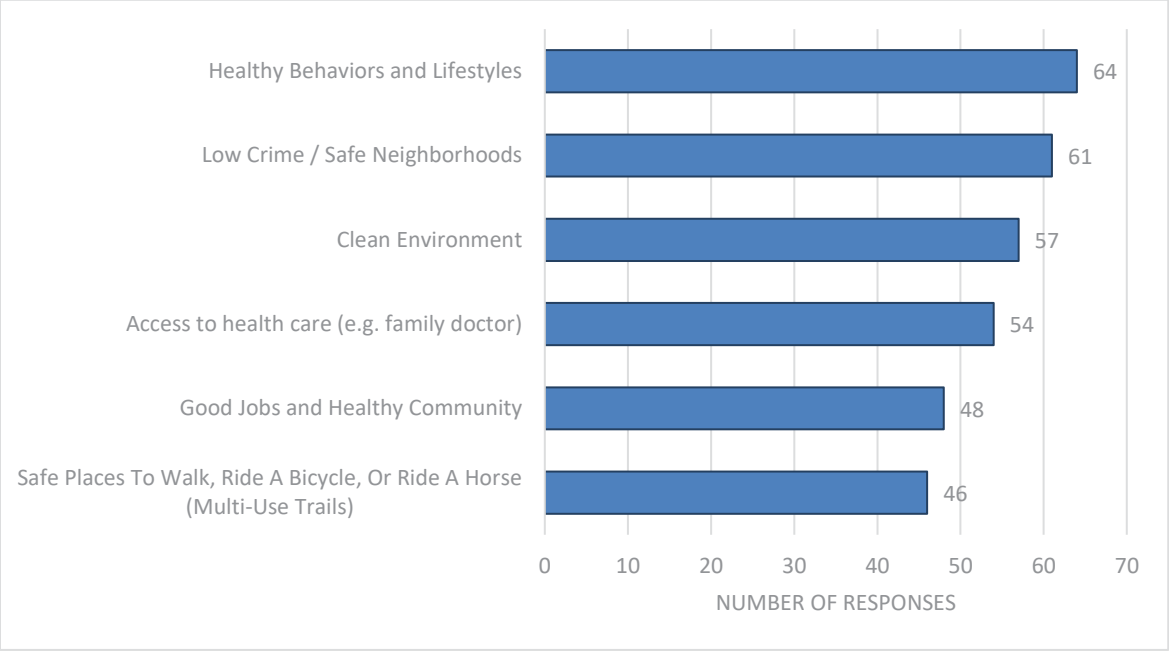
- Question 1: What do you think makes a healthy community? (Figure 4-3)
- Question 2: What do you think are the three most important health problems in our community? (Figure 4-4)
- Question 3: What do you think are the three most important "risky behaviors" in our community? (Those behaviors which have the greatest impact on overall community health.) (Figure 4-5)
- Question 4: What changes need to be made to address the health problems and risky behaviors that you have identified in the previous questions?
- Question 5: How would you rate Ventura County as a "Healthy Community"? (Figure 4-6)

Responses from Questions 1, 2, 3, and 5 are summarized below. The graphs shown below represent a subset of the data collected. In general, community members felt that:

- Healthy behaviors and lifestyles, low crime/safe neighborhoods, a clean environment, and access to health care make a healthy community
- Aging, mental health, and lack of good paying jobs are the three most important health problems in the county.
- Being overweight/obese, alcohol abuse, drug abuse, poor eating habits, and lack of exercise are behaviors that have the greatest impact on overall community health; and that
- Ventura County is, overall, "somewhat healthy" to "healthy."

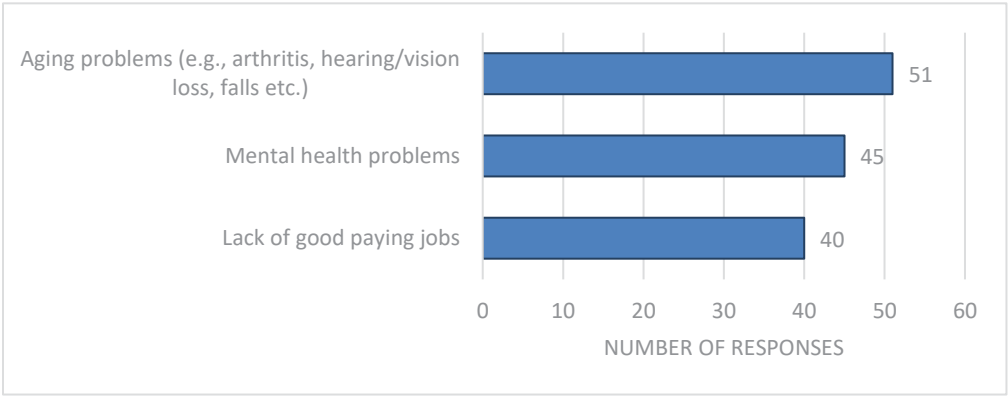
The 2016 Community Health Assessment also included several demographic questions (e.g., age, zip code, marital status, etc.). Responses showed that the majority of respondents who attended the workshops and completed the Assessment were over 40 years old, female, White, married, and college educated.

FIGURE 4-3
WHAT DO YOU THINK MAKES A HEALTHY COMMUNITY?
Ventura County
2016



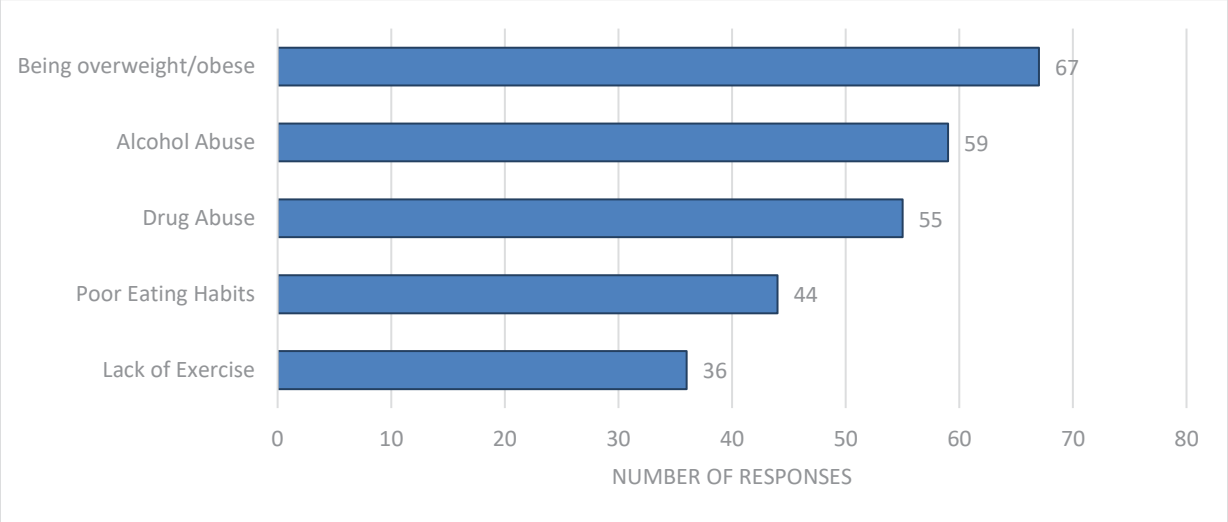
Source: Ventura County Public Health Community Health Survey, 2016.

FIGURE 4-4
WHAT DO YOU THINK ARE THE THREE MOST IMPORTANT HEALTH PROBLEMS IN OUR COMMUNITY?
Ventura County
2016



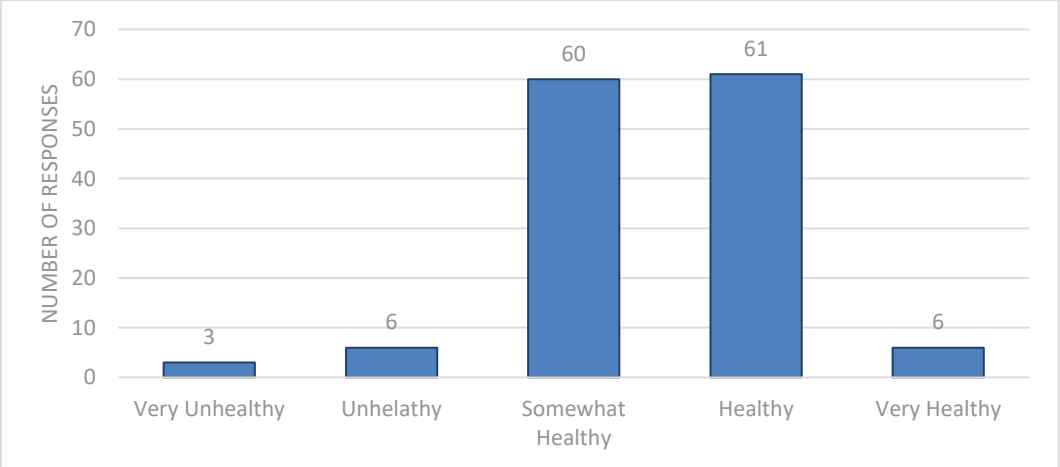
Source: Ventura County Public Health Community Health Survey, 2016.

FIGURE 4-5
WHAT DO YOU THINK ARE THE MOST IMPORTANT RISKY BEHAVIORS IN OUR COMMUNITY? (BEHAVIORS WHICH HAVE THE GREATEST IMPACT ON OVERALL COMMUNITY HEALTH.)
Ventura County
2016



Source: Ventura County Public Health Community Health Survey, 2016.

FIGURE 4-6
HOW WOULD YOU RATE VENTURA COUNTY AS A HEALTHY COMMUNITY?
Ventura County
2016



Source: Ventura County Public Health Community Health Survey, 2016.

Regulatory Setting

Federal

Healthy People 2020

The Healthy People initiative is a national 10-year plan for improving the health of Americans. Healthy People 2020 was launched in 2010 and is the third iteration of this national initiative. It is managed by the Office of Disease Prevention and Health Promotion (ODPHP) within the U.S. Department of Health and Human Services and funded by individual agencies based on agency-specific objectives. The major data sources used in tracking Healthy People objectives are funded by the National Center for Health Statistics. The mission of Healthy People 2020 is to 1) identify nationwide health improvement priorities, 2) increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress, 3) provide measurable objectives and goals that are applicable at the national , state, and local levels, 4) engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge, and 5) identify critical research, evaluation, and data collection needs.

State

Affordable Care Act/Covered California

The Affordable Care Act was signed into law in March 2010. Beginning in September 2010, all new plans are required to cover certain preventative services such as immunization; screening for blood pressure, cholesterol, depression, obesity, etc.; mammograms; and contraception. Individuals are required to have some form of health insurance, or else face paying a penalty.

California Health in All Policies Task Force

The Health in All Policies (HiAP) Task Force was established in February 2010 by Executive Order S-04-10. By Executive Order mandate, the Strategic Growth Council, a state entity responsible inter-agency collaboration to recommend policies and investment strategies, was required to establish the HiAP Task Force.

California Wellness Plan 2014

The California Wellness Plan is used by state and local community groups and organizations to prevent chronic disease and promote health and wellness. Approximately 14 million Californians had chronic diseases in 2007; these diseases are the leading cause of death, disability, and diminished quality of life in California. Prevention of chronic diseases is also economically beneficial; the Trust for America's Health estimates that every $1 spent on health care prevention would yield $4.80 in health care savings over 5 years. The Plan addresses causes of chronic disease, including factors beyond health care and traditional public health approaches, such as economic status, culture, literacy, race, educational attainment, and spatial environment. The Plan outlines how agencies can come together to collaboratively address these concerns and promote health equity.

Regional/Local

Health Matters

The Health Matters in Ventura County website provides access to data on local health, resources, news, and events. The goal of the site is to provide data needed to understand public health indicators and ultimately support organizations in establishing community goals and build healthier communities. Countywide data is provided, as well as data broken down by city.

Ventura County Public Health Strategic Plan

The Ventura County Public Health (VCPH) 2015-2020 Strategic Plan was developed by VCPH staff, community organizations, officials, and stakeholders to provide strategic priority areas, goals, and objectives for a healthier community. (http://www.healthmattersinvc.org/content/sites/ventura/ph_strategic_plan_booklet_online_082615.pdf)

The Plan considers socioeconomic status as having significant effect on health, and the breakdown of those socioeconomic barriers such as disparities in income, education, and occupation. The four strategic priority areas are defined as: Health Equity (support each person in Ventura County in attaining his or her full health potential regardless of socially determined circumstances); Healthy and Safe Community Environments (support and develop neighborhoods and institutions that support healthy lifestyles); Preventative Health Care (improve the availability, use, and integration of prevention-focused, evidence-based health care services); and Community-Driven Partnerships (collaborate with existing stakeholders and non-traditional stakeholders to increase the collective effect for improving health and well-being). Population health indicators were selected to be tracked over the next five years to measure the effectiveness of the Plan; VCPH has a target of five percent improvement for each health indicator by the year 2020.

Key Terms

Built Environment. The built environment refers to all the physical components of where people live, work, and play.

Social Determinants of Health. Social determinants of health refer to the social and physical environment in which people carry out daily life. Examples of social determinants include: job opportunities, living wages, healthy foods, social norms such as discrimination, exposure to mass media and social media, exposure to violence and crime, concentrated poverty, quality schools, transportation options, and residential segregation. Examples of physical determinants include: natural environment, built environment, exposure to toxic substances, physical barriers such as for people with disabilities, and aesthetic features such as lighting and street trees.

Socioeconomic Status. Socioeconomic status (SES) refers to a person's economic and social position within their community, often measured with educational attainment, type of occupation, and income. SES is often used to explain disparities in education, wealth, and health.

Upstream Causes. Upstream causes of health refer to the institutional, cultural, and political structures that create health inequities. The purpose of identifying the upstream causes of certain health outcomes is to target interventions at the source of health inequities to create sustainable change in health outcomes.

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SECTION 4.2 FOOD SECURITY AND FOOD ENVIRONMENT

Introduction

Increases in conditions like obesity and nutrition-related chronic diseases can be influenced by access to fresh, healthy, and nutritious foods. Food access restraints can be financial, geographic, temporal, or a combination of all three. Additionally, measurements of food accessibility in urban versus rural environments are different, as they experience different food security challenges. The ability or inability to access healthy food is discussed in terms of "food security." According to the 1996 World Food Summit definition, "Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life." This definition includes four dimensions of food security:

- Physical availability of food
- Economic and physical access to food
- Food utilization
- Stability of the other three dimensions over time

Food security occurs when all dimensions are fulfilled simultaneously.

Food security reflects the state of the current food infrastructure, which consists of a complex web of farmers, transporters, processing facilities, distribution companies, and retailers. As the tenth largest agricultural producer in the state of California, Ventura County is a major player in regional food infrastructure and, therefore, in regional food security.

Major Findings

- In 2014 there were 78,840 food-insecure people living in Ventura County, or roughly 9.4 percent of the county's population. Among those who are food-insecure, an estimated 80 percent are within 200 percent of the poverty level, making them eligible for nutrition programs such as the federally-funded Supplemental Nutrition Assistance Program (SNAP).
- Ventura County has a lower food insecurity rate than neighboring counties and California overall.
- Changing climate patterns may disrupt the stability of farming communities, in addition to making it more difficult for them to carry out healthy behaviors.
- The national "modified retail food environment index" (mRFEI) score is 10 and the California mRFEI score is 11. Most census tracts in Ventura County score higher than California and national mRFEIs; there are, however, pockets within the county that have few to no healthy food retailers.
- The Ventura Unified School District (VUSD) and Conejo Valley Unified School District are two of Southern California's pilot Farm-to-School service sites.
- In total, there are 79 DOE Summer Food Service Program sites that serve breakfast, lunch, dinner, and a morning and/or an afternoon snack in the summer months of 2016.
- There are 12 certified farmers' markets operating within Ventura County in 2016.

- Food Forward has a Ventura County branch, which hosts roughly 20 fruit harvests a month and runs two farmers' market recovery events each week.
- There are 15 FOOD Share Community Market sites and 101 food pantry sites around Ventura County.

Existing Conditions

Food Security

The term "food desert" is used to describe geographic areas that have limited access to affordable, healthy food options needed to maintain a healthy diet. The USDA defines a food desert, or "low-access community," as communities of 500 people where at least 33 percent of the community lives more than one mile from a supermarket or large grocery store. For rural communities, the distance is 10 miles or more. The USDA recognizes, however, that there are many ways to achieve healthy food access; the distance-based definition of "low-access community" was put in place for the purposes of carrying out the Healthy Food Financing Initiative (HFFI). Food deserts often contain many fast food restaurants and convenience stores, an overabundance of which is a strong negative determinant of community health. In areas where there are high numbers of fast-food restaurants compared to grocery stores, there are higher rates of diabetes, cardiovascular disease, and cancer. Studies have shown that when there is better access to grocery stores, there is a lower incidence of overweight and obese individuals, higher rates of fruit and vegetable consumption, and more people with healthy diets.

Those who live in food deserts are considered "food-insecure" and are more prone to make tradeoffs between basic needs, such as either paying utility bills or buying fresh produce. Such tradeoffs may lead to obesity and/or malnutrition. According to Gunderson et al., in 2014 there were 78,840 food-insecure people living in Ventura County, or roughly 9.4 percent of the county's population. Among those who are food-insecure, an estimated 80 percent are within 200 percent of the poverty level, making them eligible for nutrition programs such as the Federally-funded Supplemental Nutrition Assistance Program (SNAP), formerly the food stamps program. Table 4-2 shows that Ventura County has a lower food insecurity rate than neighboring counties and California as a whole. In addition to poverty, unemployment, and loss of home ownership, are life events that can contribute to food insecurity among individuals and families.

TABLE 4-2
FOOD INSECURITY
Ventura County and Neighboring Counties
2014

Indicator	California	Ventura County	Kern County	Santa Barbara County	Los Angeles County
Number of food insecure people	5,401,770	78,840	122,940	49,610	1,393,170
Rate of food insecurity[1]	13.9%	9.4%	14.3%	11.5%	14.0%
Program eligibility among food insecure people[2]	79%	80%	98%	90%	92%

Notes: [1]Food insecurity rates determined using data from 2001-2014 Current Population Survey, 2014 American Community Survey, and 2014 Bureau of Labor Statistics. [2]Those who are within the threshold of 200 percent of the poverty level are eligible for SNAP.
Source: Gundersen et al., 2014

Unlike a food desert, a healthy community has access to healthy food options, which can include fresh produce stores, farmers' markets, and community gardens. Community gardens not only provide a source of fresh fruits and vegetables, but they also increase physical activity and provide opportunities for positive social interaction.

Other factors that will impact food security include climate change and water supply. Chapter 2 of this Background Report discusses the economic importance of agriculture within Ventura County. Agriculture supports more than 28,000 direct jobs in farming and additional jobs in related support sectors and food processing. Moreover, the agricultural production and services sector is heavily concentrated in the unincorporated areas. Additionally, as weather patterns become hotter and drier, higher percentages of water will be diverted to support urban areas, leaving less water to support agriculture. Dwindling water supply for agriculture would not only negatively affect agricultural productivity, but also the local economies that depend on it.

See Sections 9.2, 9.3, and 12.2 of this Background Report for expanded discussions of Agricultural Resources, Agricultural Production, and Climate Change Effects.

Food Environment, Infrastructure, and Systems

The food environment can be discussed in terms of how the physical environment is connected, which includes places and settings where people make, buy, and/or eat food, such as homes, workplaces, schools, restaurants, community gardens, food banks, farmers' markets, and supermarkets. These physical places and where they are located influence what, where, and how much people eat. A healthy food environment is an environment that enables and encourages healthy eating and lifestyles, and both the social and physical aspects of a food environment can create or break down the barriers people may face in accessing and choosing to eat healthy food.

The Centers for Disease Control and Prevention (CDC) uses the modified retail food environment index (mRFEI) to describe the existing food environment, using census tract data to quantify the accessibility of "healthy food retailers." For purposes of this methodology, the CDC defines "healthy retailers" to include supermarkets, larger grocery stores, supercenters, and produce stores. "Less healthy retailers" include convenience stores, fast food restaurants, and small grocery stores with three or fewer employees. Farmers' markets are not included in the methodology because national data is not available.

A census tract generally has a population size between 1,200 to 8,000 people. A mRFEI score of 10 means that anywhere between 1,200 and 8,000 people are sharing 10 healthy food retailers. A mRFEI score of 0 means that 1,200 to 8,000 people live in a census tract without a healthy food retailer. This indexing system, however, simplifies how people make decisions on where, what, and how they eat. This methodology assumes that people will solely shop within their census tract, which may not make sense for where they live and how they go about their daily life. It is helpful to know where there are more or fewer healthy food retailers, but it should not be a proxy for food accessibility and overall well-being. Figure 4-7 maps the mRFEI scores for each Ventura County census tract. The national mRFEI score is 10 and the California mRFEI score is 11. Most census tracts in Ventura County score higher than California and national mRFEIs; there are, however, pockets within the county that have few to no healthy food retailers.

Local Production and Distribution

The food environment is supported by food infrastructure, which encompasses the different ways food can travel from the source to the consumer. The emphasis on local production is an attempt to create a

food environment where the produce is closer to the consumer, with the logic that local food is fresher and uses less energy to transport. In other words, the importance of local food lies in its value as a healthier and environmentally friendlier consumer choice. Standardizing "local production," however, is difficult because it is defined in many different ways, differing between regional grocers, local food retailers, non-profit organizations, and government agencies. How far food has traveled has been measured in distance, time, and/or the number of agencies and companies it passes through to move it from producer to consumer. Market-based definitions of "local" are well-recognized, such as direct-to-consumer arrangements that include regional farmers' markets or direct-to-retail/food service arrangements, such as farm sales to schools, whereas geography or time-based definitions may be more difficult to standardize.

Farm-to-Table initiatives are illustrative of local efforts to shorten the distance food needs to travel from the farm to the kitchen table. Western Ventura County markets itself as the home to many locavore restaurants, marketing itself as truly farm-to-fork. Local food markets are a small but growing sector of the U.S. agricultural production. Local sales account for a larger share of sales for small farms than for larger farms. As discuss in Chapter 9 of this Background Report, 2012, almost 80 percent of all farms in Ventura County were 49 acres or less. Given that Ventura County is a leading agricultural producer, supporting local food markets in Ventura County is important for both the health of residents and the livelihoods of local farmers and vendors.

Rural Food Infrastructure

Approximately eight percent of Ventura County residents live in unincorporated rural environments. In rural areas, transportation and connectivity is a big issue to address to ensure healthy food access. For local rural retailers, supplying and maintaining a wide selection of healthy foods can be difficult. Logistics such as getting distribution lines to stop at small towns or meeting minimum purchase requirements of wholesalers can be significant barriers for small-town retailers. According to ChangeLab Solutions, (a firm specializing in researching and drafting model laws and policies related to issues such as childhood obesity, planning, and healthy housing), there are three broad categories that can be used to describe the existing retail food environment within rural communities. First, there are areas with no food retail. Second, there are areas with some food retail. Third, there are areas with enough food retail but whose sustainability is in question. Small retailers, in particular, face barriers concerning produce supply and distribution networks.

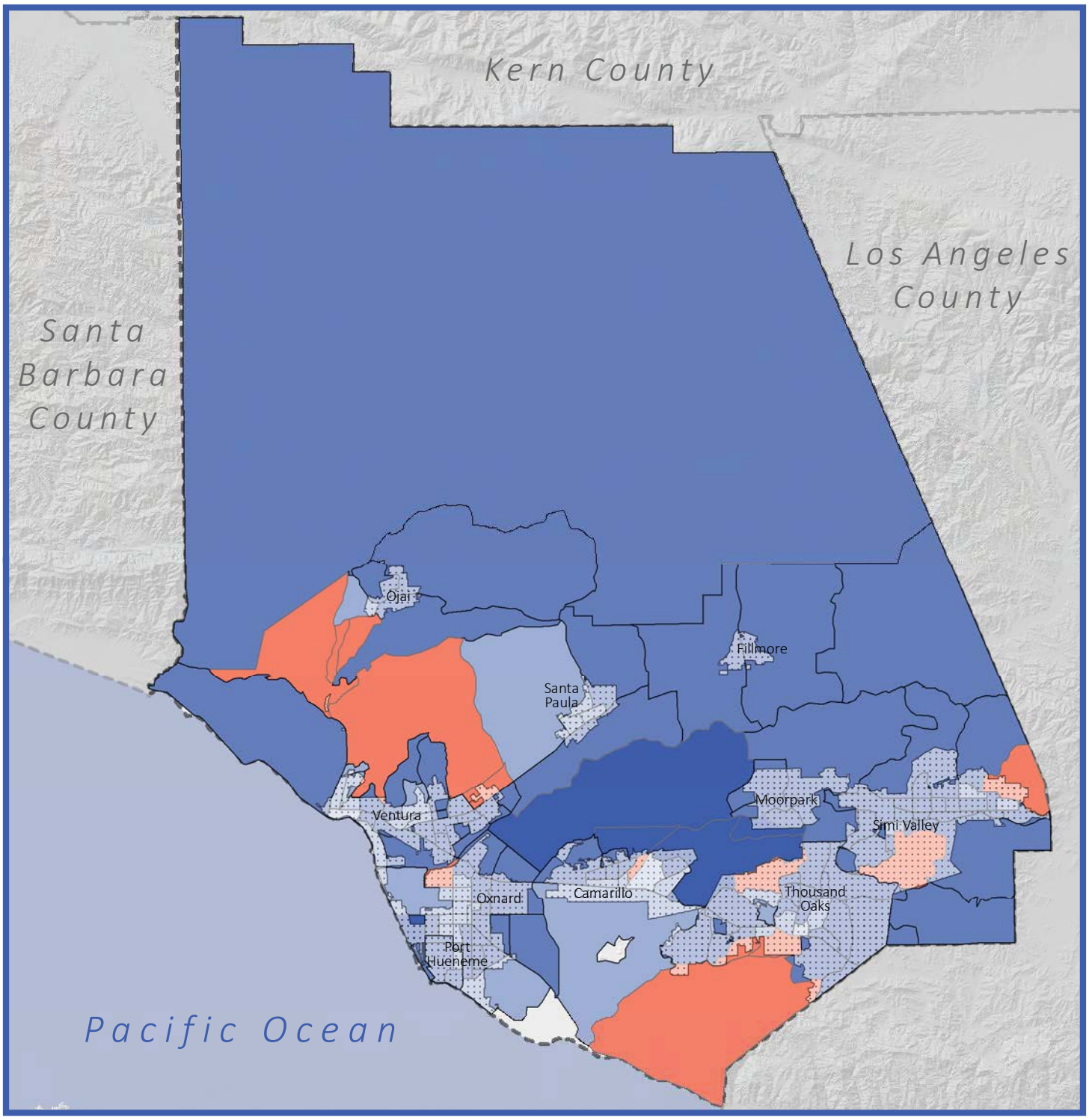
County Food Programs

Food banks, food pantries, and local organizations play a role in increasing access to fresh and healthy food to those who are experiencing food insecurity, functioning as a food safety net. There are several programs operating in Ventura County that work to bridge the gaps in the food infrastructure.

- **Farm-to-Schools:** The Ventura Unified School District (VUSD) and Conejo Valley Unified School District are two of Southern California's pilot Farm-to-School service sites. The program provides healthy lunches and nutrition education programs. It has stocked local school cafeterias with farm fresh produce, school gardens, and increased nutrition education programming in each VUSD school.
- **Summer Food Service Program:** During the summer when school is not in session, the California Department of Education (DOE) operates the Summer Food Service Program to give children access to nutritious meals when not attending school. In 2016, there are 79 DOE Summer Food Service Program sites in the county that served breakfast, lunch, dinner, and a morning

and/or an afternoon snack. Figure 4-8 maps all of the 2016 Summer Meal Sites in Ventura County. The Oxnard Planning Area had the highest number of sites (25), followed by the Planning Areas of Thousand Oaks (15) and Ventura (12). The Oak Park Planning Area has no sites operating Summer Food Service Programs. All other Planning Areas contained between one and six sites. (Chapter 3 lists all Planning Areas in the county.) Figure 4-8 shows the locations of these summer meal sites.

- **FOOD Share**: FOOD Share is a non-profit food bank headquartered in the city of Oxnard, serving Ventura County through distribution programs and food pantries located throughout the county. The organization collects food through donations, food drives, gleaning from connections through agricultural connections and local organizations, bulk purchasing, government programs, and through Feeding America, which is the national, parent organization for FOOD Share. FOOD Share partners with local organizations to host Community Markets in various locations throughout the county. As of 2015, there were 15 Community Market sites in Ventura County. The Thousand Oaks (four) and Oxnard (three) Planning Areas have the highest number of community markets within their boundaries. The Las Posas, North Half, Oak Park, and Piru Planning Areas don't have any community markets. Figure 4-9 shows the locations of these FOOD Share distribution locations. Figure 4-10 shows the locations of the FOOD Share food pantries.
- **Farmers' Markets:** The Ventura County Certified Farmers' Market Association (VCCFMA) is a nonprofit cooperative that organizes weekly farmers' markets located throughout the county. VCCFMA verifies that all products sold at Certified Farmers' Markets are grown in California and that vendors have obtained a Producer's Certificate from the County Agricultural Commissioner's office. There are 12 farmers' markets operating within Ventura County, in addition to one market in Los Angeles County that is run by VCCFMA. They are located in the Ojai, Ventura, Oxnard, Camarillo, Thousand Oaks, and Moorpark Planning Areas and are all within incorporated cities, except for one just north of Camarillo and one in the city of Santa Clarita in Los Angeles County. Although not within county boundaries, the Santa Clarita farmers' market serves the Piru and Fillmore Planning Areas. The other Planning Areas do not host farmers' markets. There are five farmers' market locations open all year that accept SNAP payments. Figure 4-11 shows the locations of the farmers' markets located within the county.



Ventura County 2040 General Plan

Figure 4-7:
Modified Retail Food Environment Index (mRFEI)

Map Date: July 29, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; US Census, 2000; Centers for Disease Control, 2011.

0 7.5 15 Miles

N

Cities

mRFEI Score

- 0
- 0-5
- 6-10
- 11-38
- 39-50

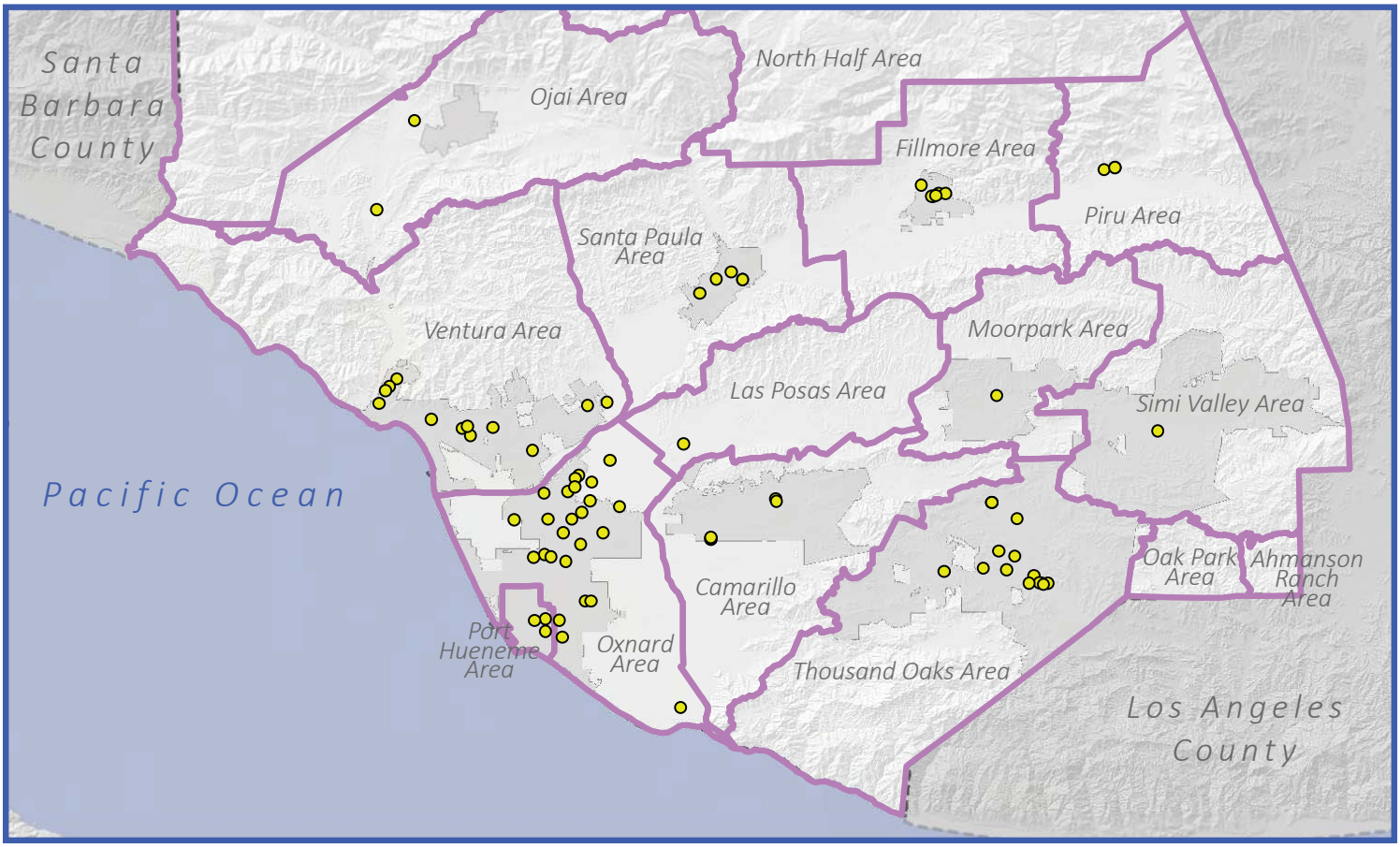


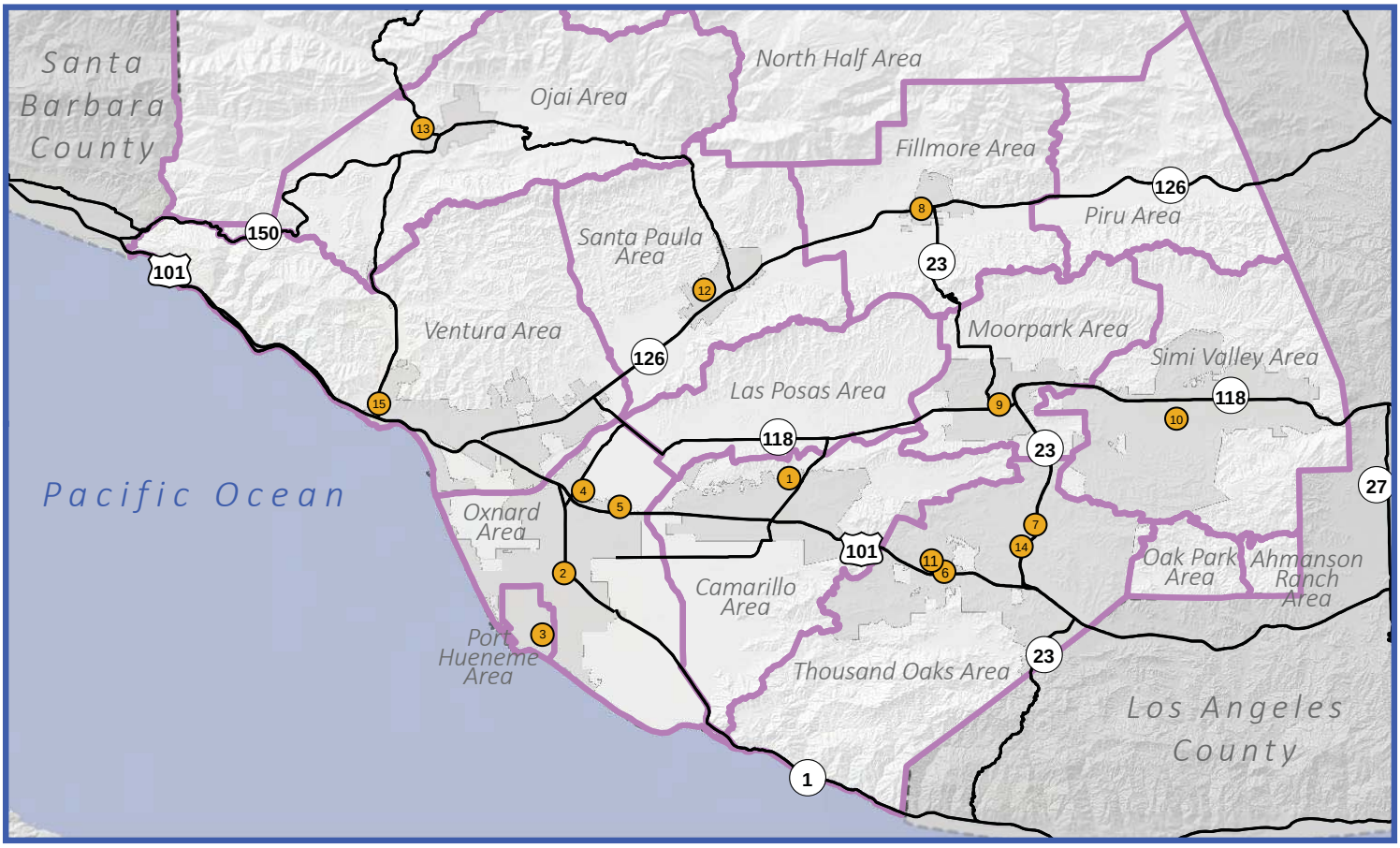
Figure 4-8:
2016 Summer Meal Sites

Map Date: August 01, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; California Department of Education, 2016.

0 5 10 Miles

N

Cities
Planning Areas
Summer Meal Sites



Ventura County 2040 General Plan

Figure 4-9:
Community Markets

Map Date: August 01, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013, Food Share, Inc., 2015

0 5 10 Miles

N

Planning

1. Camarillo Health Care
2. Centro Christiano Familiar - Oxnard
3. Centro Christiano Familiar - Port Hueneme
4. City Impact - El
5. City Impact -
6. Conejo Valley Food Resource Network - Newbury Park
7. Conejo Valley Food Resource Network - Thousand Oaks
8. First 5 Ventura County - Fillmore
9. First 5 Ventura County - Moorpark
10. First 5 Ventura County - Simi Valley
11. Nucleus/Manafest (Bridge Church)
12. Santa
13. St. Thomas
14. Thousand Oaks
15. Westpark Community Center

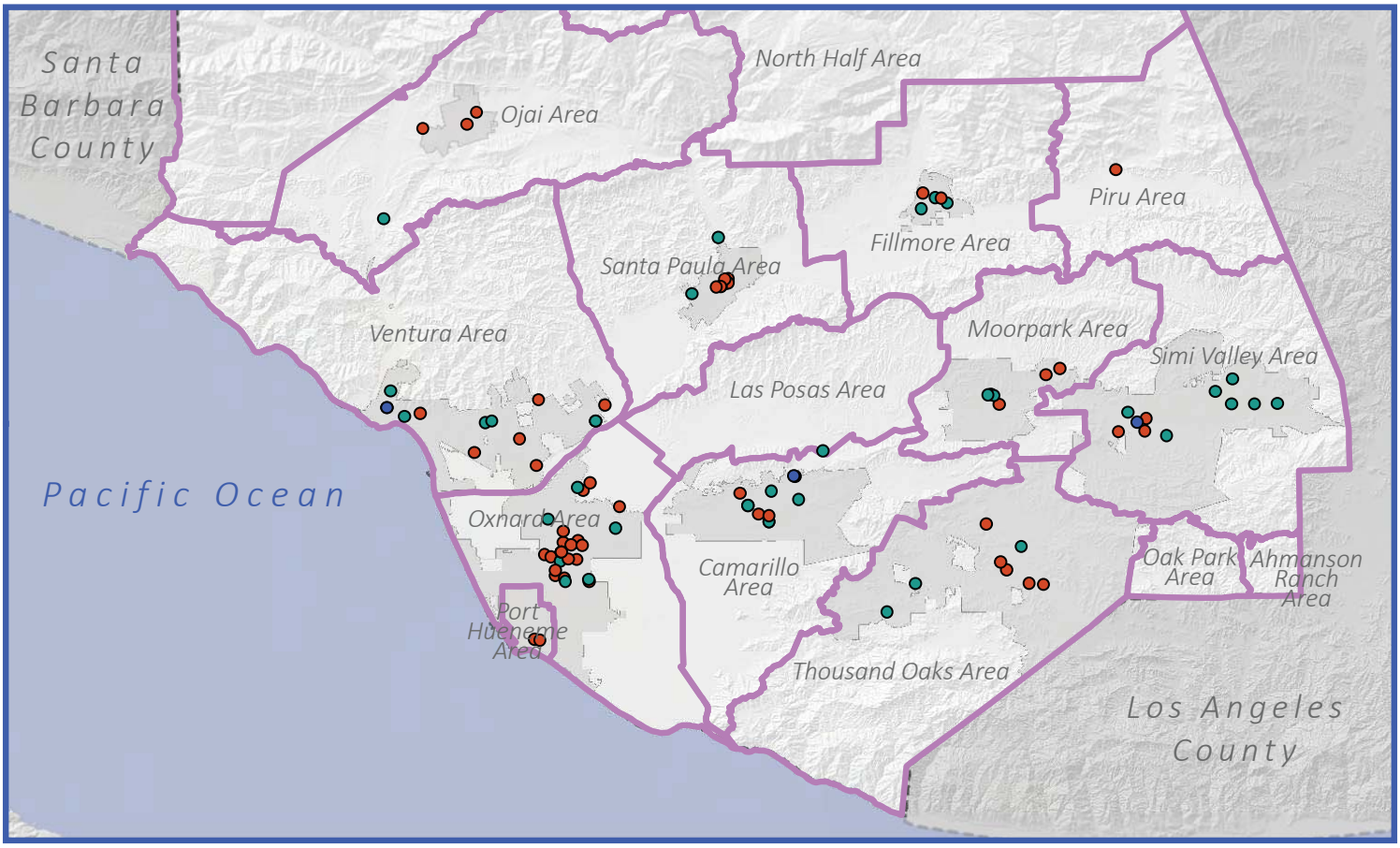
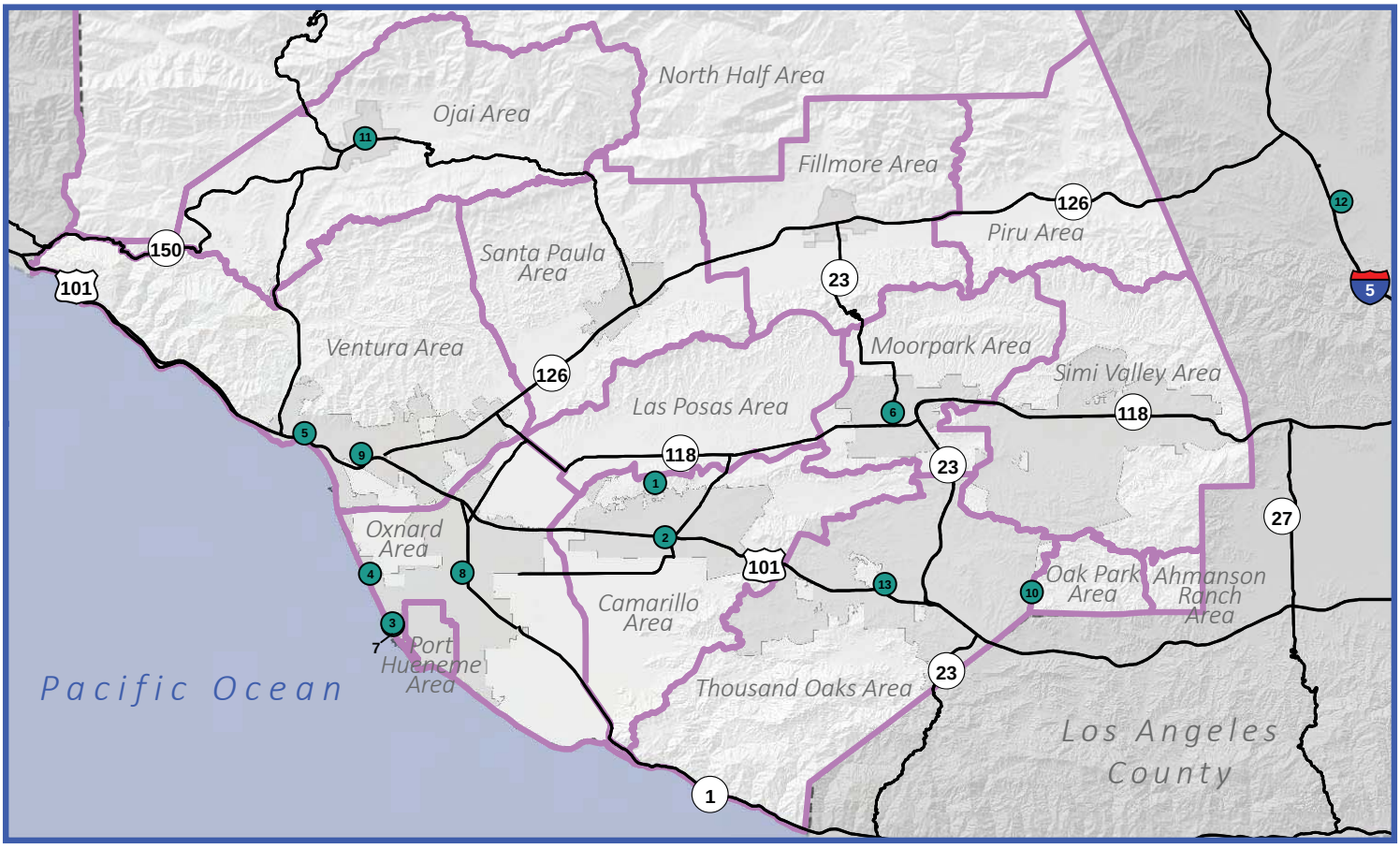


Figure 4-10:
Food Pantries

Map Date: August 01, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; Food Share, 2016.



Ventura County 2040 General Plan

Figure 4-11: Farmers' Markets

Map Date: August 02, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; FOOD Share, 2016; VCHCA, 2016; VCCFMA, 2016.

0 5 10 Miles

N

- Cities
- Planning Areas
- 1. Camarillo Certified Farmer's Market
- 2. Camarillo Hospice Certified Farmers Market
- 3. Channel Islands Certified Farmers' and Fishermens' Market
- 4. Downtown Oxnard Farmers' Market
- 5. Downtown Ventura
- 6. Farmer's Market at Moorpark
- 7. Farmers Market - Channel Islands Harbor
- 8. Farmers Market - Plaza Park
- 9. Midtown Ventura
- 10. Oak Park Certified Farmers' Market
- 11. Ojai Certified Farmers Market
- 12. Santa Clarita Certified Farmers' Market
- 13. Thousand Oaks Certified Farmers' Market

Regulatory Setting

Federal

Agricultural Act of 2014

The Agricultural Act of 2014, also known as the 2014 Farm Bill, is legislation that provides authorization for funding for a number of federal programs and services. The Bill supports a variety of efforts, supporting job creation in the agricultural sector, expanding markets for agricultural products on the domestic and international markets, maintains important agricultural research, and ensures access to safe and nutritious food. Programs related to nutrition that are supported by the 2014 Farm Bill include the Supplemental Nutrition Assistance Program (SNAP), the Food Insecurity Nutrition Incentive (FINI) Program, the Community Food Project Grants Program, the Seniors Farmers' Market Grants Program, the National Farmers' Market and Local Food Promotion Program, and the Specialty Crop Block Grant Program.

Healthy Hunger-Free Kids Act of 2010

The Healthy Hunger-Free Kids Act of 2010 is a reauthorization of the Child Nutrition Act and National School Lunch Act, as well as the Child and Adult Care Food Program (CACFP), and the Summer Food Services Program (SFSP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

National School Lunch Act

The Richard B. Russell National School Lunch Act is the Federal law that created the National School Lunch Program (NSLP) and the Child and Adult Care Food Program (CACFP). The Child Care Food Program was established by Congress under the National School Lunch Act in 1968; which over time expanded to include adults and became the Child and Adult Care Food Program (CACFP).

Supplemental Nutrition Assistance Program (SNAP)/CalFresh

Formerly known as food stamps, CalFresh is the California version of the federally-funded Supplemental Nutrition Assistance Program (SNAP). This is a nutrition program that allows eligible participants to purchase fresh food through the use of an electronic benefit transfer (EBT) card. Eligibility is based on income, resources, and residency of household members.

State

California Nutrition Incentives Act (AB 1321)

This bill creates the Nutrition Incentive Matching Grant Program within the Office of Farm to Fork at the California Department of Food and Agriculture. This program awards grants to certified farmers' markets that have the potential to double the nutrition benefits of consuming California produce (e.g., fruits, nuts, vegetables). One-third of grant funds is available to be awarded to small businesses that provide similar nutrition incentives. This bill aims to double the purchasing power of low-income persons at farmers' markets for the purpose of reducing poverty and food insecurity.

2014 Sustainable Ground Water Management Act

In September 2014, the California legislature enacted comprehensive legislation to manage California groundwater. Known as the Sustainable Groundwater Management Act (SGMA) of 2014, the legislation provides a framework for sustainable management of groundwater supplies by local authorities, but with the potential for state intervention if necessary. The aim of the legislation is to have groundwater basins managed within the sustainable yield of each basin. The legislation defines "sustainable groundwater management" as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results, which are defined as any of the following effects: chronic lowering of groundwater levels; significant and unreasonable reductions in groundwater storage; significant and unreasonable seawater intrusion; significant and unreasonable degradation of water quality; significant and unreasonable land subsidence; and surface water depletions that have significant and unreasonable adverse impacts on beneficial uses.

Sustainable Agricultural Lands Conservation Program (SALC)

SALC is administered by the California Department of Conservation (DOC), which receives authority to do so from the California Farmland Conservancy Program (Public Resource Code (PRC) Sections 10200-10277), the Agricultural Protection Planning Grant Program (PRC Sections 10280-10283), the Farmland Mapping and Monitoring Program (Government Code (GC) Section 65570), the California Land Conservation Act/Williamson Act (GC Sections 51190-51294.7), Revenue and Taxation Code Sections 421-430.5, and PRC Division 9. SALC aims to reduce air pollution, improve conditions in disadvantaged communities, and implement a Sustainable Communities Strategy (SCS) or another regional plan to reduce GHG emissions.

Regional/Local

Multi-County Goods Movement Action Plan (MCGMAP)

Given the prevalence of goods movement in the county and the region, VCTC participated in the development of a Multi-County Goods Movement Action Plan (MCGMAP) in 2007. The MCGMAP identified strategies to address regional goods movement issues and coordinate planning/programming objectives as they relate to goods movement. The 2016 RTP/SCS also identified over $70 billion in investments needed to improve the regional goods movement system. The Goods Movement component in the RTP identified related improvements such as the development of truck facilities such as truck-only lanes; improving mainline rail capacity; expanding intermodal facilities; improving port infrastructure; introducing zero emissions freight technologies; and constructing grade separations at roadway crossings.

Key Terms

Food Desert. As defined by the 2008 Farm Bill, a food desert is "an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities."

Food Insecurity. Food insecurity refers to difficulty accessing healthy food. The USDA describes low food security as reports of reduced quality, variety, or desirability of the food available, with no or some indication of reduced food intake; very low food security refers to multiple indications of disrupted eating patterns and reduced food intake.

Low-Access Community. A low-access community refers to an area whose residents experience some degree of food insecurity.

Food Environment. The food environment describes a person's exposure to food in daily life, encompassing places such as homes, schools, stores, restaurants, and food pantries.

Food Infrastructure. The food infrastructure describes how food travels from producer to consumer, including the different organizations, companies, and entities required to organize the food distribution.

Food Retailer. A food retailer is a vendor who sells food, either exclusively, or with other products. Food retailers do not include restaurants.

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SECTION 4.3 SOCIOECONOMIC STATUS AND ECONOMIC OPPORTUNITY

Introduction

Socioeconomic status typically reflects the combination of education, income, and occupation, and is tied to an individual's access to resources. Access to resources, in turn, affects an individual's health and well-being. A person's socioeconomic status greatly influences how he/she makes decisions about personal care, which affects a person's capacity to take advantage of economic opportunities. If we are low on money, we may choose unhealthy fast food over more-costly fresh produce, or opt to go to work instead of seeing the doctor because the doctor's office is too far away and we do not have any more paid time off. Someone with a higher socioeconomic status has greater economic opportunity; conversely, someone with a lower socioeconomic status has less mobility and fewer choices.

Major Findings

- There are pockets of disadvantaged neighborhoods within the county, namely within the Ojai, Oxnard, Ventura, Santa Paula, Fillmore, and Piru planning areas.
- The Oak Park (60.7 percent), Camarillo (49.2 percent), Simi Valley (40.6 percent), and Thousand Oaks (40.2 percent) planning areas have the highest percentage of residents attaining at least a Bachelor's degrees, while the Piru (46.7 percent), Santa Paula (34.5 percent), and Oxnard (30.0 percent) planning areas have the lowest percentage. (Five-year average 2010-2014)
- In 2014, 58 percent of renters within Ventura County were spending 30 percent or more of housing income on rent.
- In 2016, 53 percent of the chronically homeless reported they had a chronic illness such as diabetes, seizures, and hepatitis, and 48 percent reported they had a mental health problem.
- In 2014, approximately 17 percent of people in Ventura County reported having delayed or not received medical care they felt they needed.
- In 2016, Ventura County has a lower primary care provider-to-people ratio (75 providers/100,000) than the statewide rate (78 providers/100,000)
- According to the U.S., Census, American Community Survey (2011-2015), just over 86 percent of Ventura County adults had insurance coverage, compared with the statewide value of 81 percent.

Existing Conditions

Socioeconomic Status and Related Factors

Socioeconomic status is the most fundamental reason for differences in health outcomes. The Health Disadvantage Index (HDI), developed by the Public Health Alliance of Southern California, illustrates where health disadvantaged communities are located within the entire state of California. HDI is informed by social determinants of health and defined by six categories of indicators: economic resources, social resources, educational opportunity, health outcomes, environmental hazards, and complete neighborhoods, listed in order of weight in the model from highest to lowest. The benefits of this model

include a heavy emphasis on economic and social resources, which underscores the importance of understanding the effects of socioeconomic status on health.

Figure 4-12, which maps HDI by census tract, shows that there are pockets of disadvantaged neighborhoods within the county, namely within the Ojai, Oxnard, Ventura, Santa Paula, Fillmore, and Piru planning areas.

Research suggests that both physical and mental health is strongly associated with SES. In particular, studies suggest that lower SES is linked to poorer health outcomes. Poor health may in turn decrease an individual's capacity to work, thus reducing their ability to improve their SES. Reducing SES disparities will require major changes which are often structural and complicated in their political dimensions, and will require policy initiatives that address the components of SES such as income, education, and occupation, as well as the pathway by which these conditions affect health of the community.

The following list summarizes some of the effects of SES on health and economic opportunity:

- Low SES is associated with increased morbidity and mortality.
- Low-income individuals are 2-5 times more likely to suffer from a diagnosable mental disorder than those in the top SES bracket.
- Within families, economic hardship can lead to marital distress and disrupted parenting that may increase mental health problems among children, such as depression, substance abuse and behavior problems.
- Educational and employment opportunities may be hindered by mental health problems.
- Access to health insurance and preventive services are part of the reason for socioeconomic health disparities.
- Research shows that SES is associated with a wide array of health, cognitive, and social emotional outcomes in children, with effects beginning prior to birth and continuing into adulthood.
- Individuals with low SES often experience barriers to obtaining mental health services, including lack of or limited access to mental health care, child care and transportation.
- Education has a positive and statistically significant impact on the health of individuals.
- Child pedestrian collisions are nine times more likely to occur in low-income neighborhoods compared to high-income neighborhoods.

In unincorporated Ventura County, the planning areas with the highest proportions of residents 25 years and older with at least a Bachelor's degree are Oak Park (60.7 percent), Camarillo (49.2 percent), Simi Valley (40.6 percent), and Thousand Oaks (40.2 percent). The planning areas with high proportions of residents 25 years and over without a high school diploma are Piru (46.7 percent), Santa Paula (34.5 percent), and Oxnard (30.0 percent). (Five-year average 2010-2014)

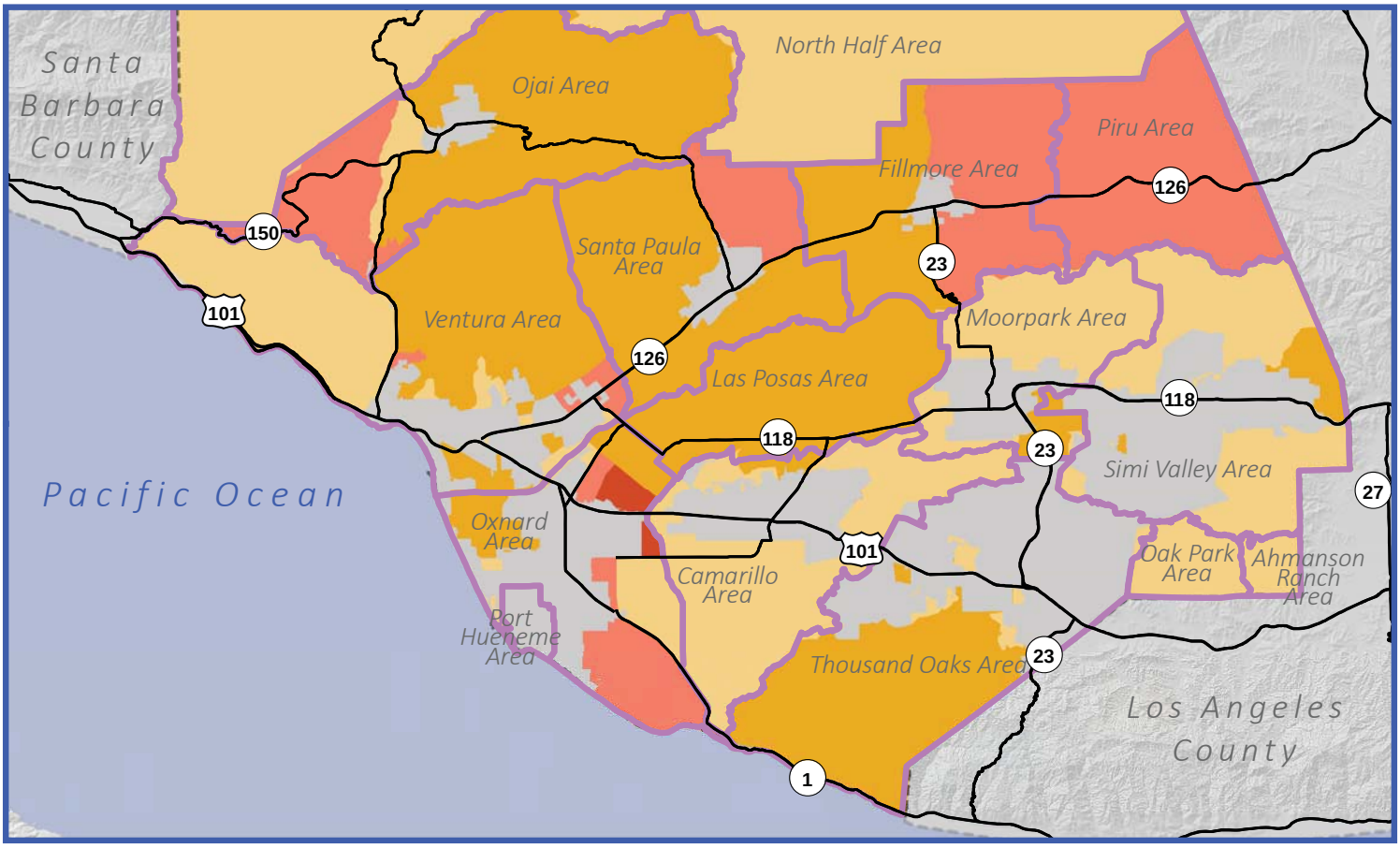

Figure 4-12:
Health Disadvantage Index (HDI)

Map Date: August 02, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; Public Health Alliance of Southern California, 2016.

0 5 10 Miles

N

Cities
Planning Areas

HDI Percentile
0-25
26-50
51-75
76-100

In the unincorporated areas of Ventura County, employed residents have a higher representation (41.4 percent) in management, business, science, and arts occupations. Conversely, incorporated areas have a higher representation in the retail and manufacturing industries. Agricultural workers generally had the highest concentration around the Oxnard, Santa Paula, and Ojai planning areas, while workers in the professional, scientific, and technical services were more concentrated around the Oak Park, Ojai, and Camarillo planning areas. The Ojai planning area also had the highest concentration of workers in educational services, and overall, had the highest number of employees compared to all other Ventura County planning areas. It is important to note that the agriculture industry supports more than 28,000 direct jobs in farming, as well as jobs in related support sectors and food processing.

Educational attainment is often tied to earned income. Ventura County's overall median income was $77,335 during the five-year period between 2010 and 2014. This median income was above the statewide median household income of $61,489. Among the cities and unincorporated CDPs in Ventura County, only Piru and Saticoy had a median income that fell below 80 percent of the statewide median household income. Among the county's planning areas, the Camarillo, Las Posas, Moorpark, Oak Park, Simi Valley, and Thousand Oaks planning areas had the highest estimated mean income, with each of them averaging over $125,000 (2014 dollars). The lowest mean household incomes occurred in the Piru ($53,470) and Santa Paula ($71,986) planning areas.[1]

An expanded discussion of education attainment, employment, and income can be found in Chapter 2.

Housing

In Ventura County, housing prices are rising; home values grew 6.8 percent between 2015 and 2016, and are projected to grow 2.8 percent by 2017. As of May 31, 2016, Zillow reported that the median sale price in Ventura County was $531,250. Those experiencing housing burden may also be at risk for experiencing food insecurity. In 2014, 58 percent of renters within Ventura County were spending 30 percent or more of housing income on rent. Increasingly, access to safe and affordable housing considered a public health issue, and the ability to choose and afford quality housing in a safe neighborhood with good public services is the combined effect of someone's education, occupation, and income. The Piru and Santa Paula planning areas have the lowest educational attainment levels in the county, and the lowest mean household incomes as discussed earlier in the section.

Ventura County's 2014 General Plan Housing Element discusses housing opportunity and diversity. The main goal of the element is to "increase housing opportunities for households of all income levels with special emphasis on lower-income households, senior citizens, mentally-ill, single heads of household, large families, farmworkers, handicapped and homeless." Addressing the need for housing, especially for the populations emphasized by the 2014 Housing Element will play an important role in reducing stress, exposure to poor living environments, and ultimately, the risk for developing chronic conditions such as obesity and/or Chronic Lower Respiratory Disease.

The countywide Health Care for the Homeless program, served 10,070 unduplicated patients that self-identified as homeless in 2015. The 2016 Ventura County Homeless County and Subpopulation Survey Report includes data showing that chronically homeless adults struggle with chronic health conditions and

[1] The mean is calculated by adding together all values, and dividing them by the number of values. Because the indicators for the Ventura County Planning Areas are aggregated together from Census Tract level data, the mean, rather than the median income was used.

mental health issues. Specifically, 53 percent of the chronically homeless reported they had a chronic illness such as diabetes, seizures, and hepatitis, and 48 percent reported they had a mental health problem.

Access to Health Care

Access to health care has been measured in terms of distance, cost, and/or cultural sensitivity. Barriers to health care arise when it is difficult to visit the nearest facility (e.g., it is too far away, the patient does not have access to a car, the facility is not open at convenient times), the cost of care is too expensive (e.g., lack of insurance or inadequate insurance coverage), and/or when the patient is uncomfortable going to the doctor (e.g., the system is too complicated, the doctor does not speak the patient's language, the patient feels judged, seeing the doctor is not part of the patient's health-seeking behavior). Typically, it is a combination of many barriers that create a patient's experience of accessing health care.

Efforts to increase access to health care have involved increasing insurance coverage, reforming the health care system to lower costs, increasing the number of small health care clinics, and investing in outreach and health education programs. Access to health care can also be influenced by planning policies such as transportation connectivity. Please see Sections 4.4 and 6.5 for an expanded discussion on transportation connectivity.

As evidenced by responses to the most recent Health Assessment conducted by the County, respondents felt strongly that access to health care was a crucial component of a healthy community. One aspect of health care is the degree to which the community can access clinical preventive services. These include procedures, tests, counseling or medications used by health care providers to prevent disease, detect health problems early, and/or provide individuals with the information they need to make good health decisions. Health care access is also affected by socioeconomic status and built environment factors such as accessible infrastructure. Several key indicators related to preventative services and access to health care include:

- **People Delayed or had Difficulty Obtaining Care:** Approximately 17 percent of people in Ventura County reported having delayed or not received medical care they felt they needed (2014). This compares with a statewide rate of 11 percent, and represents an increase in delay/difficulty of almost 80 percent since 2003. The 45-to-64-year-old cohort reported the most difficulty (28 percent); the 0- to 17-year-old cohort reported the least difficulty (11 percent).
- **Primary Care Provider Rate:** This indicator identifies the number of primary care providers per 100,000 people, and can include practicing physicians specializing in general practice medicine, family medicine, internal medicine, and pediatrics. The rate in Ventura County is 75 providers/100,000 (as measured in 2013 and updated in 2016). This compares to a statewide value of 78 providers/100,000.
- **Adults with Health Insurance:** This indicator shows the percentage of adults aged 18 to 64 that have any type of insurance coverage. The rate in Ventura County is 82 percent (2013-2014). This compares to a statewide value of 81 percent.

Other health care access indicators include: Children with Health Insurance; Kindergarteners with Required Immunizations; Children who Visited a Dentist; and Dentist Rate. These indicators can be found on the VCPH website. Chapter 7 provides a discussion of clinical and public health care services provided by and in Ventura County.

Regulatory Setting

2014 Ventura County Housing Element

Please see the 2014 Housing Element Update for relevant regulations and legislation concerning housing.

California Health and Safety Code Section 131019.5

This section defines "determinants of equity," "health equity," "health and mental health disparities," "health and mental health inequities," "vulnerable communities," and "vulnerable places." This section also establishes the Office of Health Equity, which is responsible for researching various trends and issues related to health equity, for the purpose of making recommendations for strategic plans.

Key Terms

Socioeconomic Status. Socioeconomic status (SES) refers to a person's economic and social position within their community, often measured with educational attainment, type of occupation, and income. SES is often used to explain disparities in education, wealth, and health.

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SECTION 4.4 ACTIVE AND HEALTHY LIVING

Introduction

There are many health benefits associated with convenient access to public transit and active transportation (e.g., walking, biking), including increased physical activity and reduced air pollution from vehicle emissions. Proximity to transit improves access to social, medical, employment, and recreational activities, and using public transit helps people meet minimum requirements for physical activity as it imbeds physical activity into everyday life. Pedestrian and bicycle trips do not contribute to noise or air pollution emissions, including ozone and particulate matter, which are risk factors for cardiovascular mortality and respiratory disease and illness.

Leading an active and healthy life is easier when opportunities to walk and bike are available and when people feel safe and welcome doing so. Implementation measures include human-scaled design and sidewalk maintenance to ensure a pleasant and welcoming public space. Pedestrian and bicyclist safety is also critical to address to promote active and healthy lifestyles.

Major Findings

- Historic development patterns within unincorporated communities often do not support safe and accessible walking, physical activity, or recreation.
- The current land use mix in the unincorporated county promotes an automobile-centric lifestyle since different types of destinations are not within walking distance.
- The County does not have a plan for pedestrian facilities.
- Due to higher percentages of transit-dependent populations, the Piru, Santa Paula, Moorpark, Las Posas, Ojai, and Oak Park areas may have greater need for public transit improvements and transit connectivity
- Ventura County has abundant active open space areas, although additional study may be necessary to evaluate connectivity and access to existing active open spaces.
- There is one federally-funded Safe Routes to School project within the unincorporated county.
- Communities around Oxnard and slightly south of Port Hueneme are experiencing a disproportionately higher amount of pollution burden.

Existing Conditions

Land Use and Urban Development

As shown in Table 3-1 of Chapter 3 of this Background Report, rural residential, single-family, and manufactured/mobile homes account for 2.2 percent of land use area within the unincorporated county. There is a negligible amount of commercial development, and less than one percent of industrial land uses. Commercial businesses, office buildings, and educational facilities are typically located in commercial strips, business parks, and on large campuses, maintaining separation between where people live and where entertainment, services, and schools are located. This type of land use mix promotes an

automobile-centric lifestyle since different types of destinations are not within walking distance, decreasing opportunities for physical activity within daily life, which in turn can negatively impact health.

In addition, historic development patterns within unincorporated communities often do not support safe and accessible walking, physical activity, or recreation. For example, two existing county policies outlined below have limited the degree to which existing urban development supports active living.

Ventura County Pave-Out Policy

While sidewalks, street lighting, and street trees are often key components of an active community, the County's existing "Pave-Out Policy" first passed in 1968, restricts the use of the County's Road Fund to maintenance of existing roads only. As a result, the County mostly relies on developers to construct road improvements, including sidewalks and other pedestrian amenities. (Historically, the County has also applied for limited federal and state transportation grants.) While some infrastructure improvements are best accomplished by private developers, a patchwork of pedestrian improvements implemented as part of private development is not conducive to creating an ideal infrastructure for walking.

Legacy of Proposition 13 on County Parks

Resources for park improvements within the unincorporated areas of the county are also limited. Following the 1978 passage of Proposition 13, the Board of Supervisors affirmed the policy that regional parks be self-sustaining without contributions from the General Fund. This means that park development can only occur if a method of financing (other than the General Fund), is available for acquisition, construction, operation, and maintenance. This requirement may work for large regional parks, such as those along the beach where space rental fees for motor homes can be charged, but it is challenging for smaller parks that may serve smaller existing communities within the unincorporated area.

Transportation Connectivity

Development patterns in much of California, including Ventura County, tend to be automobile-centric, prioritizing the efficiency of automobile traffic over other forms of transportation. For instance, streets are designed to be wide to accommodate increasing levels of traffic. Wide streets and lanes without pedestrian features, and increased distances between crosswalks encourage faster driving, while discouraging walking. As of 2016, the County does not have a plan for pedestrian facilities. Additionally, based on the discussion of land use and urban design, it appears that unincorporated areas of the county, including the urbanized areas, don't include policies that encourage or promote walking.

In areas where people drive faster, businesses tend to locate further back from the street edge and use bigger and higher signs that are intended to be read at a distance while driving in a car. On the other hand, narrower streets with landscaping and regular crossings, encourages safer driving and more walking. Ensuring the safety of pedestrians and bicyclists is important for encouraging people to choose walking and biking over driving.

Any kind of transportation other than driving is considered an alternate mode of transportation. This includes biking, walking, and the use of public transportation. Improving connectivity between different modes of transportation increases the convenience of getting around without a car. This is especially important for those who are "transit-dependent." Transit-dependents, as defined in Chapter 6, are people who, due to disability, age, and/or economic status, do not have access to a vehicle or are unable to drive, and, therefore, rely on public or private transportation services. In the unincorporated county, the two largest age groups are those under 18 and those between ages 25 and 64. The majority of the population

under 18 is younger than 16, and is therefore, not legally able to drive. This means that alternate modes of transportation are critical, especially if they do not have anyone to drive them. However, the greatest increase in county population is in people 65 years and over (2010-2016). This cohort grew by over 17 percent, mirroring trends seen in Ventura County's cities, as well as in California as a whole. The planning areas with the highest percentages of people age 65 and over are Moorpark (21 percent), Las Posas (20 percent), and Ojai (19 percent), while Oak Park (23 percent), Piru (21 percent), and Santa Paula (20 percent) planning areas have the highest proportion of people under 18 years. Due to higher percentages of transit-dependent populations, the Piru, Santa Paula, Moorpark, Las Posas, Ojai, and Oak Park areas may have greater need for public transit improvements and transit connectivity.

These transportation considerations are part of the state's "Complete Streets" framework, and are discussed in greater detail in Chapter 6.

Active Open Spaces

Having access to active open spaces has both mental and physical health benefits. As discussed in the Chapter 7 (Public Facilities, Services, and Infrastructure), Ventura County has land devoted to active open spaces (e.g., trails, playgrounds, campgrounds), although additional study may be necessary to evaluate connectivity between amenities and access to existing active open spaces.

Safety

Safe Routes to School

Walking and biking to school is one way to increase the amount of physical activity children engage in on a daily basis. Due to distance and/or safety concerns, however, many parents opt to drive their children to school, increasing congestion and worsening air quality near schools, and decreasing the amount of time children are active. There are five Federally-funded Safe Routes to School projects in Ventura County, but only one within the unincorporated county, in El Rio near Rio Del Valle Junior High School. This project proposed to install traffic signals, crosswalks, and bike lanes, as well as construct sidewalks. The project location is on the south side of Rose Avenue and Collins Street, and on Rose Avenue between Collins Street and Orange Drive.

Crime

Crime rates are important to consider when encouraging people to be more active. If crime rates are high in a neighborhood, people will be less likely to walk, bike, or use public transportation. Violent crime in the unincorporated county accounts for 31 percent of total countywide violent crimes, the majority of which is classified as "aggravated assault." See Chapter 7 (Public Facilities, Services, and Infrastructure) for an expanded discussion of law enforcement and emergency services.

Air Quality

Healthy air quality is important for promoting an active lifestyle. It is counterproductive to encourage people to be active outside when environmental conditions outdoors could put them at higher risk of developing respiratory diseases. Additionally, promoting good air quality supports the statewide goals of reducing GHG emissions and other pollutants. See Chapter 8 (Natural Resources) for a detailed discussion of air quality and the different types of pollution faced by communities in Ventura County.

Smoke-free Places

Since tobacco use is the leading cause of premature and preventable death in the United States, it is important to prevent and reduce tobacco use and protect people from secondhand smoke in public settings, such as parks, recreation areas, work sites, schools, multi-unit housing, etc. As with many other health indicators, smoking prevalence differs by socioeconomic status; individuals with lower income, less education, and those who receive public insurance are more likely to be smokers. Living tobacco-free lowers a person's risk of developing lung cancer, heart disease, and other diseases and causes of death related to tobacco use. Tobacco-free living means avoiding use of all types of tobacco products such as cigarettes, cigars, smokeless tobacco, hookahs as well as electronic cigarettes (a nicotine delivery system) and also living free from secondhand smoke exposure. Policies requiring signage within buildings and around the peripheries of buildings can help enforce a smoke-free environment. In 2013, 13.1 percent of Ventura County adults smoked. Additional tobacco-free living indicators include: Adults with Asthma; Age-Adjusted ER Rate due to Asthma; Age-Adjusted ER Rate due to COPD; Age-Adjusted ER Rate due to Pediatric Asthma; Children and Teens with Asthma; Youth who Smoke.

Environmental Air Quality

Chapter 12 (Climate Change) notes that on April 2, 2007, the United States Supreme Court ruled that CO_2 is identified as an air pollutant under the federal Clean Air Act (CAA). Furthermore, on December 7, 2009, in their adopted Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA, the U. S. Environmental Protection Agency (EPA) determined that greenhouse gas (GHG) emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which the EPA found is endangering public health and welfare. EPA's final findings respond to the 2007 Supreme Court decision that GHGs fit within the CAA definition of air pollutants. In 2012, 53 percent of Ventura County greenhouse gas (GHG) emissions came from on-road transportation; although in unincorporated Ventura County, on-road transportation only accounts for 19 percent of GHG emissions while non-residential electricity use accounts for 38 percent. Chapter 8, Section 8.1 notes that cars and trucks are the largest contributors of ozone precursor emissions within Ventura County. Within Ventura County ROG and NOx emissions are declining, coming closer to meeting CAAQS and NAAQS for ozone. As of October 2015, however, Ventura County was listed as a serious nonattainment area for the NAAQS for 8-hour ozone. Additionally, as the county and region continue to grow and population increases, ROG emissions are expected to increase as well. Furthermore, climate change and expected increases in temperature could lead to increased smog.

Environmental Hazards and CalEnviroScreen

The Office of Environmental Health Hazard Assessment (OEHHA) within the California Environmental Protection Agency (CalEPA) developed CalEnviroScreen 3.0 (California Communities Environmental Health Screening Tool) to better identify communities that are disproportionately burdened with multiple sources of pollution. CalEnviroScreen maps disadvantaged communities through a scoring system that combines factors that contribute to pollution burden with factors related to population characteristics. A higher score indicates a greater environmental burden. This methodology defines a disadvantaged community to be a census tract that is ranked among the highest 25 percent of all scores. Figure 4-13 shows disadvantaged communities in Ventura County as defined by CalEPA and identified by CalEnviroScreen 3.0. It shows that census tracts in the southeastern and northwestern parts of the Oxnard Planning Area and along Ventura Avenue in the Ventura Planning Area~~, the southern Santa Paula Area, and the entire Piru Area~~ have been identified as disadvantaged with a high pollution burden.

In response to increasing concerns about vulnerable communities in California experiencing instances of environmental injustice, the State Legislature passed and Governor Brown signed Senate Bill 1000 (SB 1000). SB 1000 requires that general plans adopted after January 2018 include either a stand-alone environmental justice element or goals, policies, and objectives addressing environmental justice integrated in other elements. The law also requires general plans to identify disadvantaged communities within the area covered by the general plan of a city, county, or city and county, with a reference to CalEnviroScreen as a means for such identification. See Chapter 3, Land Use, Section 3.11, Environmental Justice and Disadvantaged Communities, for further discussion of environmental justice and disadvantaged communities in Ventura County.

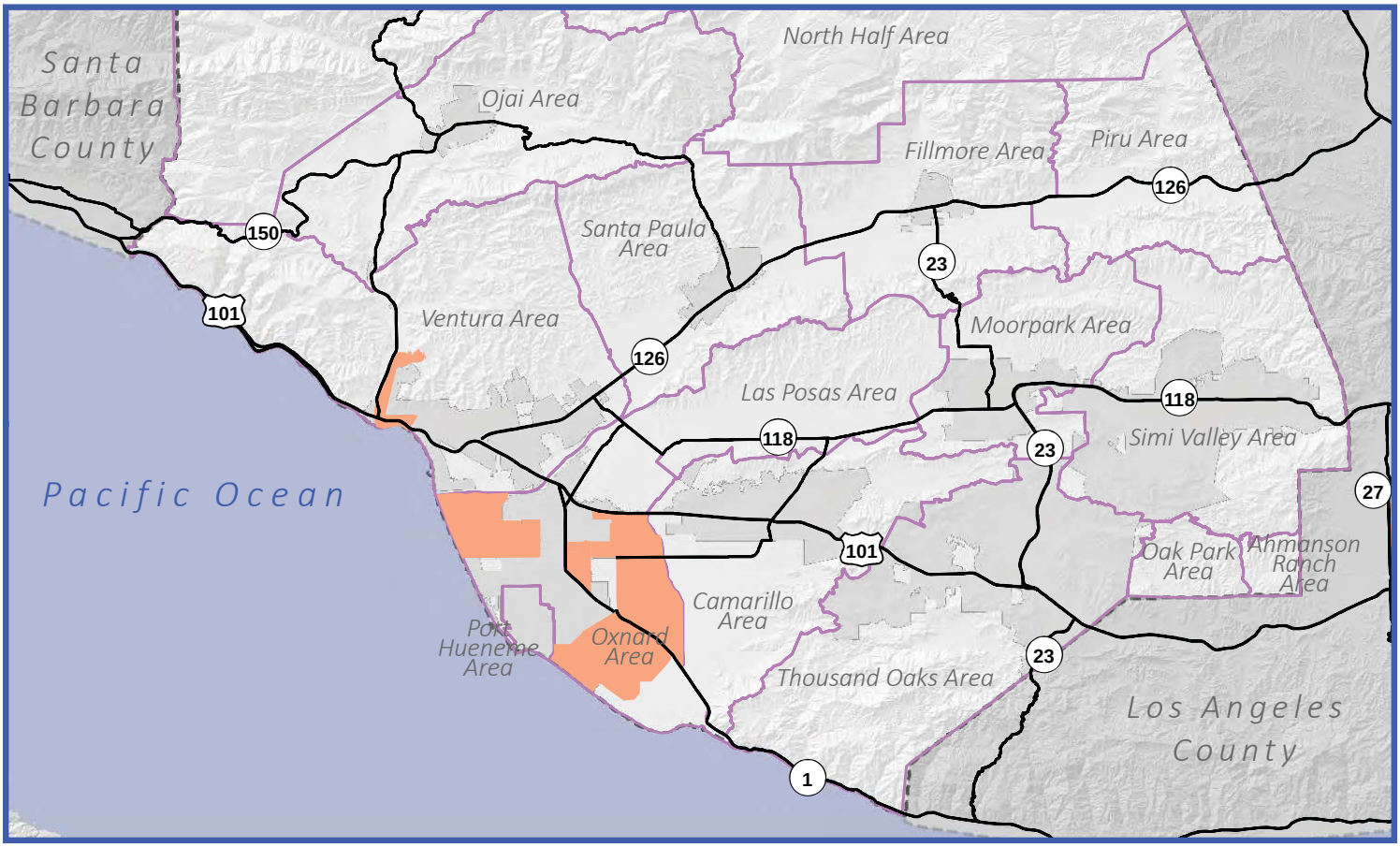

Figure 4-13:
Disadvantaged Communities (CalEPA)

Map Date: November 21, 2017
Source: CalEPA OEHHA CalEnviroScreen 3.0.

0 5 10 Miles

N

Disadvantaged Communities
Cities
Planning Areas

Regulatory Setting

Federal

Clean Air Act.

Please see Chapter 8 for a description of this legislation.

State

Safe Routes to School

The California Streets & Highways Code Section 2333.5 established the State-legislated Safe Routes to School (SR2S) Program. It was extended indefinitely by Assembly Bill 57 (Chapter 673, Statues of 2007) in 2007. Both cities and counties may apply for the grant to fund infrastructure improvement projects within the vicinity of a K-12 school. Local jurisdictions are required to match 10 percent of the grant. Projects are expected to be completed within 4.5 years of project funds allocation. There have been 10 cycles completed as of 2016.

California Indoor Clean Air Act of 1976

California Health and Safety Code Sections 118875-118915 (Article 1) and Sections 118920-118945 (Article 2), together commonly referred to as the California Indoor Clean Air Act of 1976, recognizes tobacco smoke as a health hazard of the general public and regulates the smoking of tobacco products in public places to protect the health, safety, welfare, comfort, and environment of non-smokers. Requirements of signage for designated non-smoking and smoking areas and restrictions on amount of space that may be designated for smoking areas are defined for different types of public spaces. These defined public spaces are indoor public meeting spaces, health facilities, gathering spaces for performances or sporting events, restaurants, retail food establishments, and public transportation spaces, including planes, vehicles, trains, and waiting areas for use of public transportation.

Transit-Oriented Development Implementation Fund

The California Health and Safety Code Section 53562a,b,c) allows the Health Department to make grants to cities, counties, cities and counties, or transit agencies to carry out infrastructure projects that develop higher-density uses near a transit station, or to facilitate connections between developments and a station.

Fixing America's Surface Transportation Act (FAST) Act

The FAST Act funds the Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grants: Federal Transit Authority setting aside $5.3 million to test promising and replicable public transportation health care access solutions that support 1) increased access to care, 2) improved health outcomes and reduced health care costs. An expanded description of this legislation can be found in Chapter 6.

Senate Bill 1000 (SB 1000)

SB 1000 was passed in 2016, and requires jurisdictions to identify environmentally disadvantaged communities and develop measures to mitigate the adverse effects. SB 1000 uses the California

Environmental Protection Agency definition of disadvantaged communities, which is based on Senate Bill 535. The definition of an environmentally disadvantaged community is based on scores derived from CalEnviroScreen 2.0. Census tracts that rank within the highest (worst) 25 percent of all scores are defined as a disadvantaged community.

Key Terms

Transit Dependents. These are persons who, due to disability, age, and/or economic status, do not have access to a vehicle and rely on public or private transportation services.

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Ventura County 2040 GENERAL PLAN

Chapter 5
Housing

5 HOUSING

INTRODUCTION

California State Housing Element law (Government Code Section 65580 (et seq.)) mandates that local governments update the Housing Element to adequately plan to meet existing and projected housing needs of all economic segments of the community. Housing Elements are one of the required elements of a General Plan. Jurisdictions must gain approval from the California Department of Housing and Community Development (HCD) through a certification process. The Housing Element, unlike other elements of the General Plan, must be updated per a mandated schedule, or "cycle," to ensure that the County is making incremental progress towards its goals and policies.

In 2014, the County of Ventura adopted, and had certified by HCD, an updated Housing Element that includes a comprehensive assessment of current and projected housing needs for all economic segments of the community, and set forth housing policies and implementation programs for the period of 2014-2021. The Housing Element also includes extensive documentation of background conditions related to housing in the County.

The next cycle of housing element updates for cities and counties within the Southern California Association of Governments (SCAG) region is expected to commence in 2020, prior to the scheduled completion of the General Plan Update. The County's General Plan Update Work Program calls for the update of the County's 2014 Housing Element in conjunction with the completion of the overall General Plan Update. At that point, the background documentation required for the Housing Element will be integrated into this Background Report. In the meantime, the 2014 Housing Element, including background documentation, will remain a part of the County's existing General Plan.

A summary of housing program implementation and data from the 2015 Annual Element Progress Report – Housing Element Implementation (Annual Report) is provided below. It contains the most current data reported for the 2014-2021 Housing Element reporting period. This discussion is followed by a description of the regulatory framework for housing elements as summarized by the Governor's Office of Planning and Research in its 2017 General Plan Guidelines.

EXISTING CONDITIONS

2014 Housing Element Implementation - Compliance Summary

The information below summarizes the status of compliance with SCAG's 2014-2021 Regional Housing Needs Assessment (RHNA) for calendar years 2014 and 2015, and includes a discussion of implementation status of Housing Element programs contained within the 2014-2021 Housing Element.

A. RHNA Data Summary – 2015 and 2016 Annual Element Progress Reports – Housing Element Implementation

1. Housing Objectives

The RHNA quantifies housing needs in a given jurisdiction by specifying the number of dwelling units that the jurisdiction must be able to accommodate during a specified planning period. In addition, the RHNA specifies the number of housing units that must be affordable to all household income categories, as defined by the U.S. Department of Housing and Urban Development (HUD). SCAG adopted the Regional Housing Needs Assessment (RHNA) for Ventura County for the period from January 2014 to October 2021. The RHNA dwelling unit (DU) numbers by income category for the unincorporated area of Ventura County are shown in Table 5-1.

TABLE 5-1
2014-2021 RHNA
Unincorporated Ventura County

Income Category	RHNA Allocation (DUs)	Est. Annual Housing Need (DUs)
Extremely Low (<30% median)	123	15
Very Low (>30%-<50% median)	123	15
Low (>50%-<80% median)	168	21
Moderate (>80%-<120% median)	189	24
Upper (>120% median)	412	52
Totals	**1,015**	**127**

Source: 2014-2021 Ventura County Housing Element.

2. Ventura County's Progress in Meeting Housing Needs

As shown in Table 5-1, an average of 127 dwelling units would need to be built annually within unincorporated Ventura County to meet the RHNA goals set for the 2014-2021 Housing Element. While the county has the capacity (based on land use maps) to meet its RHNA allocation, actual housing construction in 2014 and 2015 did not keep pace with this annual average target of 127 units, as further described below.

Table 5-2 summarizes information related to housing completions by income category. (Completion information for calendar year 2014 is summarized in the 2015 Annual Report, while completion information for calendar year 2015 is summarized in the 2016 Annual Report.)

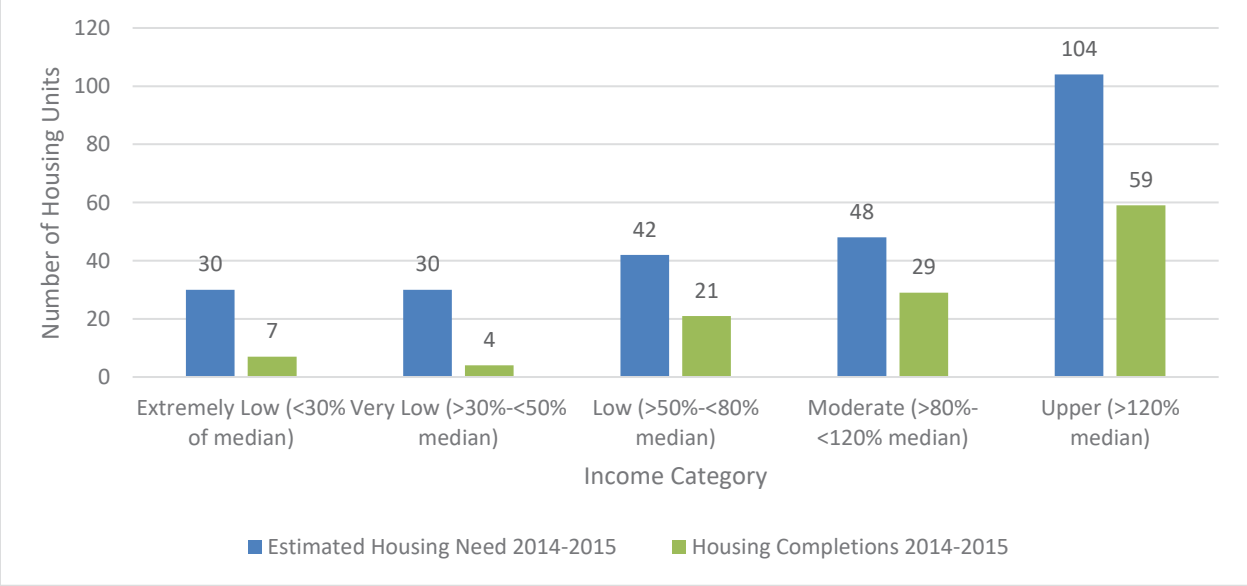
TABLE 5-2
REMAINING HOUSING NEED BY INCOME CATEGORY
Unincorporated Ventura County

	Lower Income (<80% of median)			Moderate Income (80-120% of median)	Upper Income (>120% of median	Unknown	Total
	Extremely-Low Income (<30% of median)	Very-Low Income (30-50% of median)	Low Income (50-80% of median)				
2014-2021 Housing Need	123	123	168	189	412	--	1,015
2014 - 2016 Housing Completions	7	4	21	29	56	3	120
Remaining Housing Need	**116**	**119**	**147**	**160**	**356**	**(3)**	**895**

Source: Source: 2014-2021 Ventura County Housing Element and 2016 Annual Report.

Figure 5-1 compares the average, annual housing need for individual household income groups to actual housing construction in 2014 and 2015. This graph shows that construction activity is not keeping pace with projected housing need for any of the household income groups. More specifically, 23 percent of the development goals were met for the extremely low-income category, 13 percent for the very low-income category, 50 percent for low income category, 60 percent for moderate income category, and 57 percent for the upper income category.

FIGURE 5-1
2014-2015 HOUSING NEED VS. HOUSING COMPLETION



Source: 2014-2021 Ventura County Housing Element and 2015 Annual Report.

3. Methodology and Reporting Requirements

Ventura County Planning Division staff categorized most of the dwelling units completed by affordability category using the household income information provided annually by HUD. In cases where actual sales data was not available, online data was used from the real estate website Zillow to determine market value estimates for the newly-constructed single-family units. In some cases, units were placed in the upper income category due to their location. In instances where sales information was incomplete or inconsistent, the units were placed in the unknown category.

B. Implementation Status of Housing Element Programs

All Housing Element programs are included in Section 3.3 of the existing General Plan's Goals, Policies, and Programs. These programs are implemented through either the County's Resource Management Agency (Planning Division) or the Community Development Division of the County Executive Office. All Housing Element programs and their implementation status are summarized in the Annual Element Progress Report – Housing Element Implementation, prepared for HCD. There are 25 programs that fall into the following broad categories:

- Population and Dwelling Unit Forecast
- Population and Dwelling Unit Monitoring
- Housing Preservation
- Housing Rehabilitation
- Housing Opportunity and Diversity
- Housing Equality
- Population and Housing Section Update

Most housing programs are ongoing. For example, programs that require the monitoring of housing construction will continue throughout the time horizon of the Housing Element. Several programs, however, have anticipated dates for program initiation; these are briefly summarized in Table 5-3.

TABLE 5-3
HOUSING PROGRAM IMPLEMENTATION STATUS

Name/Description of Program	Objective	Timeframe and Status of Implementation
Housing Opportunity and Diversity Program 8: The Planning Division, in consultation with farmworker housing organizations, will evaluate development standards applicable to discretionary farmworker complexes and, if warranted to facilitate farmworker complexes, will adopt new or amend existing development standards.	Support development of farmworker complexes	Initiated in 2016
Housing Opportunity and Diversity Program 10: The Planning Division will prepare and bring forward for the Board of Supervisor's consideration amendments to the Non-Coastal and Coastal Zoning Ordinances that would require residential development projects of 10 or more dwelling units to provide lower-income residential units (NCZO -FY2014-15; CZO FY2015-16 or concurrent with Phase II CIAP Grant CZO amendments).	Inclusionary Housing	Scheduled for FY 2019-2020
Housing Opportunity and Diversity Program 11: The Planning Division will evaluate senior citizen housing needs and potential ordinance revisions that promote the preservation and expansion of senior citizen housing countywide.	Senior Housing	Initiated in 2016
Population and Housing Section Update Program 2: The Planning Division will periodically prepare an update to the Population and Housing Section of the General Plan as required by State law, to reflect the results of the periodic reassessment of the County's housing needs, objectives, and implementation programs.	Housing Element Update	Scheduled for FY 2020-2021
Employment and Commerce/Industry Program 3: The Planning Division will develop and process a Housing Impact Mitigation Fee ordinance for the Board of Supervisors' consideration. Any fees collected from agricultural-related development should be set aside for only farmworker housing.	Housing Impact Mitigation Fee Ordinance	Scheduled for FY 2019-2020

Source: Source: 2014-2021 Ventura County Housing Element and 2015 Annual Report.

REGULATORY SETTING

State law (Government Code Sec. 65580) requires that housing elements contain the following components:

- Review or previous housing element;
- Housing needs assessment;
- Inventory and analysis of adequate sites where housing could be built;
- Analysis of potential constraints that may impact the development of housing; and
- Quantified objectives that establish the maximum number of housing units by income category that can be constructed, rehabilitated and conserved.

In 2017, the Governor's Office of Planning and Research (OPR) published an update to its General Plan Guidelines that includes information and guidance on preparing housing elements. It contains a listing of housing element requirements, along with a brief description of each requirement (see summary in Table 5-4). As the County begins the process of updating its Housing Element for the upcoming 2021 housing element cycle, all of the required components outlined below will be addressed.

TABLE 5-4
HOUSING ELEMENT REQUIREMENTS

Statutory Citation	Brief Description of Requirement
Gov. Code §65583(c)(8)	**Public Participation:** Description of diligent effort to include all economic segments of the community
Gov. Code §65588	**Review and Revise:** ▪ Progress in implementation ▪ Effectiveness of the element ▪ Appropriateness of goals- objectives, policies and programs
Gov. Code §65583(a)(1 and 2)	**Housing Needs Assessment:** Quantification and analysis of existing and projected housing needs, populations and employment trends, including documentation of projections, housing and household characteristics, including: ▪ Level of payment compared with ability to pay (overpaying households) ▪ Housing stock conditions ▪ Overcrowded households Existing and projected needs for all income levels, including: ▪ Regional Housing Need Allocation (RHNA) ▪ Existing housing need for extremely low income households ▪ Projected housing need for extremely low income households based on RHNA or Census
Gov. Code §65583(a)(7)	**Persons with Special Needs:** Identification and analysis of any special housing needs including: ▪ Elderly

TABLE 5-4 HOUSING ELEMENT REQUIREMENTS	
Statutory Citation	**Brief Description of Requirement**
	▪ Persons with disabilities, including developmental disabilities ▪ Large Households ▪ Farmworkers (seasonal and permanent) ▪ Female headed households ▪ Homeless (annual and seasonal) ▪ Other
Gov. Code §65583(a)(9)	**At-Risk Units:** Inventory of at-risk units (10 years from the housing element due date) ▪ Estimate of replacement versus preservation costs ▪ Identification of qualified entities ▪ Identification of potential funding
Gov. Code §65583(a)(5 and 6)	**Potential Governmental Constraints:** Include an analysis of actual and potential governmental constraints for each of the following: ▪ Land use controls ▪ Building codes and their enforcement ▪ Site improvement requirements ▪ Fees and other exactions ▪ Local processing and permit procedures ▪ Housing for persons with disabilities ▪ Transitional housing and supportive housing as a residential use of property and subject only to those restrictions that apply to other residential dwellings of the same type in the same zone
Gov. Code §65583(a)(5 and 6)	**Potential Non-Governmental Constraints:** Include an analysis of actual and potential non-governmental constraints for each of the following: ▪ Availability of financing ▪ Price of land ▪ Cost of construction
Gov. Code §65583 (a) (3) and 65583.2	**Sites Inventory and Analysis:** ▪ Listing of properties by parcel number or other unique reference showing for each parcel ▪ General description of environmental constraints to the development of housing ▪ General description of infrastructure (planned/available) including water, sewer and other dry utilities, including availability and access to distribution facilities ▪ For Non-vacant sites, specify the additional development potential for each site within the planning period and provide an explanation of the methodology to determine development potential ▪ Demonstration of zoning to accommodate the housing need for lower income households ▪ Map of sites included in the inventory

TABLE 5-4 HOUSING ELEMENT REQUIREMENTS	
Statutory Citation	**Brief Description of Requirement**
	▪ Number of units built between the start of the projection period and the deadline for adoption of the housing element (optional) ▪ Number of units proposed using alternative provisions such as rehabilitation, conversion, preservation or accessory dwelling units (optional) ▪ Analysis of whether inventory provides for a variety of housing types (Multifamily rental housing, Factory-built housing, Mobile homes, Housing for agricultural employees, Emergency Shelters, Transitional and supportive housing) ▪ Carryover obligation (AB 1233), if applicable
Gov. Code §65583(b) and (c) (1 through 6)	**Quantified Objectives and Housing Programs:** Provide statement of quantified objectives; maximum number of units, by income group, including extremely low-income ▪ New construction ▪ Rehabilitation ▪ Conservation
Gov. Code §65583(c)	**Include programs with:** ▪ Schedule of specific actions ▪ Timeline for implementation with a beneficial impact in the planning period and identification of agencies and officials responsible for implementing each program
Gov. Code §65583(c)(1)	**Program(s) providing adequate sites:** ▪ Programs to rezone and any other programs needed to address a shortfall of sites to accommodate the regional housing need, if applicable, and any programs included pursuant to Section 65583.2(h) and (i) or carryover obligation pursuant to Section 65584.09 ▪ Programs to rezone and any other programs needed to address a shortfall of capacity for housing for farmworkers that could not be accommodated on sites identified in the inventory, if applicable ▪ If applicable, programs to facilitate a variety of housing types, including multifamily rental, factory-built housing, mobile homes, housing for agricultural employees, supportive housing, single room occupancy, emergency shelters and transitional and supportive housing
Gov. Code §65583(c)(2)	Programs to assist in the development of housing for extremely low, very low, low and moderate income households
Gov. Code §65583(c)(3)	Programs to address governmental constraints and where appropriate and legally possible, to remove constraints to the maintenance, improvement and development of housing
Gov. Code §65583(c)(3)	Program to remove constraints on housing for persons with disabilities and provide reasonable accommodation for housing for persons with disabilities

TABLE 5-4 HOUSING ELEMENT REQUIREMENTS	
Statutory Citation	**Brief Description of Requirement**
Gov. Code §65583(c)(4)	Program(s) to conserve and improve the condition of the existing affordable housing stock
Gov. Code §65583(c)(5)	Program(s) to promote housing opportunities for all persons
Gov. Code §65583(c)(6)	Program(s) to preserve at-risk units
	Other Requirements
Gov. Code §65583 (c) (7)	Description of general plan consistency
Gov. Code §65585	Review by HCD and legislative body
Gov. Code §65588	Analysis of construction, demolition and conversion of housing for lower income households in the Coastal Zone
Gov. Code §65583 (a) (8)	Description of opportunities for energy conservation in residential development
Gov. Code §65589.7	Water and Sewer Priority
Gov. Code §65589.5	Housing accountability act; analysis for rejection

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Ventura County 2040 GENERAL PLAN

Chapter 6
Transportation and Mobility

6 TRANSPORTATION AND MOBILITY

INTRODUCTION

This chapter summarizes the transportation and mobility context for Ventura County. It is organized into the following sections:

- Roadways and Functional Classifications (Section 6.1)
- Level of Service and Vehicle Miles of Travel (Section 6.2)
- Active Transportation (Section 6.3)
- Transit Services (Section 6.4)
- Goods Movement (Section 6.5)
- Aviation Facilities (Section 6.6)
- Transportation Demand and System Management (Section 6.7)
- Programmed Transportation Improvements (Section 6.8)

The County will use the information in this Chapter to determine what modifications to the transportation network and local mobility regulations may be required to comply with the California Complete Streets Act of 2008 (AB 1358). As specified in the Act, Complete Streets are those that are designed and constructed to serve all users of streets, roads, and highways, regardless of age and physical ability, including pedestrians, bicyclists, motorists, and transit riders. Potential network modifications may include the formal integration of sidewalks, bike lanes, safe-crossing areas, medians, curb extensions, etc.

SECTION 6.1 ROADWAY AND FUNCTIONAL CLASSIFICATIONS

Introduction

Roads and highways within Ventura County consist of an interconnected network of federal and state highways, as well as county and city roads. The connections between these roadway systems play an important role in facilitating local, inter-county, and interstate travel. This section describes the ownership and intended function of roadway infrastructure in Ventura County.

Ventura County uses the following functional classification system. A map of roadways by functional classification is provided in Figure 6-1.

- **Freeways**. Freeways are primarily used for intercity, regional, and interstate travel. Access points are restricted to on and off ramp locations, with interchanges located typically at least one mile apart. These roadways are under Caltrans jurisdiction.

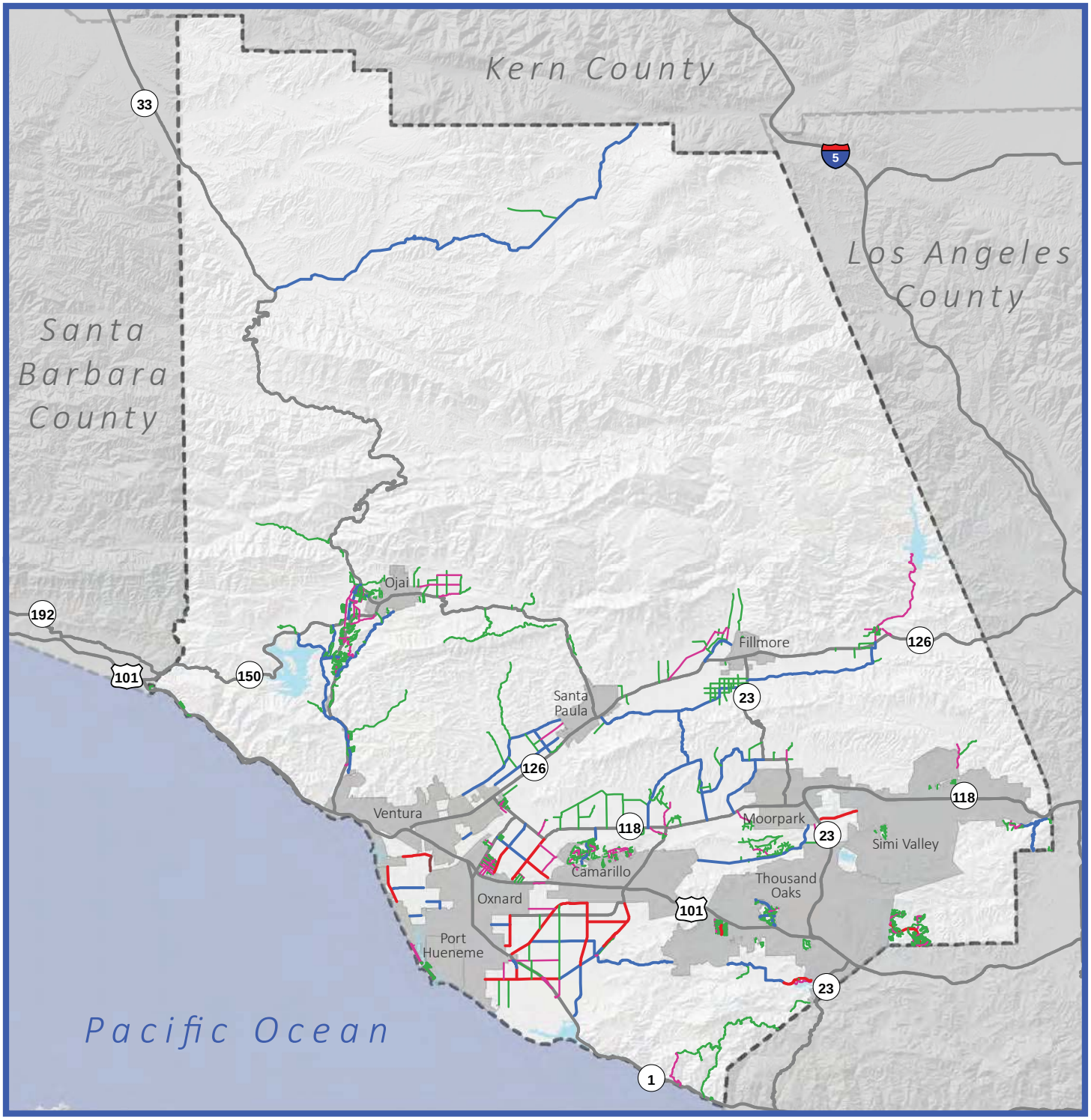
- **Expressways**. Expressways also serve inter-city and inter-county travel, and do not provide local access or service road intersections. However, unlike freeways, interchanges on expressways can be as close as 0.5 miles apart. These roadways are under Caltrans jurisdiction.
- **Conventional State Highways.** A conventional state highway refers to a roadway with limited control of access, which may be divided or have grade separations at intersections. Abutting property owners have access rights. These roadways are under Caltrans jurisdiction.
- **Primary/Secondary Arterials**. Unlike freeways and expressways, arterials serve the neighboring areas. Arterials can include at-grade intersections with other major roadways. By connecting the major activity centers and highest traffic volume corridors, arterials helps to provide a network of continuous routes, facilitating both local and regional travel.
- **Major/Minor Collectors**. The main purpose of collectors is to provide local access to the overall roadway network. Collectors channel traffic from local roadways into the arterial network. Intersections are permitted with all public roadways.
- **Local**. Local roadways provide direct access to the abutting land and primarily facilitate local travel. Local roadways are not intended for long distance travel, and are often designed to discourage through traffic. There are no restrictions on intersections or public access.

In addition to the seven classifications listed above, Ventura County also uses the general term "thoroughfare" to describe roads that are part of the Regional Road Network. The Regional Road Network consists of roads classified as Primary (6 lanes or more), Secondary (4 lanes) or Collector (2 lanes), as well as freeways, expressways and conventional state highways. A map of the Regional Network is shown in Figure 6-2. This network should not be construed as being synonymous with Ventura County Transportation Commission's (VCTC) Congestion Management Program (CMP) network.

Roads and freeways are assigned functional classifications according to federal standards. The County's classifications generally correspond to one or more federal classifications as such:

- Freeways: Federally classified as Principal Arterials (PA) i.e., Other Freeway and Expressways;
- Expressways: Federally classified as either Prinicpal Arterials (PA) i.e., Other Freeway and Expressways or, Other Principal Arterials (OPA);
- Arterials: Federally classified as either Other Principal Arterials (OPA) or Minor Arterials (MA);
- Collectors: Federally classified as either Major Collector (MJC) or Minor Collector (MNC); and,
- Local: Some local roads are federally classified as Major or Minor Collectors.

These federal classifications are significant, since only roadways classified as Principal Arterials (PA), Other Principal Arterial (OPA), Minor Arterials (MA), or Major Collectors (MJC) are eligible for federal funds.



Ventura County 2040 General Plan

Figure 6-1:
Ventura County Roadway Functional Classification

Map Date: November 14, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

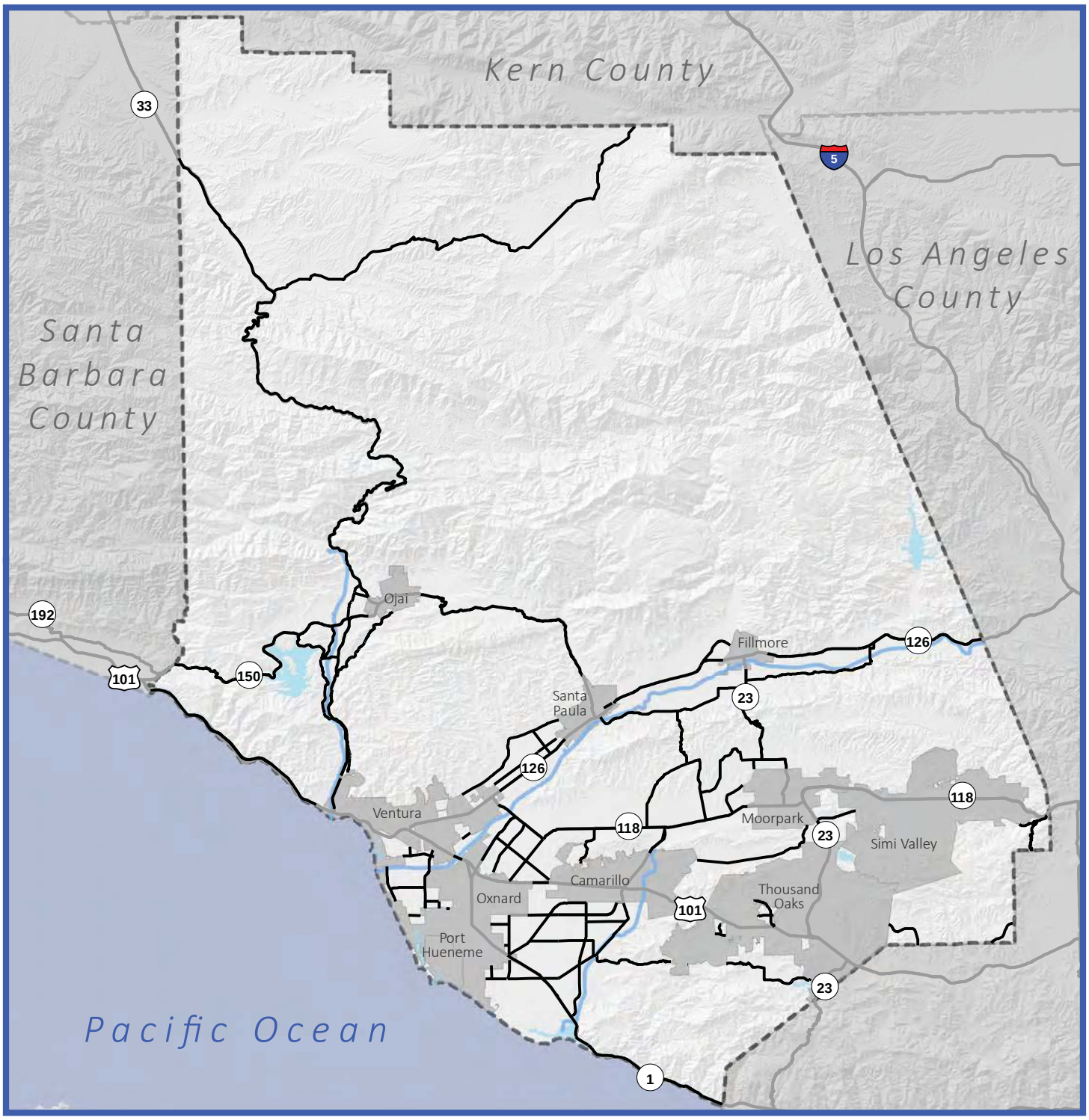
N

Street Class

- Freeways and Expressways
- Primary
- Secondary
- Collector
- Minor
- Local

Water Bodies

Cities



Ventura County 2040 General Plan

Figure 6-2:
Ventura County Road Network

Map Date: November 08, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Major County Roadways
- Other Major Roadways
- Major Waterways
- Water Bodies
- Cities

Major Findings

- Ventura County is well connected to adjacent communities to the east, specifically Los Angeles County. Roadway connections to the north and west of Ventura County are limited by the mountain range in the Los Padres National Forest. Ventura County's connection to neighboring communities is primarily via US 101, SR-1, SR-118, SR-150, and SR-126, all of which serve as the system's primary backbones.
- Based on state roadway designations, there are a number of corridors in Ventura County that are eligible for leveraging numerous state and federal transportation funding programs. Of the local roadways located in the unincorporated regions of the county, 215 miles are eligible for federal aid.

Existing Setting

Ventura County is served by an extensive network of freeways, arterials, and local roads. The network is well connected to the adjacent communities to the east and Los Angeles County. There is limited roadway connectivity to Kern County to the north. Although limited, the primary connections to Santa Barbara County to the west are US 101 and SR-150. Roadways in the southern part of the county provide access to the local communities and the major freeways of the Los Angeles area.

Roadway Designations

In addition to functional classifications, there are also state and federal roadway designations that define specific distinctions for certain roadways. Designations define the broader functionality of a given highway facility, specify planning and design requirements, and define whether a given facility is eligible for certain federal and state highway funding programs. The Ventura County roadway network includes:

- **Congestion Management Program System**. Per state statutes (Government Code sections 65088-65089.1), the CMP network is composed of the state highway system and local roadways of regional significance as defined by the Ventura County Transportation Commission (VCTC). The CMP requires systematic monitoring of congestion on the CMP network and a process for mitigating impacts to the CMP network resulting from local agency land use decisions.
- **California Freeway Expressway System**. A comprehensive statewide system of access-controlled freeways and expressways identified for their importance to the future development of the State of California (State Highway Code 250-252, 257).
- **California Scenic Highway System.** Portions of the state highway system designated to establish the state's responsibility for the protection and enhancement of California's natural scenic beauty. These roadways, together with the adjacent scenic corridors, require special scenic conservation treatment (State Highway Code 260).
- **Interregional Road System (IRRS).** A system of roadways that provide interregional access to all economic centers in the state. IRRS routes are eligible for state discretionary funding for routes located outside the boundaries of urbanized areas of over 50,000 population (Census) except as necessary to provide connections for continuation of the routes within those urban areas. Some roadways on the designated IRRS system are identified as "High Emphasis Routes" due to their critical importance to both interregional and state travel.

- **High Emphasis Route (State Designation).** High Emphasis Routes are a subset of the IRRS Routes; non-urbanized portions of these routes connect urban areas. IRRS Routes are established by Streets and Highways Code, Sections 164.10-164.20.
- **Focus Route (State Designation).** Focus Routes are a subset of High Emphasis Routes that are the highest priority for completion/maintenance. These routes are in non-urbanized areas and will complete a statewide system.
- **National Highway System (Federal Designation).** A network of highways important to the nation's economy, defense, and mobility.
- **Surface Transportation Assistance Act Routes (STAA – Federal Designation).** Act passed in 1982 that allows large trucks to operate on the interstate and certain primary routes collectively called the National Network. These routes, referred to as STAA routes, are designed to accommodate STAA-sized vehicles (48 to 53 feet from kingpin to rear-axle) specifically providing larger turn radii than typically provided on local roads.
- **Strategic Highway Network (STRAHNET – Federal Designation).** A network of highways that are important to the nation's strategic defense policy and that provide defense access, continuity and emergency capabilities for defense purposes. It is a subsystem of the National Highway NetworkSystem.[1]
- **National Highway Freight Network (NHFN – Federal Designation).** Per the FAST-Act, the NHFN strategically directs Federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system. The NHFN includes the following subsystems of roadways:
    - **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. PHFS-designated roadways in Ventura County include Hueneme Road (Port to Las Posas), Las Posas Road (Heueneme to US 101), Ventura Road (Hueneme to Channel Islands), Channel Islands Boulevard (Ventura to Victoria), and Victoria Ave (Channel Islands to US 101).
    - **Other Interstate portions not on the PHFS:** These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities.
    - **Critical Rural Freight Corridors (CRFCs):** These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.
    - **Critical Urban Freight Corridors (CUFCs):** These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.

[1] The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following subsystem of roadways: Interstate, Other Principal Arterials, Strategic Highway Network (STRAHNET), Major Strategic Highway Network Connectors, and Intermodal Connectors.

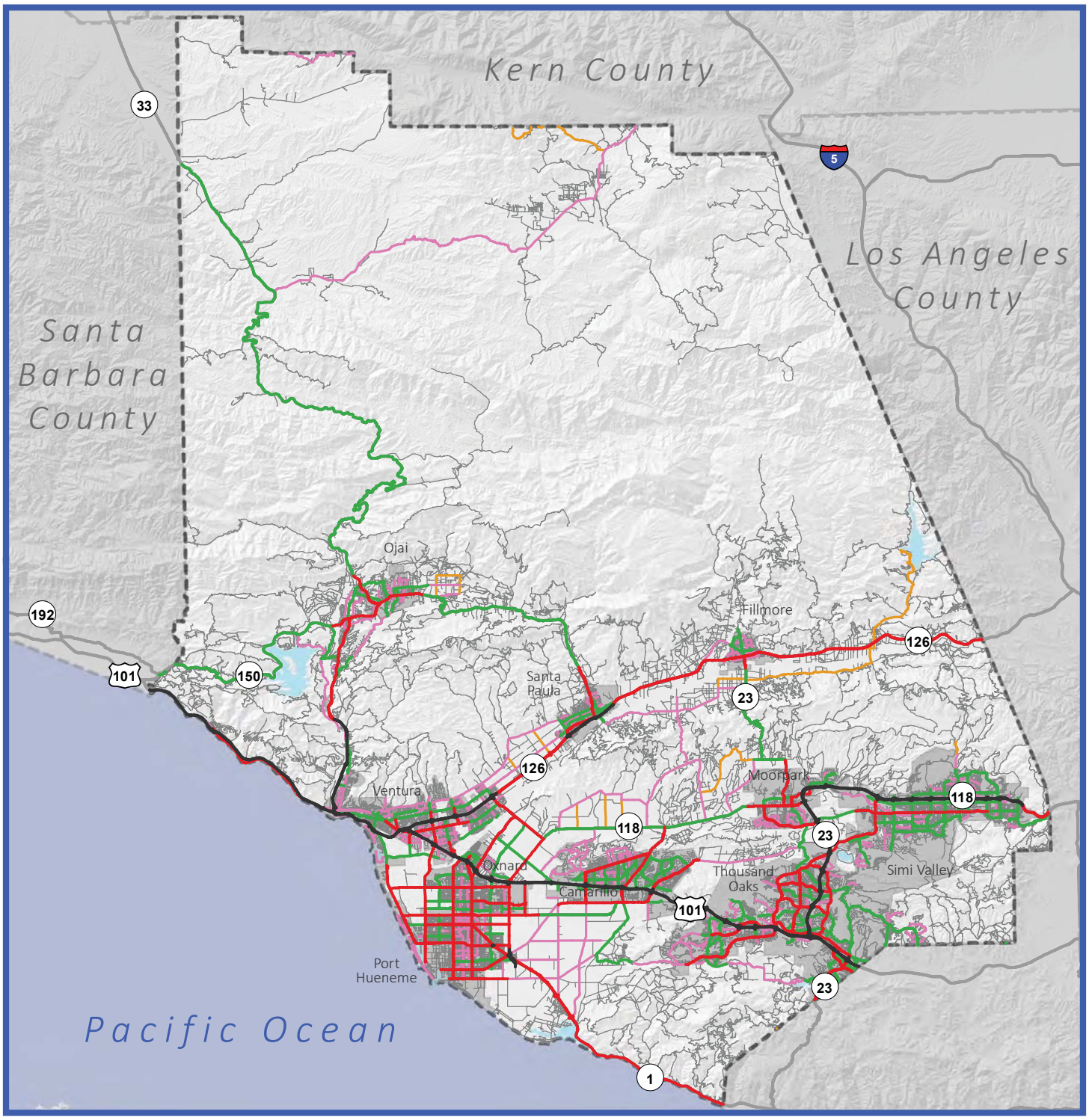
Roadway Network Inventory

Of the 542.8 miles of the local County-owned and -maintained roadways within the unincorporated areas, 214 miles are federally classified and therefore eligible for federal aid. Figure 6-3 shows the federally classified roadways in Ventura County, including both unincorporated areas and within cities. Table 6-1 provides a complete inventory of centerline roadway miles (i.e., miles of roadway irrespective of the number of travel lanes) by jurisdiction within Ventura County. There are 268.7 total state highway centerline miles within the county, with 174.7 miles traversing unincorporated areas. As shown in Table 6-2, 247.2 miles of the County's roads are federally classified. The complete list of federally classified, County-owned and -maintained roadway segments are listed in Table 6-3. The local County roadways of regional significance that have been designated as part of the state CMP are listed in Table 6-4.

TABLE 6-1
ROADWAY INVENTORY 2014
Ventura County

Jurisdiction	Centerline Miles
City Roadways	**1,876.9**
City of Camarillo	202.6
City of Fillmore	37.8
City of Moorpark	88.7
City of Ojai	42.3
City of Oxnard	392.2
City of Port Hueneme	48.6
City of Santa Paula	55.5
City of Simi Valley	320.4
City of Thousand Oaks	383.1
City of Ventura	305.9
Unincorporated County Roadways	**542.8**
State Highways	**268.7**
State Highways Unincorporated Areas	174.7
State Highways Incorporated Areas	94.0
State Park Service	**56.0**
US Navy	**58.0**
National Park Service	**74.5**
US Forest Service	**106.5**
TOTAL	**2,983.3**

Sources: Highway Performance Monitoring System, 2014. Unincorporated Miles: County of Ventura Roadway Inventory, 2016. State Highway Miles by Unincorporated vs. Incorporated, Kimley-Horn.



Ventura County 2040 General Plan

Figure 6-3: Federal Highway Classifications

Map Date: November 17, 2016

Source: Ventura County, 2016; California Department of Transportation, 2016; USGS, 2013.

Disclaimer: Designations are unofficial. See California Road System maps for official functional classifications.

0 7.5 15 Miles

N

Functional Classification

- 2 - Other Fwy or Expwy
- 3 - Other Principal Arterial
- 4 - Minor Arterial
- 5 - Major Collector
- 6 - Minor Collector
- 7 - Local

Water Bodies

Cities

TABLE 6-2
FEDERALLY CLASSIFIED, NON-STATE HIGHWAY UNINCORPORATED COUNTY ROADWAYS BY TYPE
Ventura County

Federal Highway Classification	Maintained Miles
Minor Arterial (MA)	37.1
Other Principal Arterial (OPA)	14.8
Major Collector (MJC)	162.1
Minor Collector (MNC)	33.3
Total Classified	**247.3**
Total Eligible for Federal Aid	**213.9**

Source: County of Ventura Road Inventory, 2016.

TABLE 6-3
FEDERALLY CLASSIFIED UNINCORPORATED COUNTY ROADWAYS
Ventura County

Rd Name	Limits	Maintained Miles	Federal Functional Classification	Planning
Aggen Rd	LA Av SR 118 - La Loma Av	1.80	MNC	Las Posas
Amber Dr	161w Beverly Dr - E Loop Dr	0.20	MJC	Camarillo
Avocado Pl	30n - 355n Crestview Av	0.06	MJC	Camarillo
Avocado Pl	1368n Crestview Av - Calle Aurora	1.12	MJC	Camarillo
Balcom Canyon Rd	SR 118 - South Mountain Rd	7.34	MJC	Las Posas / Santa Paula / Fillmore
Bardsdale Ave	Sespe St - SR 23	1.24	MJC	Fillmore
Beardsley Rd	190w Ramona Dr - Ramona Dr	0.04	MJC	Camarillo
Beardsley Rd	Central Av - 413n Wright Rd	1.20	MJC	Camarillo / Oxnard
Bennett Rd	Tapo Cyn Rd - North End	0.61	MNC	Simi Valley
Berylwood Rd	Aggen Rd - Bradley Rd	1.43	MJC	Las Posas
Bradley Rd	SR 118 - Balcom Cyn Rd	4.54	MJC	Las Posas
Briggs Rd	30s Faulkner Rd - Foothill Rd	1.44	MNC	Santa Paula
Bristol Rd	W R/W UPRR - 170w Montgomery	0.60	MA	Ventura
Broadway	Stockton Rd - SR 23	1.10	MA	Moorpark / Las Posas
Burnham Rd	Santa Ana Rd - SR 150	1.96	MA	Ojai
Calle Arroyo	Calle Yucca - Camino Dos Rios	0.92	MJC	Thousand Oaks
Calle Aurora	CDS - Valley Vista Dr	0.58	MJC	Camarillo
Calle Yucca	124s Cl Sequoia - North End	2.00	MJC	Thousand Oaks
Camino Concordia	Ramona Dr - Calle Aurora	0.69	MJC	Camarillo
Camino Dos Rios	CDS - 67w Lynn Rd	0.81	MA	Thousand Oaks
Camino Manzanas	Camino Flores - 48w Lynn Rd	0.57	MJC	Thousand Oaks
Canada Larga Rd	Ventura Av - SR 33	0.11	MJC	Ventura
Carne Rd	SR 150 - Thacher Rd	1.15	MNC	Ojai
Casitas Vista Rd	53w Ventura Av - Santa Ana Rd	0.66	MJC	Ventura / Ojai
Center School Rd	Fairway Dr - SR 118	1.05	MJC	Camarillo / Las Posas

TABLE 6-3
FEDERALLY CLASSIFIED UNINCORPORATED COUNTY ROADWAYS
Ventura County

Rd Name	Limits	Maintained Miles	Federal Functional Classification	Planning
Central Ave	Vineyard Av SR 232 - 2,374e Beardsley Rd	3.49	MA	Oxnard / Camarillo
Channel Islands Blvd	1345w Rice Av - Rice Av	0.25	OPA	Oxnard
Channel Islands Blvd	Ocean Dr - School E prop line	0.13	MJC	Oxnard
Conifer Street	Medea Creek Ln - Smoke Tree Av	0.76	MJC	Oak Park
Corsicana Dr	CDS - Rose Av	0.80	MJC	Oxnard
Country Club Dr	Creek Rd - 210n Oak Dr	0.24	MA	Ojai
Creek Rd	SR 33 - 2070 e Country Club Dr	5.20	MJC	Ojai
Del Norte Rd	795s El Toro Rd - 743n Rancho	0.49	MJC	Ojai
Doris Ave	100e Victoria -77w Patterson	0.72	MA	Oxnard
Doubletree Rd	Kanan Rd - 76s Oak Springs Dr	1.09	MJC	Oak Park
El Roblar Dr	Rice Rd - SR 33	0.97	MA	Ojai
Etting Rd	1488e Olds Rd - CDS	0.17	MA	Oxnard
Etting Rd	180w Dodge Rd - Wood Rd	2.30	MJC	Oxnard
Fairview Rd	SR 33 - 408w Fairview Crt	1.16	MA	Ojai
Fairway Court	153n Ramona Dr - Fairway Dr	0.05	MJC	Camarillo
Fairway Dr	Vly Vista Dr -CDS	1.22	MJC	Camarillo
Fifth Street West	1805e Harbor - 1320w Victoria	0.63	OPA	Oxnard
Foothill Rd	1,166e Petit Av – Wells Rd	1.23	MA	Santa Paula / Ventura
Foothill Rd	Wells Rd - 30w Peck Rd	5.91	MJC	Santa Paula / Ventura
Gerald Dr	336w Jenny Dr - Wendy Dr	0.34	MJC	Thousand Oaks
Gonzales Rd	Harbor Blvd - 465w Victoria Av	1.78	OPA	Oxnard
Grand Ave	McNell Rd – McAndrew Rd	0.75	MJC	Ojai
Grand Ave	279w Orange Rd - McNell Rd	1.58	MA	Ojai
Grimes Canyon Rd	LA Ave SR 118 - Brdway	3.66	MJC	Moorpark / Las Posas
Guiberson Rd	SR 23 - Torrey Rd	7.04	MNC	Fillmore / Piru
Harbor Blvd	Santa Ana Ave – 170n Albacore Wy	0.12	MJC	Oxnard
Harbor Blvd	250e Playa Ct – 30w Playa Ct	0.05	MJC	Oxnard
Harbor Blvd	754n Edison Canal - 2,898s Olivas Pk	1.99	OPA	Oxnard / Ventura
Howe Rd	Telegraph Rd SR 126 -Torrey Rd	0.65	MNC	Piru
Hueneme Rd	37e Edison Dr - Olds Rd	1.01	OPA	Oxnard / Camarillo
Hueneme Rd	Olds Rd – Laguna Rd	5.28	MJC	Oxnard / Camarillo
Jenny Dr	Gerald Dr - 40s Old Conejo Rd	0.73	MJC	Thousand Oaks
Kanan Rd	LA Co Line - 80e Lindero Cyn	2.50	MA	Oak Park
Katherine Rd	N R/W UPRR - SSusana Pass Rd	1.06	MJC	Simi Valley
La Loma Ave	Center Rd - Aggen Rd	3.93	MJC	Las Posas
La Luna Ave	SR 150 - SR 33	2.03	MA	Ojai
La Vista Ave	LA Av SR 118 - Center Rd	0.63	MJC	Las Posas
Laguna Rd	Pleasant Valley Rd - 2,300e Las Posas Rd	3.41	MJC	Camarillo / Oxnard
Lake Sherwood Dr	Potrero Rd E - Potrero Rd E	1.51	MJC	Thousand Oaks

TABLE 6-3
FEDERALLY CLASSIFIED UNINCORPORATED COUNTY ROADWAYS
Ventura County

Rd Name	Limits	Maintained Miles	Federal Functional Classification	Planning
Larmier Ave	Sunset Av - SR 33	0.36	MJC	Ojai
Las Posas Rd	122e SR 1 Offramp - Pleasant Valley Rd	6.31	MJC	Camarillo
Lesser Dr	130w Jenny Dr - Dena Dr	0.29	MJC	Thousand Oaks
Lewis Rd	Laguna Rd - 174s Pleasant Vly Rd	3.54	MA	Camarillo
Lindero Canyon Rd	63n Kanan Rd - Napoleon Ave	1.20	MJC	Oak Park / Thousand Oaks
Lockwood Valley Rd	SR 33 - Kern County Line	26.47	MJC	North Half
Loma Dr	142s Lemon Dr - E Loop Dr	0.26	MJC	Camarillo
Lomita Ave	Rice Rd - SR 33	1.42	MJC	Ojai
Loop Dr East	914n Las Posas Rd - N Loop Dr	0.50	MJC	Camarillo
Loop Dr North	Mission Dr - E Loop Dr	0.69	MJC	Camarillo
Loop Dr West	93s Lemon Dr - N Loop Dr	0.61	MJC	Camarillo
Main Street	SR 126 - 970n Orchard St	0.99	MNC	Piru
McAndrew Rd	Reeves Rd - Thacher Rd	1.04	MNC	Ojai
Michael Dr	CDS - 130e Virginia Dr	0.59	MJC	Thousand Oaks
Mission Dr	140s Catalina Dr - N Loop Dr	0.71	MJC	Camarillo
Moorpark Rd	Santa Rosa Rd - 108s Tierra Rejada Rd	1.37	MA	Moorpark / Camarillo / Thousand Oaks
Oak Hills Dr	Sunnycrest Dr - Kanan Rd	0.85	MJC	Oak Park
Ocean Dr	Sawtelle Av - San Nicolas Av	0.87	MJC	Oxnard
Ocean Dr	90s Santa Cruz Av - North end	1.26	MJC	Oxnard
Old Telegraph Rd	SR 126 - 431w C St/Goodenough	2.05	MJC	Fillmore
Olds Rd	Hueneme Rd - 668s Etting Rd	0.87	MJC	Oxnard
Olivas Park Dr	2330w Telephone - 385w Palma	0.79	OPA	Ventura
Olivas Park Dr	15e Palma Dr - 205w Victoria	0.67	OPA	Ventura
Olive Rd	Telegraph Rd - Foothill Rd	0.76	MNC	Santa Paula
Patterson Rd	20n Teal Club Rd -20s Doris Av	0.38	MA	Oxnard
Piru Canyon Rd	970n Orchard St - MP 6.26	5.84	MNC	Piru
Pleasant Valley Rd	120e SR1 NB offramp - Wood Rd	3.71	MJC	Camarillo / Oxnard
Pleasant Valley Rd	Wood Rd – Las Posas Rd	1.52	OPA	Camarillo / Oxnard
Potrero Rd East	3605e Wendy Dr - 55e Lake Sherwood Dr	6.13	MJC	Thousand Oaks
Potrero Rd West	Old Hueneme Rd - 727w Via Acosta	4.66	MA	Camarillo
Price Rd	LA Av SR 118 - La Loma Av	1.81	MNC	Las Posas
Ramona Dr	CDS - 238s Mariano St	0.60	MJC	Camarillo
Reeves Rd	SR 150 - McAndrew Rd	1.16	MJC	Ojai
Rice Ave	Channel Islands Bl - E Fifst St SR 34	1.61	OPA	Oxnard
Rice Rd	Arcata Rd - Fairview Rd	2.69	MJC	Ojai
Rimrock Rd (N)	Rimrock Rd (W) -702e Saddle Tr	0.39	MJC	Thousand Oaks
Riverside Ave	Sespe St - SR 23	1.50	MNC	Fillmore
Rose Ave	Collins St - SR 118	3.12	MA	Oxnard
San Nicolas Ave	Ocean Dr - Roosevelt Blvd	0.13	MJC	Oxnard
Santa Ana Ave	Ocean Dr - 20w Harbor Blvd	0.04	MJC	Oxnard

TABLE 6-3
FEDERALLY CLASSIFIED UNINCORPORATED COUNTY ROADWAYS
Ventura County

Rd Name	Limits	Maintained Miles	Federal Functional Classification	Planning
Santa Ana Blvd	Santa Ana Rd -SR 33	0.96	MA	Ojai
Santa Ana Rd	Casitas Vista Rd - SR 150	5.81	MJC	Ojai
Santa Clara Ave	905s Eucalyptus - SR 118	2.74	OPA	Oxnard
Santa Rosa Rd	517w Hilltop Ln - 50e Marvella	5.64	MJC	Camarillo
Santa Susana Pass Rd	N R/W UPRR - 68e Lilac Ln	1.54	MA	Simi Valley
Sespe Street	South Mtn Rd - Riverside Av	0.98	MJC	Fillmore
Simon Way	Vineyard Av SR 232 - Rose Av	0.79	MJC	Oxnard
South Mountain Rd	437s Santa Clara St - South Mountain Rd	0.27	MA	Santa Paula / Fillmore
South Mountain Rd	South Mountain Rd – Sespe St	6.64	MJC	Santa Paula / Fillmore
Spring Street	840s Grande V- Larmier Av	0.48	MJC	Ojai
Springville Rd	5490w - 2346w Central Av	0.60	MJC	Camarillo
Stockton Rd	Balcom Cyn Rd - BRdway	4.40	MNC	Las Posas
Stroube Street	51e Vineyard SR 232 - 40w Rose	0.86	MJC	Oxnard
Sunnycrest Dr East	Oak Hills Dr - 76s Oak Spring Dr	0.78	MJC	Oak Park
Tapo Canyon Rd	4103s Bennett Rd - Bennett Rd	0.78	MJC	Simi Valley
Telegraph Rd	W R/W Franklin Bar - 291w Country View Ct	4.19	MJC	Santa Paula / Ventura
Thacher Rd	Carne Rd - McAndrew Rd	1.33	MNC	Ojai
Tico Rd	SR 150 - Lomita Av	0.97	MJC	Ojai
Tierra Rejada Rd	760e SR 23 - 253w Llevarancho	2.00	MA	Moorpark
Torrey Rd	Guiberson Rd - Telegraph Rd SR 126	1.12	MNC	Piru
Valley Vista Dr	291n Vista Del Mar -Fairway Dr	0.47	MJC	Camarillo
Valley Vista Dr	519n Encino Av -460s V Del Mar	0.13	MJC	Camarillo
Ventura Ave	265n Dakota Dr - SR 33	1.78	MA	Ventura
Ventura Ave	SR 33 – 82s Casitas Vista Rd	1.64	MJC	Ventura
Victoria Ave	247s Riverbridge - 119s Olivas Pk	0.78	OPA	Ventura / Oxnard
Villanova Rd	SR 33 - SR 33	1.52	MJC	Ojai
Walnut Ave	LA Av SR 118 - La Loma Av	1.35	MNC	Las Posas
Wendy Dr	55n Borchard Rd - 120s Lois Av	0.53	MA	Thousand Oaks
Wood Rd	Navalair Rd - Pleasant Vly	5.08	MJC	Camarillo / Oxnard
Woodland Ave	Rice Rd - Ventura Av SR 33	0.24	MJC	Ojai
Wooley Rd East	25e Rose Av - Rice Av	1.00	OPA	Oxnard

Source: Ventura County Rd Inventory, 2016.

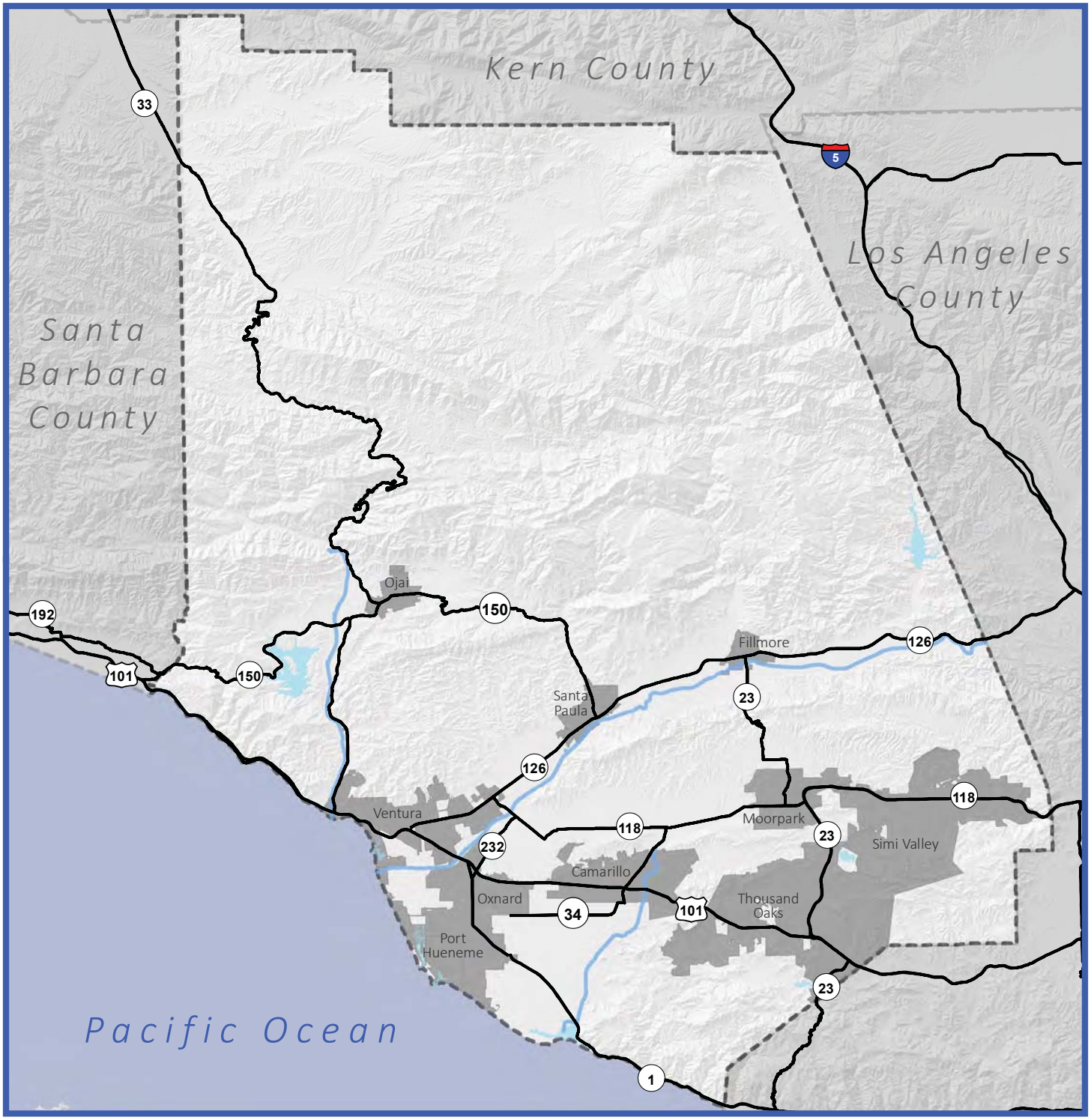
TABLE 6-4 CMP NETWORK ROADWAYS UNINCORPORATED VENTURA COUNTY		
Rd Name	**From**	**To**
Central Ave	Vineyard Ave (SR-232)	2374 e/o Beardsley Rd
Channel Islands Blvd	1345 w/o Rice Ave	Rice Ave
Harbor Blvd	754 n/o Edison Canal	2898 s/o Olivas Park Dr
Hueneme Rd	37 e/o Edison Dr	Las Posas Rd
Las Posas Rd	SR-1	Pleasant Valley Rd
Moorpark Rd	Santa Rosa Rd	Tierra Rejada Rd
Olivas Park Dr	2330 w/o Telephone Rd	385 w/o Palma Dr
Olivas Park Dr	15 e/o Palma Dr	2015 w/o Victoria Ave
Pleasant Valley Rd	120 e/o SR 1 NB Offramp	Las Posas Rd
Rice Ave	Channel Islands Blvd	E. Fifth Street (SR 34)
Rice Ave	Hueneme Rd	0.60mi n/o Hueneme Rd
Santa Clara Ave	905 s/o Eucalypus Dr	SR 118
Santa Rosa Rd	517 w/o Hilltop Lane	Moorpark Rd
Telegraph Rd	w/o Franklin Barranca (Ventura)	291 w/o Country View Court (Santa Paula)
Tierra Rejada Rd	760 e/o SR 23	253 w/o Llevarancho Rd
Victoria Ave	247 s/o River Bridge (Santa Clara River)	119 s/o Olivas Park Dr

**Rds and Limits shown above are within unicorproated area of the county only.*
Source: Ventura County Transportation Commission, Congestion Management Program, 2009.

State Highway Network

The vast majority of traffic, in terms of volumes and miles travelled, within unincorporated Ventura County takes place on state highways. Given that the state highway network forms the primary backbone of the Ventura County network, the state highway system within Ventura County is described in detail below.

The southern portion of Ventura County is served primarily by U.S. Highway 101, traversing the county from east to west and directly serving the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura. Additionally, eight state routes traverse the county (1, 23, 33, 34, 118, 126, 150, and 232). State highways are identified on Figure 6-4 and scenic state highways are shown in Figure 6-5.



Ventura County 2040 General Plan

Figure 6-4:
State Highway System

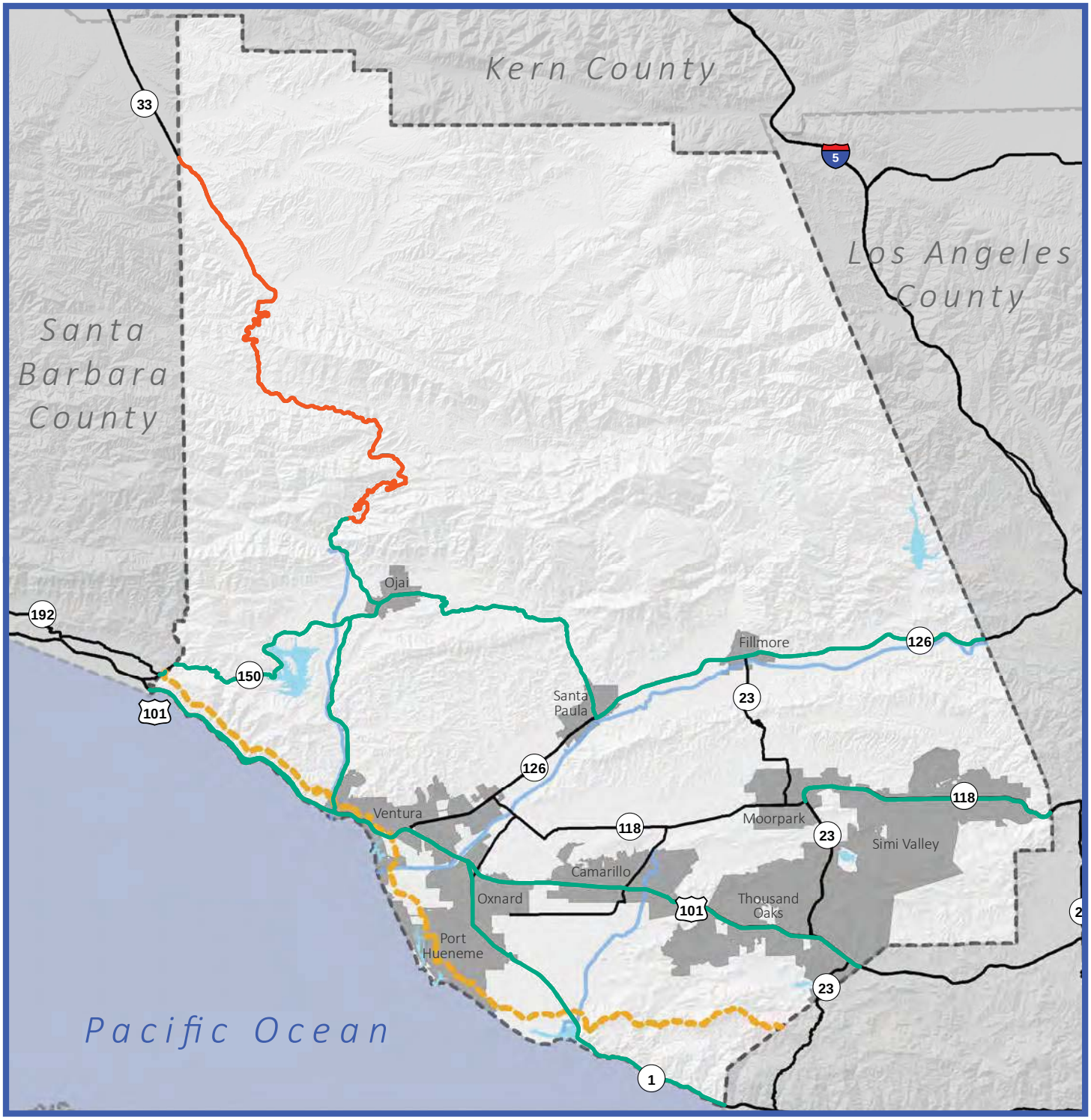
Map Date: November 08, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Major Roadways
- Major Waterways
- Water Bodies
- Cities



Ventura County 2040 General Plan

Figure 6-5
Scenic State Highways

Map Date: July 19, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

Scenic Highway Status

- Official State
- Eligible State
- Coastal Zone
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Freeway and Highway Description

Table 6-5 shows the various classifications and highway designations for each state route within Ventura County. The remainder of this section discusses the existing context and plans for each route.

TABLE 6-5
STATE HIGHWAY DESIGNATIONS
Ventura County

Facility	County Functional Classification	Freeway and Expressway System	Scenic Highway	IRRS	High Emphasis Route	Focus Route	National Highway System	STAA	STRAHNET
US 101[1]	Other Freeway or Expressway	✓		✓	✓	✓	✓	✓	✓
SR-1	Minor Arterial, Other Principal Arterial, Other Freeway or Expressway, Major Collector	✓					✓		
SR-23*	Minor Arterial, Extension of a Rural Minor Arterial into an Urban Area.								
SR-33	Rural Minor Arterial, Extension of a Rural Minor Arterial into an Urban Area		✓					✓	
SR-34	Extension of a Rural Minor Arterial into an Urban Area							✓	
SR-118	Other Principal Arterial, Minor Arterial, Other Freeway or Expressway	✓					✓	✓	
SR-126	Other Freeway or Expressway, Other Principal Arterial	✓					✓	✓	
SR-150[2]	Minor Arterial, Extension of Minor Arterial into an Urban Area								
SR-232	Other Principal Arterial	✓							

[1] US 101 is a federal facility maintained by the State of California.
[2] Indicated roadways carry none of the "special designations" denoted in Table 6-5

US 101

U.S. Highway 101 (US 101) is federally classified as Expressways/Other Freeways and is maintained by the state. It is the major east-west freeway facility serving southern Ventura County and passes directly

through much of the urbanized areas of the county. The freeway enters Ventura County from Los Angeles County in the southeast and Santa Barbara County in the west, traversing the county for a total of 43.6 miles. US 101 from Oxnard through Ventura County to downtown Los Angeles is identified as part of the Southwest Passage Multi-Modal Corridor for goods movement between Los Angeles and Houston. It is also designated as part of the STAA National Network for goods movement. The westernmost portion of US 101 in Ventura County is open to bicycle travel on the shoulder, as well as a short portion near the Los Angeles County line. The only High Occupancy Vehicle (HOV) lane on US 101 in Ventura County is a six-mile segment from Mobil Pier Road to the Santa Barbara County line.

State Route 1

State Route 1 (SR-1) traverses Ventura County from the southeast to the northwest, from the Los Angeles County line to the Santa Barbara County line. It generally follows the coast, only turning inland between Naval Air Station Point Mugu and the City of Ventura. SR-1 is considered to be a Freeway/Expressway as it traverses Ventura County.

State Route 23

State Route 23 (SR-23) enters Ventura County from Los Angeles County as Westlake Boulevard in the City of Thousand Oaks. SR-23 is primarily a conventional highway through Ventura County, from Carlisle Road to US 101, and from SR-118 to SR-126. Between US 101 and SR-118 it is a multi-lane highway. From Westlake Blvd in Thousand Oaks to its terminus at SR-126 in the City of Fillmore, SR-23 is within incorporated cities except for a 1.5-mile segment from Read Road to Tierra Rejada Road and a 8.6-mile segment from the Moorpark city limits to the Santa Clara River.

State Route 33

State Route 33 (SR-33) is classified as a rural minor arterial except for the sections that run from US 101 to Shell Road and from Creek Road to Fairview Avenue. These two sections are classified as an extension of a rural minor arterial into an urban area. Between the junctions at SR-150 and US 101, SR-33 is classified as a terminal access route, as part of the STAA Network. SR-33 is also considered a State Scenic Highway, a National Scenic Byway, and US Forest Service Scenic Highway (the portion in Los Padres National Forest).

State Route 34

State Route 34 (SR-34) is classified as a conventional highway throughout its length in Ventura County, which is from Oxnard Boulevard in Oxnard to SR-118 north of Camarillo. SR-34 is also classified as a STAA/Terminal Access Route. The majority of the route is considered an extension of rural minor arterial into an urban area, with the remainder classified as MA (minor arterial).

State Route 118

State Route 118 (SR-118) enters Ventura County from Los Angeles County at Rocky Peak Park and terminates at the junction with State Route 126 (SR-126) in the City of Ventura near Saticoy. It is considered to be a conventional highway throughout its length in Ventura County and has a truck designation of STAA/Terminal Access Route. The portion of the highway west of its intersection with SR-23 is open to bicycle travel.

State Route 126

State Route 126 (SR-126) enters Ventura County from Los Angeles County east of Piru and terminating at US 101 in the City of Ventura. SR-126 was adopted as a freeway by the California Highway Commission in 1958, but this designation was rescinded in 1974. Nevertheless SR-126 is still included in the Freeway and Expressway system. SR-126 is currently an access-controlled freeway from US 101 in Ventura through the City of Santa Paula, and a conventional highway form that point to the Los Angeles County line. It is also eligible for inclusion into the State of California's Scenic Highway system from SR-150 to its interchange with I-5 in Los Angeles County, and has a truck designation of STAA/Terminal Access Route.

State Route 150

State Route 150 (SR-150) traverses 34.40 miles through Ventura County, from Santa Barbara County near US 101 to SR-126 in the City of Santa Paula. It is classified as a conventional highway, primarily serving Interregional/Commuter/Recreational travel. Like SR-126, it is eligible for California Scenic Highway System designation.

State Route 232

State Route 232 (SR-232) is a short connector linking SR-118 and US 101 in Oxnard. Its total length is 4.11 miles. It is federally classified as an Other Primary Arterial (OPA).

Regulatory Setting

Federal

Fixing America's Surface Transportation (FAST) Act (FY 2016 – FY 2021)

The FAST Act provides federal funding for surface transportation programs and transforms the policy and programmatic framework for investments to guide the growth and development of the country's vital transportation infrastructure. FAST continues the previous transportation bill's streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

Surface Transportation Assistance Act

In 1982 the U.S. Congress, as part of the Surface Transportation Assistance Act of 1982 (STAA), for the first time allowed motor carrier semi-trailers to be up to 53 feet long (and over, as grandfathered in this legislation). In the same Act, Congress created rules for operation of trailers 48 to 53 feet in length and lifted prior restrictions on the overall combination length of highway tractors and semi-trailers. Instead, it imposed a restriction on the dimension between the kingpin on the trailer and the center of the rear axle on the trailer. This dimension is called the kingpin to rear axle length (KPRA). KPRA dimension is limited to 40 feet on a multi-axle trailer and 38 feet on a single axle trailer when the trailer is 53 feet long and operated in combination with a highway tractor or truck. There is no KPRA limitation when the trailer is 48 feet long. The completion of all financially constrained capital improvements will not

compromise progress for Ventura County attaining and/or maintaining federal air quality health based standards.

State

The California Complete Streets Act of 2008

This law requires cities and counties to include complete streets policies as part of their general plans so that roadways are designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, older people, and disabled people, as well as motorists. It complements existing State policy, which directs Caltrans to "fully consider the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products." Any substantive revision of the circulation element in the general plan requires that it include complete streets provisions.

The California Scenic Highway Program

This is a state designation indicating that a highway is located in an area of outstanding natural beauty. California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

The State has adopted legislation (Division 1, Chapter 2, Article 2.5 of the Streets and Highways Code) governing the application of the designation "State Scenic Highway." A roadway may be eligible for designation, but in order to receive that designation the local jurisdiction must follow a formal process. County Scenic Highways can also achieve State recognition by following the same process. This program is administered by the California Department of Transportation (Caltrans).There are many state and county highways eligible for official designation as "scenic" through the State of California Transportation Department (Caltrans) California Scenic Highway Program (see Figure 6-5).

Sustainable Community Strategy (SB 375)

As a companion document to the RTP, a Sustainable Community Strategy (SCS) is now required in California per SB 375 Sustainable Communities and Climate Protection Act of 2008. This law added a requirement that California's 18 Metropolitan Planning Organizations (MPOs), including SCAG, align three major components within the regional transportation planning process– land use planning, transportation planning and funding, and State housing mandates – in order to reduce climate change emissions from cars and light trucks, such as greenhouse gasses (GHG). An SCS must be based on plausible planning assumptions; consider adopted general plans and spheres of influence; and consider natural resources and farmland. It must be internally consistent with the transportation and financing elements of the RTP and consistent with the adopted Regional Housing Needs Allocation. Finally, an SCS must be able to achieve the GHG reduction target established by the California Air Resources Board. SB 375 requires a greater level of land use planning coordination between local agencies (i.e., Ventura County) and MPOs (i.e., SCAG) to meet the GHG targets established for Ventura County.

Regional

Regional Transportation Plan

As the Metropolitan Planning Organization for Ventura County, the Southern California Association of Governments (SCAG) developed and adopted the Regional Transportation Plan (RTP). The RTP complies with State and Federal transportation planning requirements required of urbanized counties for a comprehensive and long-range transportation plan. The RTP is a financially constrained multi-modal plan that identifies regional transportation improvements needed to improve system maintenance and operations and to improve mobility and accessibility countywide. The completion of all financially constrained capital improvements will not compromise progress for Ventura County attaining and/or maintaining federal air quality health based standards. Federal and state transportation funding is contingent upon local agency compliance with the RTP.

Local

Ventura County Comprehensive Transportation Plan

The Ventura County Comprehensive Transportation Plan (August 2013) is a long range policy document created by VCTC, in coordination with its member agencies (i.e., the County and all incorporated cities of the county). As part of a substantial public outreach effort, VCTC collaborated with community members, residents and other key stakeholders to create a framework for future regional transportation decisions in Ventura County. The plan also identifies the core existing conditions and funding sources from federal, state, regional, and local levels. It should be noted the creation of this transportation plan was not mandated by either the state or federal government, and it carries no regulatory authority.

Congestion Management Program

The Congestion Management Program (CMP) is the State mandated program (Government Code 65089) aimed at reducing congestion on highways and roads in California. The CMP establishes a designated roadway network of regional significance, roadway service standards, multi-modal performance measures and a land use analysis element to identify and mitigate multi-jurisdictional transportation impacts resulting from local land use decisions. Federal, state and local transportation funding is contingent upon local agency compliance with the CMP. The Ventura County Transportation Commission (VCTC) is the designated Congestion Management Agency for Ventura County. As part of the state CMP, VCTC also implements the Federal Congestion Management Process mandated by Fixing America's Surface Transportation (FAST) Act.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation. These can be found in Section 27, Transportation & Circulation.

Key Terms

California Department of Transportation (Caltrans). Caltrans provides management, support, and planning oversight for state highway facilities throughout the state.

Centerline Miles refers to miles of roadway irrespective of the number of travel lanes.

Functional Classification is the system by which roadways are grouped. Each functional classification represents an intended usage of the roadway, which helps to determine the type of access, capacity need, and speed at which the roadway is expected to operate.

Regional Road Network - consists of roads classified as Primary (6 lanes or more), Secondary (4 lanes) or Collector (2 lanes), as well as freeways, expressways and conventional state highways.

References

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SECTION 6.2 LEVEL OF SERVICE AND VEHICLE MILES OF TRAVEL

Introduction

This section describes the roadway infrastructure and circulation conditions in Ventura County. The fundamental objective of a roadway system is to provide access and mobility for all users including motorists, transit, pedestrians and bicyclists. If roads are not planned near areas of development, the road system may not provide adequate access. If roads are not planned with sufficient capacity to serve development, the road system will fail to provide adequate mobility since motorists would experience long delays and restricted access.

Major Findings

- LOS D is the minimum acceptable level of service for all County-maintained thoroughfares and federal/state highways in Ventura County, with a few exceptions. Currently, there are two portions of arterial roadways that exceed this standard: Harbor Boulevard between Oxnard and Ventura and Wendy Drive in Casa Conejo are operating at LOS E. Additionally, seven highway segments are operating at unacceptable conditions, including portions of SR-33, SR-23, SR-34, SR118, and US 101. One highway segment on SR-33 is operating at LOS F.
- Of the roadways selected for analysis, 83% of County roadways in the unincorporated areas of the county operate at an LOS of C or better, and 76% of state highway roadways in the unincorporated areas operate at LOS C or better.
- Of the total 2,983 maintained miles in Ventura County, 24 percent traverse unincorporated areas of the county. These unincorporated roadways carry approximately 21 percent of Ventura County's total vehicle miles traveled (VMT) on a daily basis. The majority of VMT in Ventura County occurs within the incorporated areas, both on local roads and state highways.
- The top three causes for collisions on roadways in unincorporated areas are improper turning maneuvers, unsafe travel speeds, and driving under the influence. The most prominent collision types are "hit object" and rear-end collisions. Approximately 64 percent of all collisions occur during daylight hours.

Existing Setting

County Roadway Inventory and Daily Vehicle Miles of Travel

Daily vehicle miles of travel (DVMT) is a general but robust measure of vehicle activity. It measures the extent of utilization a transportation network experiences by motorists. Although it is not a good indicator of congestion, it is an indicator of overall vehicle activity. DVMT is commonly applied on a per-household or per-capita basis and is a primary input for regional air quality analyses and for developing safety and accident rates. Pursuant to SB 743, DVMT is the ~~now the~~ basis for transportation impact identification and mitigation under the California Environmental Quality Act (CEQA). Despite changes in how traffic impacts are defined and measured under CEQA as a result of SB 743, local jurisdictions may continue to retain congestion based standards/metrics, such as LOS, in their General Plans.

Daily vehicle miles of travel estimates are developed annually by Caltrans and reported for Ventura County per the Federal Highway Performance Monitoring System (HPMS). DVMT is computed by multiplying a given roadway's traffic volume by its centerline segment length. To estimate countywide DVMT, the HPMS program uses a sample-based method that combines daily traffic counts stratified by functional classification of roadway by volume groups to produce sample-based geographic estimates of DVMT. HPMS DVMT estimates are considered "ground truth" by the 1990 Federal Clean Act Amendments (November 15, 1990). HPMS DVMT estimates are used to validate baseline travel demand models and to track modeled VMT forecasts over time. HPMS DVMT estimates are reported for each county by local jurisdiction, state highway use, and other state/federal land roadways (e.g., State Parks, US Bureau of Land Management, US Forest Service, US Fish and Wildlife Service).

Table 6-6 lists the latest VMT estimates for Ventura County. The majority of the vehicles miles of travel in Ventura County occurs on roadways that traverse incorporated areas, with roughly 21 percent of the mileage occurring within unincorporated areas.

TABLE 6-6
ROADWAY INVENTORY
Ventura County 2014

Jurisdiction	Daily VMT
Total Local Roadways	8,790,200
Unincorporated Area County Roadways	**1,315,660**
Incorporated Area Roadways	7,474,540
Total VMT on State Highways	9,846,110
Unincorporated Area State Highways	**2,531,062**
Incorporated Area State Highways	7,315,048
State Park Service	5,040
National Park Service	5,220
U.S. Navy	37,380
U.S. Forest Service	3,190
Ventura County Total	18,687,140
Total VMT in Incorporated Areas	14,789,588
Total VMT in Unincorporated Areas	**3,846,722**
Total Other VMT (Other State/Federal)	50,830

Source: Highway Performance Monitoring System, 2014
Source: Caltrans, California Public Road Data – 2014, November 2015
Source: State Highway Miles by Unincorporated vs. Incorporated: Kimley-Horn

Roadway Traffic Volumes and Level of Service

Level of Service (LOS) is used to rate a roadway segment's traffic flow characteristics, and acts as an indicator of roadway performance, relative to locally established standards for quality of service. LOS can assist in determining when roadway capacity improvements are needed, using a scale of A through F, as described in Table 6-7.

TABLE 6-7 LEVEL OF SERVICE DESCRIPTIONS Ventura County	
LOS	**Traffic Conditions**
"A"	Free uninterrupted low volume flow at high speeds with no restriction on maneuverability (lane changing) and with little or no delays.
"B"	Stable flow with some restrictions to operating speed occurring.
"C"	Stable flow but with speed and maneuverability restricted by higher traffic volumes. Satisfactory operating speed for urban locations with some delays at signals.
"D"	Approaching unstable flow with tolerable operating speeds subject to considerable and sudden variation, little freedom to maneuver and with major delays at signals.
"E"	Unstable flow with volume at or near capacity, lower operating speeds and major delays and stoppages.
"F"	Forced flow operation with low speeds and stoppages for long periods due to congestion. Volumes below capacity.

The County of Ventura has established minimum acceptable Level of Service (LOS) for road segments and intersections that comprise the Regional Road Network, as shown in Table 6-8. Individual intersection operations are not specifically addressed as part of the General Plan. However, based on the most recent information from the VCTC Congestion Management Plan (2009), all of the County-owned intersections are currently operating at acceptable conditions.

TABLE 6-8
MINIMUM ACCEPTABLE LEVEL OF SERVICE
Unincorporated Ventura County

Minimum LOS	Description
C	All County-maintained local roads
D	All County thoroughfares and Federal highways and State highways in the unincorporated area of the county, except as provided below.
E	1. State Route 33 between the end of the Ojai freeway and the City of Ojai. 2. State Route 118 between Santa Clara Avenue and the City of Moorpark. 3. State Route 34 (Somis Road) north of the City of Camarillo. 4. Santa Rosa Road between Camarillo city limit line and Thousand Oaks city limit line. 5. Moorpark Road north of Santa Rosa Road to Moorpark city limits line.
Varies	The LOS prescribed by the applicable city for all State highways, city thoroughfares, and city maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County, pertaining to development in the city that would individually or cumulatively affect the LOS of State highways, County thoroughfares and County-maintained local roads in the unincorporated area of the county.
	County LOS standards are applicable for any city that has not adopted its own standards or has not executed a reciprocal agreement with the County pertaining to impacts to County roads.
According to the County's General Plan, at any intersection between two roads, each of which has a prescribed minimum acceptable LOS, the less stringent LOS of the two shall be the minimum acceptable LOS of that intersection (Goals, Policies & Programs 4.2.2).	

Existing Level of Service – Unincorporated County Roadways

County thoroughfares and conventional State highways in the unincorporated area are classified as Class I, II, or III roadways. Class I roadways are rural two-lane or multi-lane roads of essentially level terrain, where the road section has been improved to meet current road standard criteria; Class II roadways are rural two-lane roads, of essentially level and slightly rolling terrain, where the road section does not meet current road standard criteria; and Class III roadways are rural two-lane roads, of mountainous terrain or sharply curving alignment, where the road section does not meet current road standard criteria; The ADT and LOS thresholds for Class I, II and III roadways are shown in Table 6-9.

Table 6-10 presents the local County roadway LOS results under existing conditions, based on 2015 traffic counts. Three arterial segments were found to be operating below the minimum LOS (see shaded cells). These segments are located on Harbor Boulevard north of Gonzales Road, on Santa Rosa Road west of Moorpark Road, and on Santa Rosa Road east of E Las Posas Road; all are operating at LOS E. Of the roadways selected for analysis, 83 percent of segments operate at LOS C or better, 12 percent operate at LOS D, 4 percent at LOS E or worse, and 1 percent do not have an LOS score.

TABLE 6-9
ADT/LOS THRESHOLDS
County Maintained Roads and Conventional State Highways

Class I			Class II	Class III	LOS
2 Lanes	4 Lanes	6 Lanes	2 Lanes	2 Lanes	
2,400	19,000	29,000	1,500	350	A
5,600	28,000	42,000	3,900	2,000	B
10,000	38,000	57,000	7,000	3,300	C
16,000	47,000	70,000	11,000	5,900	D
27,000	58,000	87,000	21,000	16,000	E

Source: County of Ventura, 2007

TABLE 6-10
LEVEL OF SERVICE
Unincorporated County Roadways

Road	Location	Road Class	Lanes	Count Day: 2015 VPD	LOS	Part of Regional Network
Aggen Road	n/o L.A. Ave (SR118)	II	2	600	A	
Balcom Canyon Road	s/o South Mountain Rd	II	2	2,000	B	✓
	n/o L.A. Ave (SR118)	II	2	2,800	B	✓
Bardsdale Avenue	e/o Sespe St	I	2	1,500	A	
Beardsley Road	n/o Central Ave	I	2	2,500	B	
Bennett Road	n/o Tapo Canyon Rd	III	2	1,100	B	
Box Canyon Road	s/o Santa Susana Pass Rd	III	2	4,000	D	✓
Bradley Road	N/O L.A. Ave (SR118)	II	2	2,500	B	✓
Bridge Rd	e/o SR-150	II	2	200	A	
Briggs Road	s/o Telegraph Rd	I	2	3,600	B	✓
	n/o Telegraph Rd	I	2	1,300	A	✓
Bristol Road	w/o Montgomery Ave	I	2	10,300	D	✓
Broadway	w/o Grimes Cyn Rd (SR23)	II	2	2,600	B	
Burnham Road	s/o Baldwin Rd (SR150)	II	2	2,200	B	✓
	e/o Santa Ana Rd	II	2	1,900	B	✓
Calle Yucca	n/o Camino Manzanas	I	2	1,800	A	✓
Camino Dos Rios	w/o Lynn Rd	I	2	3,100	B	✓
Canada Larga Road	e/o Ventura Ave	II	2	2,700	B	
Carne Road	n/o Ojai Ave (SR150)	II	2	800	A	
Casitas Vista Road	w/o Ojai Fwy (SR33)	III	2	2,500	C	
Cawelti Road	w/o Lewis Rd	I	2	1,900	A	✓
Center School Road	s/o L.A. Ave (SR118)	II	2	1,800	B	✓

TABLE 6-10
LEVEL OF SERVICE
Unincorporated County Roadways

Road	Location	Road Class	Lanes	Count Day: 2015 VPD	LOS	Part of Regional Network
Center Street (Piru)	w/o Telegraph Rd (SR126)	II	2	900	A	
Central Avenue	w/o Ventura Fwy (US101)	I	2	14,400	D	✓
	w/o Santa Clara Ave	I	2	9,300	C	✓
	e/o Vineyard Ave (SR232)	I	2	9,400	C	✓
Channel Islands Blvd	w/o Rice Ave	I	2	11,000	D	✓
Clubhouse Drive	n/o L. A. Ave (SR-118) (SBT)	II	2	600	A	
Creek Road	e/o Country Club Dr	III	2	2,600	C	✓
	e/o Ventura Ave (SR33)	III	2	3,000	C	✓
Deer Creek Road	n/o Pacific Coast Hwy (SR1)	III	2	300	A	
Deerhill Road	n/o Kanan Rd	I	4	5,700	A	
Del Norte Road	s/o Rancho Dr	II	2	400	A	
Del Norte Road	n/o El Toro Rd	III	2	400	B	
Donlon Road	n/o La Cumbre Rd	II	2	1,700	B	
Doris Avenue	e/o Victoria Ave	I	2	4,300	B	✓
El Roblar Drive	w/o Maricopa Hwy (SR33)	I	2	7,900	C	✓
Etting Road	e/o Dodge Rd	I	2	2,700	B	
Etting Road	w/o Dodge Rd	II	2	2,600	B	
Fairview Road	e/o Maricopa Hwy (SR33)	II	2	800	A	
Fairway Drive	n/o Valley Vista Dr	II	2	3,200	B	✓
Fifth Street West	e/o Harbor Blvd	I	2	5,100	B	✓
Foothill Road	w/o Peck Rd	I	2	1,600	A	✓
	w/o Briggs Rd	II	2	1,900	B	✓
	e/o Wells Rd	II	2	2,400	B	✓
	e/o Saticoy Ave	II	2	4,100	C	✓
Gonzales Road	e/o Harbor Blvd	I	2	4,100	B	✓
Grand Avenue	e/o Fordyce Rd	II	2	2,000	B	
	w/o Fordyce Rd	II	2	2,000	B	
Grimes Canyon Road	n/o L.A. Ave (SR118)	II	2	2,800	B	✓
Guiberson Road	e/o Chambersburg Rd (SR23)	I	2	900	A	
Harbor Blvd	n/o Gonzales Rd	I	2	19,900	**E**	
	s/o Gonzales Rd	n/a	n/a	n/a	n/a	
Hitch Blvd	s/o L.A. Ave (SR118)	II	2	2,500	B	
Howe Road	e/o Torrey Rd	I	2	500	A	✓
Hueneme Road	e/o Las Posas Rd	I	2	11,200	D	✓

TABLE 6-10
LEVEL OF SERVICE
Unincorporated County Roadways

Road	Location	Road Class	Lanes	Count Day: 2015 VPD	LOS	Part of Regional Network
	e/o Nauman Rd	I	2	10,500	D	✓
	e/o Wood Rd	I	2	10,400	D	✓
	w/o Olds Rd	I	2	12,300	D	✓
Kanan Road	e/o Lindero Canyon Rd	I	4	14,100	A	✓
	e/o Hollytree Dr / Oak Hills Dr	I	4	13,600	A	
	s/o Tamarind St	I	4	21,200	B	
L A Ave (SR-118)	e/o Clubhouse Dr (WBT)	I	2	9,000	C	
L A Ave (SR-118)	w/o Clubhouse Dr (EBT)	I	2	9,600	C	
La Luna Avenue	s/o Lomita Ave	I	2	4,100	B	✓
La Vista Avenue	n/o L.A. Ave (SR118)	II	2	1,000	A	
Laguna Road	e/o Pleasant Valley Rd	I	2	2,200	A	✓
	n/o Hueneme Rd	I	2	2,100	A	✓
Las Posas Road	n/o E Fifth St (SR34)	I	2	8,400	C	✓
	s/o E Fifth St (SR34)	I	2	8,900	C	✓
	s/o Hueneme Rd	I	2	6,100	C	✓
E Las Posas Road	n/o Santa Rosa Rd	I	2	2,600	B	
Lewis Road	s/o Pleasant Valley Rd	I	4	15,500	A	✓
	n/o Potrero Rd	I	2	9,500	C	✓
Lockwood Valley Road	w/o Kern County Line	II	2	800	A	✓
	e/o Maricopa Hwy (SR33)	II	2	400	A	✓
Lomita Avenue	e/o Tico Rd	I	2	4,100	B	
Main Street	n/o Telegraph Rd (SR126)	I	4	4,200	A	
McAndrew Road	n/o Reeves Rd	II	2	500	A	
Moorpark Road	n/o Santa Rosa Rd	I	2	17,100	E	✓
North St - #1 Before	1210' s/o Los Angeles Ave(SR118)	II	2	1,300	A	
North St - #2 Before	300' w/o Dodson St (E)	II	2	1,500	A	
North St - #3 Before	1210' s/o Los Angeles Ave(SR118)	II	2	1,300	A	
	(Saturday & Sunday)					
Old Telegraph Road	w/o Grand Ave	I	2	4,200	B	✓
Olds Road	n/o Hueneme Rd	I	2	1,800	A	
Olivas Park Drive	w/o Victoria Ave	I	2	12,000	D	✓
Panama Drive	s/o Lake Shore Dr	I	2	400	A	

TABLE 6-10
LEVEL OF SERVICE
Unincorporated County Roadways

Road	Location	Road Class	Lanes	Count Day: 2015 VPD	LOS	Part of Regional Network
Pasadena Ave	e/o Sespe St	II	2	300	A	
Patterson Road	s/o Doris Ave	I	2	1,000	A	✓
Piru Canyon Road	n/o Orchard St	II	2	500	A	
Pleasant Valley Road	s/o E Fifth St (SR34)	I	2	15,900	D	✓
	w/o Las Posas Rd	I	2	14,400	D	✓
Potrero Road	e/o Lake Sherwood Dr (E)	I	4	8,600	A	
	w/o Stafford Rd	I	2	3,400	B	
	w/o Hidden Valley Rd	III	2	2,300	C	
	Milepost 2.75	II	2	3,400	B	
	e/o Lewis Rd	II	2	4,800	C	
Price Road	n/o L.A. Ave (SR118)	I	2	600	A	
Rice Road	s/o E Fifth St (SR34)	I	4	31,700	C	
	n/o Channel Islands Blvd	I	4	26,200	B	
	n/o Hueneme Rd	I	4	3,600	A	
Rice Road (Meiners Oaks)	s/o Lomita Ave	III	2	2,100	C	
Riverside Avenue	w/o Chambersburg Rd (SR23)	I	2	700	A	
Rose Avenue	s/o L.A. Ave (SR118)	II	2	8,300	D	✓
	s/o Central Ave	I	4	10,500	A	✓
	n/o Collins St	I	4	18,700	A	✓
Santa Ana Blvd	e/o Ventura River	II	4	2,200	C	
Santa Ana Road	s/o Baldwin Rd (SR150)	III	2	1,000	B	
	s/o Santa Ana Blvd	II	2	1,900	B	
Santa Clara Avenue	n/o Friedrich Rd	I	2	12,900	D	✓
	s/o L.A. Ave (SR118)	I	2	15,400	D	✓
Santa Rosa Road	w/o Moorpark Rd	II	2	19,700	**E**	✓
	w/o E Las Posas Rd	I	2	16,500	**E**	✓
Santa Susana Pass Road	e/o Katherine Rd	III	2	4,800	D	✓
Sespe Street	n/o South Mountain Rd	I	2	1,900	A	
	s/o Pasadena Ave	I	2	600	A	
South Mountain Road	e/o Balcom Canyon Rd	III	2	1,900	B	✓
	s/o Santa Clara River	II	2	3,900	B	✓
Stockton Road	e/o Balcom Canyon Rd	III	2	1,200	B	✓
Sturgis Road	w/o Pleasant Valley Rd	I	2	3,800	B	
Tapo Canyon Road	s/o Bennett Rd	III	2	1,700	B	
Telegraph Road	w/o Briggs Rd	I	2	5,000	B	✓

TABLE 6-10 LEVEL OF SERVICE Unincorporated County Roadways						
Road	Location	Road Class	Lanes	Count Day: 2015 VPD	LOS	Part of Regional Network
	w/o Hallock Dr	n/a	n/a	n/a	n/a	✓
	w/o Olive Rd	I	2	5,500	B	✓
Tico Road	n/o Ventura Ave (SR150)	II	2	3,100	B	
Tierra Rejada Road	e/o Moorpark Fwy (SR23)	I	4	16,300	A	✓
Torrey Road	s/o Telegraph Rd (SR126)	I	2	500	A	✓
Valley Vista Drive	s/o Calle Aurora	II	2	5,600	C	✓
Ventura Avenue	n/o Canada Larga Rd	II	2	800	A	
	n/o Shell Rd	II	2	6,000	C	
Victoria Avenue	s/o Olivas Park Dr	I	4	44,900	D	✓
Villanova Road	e/o Ventura Ave (SR33)	II	2	2,400	B	
Walnut Avenue	n/o L.A. Ave (SR118)	II	2	400	A	
Wendy Drive	n/o Gerald Dr	II	2	13,100	**E**	✓
Wood Road	s/o Hueneme Rd	I	2	1,900	A	
	s/o E Fifth St (SR34)	I	2	1,200	A	
Wooley Road	w/o Rice Ave	I	2	9,700	C	
Wright Road	e/o Santa Clara Ave	I	2	1,400	A	
Yerba Buena Road	n/o Pacific Coast Hwy (SR1)	III	2	700	B	

Traffic Count Source: County of Ventura Traffic Counts 2015.
Level of Service Analysis Source: Kimley-Horn & Associates.

Existing Level of Service – State Highways

Based on the volume thresholds provided in Table 6-11 relative to the 2014 published traffic volumes from Caltrans, Table 6-12 provides LOS results for limited access state highways (i.e., freeway/multi-lane highway segments) that traverse unincorporated areas of Ventura County. Unlike freeways, multi-lane highways are not completely access controlled. For the purposes of this analysis, multi-lane highways were classified using the arterial classification system included in Table 6-5. The segments shown consist only those state highway segments in the unincorporated areas of the county.

Seven highways segments are operating at unacceptable conditions, including portions of SR-33, SR-23, SR-34, SR-118, and US 101, as highlighted in Table 6-12. One highway segment on SR-33 is operating at LOS F. Of the roadways selected for analysis, a total of 76 percent of segments operate at LOS C or better, 5 percent operate at LOS D, and 19 percent operate at LOS E or worse.

TABLE 6-11 FREEWAYS ADT/LOS THRESHOLDS Ventura County				
4 Lanes	6 Lanes	8 Lanes	10 Lanes	LOS
31,000	46,000	62,000	77,000	A
48,000	71,000	95,000	119,000	B
68,000	102,000	136,000	169,000	C
82,000	123,000	164,000	205,000	D
88,000	132,000	176,000	220,000	E

Source: Ventura County, 2007.

TABLE 6-12
LOS ON FREEWAY/MULTI-LANE HIGHWAY STATE FACILITIES
Unincorporated Area of Ventura County

Fwy Rte	Post mile	Location Description	Road Class Freeway (F), Arterial (I, II, III)	Lanes	AADT	LOS
1	9.866	Calleguas Creek	I	4	9,600	A
1	10.229	Las Posas Road	F	4	9,600	A
1	11.594	Wood Road	F	4	8,900	A
1	12.785	Hueneme Road	F	4	11,500	A
1	13.59	Nauman Road	F	4	12,000	A
1	27.675	Seacliff Colony, Jct. Rte. 101	F	6	4,500	A
1	28.48	Las Cruces, Jct. Rte. 101; Mobil Oil Pier	F	4	610	A
23	10.164	Moorpark, Tierra Rejada Road	F	6	70,000	B
23	15.54	Happy Camp Road	III	2	7,600	**E**
23	16.8	Grimes Canyon Road	III	2	6,300	**E**
23	22.265	Bardsdale Avenue	III	2	6,300	**E**
23	24.165	Fillmore, Jct. Rte. 126	I	2	9,100	C
33	2.648	Shell Road	F	4	29,500	A
33	4.487	Canada Larga Road	F	4	27,000	A
33	5.635	Casitas Vista Road	F	4	25,500	A
33	8.001	Creek Road	II	2	22,700	**F**
33	9.04	Santa Ana Boulevard	II	2	20,500	E
33	10.65	Woodland Road	II	2	19,600	E
33	11.21	West Jct. Rte. 150	II	2	20,800	E
33	12.8	Fairview Road/La Luna Avenue	II	2	2,500	B
33	13.35	Los Padres National Forest Boundary	II	2	1,500	A
33	15.441	Matilija Hot Springs Road	II	2	1,300	A
33	17.631	Wheeler Hot Springs	III	2	660	B
33	25.791	Rose Valley Road	III	2	560	B
33	30.219	Sespe Gorge Maintenance Station	III	2	410	B
33	48.5	Lockwood Valley Road	II	2	330	A

TABLE 6-12
LOS ON FREEWAY/MULTI-LANE HIGHWAY STATE FACILITIES
Unincorporated Area of Ventura County

Fwy Rte	Post mile	Location Description	Road Class Freeway (F), Arterial (I, II, III)	Lanes	AADT	LOS
33	57.508	Ventura/Santa Barbara County Line	III	2	340	A
34	8.43	Pleasant Valley Road, West Junction	I	2	11,700	D
34	8.911	Wood Road	I	2	9,600	C
34	10.433	Las Posas Road, West Junction	I	2	9,300	C
34	12.463	Right Onto Pleasant Valley Road	I	4	7,000	A
34	12.78	Camarillo, Pleasant Valley Road	I	4	14,300	A
34	17.663	Somis, Jct. Rte. 118	II	2	13,600	E
101	19.172	Oxnard, Almond Drive	F	8	134,000	C
101	24.645	Ventura, Victoria Avenue	F	6	125,000	**E**
101	32.7	Solimar Beach, South Jct. Rte. 1	F	6	66,000	B
101	38.976	Seacliff, North Jct. Rte. 1	F	6	61,000	B
101	43.622	Ventura/Santa Barbara County Line	F	6	65,000	B
118	2.2	Jct. Rte. 232	I	4	35,500	C
118	4.16	Santa Clara Avenue	I	4	24,700	B
118	10.92	Jct. Rte. 34	I	2	11,900	D
118	14.686	Grimes Canyon Road	I	2	18,600	E
118	17.494	Moorpark, West Jct. Rte. 23	F	4	29,000	A
126	8.912	Briggs Road	F	4	50,000	C
126	10.38	Santa Paula, Peck Road	F	4	48,000	B
126	16.73	Sespe Ranch Uc	I	4	31,500	C
126	20.331	Fillmore, West City Limits, Los Serenos Road	I	4	29,000	C
126	29.296	Center Street	I	4	22,500	B
126	36.64	Ventura/Los Angeles County Line	I	4	22,000	B
150	11.27	Santa Ana Road	III	2	2,750	C
150	14.113	Rice Road	II	2	6,300	C
150	14.406	Jct. Rte. 33 South	II	2	10,200	D
150	15.021	Loma Drive	II	2	19,400	**F**
150	16.076	Ojai, Hermosa Road	II	2	18,800	**E**
150	19.04	Gorham Road	I	2	6,500	C
150	19.93	Reeves Road	II	2	5,300	C
150	22.481	Happy Valley School Road	II	2	2,900	B
150	31.95	Santa Paula, North City Limit	II	2	3,650	B
232	2.579	Central Avenue	I	4	14,200	A
232	4.11	Jct. Rte. 118	F	4	15,100	A

Safety

Table 6-13 includes a breakdown of the reported traffic collisions from the five most recent available years of accident data from the California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS). The majority of reported collisions in the unincorporated areas of Ventura County are property damage only. Roughly one percent of collisions result in fatalities. Over 60 percent of the collisions were caused by improper turning maneuvers or travelling at an unsafe travel speed. Driving under the influence accounted for approximately 10 percent of the collisions. The number one collision type is "hit object." Approximately 64 percent of all collisions occur during daylight hours.

TABLE 6-13
BREAKDOWN OF COLLISIONS BASED ON CHARACTERISTICS
Ventura County 1/1/2011 – 12/31/2015

Cause of Accident	
Auto R/W Violation	317
Brakes	1
Driving Under Influence	397
Fell Asleep	0
Following Too Closely	6
Hazardous Parking	6
Impeding Traffic	0
Improper Passing	58
Improper Turning	1,133
Lights	1
Not Stated	2
Other	11
Other Equipment	2
Other Hazardous Movement	7
Other Improper Driving	8
Other Than Driver	71
Other Than Driver or Ped	12
Ped or Other Under Influence	0
Ped R/W Violation	3
Pedestrian Violation	14
Traffic Signals and Signs	91
Unknown	43
Unsafe Lane Change	22
Unsafe Speed	994
Unsafe Starting or Backing	174
Wrong side of Road	99
Total	**3,472**

TABLE 6-13 BREAKDOWN OF COLLISIONS BASED ON CHARACTERISTICS Ventura County 1/1/2011 – 12/31/2015	
Collision Type	
Broadside	445
Head-On	152
Hit Object	1,299
Not Stated	1
Other	156
Overturned	212
Rear-End	718
Sideswipe	449
Vehicle-Pedestrian	30
Total	**3,472**
Time of Day	
Day	2,231
Night	1,239
Unknown	2
Total	**3,472**
Highest Degree of Injuries	
Complaint of pain	607
Severe Injury	128
Other Visible Injury	443
Fatal	38
Property Damage Only	2,256
Total	**3,472**

Source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS), 2016.

Regulatory Setting

State

California Environmental Quality Act (CEQA) Streamlining (SB 743)

Adopted in 2013, SB 743 changes the metric used to evaluate transportation impact and mitigation under CEQA. However, as of the 2016 baseline of this report, the Office of Planning Research, the State agency tasked with creating implementation guidelines for SB 743, has yet to release the CEQA Guidlelines for impletmentation of SB 743. Without these guidlielines and their corresponding VMT methodology and standards, the SB 743 proposed revisions are not currently the basis for traffic impact identification and mitigation. ~~Previously,~~ CEQA analysis has centered on Level of Service (LOS), but ~~now~~ under SB 743, the primary metric for identifying CEQA impacts and mitigation will be Vehicle Miles of Travel (VMT). ~~CEQA impacts or mitigations will no longer be based on LOS.~~ The intent of SB 743 is to streamline CEQA guidelines for projects in urban infill locations and high transit priority areas. ~~However, it will be eventually phased in to apply statewide.~~ VMT was chosen as the primary metric to better integrate land use and multimodal transportation choices, to encourage alternative transportation, greater efficiency, and reduced GHG emissions. SB 743 also amended the state congestion management program

statutes lifting the sunset clause for the designation of infill opportunity zones, where CMP LOS standards would no longer apply.

Local

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation related to traffic levels of service. These can be found in Section 27a(1), Transportation & Circulation – Roads and Highways – Level of Service.

Key Terms

Annual Average Daily Traffic (AADT): The total volume of traffic passing a point or segment of a highway facility in both directions for one year divided by the number of days in a year. AADT is typically measured by taking one two-week sample during each of the four seasons (fall, winter, spring, summer) and averaging.

Daily Vehicles Miles of Travel (DVMT): The total vehicle miles of travel recorded over a 24-hour period. Alternatively, total VMT over one year divided by the number of days in a year.

Vehicle Miles of Travel (VMT) refers to the number of roadway miles traveled by motor vehicles.

Highway Capacity Manual (HCM): A publication of the Transportation Research Board (TRB) that contains concepts, guidelines, and procedures for computing the capacity and quality of service of various roadway facilities for all modes of travel (driving, walking, biking, and taking transit).

Level of Service (LOS): A qualitative measure for the travel experience along a roadway. A scale of A to F is used to indicate the level of service, with "A" as the free flow conditions and "F" as the "jammed" conditions.

Statewide Integrated Traffic Records System (SWITRS): A database of vehicular collisions collected and maintained by the California Highway Patrol.

References

California Department of Transportation. California 2013 Public Road Data, Statistical Information Derived from the Highway Performance Monitoring System, November, 2014. http://www.dot.ca.gov/hq/tsip/hpms/index.php

California Department of Transportation. Traffic Census Program, http://traffic-counts.dot.ca.gov/, February 15, 2016.

2012-2035 Regional Transportation Plan and Sustainable Communities Strategy, Southern California Association of Governments.

County of Ventura. Ventura County General Plan: Public Facilities and Services Appendix. http://vcrma.org/planning/pdf/plans/GENERAL-PLAN-Public-Facilities-Services-Appendix.pdf May 8, 2007.

SECTION 6.3 ACTIVE TRANSPORTATION

Introduction

This section describes existing facilities and programs for bicyclists and pedestrians in Ventura County. As stated in the Chapter Introduction, the information summarized below will be evaluated during the course of the General Plan Update to determine to what extent these bicycle and pedestrian facilities address the regulatory requirements of the 2008 California Complete Streets Act. Several of the jurisdictions within Ventura County, including the unincorporated county, have adopted bicycle and pedestrian plans in addition to their general plans. The following plans have been adopted by agencies within Ventura County:

- **Ventura County Transportation Commission (VCTC)**,Ventura Countywide Bicycle Master Plan (2007) (also covers **City of Port Hueneme** and **City of Santa Paula**)
- **City of Camarillo,** Bikeway Master Plan (2008)
- **City of Fillmore,** Bicycle Transportation Plan (2005)
- **City of Moorpark,** Moorpark Master Bicycle Pedestrian Plan (2008)
- **City of Ojai,** Bicycle and Pedestrian Master Plan (1999)
- **City of Oxnard,** Bicycle and Pedestrian Facilities Master Plan (2011)
- **City of Simi Valley,** Bicycle Master Plan (2008)
- **City of Thousand Oaks,** Bicycle Facilities Master Plan (2010)
- **City of Ventura,** Bicycle Master Plan (2011)

Major Findings

- A robust source of funding for local active transportation projects in other jurisdictions is through transportation sales tax measures. At this time, Ventura County does not have such a funding source. Currently, most of Ventura County's funding for transportation comes from state and federal funding sources.
- To maintain competitiveness for Active Transporation Program (ATP) program funds, the County and its local jurisdictions are required to update active transportation plans that are older than five years. The program guidelines prioritize projects that are identified on adopted plans. Jurisdictions that develop Safe Routes to School, bicycle, and pedestrian plans can better compete for state ATP funding.
- The County is focusing on closing gaps in the countywide bikeway network that were identified in the Ventura Countywide Bicycle Master Plan. Improving the connections within the existing network can improve systemwide connectivity. This strategy integrates existing recreational and arterial networks to better serve transit, employment, and activity centers. Developing publicly-accessible bicycle support facilities also improves access and usage of the county's trails and coastal bikeways. VCTC completed a bicycle wayfinding study in April 2017.
- Many of the segments in the unincorporated roadway network do not include sufficient shoulder space to stripe Class II bike paths onto existing paved surfaces. This presents a challenge for closing gaps in the existing bike network.

- The County has jurisdiction of 103 miles of trails and 58 miles of bike lanes in the unincorporated areas.
- The largest mode shares for walking and cycling are in the cities of Port Hueneme (8.1% and 1.4%, respectively) and Ojai (6.4% and 2.2%, repectively). The unincorporated area of the county has a walking and cycling mode split of 3.4% and 0.6%, respectively, which are higher than several of the other incorporated areas.
- According to a 2013 ranking of California counties, Ventura County ranks approximately in the middle in safety for pedestrians and cyclists. The County earned higher ranks for pedestrians over 65 years old and bicyclists under 15 years old.
- There is currently no inventory of County-maintained sidewalks or ADA compliant curb cuts within the unincorporated areas. Development of such an inventory would facilitate future compliance tracking of pedestrian improvements consistent with the ADA and AB 1358.

Existing Setting

This section summarizes existing active transportation commute mode shares (i.e. what percentage of commuters in Ventura County walk, bike or use other active transportation to get to work), the existing and planned bicycle and pedestrian facilities and infrastructure, and how the bicycle and pedestrian network in Ventura County interfaces with other modes to contribute to the larger mobility context.

Journey to Work

The number of Ventura County residents who bike or walk to work is identified in the US Census/American Community Survey. Table 6-14 shows the relative proportion of commuters using active transportation as their primary commute mode for each jurisdiction and provides a comparison to the California statewide average. Overall, the proportion of the labor force in Ventura County that commutes to work by walking or biking is 2.7 percent and 1.1 percent, respectively. The City of Port Hueneme had the highest proportion of workers commuting by walking at 8.1 percent. The City of Ojai had the highest proportion of residents biking to work at 2.2 percent.

TABLE 6-14 JOURNEY TO WORK MODE SPLIT – BICYCLE AND PEDESTRIAN Ventura County					
Area	**Walked**		**Bicycle**		**Total Workers**
County of Ventura	7,555	2.0%	2,593	0.7%	386,259
County of Ventura (Unincorporated)	**1,483**	**3.4%**	**284**	**0.6%**	**43,943**
Camarillo	376	1.2%	73	0.2%	30,797
Fillmore	221	3.7%	17	0.3%	5,926
Moorpark	270	1.5%	22	0.1%	17,604
Ojai	202	6.4%	70	2.2%	3,134
Oxnard	1,111	1.2%	658	0.7%	89,885
Port Hueneme	789	8.1%	136	1.4%	9,790
Santa Paula	140	1.1%	103	0.8%	12,493
Simi Valley	650	1.0%	326	0.5%	62,549
Thousand Oaks	1,290	2.2%	352	0.6%	59,629
Ventura	1,023	2.0%	552	1.1%	50,509
California	*451,715*	*2.7%*	*182,718*	*1.1%*	*16,529,777*

Source: American Community Survey – 2014 5-Year Aggregate.

Existing and Planned Pedestrian Facilities

The County of Ventura does not currently have a plan for developing pedestrian facilities at the regional level. As a member jurisdiction of SCAG, Ventura County adopted the 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which includes an Active Transportation Plan. The Active Transportation Plan identified goals and objectives supporting pedestrian mobility and access. In addition, as part of its recent work to amend the Ventura County Local Coastal Program (LCP), the Planning Division developed a conceptual trail alignment for the portion of the California Coastal Trail (CCT) that lies within the unincorporated portions of the county. In late 2016, the Ventura County Board of Supervisors approved this conceptual alignment, along with maps, goals, policies, and programs related to the CCT. The California Coastal Commission is scheduled to certify the LCP amendments in spring 2017.

The County's Comprehensive Transportation Plan (CTP) developed by VCTC (2013) identified the need for pedestrian improvements and funding. The CTP found that the bike and pedestrian infrastructure were relatively well developed within the cities, but were not well connected across jurisdictional boundaries. A wayfinding study by VCTC (2017) provides more information about pedestrian and bicycle connectivity and navigational issues in the county.

The existing General Plan outlines goals, policies and programs to guide development in the county. For commercial and industrial development, as well as school sites, the goals, policies and programs are focused on encouraging design that maximizes safe access for pedestrians and cyclists. This helps ensure that new development does not impede pedestrian and cyclist access both to and through sites. For all other discretionary developments requiring review and permitting, the goals and policies call for the provision of non-motorized infrastructure improvements and amenities where it is deemed feasible.

Local area land use/transportation plans that have pedestrian-oriented goals, objectives, and improvements include the following:

- Oxnard Corridor Transportation Improvement Plan – A Livable Oxnard (ongoing)
- Santa Paula Branch Line Recreational Trail Compatibility Survey (2015)2
- Transportation Department Strategic Master Plan, Public Works Agency approved (2013)
- Thousand Oaks Boulevard Specific Plan (2012)
- Santa Clara River Trail Master Plan (2011)
- Fillmore Business Park Master Plan (2008)
- Moorpark College Facilities Master Plan (2005-2015)
- Heritage Valley Parks Specific Plan, Fillmore CA (2002)
- Santa Paula Branch Line Trail Master Plan (1996)

Trails

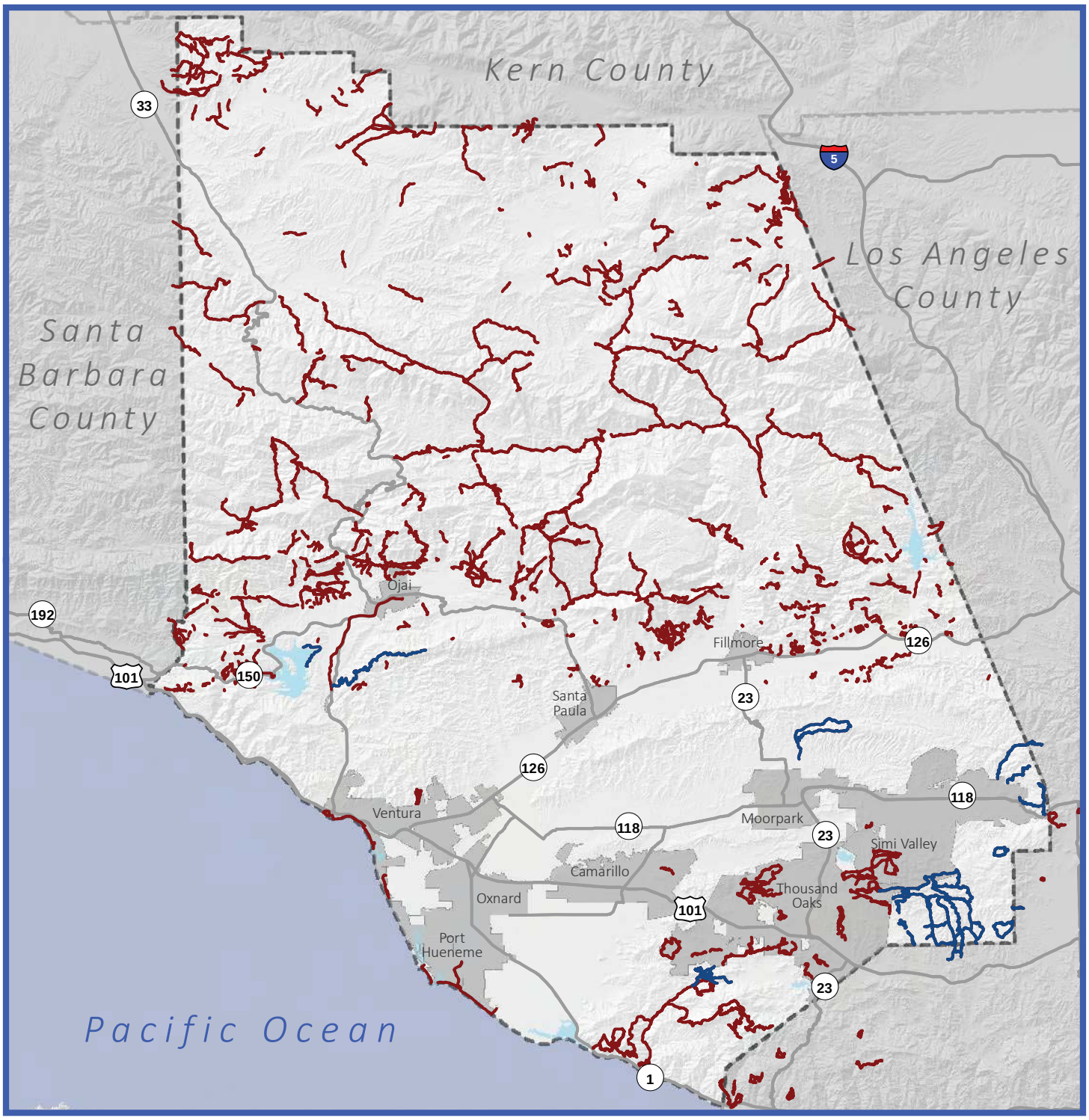
Pedestrian infrastructure in the county includes 1,009 miles of hiking trails. The County's share of these trails is 103 miles, most of which are located in the southeastern unincorporated area. While the County has jurisdiction over these 103 miles, it does not necessarily maintain all of them. The other trails in the county fall under the jurisdiction of other agencies, including California Department of Parks and Recreation, Los Angeles County, incorporated cities, and Los Padres National Forest. Figure 6-6 shows the County and non-County trails in or near the county.

Existing and Planned Bikeways

The Ventura Countywide Bicycle Master Plan was adopted in 2007 and established a planning blueprint that provided recommendations for expanding bikeway infrastructure, closing gaps, and encouraging bicycling for recreation and mobility. The plan included an inventory of existing bikeway infrastructure in the county, as well as the Recommended Countywide Bicycle Network consisting of existing facilities and proposed bikeway improvements, including those identified in local plans developed by the cities. Information on bike routes are also available on the VCTC Bikeways app that allows users to view maps on their smartphones. Figure 6-7 shows the existing bikeways in Ventura County.

Beyond the provision of bikeways, there have been other efforts to promote bicycling in the county, including promoting tourism and installing bicycle-supportive infrastructure. The County has a working group that meets quarterly to discuss marketing, public relations, and infrastructure toward making the county a tourist destination for bicyclists. In addition to these efforts, starting in spring 2017, the Ventura County Fire Department is installing sixteen bicycle repair stations throughout the county. The stations have tools and air pumps that bicyclists can use should they need repairs or air in their tires.

[2] VCTC study that provided an assessment of trails within agricultural settings to provide guidance for how to establish a trail along the Santa Paula Branch Line in Ventura County.



Ventura County 2040 General Plan

Figure 6-6:
Ventura County Hiking Trails

Map Date: December 29, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- County Hiking Trails
- Other Hiking Trails
- Major Roadways
- Water Bodies
- Cities

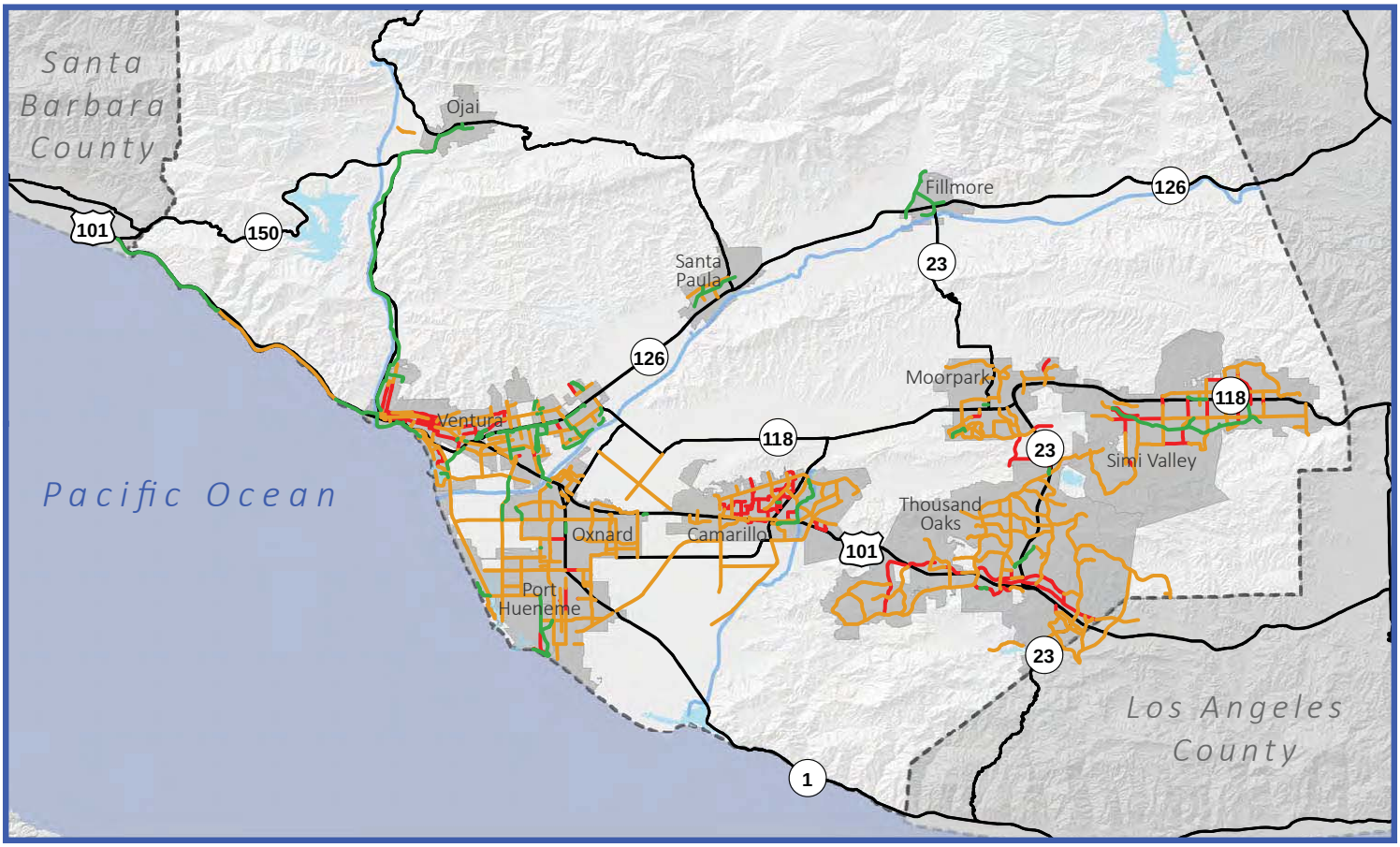


Figure 6-7:
Existing Ventura County Bikeways

Map Date: November 17, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Class
Class I
Class II
Class III
Major Roadways
Major Waterways
Water Bodies
Cities

In total, the County of Ventura maintains 58.2 miles of bike lanes. The County's bike lanes are all either Class II or Class III, with the exception of a 1.56-mile Class I bike lane on Victoria Avenue. A summary of these bike lanes is provided in Table 6-15.

Notable existing intercity bike paths include:

- Victoria Bikeway - This was constructed in the mid-1970s. It is a Class II bikeway from Olivas Park Drive to the beginning of the bridge (.48 miles) over the Santa Clara River. It transitions to a Class I bikeway from the north end of the bridge onward to Gonzales Road (1.29 miles).
- Harbor Boulevard Bike Lane - This Class II coastal facility has been striped along Harbor Boulevard based on the availability of local funding. As a link between projects in Oxnard and Ventura, the County constructed a bicycle bridge over the Santa Clara River to provide safe travel between the two cities.
- Ventura River Parkway Trail – This trail incorporates the Ojai Valley Trail and the Ventura River Trail. It is a 9.5-mile by 50-foot multi-purpose Class I trail utilizing the abandoned Southern Pacific Railroad right-of-way from the City of Ojai to Foster Park. A split-rail fence separates the horses from the pedestrians and bicyclists. One side of the trail is paved with asphalt for bicyclists, and the other with wood chips and gravel, a more suitable roadbed for horses.
- Santa Paula Branch Line Bike Trail –The alignment is generally along the Southern Pacific Railroad right-of-way. The trail is a combination of Class I and Class II trail. The full length of the Santa Paula Branch Line Trail is not yet completed.

Proposed projects in unincorporated areas of the county include:

- Fifth Street (State Route 34) between Camarillo and Oxnard: Class II Bicycle Lanes
- Hueneme Road between Las Posas Road and Oxnard: Class II Bicycle Lanes
- Las Posas Road between Laguna Road and State Route 1: Class II Bicycle Lanes. Project funded. Anticipated completion by summer 2017.
- Moorpark Road Between Santa Rosa Road and Tierra Rejada: Class II Bicycle Lanes
- Santa Ana Road between Ventura River Trail and State Route 150: Class II Bicycle Route. Project funded. Anticipated completion by end of 2017.
- Santa Clara Avenue between Los Angeles Avenue and US 101: Class II Bicycle Lanes. Project under construction. Anticipated completion by spring 2017.
- Completion of the Santa Paula Branch Line Trail (portions not constructed)
- Santa Rosa Road between Camarillo and Moorpark Road: Class II Bicycle Lanes
- SR-1 between Las Posas Road and the Los Angeles County Line: Class II Bicycle Lanes
- Old (former) State Route 1 from the US 101 Junction (North Of Ventura) to South of the Union Pacific Railroad Over-Crossing: Class I Multi-Use Pathway Extension
- State Route 118/Los Angeles Avenue from Moorpark To San Buenaventura: Class I Bicycle Pathway
- State Route 150 between Ojai and Santa Paula: Class III
- Telegraph Road between San Buenaventura (Ventura) and Santa Paula: Class II Bicycle Lanes

TABLE 6-15
UNINCORPORATED COUNTY-MAINTAINED BIKE LANES

Road Name	Road Limit	Lane Miles	Class Type
Camino Dos Rios	CDS - 67w Lynn Rd	1.62	II
Cawelti Road	Las Posas Rd - Lewis Rd	4.30	II
Central Avenue	Vineyard Av SR 232 - Rose Av	1.56	II
Central Avenue	Santa Clara Av - Beardsley Rd	2.00	II
Central Avenue	Beardsley Rd - 2374e Beardsley Rd	0.90	II
Central Avenue	Rose Av - Santa Clara Av	2.52	II
Harbor Boulevard	754n Edison Canal - Gonzales Rd	1.48	III
Harbor Boulevard	Gonzales Rd - 2898s Olivas Pk	2.50	III
Hueneme Road	Wood Rd - Las Posas Rd	1.84	II
Kanan Road	LA Co Line - Sunnycrest Dr	1.18	II
Kanan Road	Sunnycrest Dr - Deerhill Rd	0.56	II
Kanan Road	Deerhill Rd - Oak Hills Dr	0.92	II
Las Posas Road	Pleasant Valley Rd - Laguna Rd	4.10	II
Lewis Road	Laguna Rd - University Dr	1.32	II
Lewis Road	University Dr - Camarillo St	2.36	II
Lewis Road	Camarillo St - MP 2.83	1.98	II
Lewis Road	MP 2.83 - 174s Pleasant Vly Rd	1.42	II
Lindero Canyon Road	63n Kanan Rd -60s Golden Eagle	0.42	II
Lindero Canyon Road	60s Golden Eagle - Napoleon Av	1.98	II
Lomita Avenue	Rice Rd - La Luna Av	0.54	II
Lomita Avenue	La Luna Av - 1211s Besant Rd	0.34	II
Ocean Drive	Sawtelle Av - Malibu Av	1.52	II
Pleasant Valley Road	120e SR 1 NB Off Ramp - E. Fifth St	5.96	II
Pleasant Valley Road	W Fifth St SR 34 - Wood Rd	1.46	II
Pleasant Valley Road	Wood Rd - 1885e Wood Rd	0.72	II
Pleasant Valley Road	1885e Wood Rd - 1900w Las Posas Rd	1.60	II
Pleasant Valley Road	1900w Las Posas Rd - Las Posas Rd	0.72	II
Potrero Road East	587w Trentwood - 55e Lake Sherwood	3.22	II
Santa Clara Avenue	Friedrich Rd - Central Ave	1.56	II
Santa Clara Avenue	Central Av - SR 118	2.98	II
Victoria Avenue	247s Riverbridge - 119s Olivas Park	1.56	I
Wendy Drive	55n Borchard Rd - 120e Lois Av	1.06	II

Source: Ventura County Public Works Agency.
*In the **Road Limit** column the numbers followed by a letter indicate the distance in feet and direction from a road. E.g., "67w Lynn Road" indicates 67 feet west of Lynn Road.*

Bicycle-Transit Connections

All buses that operate in Ventura County have bicycle racks that can accommodate two to three bicycles, with the exception of VISTA buses that can carry bicycles in their baggage areas. This service enables riders to access destinations that are difficult to reach solely by bicycle. It also expands the potential service area range of bus stops. Metrolink commuter rail service on the Ventura County Line also allows up to three bicycles kept in designated storage areas on train cars. Additionally, trains that have a designated "Bike Car" can hold up to eight bicycles. Metrolink stations in the County have lockers and/or racks for bicycle parking. Amtrak inter-city rail service that operates through the County allows passengers to bring bicycles onto designated trains; passengers can also check-in their bicycles for a fee.

Bicycle Support Facilities

The County does not currently have publicly-accessible rest areas, showers or changing facilities for bicyclists. The Countywide Bicycle Master Plan identified bike parking and end-of-trip facilities among the recommended improvements. Including these types of bicycle support facilities at end-of-trip destinations, such as transit hubs and other major nodes can encourage greater share of trips by biking. The Ventura County Bicycle Master Plan also recommended that a countywide bicycle parking ordinance be adopted to incentivize the provision of bicycle parking facilities with new development.

Pedestrian and Bicycle Safety

The California Office of Traffic Safety ranks California counties on a variety of traffic safety metrics, including bicycle and pedestrian injuries and fatalities. Of the 58 reporting counties in 2014, the most recent year available, Ventura County ranked:

- 52nd safest for pedestrians
- 55th safest for pedestrians under 15 years old
- 50th safest for pedestrians over 65 years old
- 38th safest for bicyclists
- 31st safest for bicyclists under 15 years old

If Ventura County invests more in bicycle and pedestrian infrastructure, it is likely that more people will choose those modes for day-to-day activity, which will in turn increase the potential for vehicle and pedestrian/bicycle conflicts. Increased education and enforcement are important tools for bicycle and pedestrian safety. The Countywide Bicycle Master Plan includes non-infrastructure improvements as part of the Plan recommendations that identify the need for investments in educational programs that encourage bicycle safety. Additionally, per state law (AB1371, 2013) motorists are required to provide a three-foot buffer in order to safely pass a cyclist.

Pedestrian and Bicycle Performance Standards

As part of the scenario evaluation criteria, the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) includes mobility and sustainability performance measures that account for total transit, bicycle, and pedestrian trips. However, there are currently no formally mandated measurement cycles for active transportation in Ventura County, other than for updates to the RTP/SCS (4 year update cycle). The Countywide Bicycle Master Plan utilizes the Federal Highway Administration (FHWA) Bicycle Compatibility Index (BCI) model to evaluate the suitability of roadway segments in unincorporated areas for biking.

Regulatory Setting

State

California Global Warming Solutions Act (AB 32)

This law enacted in 2006 (AB 32) set a statewide mandate to roll back greenhouse gas emissions in California to 1990 levels by 2020. To meet the emission reduction goals of AB 32, the California's Sustainable Communities and Climate Protection Act, or SB 375, was enacted to direct the State's metropolitan planning organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its emission reduction targets. The SCS is a component of the Regional Transportation Plan (RTP) that is prepared by the Southern California Association of Governments (SCAG); Ventura County is a one of the six county members that make up the SCAG region. The current RTP/SCS that was adopted in 2016 identified the need to significantly increase the share of active transportation modes such as bicycling and walking in order to achieve the goals of AB32/SB375.

California Active Transportation Program (ATP)

The California Active Transportation Program (ATP) was passed by the State legislature and signed into law in 2013 that consolidates several federal and statewide programs such as the Bicycle Transportation Account (BTA) and the State Safe Routes to School (SR2S). The ATP program provides a source of funding for countywide projects that support programs and infrastructure improvements that encourage walking and biking. Funding is administered by Caltrans through an annual, competitive Call for Projects application process.

Comprehensive Transportation Plan (CTP)

The CTP is a policy-oriented document adopted by VCTC that identifies long-range priorities and needs based on input from member cities and public opinion; the document includes an assessment of federal and state funding sources for transportation improvements, including investments in active transportation.

Fixing America's Surface Transportation (FAST) Act

This law builds on the theme of its predecessors, providing federal funding assistance for transportation projects, while encouraging a broader scope of performance based planning, including enhanced bicycle and pedestrian connectivity. These specifically include recreational trails, improvements needed to comply with the Americans with Disabilities Act, and Safe Routes to School. It also broadens the definition of bicycle facilities to include intermodal facilities that enhance connections between transportation modes.

The California Complete Streets Act of 2008

This law requires cities and counties to include complete streets policies as part of their general plans so that roadways are designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, older people, and disabled people, as well as motorists. It will complement an existing policy, which directs Caltrans to "fully consider the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products." Beginning January 2011, any

substantive revision of the circulation element in the general plan of a California local government will include complete streets provisions.

Three Feet for Safety Act (AB1371) (2013)

This act makes it unlawful for a motorist to overtake a person on a bicycle from a passing distance of less than three feet between any part of the motor vehicle and any part of the bicycle or its operator. A violation of the provisions of the act is punishable by a $35 fine, or $220 if a motorist collides with a cyclist and causes them bodily harm.

Local

Countywide Bicycle Master Plan (2007)

This Bike plan was adopted in 2007 by the County of Ventura and its 10 incorporated cities and makes recommendations for improving and expanding the existing bikeway network. The Plan identified projects and funding opportunities to close gaps, provide for greater local and regional connectivity, and policies and programs that encourage more residents to bicycle. Projects to complete elements from this plan are managed and funduing requested by the individual agencies

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation. These can be found in Section 27b, Transportation & Circulation – Pedestrian/Bicycle Facilities.

Key Terms

Complete Street is a term for a roadway facility that safely provides adequate access and capacity for all modes and users within the shared right-of-way.

Class I Bikeways are facilities that are fully separated from automobile traffic. These are generally off street trails and are often shared with pedestrians and sometimes equestrian users.

Class II Bikeways are dedicated bicycle space on a facility shared with vehicles. Most commonly, these are marked bicycle lanes or paved shoulders and are wide enough that vehicles can pass cyclists without leaving their lanes.

Class III Bikeways are roadways where bicycles and vehicles share the same lane. These are generally indicated with signage to "share the road" or by painted sharrows. Bicycles are granted full right of access to the street and are considered part of general traffic.

Class IV Bikeways are roadways designed with bicycle friendly features, but without striping, pavement markings, or informational markers indicating preferential or exclusive use for cyclists. These features include wide curb lands and bicycle safe drain gates.

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SECTION 6.4 TRANSIT SERVICE

Introduction

This section describes the existing transit services in Ventura County including bus service and commuter rail. The county is served by seven transit operators that provide fixed-route, inter-city and local bus service and three operators that provide dial-a-ride service. A combination of regional and municipal operators provide fixed-route bus service that operates within and between cities and in unincorporated areas of the county. Several bus routes stop at commuter rail stations that are served by Metrolink and Amtrak – providing transit connections for Ventura County residents and commuters with neighboring counties.

Major Findings

- According to the 2015 American Community Survey (reflecting 2014 totals), 1.4 percent of workers in Ventura County commute to work by transit, compared to a statewide share of 5.2 percent.
- According to the 2015 American Community Survey (reflecting 2014 totals), 9.2 percent of Ventura County households have no vehicle available.
- The 2016 RTP/SCS identified the need to significantly increase the share of trips by transit modes in order to achieve the goals of AB32 and SB375.
- According to the 2015 American Community Survey (reflecting 2014 totals), 11.2 percent of the county's population were aged 65 years or older, 25.9 percent were under 16 years of age, 11.9 percent were disabled, and 11.1 percent lived below poverty level. These populations are more likely to be dependent on transit for some of their mobility needs. Additionally, the 65 years or older demographic has grown more in Ventura County than any other demographic age group over the past 20 years. This trend is projected to continue in the future.
- Gold Coast Transit District (GCTD) is the largest transit operator in Ventura County in terms of annual passenger boardings and revenue hours of operation (i.e., the hours a bus is in service).
- VCTC Intercity and GCTD provide inter-city bus service throughout the county. GCTD, Thousand Oaks Transit, Valley Express, and the Kanan Shuttle serve unincorporated areas. Municipal transit operators that provide primarily intra-city or community circulation service have connections with the Metrolink and Amtrak commuter rail stations to link Ventura County residents and workers with employment and activity centers in neighboring counties (Los Angeles and Santa Barbara). Additionally, the jointly-funded Coastal Express serves the counties of Ventura and Santa Barbara.
- The Ventura County Short Range Transit Plan (SRTP) from VCTC (2015) identified the following needs and priorities for guiding investments to improve transit service and coverage in the county: 1) improve countywide transit coordination and cooperation to address service gaps and deficiencies; 2) invest in transit facilities to make transfers more convenient; 3) consolidate service providers in east Ventura County to improve productivity and connectivity where market analysis suggest that the areas can support increased levels of transit service; and 4) develop countywide performance metrics to evaluate transit services on a continuous basis in accordance with State reporting and funding requirements.

- GCTD's top improvement needs are (1) service along Ventura Road; (2) restructured service in south Oxnard; (3) improved service to Naval Base Ventura County; (4) decreased travel time between Oxnard, Ventura, and Ojai; and (5) a seasonal bike bus.
- According to GCTD, service expansion is limited by funding availability and, without additional funding sources (e.g., sales tax), service increases are not viable.

Existing Conditions

Overview

Transit mode shares for commuters in Ventura County were collected from the American Community Survey (ACS). Table 6-16 shows the relative proportion of commuters using transit as their primary commute mode for each jurisdiction and provides a comparison to the California statewide average. Overall, 1.4 percent of the labor force in Ventura County commuted to work by transit. By contrast, more Ventura County residents walk to work (1.9 percent) than take transit, although more take transit than bike to work. Among the county's cities, Port Hueneme had the highest proportion of workers commuting by transit at 2.2 percent. Santa Paula had the second highest transit commuter population at 2.1 percent. Statewide, the percentage of transit commuters was considerably higher, at 5.2 percent.

TABLE 6-16
JOURNEY TO WORK MODE SPLIT – TRANSIT
Ventura County

Area	Riders	Percent	Total
County of Ventura (Total)	5,521	1.4%	386,259
County of Ventura (Unincorporated)	**427**	**1.0%**	**43,943**
Camarillo	341	1.1%	30,797
Fillmore	83	1.4%	5,926
Moorpark	313	1.8%	17,604
Ojai	13	0.4%	3,134
Oxnard	1,291	1.4%	89,885
Port Hueneme	212	2.2%	9,790
Santa Paula	263	2.1%	12,493
Simi Valley	966	1.5%	62,549
Thousand Oaks	676	1.1%	59,629
Ventura	936	1.9%	50,509
California	859,372	5.2%	16,529,777

Source: American Community Survey – 2014 5-Year Aggregate.

Persons who, due to disability, age, and/or economic status, do not have access to a personal vehicle and rely on public or private transportation services are the primary transit users in the county. According to the 2015 ACS, 11.2 percent of the unincorporated county's population were aged 65 years or older, 25.9 percent were under 16 years of age, 11.9 percent were disabled, and 11.1 percent lived below poverty level. These populations are more likely to be dependent on transit for some of their mobility needs. According to the US Census and Department of Finance population estimates, the 65 years or older demographic has grown more in Ventura County than any other demographic age group over the past 20 years. This trend is projected to continue in the future. As of 2014, 9.2 percent of Ventura County

households had no vehicle available, and demographic trends suggest private car ownership will decline in the future. This is part of a trend that reflects changing preferences for personal travel. This includes more people opting to ride transit where high quality service is available, including people with other choices (i.e., non-transit-dependents or "choice riders").

Gold Coast Transit District and VCTC Intercity are the primary providers of public transit service to cities within Ventura County and its unincorporated areas. Gold Coast Transit District is a special purpose transit district that operates fixed route transit service in the cities of Ventura, Oxnard, Port Hueneme, Ojai, and the unincorporated areas of El Rio, Saticoy, Oak View and Mira Monte. Gold Coast Transit District also operates GO ACCESS, which is paratransit (dial-a-ride) service for seniors and people with disabilities. VCTC Intercity is operated by VCTC and provides fixed route transit service between the cities of Oxnard, Ventura, Camarillo, Thousand Oaks, Moorpark, and Simi Valley. In the Heritage Valley, VISTA formerly operated a demand response service that was replaced by the Valley Express Fixed Route and Dial-A-Ride.

Municipal providers such as Thousand Oaks Transit, Simi Valley Transit, Moorpark City Transit, Camarillo Area Transit, Ojai Trolley, Valley Express, and the Kanan Shuttle operate fixed route bus service, community circulators, and dial-a-ride services within the county. Through a Memorandum of Understanding among the County of Ventura, and the Cities of Camarillo, Moorpark, Simi Valley, and Thousand Oaks, the East County Transit Alliance (ECTA) was formed to coordinate transit services, enhance interconnectivity between incorporated and unincoporated areas, and coordinate senior and ADA dial-a-ride services.

LA Metro operates an inter-county bus route between Thousand Oaks and the San Fernando Valley in Los Angeles County; and the Los Angeles Department of Transportation (LADOT) operates the Commuter Express that connects Ventura County commuters with Downtown Los Angeles.

The county is served by two rail lines, Metrolink and Amtrak. Metrolink is a joint powers authority that operates a commuter rail system serving five counties in Southern California, as well as service south to Oceanside in San Diego County. The Metrolink Ventura County Line serves five stations in Ventura County (East Ventura, Oxnard, Camarillo, Moorpark, and Simi Valley) and seven stations in Los Angeles County (Chatsworth, Northridge, Van Nuys, Burbank-Bob Hope Airport, Downtown Burbank, Glendale, and Los Angeles Union Station). Amtrak operates rail service between San Luis Obispo, Los Angeles, and San Diego on the Pacific Surfliner line. The Pacific Surfliner serves five stations in Ventura County (Ventura, Oxnard, Camarillo, Moorpark, and Simi Valley). Amtrak also operates rail service connecting Los Angeles to Portland and Seattle on the Coast Starlight route. The Coast Starlight serves two stations in Ventura County (Oxnard and Simi Valley).

Greyhound Bus Lines provides regular long distance travel service and stops in Oxnard, Thousand Oaks, and Ventura.

Transit services in Ventura County are shown in Figure 6-8. In addition to those shown in Figure 6-8, there are also social service transportation services in the county. A full listing of these services is shown in Table 6-18.

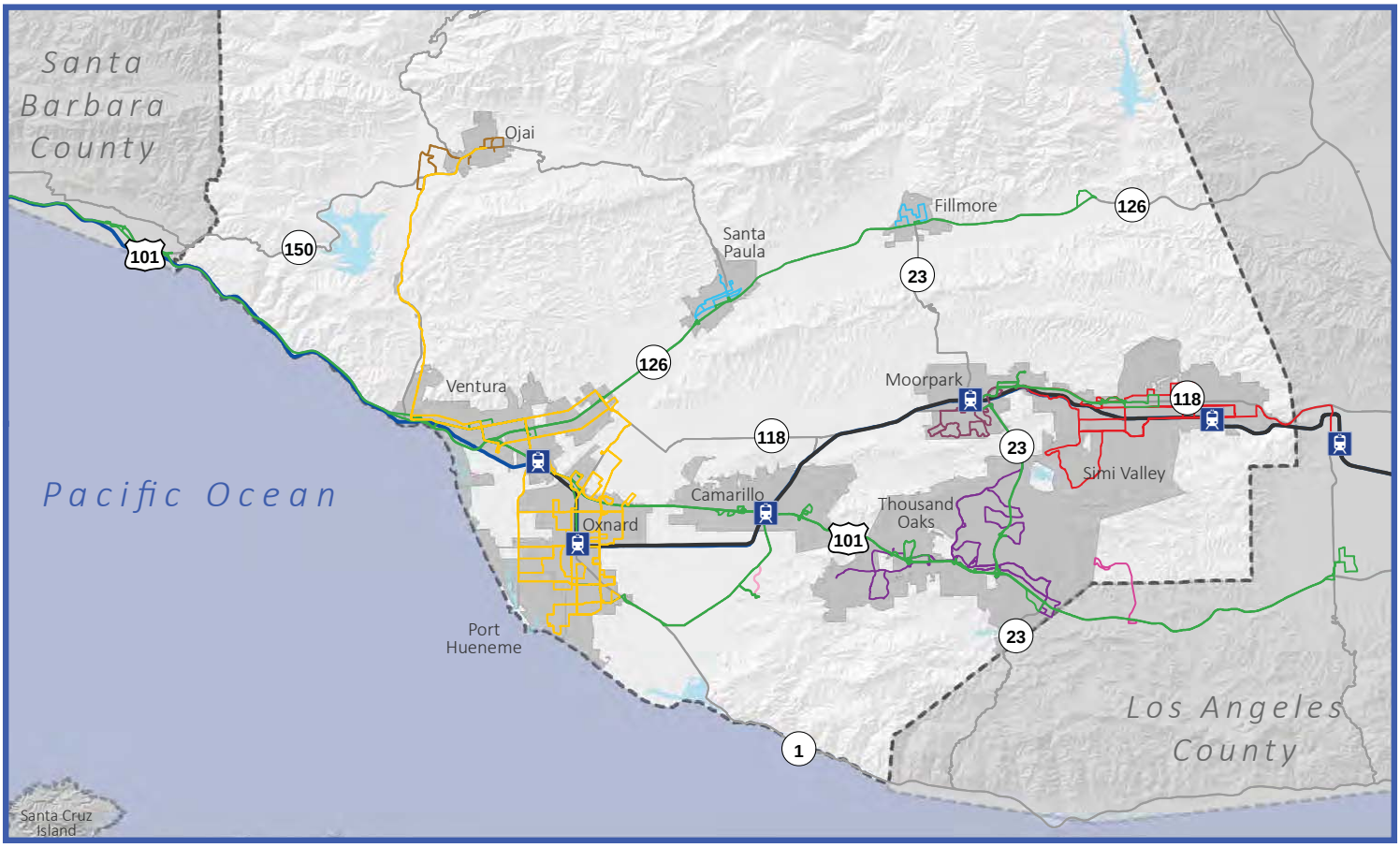

Figure 6-8:
Ventura County Transit Network

Map Date: November 15, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

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- Metrolink Stations
- Amtrak Routes
- Metrolink and Amtrak Routes
- Gold Coast Routes
- VCTC Routes
- VCTC CSU
- TO Routes
- Heritage Valley Routes
- Ojai Routes
- Moorpark Routes
- Simi Valley Routes
- Kanan Shuttle
- Major Roadways
- Water Bodies
- Cities

Transit Services

Transit services operating in Ventura County are summarized in Table 6-16. A summary of the services provided by each transit operator is presented in Table 6-18. Most services operate Monday through Friday during daytime hours, with some operators providing limited weekend service.

TABLE 6-17
SUMMARY OF TRANSIT OPERATORS
Ventura County

Intra-city operations	Inter-city operations	Inter-community operations
Thousand Oaks Transit Simi Valley Transit Moorpark City Transit Camarillo Area Transit Gold Coast Transit District	VCTC Intercity Gold Coast Transit District CONNECT Senior ADA Service	Valley Express Kanan Shuttle Ojai Trolley Gold Coast Transit District

Source: Ventura County Transportation Commission (VCTC), Ventura County Short Range Transit Plan. May 2015.

TABLE 6-18
SUMMARY OF VENTURA COUNTY TRANSIT SERVICES

Provider/Service	Days and times of operation	Type of service	Frequency of inter-city trips	Service Area
VCTC				
Inter-city service	M-F: 4:30 am – 8:00 pm Sa-Su: 6:45 am – 6:00 pm	Scheduled fixed route	Multiple round trips	Los Angeles, Thousand Oaks, Simi Valley, Moorpark, Camarillo, Oxnard, California State University Channel Islands (CSUCI), Piru, Fillmore, Santa Paula, Ventura, Carpinteria, Santa Barbara, and Goleta
Gold Coast Transit District				
Inter-city service	M-F: 4:45 am – 10:33 pm Sa-Su: 5:15 am – 10:04 pm	Scheduled fixed route	Multiple round trips	Ojai, Oxnard, Port Hueneme, Ventura, and unincorporated areas
Dial-a-ride service (GO ACCESS)	Same as fixed route	Demand responsive		Ojai, Oxnard, Port Hueneme, Ventura, and unincorporated areas
Thousand Oaks Transit				
Intra-city service	M-Sa: 5:00 am – 8:00 pm Su: 8:00 am – 8:00 pm	Scheduled fixed route		Thousand Oaks and unincorporated areas
Inter-city service	M-F: 5:15 am – 8:30 pm	Scheduled fixed route	Multiple round trips	Thousand Oaks, Moorpark Metrolink Station
Dial-a-ride service	M-F: 5:00 am – 8:00 pm Sa-Su: 8:00 am – 8:00 pm	Demand Responsive		Thousand Oaks, Moorpark, Simi Valley, and unincorporated areas

TABLE 6-18 SUMMARY OF VENTURA COUNTY TRANSIT SERVICES				
Provider/Service	**Days and times of operation**	**Type of service**	**Frequency of inter-city trips**	**Service Area**
East County Transit Alliance (ECTA)				
CONNECT ADA/Senior Dial-A-Ride	Monday through Friday from 6:00 a.m. to 6:00 p.m.	Demand Responsive	Multiple round trips	Thousand Oaks, Moorpark, Simi Valley, and unincorporated areas
Moorpark City Transit				
Intra-city service	M-F: 5:00 am – 8:00 pm Sa: 8:00 am –5:00 pm	Scheduled fixed route		Moorpark
Dial-a-ride service	M-F: 5:00 am – 8:00 pm Sa: 8:00 am –5:00 pm	Demand responsive		Moorpark
Simi Valley Transit				
Intra-city service	M-Sa: 8:00 am – 4:30 pm	Scheduled fixed route		Simi Valley
Inter-city service	M-Sa: 5:50 am – 8:00 pm	Scheduled fixed route	Multiple round trips	Simi Valley, Chatsworth Metrolink Station
Dial-a-ride	M-Sa: 5:50 am – 8:00 pm	Demand Responsive		Simi Valley
Camarillo Area Transit				
Intra-city service	M-F: 8:00 am – 4:30 pm	Scheduled fixed route		Camarillo
Intra-city service (Camarillo Trolley)	Su-Th: 10:00 am – 6:00 pm F-Sa: 10:00 am – 10:00 pm	Fixed route with route deviation		Camarillo
Dial-a-ride	M-F: 6:00 am – 9:00 pm Sa: 8:00 am – 9:00 pm Su: 8:00 am – 5:00 pm	Demand responsive		Camarillo
Ojai Trolley				
Intra-city service	M-F: 5:30 am – 9:30 pm Sa: 6:00 am – 8:30 pm Su: 7:00 am – 8:30 pm	Fixed route with route deviation		City of Ojai and unincorporated areas
Valley Express				
Inter-community service	M-F: 5:40 am – 7:45 pm Sa-Su: 8:00 am – 5:40 pm	Scheduled fixed route		Santa Paula and Fillmore and Piru
Dial-a-ride service	M-F: 5:40 am – 7:45 pm Sa-Su: 8:00 am – 6:00 pm	Demand responsive		Santa Paula, Fillmore, Piru and unincorporated areas
Kanan Shuttle				
Inter-community service	M-F: 6:40 am – 6:20 pm Sa: 8:10 am – 6:20 pm	Scheduled fixed route		Thousand Oaks and unincorporated areas

Source: Ventura County Short Range Transit Plan, 2015.

Operating Data

Bus transit operators in Ventura County carried a combined total of over 5.5 million passengers in FY 2013 – 2014, as shown in Table 6-19. Gold Coast Transit District carried the most passengers and had the

most revenue hours (the hours a bus is in service) among the transit operators in the county. It accounted for 68 percent of total passengers and 62 percent of total revenue hours. Gold Coast Transit District was also the most productive with an average of 19.1 boardings per revenue hour of operations.

TABLE 6-19
OPERATING SUMMARY
Ventura County FY 2013 - 2014

Transit Operator	Passengers	Revenue Hours	Boardings per Revenue Hour
Gold Coast Transit District	3,756,703	196,494	19.1
VCTC Intercity	933,064	55,080	16.9
Simi Valley Transit	357,743	21,709	16.5
Thousand Oaks Transit	197,969	20,284	9.8
Ojai Trolley	105,829	8,171	13.0
Moorpark City Transit	85,880	7,650	11.2
Kanan Shuttle	84,915	5,090	16.7
Camarillo Area Transit	15,494	2,062	7.5
Total	5,537,597	316,540	17.5

Source: Ventura County Short Range Transit Plan, 2015.

Passenger Rail Service

Passenger railroad service includes Amtrak, Metrolink, and Fillmore and Western Railway. Amtrak passenger rail service operates the Coast Starlight between Los Angeles and Seattle, Washington, and several trains between San Diego and Los Angeles and either Santa Barbara or San Luis Obispo. In addition, Metrolink, a five county public transportation agency, operates eight round trip commuter trains daily to various Ventura County locations. The Fillmore and Western Railway operates passenger excursion service between Fillmore and Santa Paula on a track that runs from Montalvo to Piru.

Regulatory Setting

Federal

The Americans with Disabilities Act (ADA)

The ADA legislation prohibits discrimination on the basis of disability. Other Federal laws which affect the design, construction, alteration, and operation of facilities include the Architectural Barriers Act of 1968 (ABA), and the Rehabilitation Act of 1973. These laws apply to all federally funded facilities. The ADA applies to facilities, both public (title II) and private (title III), which are not federally funded. Newly constructed and altered facilities covered by titles II and III of the ADA must be readily accessible to and usable by people with disabilities. In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in Federally-assisted programs is governed by the USDOT regulations (49 CFR part 27) implementing Section 504 of the Rehabilitation Act (29 U.S.C. 794). The Federal Highway Administration (FHWA) has specific ADA policies for statewide planning in 23 CFR 450.210(a)(1) and for metropolitan planning in 23 CFR 450.316(a)(1).

State

Transportation Development Act (TDA)

The Mills-Alquist-Deddeh Act (SB 325) was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination. Known as the Transportation Development Act (TDA) of 1971, this law provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. TDA established two funding sources; the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Funds are allocated to communities based on population, taxable sales, and transit performance, and are used to address unmet transit needs. Rules and regulations that govern the TDA process are included in the California Public Utilities Code and the California Government Code.

SB 716 (2009) amended the TDA mandate, including specification of how TDA funds are to be used in Ventura County, particularly with respect to use of TDA funds for local street and road needs. As of July 1, 2014, only the cities of Camarillo, Fillmore, Moorpark and Santa Paula are eligible to use TDA funds for streets and roads pursuant to State law. The cities of Port Hueneme, Ojai, and the unincorporated county are part of the Gold Coast Transit District, and along with the cities of Ventura and Oxnard, must use all TDA funds allocated for transit. The cities of Simi Valley and Thousand Oaks, with populations over 100,000, are not eligible to use TDA funds for local streets and roads.

California Global Warming Solutions Act (AB 32)

This law enacted in 2006 (AB 32) set a statewide mandate to reduce greenhouse gas emissions in California to 1990 levels by 2020. To meet the emission reduction goals of AB 32, the California's Sustainable Communities and Climate Protection Act (SB 375) was enacted. SB 375 directs the State's metropolitan planning organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) to demonstrate how the region will meet its emission reduction targets. The SCS is a component of the Regional Transportation Plan (RTP) that is prepared by the Southern California Association of Governments (SCAG); Ventura County is a one of the six county members that make up the SCAG region. The 2016 RTP/SCS presents the California Air Resources Board (ARB) required GHG reduction targets for the SCAG region. The per capita GHG emission reduction target from automobiles and light trucks is 8 percent below 2005 per capita emissions levels by 2020 and 13 percent below 2005 per capita emissions levels by 2035. The report indicates that the SCAG region will meet or exceed these targets, lowering greenhouse gas emissions (below 2005 levels) by eight percent by 2020; 18 percent by 2035; and 21 percent by 2040. As reported in the 2016-2040 RTP/SCS Draft Program Environmental Report, implementation of the RTP/SCS would result in an approximate 35 percent decrease in GHG emissions by 2040 in Ventura County.

Local

Gold Coast Transit District (GCTD)

The Gold Coast Transit District (GCTD) is a transit operator that provides fixed route bus and dial-a-ride services to cities and unincorporated areas in west Ventura County. It is a special district whose board is made up of directors from the following: elected officials from the cities of Port Hueneme, Oxnard, Ventura, and Ojai and the County of Ventura.

Consolidated Transportation Service Agency (CTSA)

VCTC is the designated Consolidated Transportation Service Agency (CTSA) that is responsible for improving the coordination and efficiency of transportation provided by social service agencies as mandated by the State.

Unmet Transit Needs

VCTC is the designated RTPA responsible for conducting an annually assessment of possible unmet transit needs in certain areas within Ventura County (those outside the GCTD area). VCTC is required to conduct a public process to identify unmet transit needs that are considered reasonable before TDA funds can be spent for non-transit purposes such as roadway improvements.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation related to transit services. These can be found in Section 27c, Transportation & Circulation – Bus Transit, and Section 27d, Transportation & Circulation - Railroads.

Key Terms

Demand-Responsive Service is an origin-to-destination transportation service provided to those who are unable to access the regular fixed-route bus service and is available by reservation.

Fixed-Route Bus Service operates on timetables and follows pre-determined routes, serving specified bus stops and stations.

Fixed-Route Bus Service with Route Deviation operates as fixed-route bus service, but allows for route deviation to better serve passengers. This type of service is typically provided to seniors and persons with disabilities who are unable to access the standard fixed-route service at designated bus service stops.

Intercity Bus Service provides transit connections to two or more cities in a county.

Inter-Community Service provides connections between two communities, and is usually shorter-range than intercity bus service.

Transit-Dependents are persons who, due to disability, age, and/or economic status, do not have access to a vehicle and rely on public or private transportation services.

Revenue Hours of Operation are those hours a transit vehicle is providing service.

References

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SECTION 6.5 GOODS MOVEMENT

Introduction

Goods movement in Ventura County is a key component of the economic vitality and growth of the region. Ventura County's highways, railroads, and ports facilitate the movement of goods throughout the region and state.

Major Findings

- Ventura County has a number of highways and arterials that are designated truck routes according to the Primary Highway Freight System (PHFS). These include Hueneme Road (Port to Las Posas), Las Posas (Heueneme to US 101), Ventura Road (Hueneme to Channel Island), Channel Island Boulevard (Ventura to Victoria), and Victoria Ave (Channel Island to US 101).
- The Port of Hueneme is the only port accommodating commercial freight serving the Central Coast region and is located strategically between San Francisco and the Ports of Los Angeles and Long Beach.
- The Ventura County Railroad (VCRR), a 12-mile rail-line ~~privately~~ owned by the Port of Hueneme and operated by Genesee and Wyoming Railroad Services, Inc., is an integral corridor for the movement of goods in the industrial areas of south of the City of Oxnard, the Port of Hueneme and the Naval Base Ventura County. The VCRR connects the Union Pacific main rail-line in Oxnard.
- Most freight shipments originate or end within the Los Angeles-Long Beach area (of which the federal Commodity Flow Survey considers Ventura County a part). Outbound and inbound flows with areas outside of the state account for the next highest share of freight shipments.
- US 101, SR-118, and SR-126 carry the vast majority of Surface Transportation Assistance Act of 1982 (STAA) truck traffic in terms of absolute volumes. SR-23 carries the highest percentage of STAA-sized vehicles, relative to the overall traffic on the route, followed by SR-126, SR-118, SR-232, and US 101. On average, STAA-sized trucks make up 4.7 percent of the overall truck traffic on unincorporated segments of state highways.

Existing Setting

Port of Hueneme

The Port of Hueneme in Ventura County is located within the City of Port Hueneme and is surrounded by the City of Oxnard and unincorporated areas. It is a shared use port with the Navel Base Ventura County-Port Heuneme (NBVC) which is the only military deep-water port between San Diego and Seattle. The Port is the only commercial deep-water port located between the Ports of Los Angeles/Long Beach and San Francisco, and it serves as the primary logistics gateway to the central coast region of California. Annually, the Port handles cargo with a value of $9 billion; in FY 2015, the Port handled over 1.5 million metric tons of cargo made up mostly of agricultural and automobile imports/exports. Port cargo is transported over the surface transportation network on rail and on trucks.

Military operations are an important consideration for transportation to and from the Port. The 2008 NBVC Encroachment Action Plan identified three major corridors that are strategic assets to the NBVC Mobilization mission, known as Mobilization Corridors. The three corridors are:

- Victoria Avenue to US 101;
- South Patterson Road to East Wooley Road to SR-1; and
- East Port Hueneme Road to Lincoln Court to South Rice Avenue to US 101.

The corridors are used for mobilization of troops and equipment to and from the base to strategic locations throughout the U.S., and are also used to transport ordnance from NBVC Port Hueneme to NBVC Point Mugu for storage. The Navy has recommended coordination with local jurisdictions to ensure adequate LOS during mobilization activities (NBVC Joint Land Use Study Background Report, pages 3-38 and 3-39).

Rail

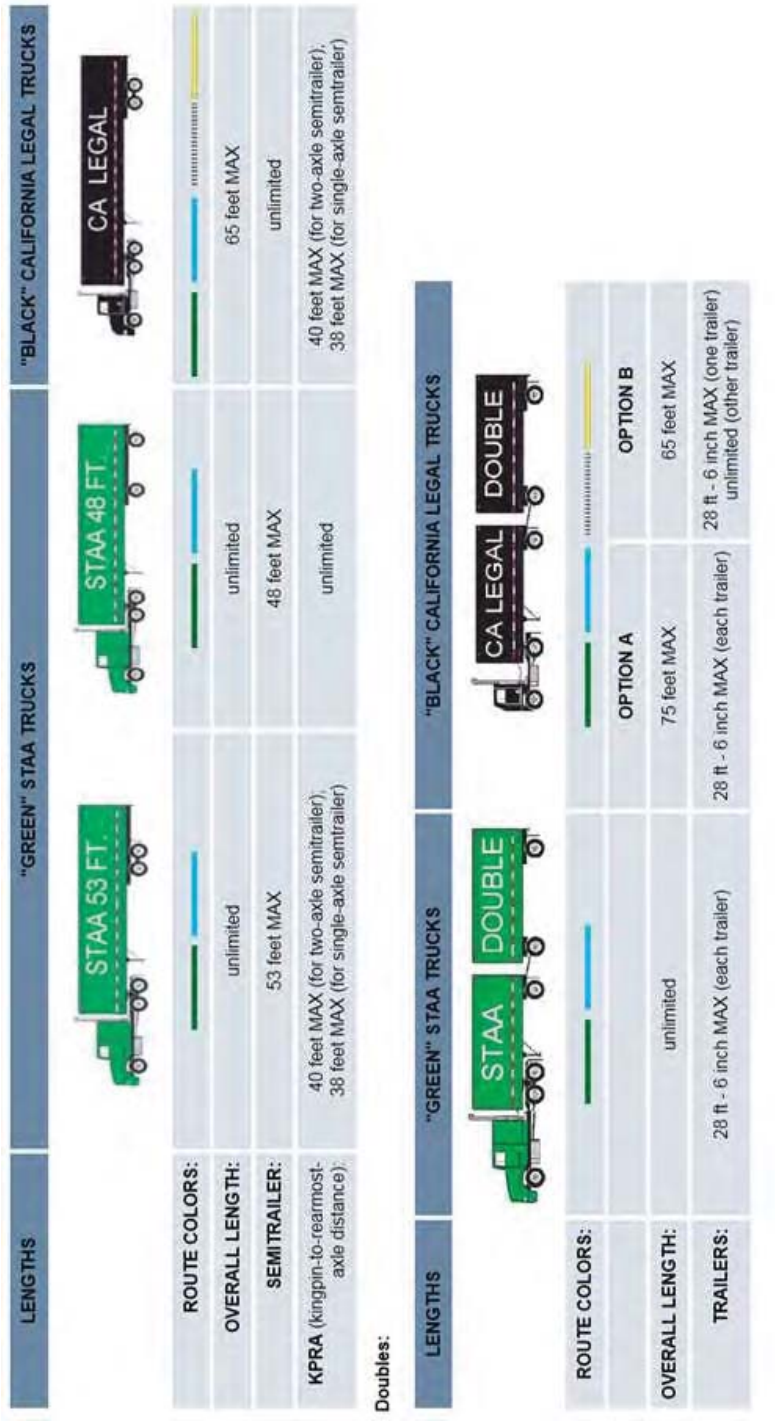
Freight rail serves both the Port of Hueneme and other goods movement industries in the county. The Ventura County Railway (VCRR) is a Class III, short-line railroad with 1~~7~~2 miles of track between NBVC-Port Hueneme, Port Hueneme Harbor, and the industrial areas south of Oxnard. This rail-line is privately owned by the Port of Hueneme. The VCRR connects to the Union Pacific railroad in downtown Oxnard. The Union Pacific Transportation Company provides intra-state and trans-continental rail freight service from its main coast line which runs from the Santa Barbara County line along the coast south through Ventura to Oxnard. The route then continues east through Camarillo, Moorpark, Simi Valley to the Los Angeles County line for a distance of 48.9 miles.

Truck Freight

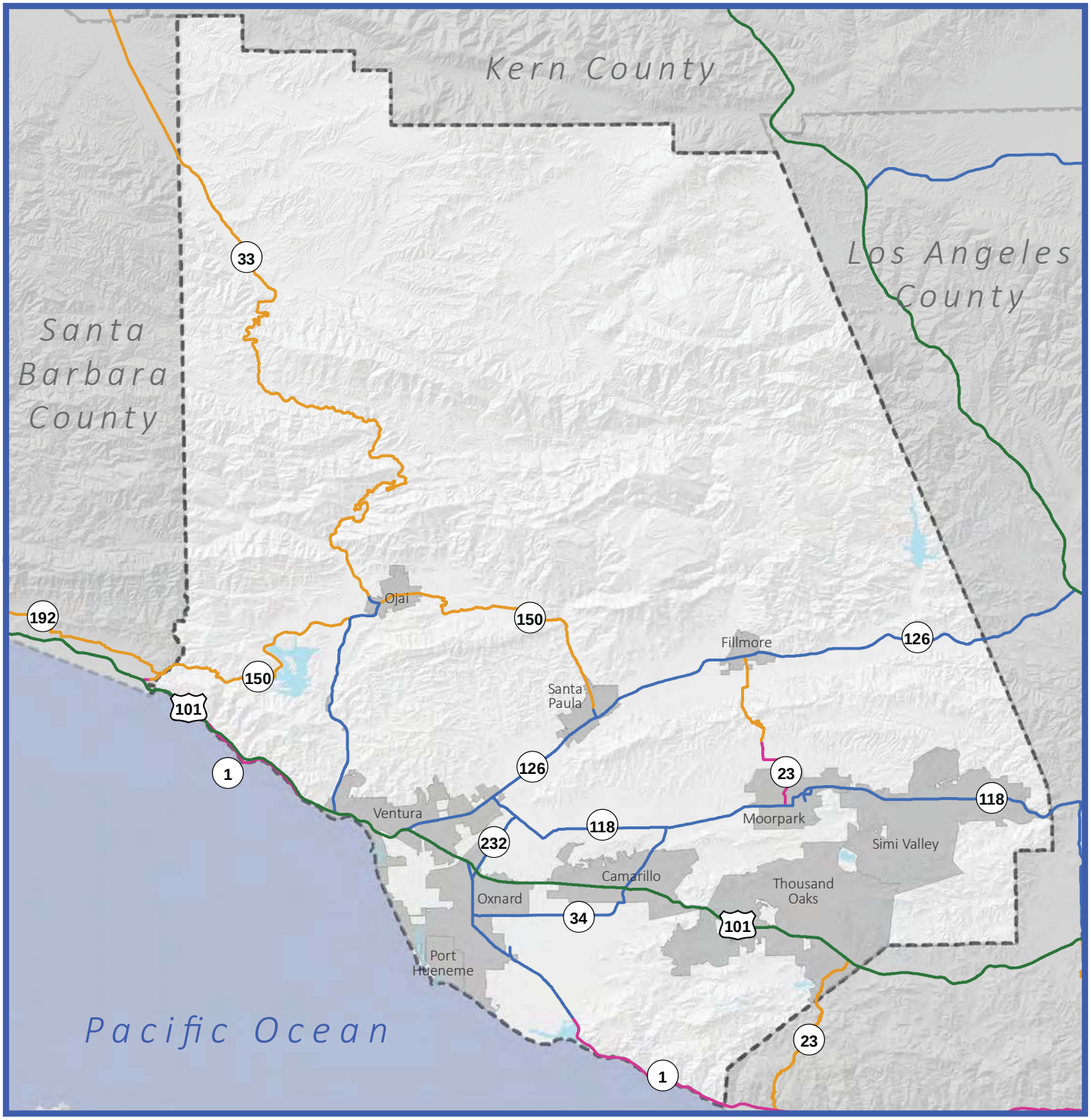
A number of designated truck routes are located in Ventura County, including both STAA and Primary Highway Freight System (PHFS) routes. STAA routes, include routes that allow large trucks to operate on the national network. The size specifications for different STAA truck types are illustrated in Figure 6-9. These STAA routes are significant both to operations at Port Hueneme and the movement of goods throughout the county. A map of the STAA designated routes within Ventura County is included in Figure 6-10. Additionally, in 2015, the Fixing America's Surface Transportation (FAST) Act established the PHFS, a subset of the national STAA network that designates highway routes considered critical to national freight transportation. Most truck designation applications involve County roads, therefore, the County of Ventura must periodically coordinate with Caltrans to designate additional routes to the PHFS.

Ventura County has 53 centerline miles of highways on the PHFS network that includes US 101, SR-118 and arterial truck routes providing access to the Port. Figure 6-11 shows truck routes designated on local roadways serving Port Hueneme. These routes are located partially in unincorporated area, but primarily within Oxnard.

FIGURE 6-9
FEDERAL AND CALIFORNIA TRUCK TYPE DESIGNATIONS



Source: Caltrans Truck Network Map



Ventura County 2040 General Plan

Figure 6-10
Ventura County Truck Routes

Map Date: November 15, 2016

Source: Ventura County, 2016; Caltrans GIS Data Library, 2011; USGS, 2013.

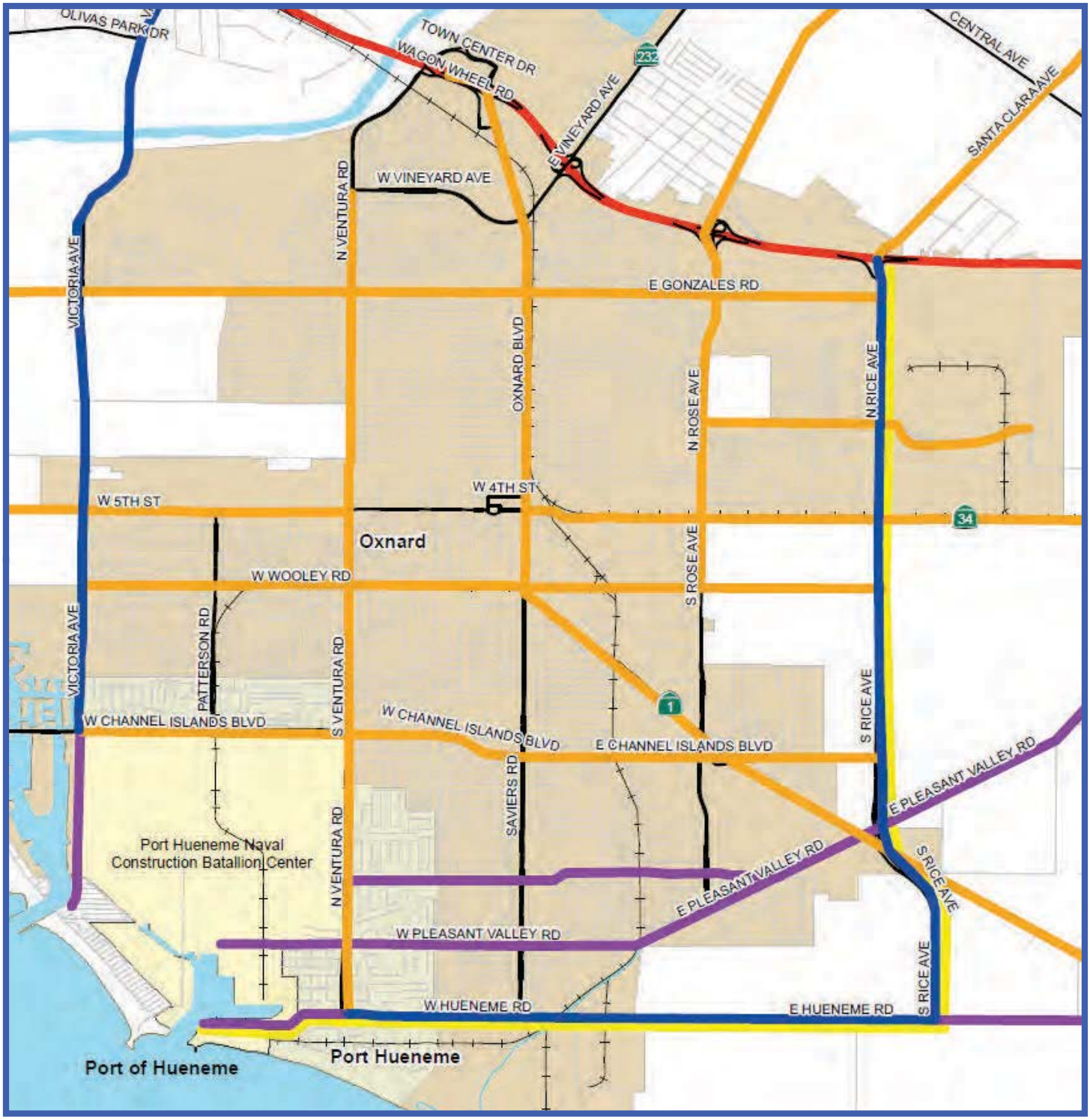
0 7.5 15 Miles

N

Designation

- National Network
- Terminal Access
- 65' California Legal Route
- California Advisory Route

- Water Bodies
- Cities



Ventura County 2040 General Plan

Figure 6-11
Primary Highway Freight System
Routes Serving Port Hueneme

Freeways
Major Roads
Secondary Roads
Main Railroads
Primary Port Access
City of Oxnard Commercial Vehicle Route
Other Truck Routes
City of Port Hueneme Commercial Vehicle Route

Source: Figure reproduced from original in Ventura County CMP, Chapter 2, 2009

0 1 2 Miles

N

US 101, SR-118 and SR-126 carry the vast majority of STAA-sized truck traffic (i.e., 5+ axles) in terms of absolute volumes. SR-23 carries the highest percentage of STAA-sized vehicles, relative to the overall traffic on the route, followed by SR-126, SR-118, SR-232, and US 101. Table 6-20 includes a breakdown of the truck travel along different segments of the highway system. The breakdown of truck volumes on state highways in Ventura County are shown in Table 6-21. The truck volumes were found based on a straight average of the volumes and the number unincorporated road segments. The percentage of STAA-sized trucks was weighted by the proportion of total vehicles carried on each segment.

TABLE 6-20
TRUCK TRAVEL ON STATE HIGHWAYS
Ventura County

Route	Post Mile	Description	AADT		Truck %	Truck AADT by axle			
			All Veh	Truck		2	3	4	5+
1	9.866	Calleguas Creek	9,600	625	6.52	386	129	73	37
1	21.25	Oxnard, Jct. Rte. 101	4,500	402	8.91	232	41	37	92
1	27.675	Seacliff Colony, Jct. Rte. 101	610	57	9.34	30	6	8	13
1	28.48	Las Cruces, Jct. Rte. 101; Mobil Oil Pier	610	86	14.1	43	7	26	10
23	16.8	Grimes Canyon Road	6,300	1,263	20.05	281	92	47	843
33	R4.046	Ventura, Ventura Avenue	27,000	868	3.21	658	130	38	42
33	11.2	West Jct. Rte. 150, Baldwin Road	20,800	807	3.88	317	289	121	80
33	11.961	El Roblar Drive	3,700	108	2.93	44	22	3	39
33	13.35	Los Padres National Forest Boundary	1,500	68	4.47	19	15	4	30
33	30.219	Sespe Gorge Maint. Station	410	35	8.65	5	4	1	25
34	17.663	Somis, Jct. Rte. 118, Los Angeles Avenue	13,600	1,928	14.18	660	221	202	845
101	R43.622	Ventura/Santa Barbara County Line	65,000	4,551	7	1,866	364	182	2,139
118	2.2	Jct. Rte. 232, Vineyard Avenue	35,500	4,188	11.8	1,367	548	261	2,012
118	2.2	Jct. Rte. 232, Vineyard Avenue	24,700	2,887	11.69	889	552	270	1,176
118	10.92	Jct. Rte. 34, Somis Road	11,900	3,059	25.71	784	503	238	1,534
118	10.92	Jct. Rte. 34, Somis Road	18,600	2,115	11.37	433	291	131	1,260
118	14.686	Grimes Canyon Road	20,200	2,296	11.37	470	315	142	1,369
126	R30.8	Piru	22,000	3,538	16.08	1,600	173	75	1,690

TABLE 6-20 TRUCK TRAVEL ON STATE HIGHWAYS Ventura County									
Route	Post Mile	Description	AADT		Truck %	Truck AADT by axle			
			All Veh	Truck		2	3	4	5+
150	0	Santa Barbara/Ventura County Line	2,750	55	2	31	12	6	6
150	R14.406	Jct. Rte. 33 South, Ventura Avenue	10,200	197	1.93	102	53	34	8
150	R14.406	Jct. Rte. 33 South, Ventura Avenue	19,400	363	1.87	139	59	22	143
232	R4.11	Jct. Rte. 118, Los Angeles Avenue	15,100	1,650	10.93	581	286	82	701

Source: Caltrans Annual Average Daily Truck Traffic on California State Highways, 2014.

TABLE 6-21 BREAKDOWN OF TRUCK TRAVEL ON HIGHWAYS Ventura County				
Facility	Avg. 5+ Axles (STAA-sized Trucks)	Avg. Trucks	Avg. Total Vehicles	Wt. Avg. % STAA-sized Trucks
SR 1	38	293	3,064	1.0%
SR 23	843	818	7,633	13.4%
SR 33	43	844	12,600	0.4%
SR 34	845	979	18,033	6.2%
US 101	2,139	594	17,167	3.3%
SR 118	1,470	328	8,667	5.4%
SR 126	1,690	70	1,870	7.7%
SR 150	52	677	5,170	0.4%
SR 232	701	2,171	26,337	4.6%

Source: Caltrans Annual Average Daily Truck Traffic on California State Highways,2014.

Every five years (in years ending in "2" and "7"), the U.S. Census Bureau and the U.S. Bureau of Transportation Statistics (BTS) collaborate to conduct the Commodity Flow Survey (CFS) as part of the Economic Census. The CFS produces data on the movement of goods in the United States, including information on commodities shipped, their value, weight, and mode of transportation. It also includes origin and destination data for shipments of commodities from manufacturing, mining, wholesale, and selected retail and services establishments. For purposes of statistical analysis, the CFS includes Ventura County as part of the designated Los Angeles-Long ach area. Table 6-22 shows the destinations for freight shipments to the Los Angeles area by mode. The majority of freight shipments that originate in the Los Angeles-Long Beach area have a destination within the same area; outside of the area, the majority of remaining freight shipments are arriving from areas of the state outside of CFS designated areas, and out of state. The truck mode accounts for the majority of freight shipments.

TABLE 6-22
FREIGHT SHIPMENTS BY ORIGIN AND MODE
To the Los Angles-Long Beach Area, 2012

Origin	Total shipments (1,000 tons)							% by origin
	Mode						Total	
	Air	Multiple modes	Pipeline	Rail	Truck	Water		
Los Angeles-Long Beach	193	6,090	43,757	2,270	222,870	649	275,829	73.4%
Bay Area		104		655	6,411		7,170	1.9%
San Diego	10				2,078		2,088	0.6%
Fresno-Madera		8			1,054		1,062	0.3%
Sacramento					923		923	0.2%
Remainder of California	12			722	12,948		13,682	3.6%
Outside of California	333	14,560	322	23,372	34,314	2,038	74,939	19.9%
Total	548	20,762	44,079	27,019	280,598	2,687	375,693	100.0%
Mode %	0.1%	5.5%	11.7%	7.2%	74.7%	0.7%	100.0%	

Source: U.S. Census Bureau/Bureau o f Transportation Statistics, 2012 Commodity Flow Survey, February 2015.

Table 6-23 shows the destinations for freight shipments from the Los Angeles-Long Beach area by mode. The majority of freight shipments that originate in the Los Angeles-Long Beach area have a destination within the same area; outside of the area, the majority of remaining freight shipments are destined for the San Diego area, and out of state. The truck mode accounts for the majority of freight shipments.

TABLE 6-23
FREIGHT SHIPMENTS BY DESTINATION AND MODE
From the Los Angeles Area, 2012

Destination	Total shipments (1,000 tons)							% by dest.
	Mode						Total	
	Air	Multiple modes	Pipeline	Rail	Truck	Water		
Los Angeles-Long Beach	193	6,090	43,757	2,270	222,870	649	275,829	78.5%
San Diego		200	716		9,940		10,856	3.1%
Bay Area	13	548	1,072	208	5,613		7,454	2.1%
Sacramento					2,015		2,015	0.6%
Fresno-Madera				99	1,524		1,623	0.5%
Remainder of California	1	103		1,017	8,605		9,726	2.8%
Outside of California	304	4,271	1,538	4,224	33,597	3	43,937	12.5%
Total	511	11,212	47,083	7,818	284,164	652	351,440	100.0%
Mode %	0.1%	3.2%	13.4%	2.2%	80.9%	0.2%	100%	

Source: : U.S. Census Bureau/Bureau o f Transportation Statistics, 2012 Commodity Flow Survey, February 2015.

Pipelines

Major pipelines within Ventura County carry crude oil and natural gas, generally along highways and railroad lines. Major oil companies, such as Shell, Equillon, Venoco and Southern California Edison, own these pipelines, and ownership changes from time to time. Most oil companies which have operations in

Ventura County have pipelines located within their oil/gas lease areas, but do not operate major transporting pipelines. Four Corners Pipeline Company, a subsidiary of ARCO, is a private pipeline company regulated by the Public Utilities Commission that transports crude oil through their own lines and connects to other pipelines as needed. Four Corners Pipeline Company operates only their own pipeline facilities, and does not own any crude oil. There is also an existing Southern California Edison fuel line originating within the Oxnard Harbor District which connects to the Ormond Beach Generating Station. Oil and Gas transport lines have been mapped on the County's Geographic Information System to allow improved response to spills in the event of pipeline system failure or a seismic event. Although available to emergency responders and planners, GIS information on the location of these transport lines is proprietary and contact must first be made with the California State Fire Marshall to gain access to this information.

Regulatory Setting

Federal

Fixing America's Surface Transportation (FAST) Act

This law builds on the theme of its predecessors, providing federal funding assistance for transportation projects, while encouraging a broader scope of performance based planning. FAST established the Primary Highway Freight System (PHFS) that is a designated network of highways considered critical to national freight transportation. FAST has provided funding assistance to the County of Ventura through it's Federal Transportation Improvement Program.

Surface Transportation Assistance Act Routes (STAA – Federal Designation)

Act passed in 1982 that allows large trucks to operate on the interstate and certain primary routes collectively called the National Network. These routes, referred to as STAA routes, provide larger turning radius than most local roads can accommodate.

State

California Global Warming Solutions Act (AB 32)

This law enacted in 2006 (AB 32) set a statewide mandate to roll back greenhouse gas emissions in California to 1990 levels by 2020. To meet the emission reduction goals of AB 32, the California's Sustainable Communities and Climate Protection Act, or SB 375, was enacted to direct the State's metropolitan planning organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its emission reduction targets. The SCS is a component of the Regional Transportation Plan (RTP) that is prepared by the Southern California Association of Governments (SCAG); Ventura County is a one of the six county members that make up the SCAG region. The current RTP/SCS that was adopted in 2016 identified over $70 billion in investments to improve the regional goods movement system within the six-county SCAG Region which includes Ventura County.

Regional

Multi-County Goods Movement Action Plan (MCGMAP)

Given the prevalence of goods movement in the county and the region, VCTC participated in the development of a Multi-County Goods Movement Action Plan (MCGMAP) in 2007. The MCGMAP identified strategies to address regional goods movement issues and coordinate planning/programming objectives as they relate to goods movement. The 2016 RTP/SCS also identified over $70 billion in investments needed to improve the regional goods movement system. The Goods Movement component in the RTP identified related improvements such as the development of truck facilities such as truck-only lanes; improving mainline rail capacity; expanding intermodal facilities; improving port infrastructure; introducing zero emissions freight technologies; and constructing grade separations at roadway crossings.

Local

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation related to goods movement. These can be found in Section 27a, Transportation & Circulation – Roads and Highways, Section 27d, Transportation & Circulation - Railroads, and Section 27e, Transportation & Circulation – Harbor Facilities.Key Terms

Terminal Access Route. Terminal Access" routes are routes where STAA-sized trucks may exit off the interstate and travel onto State and local routes. T-Signs are posted on the State and local Terminal Access routes at decision points. These sections of roadway are suitable for operation by vehicles of the size specified by the STAA and used to access terminals.

Service Access Route. Service Access Routes, denoted by S-Signs, are routes where STAA-sized trucks may exit the interstate onto a local road, for one mile only, for food, fuel, lodging, or repair.

California Legal Route. A non-STAA route designated for trucks

KPRA. King-pin to Rear Axle expressed in distance (feet).

References

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California Department of Transportation. California Truck Network Map. http://www.dot.ca.gov/trafficops/trucks/truck-network-map.html, June 22, 2016

Federal Highway Administration (FHWA), http://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm, June 2, 2016.

Port of Hueneme, http://www.portofhueneme.org/, June 2, 2016.

Southern California Association of Governments (SCAG). 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS), adopted April 7, 2016.

Los Angeles Metropolitan Transportation Authority (Metro). Multi-County Goods Movement Action Plan (MCGMAP), 2007.

U.S. Census Bureau/Bureau of Transportation Statistics, 2012 Commodity Flow Survey, Feburary 2015.

Ventura County Transportation Commission. Focusing on Freight. http://www.goventura.org/sites/default/files/VCTC-Ox%20Harbor%20Meeting.pdf. November 2, 2012.

SECTION 6.6 AVIATION FACILITIES AND SERVICE

Introduction

Ventura County is home to four airports: Santa Paula Airport, Camarillo Airport, Oxnard Airport, and Naval Base Ventura County. Although Oxnard Airport had regularly scheduled commercial service to Los Angeles International Airport (LAX) as recently as 2010, there are currently no scheduled passenger services to any of the four airports in Ventura County.

Major Findings

- Ventura County's aviation system consists of two publicly-owned airports, one privately-owned airport, and a federally-operated Naval Air Station and runway. The privately-owned airport allows public use. Airports in adjacent Los Angeles and Santa Barbara Counties provide commercial passenger services.
- The County directly owns two airports, Camarillo Airport and Oxnard Airport.
- County land use policies can have impacts on all four of the airports.

Existing Setting

Public-Use Airports

Ventura County's aviation system includes three airports that are open for use by the general public: Camarillo Airport, Oxnard Airport; and Santa Paula Airport. Table 6-24 lists these airports and their characteristics.

Camarillo Airport

Camarillo Airport is owned by Ventura County and is situated three miles to the west of downtown Camarillo. It has one 6,013 foot asphalt/concrete runway and a separate 200 foot helicopter training pad. The site was formerly the home of Oxnard Air Force Base, which was closed in 1969 and acquired by Ventura County seven years later. The airport covers 654 acres and is home to 462 aircraft, the majority of which are single-engine. Aircraft operations and development are considered by the Ventura County Airport Comprehensive Land Use Plan. Camarillo Airport is also home to facilities for both the Ventura County Fire Department,Ventura County Sheriff's Department Aviation Unit, Animal Services, Agriculture Commissioner, and the District Attorney.

Camarillo Airport is classified in the *National Plan of Integrated Airport Systems (NPIAS)* as a general aviation reliever for the Los Angeles metropolitan area. Reliever airports provide an alternative to general aviation users in major metropolitan areas. In 2013, there were an estimated 148,020 annual aircraft take offs and landings at the airport.

Oxnard Airport

Owned by Ventura County since 1934, Oxnard Airport is a former Army Air Corps facility situated one mile west of downtown Oxnard. As the last commercial passenger service ended in 2010, the airport is

now home to only general aviation, although the County is actively looking to restore airline service. The single asphalt runway is just under 6,000 feet in length and sees an average of 205 aircraft operations per day. There are 169 aircraft based at Oxnard, the majority of which are single-engine. According to FAA Airport Facilities Data, there were 59,495 aircraft operations at the Oxnard Airport in 2013. Aircraft operations and development are considered by the Ventura County Airport Comprehensive Land Use Plan.

Santa Paula Airport

Santa Paula Airport is the only privately-owned airport in Ventura County. It is owned and operated by the Santa Paula Airport Association. The airport has a 2,665 ft. asphalt runway that sees an average of 265 operations a day. Of the 309 aircraft based at Santa Paula, over 95 percent are single-engine. Aircraft operations and development are considered by the Ventura County Airport Comprehensive Land Use Plan.

Santa Paula Airport is classified in the *National Plan of Integrated Airport Systems (NPIAS)* as a general aviation airport. The airport includes airport-related businesses, including a café and a flight school, as well as five maintenance facilities. Fueling is available at the airport via the self-serve fuel island. Virtually all of the estimated 52,400 annual aircraft operations at the airport involve general aviation aircraft. The airport is licensed by the State of California for daytime operations. Helicopters also operate out of this facility.

Naval Base Ventura County

Naval Base Ventura County (NBVC) is the result of the merger in 2000 between the former Naval Air Station Point Mugu and Naval Construction Battalion Center Port Hueneme. San Nicolas Island, located 60-miles off the Ventura County coast, became part of NBVC in 2004. In addition to the 11,100-foot and 5,500-foot asphalt runways at NBVC-Point Mugu, the base also includes the 36,000-square mile Point Mugu Sea Range (PMSR) centered on San Nicolas Island. The sea and air space within the PMSR is restricted to civilian aircraft and vessels during certain times. Aircraft operations and development are considered by the Ventura County Airport Comprehensive Land Use Plan adopted in July 2000.[3]

NBVC-Point Mugu serves a variety of based and transient aircraft. The based military aircraft fleet generally consists of approximately 75 aircraft. Point Mugu maintains an air traffic control center, which controls all aircraft in southern Ventura County. The air traffic control center provides service seven days a week. Mugu Approach Control provides flight following service to approximately 125,000 aircraft per year.

Per the 2015 Air Installations Compatible Use Zone (AICUZ) Study, NBVC-Point Mugu had 29,493 average total annual flight operations (CY2009-2013). The AICUZ projects 39,500 total annual operations in CY2020. Hours of operation of the airfield are normally between 7 a.m. and 11 p.m. daily

[3] Note that the existing ACLUP is based on the 1992 Air Installations Compatible Use Zone (AICUZ) Study for the former NAS Point Mugu. With release of the updated 2015 AICUZ Study for NBVC Point Mugu, the ACLUP is due for an update per State law. For reference, see the following documents:

- NBVC AICUZ (2015), available at http://www.cnic.navy.mil/content/dam/cnic/cnrsw/NBVC/pdfs/FINAL_NBVC%20Point%20Mugu%20AICUZ%20Study_December%202015.pdf
- NBVC Joint Land Use Study (SEPT 2015), available at http://www.nbvcjlus.org

and closed on Christmas and New Year's Day. Utilization of the airfield is very low in the early morning and evening hours. Peak hours vary from day to day, depending on changing mission requirements. The least active day is Sunday.

Channel Islands Air National Guard Base

The California Air National Guard 146 Tactical Airlift Wing officially dedicated a new 208-acre installation in September of 1990. This property is north of NBVC-Point Mugu, at the intersection of Hueneme and Naval Air Roads. This Wing began relocating their C-130 aircraft to this site from Van Nuys Airport in 1989. The Wing uses the NBVC-Point Mugu runway via a 2,500-foot taxiway. The Air National Guard Base utilizes the runways and taxiways at NBVC-Point Magu and is not a separate airport.

The mission of this unit is training for other assigned units once a month with various two-week active duty obligations. This results in over 1,500 personnel during training activities on the base. The Wing operates under the Air Force Mobility Command (AMC). Normal activities average 30 take offs and landings per day between 8 a.m. and 10 p.m. Monday through Friday, with an additional five return flights on weekends. Flight activity increases when the unit performs Fire Support Missions in conjunction with the U.S. Forest Service or the California Department of Forestry.

TABLE 6-24
VENTURA COUNTY AIRPORTS
2016

Airport Name	Owner	Location	Facilities							Services					
		Community	Based Aircraft[1]	Runways	Longest Runway (ft)	Surface	Lighted	Helicopter Landing Area	Control Tower	Airline Service[2]	AvGas	Jet Fuel	Maintenance	Automobile Rentals	Food
Public Use–Publicly Owned															
Camarillo	County	Camarillo	462	1	6013	Asphalt	Yes	Yes	✓	—	✓	✓	✓	✓	✓
Oxnard	County	Oxnard	169	1	5953	Asphalt	Yes	Yes	✓	—	✓	✓	✓	✓	✓
Public Use–Privately Owned															
Santa Paula	Private	Santa Paula	309	1	2,65	Asphalt	No	—	—	—	✓	—	✓	✓	✓

[1] FAA 5010 Forms
[2] Including Air Taxi

Source: Airport Land Use Commission of Ventura County-Airport Comprehensive Land Use Plan.

Regulatory Setting

Federal

Federal Aviation Regulations (FARs)

FARs are rules established by the Federal Aviation Administration (FAA) governing all civilian and to a lesser extent military aviation activities in the United States. FARs are designed to promote aviation safety. They are approved through a formal federal rulemaking process and address a wide variety of aviation activities, including aircraft design, flight procedures, pilot training requirements, and airport design. FARs concerning aircraft flight generally preempts any state or local regulations.

State

California Code of Regulations, Section 3533 (Title 21, Article 2)

This law grants an exemption to personal-use airports in unincorporated areas and agricultural airports from obtaining an airport permit from the State of California. Aircraft operations at these airports must still comply with applicable federal aeronautical requirements and local jurisdiction land use permit requirements.

California Code of Regulations, Section 3542

This section establishes required airport design standards.

Local

Ventura County Airport Land Use Commission Airport Comprehensive Land Use Plan

Adopted in July 2000, The Airport Comprehensive Land Use Plan (ALUP) for Ventura County is intended to protect and promote the safety and welfare of residents near the military and public use airports in the county, as well as airport users, while promoting the continued operation of those airports. Specifically the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluation of environmental impacts for transportation and circulation related to aviation. These can be found in Section 27e, Transportation and Circulation – Airports.

Key Terms

General aviation refers to any civil aviation that is not a scheduled air service or service for hire. Most airports provide general aviation services exclusively.

References

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SECTION 6.7 TRANSPORTATION DEMAND AND SYSTEM MANAGEMENT

Introduction

Transportation Demand Management (TDM) programs are strategies designed to reduce the demand for the automobile as a mode of travel. Encouraging the use of alternative transportation modes reduces vehicle demand on the existing roadway system and improves the overall system efficiency. TDM strategies can help reduce or delay the need for capacity increasing projects on County roadways.

Similar to TDM strategies, Transportation System Management (TSM) strategies seek to optimize use of the existing transportation system. TSM aims at improving operations or increasing system capacity without constructing new roads or requiring major widening of existing roads or intersections. TSM includes a suite of operational strategies for optimizing system performance through active management. TSM strategies counter the default reactive strategy of waiting until system deficiencies are evident and/or adding capacity.

This section describes the TSM/TDM programs and projects in Ventura County that are designed to manage congestion by optimizing system operations and use of capacity and promoting travel alternatives to incentivize Ventura County residents and commuters to consider modes other than single occupancy driving.

Major Findings

- VCTC provides TDM resources to encourage alternative modes of transportation for county residents and commuters. Online resources on www.goVentura.com provide users with information on joining a vanpool or carpool, taking transit, and biking to work. The website also has links to smart phone apps that provide mobile access to transit and bike information.
- The three TSM strategies that are most applicable to unincorporated Ventura County are: 1) Pavement Management Systems; 2) Intelligent Transportation Systems; and, 3) Parking Management (including park-and-ride lots).
- To maximize the efficiency of the existing transportation system, field deployment of the following Intelligent Transportation System (ITS) service packages are most applicable to the unincorporated areas of the county: Safety; Traveler Information Systems; Incident Management; Advanced Public Transit Systems; and, Traffic Management.
- Combined, the County of Ventura and its cities are responsible for maintaining approximately 2,420 centerline miles of local roads and arterials. Caltrans and other state/federal agencies maintains their own facilities. The County is responsible for the approximately 543 miles located in unincorporated areas, which represents 22 percent of the total local roadways within the county.
- Preservation of the existing transportation system and infrastructure condition can be considered a key component of TSM. This includes the pavement condition of County maintained roadways. Currently, there is a funding shortfall of $438 million projected over the next 10 years that is needed to maintain public roadways in Ventura County at current conditions; over the next 30 years, the shortfall is expected to grow to $2.2 billion.

- Of the 22 park-and-ride-lots serving the regional transportation network in Ventura County, one is located in the unincorporated area.

Existing Setting

Transportation Demand Management

Daily work commutes are a major cause of traffic congestion and represent the most well understood trip type in terms of origin and destinations. For these reasons, the commute trip is typically targeted for demand management strategies. Typical "supply-side" strategies include: providing safe and efficient commuter-oriented transit services; providing Class I and Class II bike lane facilities connecting residential areas to major employment sites; and providing park-and-ride lots to facilitate carpooling/ridesharing. Typical "demand-side" strategies include: employer-based incentives for carpooling or using alternative forms of transportation to work and establishing rideshare programs (such as rideshare match lists) to help promote/facilitate ridesharing by interested individuals.

TDM strategies in Ventura County are primarily focused on information/education and include, but are not limited to the following:

- Ventura County Transportation Commission (VCTC) provides rideshare resources online at www.goventura.org. The web site includes information for commuters on organizing a carpool or joining a vanpool. The web site also has information on biking to work and using bus and commuter rail services. Users can register online with VCTC Commuter Services to receive a customized "RideGuide" that includes rideshare information tailored to the individuals home and work locations and work schedule. The Guaranteed Ride Home Program provides registered commuters that take transit, carpool or vanpool with a free taxi ride or rental car in the event of an emergency.
- The VCTC web site (www.goventura.org) has links to free smartphone applications that provide real-time transit information and maps of County bike routes.
- VCTC is one of five regional transportation planning agencies in Southern California that participate in *CommuteSmart.info*, a web site that provides ride matching services using a database of thousands of registered users interested in carpooling or vanpooling.
- The Southern California 511 traveler information system is operated by LA SAFE in partnership with the Los Angeles County Metropolitan Transportation Authority (Metro), Orange County Transportation Authority (OCTA) and VCTC. The 511 system provides the public with multi-modal traveler information on freeway travel times and speeds, road construction, incidents, bus and train schedules and real-time arrivals, carpool/vanpool information, bicycle information, and weather. Traveler information for the five county region of Los Angeles, Ventura, Orange, Riverside, and San Bernardino is disseminated to the public through an interactive telephone service (511), website (go511.com) and smartphone app.
- Employers in Ventura County participate voluntarily in the Transportation Outreach Program to reduce vehicle trips to improve air pollution and reduce congestion. The Program is administered by the Ventura County Air Pollution Control District (VCAPCD).

Policies and programs supporting TDM are documented in the VCTC's Congestion Management Program (CMP). Seven out of the ten cities in Ventura County have adopted a local TDM ordinance. A

local TDM ordinance provides standards and guidelines that encourages local development to provide amenities and services that support alternative modes such as transit, carpooling, vanpooling, bicycling and walking.

Transportation System Management

TSM includes operational strategies that yield optimal benefits from the existing system through active management. These strategies include traffic signal timing management, pavement management, and intelligent transportation systems (ITS), as described below.

Pavement Management System

Pavement management is the process of planning the maintenance and repair of a network of roadways in order to optimize pavement conditions over the entire network. Keeping roadways safe and functional is a concern for all system users (motorists, transit riders, bicyclists and pedestrians) and pavement quality is a key safety and functional consideration. A pavement management system (PMS) provides a tool for rating the pavement condition of a roadway, establishing a consistent maintenance and repair schedule, and evaluating the effectiveness of maintenance strategies. It can identify pavements that are headed for rapid decline so that preventative maintenance can be applied in a timely fashion. In December 2015, the County adopted a Multi-Year Pavement Plan (FY 2016-2020) to serve as its PMS for finding cost-effective strategies for providing, evaluating, and maintaining pavement in serviceable condition. The County's pavement management program is based on information obtained through field evaluations of pavement conditions and utilizing the Metropolitan Transportation Commission pavement management program and software called StreetSaver. This program has been used by the County for over 20 years and has been the key resource for all previous Plans approved by the Board of Supervisors.

The County of Ventura and its cities are responsible for maintaining approximately 2,420 centerline miles of local roads and arterials. Caltrans and other state/federal agencies maintain their own facilities. The County is responsible for the 542.78 miles located in unincorporated areas, which represents 22 percent of the total local roadways within the county.

Roadways are severely impacted by the weight and frequency of traffic and inclement weather conditions. The movement of goods by freight trucks and construction equipment transportation in particular will significantly lower pavement life and accelerate the need for maintenance, rehabilitation and replacement. For Ventura County's roadway system to adequately serve people and the movement of goods, a substantial investment in transportation infrastructure to keep the system in good repair is required. The Ventura County Comprehensive Transportation Plan (CTP) projects a $438 million funding shortfall over the next ten years to maintain public roadways in Ventura County at current conditions; over the next 30 years, the shortfall is expected to grow to $2.2 billion

A typical local two-lane roadway costs approximately $600,000 per mile to construct. The expected pavement life for a roadway is roughly 20 years if no preventative maintenance is applied during the useful life of that road. A pavement management system is a decision-making process that helps public works personnel make cost-effective decisions concerning the maintenance and rehabilitation of their jurisdiction's pavement. It provides a tool for rating a roadway's pavement condition, establishing a consistent maintenance and repair schedule, and evaluating the effectiveness of ongoing maintenance strategies.

Figure 6-12 illustrates that good to excellent pavements (PCI>70) are best suited for pavement preservation techniques, (e.g., preventive maintenance treatments). As pavements deteriorate, treatments that address structural adequacy are required. Between a PCI of 25 to 69, hot mix asphalt (HMA) overlays are usually applied at varying thicknesses. This may be accompanied by milling or recycling techniques. Finally, when the pavement has failed (PCI<25), reconstruction is typically required. If a pavement section has a PCI between 90 and 100, no treatment is applied. Photos are provided to visually relate ranges of PCI values. Based on the Pavement Condition Index (PCI), a PCI of 70-100 reflects "good" pavement condition; a PCI score of 25-69 reflects "at risk" pavement condition; and a PCI between 0-24 reflects "poor" pavement condition.

FIGURE 6-12
PAVEMENT PCI

According to the Ventura County's Multi-Year Pavement Plan (2016-2020), the roadway network had a weighted PCI average of 74 as of October 2015. Overall, 70 percent of the roadway network had a PCI of 70 or greater ("Good").

Intelligent Transportation Systems (ITS)

Intelligent Transportation System (ITS) strategies can be used as a component of a TSM program to improve roadway efficiencies. They consist of automated and electronic technologies that are used to improve operations and traveler information on a transportation network. ITS technologies encompass data collection, surveillance, real-time traveler information, demand-responsive roadway operations, individual vehicular operations, and fulfilling emergency response needs. They can help address recurring and incident-related congestion, facilitate inter-agency communication, prioritize transit and emergency responder access, and provide valuable data for planning.

A number of ITS device types are currently deployed on SR-23, SR-118, and US 101 that are operated and maintained by Caltrans. ITS field devices such as closed-circuit television (CCTV) cameras and roadway sensors provide the tools for agencies to monitor travel conditions and to collect traffic data on roadways. The traffic data and video images transmitted back to the traffic management center (TMC) provides the inputs for TMC operators to detect and verify congestion and incidents. Travel advisories and alternatives routes can then be disseminated to the public using changeable message signs (CMS) or broadcasted widely through the regional 511 system. The TMC may also initiate active traffic management measures such as signal timing plans or ramp metering to enable the freeway or arterial system to better manage demand.

ITS applications in unincorporated areas typically focus on the following five ITS service packages: 1) Safety; 2) Traveler Information Systems; 3) Incident Management Systems; 4) Advanced Public Transit Systems; and, 5) Traffic Management Systems. Below is a list of ITS improvements/strategies that fall within the five ITS service packages that are applicable to the unincorporated areas of the county.

Safety

- Rectangular Rapid Flashing Beacon (RRFB) pedestrian crossings
- Advance advisory systems
- On-board bus surveillance cameras

Traveler Information Systems

- Multimodal Regional Traveler Information System & Trip Planning Software
- En-route Traveler Information Systems - mobile message signs (where visual impact preclude variable message signs) at major junctures – located at junctures of state highways within the county
- Transit Dynamic Routing and Scheduling System
- Electronic traveler information (websites, kiosks, HAR, Social Media/511 systems);
- Real time transit system communication systems (bus GPS units and time of arrival information boards at bus shelters and primary transit stops)
- Trucks and recreational vehicle advisory signs/signals

Incident Management Systems

- Installation of CCTV monitors in known accident hot spots
- Installation of Smart Call-Boxes along hazardous corridors and in areas known to have poor cellular coverage
- Coordinated emergency response systems such as emergency vehicle tracking using automated vehicle location (AVL) technology, computer aided dispatch (CAD), and other complementary systems
- Emergency Vehicle Preemption on key corridors

Advanced Public Transit Systems

- Expand Computer Aided Dispatch/Automated Vehicle Location (CAD/AVL) System(s) (see traveler information)
- ITS Technologies to support Bus Rapid Transit (BRT) such as transit signal priority, transit traveler information system elements, traffic signal coordination, and off-board payment ticket vending machines
- Demand Responsive Dispatching
- Regional Automated Farebox System
- Wi-Fi on BRT Buses

Parking Management – Provision of Park-and-Ride Lots

Park-and-ride lots are convenient (and typically free) parking lots that enhance the regional transportation network. They are typically located along highways, near highway junctures, or near transit facilities where drivers can park their vehicle and then carpool, vanpool, or ride transit to their destination. Park-

and-ride facilities can increase opportunities for transit use among commuters who do not live within walking distance of a convenient transit stop or station. They also expand carpooling and vanpooling opportunities. Park-and-ride lots intercept commuters close to their trip origins and at relatively distant locations from their destinations. The lots are intended to reduce vehicle miles traveled and ease congestion by reducing single occupancy vehicle trips.

There are 22 formally designated park-and-ride lots in Ventura County with a supply of 2,280 parking spaces located adjacent to highway corridors and at transit stations. Figure 6-13 shows the location of the park-and-ride lots in Ventura County. While only one of these lots is located in the unincorporated area, the lots are part of a regional TSM strategy that benefits residents of the unincorporated area. There are also several locations in the county that serve as informal park-and-ride lots (e.g., past SR-33 on Main Street that leads onto US 101).

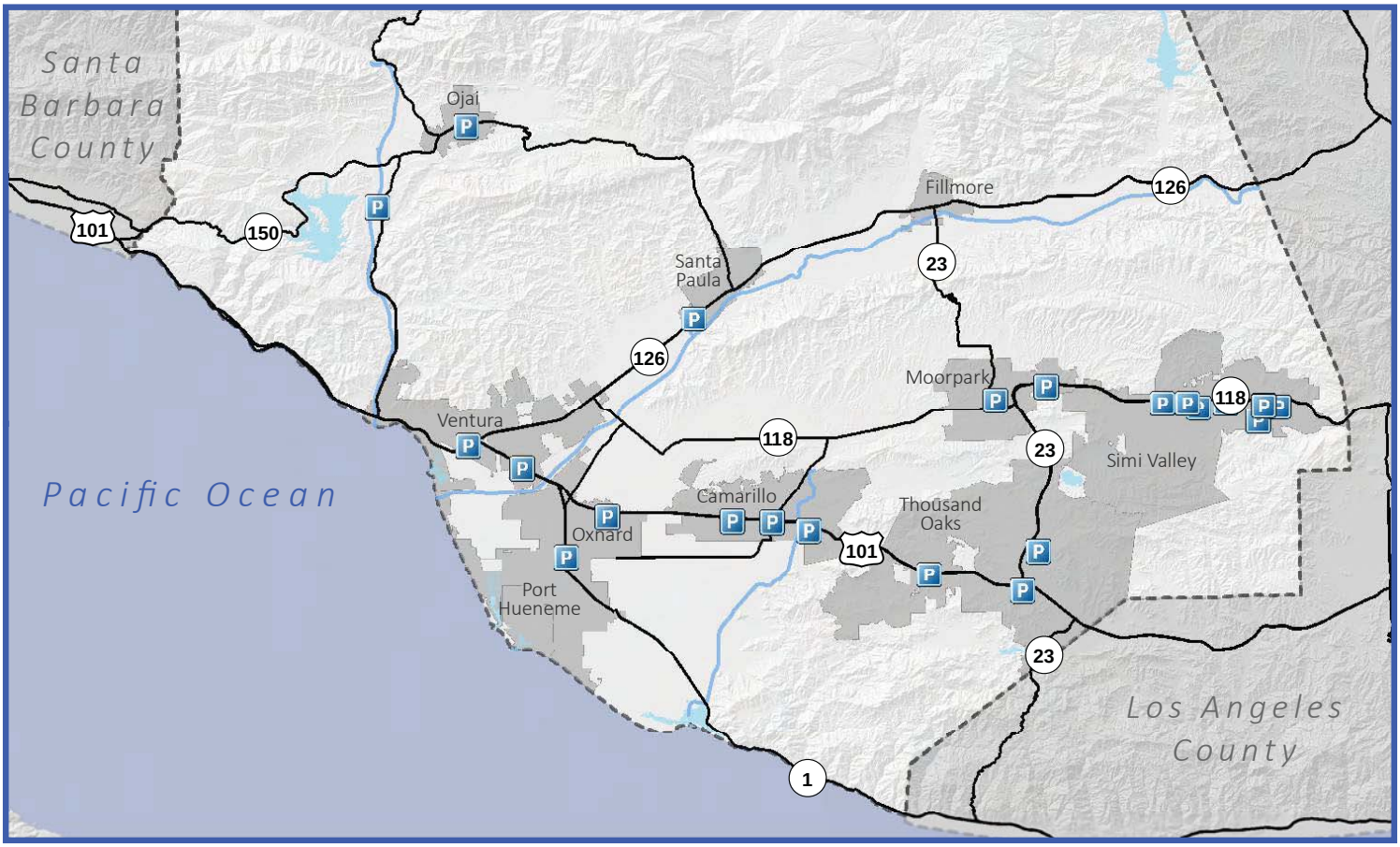

Figure 6-13:
Ventura County Park and Ride Lots

Map Date: November 14, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Park and Ride Lot
Major Roadways
Major Waterways
Water Bodies
Cities

Regulatory Setting

Federal

Federal Clean Air Act

This federal law passed in 1970, and last amended in 1990, forms the basis for the national air pollution control effort. Basic elements of the act include national ambient air quality standards for major air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

State

California Global Warming Solutions Act (AB 32)

This law enacted in 2006 (AB 32) set a statewide mandate to roll back greenhouse gas emissions in California to 1990 levels by 2020. To meet the emission reduction goals of AB 32, the **California's Sustainable Communities and Climate Protection Act, or SB 375**, was enacted to direct the State's metropolitan planning organizations (MPOs) to develop a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its emission reduction targets. The SCS is a component of the Regional Transportation Plan (RTP) that is prepared by the Southern California Association of Governments (SCAG); Ventura County is a one of the six county members that make up the SCAG region. The current RTP/SCS that was adopted in 2016 identified the need for investments in TSM/TDM improvements in order to achieve the goals of AB32/SB375.

California Clean Air Act

Established in 1988, this act requires non-attainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide standards.

Proposition 111

Prop 111 was passed by California voters in 1990 that established a nine-cent gas tax to fund transportation improvements. It mandates counties that have a population greater than 50,000 to prepare an updated Congestion Management Program (CMP) every two years; the CMP provides a plan for integrating transportation, land use and air quality decisions. VCTC is the designated congestion management agency for Ventura County. The CMP has been developed to also meet the federal congestion management process requirements of the FAST Act.

Regional

ITS Strategic Deployment Plan

The ITS Strategic Deployment Plan ensures that the application of ITS technology across Ventura and Los Angeles Counties is consistent with the national ITS architecture. The plan highlights the needs and issues related to ITS systems, and offers recommendations on key areas of concern. The plan also identifies key ITS infrastructure projects over the short, medium and long term, as well as funding

opportunities and challenges. The findings are informed by the outreach program conducted by the Regional ITS Coordination Team conducted with key stakeholders.

Southern California Association of Governments (SCAG)

SCAG is the federally designated Metropolitan Planning Organization (MPO) that is responsible for developing the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) in the six-county Southern California region (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura). SCAG reviews the CMP submitted by each county to determine if the CMP meets federal congestion management requirements.

Local

Ventura County Air Pollution Control District

In compliance with the California Clean Air Act, the Ventura County Air Pollution Control District was established to improve the health and quality of life for residents through efficient, effective and entrepreneurial air quality-management strategies.

Ventura County Air Pollution Control District (VCAPCD) Rule 211

Rule 211 requires employers with 100 or more on-site employees to register with the VCAPCD annually to submit survey data on their employee's commutes every two years. The data is used by the VCAPCD to determine emissions reductions from TDM measures taken by employers to reduce commuting by single occupancy vehicles.

Key Terms

Transportation Demand Management (TDM) refers to strategies that emphasize a more efficient use of the existing transportation network by focusing on the movement of people and freight as opposed to motor vehicles. TDM strategies are developed to encourage walking, biking, using public transit, carpooling, flexible work schedules, and telecommuting.

Transportation Systems Management (TSM) refers to operational strategies that are designed to increase the capacity and efficiency of existing transportation facilities without roadway capacity increasing projects. TSM strategies may include traffic signal timing management, pavement management, and the use of intelligent transportation systems (ITS).

Intelligent Transportation Systems (ITS) refers to automated and electronic technologies used to improve operations and traveler information on a transportation network. ITS technologies encompass data collection, surveillance, real-time traveler information, demand-responsive roadway operations, individual vehicular operations, and fulfilling emergency response needs.

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SECTION 6.8 PROGRAMMED TRANSPORTATION IMPROVEMENTS

Introduction

This section describes the major funding sources and programmed transportation improvements (i.e., those improvements with identified funding) for Ventura County.

Major Findings

- Ventura County has programmed transportation improvements covering a variety of roadway, active transportation, and transit improvements.
- Approximately $17.6 million of capital improvements were identified for the 2017 horizon year with an additional $19 million of capital improvements for the 2021 horizon year.
- The County's Traffic Impact Mitigation Fee Program includes 20 local roadway improvements and 10 state highway improvements have been identified to accommodate future development.

Existing Setting

Funding

Existing state and federal funding sources for transportation and circulation improvements are described below. State funds are programmed for the County by the Ventura County Transportation Commission (VCTC) while federal funds are programmed by the Southern California Association of Governments (SCAG). At this time, Ventura County is the only county in the SCAG region that does not have a local source of transportation funding (i.e., local sales tax measure).

Local Revenues

Ventura County Ordinance 4246 (effective January 2002) established the Traffic Impact Mitigation Fee to fund some of the roadway and highway improvements required as a result of new development in the unincorporated area of the county. The fee provides a method of assessing on a project by project basis, a "fair share" portion of the cost of improvements necessary to ensure that the County's adopted level of service standards are maintained. The fee program addresses only the unincorporated area's share of costs; it cannot be used to fund the incorporated area's share or existing development's share of the costs.

Local gas tax subvention funds, as enabled through Sections 2104 and 2105 of the California Streets and Highways Code, are also a local source of transportation revenue for the County of Ventura. These funds are programmed primarily for ongoing maintnenace and are available only on a limited basis for capital improvements internally by the County as part of their Capital Improvement Program (CIP).

State Revenues

Ventura County is also eligible for the following State transportation funding programs: Transportation Development Act (TDA); State Highway Operation and Protection Program (SHOPP); Active Transportation Program (ATP); Prop 1B: The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006; and the State Transportation Improvement Program (STIP). These are described in greater detail below.

Transportation Development Act (TDA). The Mills-Alquist-Deddeh Act (SB 325) was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination. Known as the Transportation Development Act (TDA) of 1971, this law provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. TDA established two funding sources; the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Funds are allocated to communities based on population, taxable sales, and transit performance, and are used to address unmet transit needs. SB 716 (2009) amended the TDA mandate, including specification of how TDA funds are to be used in Ventura County, particularly with respect to use of TDA funds for local street and road needs. As of July 1, 2014, only the cities of Camarillo, Fillmore, Moorpark and Santa Paula are eligible to use TDA funds for streets and roads. The cities of Port Hueneme, Ojai, and the unincorporated county are part of the Gold Coast Transit District, and along with the cities of Ventura and Oxnard, must use all TDA funds allocated for transit. The cities of Simi Valley and Thousand Oaks, with populations over 100,000, are not eligible to use TDA funds for local streets and roads.

State Highway Operation and Protection Program (SHOPP). Caltrans, in cooperation with the California Transportation Commission (CTC), is responsible for preparing an asset management plan. The asset management plan is a document that assesses the health and condition of the state highway system in order to guide selection of projects. In accordance with the asset management plan, Caltrans prepares the SHOPP which addresses capital improvements relative to maintenance, safety, and rehabilitiation of state highways and bridges that do not add a new traffic lane to the system.

California Active Transportation Program (ATP). The California ATP was passed by the State legislature and signed into law in 2013 that consolidates several federal and statewide programs such as the Bicycle Transportation Account (BTA) and the State Safe Routes to School (SR2S). The ATP program provides a source of funding for countywide projects that support programs and infrastructure improvements that encourage walking and biking. Funding is administered by Caltrans through an annual, competitive Call for Projects application process. The program is currently in its third funding cycle.

State Transportation Improvement Program (STIP). The STIP consists of two types of funds. Regional Improvement Program (RIP) funds are 75 percent of the STIP and available for capacity projects such as lane expansions, intersection or other major arterial improvements. Interregional Improvement Program (IIP) funds are 25 percent of the STIP and are also available for capacity projects on the State regional road system and for intercity rail projects. VCTC, as the Regional Transportation Planning Agency (RTPA) for Ventura County, is responsible for proposed RIP project selection while the California State Department of Transportation (Caltrans) is responsible for selection of proposed IIP projects. Both programs must be approved and allocated by the CTC. Under the "gas tax swap" approved by the State in 2010, STIP funds are derived from fuel excise taxes which are automatically adjusted to equal the funding formerly provided by Proposition 42 (sales tax on gasoline). STIP funds are primarily applied to transportation projects that are significant to the statewide system.

Senate Bill 1. Signed into law in early 2017, this bill provides funding for transportation projects throughout the state. Eligible county projects include, but are not limited to: road maintenance and rehabilitation, safety projects, railroad grade separations, traffic control devices, matches for state and federal funds, and complete street components, including active transportation, transit, drainage, and stormwater capture projects.

Proposition 1B. The Highway Safety, Traffic Reduction, Air Quality, and Port Security Fund of 2006 (Proposition 1B) provided $20 billion from State bond sales for the following:

- Congestion reduction, highway and local road improvements: $11.3 billion to increase capacity on State highways, local roads, and public transit;
- Public transportation: $4 billion to improve local transit services and state intercity rail services; purchase buses and rail cars and improve transit safety;
- Goods movement and air quality: $3.2 billion to improve freight movement through ports, on state highway and rail systems, and between California and Mexico; improve air quality by reducing emissions related to freight movement and replace/retrofit school buses; and,
- Safety and security: $1.5 billion to increase protection against security threats or improve disaster response on transit systems; improve rail crossing safety, seismically retrofit local bridges, ramps, and overpasses; improve security and disaster planning in publicly owned ports, harbors, and ferry terminals.

County projects are eligible for funding from the congestion reduction allocation. Additional funding may be available from future bond measures if proposed by the State legislature and approved by California voters.

It is important to note that at this time, not all of the bond funds have been allocated through the various programs created by the bond measure. Other county projects may receive some bond funding from programs, such as the State and Local Transportation Partnership Program (SLTPP), as they are developed.

State Transit Assistance (STA). TDA provides a second source of revenue called STA, which is derived from the State portion of the sales tax on diesel fuel. The State Controller allocates these funds based on the county's population and revenue miles of each eligible transit operator: Gold Coast Transit (GCT) and Southern California Regional Rail Authority (SCRRA) in Ventura County. The State generally disburses STA revenues on a quarterly basis and the funds are held in trust by the County. STA revenues are restricted for transit purposes and are administered by VCTC.

Federal Sources

Federal transportation funding is provided through the Federal Funding Fixing America's Surface Transportation (FAST) Act (FY2016-FY2021). FAST provides federal funding for surface transportation programs and transforms the policy and programmatic framework for investments to guide the growth and development of the country's vital transportation infrastructure. Federal funding programs primarily applicable to roadway infrastructure improvements include: Congestion Mitigation and Air Quality (CMAQ); Highway Safety Improvement Program (HSIP); Highway Railroad Grade Crossing Program; National Highway Performance Program (NHPP); Surface Transportation Program (RSTP); Transportation Alternatives Program (TAP); and, Transportation Investment Generating Economic

Recovery (TIGER). Federal funding programs primarily applicable to transit improvements include: Federal Transit Administration Section 5307 (Urbanized Area Formula Grants); Federal Transit Administration Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities); and, Federal Transit Administration Section 5311 (Rural Area Formula Grants). These sources are described in more detail below.

Surface Transportation Program (STP). STP funds provide revenue for federal-aid highways, bridge projects on public roads, transit capital projects, and local street and road improvement projects. The matching ratio is approximately 89 percent federal to 11 percent local. STP funds are allocated by VCTC and administered through Caltrans.

Congestion Mitigation and Air Quality (CMAQ). CMAQ funds are allocated by VCTC for transportation projects that reduce transportation-related emissions. Project types include public transit, rail transit capital improvements, pedestrian and bicycle paths and others that serve to reduce congestion and improve air quality. The matching ratio is approximately 89 percent federal to 11 percent local.

Transportation Alternatives Program (TAP). Under MAP 21 and now FAST, several programs which address pedestrian and bicycle transportation, scenic beautification, safe routes to schools, historic presevation, recreational trails, and other uses have been consolidated into the Transportation Alternatives Program (TAP). TAP funds are eligible for pedestrian and bicycle facilities, projects to provide safe routes to schools and for non-drivers, scenic roadway overlooks, recreational trails, rehabilitation of historic transportation facilities, preservation of abandoned railway corridors, control/removal of outdoor advertising, archaeological planning and research, vegetation management along transportation corridors, and mitigation of water pollution due to highway runoff. California has not yet determined a process for selecting projects for this new program.

Federal Transit Administration (FTA). The FTA provides funding for transit related programs in a variety of areas. FTA funds generally require matching local funds. FTA divides the program funds into "Sections" as follows:

- Section 5304, Statewide Planning funds are available for planning studies conducted by Metropolitan Planning Organizations or their sub recipients. Eligible uses of the funds include urban, small urban or rural transit planning studies, surveys and research, as well as the Transit Planning Student Internship program. The matching ratios are approximately 89 percent federal to 11 percent local.
- Section 5307, Urban Area Formula funds are available for capital, capital leases and maintenance, planning projects, and for limited operating expenses. The funds can also be used for projects that improve transit access to employment for low-income individuals. Capital and planning ratios are approximately 80 percent federal to 20 percent local match, while operating cost is limited to a 50 percent federal share. The majority of FTA funds received by VCTC are Section 5307 funds.
- Section 5310, Elderly and Disabled funds are for transportation capital expenditures for paratransit services to elderly and disabled individuals. The funds can also be used for capital or operating expenses of new transit services for disabled individuals that go beyond the ADA minimum requirements. The operating cost reimbursement is up to 50 percent, and capital cost up to 80 percent.
- Section 5311, Rural funds provide support for rural transit operating subsidies and capital projects. Operating match can be up to 50 percent of net operating costs whereas the capital match is usually 20 percent. Historically, the majority of the 5311 funds were programmed by VCTC and administered by the State but used by other agencies.

- Section 5337, Rail State of Good Repair funds are utilized for projects such as rail and facility construction and rehabilitation. The federal/local matching ratio is usually 80/20. The Section 5337 funds VCTC receives are attributed to Metrolink services.
- Section 5339, Bus and Bus Facilities funds are a relatively small source of funds available for bus capital purposes only, with a match rate of 80/20. This program is also newly-created under MAP-21 and carried forward as part of FAST.
- American Recovery and Reinvestment Program (ARRA) funds are one-time economic stimulus revenues that were funded at 100 percent, meaning that no local match is required to program these funds.

Programmed Projects

As the designated metropolitan planning organization for the region, SCAG prepares and maintains the Federal Transportation Improvement Program (FTIP). The program includes a listing of all transportation-related projects requiring federal funding or other approval by the federal transportation agencies. The FTIP also lists non-federal (i.e., local and state funded projects) regionally significant projects for information and air quality modeling purposes. Projects included in the FTIP are consistent with SCAG's Regional Transportation Plan and are part of the area's overall strategy for providing mobility, congestion relief, and reduction of transportation-related air pollution in support of efforts to attain federal air quality standards for the region.

The Ventura County Transportation Commission (VCTC) is the responsible agency for regional multimodal transportation planning and programming within Ventura County. VCTC actively coordinates with SCAG, the regional MPO, to plan and ultimately program federal/state/local transportation funds for transportation improvements.

The VCTC has attempted to secure a half-cent sales tax measure several times in the past decades and may continue to pursue a sale tax measure in the future to supplement available transportation funding. If passed, this measure could provide a significant source of additional transportation funding in the future.

The County Capital Improvement Plan (CIP) is an internal programming document that identifies all capital improvement projects (e.g., roads and bridges) the County intends to build, replace or improve over a 20-year horizon. CIPs typically provide key information for each project, including delivery schedule, cost and various revenue sources. The CIP provides a means for the County to determine the capital improvement projects and funding priorities over a 20-year horizon.

Table 6-25 and Table 6-26 provide the County's CIP improvements for the horizon years of 2017 and 2021, respectively. Approximately $17.6 of capital improvements were identified for the 2017 horizon year with an additional $19 million of capital improvements for the 2021 horizon year. Table 6-27 and Table 6-28 list the local County roadway and state-owned facility capital improvements needed to mitigate roadway impacts associated with new development within the unincorporated areas of the county respectively. As shown, the County's Traffic Impact Mitigation Fee Program includes 20 local roadway improvements and 10 state highway improvements needed to maintain the County's LOS standards while accommodating future development.

Table 6-29, Table 6-30, and Table 6-31 list the "Near-Term," "Mid-Term," and "Long-Term" STIP improvements respectively, from the County's 7-year CIP list for the Congestion Management Program. This list is limited to the improvements either directly associated with roadways in the unincorporated areas of the county or that will serve to benefit the unincorporated areas. The lists are financially

constrained but not fully programmed – particularly the Mid-Term and Long-Term lists. Financially constrained means that the improvements are within the total projected revenue estimate assuming historical trends continue into the future. Programmed means that the improvement has an identified funding source and is included in a programming document (i.e., STIP/FTIP). These lists are consistent with the long-range Regional Transportation Improvement Program (RTIP). Table 6-32 lists the top priority projects from STIP funding.

There is likely some project redundancy among the various transportation improvement programming documents given that projects are typically funded with a mix of local, state and federal funds.

TABLE 6-25
TRANSPORTATION DEPARTMENT PLANNED CAPITAL PROJECTS
FIVE-YEAR PLAN (FY 2017)
Ventura County

PROJECT	LOCATION & DESCRIPTION	EST. COST
Bridge Program	Various locations - Rehabilitation of bridges and structural improvements.	$908,000
Bridge Road Bridge Replacement	Replace the existing bridge on Bridge Road at Santa Paula Creek to eliminate structural deficiencies as identified by Caltrans latest bridge inspection report.	$600,000
Drainage Improvements	Improving existing drainage facilities such as Culverts and Storm Drain Systems.	$120,000
*Harbor Blvd Widening (Strategic Master Plan (SMP) Priority Rank # 1&2)	Oxnard C/L to Ventura C/L - Widen to 4 lanes including the Bridge widening/replacement and addition of 2nd southbound through lane and 2nd northbound through lane @ Gonzales Road (Feasibility Study).	$100,000
Mupu Rd Bridge Improvements ridge #443	Santa Paula Creek 0.25 mi east of SR 150 - Structural Improvements.	$621,000
Nonmotorized Transportation Program (Pedestrian & Bike Lane Projects)	Various locations - pedestrian and bicycle improvements.	$2,858,000
Pavement Rehabilitation Program	Pavement Resurfacing - Various Locations.	$6,267,000
Pleasant Valley Road at E. 5th Street Intersection Improvements	Add 2nd southbound through lane and 2nd northbound through lane to improve traffic safety.	$300,000
Pleasant Valley Road at Sturgis Road Intersection Improvements	Intersection of Pleasant Valley Rd and Sturgis Rd - Signalization and construction of right turn lane to improve traffic safety.	$710,000
Pleasant Valley Road Improvements - Addition of a Two-Way Left Turn Lane	Pleasant Valley Road between Dodge Road & Hailes Road - construction of a two-way left turn lane to improve traffic safety.	$657,000
*Preliminary Engineering Design Projects Grant Programs (ATP, HSIP, TDA, CMAQ)	Various locations design phase only in order to prepare and apply for Federal Grant money.	$100,000
Santa Ana Road Bike Lane - Phase I	MP 0.19 to MP 1.70 widen shoulder and construct bike lanes.	$1,125,000
Santa Ana Road Bike Lane - Phase II	MP 2.00 to MP 3.81 widen shoulder and construct bike lanes.	$1,245,000
Santa Ana Road Bike Lane - Phase III	MP 3.81 to SR 150 (MP 5.80) widen shoulder and construct bike lanes.	$1,005,000
Tapo Canyon Road Slope Repair	Improvements to Shoulders and Embankment at MP 1.04 due to slope failure.	$425,000
Traffic Signals / Intersection Program	Various locations - install or update traffic signals, and lane modification.	$465,000
Yerba Buena Area Guard Rails	Various locations along Yerba Buena Road, Cotharin Road, Pacific View Road, and Deer Creek Road.	$100,000
TOTAL		**$17,606,000**

Source: Ventura County Transportation Department, Capital Improvement Program FY 2017-2021, 2016.
(*) Design and/or Study

TABLE 6-26
TRANSPORTATION DEPARTMENT PLANNED CAPITAL PROJECTS FIVE-YEAR PLAN (FY 2018-2021)
Ventura County

PROJECT	LOCATION & DESCRIPTION	EST. COST
Bridge Program	Various locations - Rehabilitation of bridges and structural improvements.	$1,485,000
Bridge Road Bridge Replacement	Replace the existing bridge on Bridge Road at Santa Paula Creek to eliminate structural deficiencies as identified by Caltrans latest bridge inspection report.	$3,356,000
* Channel Islands Blvd Widening (SMP Priority Rank # 7)	Widen Channel Island Boulevard to 4 lanes and construct bike lanes from Oxnard city limits to Rice Avenue to improve traffic and bicycle safety (Feas Study).	$100,000
Drainage Improvements	Improving existing drainage facilities such as Culverts and Storm Drain Systems.	$575,000
* Hueneme Road Widening Phase I (SMP Priority Rank # 10)	Oxnard City Limits to Rice Ave - Widen to 4 lanes (Feasibility Study).	$100,000
* Las Posas Road Widening (SMP Priority Rank # 8)	Hueneme Road to 5th Street - Widen to 4 lanes (Feasibility Study).	$100,000
** Nonmotorized Transportation Program (Ped & Bike Lane Projects)	Various locations - pedestrian and bicycle improvements.	$4,764,500
* Olivas Park Drive Widening (SMP Priority Rank # 9)	Widen Olivas Park Drive to 4 lanes from Telephone Road to Seaborg Drive to improve traffic safety. This is a multi-jurisdictional project. (Feasibility Study).	$100,000
Pavement Rehabilitation Program	Pavement Resurfacing - Various Locations.	$12,000,000
Pleasant Valley Road at E. 5th Street Intersection Improvements	Add 2nd southbound through lane and 2nd northbound through lane to improve traffic safety.	$3,300,000
* Pleasant Valley Road Widening (SMP Priority Rank # 6)	Rice Avenue to Camarillo C/L - Widen to 4 lanes (Feasibility Study).	$100,000
* Preliminary Engineering Design Projects - Grant Programs (ATP, HSIP, TDA, CMAQ)	Various locations design phase only in order to prepare and apply for Federal Grant money.	$400,000
* Santa Clara Ave Widening (SMP Priority Rank # 3)	Oxnard C/L to Highway 118 - Widen to 4 lanes (Feasibility Study).	$100,000
** Traffic Signals / Intersection Program	Various locations - install or update traffic signals, and lane modification.	$1,080,000
* Victoria Avenue Widening (SMP Priority Rank # 5)	Gonzales Rd to Olivas Park Drive (County Section: 247's/o river bridge to 119 s/o Olivas Park Drive) - Widen to 4 lanes (Feasibility Study).	$100,000
Yerba Buena Area Guard Rails	Various locations along Yerba Buena Road, Cotharin Road, Pacific View Road, and Deer Creek Road.	$1,270,000
TOTAL		**$28,930,500**

Source: Ventura County Transportation Department, Capital Improvement Program FY 2017-2021, 2016.
(*) Design and/or Study Only
(**) Partially contingent on availability of federal funding

TABLE 6-27
TRAFFIC IMPACT MITIGATION FEE PROGRAM CIP: COUNTY ROADS AND INTERSECTIONS / SCHEDULE OF PROJECTS

#	Road/Intersection	Limit	Project Description	Cost*
1	Central Avenue Widening Improvement	Santa Clara Avenue to Camarillo City Limits	Widen from two lanes to four lanes	$5,900,000
2	Harbor Boulevard Widening Improvement	Oxnard City Limits to Ventura City Limits	Widen from two lanes to four lanes, including replacement or widening of existing bridge	$16,900,000
3	Hueneme Road Widening Improvement	Oxnard City Limits to Rice Avenue Extension	Widen from two lanes to four lanes	$3,100,000
4	Pleasant Valley Road Widening Improvement	Dodge Road to Las Posas Road	Widen from two lanes to four lanes	$13,080,000
5	Santa Clara Avenue Widening Improvement	North of Oxnard City Limits to SR 118	Widen from two lanes to four lanes	$17,200,000
6	Victoria Avenue Widening Improvement-A	Gonzales Road to Ventura City Limits (247s Riverbridge - 119s Olivas Park)	Widen from four lanes to six lanes	$9,950,000 *Partially conveyed to City of Oxnard, cost for County of Ventura portion only*
8	Victoria Avenue Widening Improvement-**B**	Gonzales Road to Oxnard City Limits	Widen from four lanes to six lanes	$4,400,000 *Conveyed to the City of Oxnard*
9	Wendy Drive Widening Improvement	Borchard Road to Thousand Oaks City Limits	Re-stripe from two lanes to four lanes, includes replacement or widening of existing bridge	$850,000** *Completed with exception of bridge replacement*
10	Central Avenue at Santa Clara Avenue, Intersection Improvements		Add 2nd WBT, 2nd EBT, and NBR	$550,000 *Project completed*
11	Grimes Canyon Road at State Route 118 (Los Angeles Avenue), Intersection Improvements		Add 2nd WBT and 2nd EBT	$500,000
12	Harbor Boulevard at Gonzales Road, Intersection Improvements		Add 2nd SBT and 2nd NBT	$630,000
13	Santa Clara Avenue at State Route 118 (Los Angeles Avenue, Intersection Improvements)		Convert Current EBT to EBL and add EBT	$550,000 *Project completed*
14	Pleasant Valley Road at East Fifth Street, Intersection Improvements		Add 2nd SBT and 2nd NBT	$640,000

TABLE 6-27 TRAFFIC IMPACT MITIGATION FEE PROGRAM CIP: COUNTY ROADS AND INTERSECTIONS / SCHEDULE OF PROJECTS				
#	**Road/Intersection**	**Limit**	**Project Description**	**Cost***
15	Rice Avenue at Wooley Road, Intersection Improvements		Add 3rd NBT and 3rd SBT	$380,000 *Project partially completed*
16	Rice Avenue at Channel Islands Boulevard, Intersection Improvements		Add 3rd NBT and 3rd SBT and SBR	$390,000 *Project completed*
17	Victoria Avenue at Gonzales intersection		Convert SBR to shared 3rd SBT/SBR, add 2nd SBL and NBR and convert dual WBT to WBR and shared WBT/2ndWBR	$400,000 *Not within County of Ventura jurisdiction, conveyed to the City of Oxnard*
18	Victoria Avenue at Olivas Park Drive, Intersection Improvements		Add 3rd NBT and 3rd SBT and convert free SBR to standard SBR	$480,000 *No longer within the County of Ventura's jurisdiction, located within City of Ventura*
19	Route 118, Intersection Improvements *(County* Portion only)		Widen Intersection, add turning lanes, realign Donlon Road (County Portion only)	$2,100,000 *Project completed*
20	SR 33/150 Cong. Relief	Ojai Area	Various minor spot Improvements to reduce congestion on State Routes 33 and 150 in Ojai Valley and City of Ojai Area	$1,000,000
Total County Road and Intersection Projects				**$88,500,000**

County of Ventura Transportation Department: Traffic Impact Mitigation Fee Program Final Report, 2001.
(*) Costs listed are from the 2001 TIMF Report
(**) Project will be removed upon approval of the General Plan Update

TABLE 6-28
TRAFFIC IMPACT MITIGATION FEE PROGRAM CIP: STATE HIGHWAYS
Schedule of Projects

Location	Limits	Improvement	Total Project Cost
SR-1 (Pacific Coast Hwy)	Las Posas Rd to LA County line	Intersection, spot improvements	$6,000,000
SR-23 (Grimes Canyon Rd)	Broadway to Bellevue Ave	Improve to two-lane Class I standards where feasible	$12,000,000
SR- 33	Casitas Springs bypass	Construct four lane roadway	$48,000,000
SR-34 (East Fifth St)	Oxnard c.l. to Pleasant Valley Rd	Widen from two lanes to four lanes	$17,000,000
SR-34 (Lewis Rd/ Somis Rd)	Los Angeles Ave (SR-118) to Camarillo c.l.	Widen from two lanes to four lanes	$6,000,000
SR-118 (Los Angeles Ave)	Vineyard Ave (SR-232) to Santa Clara Ave	Widen from two lanes to four lanes	$14,000,000
SR 118 (Los Angeles Ave)	Santa Clara Ave to Somis Rd (SR-34)	Widen from two lanes to four lanes	$40,000,000
SR-118 (Los Angeles Ave)	Somis Rd (SR-34) to Moorpark c.l.	Widen from two lanes to four lanes	$35,000,000
US 101 (Ventura Fwy)	Santa Barbara County line to freeway end	Widen from four lanes to six lanes	$60,000,000
US 101 (Ventura Fwy)	Oxnard c.l. to Camarillo c.l.	Widen from six lanes to 10 lanes	$10,000,000
Total State Highway Improvement Project Cost			**$248,000,000**

County of Ventura Transportation Department: Traffic Impact Mitigation Fee Program Final Report, 2001.

TABLE 6-29
NEAR-TERM PROJECT LIST: FY 2008/09 THROUGH FY 2014/15
(2009 CMP UPDATE CIP)
Ventura County

Jurisdiction	ID #	Project Description	Project Start	Project Cost ($1000)
Caltrans	RTIP# VEN070201	Add HOV lanes on US 101 from Mobil Pier Rd to the Ventura/SBCounty Line (construction phase only)	FY10/11	$65,589
Caltrans	RTIP# VEN071106	SR 118 Widening from Tapo Canyon Rd to LA County Line - Add 1 Lane Each Side (construction phase only)	FY08/09	$32,000
Caltrans	PPNO# 2291	SR-23/US 101 Interchange Improvement Including US 101 Mainline Improvements (environmental, design and right-of-way support)	FY10/11	$6,520
Caltrans	RTIP# VENLS02	Lum Sum - Roadway Preservation Projects at Various Locations	on-going	$33,272
Caltrans	RTIP# VENLS03	Lum Sum - Bridge Preservation Projects at Various Locations	on-going	$4,138
Caltrans	RTIP# VENLS10	Lum Sum - Emergency Response Projects at Various Locations	on-going	$17,429
Gold Coast Transit	RTIP# VEN030604	Preventive Maintenance - ADA Paratransit	on-going	$1,559
Gold Coast Transit	Various (see description)	Planning and Implementation Activities (RTIP #s VEN051203; VEN54054; VEN54056; VEN990602)	on-going	$2,837
Gold Coast Transit	RTIP# VEN051204	Purchase One Replacement Bus	FY08/09	$78
Gold Coast Transit	RTIP# VEN057404	Replace Maintenance Equipment	FY08/09	$105
Gold Coast Transit	RTIP# VEN057413	CNG Fueling System Upgrade	FY08/09	$780
Gold Coast Transit	RTIP# VEN057414	MIS Equipment Replacement/Upgrade	on-going	$24
Gold Coast Transit	RTIP# VEN54095	ADA Paratransit Service	on-going	$5,216
Gold Coast Transit	RTIP# VEN64003	Preventive Maintenance - Fixed Route	on-going	$11,688
County of Ventura	RTIP# VEN011202	Hueneme Rd from Oxnard City Limits to Rice Rd - Widen from 2 to 4 lanes (environmental, design, right-of-way, and construction phases)	FY09/10	$6,953
County of Ventura	RTIP# VEN051004	Reconstruct and Deep Lift Asphalt on Various Roads (construction phase only)	FY08/09	$2,400

TABLE 6-29
NEAR-TERM PROJECT LIST: FY 2008/09 THROUGH FY 2014/15
(2009 CMP UPDATE CIP)
Ventura County

Jurisdiction	ID #	Project Description	Project Start	Project Cost ($1000)
County of Ventura	RTIP# VEN058401	Central Ave at Rose Ave Intersection Improvements (Turn Lanes & Drainage) (environmental, design and construction phases)	FY08/09	$565
County of Ventura	RTI # VEN990310	Construct Class I Bike Path & Piru Creek Bridge at Rancho Camulos/Center St (Ph I&II) (construction phase only)	FY09/10	$3,855
VCTC	RTIP# VEN54187	2% for Planning Programming & Monitorng	on-going	$1,725
VCTC	RTIP# VEN071105	Reimbursement of Lewis Rd Widening Construction Funds Paid w/ Local Bonds (construction phase only)	FY10/11	$23,000
VCTC	RTIP# VEN54032	Lump Sum - Road Rehabilitation & Reconstruction Projects	on-going	$4,448
VCTC	RTIP# VEN93017	Regional Rideshare Program	on-going	$2,215
VCTC	Various (see description)	Planning & Implementation Activities (RTIP #s VEN010406, VEN34348, VEN54070, VEN54115)	on-going	$3,774
VCTC	RTIP# VEN010409	East County ADA Paratransit Service Operations	on-going	$752
VCTC	RTIP# VEN040405	Next Bus Upgrade for Real-Time Bus Stop Signage (Transit Enhancements)	FY08/09	$244
VCTC	RTIP# VEN051005	New Freedoms Initiative Elderly & Disabled Service Projects in Ventura County	on-going	$2,119
VCTC	RTIP# VEN54036	VISTA Capital Lease	on-going	$24,087
VCTC	RTIP# VEN059401	Ventura County Smartcard System Maintenance & Rehabilitation	FY08/09	$250
VCTC	RTIP# VEN070202	Job Access Program	on-going	$3,727
VCTC	RTIP# VEN54069	Dial-A-Route Transit Information	on-going	$763
VCTC	RTIP# VEN990609	System-wide Rehabilitation & Renovation including Track, Signals, Platforms, Etc.	on-going	$27,540

Source: County of Ventura, Congestion Management Program, 2009.

TABLE 6-30
MID-TERM PROJECT LIST: FY 2015/16 THROUGH FY 2024/25
(Projects Could be Advanced to Near-Term List if Funded)
Ventura County

Jurisdiction	ID #	Project Description	Project Cost ($1000)
Caltrans	RTP# 50M0701	Construct New Weigh Station on SR-118 in Moorpark	$27,016
Caltrans	RTP# 5G0102	SR-118 Near Grimes Canyon - Construct Crossover UPRR	$58,431
Metrolink	RTP# 5G0701	Construct Grade Separation at Los Angeles Ave in Simi Valley (MP 437), including Realigning 0.3 miles of LA Ave and adding 0.48 miles of New Track.	$156,288
County of Ventura	RTP# 5A07025	Widen Central Avenue from 2 to 4 Lanes between Santa Clara Ave and Camarillo City Limits	$13,640
County of Ventura	RTP# 5A0707	Grimes Canyon Road and Hitch Blvd Realignment at SR-118	$6,127
County of Ventura	RTP# 5A0708	Harbor Boulevard at Gonzales Road – add 2nd southbound through lane and 2nd northbound through lane	$2,355
County of Ventura	RTP# 5A0720	Harbor Blvd Widening Improvement from Oxnard City Limits to Ventura City limits	$52,117
County of Ventura	RTP# 5A0709	Pleasant Valley Road at E. 5th Street, Add 2nd Southbound Through lane and 2nd Northbound Through Lane	$1,567
County of Ventura	RTP# 5A0710	Rice Ave at Wooley Rd – Add 3rd Northbound Through Lane and 3rd Southbound Through Lane	$1,267
County of Ventura	RTP# 5A0711	Rice Ave at Channel Islands – Add 3rd Northbound Through lane and 3rd Southbound Through lane and Southbound Right-Turn Lane	$1,267
County of Ventura	RTP# 5A0721	Widen Pleasant Valley Rd from Dodge Rd to Las Posas Rd from 2 to 4 Lanes	$39,392
County of Ventura	RTP# 5A0714	Victoria Ave at Olivas Park Dr - Add E/B-W/B Through Lanes & N/B Left Turns Lanes	$474
County of Ventura	RTP# 5A0719	Widen Santa Clara Ave from 2 to 4 lanes from n/o Oxnard City Limits to SR-118	$30,071
County of Ventura	RTP# 5A0716	Somis Rd/SR-118/Donlon Road Intersection Improvements.	$6,127
to be determined	RTP# 5A0401	Victoria Ave at Gonzales Rd: Construct 4 Lane Flyover with Left Turn Pockets	$31,862
County of Ventura	RTP# 5A0712	Victoria Ave at Gonzales Rd Intersection Improvements	$1,633
County of Ventura	RTP# 5A0722	Victoria Ave Widening Improvement A: from Gonzales Rd to Ventura City Limits, Widen from 4 to 6 Lanes	$29,729
County of Ventura	RTP# 5A0726	Victoria Ave Widening Improvement B: from Gonzales Rd to Oxnard City Limits, Widen from 4 to 6 Lanes	$18,983
County of Ventura	RTP# 5A0732	Wendy Dr Widening Improvements from Borchard Rd to Thousand Oaks City Limits: Restripe from 2 to 4 lanes including replacement or widening of Existing Bridge	$2,134
Various	RTP# 5N011	Santa Paula Branch Rec Trail – Montalvo to LA County Line	$76,948
VCTC	RTP# 500702	Retrofit Soundwall Program	$31,216

Source: County of Ventura, Congestion Management Program, 2009.

TABLE 6-31 LONG-TERM PROJECT LIST: FY 2026/27 THROUGH FY 2034/35 (Projects Could Be Advanced To Near-Term List If Funded) Ventura County		
Jurisdiction	**ID #**	**Project Description**
Caltrans		On SR-118, Add One Lane in Each Direction from Tapo Canyon Rd to New LA Ave (Tierra Rejada)
Caltrans	RTP# U5M0701	On US 101, Add one lane in each direction including interchange and Ramp Improvements from the LA County Line to SR-33
Caltrans	RTP# U5M0711	On SR-33, Construct Casitas Bypass Expressway from Foster Park to Creek Rd VCTC Santa Paula Branch Rail Line Improvements – Montalvo to LA County
Caltrans	RTP# U5M0708	On SR-118, Convert to Mixed-Flow Freeway between SR-23 and SR-232
Caltrans	RTP# U5M0709	On SR-118, Convert to Mixed-Flow Freeway between SR-232 and SR-126
Caltrans	RTP# U5M0710	On SR-232, Convert to Mixed-Flow Freeway from SR-118 to US 101
Caltrans	RTP# U5M0702	On US 101, Add one lane in each direction between SR-33 and Mussel Shoals
Caltrans	RTP# U5M0703	On SR-126, Add 1 Lane in Each Direction within the City of Fillmore
Caltrans	RTP# U5M0704	On SR-23, Construct New Alignment from SR-23/SR-118 to Walnut Canyon
Caltrans	RTP# U5M0705	On SR-126, Construct New Southbound to US 101 Connector
Caltrans	RTP# U5M0707	On SR-34, Widen from 2 to 4 lanes between SR-1 and SR-118
Caltrans	RTP# U5M0706	On SR-23, Convert to Mixed-Flow freeway from SR-118 to SR-126

Source: County of Ventura, Congestion Management Program, 2009.

TABLE 6-32 VCTC Adopted STIP Priority List Ventura County	
STIP FUNDING PROJECT	**PRIORITY ID#**
1. SR-118: LA County Line to Tapo Canyon Rd Widening – Phase II (remaining unfunded portion)	RTIP# VEN071106
2. SR-23/US 101 Interchange & US 101 Main Line Improvements	STIP# 2291
3. SR-118: Tapo Canyon Rd to New LA Ave (Tierra Rejada) Widening – Phase III	*
4. US 101: LA County Line to SR-33 Widening, Replace Interchanges and Ramps	RTP# U5M0701
5. SR-33: Casitas Springs Bypass	RTP# U5M0711
6. Santa Paula Branch Rail Line: Montalvo to LA County Line	*
7. SR-118: SR-126/US 101 to Moorpark Widening, Grade Separation, Rail Siding and Bike lanes (note: The County's General Plan no longer includes widening the section between SR-34 and SR-232)	RTP#s U5M0708 U5M0709 U5M0710
8. US 101: SR-33 to Santa Barbara County	RTP# U5M0702
9. SR-126: Widening within Fillmore City Limits	RTP# U5M0703
10. SR-23: SR-23/SR-118 Junction to Walnut Canyon	RTP# U5M0704
11. SR-126: Southbound Connector to US 101	RTP# U5M0705

** Projects missing from the RTP; submit to SCAG in the next RTP cycle.*
Source: County of Ventura, Congestion Management Program, 2009.

Regulatory Setting

Federal

Fixing America's Surface Transportation (FAST) Act (FY 2016 – FY 2021)

The FAST Act provides federal funding for surface transportation programs and transforms the policy and programmatic framework for investments to guide the growth and development of the country's vital transportation infrastructure. FAST continues the previous transportation bill's streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

State

AB 1600

Traffic impact fees are one-time fees typically paid when a building permit is issued and imposed on development projects by local agencies responsible for regulating land use (cities and counties). To guide the widespread imposition of public facilities fees, the State Legislature adopted the Mitigation Fee Act (the Act) with Assembly Bill 1600 in 1987 and subsequent amendments. The Act, contained in California Government Code §§66000-66025, establishes requirements on local agencies for the imposition and administration of fee programs. The Act requires local agencies to document the following five findings when adopting a fee: 1) purpose of fee revenues; 2) use of fee revenues; 3) benefit relationship; 4) burden of relationship; and 5) proportionality.

SB 45

Enacted in 1997, SB-45 governs transportation planning and programming under state law. Under SB-45, three-quarters of State Transportation Improvement Program funds (including all State Highway Account, Public Transportation Account, and federal transportation funds, minus state administrative and other costs) are committed to regional improvement programs. The remaining 25 percent of funds are for interregional improvement programs which are administered by the State. Regional improvement programs are developed by RTPAs and MPOs, in accordance with the regional transportation plan, to improve "state highways, local roads, public transit, intercity rail, pedestrian, and bicycle facilities, and grade separation, transportation system management, transportation demand management, sound wall projects, intermodal facilities, and safety."

Regional

Regional Transportation Plan

As the Metropolitan Planning Organization for Ventura County, the Southern California Association of Governments (SCAG) developed and adopted the Regional Transportation Plan (RTP). The RTP complies with State and Federal transportation planning requirements required of urbanized counties for a comprehensive and long-range transportation plan. The RTP is a financially constrained multi-modal plan

that identifies regional transportation improvements needed to improve system maintenance and operations and to improve mobility and accessibility countywide.

Local

Congestion Management Program

The Congestion Management Program (CMP) legislation (Section 65088-65089.10) raised the state gas tax (Section 2105) and required urbanized counties (such as Ventura County) to implement a program to reduce congestion on highways and regionally significant roadways. Several Ventura County roadways are on the designated CMP system of roadways. The CMP is administered by VCTC - the designated Congestion Management Agency for Ventura County.

Key Terms

Financially Constrained refers to a improvement project with a cost that can be reasonably anticipated to be funded within a given planning horizon (typically 20 years) assuming historical revenue streams continue over the duration of the planning horizon.

Programmed Improvement refers to an improvement that has an identified funding source and has been documented in a state/federal programming document such as the State Transportation Improvement Program or Federal Transportation Improvement Program.

Strategic Master Plan (SMP) is a County of Ventura's Public Works document that identifies needs and transportation improvements recommended for programming.

Federal Funding Fixing America's Surface Transportation (FAST) Act (FY2016-FY2021) refers to the federal transportation funding bill.

Federal Transportation Improvement Program (FTIP) refers to the Federal transportation programming document and process.

State Transportation Improvement Program (STIP) refers to the State transportation programming document and process.

References

County of Ventura Transportation Department. Five Year Capital Improvement Program FY 2017-2021. March 21, 2016

County of Ventura Transportation Department. Traffic Impact Mitigation Fee Program Final Report, October 2001

County of Ventura Transportation Department. Ventura County Congestion Management Program: Chapter 7: CIP Project List, July 10, 2009

Ventura County 2040 GENERAL PLAN

Chapter 7
Public Facilities, Services, and Infrastructure

7 PUBLIC FACILITIES, SERVICES, AND INFRASTRUCTURE

INTRODUCTION

This chapter describes current conditions and capacities of public facilities, utilities, and services in Ventura County. It is organized into the following sections:

- Wastewater Collection and Treatment (Section 7.1)
- Storm Drainage and Flood Protection (Section 7.2)
- Solid and Hazardous Waste Disposal and Recycling (Section 7.3)
- Utilities (Section 7.4)
- Law Enforcement (Section 7.5)
- Fire Protection (Section 7.6)
- Emergency Services (Section 7.7)
- Health Care Services (Section 7.8)
- Schools and Childcare (Section 7.9)
- Library Services (Section 7.10)
- Parks and Recreation (Section 7.11)

SECTION 7.1 WASTEWATER COLLECTION AND TREATMENT

Introduction

This section describes the existing information regarding wastewater collection systems, treatment, and disposal facilities in Ventura County. This section provides an overview of current treatment capacities, treatment processes, current number of connections to the systems, and general conditions of the infrastructure that serves the unincorporated county. Wastewater service information is generally reported in terms of each individual district or agency providing the service.

Major Findings

- Wastewater collection, treatment, recycling, and disposal in Ventura County is provided by 19 agencies, districts, or service providers. Unincorporated Ventura County is served by 16 of these organizations.
- There are approximately 14,000 private septic systems in Ventura County.

Existing Conditions

Wastewater collection, treatment, recycling, and disposal in Ventura County is provided by 19 agencies, districts, or service providers (shown in Figure 7-1). The unincorporated area is served by 16 of these organizations, including Ventura County, county service areas, special districts, cities, and contract organizations (see Table 7-1). The Ventura County Water and Sanitation Department-Utility Services Division is responsible for administration, billing, customer service, operation, maintenance, design, inspection, and facility construction for County Service Areas 29, 30, 32 and 34, Ventura Waterworks Districts 1 and 16, and the Camarillo Utility Enterprise and Todd Road Jail Wastewater Treatment Plant.

Ventura County Service Areas

County Service Area No. 29

CSA 29 provides wastewater collection service to the coastal communities of Solimar Beach, Faria Beach, Mussel Shoals, and Seacliff. The wastewater system consists of a Septic Tank Effluent Pump (STEP) system with approximately 300 connections. The infrastructure includes 13 miles of force main, 155 STEP pumps, 160 tanks, and 6 lift stations. The system is maintained and operated by the Ventura Regional Sanitation District, through a contract with Ventura County. After collection, the wastewater is treated and disposed of by the City of Ventura.

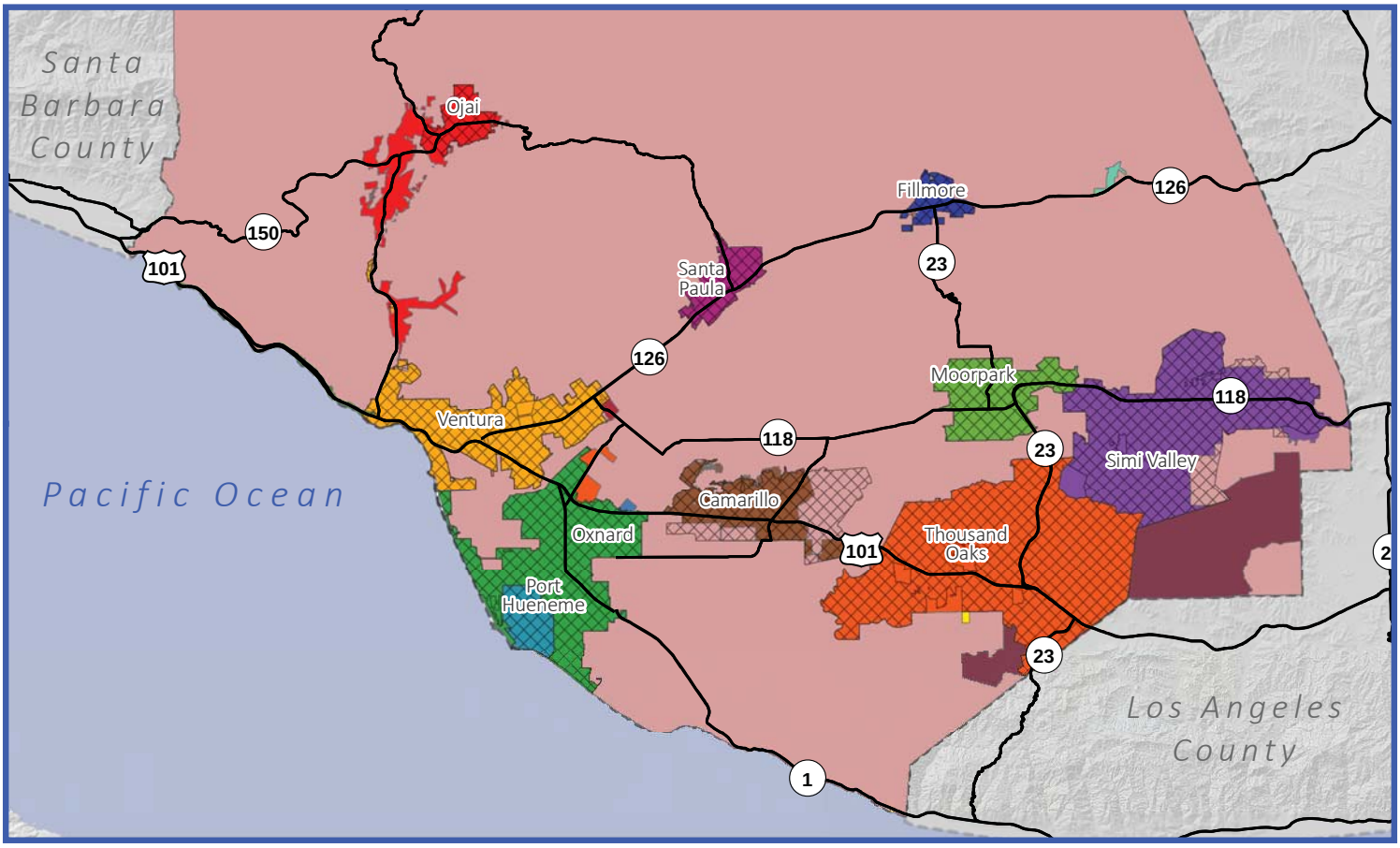
County Service Area No. 30

CSA 30 provides wastewater collection services to the unincorporated community of Nyeland Acres. The Ventura County Water and Sanitation Department manages the wastewater collection system. This service area consists of 177 acres, bound by Nyeland Drain to the north, Del Norte Boulevard off-ramp to the east, U.S. Highway 101 to the south, and Santa Clara Avenue to the west. The CSA 30 wastewater collection system includes approximately 469 residential service connections and 20 business connections. The infrastructure consists of two miles of gravity sewer lines and one lift station. The wastewater is delivered to the City of Oxnard for treatment and disposal.

County Service Area No. 32

CSA 32 is a countywide individual sewage disposal system (also known as on-site wastewater treatment system, OWTS, or septic system) monitoring and maintenance District created to provide limited district services to properties serviced by alternative technology sewage disposal systems (e.g., mound systems, advanced treatment units) and on-site sewage disposal systems serving commercial and industrial facilities. An “offer to grant an easement” to CSA 32 fulfills the Ventura County Ordinance Code requirement and applicable policies of the Ventura County General Plan for properties served by alternate and industrial systems. The Ventura County Environmental Health Division Onsite Wastewater Treatment Systems (OWTS) Program implements the County Service Area 32 agreements for applicable septic systems in unincorporated Ventura County. The Environmental Health Division OWTS Program is responsible for reviewing the septic system designs, and the inspection of septic systems during construction and repair to ensure conformance with applicable codes.

When a proposed septic system site shows conditions which have the potential for impact to groundwater, or a soil type is inconsistent with allowing waste to disperse into the soil, an alternative private sewage disposal system may be installed. For example, mound systems are typically installed in areas with high



Ventura County 2040 General Plan

Figure 7-1: Wastewater Districts

Map Date: July 22, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007.

0 5 10 Miles

N

- Ventura County Boundary
- Cities
- Major Roadways

Cities
- City of Thousand Oaks
- City of Ventura
- City of Santa Paula
- City of Port Hueneme Wastewater
- City of Fillmore
- City of Oxnard Sewer Service

Sanitary Districts
- Camarillo Sanitary District
- Ojai Valley Sanitary District
- Saticoy Sanitary District
- Simi Valley Sanitation District
- Triunfo Sanitation District

County Service Areas
- Ventura County Service Area 29
- Ventura County Service Area 30
- Ventura County Service Area 32
- Ventura County Service Area 34

Ventura County Waterworks Districts
- Waterworks District 1 - Moorpark
- Waterworks District 16 - Piru

Other
- Ventura Regional Sanitation District

TABLE 7-1
WASTEWATER SERVICE PROVIDERS
Unincorporated Ventura County

Agency	Sanitary Sewer Collection	Sanitary Sewer Treatment	Septic System Monitoring and Maintenance
Ventura County Service Areas			
Ventura County Service Area No. 29	X	Provided by the City of Ventura	
Ventura County Service Area No. 30	X	Provided by the City of Oxnard	
Ventura County Service Area No. 32			X
Ventura County Service Area No. 34	X	Provided by the City of Oxnard	
Waterworks Districts			
Ventura County Waterworks District No. 1		X	
Ventura County Waterworks District No. 16	X	X	
Other Ventura County-Operated Facilities			
Camarillo Utility Enterprise	X	X	
Todd Road Jail			
Community Sanitation Districts			
Camarillo Sanitary District	X	X	
Ojai Valley Sanitary District	X	X	
Saticoy Sanitary District	X	X	
Triunfo Sanitation District	X	X	
Community Water District			
Camrosa Water District	X	X	
Community Service District			
Channel Islands Beach Community Services District	X	Provided by City of Oxnard	
City Wastewater Facilities Providing Service to Unincorporated Areas			
City of Oxnard	X	X	
City of Simi Valley	X	X	
City of Thousand Oaks	X	X	
City of Ventura	X	X	
Regional Sanitation District			
Ventura Regional Sanitation District	X	X	

groundwater, and subsurface sand filtration systems are typically installed in areas with fractured rock. All alternative systems are required to become part of CSA 32 for more extensive monitoring of the system. After review of designs and inspections during construction, CSA 32 maintains oversight on an as-needed basis, such as in instances of notification of needed repair from complaints.

Ventura County Service Area No. 34

CSA 34 provides wastewater collection service to a portion of the unincorporated area of El Rio (other areas are served by CSA 32), including the Strickland Tract. The Ventura County Water and Sanitation Department maintains and operates the sewer collection system. The CSA 34 wastewater service area encompasses approximately 850 acres, located between the El Rio Forebay, U.S. Highway 101 to the south, South Bank Road to the west, Strickland Drive to the north, and Rose Avenue to the east. Wastewater collected by CSA 34 is delivered to the City of Oxnard for treatment and disposal.

Waterworks Districts

Ventura County Waterworks District No. 1

The Ventura County Waterworks District No. 1 provides water and wastewater services to over 10,000 customers in the city of Moorpark and unincorporated areas north and west of the city. The District boundaries include approximately 20,000 acres.

The District owns, operates, and maintains the Moorpark Water Reclamation Facility (MWRF). The MWRF is located just west of the Moorpark city limits, along California State Route 118. The MWRF has a design capacity of five million gallons per day (mgd) for tertiary treatment and metered an average wastewater flow of two mgd in 2015.

The plant discharges a portion of treated effluent to percolation basins for groundwater recharge; in 2015 this totaled 0.76 mgd. The District also provides reclaimed water to eight customers, including the MWRF itself. The MWRF uses the reclaimed water for facilities operations and landscape irrigation; the remaining reclaimed water is used for agricultural and dust control uses (0.54 mgd in 2015). The District anticipates that the recycled water supply will increase to 0.98 mgd in 2017. The District is also anticipating the need to expand the plant's tertiary treatment capacity so that recycled water supply will reach 1.96 mgd by 2040 to accommodate need from a growing customer base.

Ventura County Waterworks District No. 16

The Ventura County Waterworks District No. 16 owns and operates a wastewater treatment plant that serves over 400 customers throughout 300 acres in the unincorporated community of Piru, located along the Santa Clara River and State Route 126 in the western part of the county. The wastewater treatment plant has a design capacity of 0.5 mgd and treats the wastewater at a secondary level of treatment.

Other Ventura County-Operated Facilities

Camarillo Utility Enterprise

Camarillo Airport water and sewer systems, referred to as Camarillo Utility Enterprise (CUE), were turned over to Ventura County when the Oxnard Air Force Base was deactivated in 1976. The Ventura County Water and Sanitation Department took over operation and maintenance of the water and sewer

systems of CUE on January 1, 1996. The water system was turned over to the City of Camarillo in 2006. CUE currently operates as a non-profit sewer utility system supporting the Camarillo Airport facilities, tenants and property owners. Camarillo Airport is located just southwest of the city of Camarillo and encompasses 765 acres. CUE serves 57 sewer customers, and averages approximately 35,600 gallons of sewage a day. The sewage is pumped to Camarillo Sanitary District for treatment and disposal. The Ventura County Board of Supervisors is the governing body of CUE.

Todd Road Jail

The Ventura County Public Works Agency oversees the wastewater treatment plant at the Todd Road County Jail. The jail has over 185 employees and a capacity for 796 inmates. Effluent from the jail is disposed of in the on-site treatment plant and disposed of through percolation and evaporation.

Community Sanitation Districts

Camarillo Sanitary District

The Camarillo Sanitary District provides wastewater collection, treatment, and disposal service in an area encompassing approximately 15.3 square miles. The service area includes portions of the unincorporated county in the Las Posas Estates Community. The District serves most the city of Camarillo (the Camrosa Water District also serves a portion of the city east of Calleguas Creek and north of US-101). The District serves a population of approximately 42,000 within the city of Camarillo's corporate boundaries.

The Camarillo Sanitary District wastewater collection system and treatment facility are owned and managed by the District. The collection system consists of 143.4 miles of pipe, four pump stations, 33,660 feet of force mains, and one smaller pump station with minimal flow from irrigational land use. Additionally, in the northwestern portion of the City there are 20 individual parcels that pump wastewater into a common force main. The District's collection system has an average flow rate of 3.6 mgd.

The wastewater treatment plant is located west of Conejo Creek, and has a capacity of 7.25 mgd. The Camarillo Sanitary District and neighboring Camrosa Water District have a mutual agreement to divert raw wastewater between each other's systems for operation and maintenance purposes or in instances of emergency. The Camarillo Sanitation District also treats wastewater received from the Camarillo Utility Enterprise. The Camarillo Sanitary District wastewater treatment facility provides tertiary treatment of approximately 4 million gallons of wastewater daily, much lower than the facility's capacity. Approximately 50 percent of the wastewater is reclaimed and used for agricultural irrigation. The remainder is provided to a cemetery and two sports fields. Treated wastewater that is not reclaimed is discharged into Conejo Creek.

Ojai Valley Sanitary District

The Ojai Valley Sanitary District (OVSD) owns and operates the wastewater system that provides collection, treatment, and disposal services to approximately 20,000 residents in the city of Ojai and surrounding unincorporated county areas in the Ojai Valley. These unincorporated areas include the communities of Miramonte, Oak View, Meiners Oaks, and Casitas Springs. Not all residents of these communities are served by OVSD, and a study from 2011 estimates that there are 2,131 septic tanks in use in the area.

The OVSD wastewater collection system consists of 120 miles of pipeline with diameters ranging from six- to 24-inches and total of 7,500 connections. Most of the system is gravity-based, with five lift stations and 13,509 feet of force mains to support the gravity system. The Ojai Valley Wastewater Treatment Plant facility treats the wastewater at the tertiary level, with capacity of 3.0 mgd. As of July 2016, the average daily flow rate is approximately 1.4 mgd. However, this flow rate is considered low due to the drought, and under normal conditions the flow rate is expected to be closer to 1.5 mgd. This rate is sufficiently below the 3.0 mgd capacity of the treatment plant. The treatment facility does not reclaim water; treated effluent is discharged into the Ventura River.

The OVSD Infiltration and Inflow Master Plan, completed in July 2014, identified influent flow rates during storm events that have exceeded the capacity of the plant, resulting in violation of effluent water quality regulations. The OVSD has developed a strategy to reduce the infiltration and inflow rates of the collection system to address these concerns.

Saticoy Sanitary District

The Saticoy Sanitary District (SSD) provides wastewater collection and treatment service to the community of Saticoy in the unincorporated area of Ventura County, east of Ventura. The SSD wastewater system covers approximately 0.4 square miles and provides service to an estimated population of 1,130, including 177 residential and 94 commercial/industrial connections.

Wastewater collected by SSD is treated at the Jose Flores Wastewater Treatment Plant (WWTP). SSD contracts with the Ventura Regional Sanitation District (VRSD) for management, operation, and maintenance of the treatment plant. The Jose Flores WWTP is a secondary wastewater treatment plant, with treated effluent discharged to evaporation/percolation ponds located on the north bank of the Santa Clara River. The treatment plant has an average dry weather flow of 100,000 gallons per day (gpd) and wet weather flow of up to 200,000 gpd, with a design capacity of 250,000 gpd.

Triunfo Sanitation District

The Triunfo Sanitation District (TSD) operates as a Joint Powers Authority (JPA) with the Las Virgenes Municipal Water District (LVMWD). This JPA operates and maintains a sewer system and wastewater treatment facilities that serve the area that includes the Malibu Creek Watershed in both Ventura and Los Angeles counties. The area served by TSD consists of approximately 50 square miles in eastern Ventura County, including the communities of Oak Park, Lake Sherwood, Bell Canyon, and the Westlake Village and North Ranch portions of Thousand Oaks. The LVMWD serves an area of approximately 70 square miles in western Los Angeles County. Together, these two service areas complete the full-service area of the JPA, serving population of approximately 71,000, including over 30,000 Ventura County residents.

The JPA owns and operates 60 miles of trunk sewer lines; the tributary flows to these trunk sewer lines are owned and operated by cities, the County of Los Angeles, or the TSD. Independently, TSD owns and operates 120 miles of sewer collection pipeline, with 12,300 sewer service connections, four pump stations and 0.5 miles of force mains. The JPA conveyance system has the capacity for a wet weather flow of up to 32 mgd; and the TSD collection and pumping system conveys approximately 2.6 mgd. The location of the wastewater system is situated in a rugged topography that inhibits expansion; there is no anticipated expansion of the conveyance system as of 2014.

The JPA owns and manages the sanitation system consisting of two treatment facilities, the Tapia Water Reclamation Facility (TWRF), located at 731 Malibu Canyon Road in Calabasas, which provides tertiary

wastewater treatment, and the Rancho Las Virgenes Composting Facility, located 3.8 miles from the TWRF. The TWRF was constructed in 1965 and has since undergone several upgrades. As of 2014, the facility has daily capacity for treating 16 mgd, which is more than the average flow of 9.0 mgd.

In 2012, the TWRF produced a daily average of 7.0 mgd of reclaimed water, or 26 million gallons per month. Reclaimed water from the TWRF is transported to Ventura County through 5.4 miles of pipeline and has 116 customer connections. More than 70 percent of the recycled wastewater is sold to various agencies for use. The Calleguas Municipal Water District distributes the recycled water to the California Water Service Company (CalWater), the Lake Sherwood Community Services District, and the Oak Park Water Service (a public utility operated by Triunfo Sanitation District). CalWater distributes recycled water to the Lake Sherwood Golf Course, and the Westlake and North Ranch portions of the city of Thousand Oaks, including the North Ranch Golf Course. The Triunfo Sanitation District, through the Oak Park Water service, distributes recycled water to the Oak Park and Lake Sherwood communities. Surplus effluent is released to Malibu Creek or the Los Angeles River.

As of July 2016, the TWRF is going through a process of permit renewal and is anticipating a need for expanding water storage. More stringent total maximum daily load levels for Malibu Creek will require the facility to lower its discharge rate to that location, and the difference in discharge rate is too much to send to the Los Angeles River. The Las Virgenes Municipal Water District Board members are deciding between building a membrane plant and other options for water storage and release, such as existing reservoirs that are not owned by the district.

Community Water Districts

Camrosa Water District

The Camrosa Water District (CWD) provides wastewater collection, treatment, and disposal services. The wastewater is collected from approximately 6,900 connections and is treated at the Camrosa Water Reclamation Facility (CWRF).

The CWD owns and operates the Camrosa Water Reclamation Facility (CWRF) with a capacity of treating 1.5 mgd of wastewater at the tertiary level, with an average influent of 1.4 mgd. The District is currently (2016) in the process of expanding the facility capacity to 2.25 mgd. The reclaimed water is first delivered to customers for agricultural uses; the remainder is delivered to California State University Channel Islands. Any excess reclaimed water is delivered to properties outside the District boundaries.

As of 2015, the CWD has plans to construct a 3,000-foot, 15-inch pipeline to discharge effluent from the Camarillo Sanitary District's surplus recycled water and store it in CWD's storage ponds. This project is expected to be complete by the end of FY2017.

Community Service Districts

Channel Islands Beach Community Services District

The Channel Islands Beach Community Services District (CIBCSD) provides a variety of community services, including wastewater collection, in the communities of Silver Strand, Hollywood by the Sea, and Hollywood Beach. The CICSD owns and operates the sewer collection system including 14 pumps, 1,800 service connections, and 18 miles of collection pipes that range in size from 8 to 12 inches in

diameter and carry the wastewater with an average of flow rate of 23 mgd. The collection system discharges the wastewater in the city of Oxnard for treatment.

City Wastewater Facilities Providing Service to Unincorporated Areas

City of Oxnard

In addition to serving the cities of Oxnard and Port Hueneme, the City of Oxnard Wastewater Treatment Plant (OWTP) treats wastewater from several unincorporated areas, including the Naval Base Ventura County facilities at Point Mugu, Ventura Regional Sanitation District, Crestview Mutual Water Company, Santa Clara Wastewater Company, Nyeland Acres, the Channel Islands Beach Communities Service District, County Service Areas 30 and 34, and approximately 300 connections in a portion of the Las Posas Estates Community. The City wastewater services include approximately 40,000 connections, serving approximately 250,000 people. The collection system consists of 384 miles of pipes, ranging in diameter from 4 to 66 inches. The collection system also includes 15 pump stations, each with 2 pumps except for one that has 4 pumps.

As of 2015, OWTP is permitted to process up to 31.7 mgd and has a peak wet weather flow capacity of 50 mgd. The current (2016) rate of wastewater flow to the treatment facility is approximately 17 mgd; this is lower than the average flow rate of 20-22 mgd which was considered normal prior to the drought. The wastewater treatment facility reclaims 8.0 mgd with 2.0 mgd returning to the facility as part of the waste byproduct process and 6.0 mgd used for golf courses, agricultural, and landscape watering. The City expects to expand wastewater treatment and offer more reclaimed water for agricultural uses. Wastewater that is treated and not reclaimed is disposed in the Pacific Ocean. The facility currently (2016) has sufficient capacity, but the City anticipates upgrading the older infrastructure and expanding wastewater reclamation. A detailed description of the OWTP and its operations can be found in the City of Oxnard Public Works Integrated Master Plan.

City of Simi Valley

The City of Simi Valley provides wastewater services for approximately 127,000 people in the City of Simi Valley and several nearby unincorporated areas including the Sinaloa Lake and Santa Susana Knolls areas, as well as four unincorporated areas that are completely surrounded by incorporated areas (i.e., county islands). The wastewater collection system consists of approximately 374 miles of sewer line, with pipes ranging from 6 to 48 inches in diameter, and 3 lift stations. The system has almost 40,000 connections, including 527 connections in the unincorporated areas. The system has an average flow rate of approximately 7.8 mgd with a design capacity for 12.5 mgd. The Water Quality Control Plant is located on 33 acres in the western end of Simi Valley and has capacity to treat approximately 10 mgd at the tertiary level of treatment. Most of the treated water is discharged to the Arroyo Simi River; a small portion is reclaimed and used for dust control and irrigation at the Simi Valley Landfill.

City of Thousand Oaks

The City of Thousand Oaks provides water and wastewater services to most of the city and portions of the surrounding unincorporated area, including the communities of Rolling Oaks, Lynn Ranch, Ventu Park, and Kelley Estates. The City owns and maintains the wastewater collection system and the Hill Canyon Wastewater Treatment Plant. The wastewater collection system includes 5,000 miles of pipes ranging in diameter between 6 and 42 inches, and includes 42,000 connections, serving approximately 130,000 people.

The Hill Canyon Wastewater Treatment Plant facility treats approximately 90 percent of wastewater produced in Thousand Oaks. The remaining 10 percent of the city, in the Westlake Village area, is served by the Las Virgenes Municipal Water District, located in Los Angeles County and part of a Joint Powers Authority with the Triunfo Sanitation District. Westlake Village straddles the county line between Los Angeles and Ventura counties. The western portion of Westlake Village is an incorporated city in Los Angeles County, and the eastern portion is a community within the Thousand Oaks city limits. The City is currently (2016) in the process of expanding wastewater services to 10 more unincorporated parcels.

The Hill Canyon Wastewater Treatment Plant has a design capacity of 14.0 mgd and averages 8.0 mgd of wastewater treatment per day, though prior to the current (2016) drought, the facility averaged 10.0 mgd. The wastewater is treated to an advanced tertiary level. Approximately 90 percent of the treated water is reclaimed and sold to the Camrosa Water District for irrigation uses. The remaining 10 percent is discharged into the Calleguas Creek in order to maintain a 6.0 cfs flow in the stream for environmental habitat.

City of Ventura

Ventura Water is the City of Ventura department that manages water and wastewater treatment services. The Ventura Water Reclamation Facility (VWRF) provides wastewater collection and treatment services for City residents wastewater treatment services for McGrath State Beach Park and the North Coast Communities (County Service Area 29). Ventura Water also took over sewer service in the formerly unincorporated Montalvo Community Services District in February 2016, including both wastewater treatment and the collection system of 7.5 miles of sewer mains.

The VWRF has a permitted capacity of 14 mgd and discharges up to 9 mgd. The VWRF currently (2017) discharges an average of 7.3 mgd with drought conditions. The treated effluent is recycled and used for irrigation of golf courses (Olivas Links Golf Course and Buenaventura Golf Course), the Marina Park, and other landscape near Olivas Drive and the Harbor area. The rest of the recycled water is discharged into the Santa Clara River Estuary.

The City of Ventura has a program to provide recycled water at a filling station at the VWRF, available for commercial and industrial entities and City residents; the City anticipates that AERA Energy, the Ventura County Transportation Department, the Ventura City Parks Department, and the San Buenaventura State Park will self-haul recycled water from this station for irrigation and dust control.

Regional Sanitation District

Ventura Regional Sanitation District

The Ventura Regional Sanitation District (VRSD) is an independent public waste management agency that provides a range of services including wastewater collection, treatment, and disposal to both public agencies and private organizations. VRSD is overseen by a nine-member board of directors representing eight cities and eight special districts. Agencies providing wastewater services that are served by VRSD include the Triunfo Sanitation District; the Saticoy Sanitary District; County Service Area 29; and the Channel Islands Beach Community Services District.

TABLE 7-2
WASTEWATER TREATMENT CAPACITY
Ventura County

Agency	Total Number of Connections	Rated Capacity (MGD[1])	ADWF[2] (MGD)	Treatment Level
County Service Area No. 29	317	N/A	0.085	Secondary
County Service Area No. 30	510	N/A	0.2	Secondary
County Service Area No. 32	N/A	N/A	N/A	N/A
County Service Area No. 34	N/A	N/A	N/A	N/A
Camarillo Utility Enterprise	57	N/A	0.0356	N/A
Todd Road Jail	N/A	N/A	N/A	N/A
Ventura County Waterworks District No. 1	10,000 (population)	5	2	Tertiary
Ventura County Waterworks District No. 16	400 (population)	0.5	N/A	Secondary
Camarillo Sanitary District	70,000 (population, city and unincorporated)	7.25	4	Tertiary
Ojai Valley Sanitary District	20,000 (customers)	3	1.4	Tertiary
Saticoy Sanitary District	271	0.25	0.1	Secondary
Triunfo Sanitation District	12,300	16	9	Tertiary
Camrosa Water District	6,900	1.5	1.4	Tertiary
Channel Islands Beach Community Services District	1,800	N/A	N/A	N/A
City of Oxnard	40,000	32.7	17	Tertiary
City of Simi Valley	40,000 (527 unincorporated)	12.5	7.8	Tertiary
City of Thousand Oaks	130,000 (population)	14	8	Tertiary
City of Ventura	25,528	14	7.1	Tertiary

[1]Million Gallons per Day
[2]Average Dry Weather Flow.
Source: Ventura LAFCo, MSR 2004

Regulatory Setting

Federal

U.S. Environmental Protection Agency (EPA)

The EPA Office of Wastewater Management (OWM) supports the Federal Water Pollution Control Act (Clean Water Act) by promoting effective and responsible water use, treatment, disposal and management, and by encouraging the protection and restoration of watersheds. The OWM is responsible for directing the National Pollutant Discharge Elimination System (NPDES) permit, pretreatment, and municipal bio-solids management (including beneficial use) programs under the Clean Water Act. The OWM is also home to the Clean Water State Revolving Fund, the largest water quality funding source, focused on funding wastewater treatment systems, non-point source projects, and estuary protection.

Clean Water Act (CWA)

The CWA is the cornerstone of surface water quality protection in the United States. Section 303 of the CWA requires States to adopt water quality standards for all surface waters of the United States. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric although narrative criteria based on biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards.

State

State Water Resources Control Board (SWRCB)

The SWRCB, in coordination with nine Regional Water Quality Control Boards (RWQCB), performs functions related to water quality, including implementation and compliance with the provisions of the Federal CWA, issuance of wastewater discharge permits (NPDES and WDR) and other programs on stormwater runoff, and underground and above ground storage tanks.

Cortese-Knox-Hertzberg Governmental Reorganization Act of 2000

The Cortese-Knox-Hertzberg Governmental Reorganization Act of 2000 requires California Local Agency Formation Commissions (LAFCOs) to conduct municipal service reviews for specified public agencies under their jurisdiction. One aspect of municipal service review is to evaluate an agency's ability to provide public services, such as wastewater collection and treatment, within its ultimate service area. A municipal service review is required before an agency can update its sphere of influence.

California Code of Regulations, Title 22

Title 22 regulates the use of reclaimed wastewater. Regulation of reclaimed water is governed by the nine RWQCBs and the California Department of Public Health. In most cases, only disinfected tertiary water may be used on food crops where the recycled water would come into contact with the edible portion of the crop. Disinfected secondary treatment may be used for food crops where the edible portion is produced above ground and will not come into contact with the secondary effluent. Lesser levels of treatment are required for other types of crops, such as orchards, vineyards, and fiber crops. Standards are

also prescribed for the use of treated wastewater for irrigation of parks, playgrounds, landscaping and other non-agricultural irrigation.

AB 885 Regulations

State Water Resources Control Board adopted regulations of onsite wastewater treatment systems (OWTS), also known as septic systems. The Policy became effective on May 13, 2013, as an amendment of the California Water Code Section 13290, and was designed to allow the continued use of OWTS, while protecting water quality and public health. The County of Ventura Environmental Health Division Onsite Wastewater Treatment Program is currently (2016) working with the State Water Resources Board to implement the new regulations in CSA 32.

Local

2005 Ventura County General Plan

The General Plan covers wastewater collection and treatment in Chapter 4, Public Facilities and Services. Sections 4.3 and 4.4 include goals, policies, and programs related to wastewater collection and treatment. The following Area Plans also contain applicable goals and policies related to wastewater collection and treatment:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Piru Area Plan; and
- Saticoy Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for wastewater collection and treatment. These can be found in Sections 29a. Waste Treatment & Disposal Facilities – Individual Sewage Disposal Systems and 29b Waste Treatment & Disposal Facilities – Sewage Collection/Treatment Facilities.

Environmental Health Division Onsite Wastewater Treatment (OWTS) Program

The Environmental Health Division Onsite Wastewater Treatment (OWTS) Program is responsible for protecting public health and the environment from the potential adverse health and environmental impacts associated with onsite individual sewage disposal systems. Staff carry out this responsibility through review of septic system design proposals, review of septic system design criteria, and inspection of both new septic system construction and repair of existing systems to determine conformance with applicable codes. The County of Ventura Environmental Health Division OWTS Program is currently (2016) working with the State Water Resources Board to gain approval of a Local Agency Management Plan (LAMP) which will satisfy the Tier 2 requirement set forth in the AB885 regulations, OWTS Policy. The LAMP will apply to all new and replacement OWTS, and plans to utilize the existing CSA 32 easement offers.

Key Terms

Wastewater Collection System. The totality of the pipes, pump station, manholes, and other facilities that convey untreated (raw) wastewater from the various sources to a wastewater treatment facility.

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SECTION 7.2 STORM DRAINAGE AND FLOOD PROTECTION

Introduction

The purpose of this section is to summarize existing information regarding flood control facilities and practices in Ventura County, specifically identifying unincorporated Ventura County.

Major Findings

- The Ventura County Watershed Protection District (VCWPD) maintains flood control facilities in four zones:
  - Ventura River Watershed Zone;
  - Santa Clara Watershed Zone;
  - Calleguas Creek Watershed Zone; and
  - Malibu and Potrero Creeks and Cuyama River Watershed.
- Ventura County has a Class 6 Community Rating System, administered by the Federal Emergency Management Agency (FEMA). The Community Rating System rewards cities and counties that voluntarily exceed the minimum requirements of the National Flood Insurance Program (NFIP); the Class 6 rating gives properties within a floodplain in the unincorporated areas a 20 percent discount on flood insurance.
- Permittees under the Ventura County NPDES permit include the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Simi Valley, Santa Paula, Thousand Oaks, Ventura, the County of Ventura, and the Ventura County Watershed Protection District.

Existing Conditions

The primary surface water sources in Ventura County are the Ventura River, the Santa Clara River, and Calleguas Creek, all of which traverse the southern and most populated areas of the county. The watershed in the northern part of Ventura County is largely unpopulated and mountainous. Runoff from these areas may reach the populated areas.

Structures that are not properly elevated and constructed with floodproof materials are susceptible to flood damage within a FEMA Special Flood Hazard Area. Since 1988, a Floodplain Development Permit is required for building a new structure within a FEMA Special Flood Hazard Area. Fewer structures are being built within a FEMA Special Flood Hazard Area.

Ventura County Watershed Protection District

The Ventura County Flood Control District was formed in 1944 to protect watercourses, watersheds, public highways, life, and property from damage or destruction from floodwaters. In 2003, the District changed its name to the Ventura County Watershed Protection District (VCWPD). The District maintained its roles relating to control and conservation of flood and storm waters and for the protection of watercourses, watersheds, public highways, life and property in the district from damage or destruction from these waters.

The VCWPD has authority over channels in its jurisdictional boundaries, established through policies and ordinances adopted by the Board of Supervisors. The VCWPD ensures compliance with the National Flood Insurance Program, through permit review of structures in floodplains and evaluation of site plans for developments in floodplains. In incorporated areas, the cities serve as the floodplain managers for each designated sphere of influence.

The VCWPD maintains flood control facilities in four zones. The facilities maintained by the VCWPD have either been constructed by the VCWPD or transferred to the VCWPD after being constructed by others. In addition to regular maintenance of flood control channels and 40 dams and debris basins, the VCWPD performs storm-related maintenance on an as-needed basis. The four zones are described below and shown in Figure 7-2.

- **Zone 1: The Ventura River Watershed Zone.** This zone follows the boundaries of the Ventura River Watershed and coastal drainages in the western part of the county. The zone includes the cities and communities of Ojai, Ventura, Oak View, Casitas Springs, Live Oak Acres, and Meiners Oaks. The major waterways in this zone include the Ventura River, the San Antonio Creek, and the tributaries in the Ojai Valley.
- **Zone 2: The Santa Clara Watershed Zone.** This zone follows the boundaries of the Santa Clara River Watershed and the local costal drainages in the cities of San Buenaventura and Oxnard and the drainages located in Lockwood Valley. The zone includes the cities and communities of Piru, Fillmore, Santa Paula, Ventura, El Rio, Saticoy, Oxnard, Port Hueneme, and Nyeland Acres. The major waterways in this zone include the Santa Clara River and its tributaries, and various Oxnard Plain drains.
- **Zone 3: The Calleguas Creek Watershed Zone.** This zone follows the boundaries of the Calleguas Creek Watershed and its tributaries. The zone includes the cities and communities of Simi Valley, Moorpark, Camarillo, Thousand Oaks, Newbury Park, and Somis. The major waterways in this zone include the Arroyo Conejo, Arroyo Simi, Santa Rosa Creek, Conejo Creek, Arroyo Las Posas, Calleguas Creek, and Revolon Slough.
- **Zone 4: The Malibu and Potrero Creeks and Cuyama River Watershed.** This zone includes parts of the northernmost and southernmost areas of the county; it includes a combination of the Malibu costal drainages in the southern part of the county and the relatively undeveloped Cuyama River Watershed in the northern part of the county. The zone also includes Westlake Village. The major waterways in this zone include the Potrero Creek and Medea Creek.

All channels containing runoff with a peak flow rate of 500 cubic feet per second (cfs) or more during a 100-year storm come under the VCWPD's jurisdiction. These are "redline" channels and total 939.03 miles in length.

Community Rating System for Flood Control

The Community Rating System (CRS) is a program administered by the Federal Emergency Management Agency (FEMA). The program offers financial incentives to cities and counties that voluntarily exceed the minimum requirements of the National Flood Insurance Program (NFIP). The three goals of the CRS are to (1) reduce and avoid flood damage to insurable property; (2) strengthen and support the insurance aspects of the NFIP; and (3) foster comprehensive flood plan management. The CRS includes multiple programs or "activities" in which communities can participate to earn CRS points. These include public outreach and education on flood prevention measures, preserving open space, maintaining special

certifications for staff members as Certified Floodplain Managers, removing debris and sediment from flood control channels, and adoption of an All-Hazards Mitigation Plan. Each community receives a Class Rating based on the number of points earned; the number of points a community has earned determines if a discount is available to property owners on their flood insurance policies. As of 2016, five percent of all NFIP member communities participate in the CRS program, and fifteen percent of all NFIP California communities participate in the program.

CRS Classes are rated from 1 to 9, with Class 1 representing the highest (best) Class. On May 1, 2016, Ventura County received a Class 6 rating, and consequently, properties within a floodplain in the unincorporated areas of Ventura County are eligible for a 20 percent premium discount on flood insurance.

See Chapter 11, Section 3, for more information about flood hazards.

Stormwater Treatment

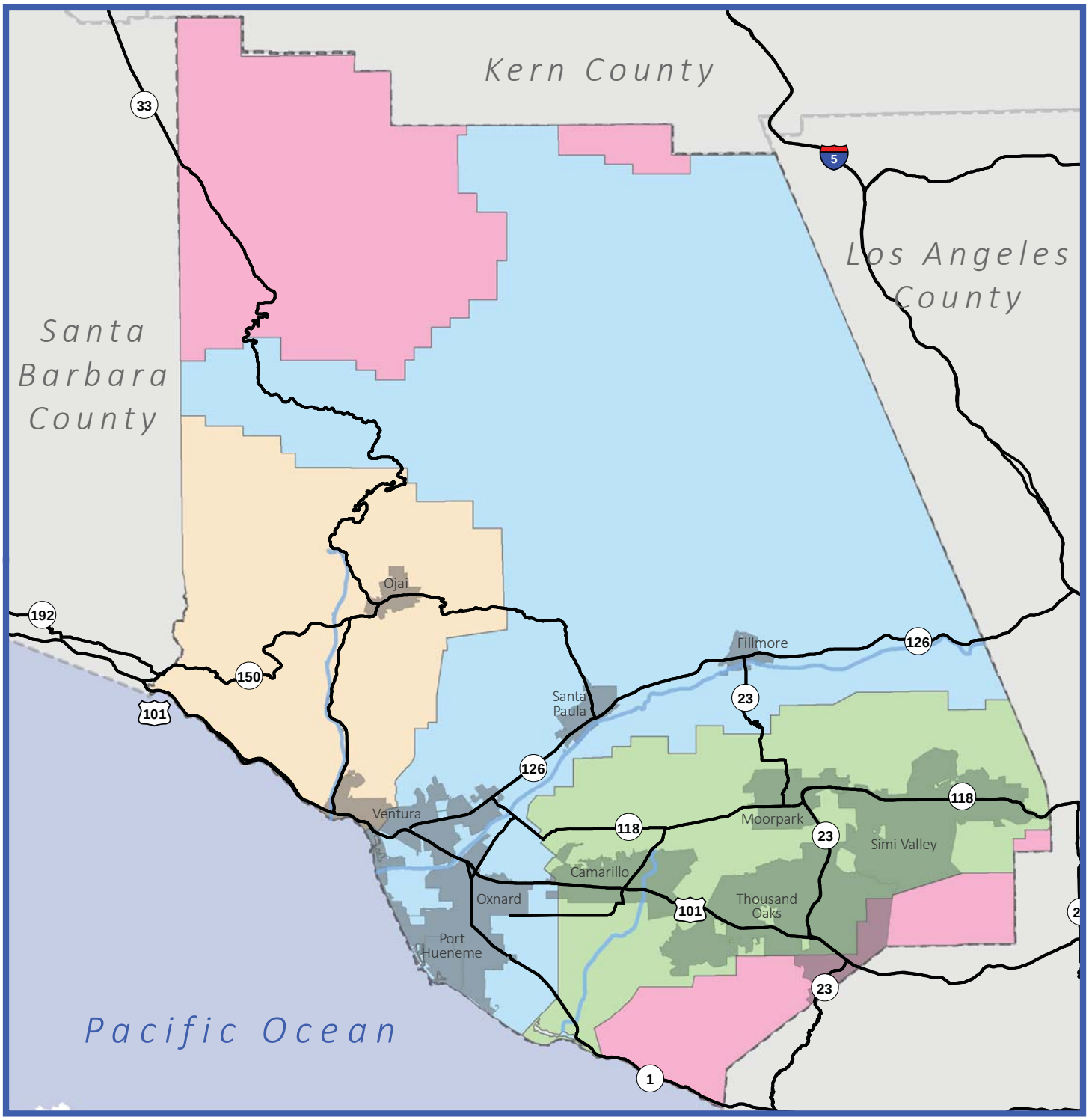
The National Pollutant Discharge Elimination System (NPDES) enforces the Federal Clean Water Act through regulating stormwater discharge from three potential pollutant sources: industrial, construction, and municipal separate storm sewer systems (MS4s). These permits are designed to prevent pollutants from entering local surface waters through stormwater runoff. The permits ensure that any new development or redevelopment will use best management practices (BMPs) designed to control pollution at its source.

The State of California is authorized by the Federal government to implement the stormwater NPDES permitting program. In California, the State oversees the industrial and construction stormwater permits, and regional water quality control boards oversee the MS4 permits.

The industrial stormwater permit is required for industrial facilities, including manufacturing facilities, mining operations, transportation facilities, disposal sites, and recycling yards that meet the County's applicability requirements. Construction stormwater permits are required for projects that disturb more than one acre of soil, or projects that disturb less than one acre but are included in a development which in total will disturb more than one acre; this permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) to guide compliance with the Permit's limits on levels of erosion, pollution, sediment, and requirements for site stabilization.

Ventura Countywide Stormwater Quality Management Program

The Ventura Countywide Stormwater Quality Management Program (VCSQMP) is intended to meet the requirements of the Ventura Countywide National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit (Permit), issued by the Los Angeles Regional Water Quality Control Board.



Ventura County 2040 General Plan

Figure 7-2: Watershed Protection District Zones

Map Date: July 22, 2016

Source: Ventura County Watershed Protection District; California Department of Transportation, 2007.

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Ventura County Boundary
Cities
Major Roadways
Major Waterways
Zone 1
Zone 2
Zone 3
Zone 4

Permittees under the Ventura County NPDES permit include all 10 cities in the county, the County of Ventura, and the Ventura County Watershed Protection District. Together, these permittees developed the Ventura Countywide Stormwater Quality Management Program (VCSQMP), which is managed through six subcommittees and a Management Committee. The subcommittees include Business Outreach and Illicit Discharge, Capital Improvement Projects, Construction, Land Development, Public Outreach, and Public Agency Activities. The 2010 Permit expired on July 8, 2015, but is currently (May 2016) on administrative extension until another permit is adopted.

The VCSQMP implements the Ventura Municipal Stormwater Permit Order No. R4-2010-0108, including enforcement of the Ventura County Ordinance Code No. 4450 relating to stormwater quality management for unincorporated areas of Ventura County and County facilities. The Program includes the following activities:

- Ongoing water quality monitoring;
- Inspecting and implementing best management practices (BMPs) at businesses, facilities, and in construction activities;
- Investigating suspicious or illegal discharges, connections, and dumping into the County storm drain systems and receiving waters, including maintaining and responding to the County Stormwater Hotline;
- Providing education to the public and County employees on stormwater pollution prevention through the Community for a Clean Watershed Program;
- Implementing Low Impact Development (LID) requirements, as identified in the Permit's Planning and Land Development Program.

Regulatory Setting

Federal

Clean Water Act (CWA)

In 1972, the CWA was amended to provide that the discharge of pollutants to water of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial stormwater discharges, including discharges associated with construction activities, under the NPDES program m.

National Pollutant Discharge Elimination System (NPDES)

In 1990, the EPA published final regulations that establish stormwater permit application requirements. The regulations, also known as Phase I of the NPDES program, provide that discharges of stormwater to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge complies with a NPDES permit. Phase II of the NPDES program expanded the requirements by requiring operators of municipal separate storm sewer systems (MS4s) in urbanized areas and small construction sites to be covered under a NPDES permit, and to implement programs and practices to control polluted stormwater runoff. The Phase II Small MS4 General Permit was renewed and became effective on July 1, 2013.

Federal Emergency Management Act (FEMA)

FEMA is the Federal agency that oversees floodplains and manages the National Flood Insurance Program (NFIP), as adopted under the National Flood Insurance Act of 1968. FEMA's regulations govern the delineation of floodplains and establish requirements for floodplain management. FEMA prepares Digital Flood Insurance Rate Maps (DFIRMs) that indicate the regulatory floodplain to assist communities such as Ventura County with land use and floodplain management decisions to meet the requirements of the National Flood Insurance Program. FEMA has prepared a DFIRM for all of Ventura County, effective January 20, 2010.

State

State Water Resources Control Board (SWRCB)

In California, the NPDES stormwater permitting program is administered by the SWRCB through its nine Regional Water Quality Control Boards (RWQCBs). The SWRCB has established a construction General Permit that can be applied to most construction activities in the State. Construction permittees may choose to obtain individual NPDES permits instead of obtaining coverage under the General Permit, In California, construction projects that will disturb more than one acre are required to obtain NPDES general permit coverage by submitting Permit Registration Documents (PRDs) including a Notice of Intent (NOI), a Stormwater Pollution Prevention Plan (SWPPP) and fees to be covered under the recently adopted SWRCB Order No. 2009-0009-DWQ (NPDES No. CAS000002). The new California General Permit now requires a risk level determination based on site and receiving water characteristics, a range of monitoring, sampling and discharge requirements based on defined risk level and post construction runoff reduction requirements that went into effect September 2012.

Local

2005 Ventura County General Plan

The General Plan covers storm drainage and flood protection in Chapter 4, Public Facilities and Services. Section 4.6 includes goals, policies, and programs related to storm drainage and flood protection. The following Area Plans also contain applicable goals and policies related to storm drainage and flood protection:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for storm drainage and flood protection. These can be found in Sections 31a. Flood Control Facilities/Watercourses – Watershed Protection District and 31b. Flood Control Facilities/Watercourses – Other Facilities.

Ventura County Drainage Design Standards

The storm water drainage system for any proposed development within Ventura County deemed complete after October 11, 2011 must be designed in accordance with the 2010 Ventura Countywide Stormwater Municipal Permit (Order No. R4-2010-0108). New development deemed complete before October 11, 2011 must be designed in accordance with the 2000 Ventura County Municipal Stormwater Permit.

County of Ventura Ordinance No. 4450

Ventura County Ordinance Code No. 4450 relates to stormwater quality management, specifically in the unincorporated areas of the county. Ordinance No. 4450 prescribes regulations pursuant to the Federal Water Pollution Control Act. It prohibits non-stormwater discharges from entering the County storm drain system, and requires that the amount of discharge of pollutants that enter stormwater be reduced to the maximum extent practicable.

County of Ventura Floodplain Management Ordinance No. 3841 (as Amended by Ordinance Nos. 3890, 3902, 3954, and 4465)

The Floodplain Management Ordinance is specific to the unincorporated area of Ventura County. This Ordinance aims to minimize public and private losses due to flood conditions in the 100-year floodplain through restrictions and regulations of land uses and activities in areas within and outside the floodplain that could alter natural flood controls, or other damages such as erosion or dredging that could ensure flood safety.

Key Terms

Basin. A hydrologic unit defined as a part of the surface of the earth covered by a drainage system consisting of a surface stream or body of impounded surface water plus all tributaries.

Best Management Practices (BMPs). Activities or structural improvements that help reduce the quantity and improve the quality of stormwater runoff. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

Erosion. When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally, but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Flood. A temporary rise in flow or stage of any watercourse or stormwater conveyance system that results in stormwater runoff exceeding its normal flow boundaries and inundating adjacent, normally dry areas.

Flood Control. The specific regulations, facilities, and practices that reduce or prevent the damage caused by stormwater runoff.

Floodplain. Any land area susceptible to inundation by stormwater from any source.

Floodplain Management. The implementation policies and programs to protect floodplains and maintain their flood control function.

Low Impact Development (LID). Development that incorporates a combination of drainage design features and pollution reduction measures to reduce development impacts on hydrology (peak runoff flow rates) and water quality.

NPDES. "National Pollutant Discharge Elimination System" – the name of the surface water quality program authorized by Congress as part of the 1987 Clean Water Act.

Redline Channel. Any channel containing runoff with a peak flow rate of more than 500 cubic feet per second (FS) during a 100-year storm.

Runoff. Drainage or flood discharge that leaves an area as surface flow or as pipeline flow.

Stormwater. Precipitation that accumulates in natural and/or constructed storage and stormwater systems during and immediately following a storm event.

Stormwater Facilities. Systems such as watercourses, constructed channels, storm drains, culverts, and detention/retention facilities that are used for conveyance and/or storage of stormwater runoff.

Stormwater Management. Functions associated with planning, designing, constructing, maintaining, financing, and regulating the facilities (both constructed and natural) that collect, store, control and/or convey stormwater.

Surface Water. Water that remains on the surface of the ground, including rivers, lakes, reservoirs, streams, wetlands, impoundments, seas, and estuaries.

Watercourse. A lake, stream, creek, channel, stormwater conveyance system, or other topographic feature, over which stormwater flows at least periodically.

Watershed. That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as a drainage area, catchment or river basin).

Wetlands. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

References

Documents

Flood Warning Program and Response Annex (CRS Activity 610), For Use with Multi-Hazard Mitigation Plan, Ventura County Watershed Protection District Watershed Resources and Technology Division Hydrology Section, August 2015.

Order R4-2010-0108 NPDES Permit No. CAS004002 (MS4 Permit), July 2010.

Ventura County Technical Guidance Manual for Stormwater Quality Control Measures, Manual Update 2011.

Ventura County Water Protection District Flood Warning Program, 2015 Hazard Mitigation Plan.

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Websites

Community for a Clean Watershed Website, accessed May 2016.

One Stop-Permitting, Guidelines/Standards, Website accessed April 2016.

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Ventura County Hazard Mitigation Plan, 2015.

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Ventura Countywide Stormwater Quality Management Program, 2014-2015 Annual Report.

Persons Consulted

Brown, Laurie, Watershed Planning and Permits Division, Ventura County Watershed Protection District, July 2016.

Gutierrez, Raymond, Development and Inspection Services Manager Ventura County, September 2016.

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SECTION 7.3 SOLID AND HAZARDOUS WASTE DISPOSAL AND RECYCLING

Introduction

This section describes the existing solid and hazardous waste disposal services, facilities, and recycling programs in Ventura County.

Major Findings

- During the fourth quarter of 2014 and the first three quarters of 2015, Ventura County as a whole had a solid waste diversion rate of 39 percent; the unincorporated area in Ventura County had a diversion rate of 58 percent.
- There are 117 facilities in Ventura County that collect and/or transfer hazardous wastes. These facilities collect different types and combinations of hazardous wastes, with 10 collecting household hazardous waste/e-waste, four collecting medications, and 25 collecting sharps. Seven are transfer stations, and 84 are used oil collection facilities.
- In 2014, 2,617,807 pounds of household hazardous waste were collected in Ventura County, or about 3.12 pounds per capita.
- The County Integrated Waste Management Plan (CIWMP) calculated that landfills in Ventura County have a capacity greater than the targeted 15 years.

Existing Conditions

Solid Waste Collection

The Ventura County Integrated Waste Management Division (IWMD) manages the collection and disposal of solid and hazardous waste in the unincorporated areas of Ventura County. The County is focused on reducing waste, preventing pollution, and promoting sustainable management of waste materials. The IWMD is also responsible for ensuring Ventura County complies with the California Integrated Waste Management Act, and maintains a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP provides an assessment of the County's goals and objectives, issues and problems identified in the incorporated and unincorporated areas of the county, summary of waste management programs and infrastructure, existing and proposed solid waste infrastructure, and description of the steps that the County will take to achieve the outlined goals.

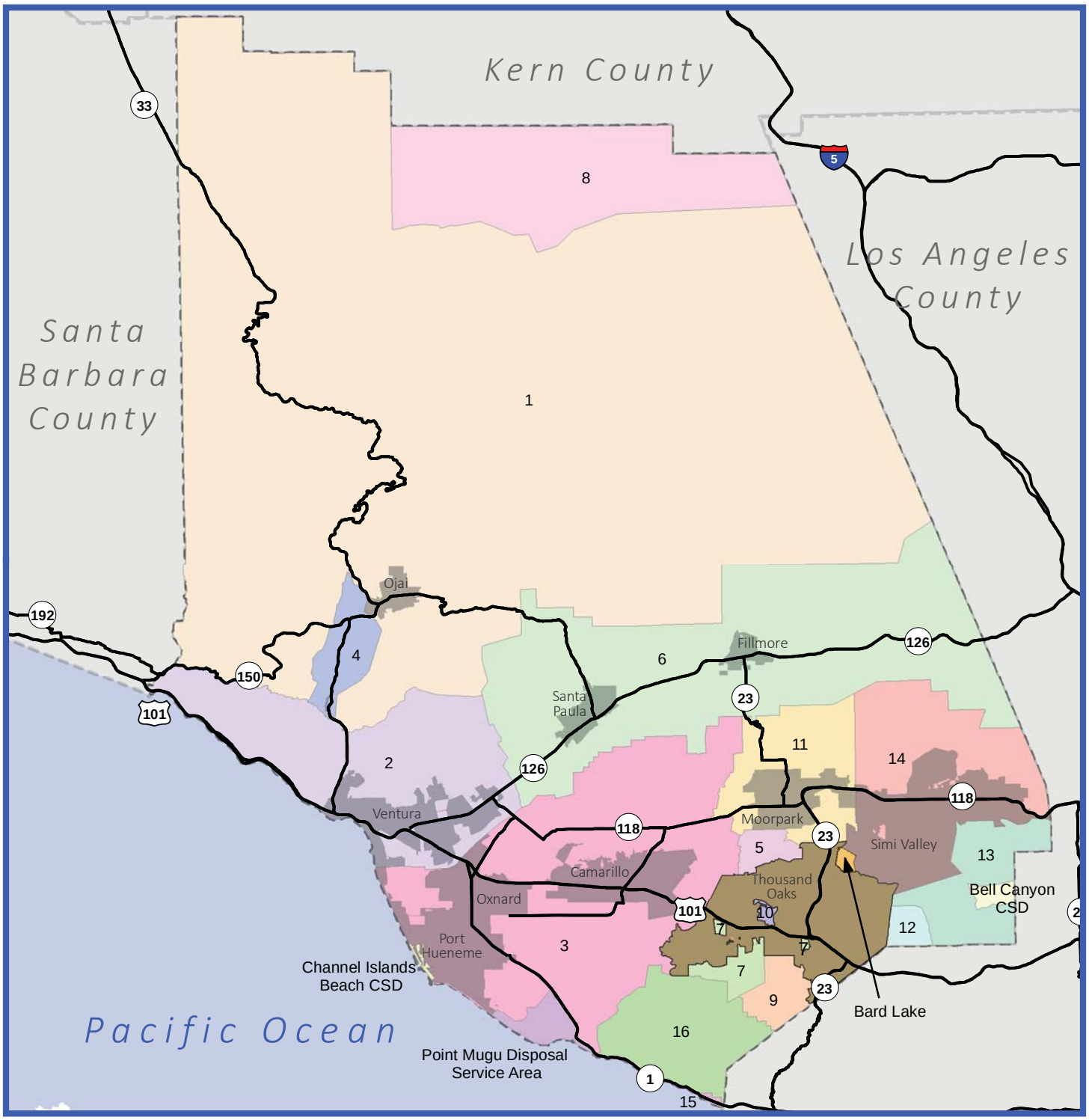
The IWMD administers five residential and 14 commercial contracts for solid waste collection in the unincorporated parts of the county. Residential solid waste collection services in the unincorporated area include receptacles for trash, recyclables, and green material (a.k.a. "yard waste"). Currently (May 2016), there are five companies that collect solid waste for approximately 24,800 households in the unincorporated areas of the county: E.J. Harrison & Sons and its subsidiaries, Santa Clara Valley Disposal Company and Newbury Disposal Company; Waste Management/G.I. Industries; and Mountainside Disposal, Inc. These residential contracts were renewed most recently in 2014 and will expire on December 31, 2023.

Table 7-3 describes the service areas of the companies contracted for residential solid waste in the unincorporated areas of the county; Figure 7-3 shows the service area boundaries. Bard Lake is shown in Figure 7-3, but is not included in Table 7-3. The County is responsible for the tonnage of solid waste produced in the Lake's area because it is in the unincorporated county, however it is a special district and selects its own hauler and is located outside of the service area managed by the County.

TABLE 7-3
RESIDENTIAL SERVICE AREAS FOR SOLID WASTE COLLECTION AGREEMENTS
Unincorporated Areas of Ventura County
2014

Name	Service Areas	Service Area Location
E.J. Harrison and Sons, Inc.	1	Unincorporated Ojai & North County
	2	Rincon, La Conchita, Faria Beach, Solimar, Unincorporated Area, Ventura, and Saticoy
	3	Unincorporated Area Oxnard Plains and Unincorporated Area Camarillo
	4	Ventura River Valley (Casitas Springs, Oak view, Meiners Oaks and Mira Monte)
	5	Santa Rosa Valley
	Point Mugu Disposal Service Area, Channel Islands Beach CSD	
Santa Clara Valley Disposal Company	6	Piru, Unincorporated Area Santa Paula and Unincorporated Area Fillmore
Newbury Disposal Company	7	North Lockwood Valley (portion)
Mountainside Disposal, Inc.	8	North Lockwood Valley (portion)
Waste Management/G.I. Industries, Inc.	9	Lake Sherwood
	10	Lynn Ranch
	11	Unincorporated Area Moorpark, Home Acres and Lexington Hills
	12	Oak Park
	13	Santa Susana Knolls
	14	Unincorporated Area Simi Valley
	15	Yerba Buena (BCH/Tongareva)
	16	Yerba Buena (Mountain)
	Bell Canyon CSD	

Source: County of Ventura, Residential Service Areas for 2014 Solid Waste Collection Agreements, Published December 18, 2013.



Ventura County Boundary

Cities

Major Roadways

Figure 7-3: Residential Service Areas for Solid Waste Collection Agreements

Map Date: November 01, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

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Fourteen companies collect commercial solid waste in Ventura County, some serving both incorporated and unincorporated areas of the county, as well as residential and/or commercial locations. New commercial contracts were negotiated in 2014 and will expire on December 31, 2023. These companies include:

- American Resource Recovery, Inc.
- Anderson Rubbish Disposal
- E.J. Harrison & Sons, Inc.
- G.I. Industries, Inc. (Waste Management)
- H. Cattle Company
- Hobbs & Sons, Inc.
- J & L Hauling & Disposal, Inc.
- J.T.'s Rubbish & Recycling
- JTZ, Inc. (dba Zaccaro Roll-Off)
- Marborg Industries
- Mountainside Disposal, Inc.
- Newbury Disposal Company
- Peach Hills Soils
- Santa Clara Valley Disposal Company

Solid Waste Facilities

The Ventura County Environmental Health Division-Solid Waste Program is the Local Enforcement Agency (LEA) for solid waste. The LEA's responsibilities include ensuring safe handling and disposal of both residential and commercial solid waste. The County does this by overseeing the inspections, permitting, and monitoring or operations of solid waste facilities, including landfills, waste transfer processing stations, and composting operations. Landfill sites used by the County are shown in Table 7-4 and Figure 7-4. Waste transfer and processing stations and composting facilities are shown in Table 7-5 and Figure 7-5.

Landfills

There are two active solid waste disposal/landfill sites in Ventura County and two located outside of the county that accept waste from Ventura County (see Figure 7-4 and Table 7-4). There are also 38 waste disposal/landfill sites in Ventura County that have an operational status of "closed," "closing," or "inactive." The four active solid waste facilities that serve areas of Ventura County are described below.

TABLE 7-4
LANDFILL SITES
Serving Ventura County

Landfill	Operator	Landfill Location
Toland Road Landfill	Ventura Regional Sanitation District	3500 North Toland Road, Santa Paula, Ventura County
Simi Valley Landfill and Recycling Center	Waste Management	2801 Madera Road, Simi Valley, Ventura County
Calabasas Landfill	County of Los Angeles	5300 Lost Hills Road, Agoura Hills, Los Angeles County
Chiquita Canyon Landfill	Waste Connections	29201 Henry Mayo Dr., Castaic, Los Angeles County

Source: Chiquita Canyon Landfill Website, July 2016; Calabasas Landfill, Los Angeles County Sanitation District Website, July 2016; Simi Valley Landfill, Waste Management Website, July 2016; Toland Road Sanitary Landfill, Ventura Regional Sanitation District Website, July 2016.

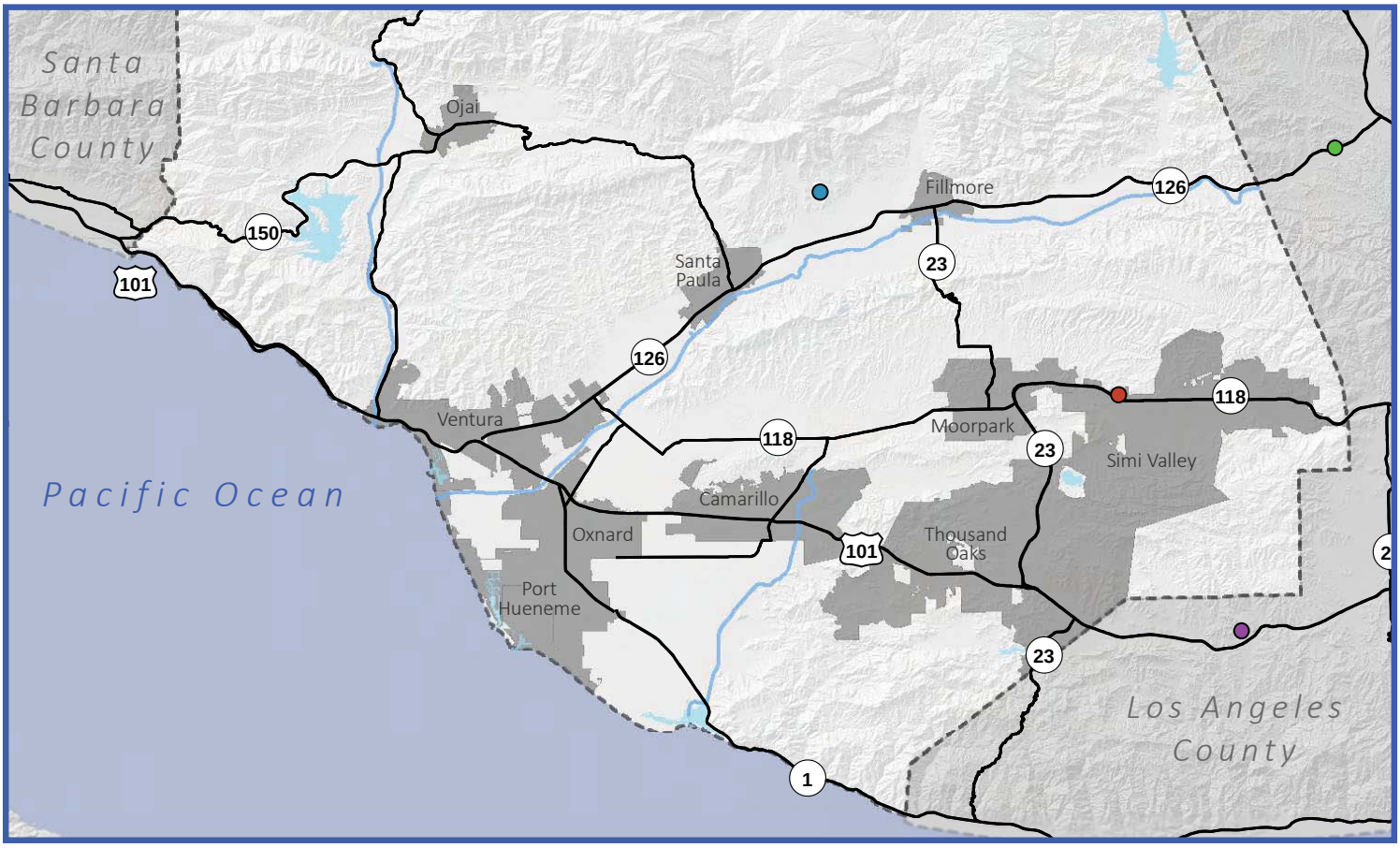

Figure 7-4: Landfills

Map Date: July 22, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

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- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- Water Bodies
- Calabasas Landfill
- Chiquita Canyon Landfill
- Simi Valley Landfill and Recycling Center
- Toland Road Landfill

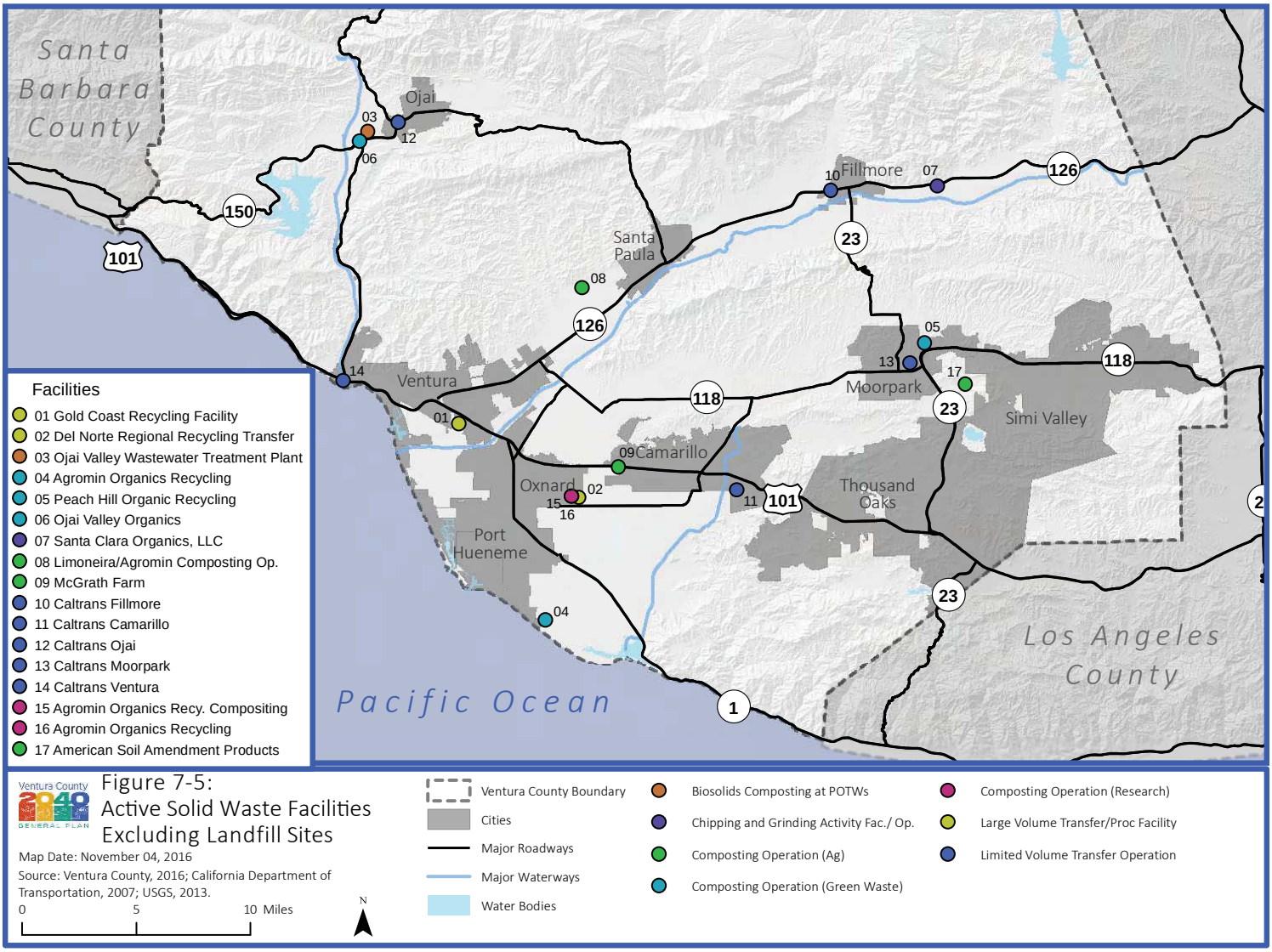

Figure 7-5:
Active Solid Waste Facilities
Excluding Landfill Sites

Map Date: November 04, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

TABLE 7-5
ACTIVE SOLID WASTE FACILITIES
(Excluding Landfill Sites)
Ventura County
2016

Figure 7-6 Reference	SWIS Number	Name	Unit	Activity	Regulatory Status[1]	Operational Status
#1	56-AA-0123	Gold Coast Recycling Facility	1	Large Volume Transfer/Proc Facility	Permitted	Active
#2	56-AA-0128	Del Norte Regional Recycling Transfer	1	Large Volume Transfer/Proc Facility	Permitted	Active
#3	56-AA-0130	Ojai Valley Waste Water Treatment Plant	1	Biosolids Composting at POTWs	Notification	Active
#4	56-AA-0138	Agromin Organics Recycling	1	Composting Operation (Green Waste)	Notification	Active
#5	56-AA-0142	Peach Hill Organic Recycling	1	Composting Operation (Green Waste)	Notification	Active
#6	56-AA-0143	Ojai Valley Organics	1	Composting Operation (Green Waste)	Notification	Active
#7	56-AA-0145	Santa Clara Organics, LLC	1	Chipping and Grinding Activity Fac./ Op.	Notification	Active
#8	56-AA-0147	Limoneira / Agromin Ag. Composting Op.	1	Composting Operation (Ag)	Notification	Active
#9	56-AA-0156	McGrath Farm	1	Composting Operation (Ag)	Notification	Active
#10	56-AA-0160	Caltrans- Fillmore Maintenance Station	1	Limited Volume Transfer Operation	Notification	Active
#11	56-AA-0161	Caltrans- Camarillo Maintenance Station	1	Limited Volume Transfer Operation	Notification	Active
#12	56-AA-0162	Caltrans- Ojai Maintenance Station	1	Limited Volume Transfer Operation	Notification	Active
#13	56-AA-0163	Caltrans- Moorpark Maintenance Station	1	Limited Volume Transfer Operation	Notification	Active
#14	56-AA-0164	Caltrans- Ventura Maintenance Station	1	Limited Volume Transfer Operation	Notification	Active
#15	56-AA-0165	Agromin Organics Recy. Composting Fac.	1	Composting Operation (Research)	Notification	Active
#16	56-AA-0169	Agromin Organics Recycling (SmartFarm)	1	Composting Operation (Research)	Notification	Active
#17	56-AA-0171	American Soil Amendment Products	1	Composting Operation (Ag)	Notification	Active

[1]Regulatory status refers to the permit status of the facility.

Source: California Integrated Waste Management Board, Solid Waste Information System (SWIS), Facility/Site Listing, www.calrecycle.ca.gov, accessed May 2016.

Toland Road Landfill

The Toland Road Landfill is in Santa Paula, and is exclusively open to residents of the Santa Clara Valley (for direct haul loads). Commercial loads that are processed through transfer stations or materials recycling facilities in Ventura County are also accepted at the landfill. The landfill and property are owned and managed by the Ventura Regional Sanitation District, with oversight by the County Planning Division and County Environmental Health Division.

The landfill is a Class III landfill and accepts mixed municipal, construction/demolition, agricultural, industrial, and biosolid waste. Hazardous wastes are not accepted. Total capacity of the landfill is 30 million cubic yards, and has a remaining capacity of 10.4 million cubic yards (as of June 2016). The facility accepts a maximum of 1,500 tons per day. As of July 2014, the County of Ventura estimates that Toland Landfill has 14 years of disposal capacity remaining.

Simi Valley Landfill and Recycling Center

The Simi Valley Landfill and Recycling Center (SVLRC) is in the unincorporated area northwest of the City of Simi Valley. The SVLRC has served Ventura County and the western San Fernando Valley since 1970. The landfill and the property is owned by Waste Management of California. The facility boundary encompasses approximately 887 acres, of which approximately 368 are permitted for waste disposal.

The landfill is a Class III landfill and accepts construction/demolition, industrial, mixed municipal, and sludge (biosolids) waste. Hazardous waste is not accepted. The landfill has a total capacity of 119.6 million cubic yards, and is permitted to accept a total of 9,250 tons of waste per day, including up to 6,000 tons per day of refuse and or recyclable material if the total remains at or below 9,250 tons per day. On average, the SVLRC recycles approximately 25 percent of all accepted waste, which is removed from the waste stream before the waste reaches the landfill. During 2015, SVLRC disposed of a total 862,528 tons of solid waste. Of the total waste, 75 percent originates in Ventura County. As of July 2016, the Landfill has about 67 years of disposal capacity remaining.

Regional Landfills

Two landfills close to Ventura County serve Ventura County businesses and residents.

Calabasas Landfill. The Calabasas Landfill is in Los Angeles County, close to Thousand Oaks. The landfill is owned and operated by the County of Los Angeles. The landfill is a Class III landfill and accepts construction/demolition, industrial, mixed municipal, tires, and green material waste. The landfill has a total capacity of 69.3 million cubic yards, with a remaining capacity of 14.5 million cubic yards. The landfill disposes of approximately 950 tons of solid waste per day and has a remaining life of approximately 19.3 years.

Chiquita Canyon Landfill. The Chiquita Canyon Landfill is in Los Angeles County, approximately ten miles east of Piru in unincorporated Ventura County. The landfill is operated by Chiquita Canyon, Inc. The landfill is as a Class III landfill, and mixed municipal, green materials, construction/demolition, industrial, and inert waste. The landfill has a total capacity of 63.9 million cubic yards, with a remaining capacity of 48.6 million cubic yards (April 2016). In 1997, the landfill was given an expiration date of 2019; as of 2016, the landfill is nearing capacity. A Revised Master Plan for landfill expansion and a Draft EIR are currently being reviewed.

Transfer Stations and Processing Facilities

Transfer stations are facilities that receive, separate, convert, or otherwise process the materials in solid wastes or transfer the solid wastes directly from smaller to larger vehicles for transport and those facilities utilized for transformation. Solid waste can also be temporarily stored at a transfer station before its final disposal. Table 7-5 and Figure 7-5 show the permitted active recycle and transfer facilities in Ventura County, as well as other active solid waste facilities, excluding landfill sites. Two transfer stations in Ventura County serve the cities and the unincorporated area:

- Del Norte Regional Recycling and Transfer Station. Located at 111 S. Del Norte Avenue in Oxnard, the facility is owned and operated by the City of Oxnard and provides transfer and recycling services of up to 2,779 tons per day.
- Gold Coast Recycling and Transfer Station. Located at 5275 Cold Street in Ventura, the facility is owned by Gold Coast Recycling, Incorporated. The facility provides recycling and transfer services of up to 440 tons per day.

Recycling Programs

There are several recycling programs in Ventura County aimed at reducing the amount of waste disposed in landfills described in the following paragraphs.

Recycling Market Development Zone. The California Department of Resources Recycling and Recovery (CalRecycle) administers the Recycling Market Development Zone (RMDZ) program, which supports recycling businesses in California through incentives including low-interest loans, technical assistance, and free product marketing. The County of Ventura is a designated Recycling Market Development Zone; this includes the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks, and the unincorporated county.

Residential Recycling Program. The Ventura County Public Works Agency maintains a list of residential recyclable items, pursuant to Ventura County Ordinance 4445, Section 4770-1.1. As part of this program the solid waste collectors in the unincorporated areas of the county typically collect mixed recyclables from a curbside recycling barrel, which collects items such as plastics, beverage containers, cartons, glass bottles, paper, and aluminum cans.

Construction, Demolition Debris Reuse and Recycling Program. State law and Ventura County Ordinance 4421 require construction and demolition projects in the unincorporated areas of the county to practice waste prevention. The Ventura County Public Works Agency Integrated Waste Management Division provides forms and instructions related to this program, including lists of authorized solid waste collectors, demolition debris recycling companies, and facilities.

Oil Collection/Recycling. There are over 85 Certified Used Oil Collection Centers in Ventura County; these centers incentivize oil recycling by paying $0.40 per gallon. Recycling centers are designated for disposal of certain types of oil and/or filters. The different types of oil and filters include motor, agricultural, airport, boat, and re-refined oil.

Recycling Facilities. A number of recycling facilities located in and around the county are available to Ventura County residents. For disposal of miscellaneous recyclable items, such as appliances, refrigerators, tires, and ink and toner cartridges, the County maintains information on disposal locations. CalRecycle also provides information on locations of collection and recycling facilities.

Solid Waste Generation, Diversion, and Landfill Capacity

The current (2016) County Integrated Waste Management Plan (CIWMP) calculated that landfills in Ventura County have a capacity greater than the targeted 15 years. According to the CIWMP, during the fourth quarter of 2014 and the first three quarters of 2015, 101,506 tons of solid waste were disposed and 65,047 tons were recycled for a diversion rate of 39 percent. According to the CIWMP 2014 Annual Report, the unincorporated area in Ventura County had a diversion rate of 58 percent. Cities and counties within California are currently required to divert 50 percent of all solid waste through source reduction, recycling, and composting activities.

Hazardous Waste

Hazardous wastes are materials that have the potential to threaten human health and/or the environment. These wastes may be flammable, toxic, or corrosive and should not be disposed of with non-hazardous solid waste. There are 117 facilities in Ventura County that collect and/or transfer hazardous wastes. These facilities collect different types and combinations of hazardous wastes, with 10 collecting household hazardous waste/electronic waste, four collecting medications, 25 collecting sharps, seven identified as transfer stations, and 84 identified as used oil collection facilities. These facilities are described in Table 7-6.

Household Hazardous Waste

The Ventura County Integrated Waste Management Division administers the Household Hazardous Waste (HHW) collection program and the operation of the Pollution Prevention Center, a permanent HHW collection facility which specifically serves residents of the unincorporated area and from the cities of Ojai, Santa Paula, and Fillmore. The county maintains information on permitted household hazardous waste facilities for residents to find out where to drop off various types of household hazardous waste. These wastes may include latex paint, batteries, electronic waste, fluorescent lights, solvents, cleaners, oils, pool chemicals, medication, and more, depending on the location. In 2014, Ventura County collected 2,617,807 pounds of household hazardous waste, equating to 3.12 pounds per capita[1].

Business Hazardous Waste

Businesses are required to safely dispose of hazardous waste. Illegal disposal of hazardous waste, such as dumping in the trash, down storm drains, or abandoning it in alleyways, can result in serious legal ramifications for business owners such as fines and/or jail time. Legally disposing of hazardous wastes can be complicated and costly and business owners will often hire a contractor to dispose of the waste. Ventura County offers several options for certain businesses that make disposal of hazardous waste easier and/or less expensive.

Oil Field Waste

Oil field waste can be disposed of in a variety of ways, including through injection wells that dispose of salt water extracted during the production process. There is one commercial injection well operating in Ventura County, a Class II well located just east of the Oxnard city limits on Wooley Road. This facility is operated by Anterra, which also treats and disposes other oil field waste on the site. In addition to the Anterra commercial facility, there are over 400 privately-operated injection wells in Ventura County.

[1] 2014/2015 Household Hazardous Waste collection statistics were reported as a single joint total on Form 303 submittals for Los Angeles/Orange/Riverside/San Diego/Ventura counties. The individual county totals were estimated by dividing the reporting total by each county's respective percentage.

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
1	AAMCO Transmission	531 E Ventura Blvd	Oxnard	Collection/Transfer	Used Oil Collection
2	AutoZone #2832	9459 Telephone Rd	Ventura	Collection/Transfer	Used Oil Collection
3	AutoZone #4167	1774 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
4	AutoZone #5712	658 W Ventura St	Fillmore	Collection/Transfer	Used Oil Collection
5	AutoZone #5714	2411 Saviers Rd	Oxnard	Collection/Transfer	Used Oil Collection
6	AutoZone #5715	600 N Ventura Rd	Oxnard	Collection/Transfer	Used Oil Collection
7	AutoZone #5716	159 E Harvard Blvd	Santa Paula	Collection/Transfer	Used Oil Collection
8	AutoZone #5717	2375 Sycamore Dr.	Simi Valley	Collection/Transfer	Used Oil Collection
9	AutoZone #5718	2288 Tapo St	Simi Valley	Collection/Transfer	Used Oil Collection
10	AutoZone #5719	2610 E Main St	Ventura	Collection/Transfer	Used Oil Collection
11	AutoZone #6211	2291 Pickwick Dr Ste B	Camarillo	Collection/Transfer	Used Oil Collection
12	AutoZone #6391	2051 N Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
13	Camarillo Car Wash	4007 Adolfo Rd	Camarillo	Collection/Transfer	Used Oil Collection
14	Camarillo Patrol Station	3701 Las Posas Rd	Camarillo	Collection/Transfer	Medication Collection
15	Camarillo Permanent Household Hazardous Waste Collection Facility	880 Verdulera St	Camarillo	Collection/Transfer	HHW/E-waste Collection, Sharps Collection
16	Camarillo Recycling	532 Dawson Dr Ste 2	Camarillo	Collection/Transfer	Transfer Station
17	City of Camarillo	880 Verdulera St	Camarillo	Collection/Transfer	HHW/E-waste Collection
18	City of Santa Paula	903 Corporation Ave.	Santa Paula	Collection/Transfer	HHW/E-waste Collection
19	Conejo Valley 76	420 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
20	Conejo Valley Medical Family Group	125 W Thousand Oaks Blvd Ste 300	Thousand Oaks	Collection/Transfer	Sharps Collection
21	Dave`s	1404 Anchors Way Dr	Ventura	Collection/Transfer	Used Oil Collection
22	DCH Toyota of Oxnard	1631 Auto Center Dr	Oxnard	Collection/Transfer	Used Oil Collection
23	Del Norte Regional Recycling AND Transfer Station	111 S Del Norte Blvd	Oxnard	Collection/Transfer	HHW/E-waste Collection, Transfer

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
					Station, Used Oil Collection
24	Dobs Brake and Auto	330 S Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
25	Fillmore Medical Plaza	852 W Ventura St	Fillmore	Collection/Transfer	Sharps Collection
26	Fillmore Patrol Station	524 Sespe Ave	Fillmore	Collection/Transfer	Sharps Collection
27	Firestone Store #67C5	321 S Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
28	Firestone Store #67E1	1256 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
29	Firestone Store #67E2	1100 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
30	Firestone Store #67E4	200 S California St	Ventura	Collection/Transfer	Used Oil Collection
31	Firestone Store #67E7	261 Arneill Rd	Camarillo	Collection/Transfer	Used Oil Collection
32	Firestone Store #67T8	598 W Hillcrest Dr	Thousand Oaks	Collection/Transfer	Used Oil Collection
33	Gabriels Imports	65 Baldwin Rd	Ojai	Collection/Transfer	Used Oil Collection
34	GI Rubbish	195 W Los Angeles Ave	Simi Valley	Collection/Transfer	Transfer Station
35	Gold Coast Recycling Facility	5275 Colt St	Ventura	Collection/Transfer	Transfer Station, Used Oil Collection
36	Hill`s Automotive	1560 S Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
37	Honda of Oxnard	1500 E Ventura Blvd	Oxnard	Collection/Transfer	Used Oil Collection
38	Honda of Thousand Oaks	3925 Automotive Drive	Thousand Oaks	Collection/Transfer	Used Oil Collection
39	Jiffy Lube #0681	2905 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
40	Jiffy Lube #1324	1098 E Thompson Blvd	Ventura	Collection/Transfer	Used Oil Collection
41	Jiffy Lube #1575	101 W Esplanade Dr	Oxnard	Collection/Transfer	Used Oil Collection
42	Jiffy Lube #2888	797 W Los Angeles Ave	Moorpark	Collection/Transfer	Used Oil Collection
43	Jiffy Lube #3098	611 S Rose Ave	Oxnard	Collection/Transfer	Used Oil Collection
44	Jiffy Lube #3264	55 W Daily Dr	Camarillo	Collection/Transfer	Used Oil Collection
45	Jiffy Lube #678	1515 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
46	Jiffy Lube, #3232	1695 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
47	Jiffy Lube-Fillmore	707 W Ventura St	Fillmore	Collection/Transfer	Used Oil Collection
48	Jim Sharp Auto Repair	5577 Saviers Rd	Oxnard	Collection/Transfer	Used Oil Collection
49	Kemp Ford	Thousand Oaks Boulevard	Thousand Oaks	Collection/Transfer	Used Oil Collection

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
50	Kirby Auto Group - Kia of Ventura	6424 Auto Center Dr	Ventura	Collection/Transfer	Used Oil Collection
51	Kirby Chrysler Jeep Dodge Ram of Simi Valley	2350 1st St	Simi Valley	Collection/Transfer	Used Oil Collection
52	Las Islas Family Medical Group	2400 South C St	Oxnard	Collection/Transfer	Sharps Collection
53	Las Islas Urgent Care	325 W Channel Islands Blvd	Oxnard	Collection/Transfer	Sharps Collection
54	Lister`s Autocare	429 N Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
55	Los Robles Hospital	215 W Janss Rd	Thousand Oaks	Collection/Transfer	Sharps Collection
56	Magnolia Family Medical Clinic	2240 E Gonzales Rd Ste #100	Oxnard	Collection/Transfer	Sharps Collection
57	Meineke Car Care Econo Lube	4519 Telephone Rd	Ventura	Collection/Transfer	Used Oil Collection
58	Moorpark Family Care Clinic	612 Spring Rd # A	Moorpark	Collection/Transfer	Sharps Collection
59	Moorpark Patrol Station	610 Spring Rd	Moorpark	Collection/Transfer	Sharps Collection
60	Mountain View Tire/Goodyear-Camarillo	57 W Daily Dr	Camarillo	Collection/Transfer	Used Oil Collection
61	Mountain View Tire/Goodyear-Oxnard	2341 E Vineyard Ave	Oxnard	Collection/Transfer	Used Oil Collection
62	Mountain View Tire/Goodyear-Ventura	477 S Mills Rd Unit B	Ventura	Collection/Transfer	Used Oil Collection
63	Nissan of Thousand Oaks	3755 Auto Mall Dr	Westlake Village	Collection/Transfer	Used Oil Collection
64	O'Reilly Auto Parts #1547	2780 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
65	O'Reilly Auto Parts #2685	147 W Main St	Ventura	Collection/Transfer	Used Oil Collection
66	O'Reilly Auto Parts #2737	151 E Gonzales Rd	Oxnard	Collection/Transfer	Used Oil Collection
66	O'Reilly Auto Parts #2737	1941 N Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
67	O'Reilly Auto Parts #3056	2706 Saviers Rd	Oxnard	Collection/Transfer	Used Oil Collection
68	O'Reilly Auto Parts #3129	275 W Harvard Blvd	Santa Paula	Collection/Transfer	Used Oil Collection
69	O'Reilly Auto Parts #3590	4225 E Main St Unit 1	Ventura	Collection/Transfer	Used Oil Collection
70	O'Reilly Auto Parts #3616	1239 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
71	O'Reilly Auto Parts #3680	367 Carmen Dr	Camarillo	Collection/Transfer	Used Oil Collection

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
72	Oak View CTRs for Family Health	655 Ventura Ave	Oak View	Collection/Transfer	Sharps Collection
73	Oil Stop-Camarillo	400 Las Posas Rd	Camarillo	Collection/Transfer	Used Oil Collection
74	Ojai Patrol Station	402 S Ventura St	Ojai	Collection/Transfer	Sharps Collection
75	Ojai Valley Hospital	1306 Maricopa Hwy	Ojai	Collection/Transfer	Sharps Collection
76	Oxnard Hyundai	1601 E Ventura Blvd	Oxnard	Collection/Transfer	Used Oil Collection
77	Oxnard Public Health	2500 S C St # B-1	Oxnard	Collection/Transfer	Sharps Collection
78	Pep Boys #619	660 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
79	Pep Boys #650	939 S Oxnard Blvd	Oxnard	Collection/Transfer	Used Oil Collection
80	Pep Boys #692	4001 E Main St	Ventura	Collection/Transfer	Used Oil Collection
81	Pep Boys #739	2099 E Thousand Oaks Blvd	Thousand Oaks	Collection/Transfer	Used Oil Collection
82	Pep Boys Store #1401	2705 E Thompson Blvd	Ventura	Collection/Transfer	Used Oil Collection
83	Rusnak Westlake Porsche	3839 Auto Mall Dr	Thousand Oaks	Collection/Transfer	Used Oil Collection
84	Santa Clara River Valley Permanent Household Hazardous Waste Collection Facility	743 Sespe Ave	Fillmore	Collection/Transfer	HHW/E-waste Collection, Sharps Collection
85	Santa Paula Chevrolet	101 West Harvard Blvd	Santa Paula	Collection/Transfer	Used Oil Collection
86	Santa Paula Clinic	1334 E Main St	Santa Paula	Collection/Transfer	Medication Collection, Sharps Collection
87	Scandinavian Service	2001 Donville Ave	Simi Valley	Collection/Transfer	Used Oil Collection
88	Shaver Automotive Group	3888 E Thousand Oaks Blvd	Westlake Village	Collection/Transfer	Used Oil Collection
89	Sierra Vista Family Medical CTR	1227 E Los Angeles Ave	Simi Valley	Collection/Transfer	Sharps Collection
90	Silver Star A.G. Ltd	3905 Auto Mall Dr	Thousand Oaks	Collection/Transfer	Used Oil Collection
91	Silver Star Cadillac, Land Rover, Lexus	3601 Auto Mall Dr	Westlake Village	Collection/Transfer	Used Oil Collection
92	Simi Lube Oil	1940 5th St	Simi Valley	Collection/Transfer	Used Oil Collection
93	Simi Quick Lube Oil	5956 E Los Angeles Ave Ste 7	Simi Valley	Collection/Transfer	Used Oil Collection

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
94	Simi Valley Base Inc - Simi Valley	240 W Los Angeles Ave	Simi Valley	Collection/Transfer	Transfer Station
95	Simi Valley HHW Facility	500 W Los Angeles Ave	Simi Valley	Collection/Transfer	HHW/E-waste Collection, Sharps Collection
96	Simi Valley Landfill/Recycling	2801 N Madera Rd	Simi Valley	Collection/Transfer	Transfer Station
97	Simi Valley Patrol Station	3901 Alamo St	Simi Valley	Collection/Transfer	Sharps Collection
98	Simi Valley Public Health	1133 E Los Angeles Ave # B	Simi Valley	Collection/Transfer	Sharps Collection
99	Simi Valley Recycling	400 W Los Angeles Ave # A	Simi Valley	Collection/Transfer	Transfer Station
100	Texaco Xpress Lube-Ventura	4624 Telephone Rd	Ventura	Collection/Transfer	Used Oil Collection
101	Thousand Oaks Permanent Household Hazardous Waste Collection Facility	1993 Rancho Conejo Blvd	Thousand Oaks	Collection/Transfer	HHW/E-waste Collection, Sharps Collection
102	Thousand Oaks PHHWCF	2010 Conejo Center Dr	Thousand Oaks	Collection/Transfer	HHW/E-waste Collection
103	Thousand Oaks Police Dept.	2101 E Olsen Rd	Thousand Oaks	Collection/Transfer	Medication Collection
104	Tito`s Automotive	1311 Commercial Ave	Oxnard	Collection/Transfer	Used Oil Collection
105	Ventura County Pollution Prevention CTR	5777 N Ventura Ave	Ventura	Collection/Transfer	HHW/E-waste Collection, Used Oil Collection
106	Ventura Permanent Household Hazardous Waste Collection Facility	5275 Colt St	Ventura	Collection/Transfer	HHW/E-waste Collection, Medication Collection, Sharps Collection
107	Ventura Public Health	3147 Loma Vista Rd	Ventura	Collection/Transfer	Sharps Collection
108	Ventura Toyota	6360 Auto Center Dr	Ventura	Collection/Transfer	Used Oil Collection
109	Ventura Volkswagen	3650 E Main St	Ventura	Collection/Transfer	Used Oil Collection
110	Victor`s Auto Electric	1210 Los Angeles Ave	Ventura	Collection/Transfer	Used Oil Collection
111	Vista Ford of Oxnard	1501 Auto Center Dr	Oxnard	Collection/Transfer	Used Oil Collection
112	Vista Honda	6450 Auto Center Dr	Ventura	Collection/Transfer	Used Oil Collection

TABLE 7-6
HAZARDOUS WASTE FACILITIES
Ventura County
2016

No.	Facility Name	Address	City	Activity Category	Activities
113	West County Patrol Station (Headquarters)	800 S Victoria Ave	Ventura	Collection/Transfer	Sharps Collection
114	West Ventura Family Care Clinic	133 West Santa Clara St	Ventura	Collection/Transfer	Sharps Collection
115	Westlake Mazda/Volkswagen	3500 Auto Mall Dr	Westlake Village	Collection/Transfer	Used Oil Collection
116	WmL Morris Chevrolet	1001 Cochran St	Simi Valley	Collection/Transfer	Used Oil Collection
117	Xpress Lube Service Center	4560 E Los Angeles Ave	Simi Valley	Collection/Transfer	Used Oil Collection
117	Xpress Lube Service Center	2170 1st St	Simi Valley	Collection/Transfer	Used Oil Collection

Source: CalRecycle, Facility Information Toolbox (FacIT), Detailed Facility Search, http://www.calrecycle.ca.gov/FacIT/Facility/Search.aspx#LIST.

Key Terms

Electronic "E" Waste. Discarded electric appliances, including computers, computer monitors, TVs, printers and electronic parts which are prohibited from solid waste landfills.

Hazardous Waste. Discarded items with properties that make it dangerous or capable of having a harmful effect on human health or the environment; often designated hazardous due to the concentration of chemical content.

Household Hazardous Waste. Leftover household products that are corrosive, toxic, could catch fire, or explode under certain circumstances, including paints, cleaning chemicals, solvents, fluorescent light bulbs, non-commercial pesticides, insecticides, and motor oil.

Industrial Waste. Solid or liquid material that is discarded from industrial facilities.

Solid Waste. Any discarded material, solid or semisolid, nonsoluble material (including gases and liquids in containers) such as agricultural refuse, demolition waste, industrial waste, mining residues, municipal garbage, and sewage sludge.

Waste Generation Rates. The amount solid waste generated. These rates are used to assess the annual anticipated landfill volume used.

Regulatory Setting

State

California Code of Regulation (CCR) Title 27 Sections 21600 through 21900, and Title 13 Sections 17850 to 17869

Title 27 Sections 21600 through 21900 regulate solid and hazardous waste transfer and disposal facilities in the County of Ventura and are regulated jointly by the California Regional Water Quality Control Board, Central Valley Region (RWQCB) and CalRecycle. Title 13 Sections 17850 to 17869 regulate compost facilities in the County of Ventura and are also jointly regulated. Permit requests and reports of waste discharge and reports and disposal site information are submitted to the RWQCB and CalRecycle, respectively, and are used by the two agencies to review, permit, and monitor these facilities. Both the RWQCB and CalRecycle regulate facilities individually and through local enforcement agencies staffed by County of Ventura employees. In Ventura County, the Local Enforcement Agency (LEA) is the County Environmental Health Division Solid Waste Program. The Ventura County Public Works Agency and the Integrated Waste Management Division assist in supporting the solid waste landfill diversion goals and operate the solid waste landfills within the county.

AB 341, Chesbro (Chapter 476, Statutes of 2011)

Mandates commercial recycling and regulation, requiring businesses to recycle and jurisdictions to implement programs to regulate the recycling through education, outreach, and monitoring. The Statute sets a statewide goal of 75 percent disposal reduction by the year 2020; the requirement of disposal reduction for jurisdictions remains at 50 percent.

AB 1826 Chesbro (Chapter 727, Statutes of 2014)

Requires local jurisdictions throughout California to implement an organic waste recycling program for businesses to divert organic waste (organic waste includes food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste). The law will be phased in, with milestone dates between 2016 and 2021, detailing when jurisdictions must provide information about their organic waste recycling programs to CalRecycle for review.

AB 1594 Williams (Chapter 719, Statutes of 2014)

Mandates that jurisdictions can no longer include green material as alternative daily cover (ADC) when determining their diversion rate; instead, the green material will be considered disposal in terms of the jurisdiction's 50 percent per capita disposal rate. The Bill includes milestone dates between 2017 and 2024, outlining the various stages of reporting requirements.

Local

2005 Ventura County General Plan

The General Plan covers solid and hazardous waste disposal and recycling in Chapter 4, Public Facilities and Services. Section 4.4 includes goals, policies, and programs related to solid and hazardous waste disposal and recycling. The following Area Plans also contain applicable goals and policies related to solid and hazardous waste disposal and recycling:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan; and
- Thousand Oaks Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for solid and hazardous waste disposal and recycling. These can be found in Sections 29c. Waste Treatment & Disposal Facilities – Solid Waste Management and 29d. Waste Treatment & Disposal Facilities – Solid Waste Facilities.

Ventura County Ordinances No. 4421, No. 4445, No. 4156, and No. 4423.

Regulate solid waste management in the unincorporated areas of Ventura County. Ventura County Environmental Health Division's Solid Waste Program is the Local Enforcement Agency (LEA) for solid waste in the County. LEA staff serve Ventura County residents by ensuring the safe handling and proper disposal of residential and commercial solid waste. Staff inspect, permit, and monitor the operation of solid waste facilities such as landfills, waste transfer processing stations, composting operations, and

chipping/grinding operations. Staff respond to complaints of illegal solid waste disposal and perform related investigations.

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McCollough, Lisa, Integrated Waste Management Division, July 2016.

Tignac, Scott, Simi Valley Landfill and Recycling Center, Senior District Manager, July 2016.

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SECTION 7.4 UTILITIES

Introduction

This section provides information natural gas, electric services, and telecommunications utilities in Ventura County.

Major Findings

- The California Public Utilities Commission (CPUC) monitors mobile and wireline broadband throughout the county. Mobile phone service in Ventura County is considered underserved at best, and unserved in many unincorporated areas. Wireline service, including DSL and cable, is considered limited in many unincorporated areas, especially in the north half of the county.
- Utility electric generation accounts for over 50 percent of the natural gas used in Ventura County.

Existing Conditions

Electrical Services

Generation Facilities

Electricity in Ventura County is primarily produced by the Southern California Edison Company. The US Bureau of Reclamation (USBR) Western Area Power Administration (WAPA) Central Valley Project also provides some electricity to the agricultural water pump sector, as defined by the California Energy Commission. Table 7-7 shows the usage and sale of electricity in 2013 and 2014 in Ventura County by user type. All residential electricity was produced by Southern California Edison and averaged 6,580 kWh per account in 2013 and 6,491 kWh per account in 2014.

Table 7-8 shows the operational electrical power facilities generating more than 0.1 MW as of 2016, excluding USBR generation facilities, but including 27 Southern California Edison power plants in Ventura County. As of 2016, there are no new facilities planned for or under construction in the county.

In addition to the above, the expansion of renewable energy (e.g., photovoltaic [solar] electrical energy generation) is increasing in the county. In 2016, the County of Ventura completed a photovoltaic project in one of the parking lots at the Government Center in Ventura. The project is expected to reduce the amount of electricity used at the Government Center by 10 percent and will help reduce greenhouse gas emissions.

Natural Gas

The Southern California Gas Company (SoCalGas) is the largest distributor of natural gas nationwide. SoCalGas provides service to all the cities and communities in Ventura County and owns natural gas transmission lines that run throughout Ventura County. According to the California Energy Commission, in 2015, residential natural gas sales in Ventura County totaled over 93 million therms, and total sales exceeded 350 million therms. Based on a countywide population of 840,000, this would equate to approximately 111 therms of natural gas used per person in 2015. In comparison, Santa Barbara County residential gas usage totaled 49 million therms, or 111 therms of natural gas per person, and Los Angeles County residential gas usage totaled 1,084 million therms, or 106 therms per person. Table 7-9 shows the natural gas sales in Ventura County for 2014 and 2015 by user type. Note that utility electric generation accounts for over 50 percent of the natural gas used in Ventura County.

TABLE 7-7
ELECTRICAL END-USE CONSUMPTION (KWH TOTALS)
Ventura County
2013-2014

Type of Use	Agency	2013			2014		
		Number of Accounts	Total Sales (KWH)	Percentage of Total Sales	Number of Accounts	Total Sales (KWH)	Percentage of Total Sales
Ag with Water Pump	Southern California Edison	3,155	285,812,899	5.6%	3,627	311,655,304	6.0%
Ag with Water Pump	USBR WAPA Central Valley Project	12	16,582,000	0.3%	12	10,313,000	0.2%
Commercial	Southern California Edison	30,187	1,762,557,019	34.7%	30,425	1,794,138,481	34.8%
Industrial	Southern California Edison	1,930	579,045,253	11.4%	1,942	596,529,172	11.6%
Mining	Southern California Edison	1,520	383,941,597	7.6%	1,540	401,988,362	7.8%
Residential	Southern California Edison	255,802	1,683,346,234	33.1%	256,555	1,665,304,869	32.3%
Street lighting	Southern California Edison	1,727	26,667,462	0.5%	1,669	24,621,697	0.5%
Transportation, Communication, and Utility	Southern California Edison	3,391	241,341,435	4.7%	3,384	239,860,223	4.6%
Unclassified	Southern California Edison	12,116	104,595,165	2.1%	13,677	114,540,066	2.2%
Total		**309,840**	**5,083,899,064**	**100.0%**	**312,832**	**5,158,951,174**	**100.0%**

Source: California Energy Commission, 2013-2014.

TABLE 7-8
OPERATIONAL POWER FACILITIES
Ventura County, 2016

Plant Name	Owner	Fuel Type	Net MW Reported
Camrosa Water District	Southern California Edison	Hydro	0.15
CI Power Cogeneration Plant (OLS Camarillo)	Southern California Edison	Gas	31.2
City of Ventura – Eastside WTR Renovation	Southern California Edison	Gas	0.548
Conejo	Southern California Edison	Hydro	0.55
County of Ventura, Government Center	County of Ventura	Solar	1
County of Ventura, Juvenile Justice Center	County of Ventura	Solar	1
County of Ventura, Moorpark Wastewater Treatment Plant	County of Ventura	Solar	1.1
County of Ventura, Todd Road Jail	County of Ventura	Solar	1
Doubletree Hotel	Southern California Edison	Gas	0.2
EF Oxnard Inc.	Southern California Edison	Gas	48.5
Houweling Nurseries	Southern California Edison	Gas	13.05
Mandalay Generating Station	Southern California Edison	Gas	573.33
McGrath Peaker	Southern California Edison	Gas	49
New-Indy Containerboard Ontario (formerly Oxnard Paper Mill)	Southern California Edison	Gas	29
One Miracle Property, LLC	Southern California Edison	Solar	0.75
Ormond Beach Generating Station	Southern California Edison	Gas	1612.8
Oxnard High School	Southern California Edison	Gas	0.12
Oxnard Wastewater Treatment Plant	Southern California Edison	Digester Gas	1.5
Procter & Gamble – Oxnard	Southern California Edison	Solar	1
Rincon Facility	Southern California Edison	Gas	3
Rockwell Intl.	Southern California Edison	Gas	28
Rockwell Intl. -Kalina	Southern California Edison	Gas	3.5
Santa Felicia	Southern California Edison	Hydro	1.42
Santa Rosa	Southern California Edison	Hydro	0.25
Simi Valley Landfill	Southern California Edison	Landfill Gas	2.7
Springville Reservoir	Southern California Edison	Hydro	1
Sune – Oxnard	Southern California Edison	Solar	2.7
The Procter & Gamble Paper Products Co.	Southern California Edison	Gas	69.8
Toland Road Landfill (Ventura)	Southern California Edison	Landfill Gas	2.25
US Government, Naval Engineering Command	Southern California Edison	Gas	0.8
Total Electricity Generated			**2,478.22**

Source: California Energy Commission, California Operational Power Plants, April 2016.

TABLE 7-9
NATURAL GAS END-USE CONSUMPTION
Ventura County
2014-2015

Type of Use	2014			2015		
	Number of Customers	Sales (Therms)	Percentage of Total Sales	Number of Customers	Sales (Therms)	Percentage of Total Sales
Ag with Water Pump	157	5,263,176	1.6%	153	4,997,558	1.4%
Commercial	8,077	29,010,346	8.8%	8,165	29,324,532	8.2%
Industrial	762	25,586,975	7.8%	756	27,271,557	7.6%
Mining	289	4,063,520	1.2%	285	2,774,000	0.8%
Residential	238,448	93,507,905	28.4%	239,499	94,002,203	26.3%
Transportation, Communication, and Utility	164	3,559,871	1.1%	156	3,707,114	1.0%
Utility Electric Generation[1]	16	168,201,148	51.0%	15	193,113,407	54.1%
Unclassified	53	516,155	0.2%	69	2,012,899	0.6%
Total	**247,966**	**329,709,096**	**100.0%**	**249,096**	**357,203,270**	**100.0%**

[1]Includes gas sales and transportation for co-generation.
Source: California Energy Commission Data 2014-2015.

Telecommunications

The telecommunications and digital industries have experienced significant growth in the past two decades, both in the number of services provided and dependency upon those services. According to the California Public Utilities Commission (CPUC), telecommunications services include basic phone; long distance; Internet, including broadband and wireless; enhanced specialized mobile radio (ESMR); personal communication services (PCS) (i.e., messaging and data transfer service such as paging).; and paging systems.

The California Public Utilities Commission (CPUC) maintains a Utility Contact System Database, which lists all certified telecommunication carriers. The CPUC also provides an Interactive Broadband Map, which shows coverage of broadband providers. The interactive map can be viewed at http://www.broadbandmap.ca.gov/.

The Broadband Consortium of the Pacific Coast (BCPC) has also conducted analyses on broadband service in the county; one analysis was completed in April 2016, followed by an update in June 2016 that used additional information provided by certain jurisdictions, and minor updates and corrections to underlying broadband infrastructure database and a refinement of some calculations. All six companies that provide telecommunications services file regular availability, technology, and service level reports with the Federal Communications Commission (FCC), which is then provided to the CPUC. The BCPC uses the CPUC data and further supplements it with census data to measure coverage by county, and reported findings specific to commercial/industrial areas use an aggregate Star rating system for cities and census blocks. The BCPC looks at San Luis Obispo County, Santa Barbara County, and Ventura County as a region, and according to their findings, broadband availability and coverage claimed by telephone and cable companies are relatively higher in Ventura County than in the other two counties in the region.

The CPUC defines broadband by the definition provided by the National Telecommunications and Information Administration's Notice of Funds Availability (NOFA); by this definition, broadband is a "two-way data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users." The CPUC provides two kinds of mapped data depicting broadband services: service availability and service status (areas where broadband is available, but where access is limited due to relatively slow download and upload speeds). Within these two categories, information is provided showing types of broadband services. These types include wireline (technology that uses wires or cables to physically connect the provider with the user, such as DSL, Cable Modem, or DSL), fixed wireless (which uses radio waves to connect providers and a fixed location, this is not available in Ventura County), and mobile (such as cell phone or other devices that are mobile and not used at a fixed location).

Availability

The availability and served-status for broadband throughout the county are shown in Figures 7-6 through 7-10. These figures, using data provided by CPUC from 2015 and 2016, illustrate areas in the county that may need improved access to services, especially wireline broadband in the northernmost areas of the county and other unincorporated areas.

Figure 7-6 shows the availability of wireline to consumers, and Figure 7-7 shows availability of wireline to businesses. Wireline broadband is generally available in the southern part of the county, with limited access in the northern half to consumers and none to businesses in the northern half. Figure 7-8 shows the

availability of mobile broadband in the county. Most of the county has mobile broadband availability, with exceptions of limited areas of the northern half of the county.

Figure 7-9 and Figure 7-10 define areas as served, underserved, unserved areas with households, or areas without households. A served area is defined by the CPUC as having downstream speeds of at least 6 megabits per second (mbps) and upstream speeds of at least 1.5 mbps. Underserved areas are defined by the CPUC as those where broadband is available, but advertised speeds are less than 6 mbps downstream and 1.5 mbps upstream. Areas defined by the CPUC as unserved are those with no service, or service slower than 768 kbps downstream and 200 kbps upstream. Figure 7-9 shows the served-status of consumer wireline broadband; served status is largely available in the southern half of the county, with large unserved areas with households in the northern half of the county. Data on served-status of wireline for businesses is not provided. Figure 7-10 shows the served-status of mobile broadband. Nearly all the county is categorized as underserved, with some areas of the northern half and the southern border between Ventura and Los Angeles counties identified as unserved areas with households.

While Figures 7-6 through 7-10 show the geographic representation of broadband service as provided by the CPUC, the BCPC analysis provides figures for homes and businesses served. The BCPC estimated (2016) that nearly all homes in Ventura County have some level of broadband service, with 95 percent covered by a telephone company and 99 percent covered by a cable company; these rates are relatively higher than those in San Luis Obispo and Santa Barbara counties.

The BCPC uses two systems for rating broadband services. The first system uses letter grades, and assesses infrastructure and services relatively by census blocks, and the second uses an aggregate star rating system which builds on the first grading system and assesses broadband services in commercial and industrial areas.

The letter grading system for evaluation of statewide infrastructure and service uses the following rubric:

- A: Two competing providers, both advertising maximum download speeds of at least 25 Mbps and maximum download speeds of 6 Mbps, or 3 or more competing providers offering that standard of service in combination.
- B: Competing providers, both advertising maximum download speeds of at least 10 Mbps and maximum upload speeds of 6 Mbps.
- C: Competing providers, one advertising max down/up speeds of at least 10/6 Mbps and the remainder meeting CPUC's minimum 6 down/1.5 up standard.
- D: At least one provider advertising speeds that meet the CPUC's minimum standards of 6 Mbps down and 1.5 Mbps up.
- F: At least one provider offers service, but no service is available that meets the CPUC's minimum standard of 6 Mbps down and 1.5 Mbps up (meets CPUC's definition of underserved).
- F-: No broadband service available (meets CPUC's definition of unserved).

The grades "A" and "B" are given to areas with service that is superior to the California average. A "C" represents the most prevalent infrastructure and corresponding levels statewide, or the statewide average for broadband services and underlying infrastructure. A "D" meets minimum service standards set by the CPUC. An "F" indicates full or partial failure, which also indicates that the area is eligible for infrastructure construction subsidies from the CPUC. Each census block is given a grade, and then the grade points are tallied, weighted by population, and averaged to give grades to defined areas. Each city

and unincorporated Census Designated Place (CDP) receives a grade, and the rest of the unincorporated county is given an aggregate grade defined as "Rest of Ventura County." Table 7-10 shows the number of census blocks in each aggregate location and their grade; both incorporated and unincorporated locations are included for context. Overall, there is a wide range of grades for the different locations. Seven CDPs included census blocks that received "A's," and five blocks received "C's"; however most of the unincorporated area received a grade "D" or lower. Outside of the CDPs, 71 percent of the census blocks in the unincorporated county, or "Rest of Ventura County," received the lowest grade of "F-."

The second rating system focuses on business-focused facilities and services. For this rating system, areas are defined by census blocks, using a centroid inside of commercial and/or industrial zones, since census blocks and zone boundaries do not coincide. Not all parcels within a census block necessarily have the same access to broadband services, but the basic infrastructure is present. The methodology for the BCPC star rating considered four categories of service types:

- Commercial grade commodity Internet service: sometimes referred to as "business class" packages, these services resemble retail services offered to residences in terms of upload and download speeds, but are typically more expensive and may meet higher quality of service standards. This service is delivered via primary infrastructure—telephone or cable systems.
- Enhanced commercial grade broadband service: any fiber-based service that supports a minimum upload speed of 10 Mbps. This service may be referred to as "megabit class fiber" service, and may include standard Internet access at the minimum speed or better, or provide a high bandwidth connection between two points without necessarily connecting to the Internet.
- Industrial grade broadband service: similar to the megabit class fiber service, but provides symmetrical connections at a minimum speed of 1 Gbps.
- Dark fiber: can support bi-directional speeds well above the 10 Terabit per second range. The customer rents the fiber optic strands between two points, and is responsible for providing the electronics and any other connectivity that is required, for example, Internet bandwidth.

The star rating system, as it relates to the grade rating system and above four categories, is explained as:

- Zero Stars: No fiber-to-the premise infrastructure is present and primary infrastructure grade is "F" or "D," indicating there is either no business class service available at all or there is only one primary carrier offering service of any kind.
- 1 Star: Business class service is available from a primary carrier and a second primary carrier offers service that meets CPUC minimum standards (i.e., a primary infrastructure grade of at least "C") or megabit class service is available and the primary infrastructure grade is "D."
- 2 Stars: Primary infrastructure grade is at least a "C" and megabit class service is available or primary infrastructure grade is at least a "D" and gigabit class service is available.
- 3 Stars: Primary infrastructure grade is at least a "C" and gigabit class service is available or primary infrastructure grade is at least a "D" and megabit and gigabit class service is available.
- 4 Stars: the primary infrastructure grade is at least a "C" and both megabit and gigabit class service is available.
- 5 Stars: meets the criteria for 4 Stars and open access dark fiber is available on standardized and published terms.

TABLE 7-10
BROADBAND CONSORTIUM OF THE PACIFIC COAST, COMMUNITY GRADES
Ventura County, 2016

Location	Unincorporated	A	B	C	D	F	F-	Total
Bell Canyon CDP	Unincorporated			14	4		3	21
Camarillo, City of	City	590			326	16	44	976
Casa Conejo CDP	Unincorporated	32			12			47
Channel Islands Beach CDP	Unincorporated				52		2	54
El Rio CDP	Unincorporated	49			7		1	57
Fillmore, City of	City				239	1	6	246
Lake Sherwood CDP	Unincorporated					19	13	32
Meiners Oaks CDP	Unincorporated	3		25	51			79
Mira Monte CDP	Unincorporated	6		30	121			157
Moorpark, City of	City	18		198	188	6	62	466
Oak Park CDP	Unincorporated	13		94	13			120
Oak View CDP	Unincorporated	1			68			69
Ojai, City of	City	17		57	99		1	174
Oxnard, City of	City	1,331			1,074	28	69	2,502
Piru CDP	Unincorporated				47	4	28	79
Port Hueneme, City of	City	69			316	2	13	400
Ventura, City of	City	15		192	1,192	49	130	1,578
Santa Paula, City of	City				382	5	16	403
Santa Rosa Valley CDP	Unincorporated				54		28	82
Santa Susana CDP	Unincorporated	5		23	7			35
Saticoy CDP	Unincorporated				23	3		26
Simi Valley, City of	City	33		892	366	8	82	1,381
Thousand Oaks, City of	City	882		33	630	1	32	1,578
Rest of Ventura County	Unincorporated	129		64	719	320	3,013	4,245
Total	-	3,196		1,616	5,990	462	3,543	14,807

Source: Broadband Consortium of the Pacific Coast, Broadband Analysis and Planning, Tellus Venture Associates, 11 April 2016.

The unincorporated communities of Ventura County overall received a rating of Zero Stars; however, the El Rio CDP received a rating of 2 Stars, and Mira Monte CDP and Santa Susana CDP both received ratings of 0.5 Stars. Table 7-11 shows the number of star ratings for each designated location, as assessed in the June 2016 update analysis; both incorporated and unincorporated locations are included for context. Five cities in Ventura County had 3-4 star ratings; however, all other cities and the unincorporated county only received star ratings from No Stars to 2 Stars.

Providers

Typically, each home in California is served by two providers: a telephone company with infrastructure that meets the CPUC's standard for service, and a cable company with infrastructure that meets the FCC's relatively higher standard for service. According to BCPC, telephone services in the county are provided by two companies: AT&T serves the western and eastern thirds of the county, and Verizon serves the central third. The most common type of infrastructure in the unincorporated areas is slow legacy DSL, with the exception of Oak Park and Santa Susana CDPs where 22 percent and 35 percent of census blocks, respectively, receiving upgraded VDSL-based services. All of Verizon's wireline systems in California were purchased by Frontier Communications as of April 2016. However, this report still references Verizon because the BCPC report was prepared using data submitted by Verizon. AT&T has upgraded approximately half of its territory to meet the CPUC's minimum standards of 6 Mbps download and 1.5 Mbps upload speeds. Verizon offers high speed fiber infrastructure to approximately 70 percent of its service area, which well exceeds the FCC's higher standard.

Time Warner, Charter Communications, Cox Communications, and Bright House Networks provide cable to various areas of Ventura County. Time Warner is the largest provider, serving the southern half of Ventura County, reporting download speeds of 300 Mbps and upload speeds of 20 Mbps, exceeding the Federal Communication Commission (FCC)'s standard. Charter Communications is the second-largest provider, and reported download speeds of 100 Mbps and upload speeds of 5 Mbps, meeting the FCC's standard. These rates of service should be viewed with skepticism, however, as they are self-reported for marketing purposes and consumers in rural areas often encounter lower rates of service. Small areas in the southwest of the county are served by Charter and Cox. Cox Communications serves a tiny area on the border with Santa Barbara County, which is a very minor extension of its system in Santa Barbara County. Bright House Networks has claimed the northwestern area in the county as part of its designated area, but has never built any systems there. Table 7-12 shows the percentage of homes in each location that are claimed by each of the broadband providers.

According to the CPUC, mobile broadband service in Ventura County is relatively faster and more widely available than in the neighboring counties of Santa Barbara and San Luis Obispo. Mobile broadband service in Ventura County is provided by the four major mobile carriers. According to the CPUC's data, Verizon service covers all of the southern part of the county, with a few dead spots in hilly areas, and provides 3-6 Mbps download speed, depending on the area. AT&T service is available throughout the southern half of the county, except for the southeast corner, with download speeds of 3 Mbps or less, except in certain incorporated cities. T-Mobile's service area is similar to AT&T, also with its fastest service available only in incorporated cities. Sprint service is more limited, with small pockets of service providing more than 3 Mbps download speed, and largely unavailable outside of incorporated cities.

While the BCPC report rates Ventura County better for broadband services than some other counties in the region and some unincorporated areas have good service, broadband access in rural parts of the county is very limited.

TABLE 7-11
BROADBAND CONSORTIUM OF THE PACIFIC COAST, COMMUNITY STAR RATINGS
Ventura County, 2016

Location	Unincorporated or City	No Stars	1 Star	2 Stars	3 Stars	4 Stars	5 Stars	Total
Bell Canyon CDP	Unincorporated		1					1
Channel Islands Beach CDP	Unincorporated	9						9
El Rio CDP	Unincorporated	1		13				14
Meiners Oaks CDP	Unincorporated	6	11					17
Mira Monte CDP	Unincorporated	4	7					11
Oak Park CDP	Unincorporated		3					3
Oak View CDP	Unincorporated	10						10
Piru CDP	Unincorporated	14						14
Santa Susana CDP	Unincorporated	3	2					5
Saticoy CDP	Unincorporated	16						16
Rest of Uninc County	Unincorporated	74	3	5				82
Camarillo	City	15	12	77	1	4		109
Fillmore	City	63						63
Moorpark	City	18	30		2			50
Ojai	City	22	32					54
Oxnard	City	157	21	226	1			405
Port Hueneme	City	8		12				20
Ventura	City	342	62	5				409
Santa Paula	City	91						91
Simi Valley	City	56	91	4	4			155
Thousand Oaks	City	27	1	117		2		147
County Total		**936**	**276**	**459**	**8**	**6**		**1,685**

Source: Broadband Consortium of the Pacific Coast, Broadband Analysis and Planning, Update, Tellus Venture Associates, 30 June 2016.

TABLE 7-12
BROADBAND CONSORTIUM OF THE PACIFIC COAST, PROVIDERS
Ventura County, 2016

Location	Unincorporated or City	AT&T	Charter	Cox	Time Warner	Verizon	Telco*	Cable
Bell Canyon CDP	Unincorporated	99%			100%		99%	100%
Casa Conejo CDP	Unincorporated				100%	100%	100%	100%
Channel Islands Beach CDP	Unincorporated				100%	89%	89%	100%
El Rio CDP	Unincorporated				100%	92%	92%	100%
Lake Sherwood CDP	Unincorporated				9%	100%	100%	9%
Meiners Oaks CDP	Unincorporated	95%			100%		95%	100%
Mira Monte CDP	Unincorporated	90%			100%		90%	100%
Oak Park CDP	Unincorporated	100%			100%		100%	100%
Oak View CDP	Unincorporated	100%			100%		100%	123%
Piru CDP	Unincorporated	99%			98%		99%	98%
Santa Rosa Valley CDP	Unincorporated				97%	93%	93%	97%
Santa Susana CDP	Unincorporated	99%			100%		99%	100%
Saticoy CDP	Unincorporated	100%			100%		100%	100%
Camarillo	City				100%	99%	99%	100%
Fillmore	City	93%			100%		93%	100%
Moorpark	City	90%			100%		90%	100%
Ojai	City	98%			100%		98%	100%
Oxnard	City				99%	98%	98%	99%
Port Hueneme	City				100%	94%	94%	100%
Santa Paula	City				100%	94%	94%	100%
Simi Valley	City	95%			100%		95%	100%
Ventura	City	97%	38%		66%		97%	105%

*Telco is an abbreviation for "telephone company."

Source: Broadband Consortium of the Pacific Coast, Broadband Analysis and Planning, Tellus Venture Associates, 11 April 2016.

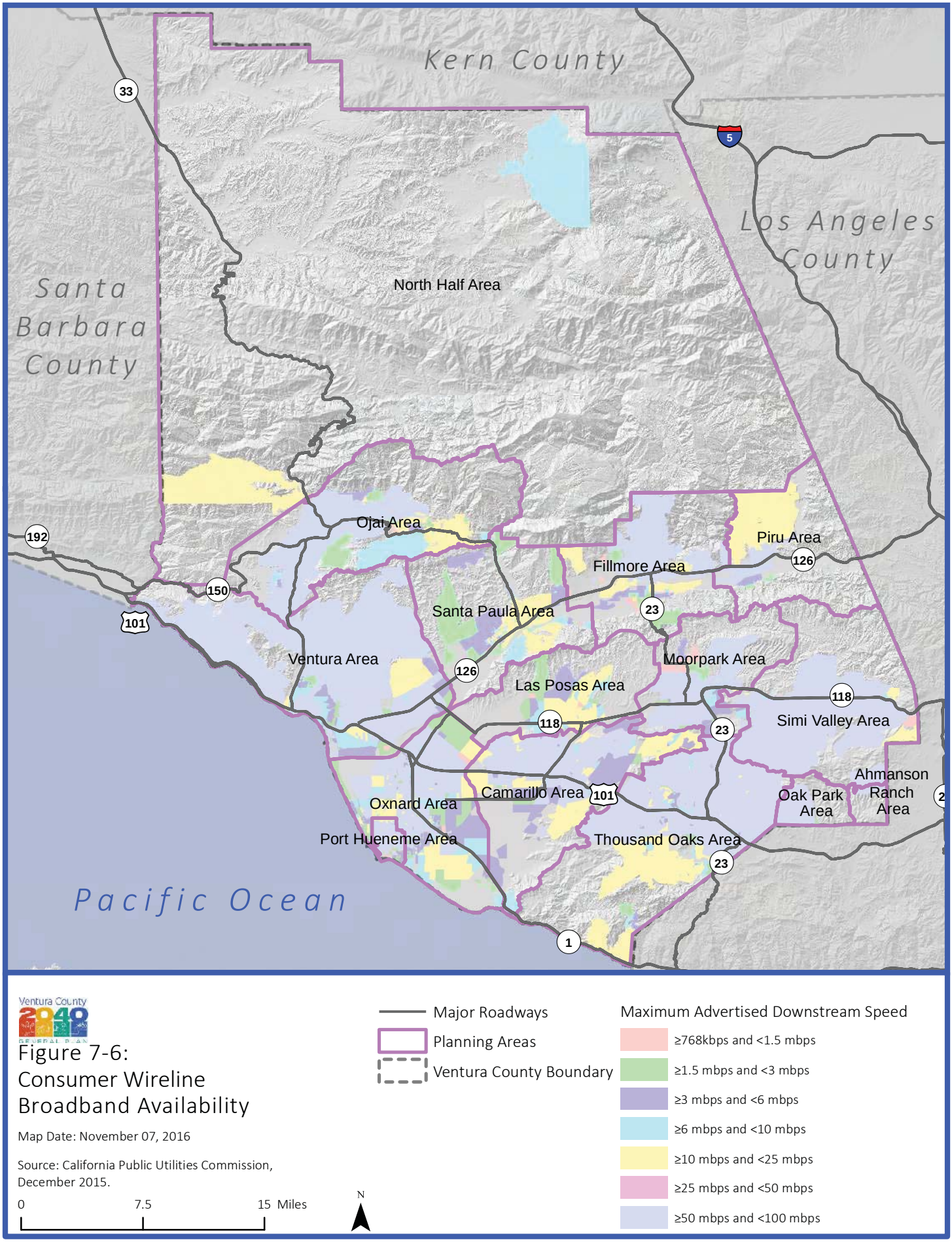
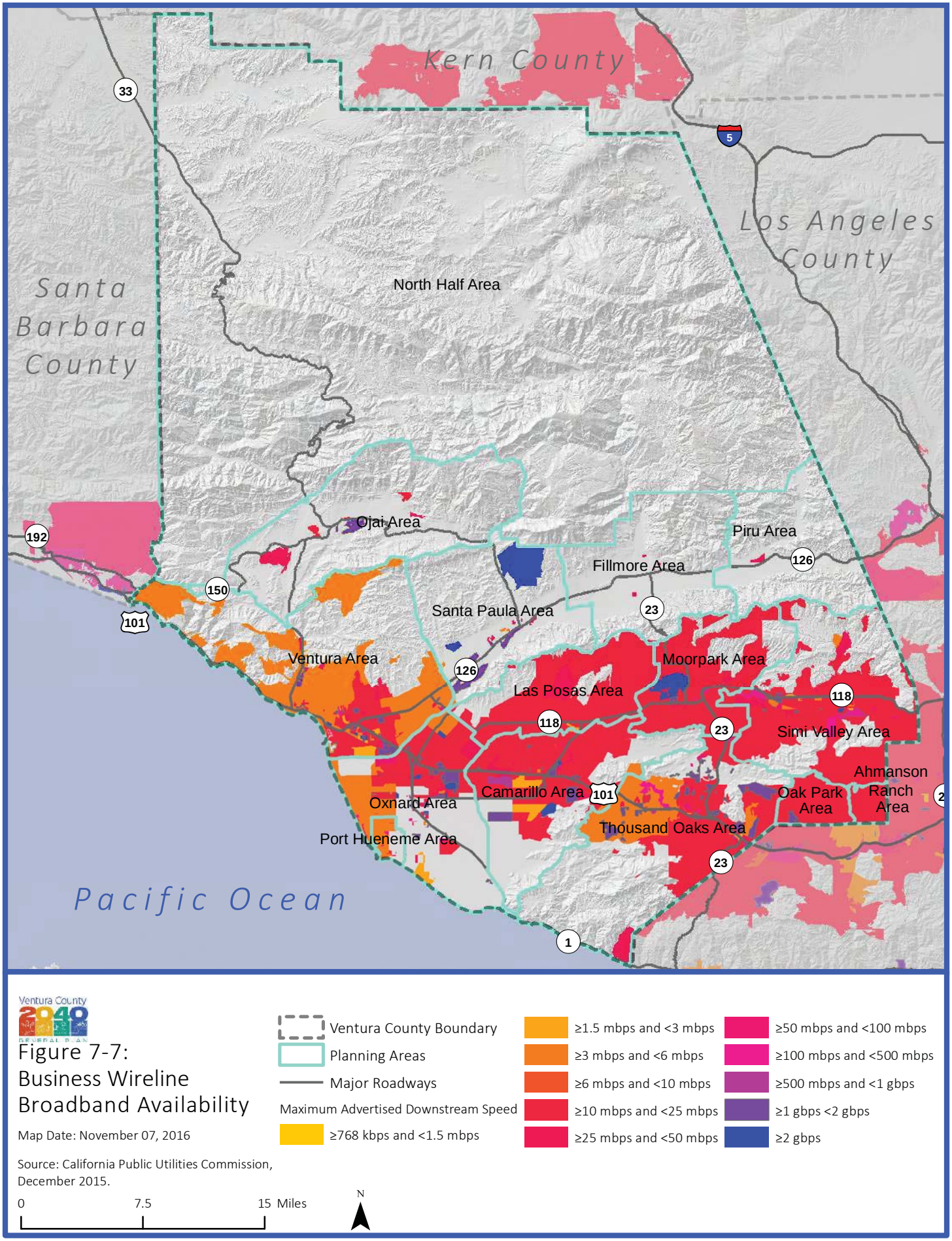


Figure 7-6:
Consumer Wireline Broadband Availability

Map Date: November 07, 2016

Source: California Public Utilities Commission, December 2015.



Ventura County 2040 General Plan

Figure 7-7: Business Wireline Broadband Availability

Map Date: November 07, 2016

Source: California Public Utilities Commission, December 2015.

0 7.5 15 Miles

N

Ventura County Boundary
Planning Areas
Major Roadways

Maximum Advertised Downstream Speed

- ≥768 kbps and <1.5 mbps
- ≥1.5 mbps and <3 mbps
- ≥3 mbps and <6 mbps
- ≥6 mbps and <10 mbps
- ≥10 mbps and <25 mbps
- ≥25 mbps and <50 mbps
- ≥50 mbps and <100 mbps
- ≥100 mbps and <500 mbps
- ≥500 mbps and <1 gbps
- ≥1 gbps <2 gbps
- ≥2 gbps

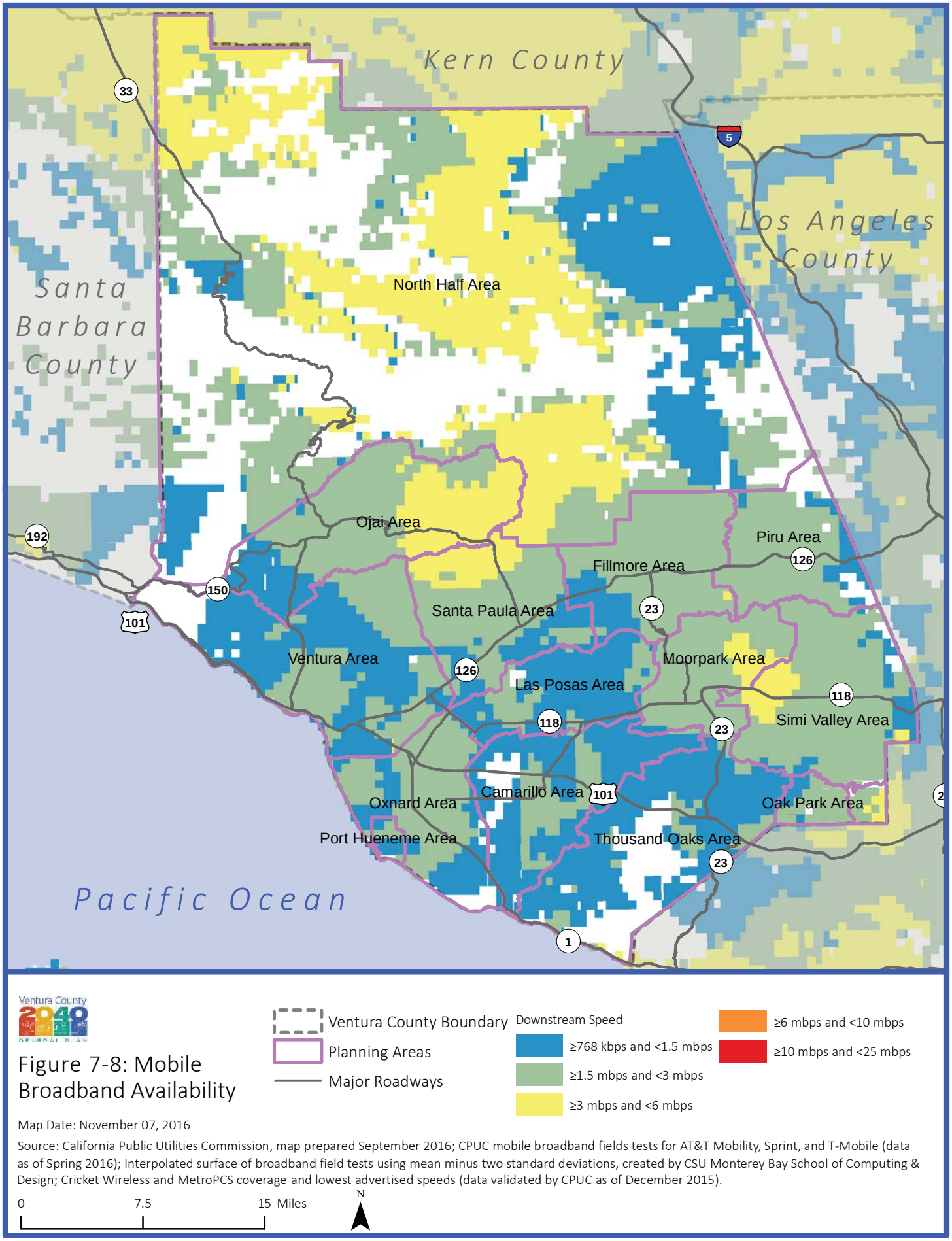


Figure 7-8: Mobile Broadband Availability

Map Date: November 07, 2016

Source: California Public Utilities Commission, map prepared September 2016; CPUC mobile broadband fields tests for AT&T Mobility, Sprint, and T-Mobile (data as of Spring 2016); Interpolated surface of broadband field tests using mean minus two standard deviations, created by CSU Monterey Bay School of Computing & Design; Cricket Wireless and MetroPCS coverage and lowest advertised speeds (data validated by CPUC as of December 2015).

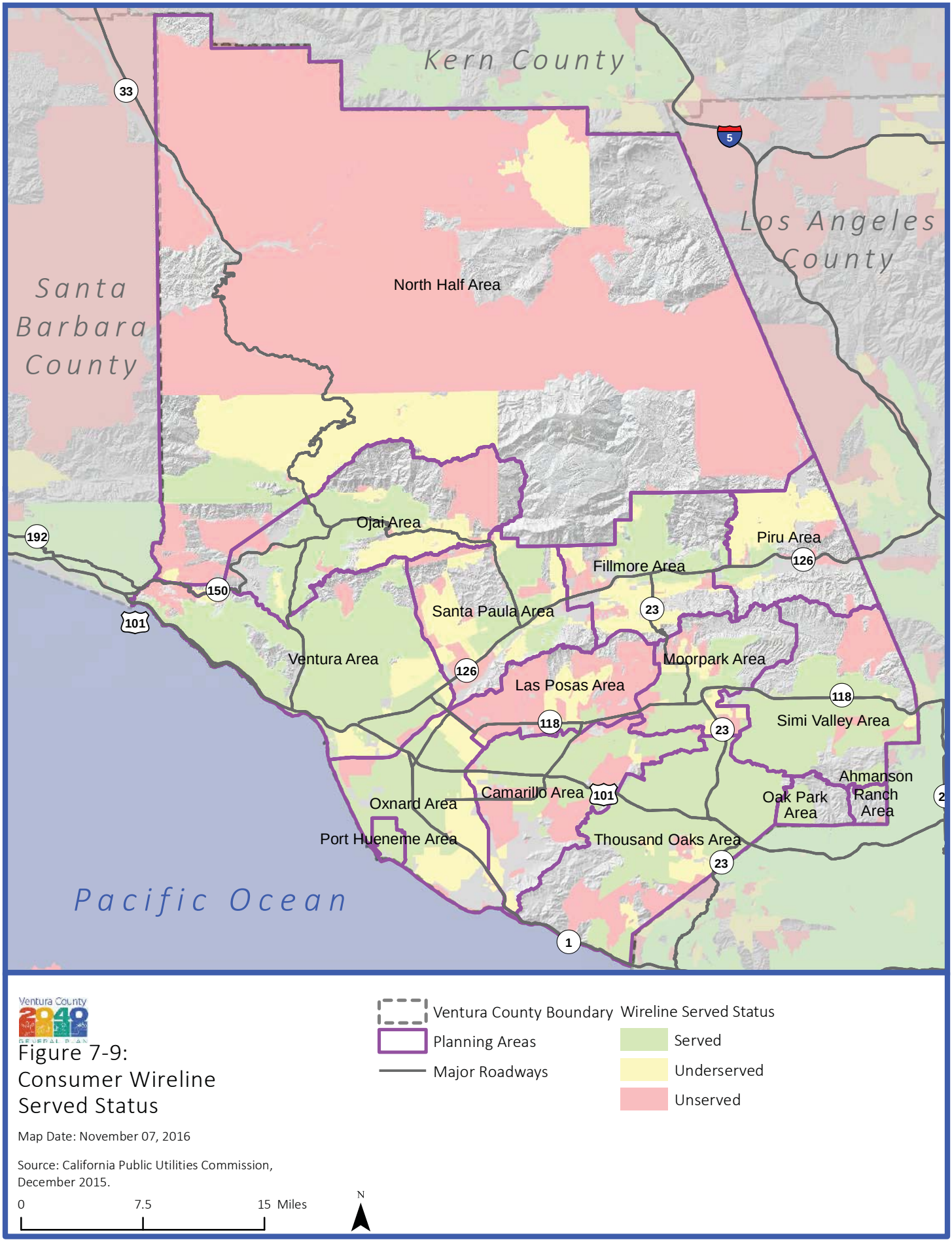


Figure 7-9:
Consumer Wireline
Served Status

Map Date: November 07, 2016

Source: California Public Utilities Commission, December 2015.

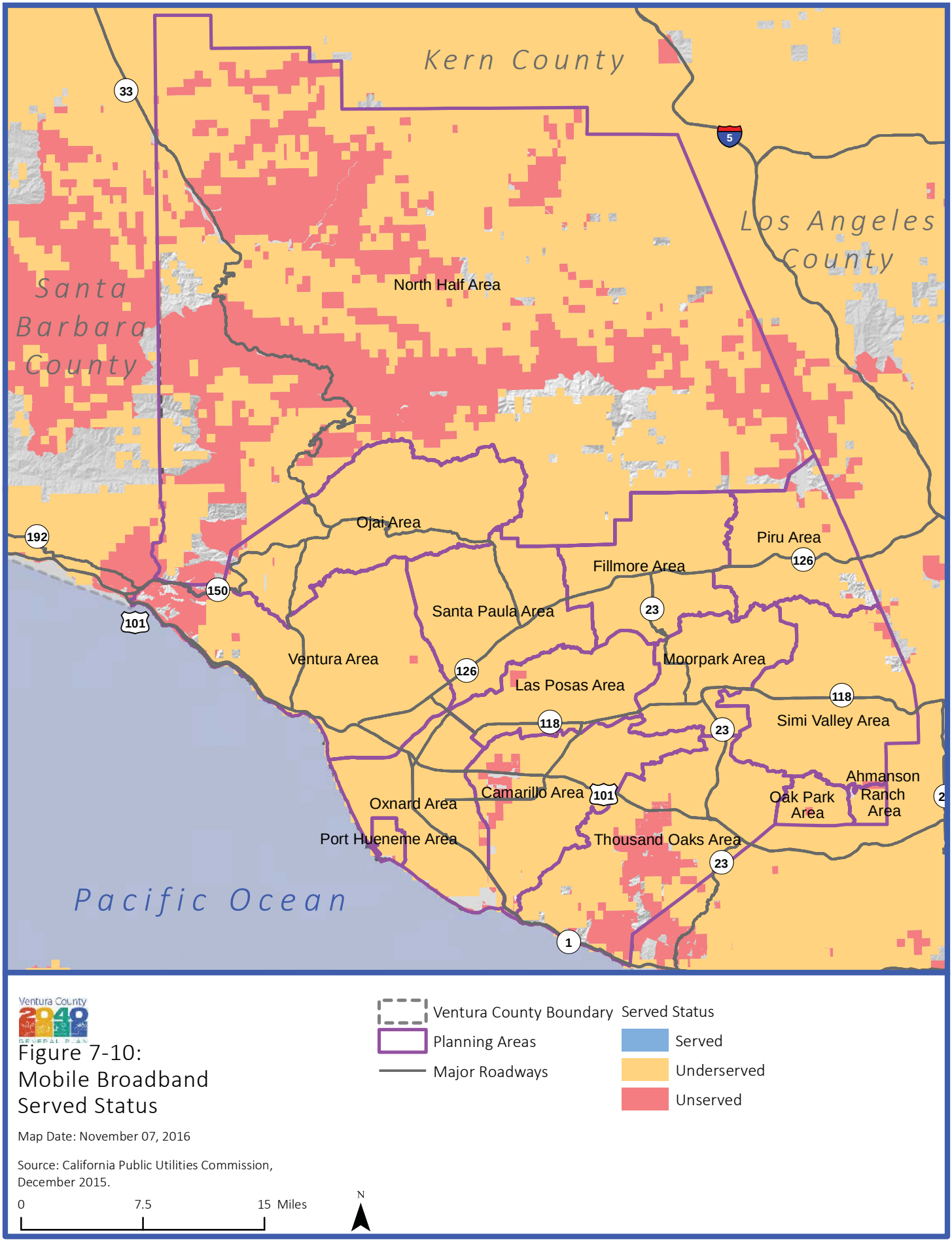


Figure 7-10:
Mobile Broadband
Served Status

Map Date: November 07, 2016

Source: California Public Utilities Commission, December 2015.

Regulatory Setting

Federal

Federal Communications Commission

The Federal Communications Commission (FCC) regulates interstate and international communications by radio, television, wire, satellite, and cable in the U.S. The FCC was founded through the Communications Act of 1934, and operates as an independent agency overseen by the U.S. Congress. The Federal Advisory Committee Act of 1972 put in place a process for establishing, operating, overseeing, and terminating FCC advisory committees for specific aspects of communications. The FCC is made up of six separate bureaus: Consumer & Governmental Affairs, Enforcement, Media, Public Safety & Homeland Security, Wireless Telecommunications, and Wireline Competition. Together, these bureaus are responsible for adopting and modifying rules/regulations that govern business practices. These can include interpretive rules, policy statements, substantive legislative rules, and organizational/procedural rules.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines, as well as licenses hydropower projects. The Energy Policy Act of 2005 gave FERC additional responsibilities, including: promoting the development of a strong energy infrastructure; open access transmission tariff reform; and preventing market manipulation.

State

AB 1890 (1996)

AB 1890 (1996) restructured California's electricity market to open the generation of electricity to competition (transmission and distribution systems remain a regulated monopoly). AB 1890 requires utilities to purchase electricity from the wholesale market. AB 1890 gives customers of investor-owned utilities the ability to choose who provides their electricity.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is a State agency created by constitutional amendment to regulate privately owned telecommunications, electric, natural gas, water, railroad, trail transit, passenger transportation, and in-State moving companies. The CPUC is responsible for assuring California utility customers have safe, reliable utility services at reasonable rates while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities; and the local pipelines of natural gas (CPUC Decision 95-08-038). The CPUC also regulates rates and charges for basic telecommunication services, such as how much one pays for the ability to make and receive calls.

California Energy Commission

The California Energy Commission (CEC) is California's primary energy policy and planning agency. Created in 1974, it is charged with six major responsibilities:

- Energy forecasting;
- Promoting energy efficiency and conservation through the appliance and building efficiency standards;
- Financially supporting public interest energy research;
- Developing green energy resources and technologies for buildings, industry, and transportation;
- Licensing large thermal power plants; and
- Planning for State response to energy emergencies.

SB 350

Increases the State's Renewables Portfolio Standard to 50 percent by 2030 and doubles State energy efficiency standards. Supports April 2015 Executive Order, new goal of reducing greenhouse gas emissions by 40 percent below 1990 levels by 2030.

Local

2005 Ventura County General Plan

The General Plan covers utilities in Chapter 4, Public Facilities and Services. Section 4.5 includes goals, policies, and programs related to utilities. The following Area Plans also contain goals and policies related to utilities:

- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for utilities. These can be found in Section 30, Utilities.

Key Terms

Digital Subscriber Line (DSL). Internet technology that uses existing 2-wire copper telephone wiring to deliver high-speed data services at speeds greater than basic Internet dial-up.

Electricity. A natural phenomenon, either through lightening or the attraction and repulsion of protons and electrons to create friction, that forms an electric current or power.

Generators. Entities that own, operate, and maintain generation assets to supply energy and ancillary services to the competitive market.

Internet. A network that links computer networks all over the world by satellite and telephone, connecting users with service networks such as e-mail and the World Wide Web.

Kilowatt-hours (kWh). A unit of measurement for electricity equal to one thousand watt hours.

Personal Communication Service (PCS) Provider. Wireless service that feature "number portability," or the means to be contacted on a single number and that will be competitors in the future to cellular carriers.

Power Facility. A facility for the generation of electric power. Most power facilities contain one of more generators that convert mechanical power to electrical power.

Watt. An electrical unit of power equal to the rate of energy transfer produced in a circuit by one volt acting through a resistance of 1 ohm, a unit of measurement of resistance.

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SECTION 7.5 LAW ENFORCEMENT

Introduction

This section describes the general characteristics of law enforcement facilities and services provided within Ventura County. The section focuses on service provided by the Ventura County Sheriff's Office and the divisions for which it is responsible and the California Highway Patrol (CHP).

Major Findings

- There are no major planning-related findings for this section.

Existing Conditions

Ventura County Sheriff's Office

The Sheriff's Office has been responsible for the security and safety of Ventura County residents and their property since 1873. The Sheriff's Office oversees the county jail system and the investigation of all criminal activities occurring in the unincorporated areas. Beyond providing law enforcement services to the unincorporated county, the Sheriff's Office is also contracted to provide services to five of the county's ten incorporated cities (Thousand Oaks, Camarillo, Moorpark, Fillmore, and Ojai). The unincorporated county and these cities make up 95 percent of the county's land area and are home to nearly half of the county's population.

The Sheriff's Office employs 1,200 staff members, including more than 700 sworn positions. The Sheriff's Office is composed of four primary divisions: Patrol, Detention, Special Services, and Support Services.

Patrol Division

The Patrol Division serves the unincorporated areas of Ventura County and five contract cities (Camarillo, Fillmore, Moorpark, Ojai, and Thousand Oaks). There are seven patrol stations, as shown in Figure 7-11 and listed below:

- Headquarters Station/West County Patrol Station: 800 South Victoria Avenue, Ventura
- Camarillo Patrol Station: 3701 East Las Posas Road, Camarillo
- East County Patrol Station: 2101 East Olsen Road, Thousand Oaks
- Fillmore Patrol Station: 524 Sespe Avenue, Fillmore
- Lockwood Valley Patrol Station: 15021 Lockwood Valley Road, Frazier Park
- Moorpark Patrol Station: 610 Spring Road, Moorpark
- Ojai Patrol Station: 402 South Ventura Street, Ojai

The Patrol Division also includes the Mounted Unit, Canine (K-9) Unit, Sheriff's Communication Center, the Office of Emergency Services, and a Tactical Response Team. The Mounted Unit includes privately owned horses, which are used in functions such as large crowd management and back country trail patrols. The K-9 Unit includes six German Shepherd patrol dog teams, all on call 24 hours a day, and one narcotics detection trained Labrador Retriever. The Sheriff's Office of Emergency Services (OES) provides whole community emergency management services which include, disaster planning, emergency alert and warning, the implementation of emergency evacuation plans, the maintenance and operation of the County Emergency Operations Center, and leading recovery operations. OES services are described in more detail in Section 7.7 Emergency Services. The Sheriff's Communication Center (SCC) handles all law enforcement calls for the unincorporated communities and five contracted cities in Ventura County by working with the Patrol Division to provide response services.

The Patrol Division is the largest division in the Sheriff's Office. As part of its responsibilities, the Patrol Division initiates regular community engagement focused on crime reduction and quality of life issues. This engagement is achieved ~~primarily~~ through a variety of ~~its~~ community policing programs~~.~~ including the Citizens Academy, Chaplain Program, Neighborhood Watch, Parent Project, Ride Along Program, and Beat Coordinators which operate in a variety of areas throughout the county. For example, deputies in Thousand Oaks partner with various community resources to provide Safe Passage, a social immersion program targeting at-risk youth susceptible to gang and drug influences. At all levels of the Patrol Division, Sheriff's Office staff members are engaged with the public through social media and community presentations/interaction.

The Patrol Division relies heavily on volunteerism to help provide a superior level of public service. As an example, in Thousand Oaks nearly 100 VIPs (Volunteers in Policing) augment the paid staff to accomplish administrative tasks, provide community education, and perform limited patrol functions. On average, VIPs in Thousand Oaks alone donate more than 6,000 hours annually. Other volunteer programs administered by the Patrol Division include three coordinated Search and Rescue Teams, the Explorer Program, and the Reserve Deputy to support its mission.

The Division's West County Patrol Station serves as the headquarters station and is located in Ventura. This station serves the unincorporated communities Saticoy, El Rio, Nyeland Acres, Montalvo, Silver Strand Beach, Hollywood Beach and La Conchita Beach in addition to the cities of Oxnard and Ventura. This station is responsible for approximately 80.5 square miles of service area. This station includes both sworn and civilian personnel as well as volunteer staff members. This station has a liaison deputy who services all communities of the station's service areas to attend monthly community council, municipal advisory committee, and board meetings. This station also houses an active Explorer program which includes two deputies assigned to serve as youth advisors. The Sheriff Department's Gang Unit, located at headquarters, serves a number of communities in assisting with law enforcement and apprehension of gang members.

The Camarillo Patrol Station is home to sworn officers assigned to areas in and around the City of Camarillo including nearby unincorporated areas nearest to Camarillo. The Camarillo station includes sworn personnel responsible for responding to calls for service in 136 square miles of area ranging from Somis to Malibu. Additionally, the station hosts community policing programs and volunteer programs that contribute thousands of volunteer hours per year including the Citizen Patrol, Explorer Program, Disaster Assistance Response Team (D.A.R.T), and Project Hope. Of the provided programs, Camarillo deputies administer Project Hope, a collaborative approach to reducing homelessness through outreach and awareness of available services.

The East County Station was built in 1988 and the facility encompasses 58,000 square feet of space on 11 acres of land in the northeastern part of the City of Thousand Oaks. The City of Thousand Oaks has contracted with the Ventura County Sheriff's Office for police services since 1964. In addition to the City of the Thousand Oaks, East County Patrol Station provides police services to the unincorporated areas including Lynn Ranch, Casa Conejo, Kelley Estates, Hidden Valley, Oak Park, and Bell Canyon. In addition to sworn and civilian personnel, this station relies on tremendous volunteer support through Volunteers in Policing (VIPs), Disaster Assistance Response Team (DART), Search and Rescue, and Explorers who all donate their time, energy and expertise.

The Fillmore Patrol Station is responsible for serving approximately 450 square miles of unincorporated area in the Santa Clara Valley, including the unincorporated communities of Piru, Bardsdale, Rancho Sespe, and Upper Ojai. In addition to patrol beat cars, the Division maintains a School Resource Officer in collaboration with the Fillmore Unified School District. Volunteers make a large contribution to the station including Explorer and Citizen Patrol Units as well as the Fillmore Search and Rescue Unit. Additionally, the Fillmore Station utilizes community policing by teaming up with community organizations for early intervention, job training and counseling of at-risk youths in Fillmore. As part of community policing efforts, the station deploys Beat Coordinators who, aside from patrolling their regular beat, provide a citizen oriented policing approach.

The Moorpark Patrol Station provides law enforcement services to the City of Moorpark on a contract basis. In addition to the City of Moorpark, the station provides police services to unincorporated areas including Santa Rosa Valley, Moorpark Home Acres, Happy Camp, Fruitvale, Santa Susanna Knolls, Box Canyon, Tapo Canyon, Balcom Canyon, Bradley, Stockton, and Grimes Canyon. As collateral assignments to patrol responsibilities, the station hosts four deputies who serve as gang officers and three others assigned to bicycle patrol detail.

The Lockwood Valley Patrol Station is responsible for approximately 610 square miles in the northern portion of Ventura County. The station hosts two deputies and two additional personnel, with deputies working a 5/2 schedule and on call seven days a week. Deputies at this station work with a variety of agencies including Kern County Sheriff's Office, Santa Barbara County Sheriff's Office, Los Angeles County Sheriff's Office, California State Parks, United States Forest Service, and California Highway Patrol. A high number of calls at the Lockwood Valley Patrol Station are search and rescue or medical calls. For this reason, deputies work closely with the Department's aviation unit and a helicopter landing pad is located next to the station.

The Ojai Patrol Station provides full-service policing to the approximately 30,000 residents residing in the Ojai Valley. Included in this population is the City of Ojai which contracts with the Ventura County Sheriff's Office for police services. Personnel assigned to the Ojai Patrol Station are proactively engaged in community policing. A variety of unique policing strategies are utilized to prevent crime, apprehend offenders, and improve effective police-community partnerships and effective two-way communication. Deputies patrolling on bicycles, walking foot patrol, and talking with residents and merchants are a common sight in the City. The Ojai Patrol Station also keeps the community informed of crime trends, and other police information, through publication of its "City Watch" email newsletter, as well as using social media. Additionally, The Ojai Valley enjoys a high degree of volunteerism and the station utilizes a citizen volunteer program to do many jobs.

Detention Division

The Detention Division oversees inmate services, jail facilities, and court services. The County has three jail facilities: The Main Jail, the Todd Road Jail, and the East County Jail.

- The Main Jail (pre-detention facility), accepts arrestees from all law enforcement agencies. The Main Jail facility has capacity for approximately 890 sentenced and un-sentenced inmates, and processes over 29,000 bookings and releases every year. The facility is operated by over 250 sworn and non-sworn personnel.
- The Todd Road Jail has a capacity of 796 inmates and is staffed by 185 sworn and non-sworn personnel. The Todd Road Jail also houses Inmate Services for all three jail facilities, which is a program for inmates geared toward reducing rates of recidivism, including academic, vocational, re-entry planning, substance abuse and treatment, and religious programs. This facility also houses Food Services, the Laundry Department, as well as the Commissary, which serves all three jail facilities.
- The East County Jail (ECJ) Facility, located at the East County Patrol Station in Thousand Oaks, operates as both a booking and housing facility. The ECJ has a maximum capacity of 34 inmates.
- The Detention Division includes the Court Services Bureau, with 102 professional and sworn staff, deployed between three courthouses and providing transportation to and from all of the jails. The three courthouses in the Ventura Superior Court system are the East County Courthouse in Simi Valley, the Juvenile Justice Center, located in the unincorporated area north of Oxnard, and the Hall of Justice, located in the city of Ventura.

Special Services Division

- The Special Services Division is responsible for unique situations requiring specialized training and is managed by the Chief Deputy Sheriff. The Special Services Division includes approximately 200 sworn and non-sworn personnel. The Division oversees the following departments and teams: Crime Laboratory, Crime Scene Investigations Unit, Information Systems Bureau, Narcotics, Intelligence and Vice Investigations, Aviation Unit, Search and Rescue, Tactical Negotiations Team, Special Weapons and Tactics Team (SWAT), and the Sheriff's Bomb Squad.

Support Services Division

- The Support Services Division includes departments that serve the internal needs of the Sheriff's Office, including the Business Office, Human Resources, Internal Affairs, Records and Licensing, and the Training Academy. The Training Academy provides specialized training for officer trainees through a 22-week accredited program. The training includes physical and psychological exercises and requires a certain level of physical fitness to enter the program.
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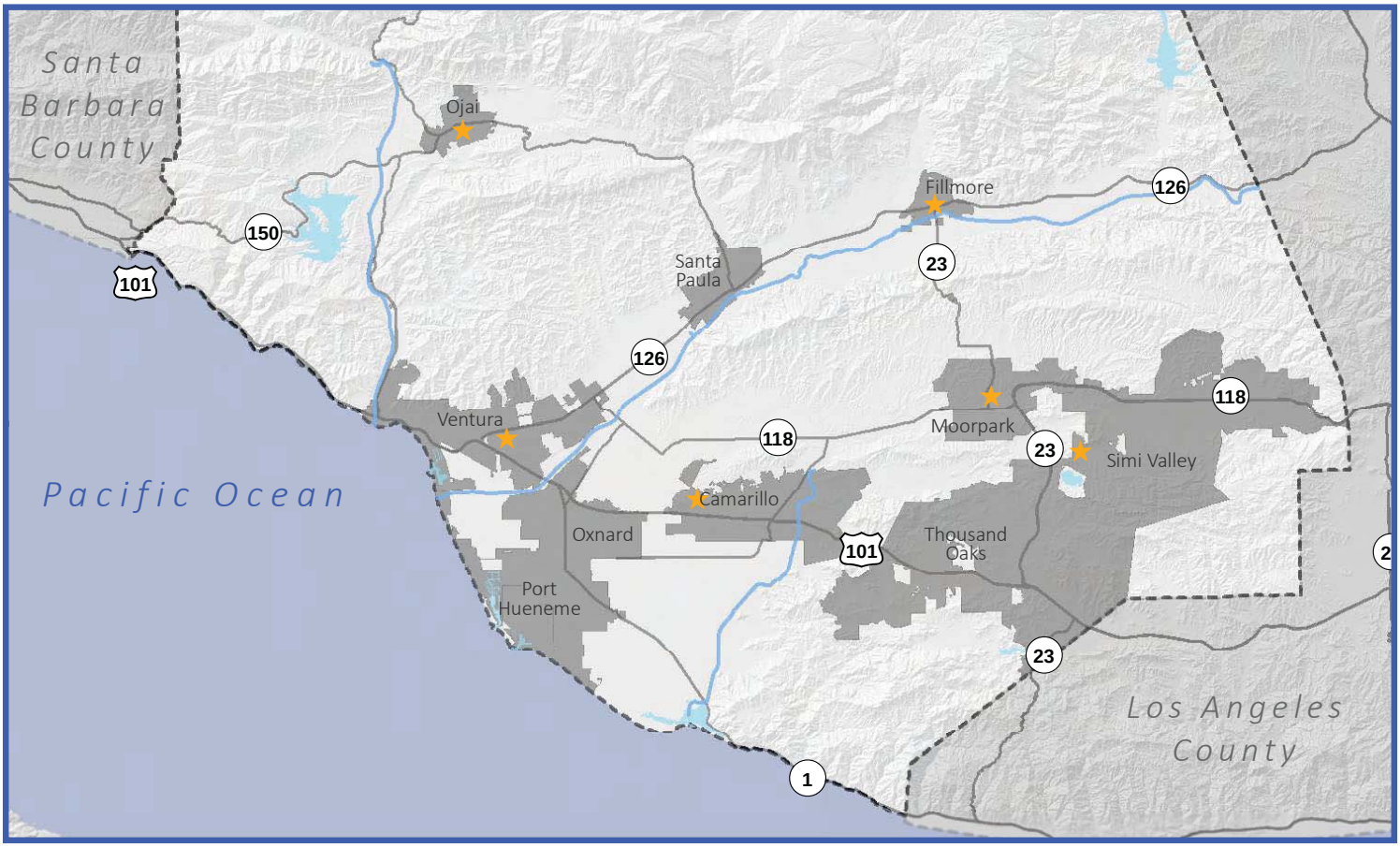

Figure 7-11:
Sheriff Stations

Map Date: July 22, 2016
Source: Ventura County Sheriff's Office, 2016; California Department of Transportation, 2007.

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Ventura County Boundary
Cities
Major Roadways
Major Waterways
Water Bodies
Sheriff Stations

California Highway Patrol

The California Highway Patrol (CHP) handles all traffic enforcement and automobile accident investigations for the unincorporated parts of Ventura County. There are two CHP offices located in Ventura County. The first office is located at 4656 Valentine Road in the City of San Buenaventura (Ventura). The second office is located in Moorpark at 610 Springs Road. The Moorpark CHP Station shares its facilities with the Moorpark Police Services Center. The CHP Moorpark serves approximately 650 miles of freeways, State routes, and unincorporated county roads, and many unincorporated areas of the county, including Oak Park, Newbury Park, Lynn Ranch, Somis, and Piru.

California Department of Corrections and Rehabilitation

The California Department of Corrections and Rehabilitation (CDCR) is responsible for the operation of the California state prison and parole systems. CDCR operates 33 adult correctional institutions, 13 adult community correctional facilities, and 8 juvenile facilities in California. Together, these facilities house more than 165,000 adult offenders and nearly 3,200 juvenile offenders. The only CDCR facility in Ventura County is the Ventura Youth Correctional Facility (VYCF), which is located in Camarillo. It is a reception center-clinic and program facility that houses and provides diagnostic services for the female population. VYCF includes Mary B. Perry High School, which provides instruction in basic skills, high school courses, GED preparation, vocational training, and special education services. Qualified youths have an opportunity to earn college credits towards an Associate of Arts Degree through Ventura Community College. Special programs available for female youths include a residential substance abuse treatment program, an intensive treatment program, and a specialized counseling program.

Regulatory Setting

State

Section 24000 of the Government Code mandates the Office of Sheriff be established in each county in California.

Local

2005 Ventura County General Plan

The General Plan covers law enforcement in Chapter 4, Public Facilities and Services. Section 4.7 includes goals, policies, and programs related to law enforcement. The following Area Plans also contain applicable goals and policies related to law enforcement:

- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and

- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for law enforcement. These can be found in Section 32. Law Enforcement/Emergency Services.

Key Terms

There are no key terms for this section.

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SECTION 7.6 FIRE PROTECTION

Introduction

The purpose of this section is to describe fire protection services in Ventura County. The following evaluation describes the Ventura County Fire Department (VCFD), colloquially referred to as the Fire Department.

Major Findings

- Ventura County encompasses 1,179,520 acres (1,843 square miles) of which 353,180 acres (552 square miles) are State Responsibility Area (SRA). The Ventura County Fire Department response area covers 542,720 acres (848 square miles). In 2015, VCFD responded to more than 40,000 incidents (an average of 102 calls each day).

Existing Conditions

The Ventura County Fire Department (VCFD) was created in 1928. Originally formed to serve the unincorporated county, it now provides fire protection services to the unincorporated areas of the county and 6 of the 10 incorporated cities: Thousand Oaks, Simi Valley, Moorpark, Camarillo, Port Hueneme, and Ojai. VCFD response area covers 848 square miles, out of the 1,843 total square miles that make up the county and serves a population of more than 480,000. In 2015, the VCFD responded to more than 40,000 incidents for an average of more than 110 calls each day. Following is a breakdown of the types of calls that VCFD responded to in 2015:

- Emergency Medical: 28,988
- Fires: 1,245
- Rescue: 2,742
- Public Service: 3,255
- Alarms: 3,152
- Hazardous Materials: 716

VCFD provides a range of programs and services aimed at protecting lives and property of the people of Ventura County from the adverse effects of fires, sudden medical emergencies, exposure to hazardous materials, or other dangerous conditions. These programs include fire protection planning, fire prevention education, fire law and code enforcement, fire suppression and recovery, first responder level emergency medical services, and assistance and support for other non-fire emergencies such as floods, earthquakes, and other disasters.

VCFD provides all-risk services including Fire Suppression, Rescue, Emergency Medical, Hazardous Materials, Urban Search and Rescue (USAR), Water Rescue, Operational Training, Fire Prevention, Investigation, Community Education, Community Emergency Response Teams (CERT), and Public Information. The Department provides a network of fire stations, personnel, and equipment. This network consists of 32 stations, 583 total personnel and a fleet of approximately 371 emergency and non-

emergency vehicles, including 31 first-run fire engines, 1 first-run Quint, 16 reserve fire engines, 11 wildland fire engines, 5 ladder trucks, 5 water rescue and fire boat craft, 2 paramedic squads, 15 command vehicles, 12 pieces of heavy equipment, and 33 other response vehicles.

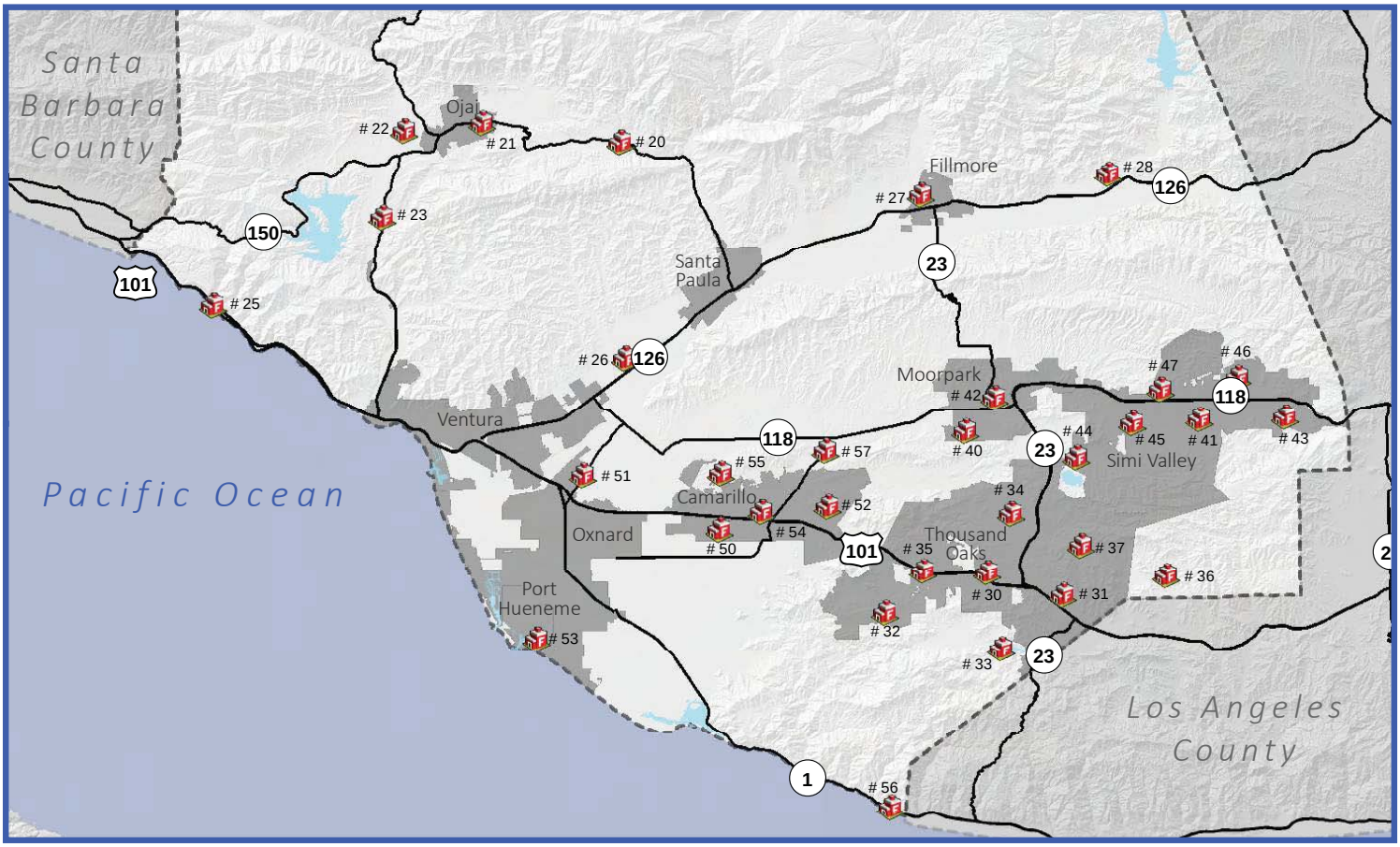
The County of Ventura Board of Supervisors acts as the Board of Directors for VCFD. The Fire Chief is appointed by the Supervisors. VCFD is divided into five bureaus: Administrative Services, Business Services, Support Services, Emergency Services, and Fire Prevention. VCFD includes five Battalions and several specialized units. The Battalions, their areas of service, and station numbers are listed below:

- Battalion 1 primarily serves the City of Camarillo and the surrounding area, and the Battalion's Stations include 50, 52, 54, 55, and 57. Battalion 1 is home to the Hazardous Materials, Crash/Recuse, Water Rescue, and Urban Search and Rescue special operations units.
- Battalion 2 serves the City of Ojai, District areas near the cities of Santa Paula and Ventura, and unincorporated areas in the northern part of the county. Battalion 2 is housed in Stations 20, 21, 22, 23, 25, and 26.
- Battalion 3 serves the greater Conejo Valley and the City of Thousand Oaks. Battalion 3 is located at Stations 30, 31, 32, 33, 34, 35, 36 and 37.
- Battalion 4 primarily serves within the cities of Moorpark and Simi Valley. The Stations include 40, 41, 42, 43, 44, 45, 46, and 47.
- Battalion 5 serves District areas along the Malibu coastline and Santa Clara River Valley, and the City of Port Hueneme. The Stations include 27, 28, 51, 53, and 56.

The locations of VCFD fire stations are shown in Figure 7-12. Each fire station has a staffed fire engine; strategic stations (Stations 30, 41 and 54) also have a staffed fire truck, with specific tools to perform responsibilities including forcible entry, search and rescue, clearing smoke and gas from a building, and turning off utility services. Three new fire stations are scheduled to replace the existing ones. Construction of a new Fire Station 27 is expected to begin in the fall of 2016, construction of a new Fire Station 35 is expected to be completed in the spring of 2017, and construction of a new Fire Station 20 is expected to begin in the winter of 2017.

VCFD specialized units include personnel trained for incidents involving special hazards or needs and they are available to all Battalions. These units include:

- Crash/Rescue Unit: responds to crashes involving flammable liquids.
- Hazardous Materials Unit: responds to incidents involving hazardous substances; they also perform decontamination of victims and emergency personnel.
- Urban Search & Rescue Unit: responds to technical rescue incidents such as those with collapsed structures or when entrapment exceeds the capabilities of regular rescue crews.
- Water Rescue Unit: responds to incidents that exceed the capabilities of land based units, in swift water, ocean, or lake rescue.
- Wildland/Aviation Unit: responds to wildfire with construction of fire control lines; the unit also works with the Sheriff's Aviation unit.



Ventura County 2040 General Plan

Figure 7-12:
Fire Station Locations

Map Date: July 22, 2016

Source: Ventura County Fire Protection District, 2016; California Department of Transportation, 2007.

0 5 10 Miles

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Ventura County Boundary

Cities

Major Roadways

Fire Station

Beyond emergency fire response, VCFD also works with the community to prevent and prepare for fires. VCFD enforces fire codes and regulations; in 2015, VCFD inspected more than 5,700 residential and commercial occupancies, reviewed approximately 5,000 plans/applications, and issued 143 fire code permits and 500 film permits. The Fire Prevention Bureau manages the Fire Hazard Reduction Program (FHRP) that includes public education related to defensible space. Approximately 16,000 plus parcels are inspected annually by local fire stations and the FHRP unit. Parcels not in compliance can be abated by VCFD. The "Ready, Set, Go!" program, helps guide the residents through the process of making their homes resistant to wildfire, and their families ready to leave early and safely.

VCFD is funded through a combination of the Ventura County General Fund, CAL FIRE for services as a Contract County, and Fire Facilities Impact fee.

All calls for VCFD service are received through and dispatched from the Fire Communications Center (FCC), located in Camarillo. The FCC facility was completed in 2006 and uses state-of-the-art technology that is designed to ensure the most efficient response to calls; the technology allows dispatchers to see the locations of fire engines and ambulances with a Global Positioning System (GPS) to ensure the closest available emergency vehicles are dispatched to the areas of greatest need. The FCC facility is staffed with one supervising public safety dispatcher and seven professional public safety dispatchers. The FCC dispatches for all fire agencies in the county and all ambulance companies.

Regulatory Setting

Local

2005 Ventura County General Plan

The General Plan covers fire protection in Chapter 4, Public Facilities and Services. Section 4.8 includes goals, policies, and programs related to fire protection. The following Area Plans also contain applicable goals and policies related to fire protection:

- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for fire protection. These can be found in Sections 33a. Fire Protection Services – Distance and Response and 33b. Fire Protection Services – Personnel, Equipment, and Facilities.

Key Terms

There are no key terms for this section.

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SECTION 7.7 EMERGENCY SERVICES

Introduction

This section summarizes existing information on emergency services in unincorporated areas of Ventura County. These can include medical emergencies and response to natural, human caused or technological disasters. The following summary describes County programs and service providers that provide emergency services to residents of the county.

Major Findings

- The Ventura County Sheriff's Office of Emergency Services leads, coordinates and supports countywide preparedness, response and recovery efforts to approximately a dozen large scale incidents or disasters per year.
- The Ventura County Sheriff's Office of Emergency Services administers the largest annual homeland security and emergency management grant program in the county.
- The Ventura County Public Health Department Emergency Medical Services Agency (EMSA) handles approximately 45,000 emergency medical calls each year, and is responsible for over 30,000 patient transports to local hospitals.
- The Ventura County Public Health Department Emergency Medical Services Agency (EMSA) and the Ventura County Fire Department (VCFD) aid in medical emergency response. VCFD is the largest first responder in the county, and the EMS oversees ambulance services that provide transport.

Existing Conditions

This section discusses emergency services provided in Ventura County, including the State Office of Emergency Services, the County Sheriff's Office of Emergency Services, and County-provided emergency medical services.

State Office of Emergency Services

The California Office of Emergency Services (California OES) was established as part of the Governor's Office in 1950 as the State Office of Civil Defense. The agency became more involved in natural disaster operations, and the name was changed to the California Disaster Office in 1956. Adoption of the Emergency Services Act in 1970 changed the agency's name to the Office of Emergency Services.

The California OES serves as the lead State agency for emergency management in California. To ensure the most effective use of all resources for dealing with any emergency, California OES includes government agencies at all levels, businesses, community based organizations, and volunteers in their process.

The California OES mission is to ensure the State is ready and able to mitigate against, prepare for, respond to, and recover from the effects of emergencies that threaten lives, property, and the environment. OES coordinates the activities of all State agencies relating to preparation and implementation of the State

Emergency Plan. California OES also coordinates the response efforts of State and local agencies to ensure maximum effect with minimal overlap and confusion. Additionally, California OES coordinates the integration of Federal resources into State and local response and recovery operations.

Ventura County Sheriff's Office of Emergency Services

The Ventura County Sheriff's Office of Emergency Services (County OES) is responsible for countywide all hazards disaster preparedness, planning, response and recovery. OES staff work with all County departments, ten cities, public and private organizations, community and civic groups to lead a whole community emergency management program. OES responsibilities include, emergency management preparedness, planning, emergency alert and warning, the implementation of emergency evacuation and shelter plans, the maintenance and operation of the County Emergency Operations Center and leading recovery operations. To prepare for potential emergencies, the OES maintains an Emergency Operations Plan that ensures that the County's Emergency Operations Center is in a constant state of readiness. OES also leads the development of maintains the Operational Area Multi Hazard Mitigation Plan and administers the largest homeland security and emergency management grant program in the county. The coverage of the OES encompasses all of Ventura County and involves the support of agencies of all levels of government, public and private organizations, and community and civic groups. On an annual basis, OES leads, coordinates and supports countywide preparedness, response and recovery efforts to approximately a dozen large scale incidents or disasters per year.

Emergency Medical Services

The Ventura County Public Health Department includes the Ventura County Emergency Medical Services (EMS) Agency. This Agency provides oversight and guidance of the delivery of emergency medical services throughout Ventura County. The Agency handles approximately 45,000 emergency medical calls each year, and is responsible for over 30,000 patient transports to local hospitals. In 2015, approximately 29,000 of these calls were in collaboration with VCFD.

Ambulance Service

There are three ambulance transport providers contracted with the Ventura County Emergency Medical Service Agency:

- Lifeline Medical Transport has 8 vehicles in their fleet, with an average of 6 in service daily
- Gold Coast Ambulance Services has 19 vehicles in their fleet, with 15 in service daily
- American Medical Response has 28 vehicles, with 19 in service daily

The Fire Communications Center (FCC) dispatches for all ambulance services in Ventura County. The county is divided into seven ambulance zones designating response areas based on population density. (Figure 7-13 shows the seven zones). Each of the ambulance transport providers are assigned to one or more of the designated zones, though the FCC can dispatch any ambulance from any provider (including other ambulance transport providers not contracted by the County) to any location in the county on an as-needed basis. Table 7-12 shows the number of Emergency Medical Technicians (EMT) and Paramedic staff with each of the providers contracted with Ventura County EMS Division.

Ventura County's current contract with the ambulance service providers requires a level of service based on response times and compliance with expected response times no less than 90 percent of the time. Areas considered to be "metropolitan or urban" generally have an eight-minute response time; "suburban areas" require a 20-minute response time; areas designated as "semi-rural" require a 30-minute response time; and other very low-population or "wilderness areas" expect service as quickly as possible but without a defined time frame. Ambulance service providers undergo an annual review for compliance and a full-contract compliance review every two years. As of 2016, the ambulance service providers have met or exceeded the contract agreement every year since the current contract, which went into effect on January 1, 2005.

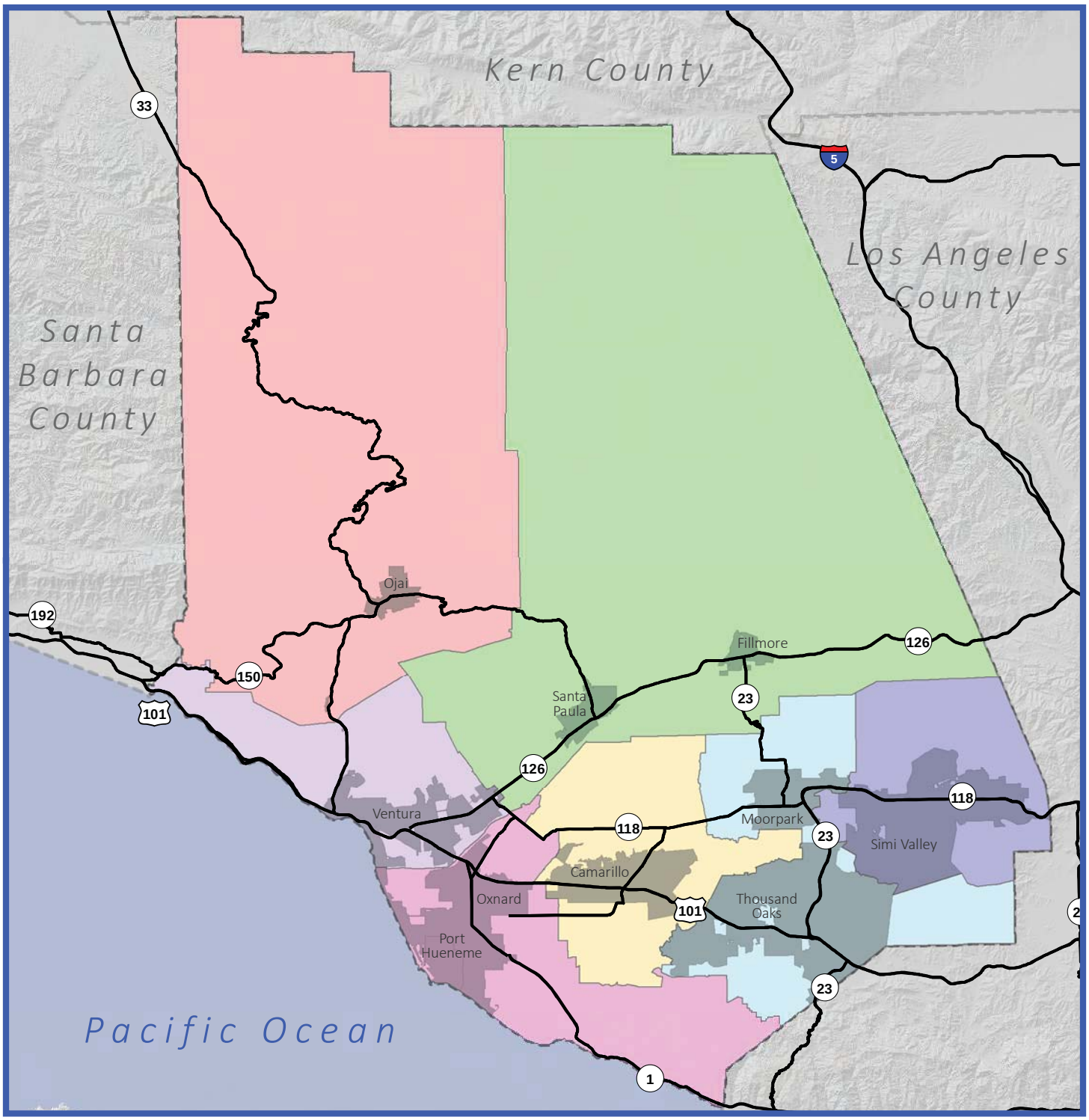
Ventura County Fire Department Emergency Medical Services

VCFD is the largest first responder in the county, with 122 firefighters in the field daily with either Emergency Medical Technician (EMT) or Paramedic certification. VCFD does not provide transport services, and instead works with ambulance services in the county, as needed, including Ventura County EMS.

TABLE 7-12
EMERGENCY MEDICAL PROVIDERS
Ventura County

Provider Name	EMT	Paramedic
Federal Fire Ventura County	68	0
Fillmore Fire Department	20	0
Oxnard Fire Department	109	0
Santa Paula Fire Department	30	0
Ventura City Fire Department	31	35
Ventura County Fire Department	326	49
American Medical Response	28	104
Gold Coast Ambulance	33	37
Lifeline Medical Transport	30	17
Total Providers	**675**	**242**

Source: Ventura County Emergency Medical Services, Steve Carroll, May 2016.



Ventura County Boundary
Cities
Major Roadways

Zones
1
2
3
4
5
6
7

Figure 7-13: Ambulance Zones

Map Date: July 22, 2016

Source: Ventura County Public Health Emergency Medical Services Agency, 2016; California Department of Transportation, 2007.

0 7.5 15 Miles

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Regulatory Setting

Ventura County Sheriff's Office of Emergency Services – Ventura County Code of Ordinance Division 5 – Safety, Chapter 3 – Public Emergency

Local

2005 Ventura County General Plan

The General Plan covers emergency services in Chapter 4, Public Facilities and Services. Section 4.7 includes goals, policies, and programs related to emergency services.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for emergency services. These can be found in Section 32. Law Enforcement/Emergency Services.

Key Terms

There are no key terms for this section.

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SECTION 7.8 HEALTH CARE SERVICES

Introduction

This section provides an overview of public health care services provided by Ventura County and hospitals and other medical facilities located in the county.

Major Findings

- The Ventura County Medical Center hospital has 180 beds; the Santa Paula Hospital has 49 beds, both serving all Ventura County residents.
- The Ventura County Health Care Agency's Ambulatory Care System provided service to nearly 500,000 patients in 2015, equivalent to 2,000 visits per weekday. These services were provided at 19 primary care clinics, 26 specialty care clinics, and eight urgent care centers throughout the county.
- Ventura County Public Health Department (VCPH) was awarded a five-year national accreditation from the Public Health Accreditation Board. VCPH is one of 79 public health departments in the country and the first in California to have earned this distinction.
- The County Board of Supervisors approved the "Health in All Policies" Resolution 15-007, on January 27, 2015 that provides a framework for all County agencies and departments to consider community health in non-medical areas such as planning, housing, transportation, and safety.
- There are 13 hospitals located in Ventura County, two of which are managed by the County. There are also 25 long term care facilities, 22 primary care clinics, 15 specialty care clinics, and 115 home health agencies and hospice facilities.

Existing Conditions

Ventura County Health Care Agency Facilities and Services

The Ventura County Health Care Agency team of 3,000 employees provides health care services to all members of the Ventura County community, with an emphasis on serving the most vulnerable of the community. This section discusses the services provided by the County agency, including facilities, programs, and goals for service.

The Ventura County Health Care Agency operates two hospitals, a nationally-recognized family medicine residency program, 24 primary care medical clinics, 11 specialty care medical clinics, eight urgent care medical clinics, and 10 behavioral health clinics. Table 7-13 lists the Ventura County Health Care Agency hospitals and medical clinics, and others in the county, including their location, the number of primary care visits they provided in 2014-2015 and whether they provide urgent care services.

TABLE 7-13
VENTURA COUNTY HEALTH CARE AGENCY
HOSPITALS AND MEDICAL CLINICS
Ventura County
2015

Facility	Location	Primary Care Visits 14-15	Urgent Care Provided
HOSPITALS			
Ventura County Medical Center	3291 Loma Vista Rd, Ventura, CA 93003	--	
Santa Paula Hospital	825 N 10th St, Santa Paula, CA 93060	--	
CLINICS			
Camarillo			
Las Posas Family Medical Group*	3801 Las Posas Rd #214, Camarillo, CA 93010	9,818	X
Fillmore			
Fillmore Family Medical Group*	828 W Ventura St # 100, Fillmore, CA 93015	11,220	X
Moorpark			
Moorpark Family Medical Clinic*	612 Spring Rd, Moorpark, CA 93021	20,559	
Oxnard			
John K. Flynn Community Clinic*	3100 N Rose Ave, Oxnard, CA 93036	2,518	
Las Islas Family Medical Group (North)*, and Las Islas Mobile Clinic	2400 S C St, Oxnard, CA 93033	67,994	
Las Islas Family Med Group (South)*	325 W Channel Islands Blvd, Oxnard, CA		X
Magnolia Family Medical Center* Magnolia Family West*	#120a, 2220 E Gonzales Rd, Oxnard, CA 93036	59,717	X
Mandalay Bay Women & Children's*	2000 Outlet Center Dr. #110, Oxnard, CA 93036	24,392	
Piru			
Piru Family Medical Center*	4061 Center St, Piru, CA 93040	173	
Santa Paula			
Santa Paula Hospital Clinic*	825 N 10th St, Santa Paula, CA 93060	9,654	
Santa Paula Medical Clinic*	1334 E Main St, Santa Paula, CA 93060	15,868	
Santa Paula West*	254 W Harvard Blvd, Santa Paula, CA 93060	15,107	
Simi Valley			
Sierra Vista Family Medical Clinic*	1227 E Los Angeles Ave, Simi Valley, CA 93065	41,631	X
Thousand Oaks			
Conejo Valley Family Medical Group*	125 W Thousand Oaks Blvd, Thousand Oaks, CA 91360	35,678	X
Ventura			
Academic Family Medicine Center	3291 Loma Vista Road, Ventura, CA 93003	70,290	X
Anacapa Surgical Associates*	3291 Loma Vista Rd, Ventura, CA 93003	--	
West Ventura Medical Clinic*	133 W Santa Clara St, Ventura, CA 93001	42,883	X

*Affiliated with Ventura County Medical Center

Source: Ventura County Health Care Agency, 2015 Annual Report.

Ventura County Medical Center/Santa Paula Hospital

The Ventura County Medical Center (VCMC) has 180 beds and is in the city of Ventura. The Santa Paula Hospital has 49 beds and is in the Santa Clara River Valley, in the city of Santa Paula. Both facilities serve all Ventura County residents. Both VCMC and Santa Paula Hospital offer a variety of services to patients including, a 24-hour Emergency Center, Pediatric Specialty Care, Medical and Surgical Specialty Care, Obstetrics and Gynecology, and Observation Unit. Figure 7-14 shows the locations of these facilities in the county.

Ambulatory Care Medical Clinics

The Ventura County Health Care Agency operates ambulatory outpatient care, available to county residents. The ambulatory care system provided service to nearly 500,000 patients in 2015, equivalent to 2,000 visits per weekday. These services were provided at 19 primary care clinics, 26 specialty care clinics. To complement these clinics, eight urgent care centers operate within the Ambulatory Care system to provide for the immediate needs of patients. Ambulatory Care services are also provided through additional targeted services, including three mobile units to reach patients with unique needs, outreach to homeless individuals, pre- and post-surgical care for some surgeries, neurology, gastroenterology and rheumatology services, an LGBT clinic, and obstetrical care.

Behavioral Health

The Ventura County Behavioral Health Department (VCBH) provides a system of coordinated services to meet the mental health and substance abuse treatment needs of Ventura County. VCBH provides services at regional clinics throughout the county and through programs and services at community locations. VCBH also works in collaboration with community-based public and private partners to ensure access to effective treatment for Ventura County community members. This includes a variety of alcohol and drug programs that operate collectively as "Ventura County Limits" (see www.venturacountylimits.org). This includes programs focused on marijuana abuse, prescription drug abuse, and drugged driving.

The Ventura Office of Education (VCOE) and Special Education Local Plan Area contract with VCBH for mental health services for Special Education students. These services provide support for students suffering from mental illness that impacts their ability to succeed academically. As of 2015, the service has grown most significantly in the underserved areas of Santa Paula, Fillmore, South Oxnard, and Ojai, and now serves approximately 800 students.

VCBH services were expanded in 2014 to add two new clinics providing Adult Services and Youth and Family Services. The facilities are open for extended hours and are focused on increasing accessibility to services for the county's Hispanic population and to accommodate working families. Also in 2014, VCBH introduced the Rapid Integrated Support and Engagement (RISE) unit. RISE is aimed at serving people who are traditionally service-resistant (including homeless individuals), and providing crisis prevention and resolution services. During the Fiscal Year 2014-2015, RISE reached 1,501 clients and provided 4,474 documented services.

In addition to direct services provided, VCBH also conducts outreach programs including How High Ventura County.Org and an Anti-Stigma campaign. The "How High Ventura County.org" campaign launched in November 2014 and is designed to educate the community about unique effects of marijuana on the developing adolescent brain. The Anti-Stigma campaign, launched in late 2014, aims to increase access to mental health care prevention and treatment by removing the stigma around mental illness.

Public Health

The Ventura County Public Health (VCPH) Department aims to support the health of all Ventura County residents and prevent the spread of communicable diseases through strategic planning around a variety of goals and policies. In June 2014, VCPH was awarded a five-year national accreditation from the Public Health Accreditation Board. As of August 2015, VCPH is one of 79 public health departments in the country and the first in California to have earned this distinction. For more information related to public health in Ventura County, see Chapter 4, Health and Well-Being, of this Background Report.

In an effort to continue to improve health care, on January 27, 2015, the Ventura County Board of Supervisors adopted a Resolution and Policy Statement that incorporates a Health in All Policies Framework for all county agencies and departments. This effort addresses many non-health factors that can affect community health, such as planning, housing, transportation, and safety. Following is the Policy Statement adopted by the Board:

> *The County of Ventura believes that in order to build strong communities and a strong economy, it is necessary to commit to investing in health, equity, and sustainability. The Board also recognizes that providing County leaders and decision makers with tools to view all decisions through a health equity lens will benefit all entities. It is therefore the intent of the Board to support, promote, and maintain a Health in All Policies approach throughout all County Departments and Agencies.*

In adopting this policy, the Board added the following commitments as a facilitator of the Health in All Policies Framework:

1. Encourage department and agency directors and other County leaders to consider both short- and long-term health impacts, costs, and benefits, where appropriate, when weighing the merits of proposed policies, programs, and plans.

2. Encourage department and agency directors and other County leaders to recognize that health is influenced by policies related to air and water quality, natural resources and agricultural land, affordable housing, infrastructure systems, public health, sustainable communities, and climate change, and that inter- and intra-agency collaboration on social and environmental factors that impact health is essential.

3. Direct all county departments, agencies, and offices to receive training and technical assistance in understanding the ways in which decisions about housing, employment, education, transportation, land use, etc. can create the conditions that promote or discourage health, especially for residents that are already marginalized.

4. Direct that County employees under their direct executive authority shall cooperate in the implementation of this resolution.

Ventura County Health Care Plan

The Ventura County Health Care Plan (VCHCP) was established in 1993 to provide health care services to county employees and their dependents. The VCHCP offers access to quality health care by providing financial benefits and keeping rates as low as possible.

Emergency Medical Services

The Ventura County Emergency Medical Services (EMS) Agency is a division of the Public Health Department within the Ventura County Health Care Agency. County Emergency Medical Services are discussed in more detail in Section 7.7, Emergency Services, on page 78.

Medical Examiner

The Medical Examiner, an office within the County Health Care Agency, investigates deaths in the county and determines the cause of death in instances where the deceased died under suspicious circumstances, suspected trauma or unexplained causes. Some of these situations may include suspected homicides, accidents, work-related deaths, and suicides.

Other Medical Facilities

The California Office of Statewide Health Planning and Development maintains facility listings of hospitals, long-term care facilities, primary care clinics, specialty care clinics, and home health agencies and hospice. These lists are updated semi-annually, on June 30th and December 31st.

In addition to the county facilities, the names and locations of other medical facilities and providers located in the county are listed in Table 7-13 through Table 7-17. There are 13 hospitals located in Ventura County, and 2 of these are managed by the County, as shown in Table 7-14. There are 25 long-term care facilities, shown in Table 7-15, and 22 primary care clinics are shown in Table 7-16. The 15 specialty care clinics are shown in Table 7-17, and 115 home health agencies and hospice facilities are shown in Table 7-18.

Regulatory Setting

There is no regulatory setting for this section.

Key Terms

There are no key terms for this section.

References

Ventura County Health Care Agency, 2015 Annual Report.

TABLE 7-14
HOSPITALS
Ventura County

Name of Hospital	Address, City	Beds	ER Service Level	License Category
Aurora Vista Del Mar Hospital	801 Seneca Street, Ventura	87	--	Acute Psychiatric Hospital
Community Memorial Hospital	147 N. Brent Street, Ventura	242	Emergency—Basic	General Acute Care Hospital
Los Robles Hospital and Medical Center	215 West Janss Road, Thousand Oaks	321	Emergency—Basic	General Acute Care Hospital
Los Robles Hospital and Medical Center—East Campus	150 Via Merida, Westlake Village	20	--	General Acute Care Hospital
Ojai Manor Convalescent Hospital	1306 Maricopa Highway, Ojai	66	--	General Acute Care Hospital
Ojai Valley Community Hospital	1306 Maricopa Highway, Ojai	25	Emergency—Standby	General Acute Care Hospital
Pacific Shores Hospital	2130 N. Ventura Road, Oxnard	30	--	General Acute Care Hospital
Simi Valley Hospital and Health Care SVCS – Sycamore	2975 North Sycamore Drive, Simi Valley	144	Emergency—Basic	General Acute Care Hospital
St. John's Pleasant Valley Hospital	2309 Antonio Avenue, Camarillo	155	Emergency—Basic	General Acute Care Hospital
St. John's Regional Medical Center	1600 North Rose Avenue, Oxnard	265	Emergency –Basic	General Acute Care Hospital
Thousand Oaks Surgical Hospital, A Campus of Los Robles Hospital and Medical Center	401 Rolling Oaks Drive, Thousand Oaks	21	--	General Acute Care Hospital
Ventura County Medical Center (includes Hillmont Psychiatric Center)	3291 Loma Vista Road, Ventura	223	Emergency—Basic	General Acute Care Hospital
Ventura County Medical Center—Santa Paula Hospital	825 North 10th Street, Santa Paula	49	Emergency—Basic	General Acute Care Hospital
	Total Beds	**1,648**		

Source: Office of Statewide Health Planning and Development (OSHPD), Healthcare Information Division, Healthcare Information Resource Center, Facility Listing: Hospitals as of June 30, 2016.

TABLE 7-15
LONG-TERM CARE FACILITIES
Ventura County

Name of Facility	Address, City	Beds	License Category
Avenida Living Home, Inc.	2465 Avenida De Las Plantas, Thousand Oaks	8	Congregate Living Health Facility
Brookdale Camarillo	6000 Santa Rosa Road, Camarillo	45	Skilled Nursing Facility
Camarillo Healthcare Center	205 Granada Street, Camarillo	114	Skilled Nursing Facility
Caremeridian - Oxnard	1540 Teal Club Road, Oxnard	10	Congregate Living Health Facility
Costal View Healthcare Center	4904 Telegraph Road, Ventura	96	Skilled Nursing Facility
Cochran Congregate Living, Inc.	1378 Cochran Street, Simi Valley	6	Congregate Living Health Facility
Glenwood Care Center	1300 North C Street, Oxnard	99	Skilled Nursing Facility
Greenfield Care Center of Fillmore, LLC	118 B Street, Fillmore	99	Skilled Nursing Facility
La Ventana Treatment Programs	913 Bruce Circle, Thousand Oaks	6	Congregate Living Health Facility
La Ventana Treatment Programs	597 Kalinda Pl., Thousand Oaks	6	Congregate Living Health Facility
Mary Health of the Sick CVLT and NRSG Hospital	2929 Theresa Drive, Newbury Park	61	Skilled Nursing Facility
Maywood Acres Healthcare	2641 South C Street, Oxnard	98	Skilled Nursing Facility
Moorpark Healthcare Center	4762 Maureen Lane, Moorpark	10	Congregate Living Health Facility
Oakview Skilled Nursing	3557 Campus Drive, Thousand Oaks	48	Skilled Nursing Facility
Oxnard Manor Healthcare Center	1400 West Gonzales Road, Oxnard	82	Skilled Nursing Facility
Providence Ojai	601 North Montgomery Street, Ojai	74	Skilled Nursing Facility
Shoreline Care Center	5225 South J Street, Oxnard	193	Skilled Nursing Facility
Simi Valley Care Center	5270 E. Los Angeles Avenue, Simi Valley	99	Skilled Nursing Facility
Simi Valley Care Home, Inc.	1544 Elvado Drive, Simi Valley	6	Congregate Living Health Facility
The Bella Passione – CLHF	488 Oakhampton Street, Thousand Oaks	6	Congregate Living Health Facility
Thousand Oaks Healthcare Center	93 West Avenida De Los Arboles, Thousand Oaks	6	Skilled Nursing Facility
Ventura Convalescent Hospital	4020 Loma Vista Road, Ventura	71	Skilled Nursing Facility
Victoria Care Center	5445 Everglades Street, Ventura	188	Skilled Nursing Facility
Vista Cove Care Center at Santa Paula	250 March Street, Santa Paula	99	Skilled Nursing Facility
Windsor Terrance of Westlake Village	250 Fairview Road, Thousand Oaks	99	Skilled Nursing Facility
	Total Beds	**1,746**	

Source: Office of Statewide Health Planning and Development (OSHPD), Long Term Care Listing: Hospitals as of June 30, 2016.

TABLE 7-16
PRIMARY CARE CLINICS
Ventura County

Name of Hospital	Address, City	License Category
Casa Pacifica Health Clinic	1722 Lewis Rd., Camarillo	Community Clinic
Clinicas Del Camino Real Inc. Fillmore	355 Central Ave., Fillmore	Community Clinic
Clinicas Del Camino Real Inc. Maravilla	450 Clara St., Oxnard	Community Clinic
Clinicas Del Camino Real Inc., North Oxnard	1300 N. Ventura Rd., Oxnard	Community Clinic
Clinicas Del Camino Real Inc., Oceanview	4400 Olds Rd., Oxnard	Community Clinic
Clinicas Del Camino Real Inc., Santa Paula	500 E. Main St., Santa Paula	Community Clinic
Clinicas Del Camino Real Inc., Ventura	200 S. Wells Rd., Ventura	Community Clinic
Clinicas Del Camino Real Inc., East Simi Valley	4370 Eve Road, Simi Valley	Community Clinic
Clinicas Del Camino Real Inc., Moorpark	4279 Tierra Rejada Rd., Moorpark	Community Clinic
Clinicas Del Camino Real, Inc., Simi Valley	1424 Madera Rd., Simi Valley	Community Clinic
Clinicas Del Camino Real, Inc., Newbury Park	1000 Newbury Rd., Newbury Park	Community Clinic
Clinicas Del Camino Real, Inc., El Rio	221 E. Ventura Blvd., Oxnard	Community Clinic
Clinicas Del Camino Real, Inc., Oxnard	650 Meta St., Oxnard	Community Clinic
Community Pregnancy Clinic	2045 Royal Ave., Simi Valley	Community Clinic
Conejo Free Clinic	80 E. Hillcrest Dr., Thousand Oaks	Free Clinic
Conejo Valley Women's Resource Center	80 E. Hillcrest Dr., Thousand Oaks	Community Clinic
Free Clinic of Simi Valley	2060 Tapo St., Simi Valley	Free Clinic
Life Centers of Ventura County	600 N. A St., Oxnard	Community Clinic
Life Choices Pregnancy Clinic of Ojai Valley	1320 Maricopa Hwy, Ojai	Community Clinic
Ojai Valley Community Health Center	1200 Maricopa Hwy, Ojai	Community Clinic
Planned Parenthood of Ventura	5400 Ralston St., Ventura	Community Clinic
Salvation Army Free Medical Clinic	622 W. Wooley Rd., Oxnard	Free Clinic

Source: Office of Statewide Health Planning and Development (OSHPD), Facility Listing: Hospitals as of June 30, 2016.

TABLE 7-17
SPECIALTY CARE CLINICS—CHRONIC
Ventura County

Name of Specialty Care Clinic	Address, City	License Category
Camarillo Dialysis	2438 N. Ponderosa Dr., Camarillo	Chronic Dialysis Clinic
Camarillo Dialysis Center	3801 Las Posas Rd., Camarillo	Chronic Dialysis Clinic
Moorpark Dialysis	388 Patriot Dr., Moorpark	Chronic Dialysis Clinic
BMA Oxnard	1801 Holser Walk	Chronic Dialysis Clinic
Channel Islands Dialysis	3541 W. 5th St., Oxnard	Chronic Dialysis Clinic
FMC Dialysis Services Channel Islands	2679 Saviers Rd., Oxnard	Chronic Dialysis Clinic
Oxnard Dialysis	1900 Outlet Center Dr., Oxnard	Chronic Dialysis Clinic
BMA Santa Paula	242 E. Harvard Blvd., Santa Paula	Chronic Dialysis Clinic
Santa Paula Dialysis	253 March St., Santa Paula	Chronic Dialysis Clinic
Simi Dialysis Center, LLC.	1407 E. Los Angeles Ave., Simi Valley	Chronic Dialysis Clinic
Simi Valley Dialysis	2950 Sycamore Dr., Simi Valley	Chronic Dialysis Clinic
Conejo Valley Renal Center	277 W. Janss Rd., Thousand Oaks	Chronic Dialysis Clinic
Thousand Oaks Dialysis	375 Rolling Oaks Dr., Thousand Oaks	Chronic Dialysis Clinic
Dialysis Centers of Ventura County	4567 Telephone Rd., Ventura	Chronic Dialysis Clinic
Ventura Dialysis	2705 Loma Vista Rd., Ventura	Chronic Dialysis Clinic

Source: Office of Statewide Health Planning and Development (OSHPD), Facility Listing: Hospitals as of June 30, 2016.

TABLE 7-18
HOME HEALTH AGENCIES AND HOSPICE
Ventura County

Name of Specialty Care Clinic	Address, City	License Category
24-7 Quality Hospice Care, Inc	2659 Townsgate Road, Westlake Village,	Hospice
24-7 Quality Infusion & Home Health, Inc.	2659 Townsgate Rd, Westlake Village	Home Health Agency
A and C Health Care Unlimited, LLC	1687 Erringer Rd., Simi Valley	Hospice
A Flying Eagle Home Health	5775 E Los Angeles Ave., Simi Valley	Home Health Agency
A-1 Home Health Services Inc	1407 Kuehner Dr., Simi Valley	Home Health Agency
AAA Home Health Care, Inc.	995 E Los Angeles Ave., Simi Valley	Home Health Agency
ACA Home Health Care Inc	223 E Thousand Oaks Blvd., Thousand Oaks	Home Health Agency
Access Home Health Care, LLC	600 Hampshire Rd., Westlake Village	Home Health Agency
Adventist Health/Home Care Services	2650 Jones Way., Simi Valley	Home Health Agency
All Heart Home Health of Camarillo, LLC	400 Mobil Ave., Camarillo	Home Health Agency
Alleviation Healthcare Services Inc	1429 E Thousand Oaks Blvd., Thousand Oaks	Home Health Agency
Allied Healthcare Professionals, Inc.	61 Long Ct., Thousand Oaks	Home Health Agency
Angel of God Hospice and Palliative Care, Inc	266 Mobil Ave., Camarillo	Hospice
Assisted Health Care Services - Branch	468 Pennsfield Place, Thousand Oaks	Home Health Agency
Assisted Healthcare Services	4450 Westinghouse St., Ventura	Home Health Agency
Assisted Home Care	4450 Westinghouse St., Ventura	Home Health Agency
Assisted Home Care - Branch	468 Pennsfield Pl., Thousand Oaks	Home Health Agency
Assisted Home Hospice - Parent	4450 Westinghouse Street, Ventura	Hospice
Assisted Home Hospice-Branch	468 Pennsfield Pl., Thousand Oaks	Hospice
Braewood Home Health, Inc.	816 Camarillo Springs Rd., Camarillo	Home Health Agency
Bright Way Care Hospice, Inc.	2650 Jones Way, Simi Valley	Hospice
Brightstar Care Conejo Valley	516 Pennsfield Pl., Thousand Oaks	Home Health Agency
Brightstar Of Ventura	3110 Loma Vista Rd., Ventura	Home Health Agency
Buena Ventura Home Health Agency	5924 E Los Angeles Ave., Simi Valley	Home Health Agency
Buena Vista Hospice	143 Triunfo Canyon Rd., Westlake Village	Hospice
Buena Vista Palliative Care & Home Health, Inc.	1732 Palma Dr., Ventura	Home Health Agency
Camarillo Skilled Home Health, LLC	450 Rosewood Ave., Camarillo	Home Health Agency
Care Link Home Health Services, Inc	2112 Eastman Ave., Ventura	Home Health Agency
Carelink Home Health, Inc.	187 E Wilbur Rd., Thousand Oaks	Home Health Agency
Carelink Hospice, Inc	187 E Wilbur Rd., Thousand Oaks	Hospice
Caremax Home Health	2139 Tapo St., Simi Valley	Home Health Agency

TABLE 7-18
HOME HEALTH AGENCIES AND HOSPICE
Ventura County

Name of Specialty Care Clinic	Address, City	License Category
Carewise Hospice, Inc.	5924 E Los Angeles Ave., Simi Valley	Hospice
Central Coast Healthcare Services, Inc.	915 Greenwich Dr., Thousand Oaks	Home Health Agency
Certified Home Health Care, Inc.	585 E Los Angeles Ave., Simi Valley	Home Health Agency
City of Dreams Home Health Care, Inc.	5924 E Los Angeles Ave., Simi Valley	Home Health Agency
Comfort Care Hospice Providers	2139 Tapo St., Simi Valley	Hospice
Comforting Care Hospice, Inc.	5924 E Los Angeles Ave., Simi Valley	Hospice
Community Care and Hospice LLC	2941 Loma Vista Rd., Ventura	Hospice
Companion Hospice and Palliative Care, LLC	3605 Alamo St., Simi Valley	Hospice
Compassionate Healthcare Solutions, Inc.	905 Greenwich Dr., Thousand Oaks	Hospice
Comprehensive Hospice	5924 E Los Angeles Ave., Simi Valley	Hospice
D'mission Home Health Services, Inc.	4220 E Los Angeles Ave., Simi Valley	Home Health Agency
Darancare Health Corporation	4820 Adohr Ln., Camarillo	Home Health Agency
Dependable Home Care Services Inc	5924 E Los Angeles Ave., Simi Valley	Home Health Agency
Divine Care Home Health Services, Inc.	1985 Yosemite Ave., Simi Valley	Home Health Agency
Elysium Hospice Care, Inc.	4225 Valley Fair St., Simi Valley	Hospice
Exceptional Home Health Services, Inc.	2315 Kuehner Dr., Simi Valley	Home Health Agency
Fidelity Home Health Care, Inc.	4195 Valley Fair St., Simi Valley	Home Health Agency
Fidelity Hospice, Inc.	4225 Valley Fair St., Simi Valley	Hospice
Florence Home Health Care	2521 E Thousand Oaks Blvd., Thousand Oaks	Home Health Agency
Florence Hospice LLC	100 E Thousand Oaks Blvd., Thousand Oaks	Hospice
Generation Care, Inc.	516 Pennsfield Place, Thousand Oaks	Hospice
Genesis Home Health, Inc	1687 Erringer Rd., Simi Valley	Home Health Agency
Gibraltar Hospice, Inc.	1791 Erringer Rd., Simi Valley	Hospice
Graceful Care Hospice, Inc	2082 Newbury Rd., Newbury Park	Hospice
Guardian Angel Home Care, Inc.	5450 Ralston St., Ventura	Home Health Agency
Guardian Angel Home Health Agency Inc.	2513 Tapo Street, Simi Valley	Home Health Agency
H & A Hospice, Inc.	4511 Alamo St., Simi Valley	Hospice
Healthwise Home Care Solutions Inc.	1100 N Ventura Rd., Oxnard	Home Health Agency
Hearten Home Health, Inc	1720 E Los Angeles Ave., Simi Valley	Home Health Agency
Heavenly Gates Hospice, Inc.	1720 E Los Angeles Ave., Simi Valley	Hospice
Help Unlimited Homecare	1767 Goodyear Ave., Ventura	Home Health Agency

TABLE 7-18
HOME HEALTH AGENCIES AND HOSPICE
Ventura County

Name of Specialty Care Clinic	Address, City	License Category
Home Health Connect, Inc.	5924 E Los Angeles Ave., Simi Valley	Home Health Agency
Horizon Health Care Systems Inc	2488 Tapo St., Simi Valley	Home Health Agency
Hospice and Home Care, Inc.	599 E Los Angeles Ave., Simi Valley	Hospice
Hospice Care of The Valley, Inc.	1176 Roadrunner Way, Simi Valley	Hospice
Hospice of St. Mary	1985 Yosemite Ave., Simi Valley	Hospice
Infinite Home Health, Inc.	875 S Westlake Blvd., Westlake Village	Home Health Agency
Innerjoy Home Health Services, Inc	1965 Yosemite Ave., Simi Valley	Home Health Agency
Innerjoy Hospice Care, Inc.	1965 Yosemite Ave., Simi Valley	Hospice
Integrated Home Health	701 E Santa Clara St., Ventura	Home Health Agency
JMT Hospice, Inc.	2082 Newbury Rd., Newbury Park	Hospice
Jubilee Home Health Care Inc	4195 Valley Fair St., Simi Valley	Home Health Agency
Las Posas Home Health Services	1601 Carmen Drive, Camarillo	Home Health Agency
Life Springs Hospice Care	2660 E Main St., Ventura	Hospice
Livingston Memorial Visiting Nurse Assn - Branch	325 E Hillcrest Dr., Thousand Oaks	Home Health Agency
Livingston Memorial Visiting Nurse Assn - Parent	1996 Eastman Ave., Ventura	Home Health Agency
Livingston Memorial Visiting Nurse Assoc - Hospice	1996 Eastman Ave., Ventura	Hospice
Livingston Memorial Visiting Nurse Association	202 Canada St., Ojai	Home Health Agency
Los Robles Homecare Services, Inc.	68 Long Ct., Thousand Oaks	Home Health Agency
Loyal Home Health Care, Inc.	2139 Tapo St., Simi Valley	Home Health Agency
Magnificent Healthcare Systems Inc	5924 E Los Angeles Ave., Simi Valley	Home Health Agency
Maxim Healthcare Services Inc	500 E Esplanade Dr., Oxnard	Home Health Agency
Neighbor Care Home Health	2955 E Hillcrest Dr., Westlake Village	Home Health Agency
Neighbor Care Hospice	2955 E Hillcrest Dr., Thousand Oaks	Hospice
Nexus Home Health, Inc.	141 S A St., Oxnard	Home Health Agency
Nursecore If Ventura	1500 Palma Dr., Ventura	Home Health Agency
Oakhurst Hospice	860 Hampshire Rd., Westlake Village	Hospice
Prime Home Healthcare Inc	2139 Tapo St., Simi Valley	Home Health Agency
Prime Hospice Care, LLC	2139 Tapo St., Simi Valley	Hospice
Procare Hospice	1700 Lombard St., Oxnard	Hospice
Professional Care Home Health Services Inc	1720 E Los Angeles Ave., Simi Valley	Home Health Agency
Rainbow Hospice Corp.	2139 Tapo St., Simi Valley	Hospice

TABLE 7-18
HOME HEALTH AGENCIES AND HOSPICE
Ventura County

Name of Specialty Care Clinic	Address, City	License Category
Royal Home Care, Inc.	870 Hampshire Rd., Westlake Village	Home Health Agency
Roze Room Hospice of Ventura	5675 Ralston St., Ventura	Hospice
Sebastian Hospice Care, Inc.	1720 E Los Angeles Ave., Simi Valley	Hospice
Serenity Hospice Care Provider, Inc.	2139 Tapo St., Simi Valley	Hospice
Serenity Point Hospice Care, Inc.	1420 E. Los Angeles Ave., Simi Valley	Hospice
Silverado Hospice - Ventura County	4520 E. Thousand Oaks Blvd., Thousand Oaks	Hospice
Starbright Home Health Services, Inc.	1633 Erringer Rd., Simi Valley	Home Health Agency
Summit Home Health, Inc.	2139 Tapo St., Simi Valley	Home Health Agency
Tender Loving Care Home Hospice	5400 Atlantis Court, Moorpark	Hospice
Ultimate Care Hospice	2315 Kuehner Dr., Simi Valley	Hospice
Ultimate Great Care Hospice Inc.	1174 Amazon Way, Simi Valley	Hospice
United Hearts Hospice Health Services Inc	2139 Tapo St., Simi Valley	Hospice
United Hospice Care, Inc.	5924 E Los Angeles Ave., Simi Valley	Hospice
Universal Preventive Home Health Care, Inc.	2139 Tapo St., Simi Valley	Home Health Agency
Valley Hospice Services, LLC	3355 Cochran St., Simi Valley	Hospice
Vitas Healthcare Corporation of California - Branch	333 Lantana St., Camarillo	Hospice
Walgreens Infusion Services, Inc. D/B/A Option Care	4867 Colt St., Ventura	Home Health Agency
West Coast Nursing Ventura, Inc.	2955 E. Hillcrest Drive, Westlake Village	Home Health Agency
Westlake Hospice Care, Inc.	660 Hampshire Rd., Westlake Village	Hospice
Westlake Village Hospice, Inc.	2659 Townsgate Rd., Westlake Village	Hospice
Wicare Home Health LLC	4615 Industrial St., Simi Valley	Home Health Agency

Source: Office of Statewide Health Planning and Development (OSHPD), Facility Listing: Hospitals as of June 30, 2016.

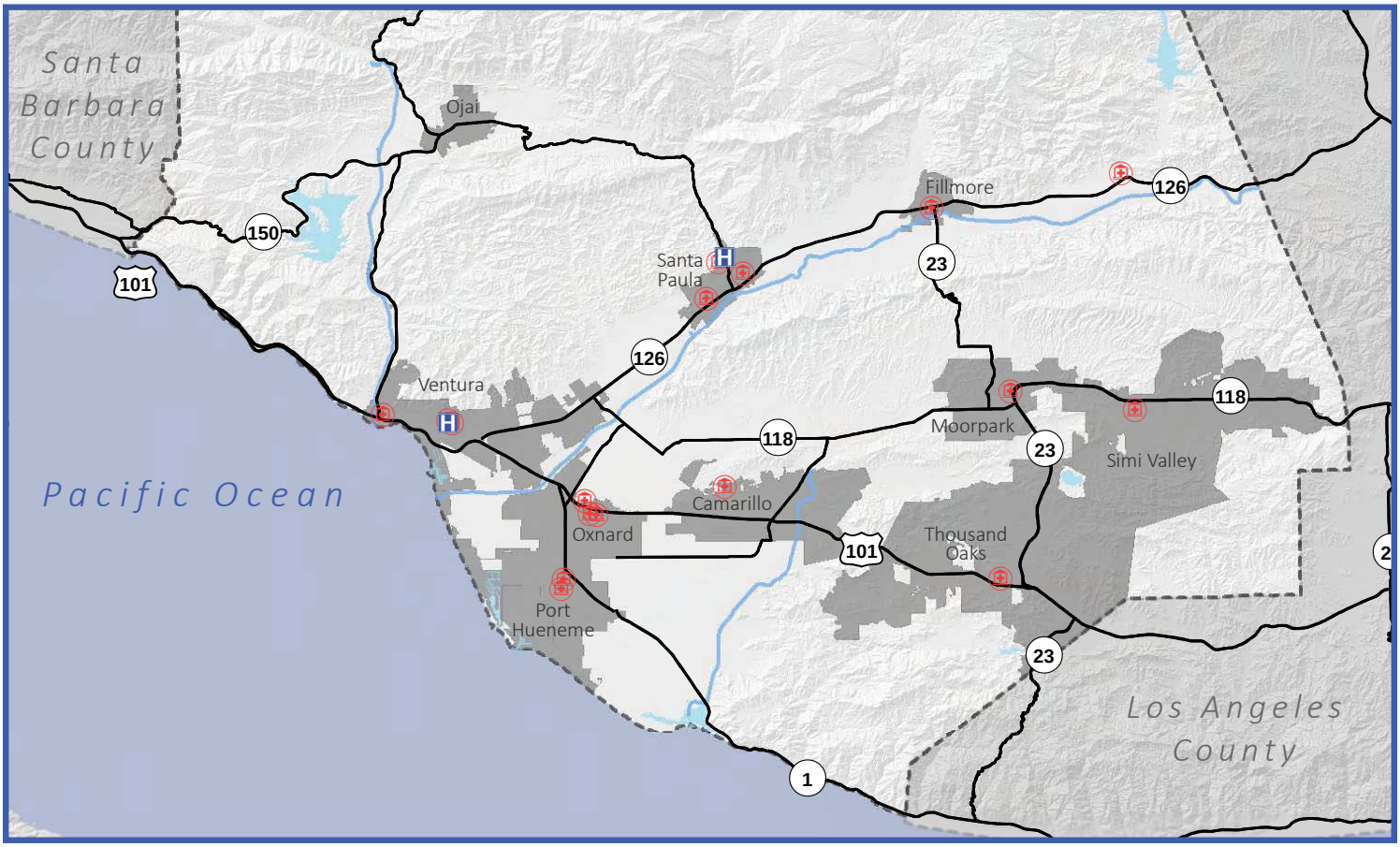

Figure 7-14:
Medical Clinics and Hospitals

Map Date: July 22, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

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Ventura County Boundary
Cities
Major Roadways
Major Waterways
Water Bodies
Hospitals
Clinics

SECTION 7.9 SCHOOLS AND CHILDCARE

Introduction

This section describes the general characteristics of school facilities and child care operations in Ventura County.

Major Findings

- An estimated 40 percent of students in K-12 education in Ventura County come from homes where English is not the primary language. Levels of proficiency in English among students from non-English speaking homes can be as low as 60 percent among kindergarteners, but these numbers grow to an estimated 90 percent among all 12th graders.

Existing Conditions

The Ventura County public schools serve approximately 142,000 students in 21 school districts. Of the 21 districts, 12 are "unified," indicating that they serve K-12. The remaining nine consist of seven elementary school districts and two high school districts. Table 7-19 lists school districts in the County, including the approximate enrollment of students during the 2014-2015 school year. Figure 7-15 depicts the school districts, all of which comprise Ventura County's K-12 public education system.

Public education in the County is overseen by the Ventura County Office of Education (VCOE). The VCOE is a regional agency whose mission is to provide quality services and support for life-long learning opportunities. The VCOE also acts as an intermediary agency between the California Department of Education and the school districts in Ventura County.

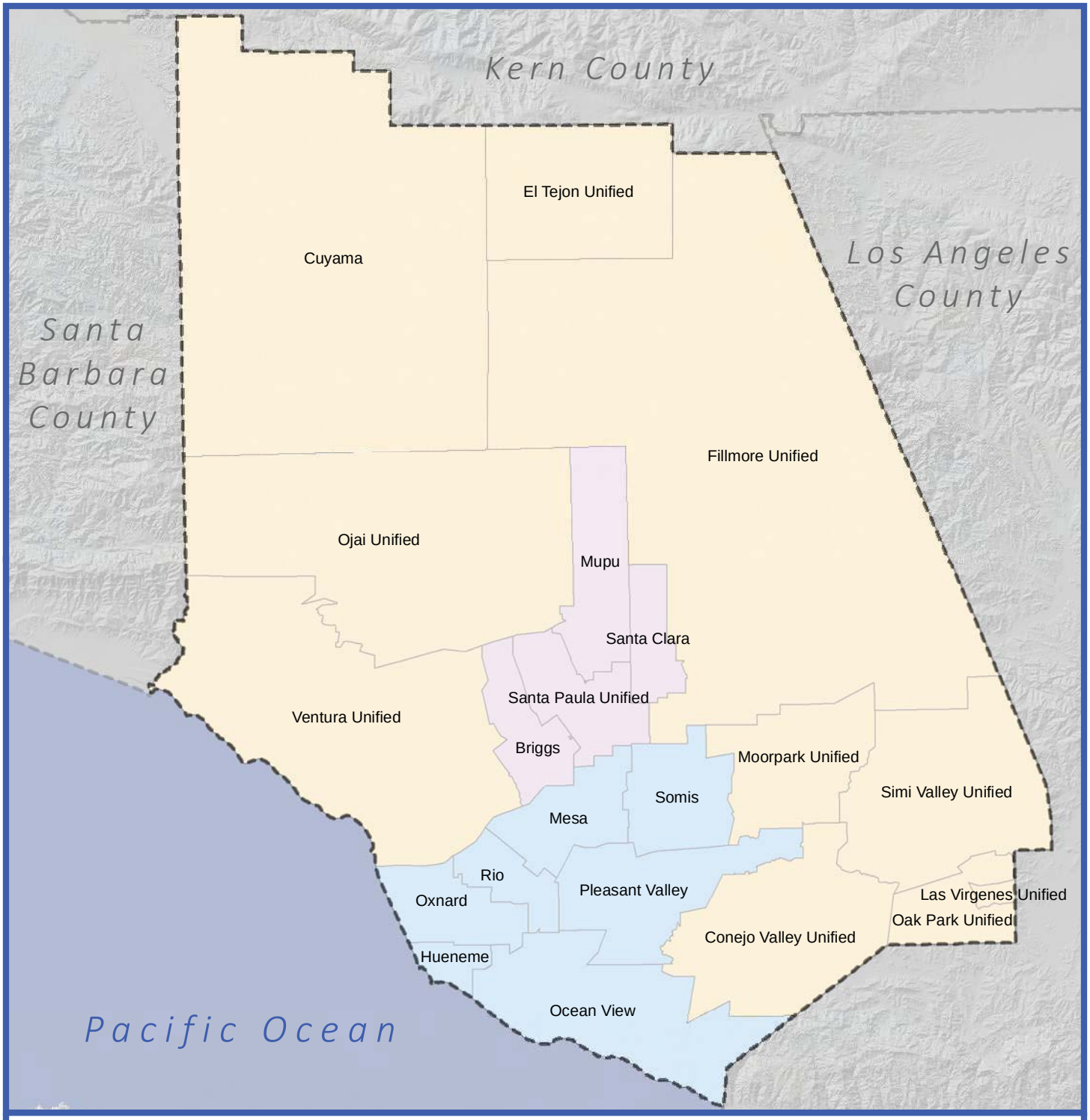
An estimated 57,300 (40 percent) of the county's K-12 students come from homes where English is not the primary spoken language. The Department of Education estimates that over 33,000 (approximately 24 percent) students do not speak English at a level adequate to be successful in their grade level. The numbers are highest in the earlier grades, with almost 40 percent of all kindergarteners considered not proficient in English, compared to 10 percent of all 12th graders considered to not be proficient in English. A majority, 50,700 (88 percent) of students who do not speak English at home speak Spanish.

Total school enrollment in Ventura County increased from 140,156 to 141,899 during a 15-year span from 2000-2015. Between the 2000-2001 school year and the 2003-2004 school year there was steady growth, from 140,156 to 145,316 total student enrollment (with an average annual growth rate of 0.9 percent). However, between the 2003-2004 school year and the 2014-2015 school year there has been a decline in total enrollment, with an average annual change rate of -0.2 percent. In contrast, some districts have been experiencing significant growth. In recent years there have been a number of successful ballot measures to fund school renovations and expansions.

TABLE 7-19
K-12 SCHOOL DISTRICTS AND ENROLLMENT
Ventura County

School District	Number of Schools	Enrollment
Briggs Elementary	2	561
Conejo Valley Unified	28	19,727
Fillmore Unified	9	3,774
Hueneme Elementary	12	8,396
Mesa Union Elementary	3	1,385
Moorpark Unified	12	6,703
Mupu Elementary	3	917
Oak Park Unified	8	4,693
Ocean View	5	2,682
Ojai Unified	12	2,680
Oxnard Elementary	21	16,916
Oxnard Union High	11	17,148
Pleasant Valley Elementary	15	7,401
Rio Elementary	8	4,946
Santa Clara Elementary	1	56
Santa Paula Unified	10	5,459
Simi Valley Unified	31	17,821
Somis Union	1	237
Ventura County Office of Education	9	3,031
Ventura Unified	27	17,366
County Total	**231**	**141,899**

Source: California Department of Education, Data Quest 2014-2015 school year, http://data1.cde.ca.gov/dataquest/.



Ventura County 2040 General Plan

Figure 7-15: School Districts

Map Date: July 22, 2016

Source: Ventura County, 2016.

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- Ventura County Boundary
- Santa Paula Unified School District High School Service Area
- Oxnard Union High School District
- Unified School Districts

Ventura County School Districts

Each of the Ventura County school districts and facilities are described below.

Briggs Elementary School District

The Briggs Elementary School District has two schools and serves a region in the central part of Ventura County. Student enrollment in 2014-2015 was 561. Briggs Elementary School District schools are listed below.

- Briggs Elementary (grades 5-8)
- Olivelands Elementary (grades K-4)

Conejo Valley Unified School District

The Conejo Valley Unified School District has 26 schools and serves a region in the southeastern part of Ventura County. Student enrollment in 2014-2015 was 19,727. Conejo Valley Unified School District schools are listed below.

- Acacia Elementary (grades K-5)
- Aspen Elementary (grades K-5)
- Banyan Elementary (grades K-5)
- Century Academy (grades 9-12)
- Colina Middle (grades 6-8)
- Conejo Elementary (grades K-5)
- Conejo Valley High (Continuation) (grades 9-12)
- Cypress Elementary (grades K-5)
- Environmental Academy of Research Technology and Earth Sciences (grades K-5)
- Glenwood Elementary (grades K-5)
- Ladera Elementary (grades K-5)
- Lang Ranch (grades K-5)
- Los Cerritos Middle (grades 6-8)
- Madrona Elementary (grades K-5)
- Maple Elementary (grades K-5)
- Newbury Park High (grades 9-12)
- Redwood Middle (grades 6-8)
- Sequoia Middle (grades 6-8)
- Sycamore Canyon (grades K-8)
- Thousand Oaks High (grades 9-12)
- Walnut Elementary (grades K-5)
- Weathersfield Elementary (grades K-5)
- Westlake Elementary (grades K-5)
- Westlake High (grades 9-12)
- Westlake Hills Elementary (grades K-5)
- Wildwood Elementary (grades K-5)

Fillmore Unified School District

The Fillmore Unified School District has eight schools and serves a region in the eastern part of Ventura County. Student enrollment in 2014-2015 was 3,774. The Fillmore Unified School District schools are listed below.

- Fillmore Middle (grades 6-8)
- Fillmore Senior High (grades 9-12)
- Heritage Valley Independent Study (grades 9-12)
- Mountain Vista (grades K-5)
- Piru Elementary (grades K-5)
- Rio Vista Elementary (grades K-5)
- San Cayetano Elementary (grades K-5)
- Sierra High (grades 11-12)

Hueneme Elementary School District

The Hueneme Elementary School District has 11 schools and serves a region in the southwestern part of Ventura County. Student enrollment in 2014-2015 was 8,396. The Hueneme Elementary School District schools are listed below.

- Ansgar Larsen Elementary (grades K-6)
- Art Haycox Elementary (grades K-5)
- Charles Blackstock Junior High (grades 6-8)
- E.O. Green Junior High (grades 6-8)
- Fred L. Williams Elementary (grades K-5)
- Hollywood Beach Elementary (grades K-6)
- Hueneme Elementary (grades K-6)
- Julien Hathaway Elementary (grades K-5)
- Parkview Elementary (grades K-6)
- Richard Bard Elementary (grades K-6)
- Sunkist Elementary (grades K-6)

Mesa Union Elementary School District

The Mesa Union Elementary School District has two schools and serves a region in the southern central part of Ventura County. Student enrollment in 2014-2015 was 1,385. The Mesa Union Elementary School District schools are listed below.

- Golden Valley Charter (grades K-12)
- Mesa Elementary (grades K-8)

Moorpark Unified School District

The Moorpark Unified School District has 12 schools and serves a region in the southeastern part of Ventura County. Student enrollment in 2014-2015 was 6,703. The Moorpark Unified School District Schools are listed below.

- Arroyo West Elementary (grades K-5)
- Campus Canyon Elementary (grades K-8)
- Chaparral Middle (grades 6-8)
- Community High (grades 11-12)
- Flory Academy of Sciences and Technology (grades K-5)
- Ivy Tech Charter (grades 7-12)
- Mesa Verde Middle (grades 6-8)
- Moorpark High (grades 9-12)
- Mountain Meadows Elementary (grades K-5)
- Peach Hill Academy (grades K-5)
- The High School at Moorpark College (grades 11-12)
- Walnut Canyon Elementary (grades K-5)

Mupu Elementary School District

The Mupu Elementary School District has three schools and serves a region in the central part of Ventura County. Student enrollment in 2014-2015 was 917. The Mupu Elementary School District Schools are listed below.

- Academy of Arts and Sciences: Oxnard and Ventura (grades K-12)
- Academy of Arts and Sciences: Thousand Oaks and Simi (grades K-12)
- Mupu Elementary (grades K-8)

Oak Park Unified School District

The Oak Park Unified School District has seven schools and serves a region in the southeastern part of Ventura County. Student enrollment in 2014-2015 was 4,693. The Oak Park Unified School District Schools are listed below.

- Brookside Elementary (grades K-5)
- Medea Creek Middle (grades 6-8)
- Oak Hills Elementary (grades K-5)
- Oak Park High (grades 9-12)
- Oak Park Independent (grades K-12)
- Oak View High (grades 9-12)
- Red Oak Elementary (grades K-5)

Ocean View School District

The Ocean View School District has four schools and serves a region in the southernmost part of Ventura County. Enrollment in 2014-2015 was 2,682. The Ocean View School District schools are listed below.

- Laguna Vista Elementary (grades K-5)
- Mar Vista Elementary (grades K-5)
- Ocean View Junior High (grades 6-8)
- Tierra Vista Elementary (grades K-5)

Ojai Unified School District

The Ojai Unified School District has nine schools and serves a region in the western part of Ventura County. Student enrollment in 2014-2015 was 2,680. The district's schools are listed below.

- Chaparral High (grades 11-12)
- Matilija Junior High (grades 7-8)
- Meiners Oaks Elementary (grades K-6)
- Mira Monte Elementary (grades K-6)
- Nordhoff High (grades 9-12)
- San Antonio Elementary (grades K-6)
- Summit Elementary (grades 1-6)
- Topa Topa Elementary (grades K-6)
- Valley Oak Charter (grades K-12)

Oxnard School District

The Oxnard School District has 20 schools and serves a region in the southwestern part of Ventura County. Student enrollment in 2014-2015 was 16,916. The district's schools are listed below.

- Cesar E. Chavez Elementary (grades K-7)
- Christa McAuliffe Elementary (grades K-5)
- Curren Elementary (grades K-8)
- Driffill Elementary (grades K-8)
- Elm Street Elementary (grades K-5)
- Emilie Ritchen Elementary (grades K-5)
- Fremont Middle (grades 6-8)
- Harrington Elementary (grades K-5)
- Juan Lagunas Soria Elementary (grades K-8)
- Kamala Elementary (grades K-8)
- Lemonwood Elementary (grades K-7)
- Marina West Elementary (grades K-5)
- McKinna Elementary (grades K-5)
- Norman R. Brekke Elementary (grades K-5)

- Ramona Elementary (grades K-5)
- Richard B. Haydock Middle (grades 6-8)
- Robert J. Frank Middle (grades 6-8)
- Rose Avenue Elementary (grades K-5)
- Sierra Linda Elementary (grades K-5)
- Thurgood Marshall Elementary (grades K-5)

Oxnard Union High School District

The Oxnard Union High School District has 10 schools and serves a large region in the southwestern part of Ventura County, overlapping with the Somis, Mesa, Rio, Oxnard, Hueneme, Ocean View, and Pleasant Valley School District regions. Student enrollment in 2014-2015 was 17,148. The Oxnard Union High School District schools are listed below.

- Adolfo Camarillo High (grades 9-12)
- Architecture, Construction and Engineering Charter High (grades 9-12)
- Camarillo Academy of Progressive Education (grades K-8)
- Channel Islands High (grades 9-12)
- Condor High (grades 9-12)
- Frontier High (grades 10-12)
- Hueneme High (grades 9-12)
- Oxnard High (grades 9-12)
- Pacifica High (grades 9-12)
- Rio Mesa High (grades 9-12)

Pleasant Valley School District

The Pleasant Valley School District has 13 schools and serves a region in the southern part of Ventura County. Student enrollment in 2014-2015 was 7,401. The district's schools are listed below.

- Camarillo Heights Elementary (grades K-5)
- Dos Caminos Elementary (grades K-5)
- El Descanso Elementary (grades K-6)
- La Mariposa (grades K-5)
- Las Colinas Middle (grades 6-8)
- Las Posas Elementary (grades K-5)
- Los Primeros School of Sciences and Arts (grades K-8)
- Monte Vista Middle (grades 6-8)
- Rancho Rosal Elementary (grades K-5)
- Santa Rosa Technology Magnet (grades K-8)
- Tierra Linda Elementary (grades K-5)
- University Charter Middle School at CSU Channel Islands (grades 6-8)
- University Preparation School at CSU Channel Islands (grades K-5)

Rio Elementary School District

The Rio Elementary School District has eight schools and serves a region in the southwestern part of Ventura County. Student enrollment in 2014-2015 was 4,946. The Rio Elementary School District schools are listed below.

- Rio Del Mar (grades K-5)
- Rio Del Norte (grades K-5)
- Rio Del Valle Middle (grades 6-8)
- Rio Lindo Elementary (grades K-5)
- Rio Plaza Elementary (grades K-5)
- Rio Real Elementary (grades K-7)
- Rio Rosales (grades K-5)
- Rio Vista Middle (grades 6-8)

Santa Clara School District

The Santa Clara School District has one school, Santa Clara Elementary, and serves a region in the central part of Ventura County. Student enrollment in 2015-2015 was 56.

Santa Paula School District

The Santa Paula School District has nine schools and serves a region in the central part of Ventura County, overlapping with the Mupu, Santa Clara, Santa Paula, and Briggs School District regions. Student enrollment in 2014-2015 was 5,459. The Santa Paula School District schools are listed below.

- Barbara Webster Elementary (grades K-5)
- Blanchard Elementary (grades K-5)
- Glen City Elementary (grades K-5)
- Grace S. Thille Elementary (grades K-5)
- Isbell Middle (grades 6-8)
- McKevett Elementary (grades K-5)
- Renaissance High (grades 11-12)
- Santa Paula High (grades 9-12)
- Thelma B. Bedell Elementary (grades K-5)

Simi Valley Unified School District

The Simi Valley Unified School District has 29 schools and serves a region in the southeastern part of Ventura County. Student enrollment in 2014-2015 was 17,821. The Simi Valley Unified School District schools are listed below.

- Apollo High (grades 10-12)
- Arroyo Elementary (grades K-6)
- Atherwood Elementary (grades K-6)

- Berylwood Elementary (grades K-6)
- Big Springs Elementary (grades K-6)
- Crestview Elementary (grades K-6)
- Garden Grove Elementary (grades K-6)
- Hillside Middle (grades 6-8)
- Hollow Hills Elementary (grades K-6)
- Justin Elementary (grades K-6)
- Katherine Elementary (grades K-6)
- Knolls Elementary (grades K-6)
- Lincoln Elementary (grades K-6)
- Madera Elementary (grades K-6)
- Monte Vista (grades 3-12)
- Mountain View Elementary (grades K-6)
- Park View Elementary (grades K-6)
- Royal High (grades 9-12)
- Santa Susana Elementary (grades K-6)
- Santa Susana High (grades 9-12)
- Simi Elementary (grades K-6)
- Simi Valley High (grades 9-12)
- Sinaloa Middle (grades 6-8)
- Sycamore Elementary (grades K-6)
- Township Elementary (grades K-6)
- Valley View Middle (grades 6-8)
- Vista Elementary (grades K-6)
- White Oak Elementary (grades K-6)
- Wood Ranch Elementary (grades K-6)

Somis Union School District

The Somis Union School District has one school, Somis Elementary, and serves a region in the central part of Ventura County. Student enrollment in 2014-2015 was 237.

Ventura Unified School District

The Ventura Unified School District has 27 schools and serves a region in the western part of Ventura County. Student enrollment in 2014-2015 was 17,366.

- Academy of Technology and Leadership at Saticoy (grades K-5)
- Anacapa Middle (grades 6-8)
- Balboa Middle (grade 6-8)
- Blanche Reynolds Elementary (grades K-8)
- Buena High (grades 9-12)
- Cabrillo Middle (grades 6-8)

- Citrus Glen Elementary (grades K-5)
- De Anza Academy of Technology of the Arts (grades 6-8)
- E.P. Foster Elementary (grades K-5)
- El Camino High (grades 9-12)
- Elmhurst Elementary (grades K-5)
- Foothill Technology High (grades 9-12)
- Homestead (Alternative) (grades K-8)
- Juanamaria Elementary (grades K-5)
- Junipero Serra Elementary (grades K-5)
- Lincoln Elementary (grades K-5)
- Loma Vista Elementary (grades K-5)
- Montalvo Elementary (grades K-5)
- Mound Elementary (grades K-5)
- Pacific High (grades 10-12)
- Piermont Elementary (grades K-5)
- Poinsettia Elementary (grades K-5)
- Portola Elementary (grades K-5)
- Sheridan Way Elementary (grades K-5)
- Sunset Elementary (grades K-8)
- Ventura High (grades 9-12)
- Will Rogers Elementary (grades K-5)

Northwestern Ventura County

The northwestern area of Ventura County does not have a designated school district. Students from this rural area attend schools in a variety of districts, including:

- Cuyama Joint Union District (grades K-12): a major portion of this district is in Santa Barbara County. Average enrollment is 240 students.
- El Tejon Unified School District: in Kern County, including Frazier Park Elementary School, El Tejon Middle School.

The Las Virgenes Unified School District, located in Los Angeles County, on the eastern border of Ventura County. This District serves students from Ventura County and is included in Figure 7-15, but is excluded from the detailed discussion of schools because it is not located in Ventura County.

Ventura County Office of Education

The Ventura County Office of Education (VCOE) is governed by a County Board of Education and the County Superintendent of Schools. The VCOE oversees three branches of departments and schools, consisting of Student Services, Educational Services, and Fiscal and Administrative Services. The VCOE provides fiscal, training, and technology support services to school districts. The Student Services Branch includes CalSAFE, Career Education Center, Charter Schools, Court and Community Schools, Homeless and Foster Youth Programs, Migrant Education, Special Education, and Student Competitions. The Educational Services Branch includes a broad array of resources and training for educators in the county,

as well as programs such as health and prevention programs, and hearing conservation. Below are some of the specialized programs and schools overseen by the VCOE.

Career Education Center

The Career Education Center (CEC) provides students with skill-based training. The center is located next to the Camarillo Airport. Courses are available to high school juniors and seniors at no cost, and also for adults for a fee. High school students receive elective credit for participating in the courses and on-the-job experience that is aimed at preparing students for successful employment.

Special Education

The VCOE Special Education Department currently (April 2016) provides services to 86 classes in 22 different schools throughout the county. Services include specialized academic instruction in self-contained classes for students with moderate to severe disabilities, and/or severe social-emotional and behavioral needs, and highly specialized program for students on the autism spectrum. The VCOE also provides transportation for over 900 students.

Gateway Community School

The Gateway Community School is operated by the Ventura County Office of Education and serves students in grades 6-12 who have been referred, expelled, and truant. The school provides academic education as well as rehabilitation services.

Providence School

Providence School provides education services to minors within the Ventura County Juvenile Justice Facility. The school includes a Detention School Program, serving youth going through the court process, and a Commitment School Program, serving incarcerated youth. As part of the Commitment School Program, students in the 11th and 12th grades have the opportunity to participate in VCOE's Career Education Center (CEC) where they can develop technical skills, as described above.

Charter Schools

There are 14 charter schools in Ventura County, 5 of which are authorized by the Ventura County Office of Education. The other nine charter schools are authorized by school districts described above. Below is a list of the charter schools in Ventura County, their location, and their authorizers:

- Bridges Charter School, Thousand Oaks, Ventura County Office of Education
- Meadows Arts and Technology Elementary School (MATES), Thousand Oaks, Ventura County Office of Education
- River Oaks Academy, Westlake Village, Ventura County Office of Education
- Ventura Charter School of Arts and Global Education, Ventura, Ventura County Office of Education
- Vista Real Charter High School, Oxnard, Ventura County Office of Education
- Academy of Arts and Sciences, Oxnard & Ventura, Mupu School District
- Academy of Arts and Sciences, Thousand Oaks & Simi Valley, Mupu School District

- Architecture, Construction and Engineering (ACE) Charter High School, Camarillo, Oxnard Union High School District
- Camarillo Academy of Progressive Education (CAPE), Camarillo, Oxnard Union High School District
- Golden Valley Charter School, Ventura, Mesa Union School District
- Ivy Tech Charter School, Moorpark, Moorpark Unified School District
- Valley Oak Charter School, Ojai, Ojai Unified School District
- University Charter Middle School, Camarillo, Pleasant Valley School District
- University Prep at CSUCI, Camarillo, Pleasant Valley School District

Private Elementary and High Schools

The California Department of Education, Educator Excellence Office, maintains a list of private schools in California. Table 7-20 shows private schools in Ventura County for the 2015-2016 school year.

TABLE 7-20 PRIVATE SCHOOLS Ventura County			
School	Address	Grades	Total Enrollment
Adat Y'shua Academy	2891 Fairbanks Avenue, Simi Valley	2-11	6
Ascension Lutheran	1600 East Hillcrest Drive, Thousand Oaks	K-8	167
Assistance League School	1310 Fremont Way, Oxnard	K	10
Beacon Hill Classical Academy	2304 Antonio Avenue, Camarillo	K-9	192
Besant Hill School of Happy Valley	8585 Ojai Santa Paula Road, Ojai	9-12	97
Bethany Christian School	200 West Bethany Court, Thousand Oaks	K-6	142
Bright Stars Academy	1777 Statham Boulevard, Oxnard	K-1	13
Calvary Christian School	936 West Fifth Street, Oxnard	9-12	38
Camarillo Progressive Montessori School	4451 Las Posas Road, Camarillo	K	9
Canopy Academy	3273 Canopy Drive, Camarillo	1-12	9
Carden Conejo School	975 Evenstar Avenue, Westlake Village	K-5	131
Chaffin Christian Academy	10455 Hugo Court, Ventura	K-12	13
Channel Islands Academy	1209 Entrada Drive, Oxnard	K-12	6
Children "R" Us	1045 South Saticoy Avenue, Ventura	K-6	38
Children "R" Us Child Development Center	1083 Scandia Avenue, Ventura	K-6	27
College Heights Christian School	6360 Telephone Road, Ventura	K-8	153
Community SchoolHouse	5450 Churchwood Drive, Oak Park	K-12	7
Conejo Adventist Elementary School	1250 Academy Drive, Newbury Park	K-8	115
Cornerstone Christian	1777 Arneill Road, Camarillo	K-8	178
El Shaddai Academy	716 North Ventura, Road, Oxnard	1-12	12
Evanwood School	12770 Tree Ranch Road, Ojai	1-12	7
Faith Academy	403 Talbert Avenue, Simi Valley	1-12	8
Faith Academy Homeschool	3059 Evelyn Avenue, Simi Valley	K-12	16
Fillmore Christian Academy	461 Central Avenue, Fillmore	K-8	73
First Baptist Accelerated Academy	1250 Erbes Road, Thousand Oaks	K-12	34
Global Village School	207 North Ventura Street, Ojai	K-12	86
Goldenwest Montessori Schools, Inc.	1239 East Main Street, Ventura	K-4	7
Good Shepherd Lutheran	2949 Alamo Street, Simi Valley	K-8	55
Grace Academy, The	1350 Cherry Avenue, Simi Valley	K-12	159
Grace Brethren Elementary	1717 Arcane Street, Simi Valley	K-6	350
Grace Brethren Junior–Senior High School	1350 Cherry Avenue, Simi Valley	7-12	415
Grace Christian Academy	12039 Hertz Street, Moorpark	1-12	6
Halstrom Academy - Westlake Village	30700 Russell Ranch Road, Westlake Vill	6-12	32
Heritage Christian Academy of Simi Valley	390 Quiet Court, Simi Valley	K-12	256
Hillcrest Christian	384 Erbes Road, Thousand Oaks	K-12	259
Holy Cross School	211 East Main Street, Ventura	K-8	144
Hope Academy	400 East Hillcrest Drive, Thousand Oaks	K-12	6

TABLE 7-20
PRIVATE SCHOOLS
Ventura County

School	Address	Grades	Total Enrollment
Hueneme Christian School	312 North Ventura Road, Port Hueneme	K-8	130
International Virtual Learning Academy	2828 Cochran Street, Simi Valley	K-12	203
La Reina High School	106 West Janss Road, Thousand Oaks	6-12	573
Lamplighters Jewish Academy	2222 East Ventura Boulevard, Camarillo	K-8	35
Laurel Springs	302 West El Paseo, Ojai	K-12	2953
Liberty Christian Academy	1626 Valley High Avenue, Thousand Oaks	K-12	17
Linda Vista Adventist Elementary School	5050 Perry Way, Oxnard	K-8	63
Malibu Cove Private	860 Hampshire Road, Westlake Village	K-12	53
Monica Ros School	783 McNell Road, Ojai	K-3	49
Montessori One	620 Triunfo Canyon Road, Westlake Vill.	K	14
Montessori School of Ojai	806 West Baldwin Road, Ojai	K-8	56
Moorpark KinderCare	3987 Spring Road, Moorpark	K	12
Mother of Divine Grace	407 Bryant Circle, Suite B1, Ojai	K-12	483
New Harvest Christian School	723 South D Street, Oxnard	K-8	115
Newbury Park Adventist Academy	180 Academy Drive, Newbury Park	9-12	114
Oak Crest Academy	5450 Churchwood Drive, Oak Park	K-12	27
Oak Grove	220 West Lomita Avenue, Ojai	K-12	189
Ojai Valley School	723 El Paseo Road, Ojai	K-12	286
Our Lady of Guadalupe Elementary	530 North Juanita Avenue, Oxnard	K-8	239
Our Lady of the Assumption	3169 Telegraph Road, Ventura	K-8	262
ePassageway	1153 Lawrence Drive, Newbury Park	K-12	39
Peppermint Junction	2150 East Gonzales, Oxnard	K-8	65
Phoenix Ranch School	1845 Oak Road, Simi Valley	K-8	210
Pinecrest Schools - Moorpark	14100 Peach Hill Road, Moorpark	K-5	89
Pinecrest Schools - Simi Valley	4974 Cochran Avenue, Simi Valley	K-8	115
Pleasant Valley Christian	1101 East Ponderosa Drive, Camarillo	K-8	217
Prado Learning Academy	4342 Avenida Prado, Thousand Oaks	1-12	6
Revo Academy	1080 East Janss Road, Thousand Oaks	K-8	23
Sacred Heart	10770 Henderson Road, Ventura	K-8	221
Saint Bonaventure High School	3167 Telegraph Road, Ventura	9-12	535
Santa Clara Elementary	324 South E Street, Oxnard	K-8	220
Santa Clara High School	2121 Saviers Road, Oxnard	9-12	236
School of Science Technology Engineering and Math	3327 Michael Drive, Newbury Park	K-12	38
Simi Valley Adventist School	1636 Sinaloa, Simi Valley	K-8	32
Solimar Academy	1147 East Main Street, Ventura	1-12	41
St. Anne's Academy	3391 Los Nogales Road, Simi Valley	1-12	11
St. Anthony's Elementary	2421 South C Street, Oxnard	K-8	196
St. Augustine Academy	130 South Wells Road, Ventura	K-12	156

TABLE 7-20
PRIVATE SCHOOLS
Ventura County

School	Address	Grades	Total Enrollment
St. John's Lutheran	1500 North C Street, Oxnard	K-8	128
St. Mary Magdalen	2534 Ventura Boulevard, Camarillo	K-8	259
St. Michael's Academy in the Mountains	1463 Larkspur Street, Santa Paula	K-6	6
St. Paschal Baylon Elementary	154 East Janss Road, Thousand Oaks	K-8	320
St. Patrick's Episcopal Day School	1 Church Road, Thousand Oaks	K-6	130
St. Peter Claver Preschool & Kindergarten	5670 Cochran Street, Simi Valley	K	15
St. Rose of Lima Elementary	1325 Royal Avenue, Simi Valley	K-8	290
St. Sebastian	325 East Santa Barbara Street, Santa Paula	K-8	99
Stoneridge Preparatory	1625 Tierra Rejada Road, Simi Valley	6-12	11
The Thacher School	5025 Thacher Road, Ojai	9-12	250
Trinity Pacific Christian School	3389 Camino Calandria, Thousand Oaks	K-12	372
Valley Bible Academy	4910 Cochran Street, Simi Valley	1-12	18
Ventura Christian Academy	1000 North Ventura Avenue, Ventura	K-12	14
Ventura Missionary Christian	500 High Point Drive, Ventura	K-8	391
Villanova Preparatory School	12096 North Ventura Avenue, Ojai	9-12	265
Weil Tennis Academy and College Preparatory School	428 Bryant Circle, Ojai	7-12	49
Westlake Montessori School	228 South Skyline Drive, Thousand Oaks	K-1	13

Source: California Department of Education, Private Schools, School Identification, 2016.

Public Colleges

Ventura County Community College District

The Ventura County Community College District (VCCCD) is a public community college district that includes three colleges: Moorpark College, Oxnard College, and Ventura College. The VCCCD offers programs for students to transfer to four-year colleges and universities; students can also obtain an Associate Degree, technical training, certifications, and basic skills instruction. As of 2016, VCCCD serves over 36,000 students each semester.

Of the three community colleges, Ventura College is the oldest and was initially started as a junior college department added to the Ventura High School in 1925. In 1955 the college moved to its current location in eastern Ventura, on a 112-acre campus. As of 2016, the college had an enrollment of 14,500 students. The demographics of the campus are diverse, with 45 percent Hispanic students, and 55 percent female. Ventura College offers Associate of Arts and Associate of Science degrees in 33 majors, certificates of completion in 35 career and technical education fields, and proficiency awards in 26 fields. The College also has a Community Education program which offers hundreds of not-for-credit classes in topics including music, dance, writing, cooking, financial planning, language, and more.

Moorpark College was founded in 1967. The college began with 2,500 students and, as of September 2016, has since expanded to serve approximately 15,000 students. Moorpark College offers associates degrees, transfer preparation, and certificates in certain fields. Specifically, the college is known for programs including nursing, radiation technology, biotechnology, and exotic animal training.

Oxnard College is in Oxnard and was founded in 1975. The campus includes 118 acres and is undergoing major reconstruction. In 2002, voters passed Measure S to fund campus expansion. Additions included the Performing Arts Center (opened in 2011), the new Learning Resource Center/Library (opened in 2012), and the new Dental Hygiene building, (opened in 2013). The College offers 37 Associates degrees, 17 Associate degrees for transfer, vocational education, and other noncredit courses for the community in over 60 disciplines. Total enrollment in September 2016 was 7,126.

The three colleges within the Ventura County Community College District are accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC) of the Western Association of Schools and Colleges, a body of institutional accreditation recognized by the Council for Higher Education Accreditation and the U.S. Department of Education.

California State University, Channel Islands

California State University Channel Islands (CSUCI, CSU Channel Islands) is the only four-year public university in Ventura County. The campus is in the unincorporated part of the county, west of Camarillo and north of Thousand Oaks. CSU Channel Islands opened in 2002 as the 23rd campus in the California State University system. As of fall 2015, CSU Channel Islands had a total enrollment of over 6,000 students and offers 24 majors and 26 minors. The faculty/student ratio is 13:1. About 1,600 students live on campus. University enrollment is projected to grow to an enrollment of 11,500 by 2025, and corresponding short-term and long-term physical development of the campus is addressed by the campus master plan.

Private Colleges

The several private colleges in Ventura County are described below.

California Lutheran University

California Lutheran University (CAL Lutheran) is a private, liberal arts university located in Thousand Oaks. The school was founded in 1959 and has an enrollment of 4,125, as of 2015. The college offers a total of 36 majors and 35 minors, as well as master's degrees in information technology, public policy, education, psychology, theology, and business and economics. On campus housing is guaranteed for all full-time undergraduate students, and all Freshman through Junior year students are required to live on campus. The most recent Strategic Plan for the University outlined goals and steps to be taken between 2012-2017, including modernization of facilities and increasing enrollment numbers.

Thomas Aquinas College

Thomas Aquinas College is a private, liberal arts college located in the unincorporated area north of Santa Paula. It was founded in 1971 and has an enrollment of 378 students. The College offers education in the liberal arts and sciences, general studies, and humanities. Classes average 20 students and are typically taught in a seminar format. The College does not offer majors, minors, electives or specializations. Instead, the four-year interdisciplinary course of study relies on the Great Books, the original writings of great philosophers, historians, mathematicians, poets, scientists, and theologians of the West. Instruction does not rely on text books and lectures. Instead, the curriculum is in the form of tutorials, seminars, and laboratories guided by tutors who assist students in the work of reading, analyzing, and evaluating the great books. All students live in on-campus housing, except for married students.

St. John's Seminary College

Founded in 1939, St. John's Seminary is a private graduate institution located in Camarillo. Academic programs include a pre-theology program, masters of divinity, masters of arts, and masters of arts in pastoral ministry. The Seminary has an enrollment of 89. Housing is provided for all students, in three recently remodeled dormitories.

Private University Satellite Campuses

A number of private universities maintain satellite campuses in Ventura County, including: Pepperdine University (2829 Townsgate Road #180, Westlake Village) and University of La Verne (500 Esplanade Drive, Suite 1000, Oxnard).

Vocational and Trade Schools

The California Employment Development Department (EDD) provides training services in partnership with other State and local agencies through America's Job Center of California. Through these efforts, the EDD maintains a list of Training Providers and their locations. See Table 7-21 for vocational and trade schools located in Ventura County.

VC Innovates

The Ventura County Office of Education (VCOE) received grant funding from the California Department of Education Career Pathways Trust Program to establish the VC Innovates Program.VC Innovates is a collaborative effort to expand technical education programs at colleges, high schools, and middle schools. The goal of the program is to give students training so that they will graduate with skills to be employable in the information technology, health sciences, energy, and agricultural sectors.

TABLE 7-21
TRADE AND VOCATIONAL SCHOOLS
Ventura County, and in Area

Provider Name	Provider Type	Location
A2Z Health. Net, Inc. - Thousand Oaks	Apprenticeship, Business, Career, & Tech	Thous Oaks
Academy Education Services Inc	Schools with Occupational Programs (ROP)	Oxnard
Academy of Somatics & Massage	Apprenticeship, Business, Career, & Tech	Oxnard
Alvarez Studio	Apprenticeship, Business, Career, & Tech	Oxnard
American Red Cross - Ventura	Apprenticeship, Business, Career, & Tech	Ventura
Bail Resource Center & Career Academy	Apprenticeship, Business, Career, & Tech	Camarillo
California State University, Channel Islands	University or College (four-year school)	Camarillo
California Vocational College	Apprenticeship, Business, Career, & Tech	Oxnard
Center for Employment Training	Apprenticeship, Business, Career, & Tech	Oxnard
Certifications Plus Learning Centre	Schools with Occupational Programs (ROP)	Oxnard
Channel Islands Aviation, Inc.	Apprenticeship, Business, Career, & Tech	Camarillo
Charter College - Oxnard	Apprenticeship, Business, Career, & Tech	Oxnard
Christian Pacific Bible College	Other (incl. religious schools and seminaries)	Thous Oaks
Clinical Care Institute	Apprenticeship, Business, Career, & Tech	Port Hueneme
Clinical Training Institute	Apprenticeship, Business, Career, & Tech	Oxnard
College of Automotive Management - Oxnard	Apprenticeship, Business, Career, & Tech	Oxnard
Computer Idiot Training & Technology Services	Apprenticeship, Business, Career, & Tech	Ventura
Conejo Valley Adult Education	Schools with Occupational Programs (ROP)	Thous Oaks
Contractors State License Services - Ventura	Apprenticeship, Business, Career, & Tech	Ventura
Dollar Driving School of Ventura	Apprenticeship, Business, Career, & Tech	Ventura
Energy Conservation Institute	Schools with Occupational Programs (ROP)	Ventura
FLS International - Oxnard College Campus	University or College (four-year school)	Oxnard
Golden Grain Bible College & Seminary	Other (incl. religious schools and seminaries)	Ventura
Goodwill Industries of Ventura & Santa Barbara	Schools with Occupational Programs (ROP)	Oxnard
H & R Block Income Tax School - Oxnard	Apprenticeship, Business, Career, & Tech	Oxnard
Kali Institute for Massage & Somatic Therapies	Apprenticeship, Business, Career, & Tech	Ventura
Laubach Literacy of Ventura County	Other (incl. religious schools and seminaries)	Oxnard
Leslie Hammett & Associates	Apprenticeship, Business, Career, & Tech	Ventura
Lu Ross Academy	Community Colleges (two-year school)	Ventura
Lynda.Com, Inc.	Apprenticeship, Business, Career, & Tech	Ojai
Massage Center	Apprenticeship, Business, Career, & Tech	Thous Oaks
Modern Beauty Academy	Apprenticeship, Business, Career, & Tech	Oxnard
Modern Institute of Technology	Apprenticeship, Business, Career, & Tech	Oxnard
Moorpark College	Community Colleges (two-year school)	Moorpark
New Horizons Computer Learning Centers	Apprenticeship, Business, Career, & Tech	Oxnard
Ojai School of Massage	Apprenticeship, Business, Career, & Tech	Ojai
Oxnard Adult School	Schools with Occupational Programs (ROP)	Oxnard

TABLE 7-21 TRADE AND VOCATIONAL SCHOOLS Ventura County, and in Area		
Provider Name	**Provider Type**	**Location**
Oxnard College	Apprenticeship, Business, Career, & Tech	Oxnard
Pacific Coast Trade School	Schools with Occupational Programs (ROP)	Oxnard
Pacific Seatec	Apprenticeship, Business, Career, & Tech	Ventura
Professional Driver Training Schools, Inc.	Schools with Occupational Programs (ROP)	Oxnard
Professional Medical Careers Institute	Apprenticeship, Business, Career, & Tech	Thous Oaks
Santa Barbara Business College - Ventura	Apprenticeship, Business, Career, & Tech	Ventura
Santa Paula Adult School	Schools with Occupational Programs (ROP)	Santa Paula
Sheet Metal Workers Joint Apprenticeship Commit	Apprenticeship, Business, Career, & Tech	Ventura
Simi Valley Adult School & Career Institute	Schools with Occupational Programs (ROP)	Simi Valley
Southern California Institute of Law	University or College (four-year school)	Ventura
Technology Development Center	Apprenticeship, Business, Career, & Tech	Ventura
University of La Verne	University or College (four-year school)	Oxnard
University of Laverne Residence Center	University or College (four-year school)	Port Hueneme
Ventura College	Community Colleges (two-year school)	Ventura
Ventura College East Campus	Community Colleges (two-year school)	Santa Paula
Ventura College of Law	Apprenticeship, Business, Career, & Tech	Ventura
Ventura County Regional Occupational Program	Schools with Occupational Programs (ROP)	Camarillo
World University of America, Ojai	University or College (four-year school)	Ojai

Source: State of California Employment Development Department, Training Providers in Area in Ventura County, 2016.

Regulatory Setting

Local

2005 Ventura County General Plan

The General Plan covers education facilities and services in Chapter 4, Public Facilities and Services. Section 4.9 includes goals, policies, and programs related to education facilities and services. The following Area Plans also contain applicable goals and policies related to schools and childcare:

- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for schools and childcare. These can be found in Section 34a, Education – Schools.

Key Terms

There are no key terms for this section.

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SECTION 7.10 LIBRARY SERVICES

Introduction

This section describes the general characteristics of the library facilities and services in Ventura County.

Major Findings

- The Ventura County Library System consists of 11 library branches, a museum research library, an administration office facility, and a Virtual Library or e-Library that can be accessed 24/7 online.
- Library funding, while stable, is also stagnant and not increasing as costs increase. Since 2000, state funding for the Ventura County Library System went from $1.2 million to zero.
- Per capita spending for FY 15-16 for the Ventura County Library System was $32.52, with a service population of 252,656 and a total operating budget of $8,215,860 (not including $1,212,327 for Fixed Assets). The average per capita spending for California public libraries in FY 14-15 was $49.89.
- There were 65.63 FTE and 88 authorized positions at the Ventura County Library System in FY 2015-16.
- The Ventura County Library System celebrated 100 years of operation in 2016.

Existing Conditions

Ventura County Public Library System

The Ventura County Library System (VCLS) is a County agency governed by the Ventura County Board of Supervisors. County libraries are organized under the County Free Library Law. The County Service Area (CSA) Law allows for the creation of a separate legal entity for library services, or a mechanism to provide financing flexibility within an existing county library system.

VCLS is a Dedicated Property Tax Library. A separate property tax for libraries was imposed before Proposition 13 (1978). This property tax rate still generates revenues, all of which are dedicated to county library services. Library funding, while stable, is also stagnant and not increasing as costs increase. Moreover, since 2000, state funding for the VCLS has gone from $1.2 million to zero. VCLS is using technology and reorganization to maintain services in this climate. Any increases to property tax revenue, which is Ventura County Library System's main revenue source, will be used to improve the library collections, children and adult programming, and technology.

The Ventura County Library System charges fines and fees for materials that are lost or returned late. Some of the branch libraries also engage in more entrepreneurial activity such as renting out meeting rooms. The Ventura County Library Foundation was formed in 2012. Some of the Library System's branch libraries also seek and receive donations from various Friends of the Library groups, citizens, patrons, and businesses.

The Ventura County Library System provides services to all Ventura County residents, and serves unincorporated areas and cities, or areas within cities, which are neither served by a city library nor within the boundaries of independent library districts. The agency mission is to be the community's information center, where people can connect and explore a universe of knowledge and ideas offering diverse viewpoints. The Library System belongs to the Southern California Library Cooperative.

The VCLS operates an Administrative Office in Ventura and branch libraries throughout the county. Table 7-22 lists the branch locations, number of weekly open hours of each library, and square footage of each facility, and Figure 7-16 shows their locations.

TABLE 7-22
VENTURA COUNTY LIBRARY BRANCHES
VENTURA COUNTY
2016

Facility	Address	Hours Open Per Week	Square Feet
Albert H. Soliz Library	2820 Jourdan Street, Oxnard, CA 93036	24	3,030
Fillmore Library	502 2nd Street, Fillmore, CA 93015	32*	3,030
Piru Library	3811 Center Street, Piru, CA 93040	24*	1,960
Oak Park Library	899 North Kanan Road, Oak Park, CA 91377	44**	9,100
Meiners Oaks Library	114 North Padre Juan, Ojai, CA 93023	24	1,609
Oak View Library	555 Mahoney Avenue, Oak View, CA 93022	24*	2,400
Ojai Library	111 East Ojai Avenue, Ojai, CA 93023	55**	5,106
Ray D. Prueter Library	510 Park Avenue, Port Hueneme, CA 93041	40*	15,064
Avenue Library	606 North Ventura Avenue, Ventura, CA 93001	31*	3,000
E.P. Foster Library	651 East Main Street, Ventura, CA 93001	54**	31,000
Saticoy Library	1292 Los Angeles Avenue, Ventura, CA 93004	24*	5,000
Museum of VC Research Library	100 E. Main Street, Ventura, CA 93001	24	--
Total			**80,299**

Note: *Indicates that the library is open on Saturdays. **Indicates that the library is open on Saturdays and Sundays.
Source: Ventura County Library Website, http://www.vencolibrary.org/locations, accessed July 2016; Nancy Schram, Ventura County Library, Deputy Director, September 2016.

The Ventura County Library System offers free access to books, audiobooks, magazines, comic books, music, and movies for checkout and in streaming or electronic format. The Library System also offers programs and services beyond providing media access, including events for patrons of different age groups, an Adult Literacy program, computers for public use, Homework and tutoring centers, ongoing Early Literacy Classes, and annual Summer Reading Program, Makerspaces featuring 3-D printing and other STEAM (Science, Technology, Engineering, Art and Math) related hands-on equipment and activities, computer coding clubs, access to more than 45 databases, meeting rooms, free Wi-Fi within library facilities, and the checkout of laptops and Wi-Fi hotspots at some branch locations.

The VCLS 2015-2016 Annual Report provides information on the frequency that patrons used library services. During this time, over 679,000 people used the VCLS libraries, with over 302,000 patrons

holding library cards. Among the 12 library locations, the VCLS collection includes over 412,000 print books, 152 e-books, and 57 online resources. Technological resources provided are estimated to total 70,200 computer sessions, 280,200 Wi-Fi sessions, and 586,000 website visits. Approximately 3,500 public events held by the VCLS and were attended by 63,000 patrons. The adult literacy reading program included 98 volunteers and 135 participants, and 692 early literacy classes were attended by 18,385 learners. The summer reading program had 4,503 participants and totaled 22,515 hours of reading.

The Library System has numerous community partners and offers many collaborative programs and services at locations other than the branch libraries throughout Ventura County. In 2016, the Library System acquired a Mobile Education Center library van equipped with books and materials to create "pop up" library services as needed at various locations throughout Ventura County.

The Virtual Library or e-Library can be accessed online through the Ventura County Library Website or through the Ventura County Library mobile app acquired by the Library System in 2016.

To evaluate the VCLS branches and determine if they are considered adequate for the populations they serve, VCLS has referred to a former State standard regarding library facilities that states 0.5 per capita for facility square footage for public libraries. The population served by VCLS in 2015-16 as determined by the California State Library was 252,588. With a total combined square footage of eleven library branch facilities of 80,299 sq. ft. and per capita of 0.32, using the 0.5 per capita standard the VCLS facilities would be deemed inadequate for population served. To break down this figure by branch, the per capita figure by branch facility points to inadequate size in Ventura (0.3), El Rio (.4), Fillmore (.2) and Meiners Oaks (.4). Based upon this ratio or standard, there is an existing, unmet demand for public library facilities in these areas. However, residents of the Meiners Oaks area can be considered part of the Ojai Valley population, and therefore have access to both the Oak View and Ojai branch libraries.

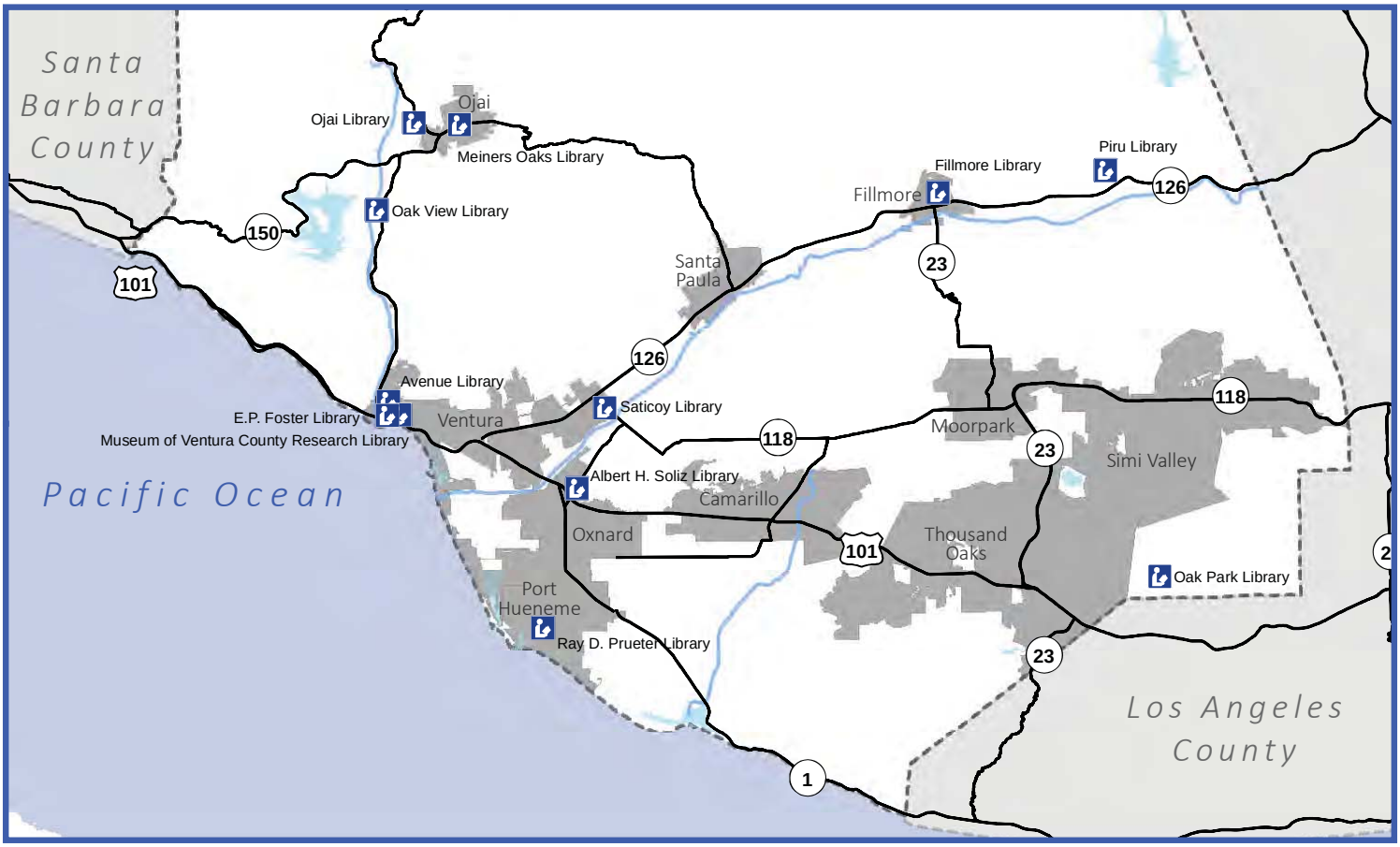

Figure 7-16:
Ventura County Libraries

Map Date: August 31, 2017
Source: Ventura County, 2016; California Department of Transportation, 2007; Ventura County Library, 2016.

0 5 10 Miles

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Ventura County Boundary
Cities
Major Roadways
Ventura County Libraries

Regulatory Setting

Local

2005 Ventura County General Plan

The General Plan covers library services in Chapter 4, Public Facilities and Services. Section 4.9 includes goals, policies, and programs related to library facilities and services. The El Rio/Del Norte Area Plan also contains library-related goals and policies.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for library services. These can be found in Section 34b. Education – Public Libraries.

Key Terms

There are no key terms for this section.

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Persons Consulted

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SECTION 7.11 PARKS AND RECREATION

Introduction

According to the State's General Plan Guidelines, specific types of open space must be addressed to the extent that they are locally relevant. This includes open space for outdoor recreation, which includes parks and areas of scenic and cultural value, stream banks, trails and other links between open spaces. In Ventura County, a large portion of open space lands are accessible to the public and provide a number of recreational resources like trails, playgrounds, scenic vistas, and campgrounds. Open spaces accessible to the public and providing recreation resources are important to maintaining a high quality of life.

This section describes the existing conditions and regulatory framework related to recreation opportunities in the unincorporated areas of Ventura County. Most recreation opportunities, such as wildlife areas, hiking trails, and parks occur on lands designated as Open Space in the General Plan. However, it is important to note that lands designated Open Space are not exclusively devoted to recreation uses, nor are they all publicly accessible, as noted in the definition of Open Space (see Chapter 3, Land Use).

Major Findings

- There are approximately 640,000 acres of open space in Ventura County that are managed by federal, state, county, special district, local, and non-profit agencies. A portion of these open spaces are accessible to the public, and offer a variety of recreational opportunities in different settings.
- The United States Forest Service (USFS) manages 87 percent, or 561,000 acres, of open space lands in Ventura County, which makes up almost all of north Ventura County. However, access to USFS lands is limited in part due to the wildlife conservation areas for the California condor and the existence of private lands near the southern forest boundary, which often do not have easements for public access.
- Non-USFS lands in Ventura County (other federal, state, and local lands) totaling approximately 79,000 acres, are mostly clustered near Ventura County's southeastern border. Although Ventura County residents have a wide array of open space and recreational opportunities, distance to open space, and access, varies substantially throughout the county. Thus, some Ventura County residents do not have access to open space/park resources within walking distance, or a half mile of their residence.
- Ventura County owns 5,321 acres of parks, open spaces, and golf courses as well as 23.25 miles of trails. A variety of recreational opportunities are also provided through special districts like the Conejo, Pleasant Valley, and Rancho Simi Recreation and Park Districts.

Existing Conditions

Open space lands occupy more than half of the land area in Ventura County. Table 7-23 summarizes open space lands by ownership type, and Table 7-24 lists individual open space areas by level of access (i.e., open, limited, none, unknown), ownership, and size. Figure 7-17 shows recreation and open space areas by ownership type. The United States Forest Service (USFS) owns the largest share of open space land in Ventura County: the portion of the Los Padres National Forest in the county encompasses 561,488 acres and covers most of north Ventura County. There are more than 307 unique open space lands, from small municipal neighborhood parks under an acre to large federally managed parks like the Santa Monica Mountains National Recreation Area (in both Los Angeles and Ventura counties), at more than 150,000 acres.

A wide variety of recreation opportunities exist in the unincorporated areas of the County including, but not limited to, mountain hiking trails, bicycle paths, beach parks, golf courses, camp sites, equestrian facilities, access to the off-shore Channel Islands, and lakes. Recreational resources are managed by the county, state, and federal agencies and are summarized below. Recreational resources managed by cities within the county are not included in this discussion.

Local Park and Recreation Agencies

Several local public agencies manage parks and/or provide recreational program services within the county. This section first describes the resources managed and maintained by the Ventura County Parks Department and then describes resources managed by the other local agencies. Other local agencies include three park and recreation special districts, three cemetery districts, four conservation agencies, and two independent water districts. These agencies provide recreation opportunities like boating, camping, fishing, hiking, skating, horse riding, and more. Municipal park and recreation departments and school districts are not discussed in this section.

Table 7-23 provides an inventory of open space lands that are owned by public or quasi-public entities. Not included in this inventory are properties which are privately owned and provide varying amounts of public access to open space. Such organizations include, but are not limited to, the Ojai Valley Land Conservancy, Rancho San Buenaventura Conservation Trust, and The Nature Conservancy.

TABLE 7-23
SUMMARY OF OPEN SPACE LAND AREA BY ORGANIZATION
Ventura County
2016

Organization Name	Type of Organization	Size (acres)
United States Bureau of Land Management	Federal Agency	2,717
United States Bureau of Reclamation	Federal Agency	4,724
United States Fish and Wildlife Service	Federal Agency	2,509
United States Forest Service	Federal Agency	561,489
United States National Park Service	Federal Agency	10,894
SUBTOTAL		**582,333**
California Department of Fish and Wildlife	State Agency	84
California Department of Parks and Recreation	State Agency	20,916
Santa Monica Mountains Conservancy	State Agency	5,561
SUBTOTAL		**26,561**
Bardsdale Cemetery District	Special District	14
Conejo Open Space Conservation Agency	Special District	7,609
Conejo Recreation and Park District	Special District	2,160
Conejo Valley Unified School District	Special District	30
Mountains Recreation and Conservation Authority	Special District	4,852
Piru Cemetery District	Special District	3
Pleasant Valley Recreation and Park District	Special District	232
Rancho Simi Recreation and Park District	Special District	3,841
El Rancho Simi Cemetery District~~Simi Valley Public Cemetery District~~	Special District	5
SUBTOTAL		**18,747**
Casitas Municipal Water District	Local Agency	211
Fillmore, City of	Local Agency	17
Moorpark, City of	Local Agency	154
Ojai, City of	Local Agency	132
Oxnard, City of	Local Agency	454
Port Hueneme, City of	Local Agency	132
Santa Paula, City of	Local Agency	42
Thousand Oaks, City of	Local Agency	2,024
United Water Conservation District	Local Agency	974
Ventura, City of	Local Agency	997
Ventura, County of	Local Agency	5,321
SUBTOTAL		**10,458**
TOTAL		**638,099**

Source: Ventura County Planning Division, RMA/GIS, and MIG, 2016

TABLE 7-24 OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE Ventura County 2016		
Open Space Name	**Agency**	**Size (ac)**
Open Access		
Adolfo Park	Pleasant Valley Recreation and Park District	2.7
Arneill Ranch Park	Pleasant Valley Recreation and Park District	5.0
Arroyo Park	Rancho Simi Recreation and Park District	2.0
Arroyo Simi Equestrian Center	Rancho Simi Recreation and Park District	9.1
Arroyo Verde Park	Ventura, City of	129.2
Arroyo Vista Community Park	Moorpark, City of	77.0
Arroyostow Park	Rancho Simi Recreation and Park District	2.0
Arundell Linear Park	Ventura, City of	3.4
Atherwood Park	Rancho Simi Recreation and Park District	6.0
Banyan Park	Conejo Recreation and Park District	6.9
Bardsdale Cemetery	Bardsdale Cemetery District	14.3
Barranca Vista Park	Ventura, City of	4.8
Beck Park	Oxnard, City of	9.9
Berylwood Park	Rancho Simi Recreation and Park District	4.8
Beyer Park	Conejo Valley Unified School District	5.1
Big Sky Park	Rancho Simi Recreation and Park District	10.1
Birchview Park	Pleasant Valley Recreation and Park District	0.4
Blanche Reynolds Park	Ventura, City of	5.4
BLM	United States Bureau of Land Management	2,716.9
Boat Launch Ramp and Park	Oxnard, City of	15.7
Bob Kildee Community Park	Pleasant Valley Recreation and Park District	34.2
Bolker Park	Port Hueneme, City of	3.9
Borchard Park	Conejo Recreation and Park District	27.3
Brittel Park	Oxnard, City of	3.1
Broome Ranch[1]	Mountains Recreation and Conservation Authority and NPS	1,094.2
Cabrillo Park	Oxnard, City of	5.1
California Botanic Garden	Conejo Recreation and Park District	32.6
California Street Mini-Park	Ventura, City of	0.3
Calleguas Creek Park	Pleasant Valley Recreation and Park District	3.2
Camarillo Oak Grove County Park	Pleasant Valley Recreation and Park District	26.1
Camarillo Regional Park	State of California CSUCI	354.82
Camino Real Park	Ventura, City of	40.9
Camp Comfort Park	Ventura, County of	37.39
Campus Canyon Park	Moorpark, City of	6.0
Campus Park	Moorpark, City of	2.7
Canada Park	Conejo Valley Unified School District	9.1
Canilla Corp.	United States National Park Service	3.5
Carmenita Park	Pleasant Valley Recreation and Park District	1.8
Central Park	Fillmore, City of	5.7
Challenger Park	Rancho Simi Recreation and Park District	141.8
Chaparral Park	Rancho Simi Recreation and Park District	4.7
Chumash Park[1]	Rancho Simi Recreation and Park District and City of Ventura	109.1
Citrus Grove Park	Rancho Simi Recreation and Park District	5.2

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
College Estates Park	Oxnard, City of	6.5
College Park	Oxnard, City of	74.9
College View Park	Moorpark, City of	4.3
Colonia Park	Oxnard, City of	9.0
Community Center Park	Pleasant Valley Recreation and Park District	11.6
Community Center Park East	Oxnard, City of	16.5
Community Center Park West	Oxnard, City of	9.9
Conejo Canyons (includes Adventist Hill Open Space and Rancho Conejo Open Space) [1]	City of Thousand Oaks and Conejo Open Space Conservation Agency	1,157.4
Conejo Community Park	Conejo Recreation and Park District	48.8
Conejo Creek Park	Conejo Recreation and Park District	149.7
Conejo Open Space Conservation Agency	Conejo Open Space Conservation Agency	3.5
Conejo Recreation and Park District	Conejo Recreation and Park District	14.8
Conejo Ridge[1]	Conejo Open Space Conservation Agency, City of Thousand Oaks, and Mountains Recreation and Conservation Authority	384.2
Constitution Park	Pleasant Valley Recreation and Park District	2.9
Corriganville Park	Rancho Simi Open Space Conservation Agency	178.5
Country Trail Park	Moorpark, City of	0.7
Coyote Hills Park	Rancho Simi Recreation and Park District	8.9
Crestview Park	Pleasant Valley Recreation and Park District	3.0
Cypress Park	Conejo Recreation and Park District	8.9
Daly Ranch Park	Ojai, City of	47.4
Darrah Volunteer Park	Rancho Simi Recreation and Park District	7.5
Deer Creek - Denman	Mountains Recreation and Conservation Authority	9.2
Deer Ridge Open Space	Conejo Open Space Conservation Agency	112.1
Deerhill Park	Rancho Simi Recreation and Park District	12.2
Del Sol Park	Oxnard, City of	16.0
Dennison Park	Ventura, County of	33.86
Dewar Park	Port Hueneme, City of	3.3
Dick Clark Open Space	Santa Monica Mountains Conservancy	57.0
Dizdar Park	Pleasant Valley Recreation and Park District	1.4
Dos Vientos Community and Neighborhood Park, Playfield, and Open Space[1]	Conejo Recreation and Park District, Conejo Open Space Conservation Agency, City of Thousand Oaks, Mountains Recreation and Conservation Authority	329.2
Durley Park	Oxnard, City of	11.7
Eagle View Park	Rancho Simi Recreation and Park District	4.4
Eastwood Memorial Park	Oxnard, City of	15.1
Eastwood Park	Ventura, City of	0.9
Ebell Park	Santa Paula, City of	1.2
El Parque de la Paz	Conejo Recreation and Park District	4.6
El Rancho Simi Pioneer Cemetery	El Rancho Simi Cemetery District	5.4
Emma Wood State Beach	California Department of Parks and Recreation	109.3

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Encanto Park - PVRPD	Pleasant Valley Recreation and Park District	3.2
Estella Park	Conejo Recreation and Park District	1.6
Evenstar Park	Conejo Recreation and Park District	4.1
Faria Beach Park	Ventura, County of	1.76
Feraud Park	Ventura, County of	1.4
Figueroa Street Plaza	Ventura, City of	0.6
Fillmore Fish Hatchery	California Department of Fish and Wildlife	24.1
Fiore Playfield	Thousand Oaks, City of	10.5
Fireworks Hill Open Space	Thousand Oaks, City of	31.4
Foothill Park	Rancho Simi Recreation and Park District	2.0
Foster Park	Ventura, County of	204.6
Freedom Park	Pleasant Valley Recreation and Park District	34.4
Fremont Park	Oxnard, City of	25.3
Fritz Huntsinger Youth Complex	Ventura, City of	18.3
Frontier Park	Rancho Simi Recreation and Park District	2.6
Garden City Acres Park	Oxnard, City of	6.0
Glenwood Park[1]	City of Moorpark of and Conejo Recreation and Park District	9.3
Glider Hill Open Space[1]	Thousand Oaks, City of	95.4
Goebel Senior Adult Center	Thousand Oaks, City of	10.2
Grant Park	Ventura, City of	91.2
Happy Camp Canyon Park	Ventura, County of	3,238.65
Harding Park	Santa Paula, City of	16.3
Harry A. Lyon Park	Ventura, City of	8.4
Heritage Park	Pleasant Valley Recreation and Park District	8.9
Hickory Park	Conejo Recreation and Park District	4.5
Hillcrest Center	Thousand Oaks, City of	5.8
Hobert Park	Ventura, City of	7.1
Hobson Beach Park	Ventura, County of	1.7
Hope Nature Preserve	Conejo Open Space Conservation Agency	359.4
Houghton-Schreiber Park	Rancho Simi Recreation and Park District	8.9
Hungry Valley State Vehicular Recreation Area	California Department of Parks and Recreation	6,279.9
Indian Springs Park	Rancho Simi Recreation and Park District	8.5
Johnson Creek Park	Oxnard, City of	29.2
Juanamaria Park	Ventura, City of	5.0
Junipero Serra Park	Ventura, City of	2.6
Kenney Grove Park	Ventura, County of	15.40
Kimber Park	Conejo Recreation and Park District	8.3
Knoll Open Space	Conejo Open Space Conservation Agency	20.8
Knolls Park	Rancho Simi Recreation and Park District	2.3
La Jolla Open Space	Thousand Oaks, City of	14.3
Lake Casitas Recreation Area[1,2]	Casitas Muni Water District and US Bureau of Reclamation	4,935.3
Lake Piru[2]	United Water Conservation District	973.9
Lake Eleanor Open Space	Conejo Open Space Conservation Agency	523.0

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Lang Ranch Community Park and Open Space (includes Jordan Ranch, Lang Creek Open Space, Lang Ranch Open Space, and Montgomery Ranch Open Space) [1]	City of Thousand Oaks, Conejo Recreation and Park District, Conejo Open Space Conservation Agency, Rancho Simi Recreation and Park District, and NPS	1,557.5
Las Piedras Park	Santa Paula, City of	5.9
Lathrop Park	Oxnard, City of	3.0
Laurelwood Park	Pleasant Valley Recreation and Park District	1.5
Lemonwood Park	Oxnard, City of	9.4
Leo Carrillo State Park[1]	California Department of Parks and Recreation and Santa Monica Mountains Conservancy	183.9
Libbey Park	Ojai, City of	7.8
Lincoln Park	Rancho Simi Recreation and Park District	5.5
Los Padres National Forest[1] (includes 53,000-acre Sespe Condor Sanctuary, which has restricted access)	United States Forest Service	561,488.8
Los Padres Open Space	City of Thousand Oaks/Conejo Open Space Conserv Agency	168.0
Los Robles Golf Course	Thousand Oaks, City of	133.2
Los Robles Open Space	Conejo Open Space Conservation Agency	351.8
Los Vientos Open Space	Conejo Open Space Conservation Agency	28.0
Lynn Oaks Park	Conejo Valley Unified School District	15.7
Lynnmere Open Space	Conejo Open Space Conservation Agency	120.3
Mae Boyar Park	Rancho Simi Recreation and Park District	5.8
Main Street Park	Fillmore, City of	2.6
Mammoth Highlands Park	Moorpark, City of	7.1
Mandalay County Park	Ventura, County of	2.4
Mandalay State Beach	California Department of Parks and Recreation	88.6
Marina Park	Ventura, City of	20.4
Marina West Park	Oxnard, City of	17.1
Marion Cannon Park	Ventura, City of	5.0
Mayfair Park	Rancho Simi Recreation and Park District	5.0
McGrath State Beach[2]	California Department of Parks and Recreation	343.5
Memorial Park	Ventura, City of	7.1
Midblock Park	Ventura, City of	0.4
Mill Park	Santa Paula, City of	3.2
Miller Park	Moorpark, City of	8.2
Mission Oaks Community Park	Pleasant Valley Recreation and Park District	53.0
Mission Park	Ventura, City of	2.3
Montalvo Neighborhood Park	Ventura, City of	6.6
Monte Vista Nature Park	Moorpark, City of	6.8
Moorpark holding 1 and 2[1]	Moorpark, City of	0.1
Morrow Circle	Conejo Recreation and Park District	4.0
Mount Clef Ridge Open Space	Conejo Open Space Conservation Agency	86.6
Mountain Meadows Park	Moorpark, City of	8.0

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Newbury Gateway Park	Conejo Recreation and Park District	8.5
North Ranch - Hillcrest Open Space and subarea, Lakeview Canyon Open Space, Lindero Creek Open Space, North Ranch East, Simi Hills Open Space, and Neighborhood Park[1]	City of Thousand Oaks, Conejo Open Space Conservation Agency, Conejo Recreation and Park District	2,324.4
North Ranch Playfield	Conejo Recreation and Park District	11.9
Northwood Field	Conejo Recreation and Park District	7.8
Oak Canyon Community Park	Rancho Simi Recreation and Park District	55.4
Oak Park	Ventura, County of	132.83
Oakbrook Regional Park[1]	Conejo Recreation and Park District and Ventura County	433.6
Obregon Park	Santa Paula, City of	4.0
Ocean Avenue Park	Ventura, City of	1.2
Old Conejo Open Space	Conejo Open Space Conservation Agency	37.9
Old Meadows Park and Open Space[1]	City of Thousand Oaks and Conejo Recreation and Park District	52.0
Old Windmill Park	Rancho Simi Recreation and Park District	9.6
Olivas Park & Golf Course	Ventura, City of	259.9
Orchard Park	Oxnard, City of	10.5
Oxnard Beach Park	Oxnard, City of	25.0
Oxnard holding 1	Oxnard, City of	18.3
Pacific Skateboard Park	Ventura, City of	0.3
Palo Comado Canyon	United States National Park Service	1,698.4
Peach Hill Park	Moorpark, City of	9.3
Peninsula Park	Oxnard, City of	3.7
Pepper Tree Playfield	Conejo Recreation and Park District	22.2
Peppertree Corner	Ventura, City of	0.2
Piru Cemetery	Piru Cemetery District	2.9
Piru Town Center/Skate Park	Ventura County Transportation Commission	6.75
Pitts Ranch Park	Pleasant Valley Recreation and Park District	10.4
Plaza Park[1]	Cities of Oxnard and Ventura	5.3
Pleasant Valley Park	Oxnard, City of	9.6
Pleasant Valley Recreation and Park District	Pleasant Valley Recreation and Park District	27.5
Poindexter Park	Moorpark, City of	9.2
Point Mugu State Park	California Department of Parks and Recreation	13,893.2
Port Hueneme Beach Park	Port Hueneme, City of	104.6
Potrero / Kelley Estates	Thousand Oaks, City of	3.4
Potrero / Potrero	Conejo Open Space Conservation Agency	188.0
Rancho Conejo Playfield	Conejo Recreation and Park District	14.3
Rancho Madera Community Park	Rancho Simi Recreation and Park District	24.8
Rancho Santa Susana Community Park	Rancho Simi Recreation and Park District	45.3
Rancho Simi Community Park[2]	Rancho Simi Recreation and Park District	33.4
Rancho Simi Recreation and Park District[1]	Rancho Simi Open Space Conservation Agency and Rancho Simi Recreation and Park District	2,028.9

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Rancho Simi Recreation Area	Rancho Simi Recreation and Park District	395.3
Rancho Tapo Community Park	Rancho Simi Recreation and Park District	19.9
Richard Barb Bubbling Springs	Port Hueneme, City of	20.4
Rio Lindo Park	Oxnard, City of	8.4
Rocky Peak Park	Mountains Recreation and Conservation Authority	3,570.4
Rocky Pointe Natural Park	Rancho Simi Recreation and Park District	12.9
Rose Park	Oxnard, City of	2.8
Russell Access Strips	Conejo Recreation and Park District	1.3
Russell Park	Conejo Recreation and Park District	8.4
Rustic Canyon Golf Course	Ventura, County of	423.68
Sage Ranch Park	Mountains Recreation and Conservation Authority	578.8
San Buenaventura Golf Course	Ventura, City of	97.1
San Buenaventura State Beach	California Department of Parks and Recreation	81.1
San Nicolas Island	United States Navy	14,393
Santa Monica Mountains National Recreation Area - Cheeseboro Canyon, Circle X Ranch, and Rancho Sierra Vista[1]	United States National Park Service	6,434.4
Santa Susana Park	Rancho Simi Recreation and Park District	15.2
Santa Rosa Valley Park	Ventura, County of	50.07
Sarzotti Park	Ojai, City of	9.5
Saticoy Park	Ventura, County of	3.1
Saticoy Regional Golf Course	Ventura, County of	48.62
Sea Air Park	Oxnard, City of	8.6
Seaside Park	Ventura, City of	5.0
Seaside Wilderness Park	Ventura, City of	17.3
Seaview Park	Oxnard, City of	6.4
Sespe Park	Ventura, County of	16.52
Sequoia Park	Rancho Simi Recreation and Park District	5.7
Serrano Valley	United States National Park Service	217.3
Shiells Park	Fillmore, City of	9.2
Sierra Linda Park	Oxnard, City of	5.0
~~Simi Cemetery~~	~~Simi Valley Public Cemetery District~~	~~5.4~~
Simi Dog Park	Rancho Simi Recreation and Park District	4.0
Simi Hills Golf Course	Rancho Simi Recreation and Park District	250.4
Simi Hills Neighborhood Park	Rancho Simi Recreation and Park District	5.9
Sinaloa Golf Course	Rancho Simi Recreation and Park District	24.3
Sinaloa Youth Ball Fields	Rancho Simi Recreation and Park District	11.4
Skyline Open Space[1]	City of Thousand Oaks/Conejo Open Space Conserv Agency	58.4
Soule Park	Ventura, County of	189.30
Soule Golf Course	Ventura, County of	200.00
South Ranch Open Space[1]	City of Thousand Oaks/Conejo Open Space Conserv Agency	640.1
South Winds Park	Oxnard, City of	10.8
Southbank Park	Oxnard, City of	6.2

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Southshore Hills Park	Conejo Recreation and Park District	4.5
Southwest Community Park	Oxnard, City of	21.9
Spring Meadow Park	Conejo Recreation and Park District	6.5
Springville Park	Pleasant Valley Recreation and Park District	4.9
Stagecoach Inn Park	Conejo Recreation and Park District	16.2
Stargaze Park	Rancho Simi Recreation and Park District	3.3
Steckel Park	Ventura, County of	173.41
Strathearn Historical Park & Museum	Rancho Simi Recreation and Park District	5.4
Suburbia Park	Conejo Recreation and Park District	1.9
Sunrise Park	Pleasant Valley Recreation and Park District	1.1
Sunset Hills Park and Open Space (includes Olsen Road, Amber Ridge, and Northwood Open Space) [1]	Conejo Open Space Conservation Agency, Conejo Recreation and Park District, and Ventura County	388.5
Surfers Knoll	Ventura, City of	10.0
Sycamore Canyon Park	Rancho Simi Recreation and Park District	8.4
Sycamore Drive Comm Ctr & Pool	Rancho Simi Recreation and Park District	13.1
Sycamore Park	Rancho Simi Recreation and Park District	19.4
Tapo Canyon Park	Ventura, County of	210.60
Tarantula Hill	Conejo Open Space Conservation Agency	45.3
Teague Park	Santa Paula, City of	7.9
Thille Neighborhood Park	Ventura, City of	5.0
Thompson Park	Oxnard, City of	2.7
Thousand Oaks	Conejo Recreation and Park District	33.5
Tierra Rajada Park[1]	City of Moorpark and Rancho Simi Recreation and Park Dist	151.9
Toland Park	Ventura, County of	212.72
Trailside Park	Pleasant Valley Recreation and Park District	0.4
Triunfo Park	Conejo Recreation and Park District	39.0
Upper Las Virgenes Open Space Preserve / Ahmanson	Santa Monica Mountains Conservancy	5,427.8
Valle Lindo Park	Pleasant Valley Recreation and Park District	10.1
Valley View Park	Rancho Simi Recreation and Park District	8.3
Ventu Park Open Space	Conejo Open Space Conservation Agency	141.0
Ventura Community Park	Ventura, City of	96.8
Ventura holding 1 – 5[1]	City and County of Ventura	45.9
Ventura holding 6 – 133[1]	Ventura, City of	122.5
Verde Park	Rancho Simi Recreation and Park District	7.3
Veterans Memorial Park	Santa Paula, City of	3.1
Via Marina Park	Oxnard, City of	12.3
Villa Campesina Park	Moorpark, City of	1.2
Vineyards Park	Oxnard, City of	5.3
Virginia Colony Park	Moorpark, City of	0.8
Vista del Arroyo Park	Rancho Simi Recreation and Park District	3.3
Walnut Grove Equestrian Center	Conejo Recreation and Park District	13.4
Walnut Grove Park	Conejo Recreation and Park District	6.6

TABLE 7-24
OPEN SPACE LANDS, RESPONSIBLE AGENCIES, AND SIZE
Ventura County
2016

Open Space Name	Agency	Size (ac)
Walnut Open Space	Conejo Open Space Conservation Agency	8.9
Warring Park	Ventura, County of	3.9
Waverly Park	Conejo Recreation and Park District	7.4
Wendy Park	Conejo Recreation and Park District	4.5
West Village Park	Oxnard, City of	5.6
Westpark Community Center	Ventura, City of	8.6
Whelan	United States National Park Service	40.4
Wildflower Playfield	Conejo Recreation and Park District	21.4
Wildwood Park and Open Space (includes Lynnmere North and Wildwood Mesa) [1]	Conejo Open Space Conservation Agency and Conejo Recreation and Park District	1,704.7
Willowbrook Park	Rancho Simi Recreation and Park District	0.5
Wilson Park	Oxnard, City of	5.8
Woodcreek Park	Pleasant Valley Recreation and Park District	5.0
Woodridge Open Space[1]	City of Thousand Oaks/Conejo Open Space Conserv. Agency	607.3
Woodside Park	Pleasant Valley Recreation and Park District	5.2
Yellowhill	United States National Park Service	395.7
SUBTOTAL		**649,198.18**
Limited Access		
Anacapa Island (includes areas of park with restricted access)	National Park Service	699.0
Arroyo Conejo Nature Preserve and South Arroyo Conejo Open Space[1]	Conejo Open Space Conservation Agency	296.4
Coldwater Canyon Ecological Reserve	California Department of Fish and Wildlife	60.2
Hopper Mt National Wildlife Refuge	United States Fish and Wildlife Service	2,387.4
McCrea Open Space, Ranch, and Wildlife Preserve	Conejo Open Space Conservation Agency and Conejo Recreation and Park District	362.6
Oakbrook Neighborhood Park	Conejo Recreation and Park District	13.4
SUBTOTAL		**3,819.0**
No Public Access		
Bitter Creek National Wildlife Refuge	United States Fish and Wildlife Service	121.9
Southshore Hills Open Space	Conejo Open Space Conservation Agency	12.8
SUBTOTAL		**134.7**
Unknown		
Alta Vista Open Space	Conejo Open Space Conservation Agency	11.0
Labisco Hill Open Space	Conejo Open Space Conservation Agency	23.9
Summit House	Conejo Open Space Conservation Agency	31.9
SUBTOTAL		**66.8**

[1] This open space was consolidated into one unit and may be managed by multiple agencies.
[2] All or a part of this open space contains a water feature; the final area calculations also reflect acreage of water.
Source: Ventura County Planning Division and MIG, 2016

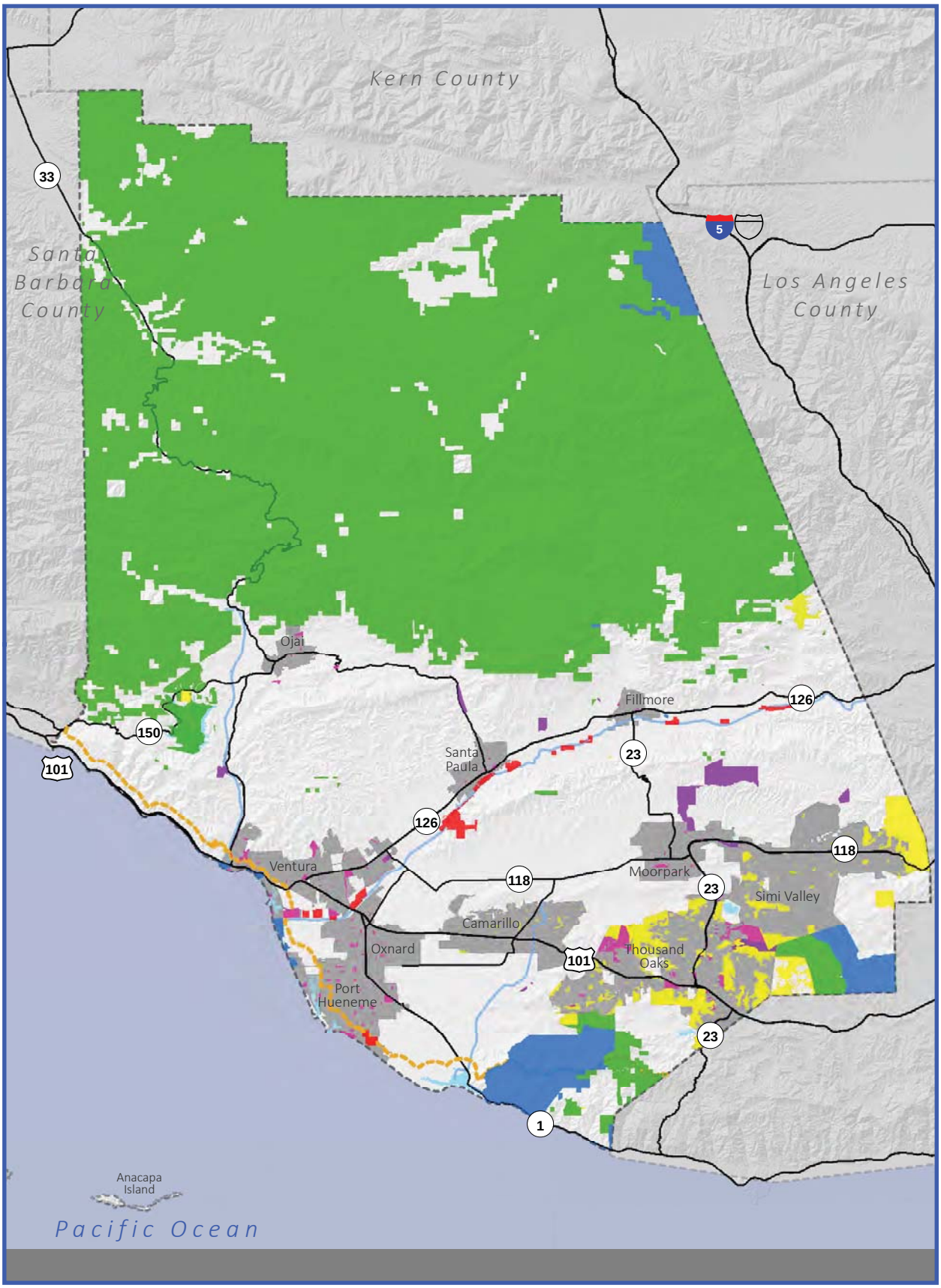

Figure 7-17
Recreation and Open Space Areas

Map Date: July 20, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Ownership Agency Type
- Federal
- State
- County
- City
- Special District
- Non Profit

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

FIGURE 7-17
RECREATION AND OPEN SPACE AREAS
BACK OF FIGURE

County of Ventura Parks

The Ventura County Parks Department (part of the County's General Services Agency), manages park and recreation facilities throughout the County.

Categories and General Standards for Park and Recreation Facilities

Recreation facilities managed by the Ventura County Parks Department are categorized as either Regional, Local, or Trails/Corridors. These categories are briefly described below. The general planning standard for Regional Parks is five acres of developable land, per one thousand people and the facility should be accessible to the major portion of the population within 30 to 60 minutes' travel time. Similarly, the planning standard for Local Parks is five acres per one thousand people, and are typically within walking distance of the communities where they are located. The general planning standard for Trails and Corridors is 2.5 miles per one thousand people.

Regional: There are five specific regional park classifications that are based on measures or values placed on the area or site including, but not limited to accessibility, physical and/or visual attributes, its potential for offering a quality experience or for meeting needs for a highly specialized use. The following classifications were approved by the Board of Supervisors:

1) **Regional Parks:** A Regional Park should include sufficient developable land to accommodate large organized groups or family gatherings without sacrificing the basic qualities of the area or the specific attributes that that support specialized use. A Regional Park may contain a variety of specialized facilities or natural features that in combination will support recreation experience of County-wide significance.

2) **Recreation Parks:** A Recreation Park should provide facilities for a comprehensive recreation program to serve a population of approximately 200,000 by providing facilities such as sports fields, courts, courses, and gyms. It is designed to handle large-scale multiple participant sports programs and can accommodate tournament competition. It may also offer incidental passive recreation areas and local park facilities, such as small picnic areas and playgrounds. It is usually not less than 30 acres in size and may comprise the active recreation element of a regional park.

3) **Preserves:** A Preserve is an extent of land preserved from development to protect unique scenic resources, unusual native plants and animals, geologic phenomena, or historical sites or buildings. It may be part of a regional recreation area or a singular entity.

4) **Regional Open Space:** A Regional Open Space is any space, the preservation of which in its natural condition would maintain or enhance the aesthetic quality of a regional recreation area, a major portion of the County, or contribute to the logical control of urban development.

5) **Specialized Facilities:** A Specialized Facility is a singular area or facility that provides specialized recreation opportunities that are of regional or County-wide significance. It may be an individual element, or it may be a unit of a larger or more inclusive regional park. Specialized Facilities may include but are not limited to amphitheaters (bowls), auditoriums, botanical gardens, day use beaches, equestrian centers, fairgrounds, golf courses, museums, nature centers, off-road vehicle areas, campgrounds, group picnic grounds, riding and hiking trails, vista points and zoos.

Local: The local park provides facilities to serve the daily needs of a defined neighborhood or group of neighborhoods within an urban community. The specific facilities should be determined by the needs of the community. Local park acres should provide for three main types of recreation: 1) Open areas for passive recreation and relaxation; 2) Active sports areas for baseball, basketball and other court games; and 3) A neighborhood center for group activities.

Trails/Corridors: There are many existing and proposed trail systems within the County that serve or will serve bicycles, pedestrians and equestrians. Several regional trails/corridors link major park and recreation facilities. In the south half of the County, the state and federal government have extensive trails in the Santa Monica Mountains and the Conejo Recreation and Parks District has developed many miles of trails connecting various parks and recreation areas in and around Thousand Oaks. Trails in the Los Padres National Forest in the north half of the County also serve motorcycles and other off-highway vehicles.

County of Ventura Park Facilities

The Ventura County Parks Department organizes its facilities into five categories: (1) Inland; (2) Beach (3) Trails; (4) Golf; and (5) Community Centers. The recreational resources provided by Ventura County Parks Department are summarized in Table 7-25. In addition to the park name, location, amenities, and size, the table indicates whether the park is "Regional," (i.e., intended to be used as a countywide resource) "Local," (i.e., intended to be used by those who live near the park) and/or "Leased" (owned by county but managed by private concessionaires).

TABLE 7-25
REGIONAL RECREATION SYSTEM
Unincorporated County
2016

Name and Location	Park Type	Amenities	Size
Inland Parks			
Camp Comfort *Ojai*	Regional	A day use and overnight facility. San Antonio Creek flows through the park.	34.8 acres
Dennison Park *located near Ojai*	Regional	A day use and overnight facility. Family and group covered BBQ areas are available by reservation.	32.4 acres
Foster Park *Ventura*	Regional	Two separate day use areas and two campgrounds. The Ojai Valley trail goes through the park.	201.5 acres
Happy Camp *Moorpark*	Regional	Regional wilderness with 12.5 miles of trails.	2,952.25 acres
Kenney Grove Park *Fillmore*	Leased	A developed RV park owned by the County but operated by a private party.	15.40 acres
Oak Park *Simi Valley*	Regional	A day use and overnight facility.	132.83 acres
Santa Rosa Valley Park *east of Camarillo*	Regional	A day use facility that includes two equestrian riding areas.	50.07 acres
Saticoy Park *Saticoy*	Local	A neighborhood park with sports fields. After school programs are provided by the local Boys and Girls Club at this facility.	3.1 acres
Soule Park *Ojai*	Regional	A day use facility with picnic areas, dog park, and equestrian riding areas.	15.3 acres

TABLE 7-25
REGIONAL RECREATION SYSTEM
Unincorporated County
2016

Name and Location	Park Type	Amenities	Size
Steckel Park *near Santa Paula*	Regional; Leased	A day use and overnight facility. The park contains a playground and a large aviary.	193.41 acres
Tapo Canyon Regional Park *near Simi Valley*	Regional	A day use and overnight facility. The campground contains full hook-ups for RVs along with an equestrian arena.	210.60 acres
Toland Park *Santa Paula and Fillmore*	Regional	Hiking opportunities available. A group youth tent camp is available by reservation.	212.92 acres
Warring Park *Piru*	Local	Amenities include a softball diamond and a basketball court.	3.9 acres
Beach			
Faria Beach Park *Pacific Coast Highway*	Regional	The park offers day use beach access along with camping (some sites have full hook-ups).	1.76 acres
Hobson Beach Park *Pacific Coast Highway*	Regional	The park offers day use beach access along with camping (some sites have full hook-ups).	1.7 acres
Rincon Parkway *Pacific Coast Highway*	Regional	An RV overnight parkway area located along Highway 101 along the ocean front.	1.4 acres
Trails			
Ojai Valley Trail *Ojai and Ventura*	Regional	National Recreation Trail is parallel to Highway 33 and connects Ojai and Ventura	9.5 miles
Piru Trail *Piru*	Local	Paved trail connects the Town Center and Warring Park.	0.85 mile
Shelf Road Trail *northern edge of Ojai*	Local	Unpaved road located on the northern edge of Ojai.	0.6 mile
Sulphur Mountain Trail *Near Ojai*	Regional	Unpaved with views of Ojai Valley and mountains. Located off Sulphur Mountain Rd along Hwy 33.	11.5 miles
Golf Courses			
Rustic Canyon *Simi Valley*	Regional; Leased	18-hole golf course located within Happy Camp Regional Park	407.72 acres
Saticoy Regional *Ventura*	Regional; Leased	9-hole golf course	48.62 acres
Soule Park Golf Course *Ojai*	Regional; Leased	18-hole golf course	200.0 acres
Community Centers			
Casitas Springs *Casitas Springs*	Local	1 large room and 1 small room for parties and meetings	n/a
Jose Flores *Saticoy*	Local	1 large room and 1 small room for parties and meetings	n/a
Oak View *Oak View*	Local	Child's playground area, basketball court. 1 large room and 1 small room for parties and meetings	n/a
Piru *Piru*	Local	Baseball field. 2 Rooms - 1 Large Room and 1 Small Room available for parties and meetings.	n/a
Roger Jones *El Rio*	Local	Park with outdoor BBQ, basketball court, playground. 1 room for parties and meetings.	n/a

Sources: Inland Parks (Ventura County 2016d), Beach Parks (Ventura County 2016a), Trails (Ventura County 2016e), Golf Courses (Ventura County 2016c), Community Centers (Ventura County 2016b)

Park Funding

The existing funding framework for park facilities was first developed in 1978, in response to the statewide Jarvis-Gann Initiative (Proposition 13), which limited the collection of property taxes. In June 1978, shortly after the passage of Proposition 13, the Board of Supervisors approved the Parks Recreation Enterprise Fund, which requires that the County's regional recreation program be self-supporting, and not dependent on the County's General Fund.

Five years later, in August 1982, the Board approved and adopted the annual *Rent, Fee and Insurance Schedule for Parks*, and reaffirmed the policy that the Regional Recreation Enterprise Fund be operated on a self-sustaining basis, without contributions from the General Fund. Currently, park development occurs only if a method of financing for acquisition, construction, operation, and maintenance has been established.

Existing Park and Recreation Deficiencies

In 1981, the Board of Supervisors held a study session focused on park development, identification of capital improvement priorities, evaluation of existing conditions, and the development of recommendations to correct facility deficiencies. Recommendations included acquiring and developing additional parkland, augmenting staffing levels, completing a Recreation Element for the General Plan, and presenting a funding program for regional park acquisition, development, and operation to the voters of Ventura County. Some of the recommendations from the study session were achieved. For example, new group picnic areas, campgrounds, equestrian facilities, golf courses and trails were added to the park system and several parks were acquired and developed, thus increasing the number of regional recreation opportunities. However, this 1981 study session was the last extensive evaluation of recreation demands and deficiencies. Notably, an automated reservation and payment system established in 2007/2008 confirmed that, as of 2016, there has been a 69 percent increase in park attendance. Moreover, this increase does not reflect any increased usage of trails or other non-revenue generating park activities.

Casitas Municipal Water District

The Casitas Municipal Water District is a local water supplier for Western Ventura County, including Ojai, the Upper Ojai, Rincon, and parts of Ventura. The district maintains the 300-acre Lake Casitas Recreation Area, where boating, camping, and fishing are available. Casitas Water Adventure, a water park, is open during the summer months and is located in close proximity to the reservoir and recreation area. There is also a disc golf course overlooking the reservoir.

Cemetery Districts

Cemetery Districts include the Bardsdale, Piru, and El Rancho Simi Cemetery Districts ~~and Simi Valley Public Cemetery Districts~~. These three cemetery districts operate pursuant to Division 8 of the California Health and Safety Code relating to cemeteries and specifically pursuant to the Public Cemetery District Law. Public cemetery districts are legally separate from the County, and the board of trustees of each district is solely responsible for district operations (Ventura LAFCO 2007). These districts encompass approximately 23 acres of open space.

Conejo Open Space Conservation Agency

The Conejo Open Space Conservation Agency (COSCA) was created through a joint agreement between the City of Thousand Oaks and the Conejo Recreation and Park District in 1977. This partnership allowed the two entities to "exercise their legal powers to create a jurisdictional framework for the conservation of natural open space lands, assure coordination of local land use and resource management decisions, and establish an entity to focus community resources toward achievement of adopted General Plan goals" (COSCA 2016a). The COSCA manages 19 open space properties and co-manages 7 open space properties with the Conejo Recreation and Park District, City of Thousand Oaks, Ventura County, and the Mountains Recreation and Conservation Authority (see Table 8.3-2) (COSCA 2016b).

Conejo Recreation and Park District

The Conejo Recreation and Park District predates the incorporation of the City of Thousand Oaks. The district serves communities within the Conejo Valley both within Thousand Oaks as well as the unincorporated areas of Lynn Ranch, Rolling Hills and Lake Sherwood. According to the most recent Master Plan, the district maintains 50 developed facilities, which include parks, playfields and special facilities (CRPD 2011). The district also jointly owns and operates 40 open space areas and regional parks totaling more than 13,000 acres.

Mountains Recreation and Conservation Authority

The Mountains Recreation and Conservation Authority (MRCA) is a local partnership between the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. MRCA is dedicated to the preservation and management of local open space and parkland, watershed lands, trails, and wildlife habitat (MRCA 2016). MRCA manages about 4,800 acres of open space land in Ventura County.

Pleasant Valley Recreation and Park District

The Pleasant Valley Recreation and Park District (PVRPD) predates the incorporation on the City of Camarillo (the primary community that it serves). The district also includes substantial unincorporated areas south and east of the City of Camarillo. Additionally, some neighborhoods north of Camarillo but within the City's Sphere of Influence, are within the district's boundaries. The district has 27 parks on 300 acres, an aquatic center, a community center, and a skate park (PVRPD 2013).

Rancho Simi Recreation and Park District

The Rancho Simi Recreation and Park District predates the incorporation of the City of Simi Valley. The district serves residents within Simi Valley but also unincorporated areas in close proximity including Oak Park. The district has 50 parks and over 5,600 acres of open space. The district also has two equestrian centers, two swimming pools, and two golf courses.

United Water Conservation District

The United Water Conservation District encompasses the Santa Clara River Valley and the Oxnard Coastal Plain and is a supplier of municipal and agricultural water. The district manages the Lake Piru Recreation Area. Along the western shore of the lake, the district provides boating access, camping, fishing, swimming and picnicking.

State Park and Recreation Agencies

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) manages the Coldwater Canyon Ecological Reserve and the Fillmore Trout Hatchery. These two sites include about 84 acres of open space land. Fillmore Trout Hatchery is open to the public, from 7:00 am to 3:00 pm, and visitors can feed the trout at the hatchery. This Hatchery raises trout for stocking southern California waters (CDFW 2016).

California Department of Parks and Recreation

The California Department of Parks and Recreation (State Parks) manages a wide variety of recreational and cultural attraction throughout the State. The following six parks are not located in the unincorporated area of Ventura County but are available to unincorporated area residents:

- Emma Woods State Beach – Provides non-tent camping at 90 campsites west of Ventura. Additionally, four group campsites are available at the facility. Activities include swimming, surfing and fishing (State Parks 2016a).
- Hungry Valley State Vehicle Recreation Area (SVRA) – A 19,000-acre facility located in the interior of the county near Gorman, with 130 miles of trails providing opportunities for off-highway vehicle use (State Parks 2016b).
- Leo Carrillo State Park – This is a 189-acre facility co-managed by the Santa Monica Mountains Conservancy. This park has 1.5 miles of beach for swimming, surfing, windsurfing, surf fishing, and beachcombing. The beach also has tide pools, coastal caves and reefs for exploring. There are also campgrounds and trails for backcountry hiking (State Parks 2016c).
- Mandalay State Beach – An undeveloped beach located west of Oxnard. The beach experiences closures during the Spring and Summer to protect the western snowy plover, a federally threatened bird species (State Parks 2016d).
- McGrath State Beach – Located five miles south of Ventura, the park provides excellent wildlife viewing (State Parks 2016e).
- Point Mugu State Park is located along the Santa Monica Mountains, 15 miles south of Oxnard. The park offers 70 miles of trails along with five miles of ocean shoreline (State Parks 2016g).
- San Buenaventura State Beach – Located in Ventura, the State Beach contains two miles of sandy beach, picnic sites, along with a snack bar and rental shop. The beach is the location of numerous special events and activities such as swimming, picnicking and beach volleyball occur at this location (State Parks 2016f).

Santa Monica Mountains Conservancy

The Santa Monica Mountains Conservancy was established by the California State Legislature to preserve parkland in both wilderness and urban settings and improve public recreational facilities throughout Southern California. The Santa Monica Mountains Conservancy manages the Dick Clark Open Space and Upper Las Virgenes Open Space Preserve and co-manages the Leo Carrillo State Park with California State Parks. The Upper Las Virgenes Open Space Preserve is part of a critical ecological linkage and wildlife corridor for a number of important species, like California red-legged frog, San Fernando Valley

spineflower, southwestern willow flycatcher, and southern steelhead trout. Trails at this open space preserve offer opportunities for hikers, mountain bikers, and equestrians during daylight hours (Santa Monica Mountains Conservancy 2016). Dick Clark Open Space is located near the southern border of Ventura County, between Boney Mountains State Wilderness Area and Deer Creek Canyon Park, just north of Deer Creek Road. The Upper Las Virgenes Open Space Preserve, Leo Carrillo State Park, and Dick Clark Open Space are located within unincorporated areas within Ventura County.

Federal Park and Recreation Agencies

United States Bureau of Land Management

The Bureau of Land Management (BLM) owns 30 unnamed properties throughout Ventura County, totaling 2,717 acres. BLM land is generally open to the public.

United States Bureau of Reclamation

In Ventura County, the Bureau of Reclamation co-manages the Lake Casitas Recreation Area with the Casitas Municipal Water District. A more detailed description of the Lake Casitas Recreation Area and the recreational opportunities available can be found in the sub-section of this chapter describing Casitas Municipal Water District.

United States Forest Service

A relatively large portion of Ventura County lies within the Los Padres National Forest, which is managed by the USFS. The Los Padres National Forest offers the following recreational opportunities:

- 57 dispersed trail camps
- 19 developed family campgrounds and one developed group campground
- An extensive road system allowing for scenic driving and/or OHV driving
- Over 350 miles in trails
- Several Wilderness Areas fully or partially within the County: Dick Smith Wilderness, Matilija Wilderness, Chumash Wilderness, and the Sespe Wilderness
- Sespe Condor Sanctuary allows limited access to designated trail corridors within the sanctuary boundaries

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) is responsible for the management of the Hopper National Wildlife Refuge (NWR) Complex, which includes Bitter Creek and Hopper Mountain. These two NWRs support the California Condor Recovery Program. Bitter NWR is located in northwestern Ventura County and provides valuable habitat for the federally- and state-listed California condor. Public access to Bitter Creek is limited to guided hikes in the refuge led by Friends of California Condors Wild and Free (USFWS 2013a). Hopper Mountain NWR, located north of the unincorporated town of Piru, has similar policies for limited (guided) public access (USFWS 2013b). These two NWRs encompass approximately 2,500 acres of open space land in Ventura County.

United States National Park Service

The National Park Service (NPS) is responsible for management of Channel Islands National Park, located offshore. Channel Islands National Park encompasses five of the eight Channel Islands. One of

the Park's five islands, Anacapa, is within Ventura County. Anacapa Island is the most visited of the islands, and is comprised of three islets. The island is located 11 miles from Oxnard and 14 miles from Ventura. The eastern portion of the island provides public access, a visitor center, picnicking, and overnight camping.

The Santa Monica Mountains National Recreation Area (SMMNRA) was established in 1978, and the National Park Service has prime responsibility for managing these lands. SMMNRA includes 150,000 acres in the Santa Monica Mountains, both within Ventura and Los Angeles counties. In addition to the NPS, other agencies manage recreational open space in the SMMNRA, including the California Department of Parks and Recreation, the Santa Monica Mountains Conservancy, and the Mountains Recreation and Conservation Authority. Federal land within the Ventura County portion of SMMNRA include Cheeseboro Canyon, Rancho Sierra Vista/Satwiwa, Malibu Springs (near Leo Carrillo State Beach), and Circle X Ranch (adjacent to Boney Mountain State Wilderness Area).

United States Navy

Mugu Lagoon is located within Naval Base Ventura County-Point Mugu. Since it has been in ownership under the U.S. Navy for more than 70 years, it is considered as one of the least disturbed and best protected estuaries in southern California (Onuf 1987). This area is not readily accessible to the public for recreation purposes; however, it can be viewed from the Pacific Coast Highway.

San Nicolas Island is one of the eight Channel Islands and located within Ventura County. It is owned by the United States Navy for weapons testing and as a training facility; it is not open to the public. San Nicholas Island also serves as a wildlife refuge and has been the focus of several restoration efforts, including feral cat eradication and southern sea otter translocation. There are several endemic, rare, and special status species the island, including: island night lizard, western snowy plover, San Nicholas Island fox, and southern sea otter (Montrose Settlements Restoration Program 2009). The Navy's work with the island night lizard at San Nicolas island contributed to this species being removed from the engendered species list in 2014.

Regulatory Setting

Federal

National Forest Management Act. This act requires the Secretary of Agriculture to assess national forest lands; develop a management program based on multiple-use, sustained-yield principles; and implement a resource management plan for each unit of the National Forest System. It is the primary statute governing the administration of national forests. The Land Management Plan – Part 2 Los Padres National Forest Strategy, adopted in September 2005, "…describes the strategic direction at the broad program-level for managing the land and its resources over the next 10 to 15 years. The strategic direction was developed by an interdisciplinary planning team working with forest staff using extensive public involvement and the best science available" (USFS 2016).

National Park Service. The National Park Service (NPS) was established in 1916 under the National Park Service Organic Act. The NPS manages its facilities under a policy known as "the dual mandate," which requires NPS to preserve the natural and cultural resource under their jurisdiction for future generations while providing for the "enjoyment" (often in the form of recreation use) of the areas under their purview.

Wild and Scenic Rivers Act. The USFS is responsible for preserving the outstanding natural, cultural, and recreational values for portions of Piru Creek and Sespe Creek, which flows through the Los Padres

National Forest. These creeks are part of the National Wild and Scenic Rivers System, which was created to preserve remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other valuable natural resources. Rivers within these systems are classified as wild, scenic, or recreational; segments of rivers designated as "wild" are the least developed (free of impoundments, no development, only accessible by trail); and recreational segments are the most developed (may have undergone some impoundment, has some development along shoreline, readily accessible by road or public transit) (National Wild and Scenic Rivers System 2016a). Piru Creek has 4.3 miles classified as wild and 3.0 miles as recreational, for a total of 7.3 miles (National Wild and Scenic Rivers System 2016b). Sespe Creek as 27.5 miles classified as wild and 4.0 miles as scenic, for a total of 31.5 miles (National Wild and Scenic Rivers System 2016c).

State

California Coastal Act of 1976. There are several sections of the Coastal Act that pertain to recreation; these sections are listed below.

> § 30213. Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.
>
> § 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.
>
> § 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.
>
> § 30222. The use of private lands suitable for visitor-serving commercial recreation facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.
>
> § 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.
>
> § 30250(c). Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attractions for visitors.

California Department of Conservation, Division of Land Resource Protection. The California Department of Conservation, Division of Land Resource Protection (DLRP) works with landowners, local governments and researchers to conserve open space resources statewide. DRLP provides information, maps, funding and technical assistance to local governments, consultants, resource conservation districts and nonprofit organizations, with the goal of conserving the state's agricultural and natural resources.

California Government Code. California Government Code Sections 65560-65570 establish the need for an Open Space Element in a General Plan, define the types of open spaces, require an action program for implementing the Open Space Element, and require that city and county actions be consistent with the Open Space Element. Types of open space include open spaces used for the preservation of natural

resources, managed production of resources, outdoor recreation, public health and safety, support of the mission of military installations, and the protection of places, features and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code. Examples of city or county actions that must be consistent with the Open Space Element include acquisition/disposal of land or interest, restriction/regulation of uses, permitting for construction, approval for subdivision maps and adoption of open space zoning regulations.

The Quimby Act (California Government Code Section 66477, as amended by Assembly Bill 1359), allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land, donate conservation easements or pay fees to acquire parkland.

California Land Conservation Act of 1965 (Williamson Act). This act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Public Resources Code. The State Public Park Preservation Act (Public Resources Code 5400-5409) is the primary instrument for protecting and preserving parkland in California. Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland required. This ensures no net loss of parkland and facilities.

Public Resources Code Section 5076 requires counties to consider trail-oriented recreational use and shall consider such demands in developing specific open space programs during the development of the General Plan. Cities are also required to consider the feasibility of integrating their trail routes with appropriate segments of the state system.

State Street and Highway Code. The State Street and Highway Code include provisions for equestrian and hiking trails within the rights-of-way of county roads, streets and highways.

Local

The Guidelines for Orderly Development

These guidelines are intended in part to protect open space and agricultural land uses by directing urban-level development to incorporated cities in Ventura County rather than in unincorporated areas. Ventura County's Guidelines for Orderly Development are consistent with new State laws, such as Assembly Bill (AB) 32 and Senate Bill (SB) 375, which seek reductions in greenhouse gas emissions through changes to land use patterns and related transportation systems (Ventura County 2013).

Save Open Space and Agricultural Resource (SOAR) Ordinances

Save Open Space & Agricultural Resources (SOAR) refers to a series of voter initiatives that individual jurisdictions adopted to protect open space and agricultural land. Ventura County first adopted the countywide SOAR ordinance in 1998. The County SOAR ordinance requires countywide voter approval of any change to the General Plan involving the Agricultural, Open Space, or Rural land use designations, or any changes to a General Plan goal or policy related to those land use designations. In addition to the County SOAR ordinance, eight of the 10 cities in the county have enacted SOAR ordinances/initiatives:

Ventura (1995 and 2001), Camarillo (1998), Oxnard (1998), Simi Valley (1998), Thousand Oaks (1998), Moorpark (1999), Santa Paula (2000), and Fillmore (2002). The cities of Camarillo, Fillmore, Moorpark, Oxnard, Santa Paula, Simi Valley, and Thousand Oaks adopted SOAR ordinances to establish voter-controlled urban growth boundaries, known as City Urban Restriction Boundaries (CURBs). CURBs are lines around each city that require voter approval to allow city annexation and development of land outside of the CURB boundary. In November 2016, the voters of Ventura County and eight of the county's ten cities renewed the SOAR ordinances and extended their controls through 2050. Ojai and Port Hueneme were not covered by the Measure C, the 2016 ballot initiative that extended the SOAR ordinances. Ojai will continue to rely on locally-adopted planning measures, while Port Hueneme is landlocked, with no room to expand beyond its current boundaries.

2005 Ventura County General Plan

The General Plan covers recreation opportunities in Chapter 4, Public Facilities and Services. Section 4.10 includes goals, policies, and programs related to recreation opportunities. The following Area Plans also contain applicable goals and policies related to recreation opportunities:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for recreation opportunities. These can be found in Section 35. Recreation Facilities.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates recreation opportunities through Section 8175-5 Standards and Conditions for Uses and Section 8174-6 Statutory Exemptions and Categorical Exclusions.

Key Terms

Multiple-use, sustainable yield. Multiple use means management of all the various renewable surface resources of the national forests like timber, range, water, recreation, and wildlife, so that they are utilized in the combination that will best meet the needs of the American people. Sustainable yield means the achievement and maintenance, in perpetuity, of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land.

National Wildlife Refuge Complex. An administrative grouping of two or more refuges, wildlife management areas or other refuge conservation areas primarily managed from a central office location.

Refuges are grouped into a complex structure because they occur in a similar ecological region, such as a watershed or specific habitat type, and have a related purpose and management needs.

Special District. Any agency of the state for the local performance of governmental or proprietary functions within limited boundaries; a separate local government that delivers a limited number of public services to a geographically limited area. Special districts are a form of government, have governing boards, provide services and facilities, and have defined boundaries.

Walking Distance. Pursuant to the Partnership for Sustainable Communities (an interagency collaboration between the Department of Housing and Urban Development, Department of Transportation, and the Environmental Protection Agency), walking distance is any distance less than ¼ or ½ mile (2014). For communities with many elderly residents or dense city centers, ¼ may be a more appropriate metric when considering walking distance. In suburban/rural areas where amenities are more spread out, ½ mile may be a more appropriate metric.

Wilderness Areas. According to the USFS, a Wilderness Areas is a social condition, one in which an area is untrammeled and free from human control, regardless of preexisting conditions or future consequences.

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Ventura County 2040 GENERAL PLAN

Chapter 8
Natural Resources

8 NATURAL RESOURCES

INTRODUCTION

This chapter summarizes the natural resources for the County of Ventura. It is organized into the following sections:

- Air Quality (Section 8.1)
- Biological Resources (Section 8.2)
- Scenic Resources (Section 8.3)
- Mineral Resources (Section 8.4)
- Energy Resources (Section 8.5)
- Cultural, Historical, Paleontological, and Archaeological Resources (Section 8.6)
- Appendices (Section 8.7)

SECTION 8.1 AIR QUALITY

Introduction

This section summarizes the existing air quality conditions and regulatory framework within Ventura County. Air quality is described as the concentration of various pollutants in the atmosphere for a specific location or area. Air quality conditions at a particular location are a function of the type and amount of air pollutants emitted into the atmosphere, the size and topography of the regional air basin, and the prevailing weather conditions. Air quality is an important natural resource that influences public health and welfare, the economy, and quality of life. Air pollutants have the potential to adversely impact public health, the production and quality of agricultural crops, native vegetation, visibility, buildings, and other structures and materials.

Regarding public health impacts from poor air quality, some people are more sensitive to poor air quality than others. These people include children, the elderly, and persons with asthma and other respiratory conditions. Land uses where these people are likely to be located are termed “sensitive receptors.” as sensitive receptors. Sensitive receptors include long-term healthcare facilities, hospitals, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds. Sensitive receptors are located throughout Ventura County.

Climate change and sources of greenhouse gas (GHG) emissions often are associated with air quality. These topics are addressed in Chapter 12 (Climate Change).

Major Findings

- ~~Ventura County's air quality continues to improve towards the 2008 federal 8-hour (0.075 ppm) ozone standard, the county's most serious and pervasive air quality problem. In 1990, the county exceeded that standard 117 times but only seven times in 2014 and four times in 2015 and 2016. These improvements have occurred despite a 28 percent increase in county population from 1990 through 2016 and should continue as local, state, and federal clean air programs continue to reduce air emissions responsible for ozone formation. Likewise, the county is making similar progress towards the more the more stringent 2015 federal 8-hour (0.070 ppm) ozone standard.~~ Ventura County is designated as a "serious" nonattainment area for the federal ozone air quality standard. Air in the County currently exceeds the standard on an average of 14 days per year, which is a significant improvement from the average of 38 days over the standard in the 2010 timeframe and the average of 78 days over the standard in the 2000 timeframe. These improvements have occurred despite a 28 percent increase in county population from 1990 to 2016. The Air Quality Management Plan for Ventura County projects continued reductions in air pollutant emissions in the County for the foreseeable future. On the days when the standard is exceeded the air is considered unhealthy, especially for children, the elderly, and people with respiratory problems. It is important to note that this air quality standard is rarely exceeded in the coastal portion of the County (Ventura, Oxnard, Port Hueneme, and Camarillo) and the Conejo Valley.
- Ventura County is located in the South Central Coast Air Basin (SCCAB) and is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD). The VCAPCD is currently designated as a nonattainment area for ozone under the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS); additionally, Ventura County is listed as a nonattainment area for the CAAQS for respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}). A nonattainment area is defined as an area or air basin that does not meet the CAAQS or NAAQS for a given pollutant.
- Within Ventura County, mobile sources (e.g., cars and trucks) are the largest contributor of ozone precursor emissions, which include ROG and NO_X. Area-wide sources (e.g., paved road dust, agriculture, construction and demolition activities) in Ventura County are the largest contributor of PM_{10} and fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$) emissions.
- There are several hundred stationary sources in Ventura County that emit toxic substances and are subject to the Air Toxics"Hot Spots" Information and Assessment Act (AB 2588). The majority of locations are concentrated in incorporated or developed areas, including the cities of Oxnard, Camarillo, Thousand Oaks, Simi Valley, Ventura, Ojai, Santa Paula, and Fillmore. The primary purpose of the Hot Spots Act is to notify the public of facilities that have routine and predictable emissions of toxic air pollutants that may pose a significant health risk to nearby residents and workers. The Hot Spots Act also encourages those facilties to reduce the health risk to below the level of significance.
- Ventura County is not classified as having the potential to contain serpentine bedrock. Thus, there is no potential for naturally-occurring asbestos (NOA) in the unincorporated county.

Existing Conditions

In addition to the presence of existing air pollution sources, air quality is determined by a number of natural factors, such as topography, climate, and meteorology. These factors are discussed below.

Topography, Climate, and Atmospheric Conditions

Ventura County is located in the South Central Coast Air Basin, which comprises all of San Luis Obispo, Santa Barbara, and Ventura counties. The air above Ventura County often exhibits weak vertical and horizontal dispersion characteristics, which limit the dispersion of emissions and cause increased ambient air pollutant levels. Persistent temperature inversions prevent vertical dispersion. The inversions act as a "ceiling" that prevent pollutants from rising and dispersing. The county's mountain ranges act as "walls" that inhibit horizontal dispersion of air pollutants.

The diurnal land/sea breeze pattern common in Ventura County recirculates air contaminants. Air pollutants are pushed toward the ocean during the early morning by the land breeze, and toward the east during the afternoon, by the sea breeze. This creates a "sloshing" effect, causing pollutants to remain in the area for several days. Residual emissions from previous days accumulate and chemically react with new emissions in the presence of sunlight, thereby increasing ambient air pollutant levels.

This pollutant sloshing effect happens most predominantly from May through October (smog season). Air temperatures are usually higher and sunlight more intense during the smog season. This explains why Ventura County experiences the most exceedances of the CAAQS and NAAQS for ozone during this six-month period (VCAPCD 2003).

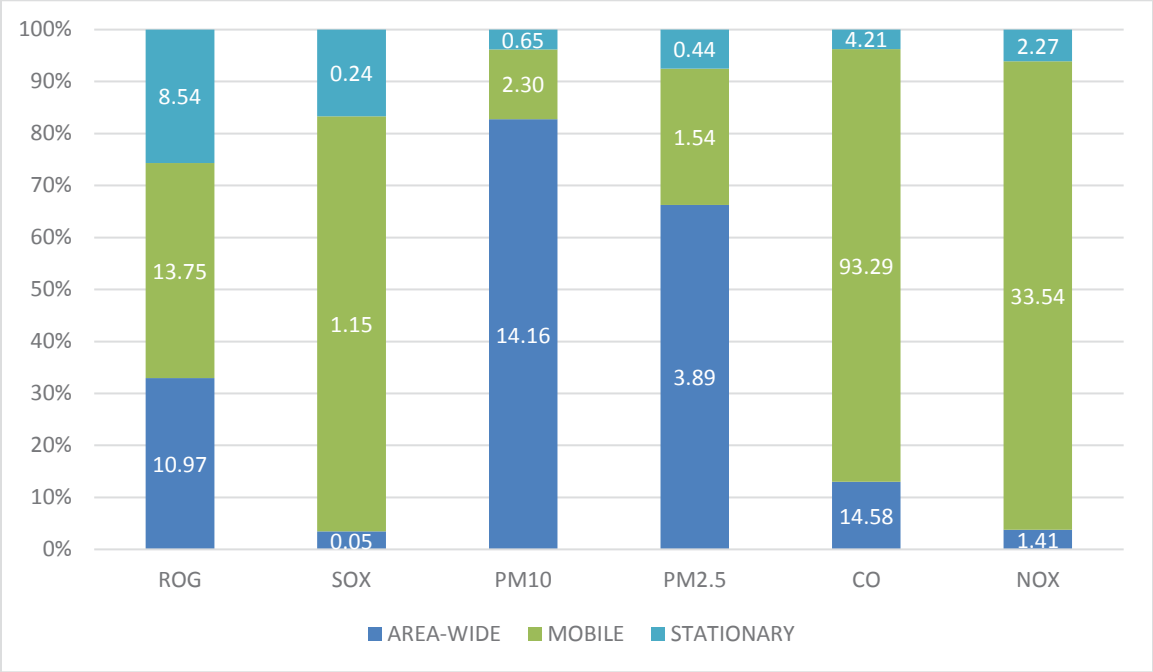
Existing Sources of Criteria Air Pollutant and Precursor Emissions

The California Air Resources Board (CARB) developed a 2015 emissions inventory projection for Ventura County (CARB 2017). The county emissions inventory is projected from the 2012 base year emissions inventory used for the 2016 State Implementation Plan (SIP), last updated in February 2017 and is representative of the types of emissions sources that are included in the county. The county emissions inventory is summarized in Figure 8-1. A detailed breakdown of the county inventory is provided in Appendix 8B.

According to the CARB inventory, mobile sources, such as cars and trucks, are the largest contributor to the estimated air pollutant levels of ROG, sulfur oxides (SO_X), carbon monoxide (CO), and NO_X, accounting for approximately 41 percent, 80 percent, 83 percent, and 90 percent, of total respective emissions in Ventura County. Area-wide sources, such as the household, commercial and institutional use of solvents, agricultural pesticides and fertilizers, architectural coatings, consumer products, and other activities, account for about 33 percent of ROG emissions, while stationary sources, such as industrial and manufacturing activities, contribute about 26 percent of ROG emissions. Outer Continental Shelf sources (e.g., ocean going vessels, commercial harbor craft and offshore oil and gas production platforms) also contribute approximately 43 percent of total NO_x emissions (CARB 2017).

Area-wide sources account for approximately 83 percent and 66 percent of the county's PM_{10} and $PM_{2.5}$ emissions, respectively, most of which resulted from construction and demolition, vehicle travel on unpaved roads, vehicle travel on paved roads, residential fuel combustion activity, and fugitive windblown dust (CARB 2017).

FIGURE 8-1
CRITERIA AIR POLLUTANTS AND PRECURSORS (TONS PER DAY)
Ventura County
2015



Notes: CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamicdiameter of 2.5 micrometers or less; ROG = reactive organic gases; SO_x = sulfur oxides. [Includes OCS emission sources]
Source: California Air Resources Board (CARB). 2015 Estimated Annual Average Emissions – Ventura County. 2016 SIP Emission Projection Data 2015 Estimated Annual Average Emissions by region https://www.arb.ca.gov/ei/emissiondata.htm]

Air Quality Monitoring and Existing Pollutant Concentrations

There are currently five active air quality monitoring stations in Ventura County as shown in Figure 8-2. Table 8-1 summarizes the stations and the pollutant concentrations measured at each station. Table 8-10 through Table 8-17 in Appendix 8C summarize the pollutant concentrations measured from these stations from 2009 to 2014. EPA and CARB use these monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies (see further discussion on attainment with the CAAQS and NAAQS under the Regulatory Setting section below). Notably, due to the differing geographical characteristics surrounding the air quality monitoring stations, concentrations of air pollutants and their achievement or violation of the CAAQS and NAAQS will be site-specific. Each pollutant is described further below.

TABLE 8-1 AIR QUALITY MONITORING IN VENTURA COUNTY[1]					
Monitoring Station	**Active**	**Ozone**	**$PM_{2.5}$**	**PM_{10}**	**NO_2**
Ojai - East Ojai Ave	Yes	Yes	Yes	No	No
Simi Valley - Cochran Street	Yes	Yes	Yes	Yes	Yes
Thousand Oaks-Moorpark Road	Yes	Yes	Yes	No	No
El Rio-Rio Mesa School #2	Yes	Yes	Yes	Yes	Yes
Simi Valley - Upper Air[2]	Yes	No	No	No	No
Piru - Pacific	Yes	Yes	Yes	No	No

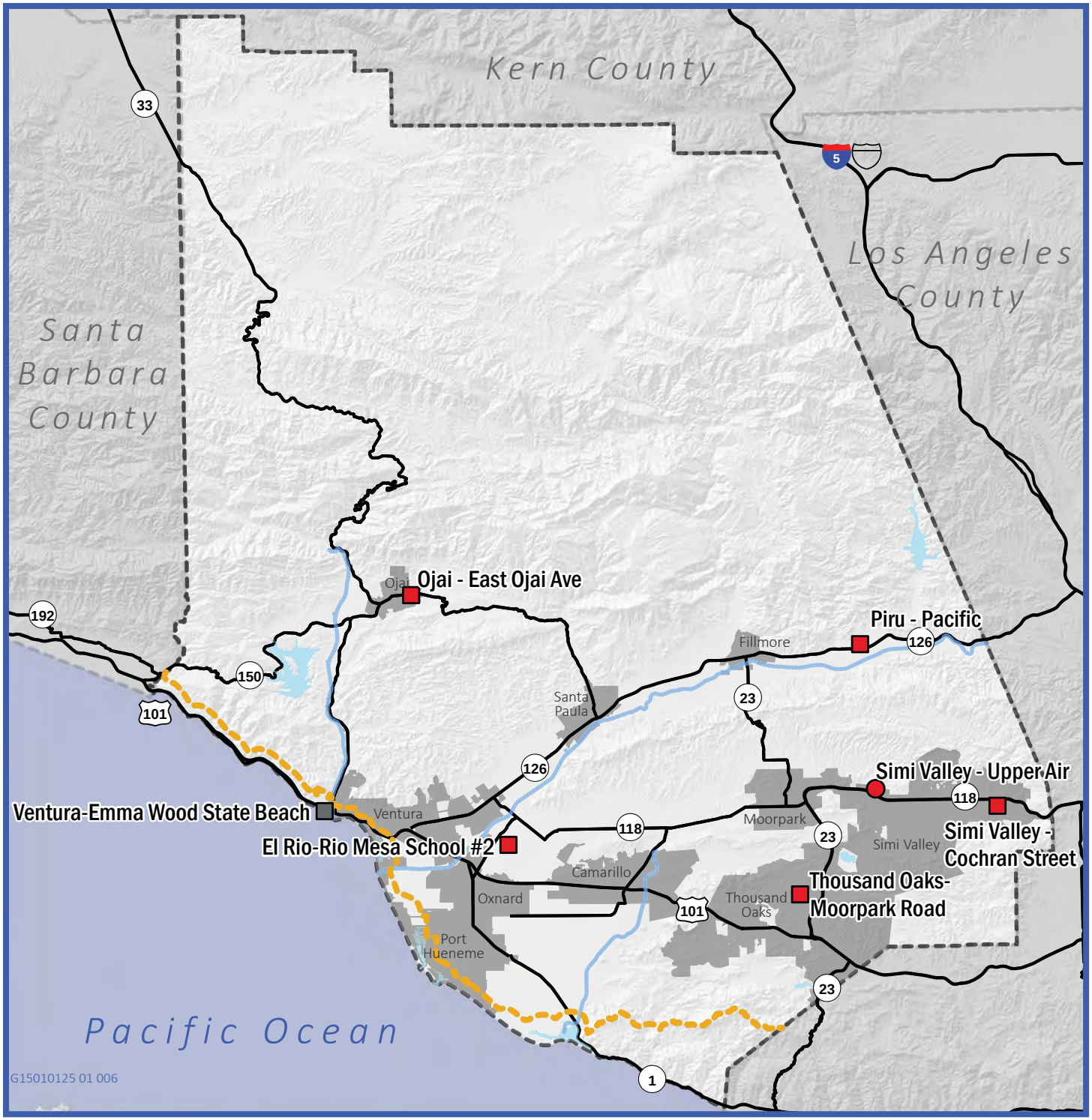
[1] CO data are not collected at any monitoring station in Ventura County.
[2]*Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed March 22, 2016e. Data compiled by Ascent Environmental 2016*

Ozone/Smog

Ozone, a photochemical oxidant and the main constituent of smog, is the most serious and widespread air pollution problem in the country and Ventura County's primary air pollution problem. Ozone is a pungent, colorless, toxic gas formed in the atmosphere through a complex series of chemical reactions and transformations involving reactive organic gases (ROG) and nitrogen oxides (NOx) in the presence of sunlight. These "ozone precursor" pollutants come from a wide variety of sources such as gasoline vapors, fuel combustion, chemical solvents, and household products such as hairsprays, deodorants, and cleaners.

Ozone is hazardous to human health. Ozone damages cells in the lungs, making the passages inflamed and swollen. Ozone also causes shortness of breath, nasal congestion, coughing, eye irritation, sore throat, headache, chest discomfort, breathing pain, throat dryness, wheezing, fatigue, and nausea. It can damage alveoli, the individual air sacs in the lungs where oxygen and carbon dioxide exchange occurs. Ozone also has been associated with a decrease in resistance to infections.

People most affected by ozone include the young, elderly, and athletes. Ozone may pose the worst health threat to people who already suffer from respiratory diseases such as asthma, emphysema, and chronic bronchitis, and those with cardiovascular diseases. It also diminishes the yield and quality of many agricultural crops, reduces atmospheric visibility, degrades soils and materials, and damages native vegetation.



Ventura County 2040 General Plan

Figure 8-2
Air Quality Monitoring Stations

Map Date: June 16, 2016

Source: California Air Resources Board (ARB), 2016d; Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Monitoring Station
Active
- Pollutant Data
- Weather Data

Inactive
- Pollutant Data

Particulate Matter

Particulate matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Dust and other particulates exhibit a range of particle sizes. The size of particles is directly linked to their potential for causing health problems. PM_{10} is made up of dust and particulates that are 10 microns in diameter or smaller. $PM_{2.5}$ is made up of dust and particulates that are 2.5 microns in diameter or smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries, and automobiles react in the air. Fine particulate matter is considered a toxic air contaminant (see below for further discussion), and creates the greatest health problems because it can get deep into lung tissue, and may even get into the bloodstream (EPA 2016b).

As shown in Appendix 8C's Tables 8-14 and 8-16, Ventura County exceeded the CAAQS for PM_{10} 24-hour at the Simi Valley station from 2013 to 2015 and at the El Rio station from 2010 to 2015. Additionally, one exceedance of the NAAQS for $PM_{2.5}$ 24-hour at the Thousand Oaks station occurred in 2012 (see Table 8-12).

Toxic Air Contaminants

Toxic air contaminants (TACs), or hazardous air pollutants (HAPs), are regulated in California primarily through the Tanner Air Toxics Act of 1983 (AB 1807, Chapter 1047, Statutes of 1983), as well as the Air Toxic Hot Spot Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 set forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB identified 23 TACs and adopted EPA's list of HAPs as TACs. CARB added diesel PM ($PM_{2.5}$) to the list of TACs in 1998. Internal combustion engines are the primary source of diesel PM in Ventura County.

The goals of AB 2588 are to collect air toxics emissions data, identify facilities having localized effects, and to ascertain the health risks. TACs may include diesel, formaldehyde, benzene, acetaldehyde, and polycyclic aromatic hydrocarbons. Figure 8-3 shows the locations of the AB 2588-identified facilities, which include gasoline service stations, dry cleaning facilities, County-owned facilities, water treatment plants, and generators. Appendix 8D provides a complete summary of all the AB 2588-identified facilities locations within Ventura County.

Other sources of TACs in California include mobile sources, such as freeways and urban roadways with more than 100,000 vehicles per day, and rural roadways with more than 50,000 vehicles per day. Based on 2014 traffic data, several interstate and route segments located within or adjacent to Ventura County include annual average daily traffic volumes (AADT) in excess of 100,000 vehicles per day on State Route 23, State Route 118, and U.S. Highway 101. There are no segments along State Routes 1, 33, 34, 150, or 232, that exceed an AADT of 50,000 vehicles per day. There are two segments along Route 126 that have an AADT of 50,000. There are no rural roadways in Ventura County with volumes that exceed 50,000 vehicles per day (Caltrans 2016).

Methane

Methane is a VOC and a potent greenhouse gas. It is produced through anaerobic (without oxygen) decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and

distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion (EPA 2016c). It can also from naturally from oil seeps originating from the ocean floor.

Odors

VCAPCD identifies typical land uses that have the potential to result in increases in odorous emissions and provides recommendations for siting new sensitive land uses in close proximity to these land uses. Examples of land uses that have the potential to generate considerable odors include, but are not limited to, wastewater treatment and pumping facilities, landfills, recycling and composting stations, greenwaste processing, food manufacturing and services, refineries, and chemical plants (VCAPCD 2003).

Naturally Occurring Asbestos

Asbestiform minerals (asbestos) occur naturally in rock and soil as the result of natural geologic processes, often in veins near earthquake faults in the coastal ranges and the foothills of the Sierra Nevada Mountains. Naturally occurring asbestos (NOA) is also found in other areas of the country. NOA can take the form of long, thin, separable fibers. Natural weathering or human disturbance can break NOA down to microscopic fibers, easily suspended in air. There is no health threat if asbestos fibers in soil remain undisturbed and do not become airborne. When inhaled, these thin fibers irritate tissues and resist the body's natural defenses. Asbestos, a known carcinogen, causes cancers of the lung and the lining of internal organs, as well as asbestosis and other diseases that inhibit lung function (Van Gosen and Clinkenbeard 2011).

The unincorporated county is not classified as having the potential to contain ultramafic bedrock, which can be associated with certain forms of serpentine rocks near the surface that could contain NOA (California Dept. of Conservation 2010). Ventura County is one of five counties in California with no reported asbestos occurrences, fibrous amphibole occurrences, and (or) ultramafic rock/serpentinite (Van Gosen and Clinkenbeard 2011). Thus, there is no potential for NOA in the unincorporated county.

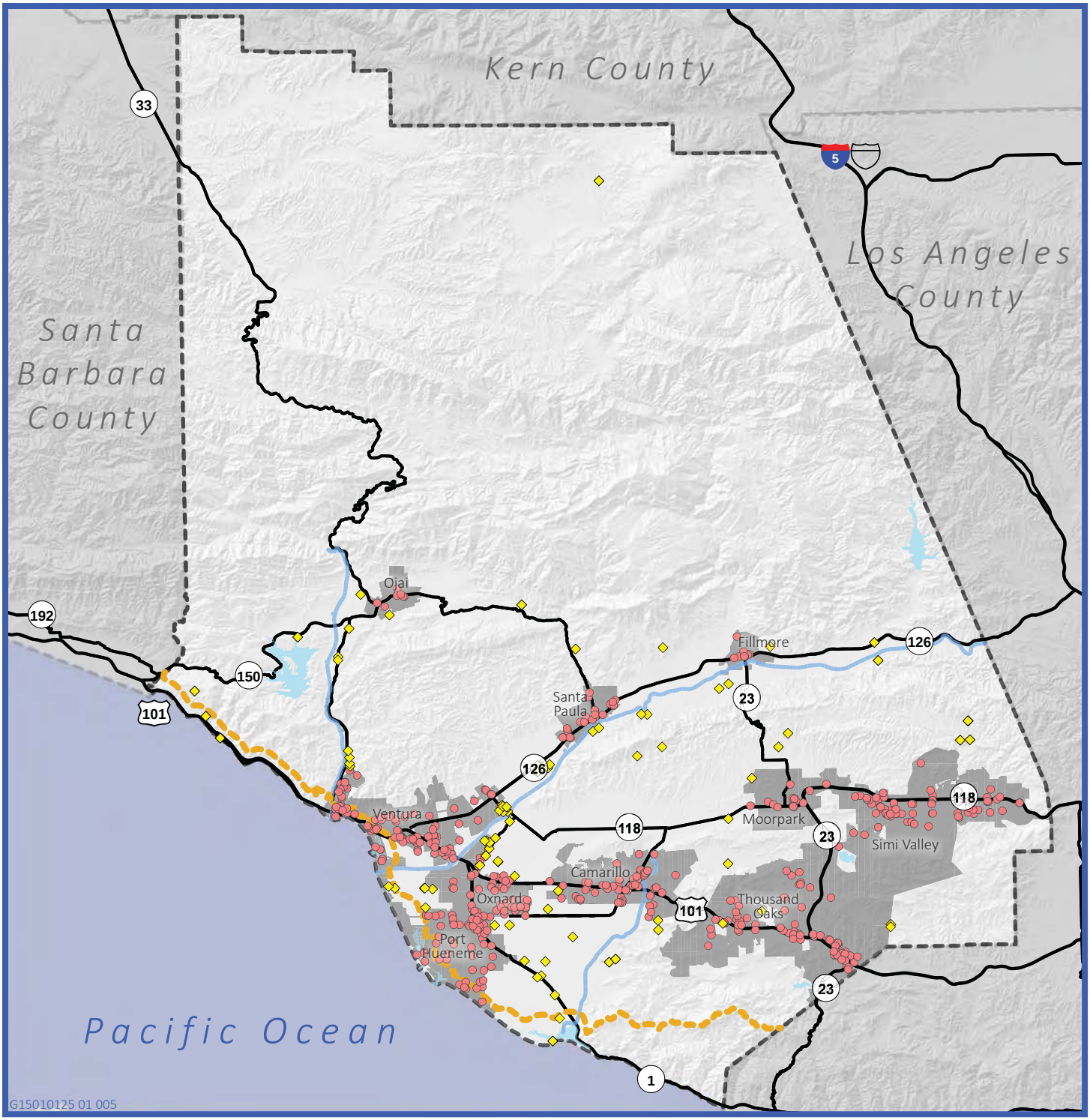


Figure 8-3
Air Toxics 'Hot Spots' in Ventura County for 2014
Map Date: June 15, 2016

Source: California Air Resources Board (ARB), 2016d; Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

AB 2588 Air Toxic Facilities

- Unincorporated Areas
- Incorporated Areas

Regulatory Setting

Air quality within Ventura County is regulated by EPA, CARB, and VCAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, State and local regulations may be more stringent.

Federal

U.S. Environmental Protection Agency

EPA is in charge of implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), enacted in 1970. Congress made the most recent major amendments to the CAA in 1990.

Criteria Air Pollutants

The CAA required EPA to establish the NAAQS. EPA established primary and secondary NAAQS for several different pollutants, expressed in maximum allowable concentrations generally defined in units of parts per million (ppm) or in micrograms per cubic meter ($\mu g/m^3$). The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP).

The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the basin. The Ventura County Air Pollution Control District has an approved SIP.

Toxic Air Contaminants/Hazardous Air Pollutants

Air quality regulations also focus on TACs, which are also referred to as HAPs by Federal agencies. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. (By contrast, for the criteria air pollutants, acceptable levels of exposure are determinable; Table 8-11 shows the established ambient standards). Instead, EPA and, in California, CARB, regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum achievable control technology or best available control technology for toxics to limit emissions. (See the discussion of TACs in the "State" section below for a description of CARB's efforts.) These, in conjunction with additional rules set forth by VCAPCD, described below under "Ventura County Air Pollution Control District," establish the regulatory framework for TACs.

Conformity

Conformity is a federal regulatory process required in nonattainment areas by the CAA Section 176(c) to ensure that federal funding and approvals will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. Section 176(c) prohibits federal agencies, departments, or instrumentalities from engaging in, supporting, providing financial assistance for, licensing, permitting or approving any action which does not conform to an approved state or federal clean air implementation plan. It is called conformity because federal agencies, such as the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Aviation Administration (FAA), must show that their actions "conform with" (i.e., do not undermine or hinder) approved SIPs.

A conformity determination is a formal demonstration that the subject federal action is consistent with the respective SIP. Federal agencies make such demonstrations by performing a conformity analysis of their proposed federal actions. The conformity analysis evaluates and documents project-related air pollutant emissions, local air quality impacts, and the potential need for emissions mitigation.

In 1993, EPA promulgated two sets of conformity regulations to implement Section 176(c): 1) transportation conformity and, 2) general conformity. Transportation conformity is applicable to highway and mass transit projects and to transportation plans, programs, and projects funded under the Federal Highway and Transit Act. General conformity is applicable to other non on-road federal actions and approvals such as, airport expansion projects or new water treatment facilities. The VCAPCD currently has two conformity rules, Rule 221, *Transportation Conformity*; and, Rule 220, *General Conformity*.

Transportation conformity is a CAA and FAST Act (Fixing America's Surface Transportation Act) regulatory process that coordinates air quality planning and transportation planning to help ensure that highway and transit projects will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. Conformity applies to transportation plans, transportation improvement programs, and highway and transit projects funded or approved by the FHWA and FTA. Both the RTP/SCS and FTIP must demonstrate conformity with the clean air plans covering the SCAG region, including Ventura County.

General conformity is a CAA regulatory process that applies to most federal actions other than transportation actions (see transportation conformity). Examples of federal actions subject to general conformity include issuance of Army Corps of Engineers permits, water and wastewater projects funded by EPA, and other federal projects impacting harbors, airports, and reservoirs. Certain federal projects are exempt from general conformity. Those include projects whose air pollutant emissions would be below specified de minimis emission levels (based on the area's nonattainment classifications) and certain projects presumed to conform, such routine maintenance activities, activities at Superfund sites, and activities conducted in response to national emergencies.

State

California Air Resources Board

Criteria Air Pollutants

CARB is responsible for preparing and enforcing the federally-required SIP to achieve and maintain NAAQS, as well as the CAAQS (Table 8-11, *see appendix*). CAAQS for criteria pollutants are equal to or more stringent than the corresponding NAAQS, and include other pollutants for which there are no NAAQS. Air basins are designated as being in nonattainment if the levels of a criteria air pollutant meet the CAAQS or NAAQS for the pollutant, and are designated as being in nonattainment if the concentration of a criteria air pollutant excceds the CAAQS or NAAQS.

CARB is the oversight agency responsible for regulating statewide air quality, but except for mobile sources, consumer products, and pesticides, (for which responsibility rests with CARB), implementation and administration of the CAAQS are delegated to 35 regional air pollution control districts and air quality management districts. These districts have been created for specific air basins, and have principal responsibility for: developing plans for their areas to comply with the NAAQS and CAAQS; developing control measures for non-vehicular sources of air pollution necessary to achieve and maintain NAAQS and CAAQS; implementing permit programs established for the construction, modification, and operation of air pollution sources; enforcing air pollution statutes and regulations governing non-vehicular sources; and developing employer-based trip reduction programs. CARB develops and implements control measaures for mobile sources, fuels, and consumer products. The California Department of Pesticide Regulation implements regulations to minimize air pollutants from agricultural pesticides.

Toxic Air Contaminants/Hazardous Air Pollutants

TACs in California are regulated primarily through the Tanner Air Toxics Act (AB 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB identified more than 21 TACs and adopted EPA's list of HAPs as TACs. CARB added diesel PM to the list of TACs in 1998.

Once a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Air Toxic Hot Spots Information and Assessment Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors and generators). In February 2000, CARB adopted a new public-transit bus fleet rule and emissions standards for new urban buses. These rules and standards included more stringent emission standards for some new urban bus engines, beginning with the 2002 model year; zero-emission-bus demonstration and

purchase requirements for transit agencies; and reporting requirements, under which transit agencies must demonstrate compliance with the public-transit bus fleet rule. Recent milestones included the low-sulfur diesel fuel requirement, and tighter emissions standards for heavy-duty diesel trucks (effective in 2007 and subsequent model years) and off-road diesel equipment (2011) nationwide. Over time, replacing older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) in California have been reduced significantly over the last decade; such emissions will be reduced further through a progression of regulatory measures (e.g., Low Emission Vehicle/ Clean Fuels and Phase II reformulated-gasoline regulations) and control technologies.

With implementation of CARB's risk reduction plan, it is expected that concentrations of diesel PM will be reduced statewide by 85 percent by 2020 from the estimated year-2000 level. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

Recommended Setback Distances from Sources of Air Toxics

CARB research substantiates the health risks to sensitive populations from exposure to high levels of TACs. CARB recommends local jurisdictions adopt land use policies to separate sensitive land uses a minimum of 500 to 1,000 feet from air toxic sources (CARB 2005). CARB's recommendations for siting new sensitive land uses for both mobile and stationary sources of air toxics is presented in Table 8-2 and published in "Air Quality and Land Use Handbook: A Community Health Perspective." The recommended setback distances in Table 8-2 are advisory and should not be interpreted as defined "buffer zones." CARB recognizes the opportunity for more detailed site-specific analyses and that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues (CARB 2005).

TABLE 8-2
RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES

Source Category	Advisory Recommended Setback Distance
Freeways and High-Traffic Roads	500 feet from a freeway or urban road with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	1,000 feet. Avoid location new sensitive land uses near entry and exit points.
Rail Yards	1,000 feet. Within 1 mile, consider siting limitation and mitigation approaches.
Ports	Immediately Downwind. Consult local air district.
Refineries	1,000 feet
Chrome Platers	1,000 feet
Dry Cleaners Using Perchloroethylene	300 to 500 feet
Gasoline Dispensing Facilities	300 feet

Source: California Air Resources Board (CARB). Air Quality and Land Use Handbook: A Community Health Perspective. 2005.

Ventura County Attainment Status

As described above, EPA and CARB adopted NAAQS and CAAQS (see Appendix 8A) to regulate air quality within air basins in the state and nation. Both agencies make determinations about the status of each air basin relative to these standards, known as attainment designations. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassifiable." Nonattainment areas are areas that do not meet air quality standards, whereas attainment areas meet air quality standards. "Unclassifiable" is used in areas that cannot be classified on the basis of available information as meeting or not meeting the NAAQS or CAAQS.

The most current National and California attainment designations for Ventura County are shown in Table 8-3 for each criteria air pollutant. Ventura County is in nonattainment status for Ozone (CAAQS and NAAQS standards) and PM10 (CAAQS standard).

TABLE 8-3
ATTAINMENT STATUS DESIGNATIONS
Ventura County

Pollutant	California Designation	National Designation
Ozone	Nonattainment	Nonattainment (serious)
PM_{10}	Nonattainment	Unclassifiable
$PM_{2.5}$	Attainment	Unclassifiable / Attainment
Carbon Monoxide	Attainment	Unclassifiable/ Attainment
Nitrogen Dioxide	Attainment	Unclassifiable / Attainment
Lead	Attainment	Unclassifiable / Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	Attainment	No National Standard
Hydrogen Sulfide	Unclassifiable	No National Standard
Visibility Reducing Particles	Unclassifiable	No National Standard

[1] Notes: PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less.
Sources: California Air Resources Board (CARB). Area Designation Maps / State and National. http://www.arb.ca.gov/desig/adm/adm.htm#state, Accessed March 22, 2016e. United States Environmental Protection Agency (EPA). Criteria Pollutant Nonattainment Summary Report as of October 1, 2015. https://www3.epa.gov/airquality/greenbook/ancl3.html, Accessed March 22, 2016a.
Data compiled by Ascent Environmental 2016.

Regional

Ventura County Air Pollution Control District

VCAPCD, the local lead air quality regulatory agency for Ventura County, maintains air quality conditions through comprehensive programs of planning, regulation, enforcement, technical innovation, incentive programs and promotion of the understanding of air quality issues.

VCAPCD has primary responsibility for regulating stationary sources, including some area sources, within Ventura County. CARB regulates on-road motor vehicles, some off-road mobile sources, and consumer products, and sets motor vehicle fuel specifications in California. EPA regulates emissions from locomotives, aircraft, heavy-duty trucks used in interstate commerce, and some off-road engines

exempt from state authority or best regulated at the national level. State and federal laws prohibit local air districts from regulating mobile sources.

The 2016 Ventura County Air Quality Management Plan (AQMP), adopted by the Ventura County Air Pollution Control Board on February 14, 2017, presents Ventura County's strategy for attaining the federal 8-hour ozone standard as required by the CAAA of 1990.

VCAPD also inspects stationary sources to ensure they abide by permit requirements and applicable rules, responds to citizen complaints, monitors local ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and the CCAA.

Criteria Air Pollutants

VCAPCD implements emissions rules and regultions to improve air quality in Ventura County. Examples of such rules and regulations are listed below:

- **Regulation II: Permits.** Specifies the air permit requirements for stationary sources of air pollutant emissions subject to VCAPCD permit authority. Examples of such pertinent rules included under this regulation are listed below:
    - **Rule 10 Permits Required.** Specifies the general air permit requirements for new and modified stationary sources of air pollutants.
    - **Rule 17 Disclosure of Air Toxics Information.** Lists the requirements and exemptions to the Air Toxics "Hot Spots" Information and Assessment Act.
    - **Rule 26 New Source Review.** Specifies the New Source Review provisions that are applicable to new, replacement, modified or relocated emissions units in Ventura County. Contains requirements for Emission Banking (Rule 26.4), Community Bank (26.5), and Power Plants (26.9). Also, it implements Federal major modifications (Rules 26.12) and Prevention of Significant Deterioration (Rule 26.13) requirements.
    - **Rule 36 New Source Review – Hazardous Pollutants.** Specifies requirements for construction or reconstruction of a major source of HAPs.
- **Regulation IV: Prohibitions.** Provides general and source-specific regulations. Examples of pertinent rules included under this regulation are listed below:
    - **Rule 51 Nuisance.** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. This rule covers the emission of odors.
    - **Rule 52 Particulate Matter – Concentration.** Sets limits for discharging particulate matter based on concentration.
    - **Rule 53 Particulate Matter – Process Weight.** Sets limits for discharging particulate matter based on process weight.
    - **Rule 55 Fugitive Dust.** The provisions of this rule shall apply to any operation, disturbed surface area, or man-made condition capable of generating fugitive dust, including bulk

material handling, earth-moving, construction, demolition, storage piles, unpaved roads, track-out, or off-field agricultural operations. Two sub-rules cover specific regulations pertaining to paved roads and public unpaved roads (Rule 55.1) and street-sweeping equipment (Rule 55.2).

- **Rule 56 Open Burning.** Specifies the requirements for open burning, including when open burning is allowed, the permissible purposes for open burning, and details regarding the approved process for burning materials.
- **Rule 62 Hazardous Materials and Airborne Toxics.** Details provisions applying to the discharge of any hazardous material or airborne toxic from any affected source.
- **Rule 71 Crude Oil and Reactive Organic Compound Liquids**. Establishes standards for oil production and processing facilities. These are five rules, including those pertaining to crude oil production and separation (Rule 71.1), storage (Rule 71.2), and Transfer (Rule 71.3) or reactive organic compound liquids.
- **Rule 72 New Source Performance Standards.** Establishes emission and/or performance standards for new plants and other sources. The rules are incorporated by reference to the provisions of Part 60, Chapter 1, Title 40, of the Code of Federal Regulations.
- **Rule 73 National Emission Standards for Hazardous Air Pollutants (NESHAPS).** Establishes emission and/or performance standards for sources of HAPs. The rules are incorporated by reference to the provisions of Part 61, Chapter 1, Title 40, of the Code of Federal Regulations.
- **Rule 74 Specific Source Standards.** Establishes standards for specific sources of pollution. There are thirty-three rules, including those pertaining to architectural coatings (Rule 74.2), cutback asphalt (Rule 74.4), fugitive emissions of ROCs at petroleum refineries and chemical plants (Rule 74.7), oilfield drilling operations (74.16), and wood product coatings (Rule 74.30).

Toxic Air Contaminants/Hazardous Air Pollutants

At the regional or local level, air pollution control or management districts may adopt and enforce CARB's control measures. VCAPCD Regulation 4, Rule 62 ("Hazardous Materials and Airborne Toxics") details provisions applying to the discharge of any hazardous material or airborne toxic from any affected source. Regulation 4, Rule 73 ("National Emission Standards for Hazardous Air Pollutants") sets emission and/or performance standards for hazardous pollutants. Sources of fugitive dust are regulated under VCAPCD Regulation 4, Rule 55 ("Fugitive Dust") (VCAPCD 2016).

Odors

VCAPCD developed Rule 51 ("Nuisance") to place general limitations on "...such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property" (VCAPCD 2016).

The VCAPCD Air Quality Assessment Guidelines include guidance on identifying and mitigating potential odor impacts that could result from siting a new odor source near sensitive receptors, or siting a new sensitive receptor near an existing odor source. Examples of land uses that have the potential to generate considerable odors include, but are not limited to, wastewater treatment and pumping facilities,

landfills, recycling and composting stations, food manufacturing and services, refineries, and chemical plants (VCAPCD 2003).

Ventura County 2016 Air Quality Management Plan

The 2016 Air Quality Management Plan (AQMP) presents Ventura County's:

1) strategy to attain the 2008 federal 8-hour ozone standard;

2) attainment demonstration for the 2008 federal 8-hour ozone standard;

3) reasonable further progress demonstration for the 2008 federal 8-hour ozone standard; and

4) transportation emissions budget to ensure consistency with the federal transportation conformity rule (as explained below in the Regulatory Setting section).

Building on previous Ventura County AQMPs, the 2016 AQMP control strategy consists of a local component implemented by the VCAPCD and a combined state and federal component implemented by the CARB and U.S. EPA. The local strategy includes emission control measures carried forward from previous Ventura County clean air plans plus new and further study emission control measures. It also includes a transportation conformity budget that sets the maximum amount of on-road motor vehicle emissions produced while continuing to demonstrate progress towards attainment.[1]

The new control measures are proposed new rules and revisions to existing VCAPCD rules that District staff has found practicable for Ventura County. The further study measures are proposals that may help Ventura County achieve the federal and state ozone standards but need additional air quality, feasibility, and environmental scrutiny before VCAPCD staff can recommend them for adoption as District rules. They will become District rules and be implemented only if the District's governing board finds them to be practicable and appropriate for Ventura County. Both the new control measures and those further study measures recommended for adoption by VCAPCD staff will also serve to meet the "every feasible measure" requirement of the California Clean Air Act.

Several of the local control measures from the 2007 AQMP are not in the 2016 AQMP. In each case, VCAPCD staff determined that the measure is either obsolete or infeasible for Ventura County based on technological or economic considerations. However, no control measures from previous AQMPs would be deleted from the 2016 AQMP that would slow the county's progress towards attaining either the 2008 federal 8-hour ozone standard or the state ozone standards.

The 2016 AQMP includes a new transportation conformity budget for Ventura County. Transportation Conformity is a federal CAA regulatory process that coordinates air quality planning and transportation planning to help ensure that highway and transit projects will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS.

The 2016 AQMP contains an attainment demonstration (photochemical modeling and weight of evidence analyses) showing that Ventura County will attain the federal 2008 8-hour ozone by, July 20, 2020, the

[1] The 2016 AQMP is available on VCAPCD's website at http://www.vcapcd.org/AQMP-2016.htm.

attainment date for serious ozone nonattainment areas under the 2008 fedeal ozone standard. Ventura County met the 1997 federal 8-hour ozone standard in 2012. However, the US EPA promulgated stricter ozone standards in 2008 and 2015 so Ventura County remains a serious Federal nonattainment area for ozone.

Ventura County's strategy for attaining the 2008 federal 8-hour ozone standard also relies on CARB's 2007 State Implementation Plan. The 2007 State Strategy, adopted by CARB on September 27, 2007, is a comprehensive and far-reaching set of emission reduction programs that focuses on reducing emissions from mobile sources, consumer products, and pesticides to significantly improve air quality throughout California and meet federal clean air standards for ozone and fine particulate matter (PM2.5).[2]

The most recent 2015 Triennial Assessment shows that Ventura County is still making significant progress towards meeting the CAAQS for ozone. Furthermore, the 2015 Triennial Assessment did not identify any deficiencies regarding meeting progress goals towards the state one-hour ozone standard. The "every feasible measure" analysis conducted for the 2015 Triennial Assessment did, however, identify three existing VCAPCD rules with potential for enhancement. It also identified one possible new control measure that would help Ventura County continue its progress towards attaining the CAAQS for ozone. This prospective new rule would reduce NO_x emissions from miscellaneous sources based on the South Coast Air Quality Management District Rule 1147 and Rule 1153.1. The purpose of this rule would be to reduce NO_x emissions from a variety of sources not currently regulated. It would require equipment with rated heat input of one million British Thermal Units per hour (MMBtu/hr) or greater to meet NO_x emissions limits in the range of 30 ppm to 60 ppm depending upon the process and process temperature.

Ventura County remains in attainment of the CAAQS for CO, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) (VCAPCD 2015).

VCAPCD Air Quality Assessment Guidelines

The Ventura County Air Quality Assessment Guidelines (Guidelines) is an advisory document that provides lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality evaluations for environmental documents. The Guidelines, first adopted by the Ventura County Air Pollution Control Board in 1989 and last revised in 2003, are used by most jurisdictions in Ventura County.

Central to the Guidelines are specific air emissions significance criteria for determining whether a proposed development project would have a significant adverse impact on air quality. The Guidelines also provide mitigation measures that may be useful for mitigating the air quality impacts of proposed projects. It should be noted, however, that these are guidelines only, and their use is not required or mandated by the VCAPCD. The final decision of whether to use these Guidelines rests with the lead agency responsible for approving the project (VCAPCD 2003). The cities of Ventura, Oxnard, Ojai, Santa Paula, Fillmore, Thousand Oaks, Moorpark, and Camarillo use the VCAPCD Guidelines when assessing air quality impacts under CEQA. Table 8-4 outlines the recommend significance criteria outlined in the Guidelines.

[2] http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm#state.

TABLE 8-4
VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT RECOMMENDED SIGNIFICANCE CRITERIA[1]

Pollutant	Recommended Significance Criteria
Ozone	**Ojai Planning Area[2]** • ROG: 5 lb/day • NO_X: 5 lb/day **Remainder of Ventura County[3]** • ROG: 25 lb/day • NO_X: 25 lb/day
Ozone (Cumulative Impacts)	**Project-Specific Air Quality Management Plan (AQMP) Consistency:** A project with emissions of two pounds per day or greater of ROG, or two pounds per day or greater of NO_x that is found to be inconsistent with the AQMP will have a significant cumulative adverse air quality impact. A project with emissions below two pounds per day of ROG, and below two pounds per day of NO_x, is not required to assess consistency with the AQMP. **General Plan AQMP Consistency:** Any General Plan Amendment or revision that would provide directly or indirectly for increased population growth above that forecasted in the most recently adopted AQMP will have a significant cumulative adverse air quality impact.
Fugitive Dust	a) A project that may be reasonably expected to generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property (see California Health and Safety Code, Division 26, §41700) will have a significant adverse air quality impact. b) A project for which an appropriate air dispersion modeling analysis shows a possible violation of an ambient particulate standard will have a significant adverse air quality impact.
Toxic Air Contaminants	Impacts from TACs may be estimated by conducting a health risk assessment (HRA). The HRA procedure involves the use of an air quality model and a protocol approved by the APCD. Following are the recommended significance criteria: a) The increase in lifetime probability of contracting cancer is greater than 10 in one million (as identified in an HRA). b) The increase in ground-level concentrations of non-carcinogenic toxic air pollutants would result in a Hazard Index of greater than 1 (as identified in an HRA).
Odors	A qualitative assessment indicating that a project may reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to

TABLE 8-4 VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT RECOMMENDED SIGNIFICANCE CRITERIA[1]	
Pollutant	**Recommended Significance Criteria**
	business or property (see California Health and Safety Code, Division 26, §41700) will have a significant adverse air quality impact.

[1] Notes: CO = carbon monoxide; lb/day = pounds per day; NO_x = nitrogen oxides; ROG = reactive organic gases; ROC = reactive organic compounds; SO_x = sulfur oxides; TAC = toxic air contaminants; TOG = total organic gases.
[2] The Ojai Planning Area is the area defined as the "Ojai Valley" in Ventura County Non-Coastal Zoning Ordinance, Article 12, Section 8112-2, plus the Ventura (Ojai) Non-growth Area (NGA) (as depicted in the 1987 Ventura County Air Quality Management Plan (AQMP), Appendix E-87, Figure E-1, "Map of Ventura County with Growth/Nongrowth Areas," page E-11). In the Guidelines, see Figure 3-1, "Ojai Planning Area." These thresholds are set in compliance with the Ojai Valley Area Plan Policy 1.1.2-1 (Ventura 2015).
[3] The City of Simi Valley uses a significance threshold of 13.7 tons per year of reactive organic compounds or nitrogen oxides, as directed by the City of Simi Valley City Council.
Sources: Ventura County Air Pollution Control District (VCAPCD). Ventura County Air Quality Assessment Guidelines. October 2003. Ventura, County of (Ventura). Ojai Valley Area Plan. March 2015. Data compiled by Ascent Environmental 2016.

Local

2005 Ventura County General Plan

The General Plan covers air quality in Chapter 1, Resources. Section 1.2 includes goals, policies, and programs related to air quality. The following Area Plans also contain applicable goals and policies related to air quality:

- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for air quality. These can be found in Section 1. Air Quality.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates air quality through Article 12: Limitations on Issuance of Building Permits in the Ojai Valley to Protect Air Quality.

Key Terms

The following key terms used in this chapter are defined as follows:

Ambient Air Quality Standards. Maximum acceptable average concentrations of air pollutants during a specified period of time, calculated as described in the regulations specifying the standard.

Area-wide Source. Pollution where the emissions are spread over a wide area, such as consumer product use; fireplaces and wood stoves; natural gas-fueled space heaters and water heaters; road dust; landscape maintenance equipment; architectural coatings; solvents; and farming operations. Area-wide sources do not include mobile sources or stationary sources.

Mobile Source. On-road or off-road vehicles, boats, airplanes, lawn equipment and small utility engines.

Nonattainment Area. An area or air basin that does not meet California or National ambient air quality standards for a given pollutant.

Oxides of Nitrogen (NOx). A general term pertaining to compound of nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects.

Ozone. A strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy and ozone precursors such as hydrocarbons and oxides of nitrogen. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). Ozone in the troposphere causes numerous adverse health effects and is a criteria air pollutant. It is a major component of smog.

Ozone Precursors. Chemicals such a non-methane hydrocarbons and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, a major component of smog.

Particulate Matter (PM). Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.

Respirable Particulate Matter (PM_{10}). Dust and particulates that are 10 microns in diameter or smaller. PM_{10} is also referred to as respirable particulate matter.

Fine Particulate Matter ($PM_{2.5}$). Dust and particulates that are 2.5 microns in diameter or smaller. $PM_{2.5}$ is also referred to as fine particulate matter.

Reactive Organic Gas (ROG). A photochemically reactive chemical gas, composed on non-methane hydrocarbons that may contribute to the formation of smog.

Sensitive Receptors. Populations or uses that are more susceptible to the effects of air pollution than the general population, such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Stationary Source. A non-mobile source of air pollution such as a power plant, refinery, distribution center, chrome plating facility, dry cleaner, port, rail yard, or manufacturing facility.

Transportation Control Measures (TCM). As defined by Section 108(f)(1) of the Federal Clean Air Act (CAA), TCMs are strategies that reduce motor vehicle emissions by reducing vehicle trips, vehicle use, vehicle miles traveled (VMT), vehicle idling, and traffic congestion. The CAA requires TCMs, to meet progress milestones and demonstrate attainment of national air quality standards. Measures can include improved public transit, traffic flow improvements and high-occupancy vehicle lanes, shared ride services, pedestrian/bicycle facilities, and flexible work schedules.

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SECTION 8.2 BIOLOGICAL RESOURCES

Introduction

This section describes the existing conditions associated with biological resources within Ventura County, including vegetation and habitats, special-status species, and landscape-scale habitat linkages and wildlife corridors that ensure adequate habitat connectivity. The coastal location and varied topography of Ventura County provides the conditions for a rich and diverse ecosystem that includes nearshore marine, freshwater aquatic, and terrestrial habitats. Ventura County contains a range of elevations and habitats extending from beach and marshes, through chaparral and oak woodland, along riparian corridors of major rivers and tributaries, through agricultural and developed landscape, and into mountain ranges that support pinyon-juniper woodland. In turn, the diversity of habitats supports a diversity of plant and animal species, including special-status species (rare plants and animals that require special consideration and/or protection under state or federal law).

Major Findings

- Ventura County is home to unique and sensitive biological resources, including rare plant and animal species, coastal wetlands, extensive chaparral habitat, and riverine systems maintained mostly in a natural state.
- As of November 2016, there are 417 special-status plant and animal species known to occur in Ventura County, including species tracked by the California Department of Fish and Wildlife (CDFW) in their California Natural Diversity Data Base and those species that are on the Locally Important Plant and Wildlife Species lists maintained by Ventura County. As of November 8, 2016, 34 and 22 species in Ventura County are listed, proposed for listing, or candidates for listing by the federal government and State, respectively.
- Most of the northern half of Ventura County is within the boundary of the Los Padres National Forest. This is where the north-south trending Coastal Range transitions into the east-west Transverse Range. The Los Padres National Forest contains the majority of the Transverse Range in the county. These national forest lands contribute to habitat diversity and connectivity in the northwestern part of the county.
- The majority of development, both urban and agriculture, has occurred in the southern half of the county and in the lower elevations, and approximately nine percent of the county (which includes the unincorporated area and incorporated cities) is classified as developed.
- Three major riverine systems extend from the mountains to the ocean in the county: the Ventura River (watershed area is 227 square miles), the Santa Clara River, (watershed area is 1,634 square miles), and Calleguas Creek (watershed area is 343 square miles), and are habitat to many special-status species. Small portions of the Ventura River watershed occur in Santa Barbara County and small portions of the Santa Clara River and Calleguas Creek watersheds occur in Los Angeles County, however, the majority of these watersheds occur in Ventura County.
- Ventura County has one of the few major coastal to inland habitat connections remaining in the South Coast Ecoregion. It stretches from the Santa Monica Mountains at the coast to the Santa Susana Mountains and the Sierra Madre Ranges of the Los Padres National Forest. This important network of habitat linkages has been identified as the Santa Monica-Sierra Madre

Connection by South Coast Wildlands, as part of the South Coast Missing Linkages Project (SCMLP). South Coast Wildlands is a non-profit organization that works to ensure functional habitat connectivity across diverse wildland networks. They work with conservation biologists, ecologists, wildlife agencies, land managers and planners, and other conservation organizations to develop and implement regional conservation strategies.

- Ventura County also recognizes the three major river systems as landscape scale linkages because they provide contiguous habitat that facilitates wildlife movement through large regional areas. Within Ventura County, State Routes 126, 23, and 118 represent substantial barriers to wildlife migration.

Existing Conditions

The topography of Ventura County varies from coastal marsh at the Pacific Ocean to the mountains of the western Transverse Ranges in the north. Elevations range from sea level in the southern coastal zone of the county to 8,830 feet on Mount Pinos in the north. The mean annual precipitation varies from 15 to 35 inches, and the mean annual temperature is 61 degrees Fahrenheit.

The diversity of topography and climate in Ventura County has resulted in a range of vegetation communities, as described below. The diversity in vegetation supports a diversity of wildlife, including rodents, insectivores, hares, fox, coyotes, raptors (such as hawks, falcon, owls, and eagles) and numerous perching birds, from hummingbirds to ravens. The upland plant communities, such as the oak woodlands, pinyon-juniper, and mixed-conifer, provide habitats for larger animals as well, and include populations of bobcat and mountain lion, mule deer, and black bear, in addition to a game population of quail, rabbit, tree squirrel, band-tailed pigeon, dove, and turkey. Reptiles are commonly found throughout the county.

Vegetation Communities and Land Cover Types

The diverse climate and topography in Ventura County support a wide range of plant communities. Native vegetation in Ventura County can be categorized into eight general plant communities as defined in the Natural Communities List, which is California's expression of the National Vegetation Classification: chaparral, sage scrub, coastal salt marsh, coastal strand, grasslands, forest, woodland, and riparian. In addition, a significant portion of land in the county is developed or cultivated (agriculture). Many subgroups or localized distinct groups can be discerned within these broader vegetation communities. The major vegetation communities and other land cover types present in the unincorporated county are summarized in Table 8-5 and Figure 8-4.

Some vegetation communities are considered special-status based on Conservation Status Rankings developed by NatureServe's Natural Heritage Network and the CDFW. One purpose of the vegetation community classification is to assist in determining the level of rarity and imperilment of these communities at a state, national, and global level. Ranking provides their degree of imperilment (as measured by rarity, trends, and threats) and each is given a G (global) and S (state) rank. Ranks of G1-G3 and S1-S3 are considered rare or sensitive for the purposes of impact assessment under CEQA.

TABLE 8-5
VEGETATION COMMUNITIES
Ventura County
2008

Vegetation Community	Approximate Acres
Chaparral	318,529
Coastal salt marsh	1,567
Coastal strand	398
Agriculture	118,834
Annual grassland/upland herbaceous	46,077
Perennial grassland	10,756
Evergreen forest	66,544
Pinyon-juniper woodland	154,005
Valley and foothill woodland	108,038
Sage scrub	197,504
Riparian	17,660
Streambed	4,984
Open water/wetland	5,944
Rock/sand	12,283
Developed areas	110,379
Total Land Acreage	**1,269,502**

Source: Ventura County GIS Data, 2008.

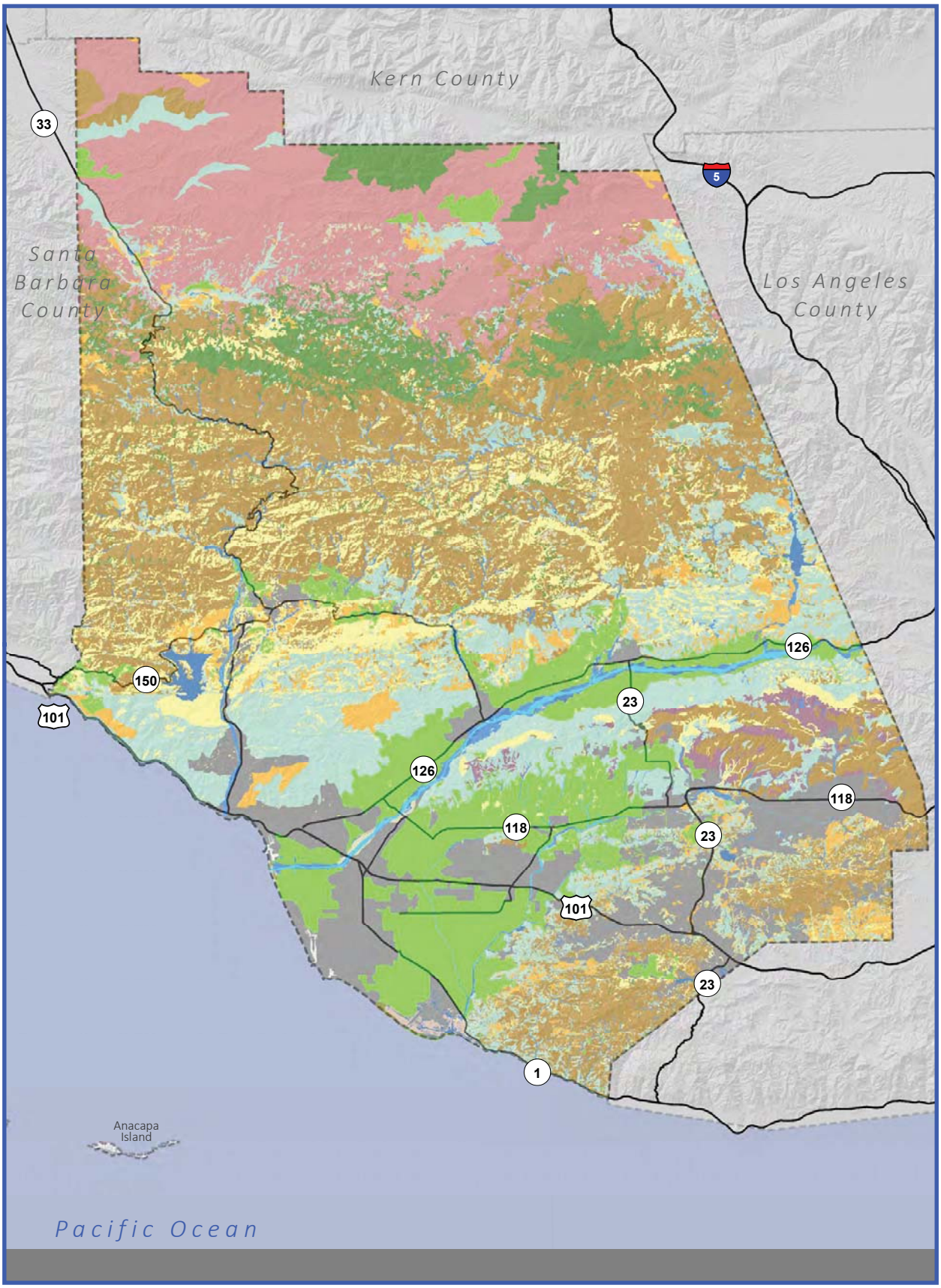


Figure 8-4
Vegetation Communities

Map Date: July 21, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Vegetation Communities

- Agriculture
- Chaparral
- Coastal Salt Marsh
- Coastal Strand
- Developed
- Evergreen Forest
- Native Perennial Grassland
- Pinyon Juniper Woodland
- Riparian
- Rock/Sand
- Sage Scrub
- Streambed
- Upland Herbaceous
- Valley Foothill Woodland
- Water/Wetland

FIGURE 8-4
VEGETATION COMMUNITIES AND LAND COVER
BACK OF FIGURE

Upland Habitats

Chaparral and sage scrub are the most commonly occurring upland vegetation in Ventura County. The second most common is woodland habitat including Pinyon-juniper and valley and foothill woodland. Grasslands, both native and non-native also occur throughout the county and often as an understory below woodland communities. Evergreen forest generally includes mixed conifers and occurs in the mountains in the northern half of the county.

The northern half of the county encompasses the transition from the northwest trending coastal mountain ranges to the east-west trending Transverse Ranges of southern California. Dominant plant communities of these mountain ranges include scrub oak, mixed chaparral, coast live oak, and coastal sage scrub at lower elevations; small areas of big-cone Douglas fir and canyon live oak on north-facing slopes and in canyons; and mixed conifer and Ponderosa pine at higher elevations. The three highest peaks in these mountains are Mount Pinos (8,831 feet), Frazier Mountain (8,017 feet), and Reyes Peak (7,525 feet). The Los Padres National Forest encompasses the majority (90 percent) of these habitats in the northern half of the county. Most native vegetation in the National Forest has been relatively well preserved as a result of the low level of development in this area. Development in the Lockwood Valley area (a private in-holding in the National Forest) has impacted the pinyon-juniper community; however, the higher elevations surrounding the valley contain nearly undisturbed stands of oak and mixed conifer vegetation.

In the southern half of the county, a large portion of the native vegetation has been displaced as a result of urban and agricultural development. For the most part, this development is confined to the fertile valleys and plains formed by the Ventura River, Santa Clara River, and Calleguas Creek, and along the coastline. The more difficult-to-develop mountainous areas in the southern half, such as Rincon Mountain, Red Mountain, South Mountain, Sulphur Mountain, Santa Susana Mountain, Simi Hills, and the Santa Monica Mountains still support some measure of native plant communities. However, development (including large lot subdivisions, rural development, and expansion of orchards) continues to fragment these habitats and threaten the viability of native plant communities.

Chaparral is the most common plant community found in the mountains of Ventura County. It can be divided into the lower chaparral (from about 1,000-5,000 feet) and the upper chaparral (above 5,000 feet) and occurs on very steep, dry slopes where most other plants cannot grow. This community consists of densely growing evergreen scrub oak and other drought-resistant woody shrubs, such as ceanothus, chamise, redshanks, coffeeberry, laurel sumac, manzanita, and toyon. Large expanses of chaparral are found in the Santa Monica Mountains, including protected areas within the Santa Monica Mountains National Recreation Area. However, in unprotected areas, chaparral is threatened by rural development and brush clearing for fire protection. Chaparral is a fire-adapted plant community, and many plant species that are found in chaparral require fire for regeneration.

The coastal sage-scrub community is found on dry slopes, usually near the coast below 3,000 feet. It is composed of low-growing, aromatic, and drought-deciduous shrubs, such as California sagebrush, black sage, purple sage, white sage, California buckwheat, coast brittle-bush, and golden yarrow, mixed with larger shrubs, such as toyon and lemonade berry, and herbaceous plants, grasses, and in some places, cacti and succulents. The drought-deciduous leaves of most plants within this community are softer than the waxy, tough leaves of chaparral plants. Substantial areas of this community remain on South Mountain, in the Santa Paula area, and in the Simi Hills and Santa Susana Knolls areas; however, these areas are increasingly impacted by encroaching development.

Oak woodlands occur on foothills and in valleys throughout Ventura County. A study completed in 2007 to support the development of an Oak Woodland Management Plan for Ventura County (July 2007), identified 77,000 acres of oak woodlands in the county. Roughly half of this total lies within the Los Padres National Forest and the remaining acreage is privately owned. These communities are typically dominated by coast live oak (*Quercus agrifolia*), the predominant oak type in Ventura County, valley oak (*Quercus lobata*), black oak (*Quercus kelloggii*), or canyon live oak (*Quercus chrysolepis*). Oak savannas occur where oaks are more spread apart with extensive grassland in the understory. Oak woodlands correlate with both the Ventura River and Santa Clara River watersheds and important wildlife corridors, as they are a good source of food and shelter, and the understory is less dense than neighboring chaparral communities. The study also revealed that the majority of the oak woodlands in the county are in moderate to dense stands and only one percent of the total oak woodland acreage contains small trees, indicating a potential problem with oak regeneration and recruitment.

Annual grassland habitat occurs in open fields and rolling hills and as an understory below woodlands. It is dominated by non-native grasses with scattered native and non-native forbs. Common species include wild oats (*Avena spp*.), ripgut brome (*Bromus diandrus*) and Italian ryegrass (*Festuca perennis*). Patches of California native grassland are interspersed in the annual grassland, and include native perennial bunch grasses such as purple and foothill needlegrass. Pockets of native grasses remain in the La Jolla Valley in Point Mugu State Park in the Santa Monica Mountains.

Coastal Habitats

Ventura County occupies 42 miles of coastline (Ventura County Assessor's Office 2016). Coastal habitats in the county are categorized into coastal salt marsh and coastal strand habitat (sandy beach and dune habitat above the high tide line) in the County's GIS data. In addition, the County retains land use authority in certain areas up to the mean high tide line which also can encompass other nearshore habitat such as rocky intertidal zones and eelgrass beds. There are approximately 1,567 acres of coastal salt marsh in the county. Coastal salt marshes develop along the intertidal shores of bays and estuaries. Cordgrass (*Spartina foliosa*), occurs in the intertidal zone, characterized by lower salinity and periodic exposure to the air. Towards shore where conditions are drier, pickleweed species belonging to the genus *Salicornia* are common.

The coastal marsh area within the county with the richest biological diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations that once inhabited preexisting lagoons and extensive coastal habitat from the Ventura River to the Santa Monica Mountains. Other remaining coastal wetlands include the McGrath Lake (a natural fresh water lake formed by the dune system) and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers which are identified as important habitat for several bird species.

The coastal strand vegetation community extends from the high tide zone inward in a narrow band. Many of the plants in this community have adapted to shifting sands, with stems that lay prostrate over the sand, or leaves that curve downward and lay flat along the sand. Characteristic plants include sand verbena (*Abronia maritima*), silver beachweed (*Ambrosia chamissonis*), saltbush (*Atriplex* sp.), beach morning glory (*Calystegia soldanella*) and the non-native iceplant (*Mesembryanthemum* sp.). Coastal strand habitat provides a rich diversity of invertebrate species that serve as a food sources for a large number of shorebird species. Locally, coastal strand habitat also offers habitat for grunion spawning. Rocky intertidal habitat and eelgrass beds provide shelter, foraging, and breeding habitat for thousands of invertebrates and fish that serve as the base of the food web for marine mammals and birds.

Coastal habitats, particularly coastal wetlands, are significant biological resources that are threatened by competing land uses. The objectives and policies of the County's Coastal Area Plan require enhanced protection for Environmentally Sensitive Habitat Areas (ESHA). ESHA includes habitats that are either rare or especially valuable because of their special role in an ecosystem which could be easily disturbed or degraded by human activities or development. ESHA include, but are not limited to habitats such as coastal dunes, wetlands, creek corridors; habitats that are utilized during a critical life stage of a protected species (e.g., nesting or roosting areas); and identified habitats that serve as important species movement corridors between large protected areas (Ventura County Coastal Area Plan). Coastal habitat in Ventura County supports several special-status species such as tidewater goby, California least tern, and western snowy plover.

River Systems

Three major river systems flow through Ventura County to the Pacific Ocean. These river systems provide important riparian habitats, including mulefat scrub and southern willow scrub in areas that are frequently flooded, and riparian forests of willow, cottonwood, sycamore, alder, and coastal live oak along permanent streams that are less frequently or intensely flooded. Many tributaries to these rivers contain flowing water only seasonally or only after storm events, but nevertheless, these intermittent and ephemeral streams can provide habitat and seasonal water sources for special-status plants and animals, and serve as important wildlife corridors. A portion of the Malibu Creek watershed, which supports a population of southern steelhead, is also within Ventura County. Approximately 17,660 acres of riparian habitat occur within Ventura County. In addition to providing habitat for a variety of wildlife, riparian vegetation also provides riverbank protection, erosion control and improved water quality, and shading/cooling of river water.

The Ventura River begins at the confluence of Matilija Creek and North Fork Matilija Creek, 16 miles upstream from the Pacific Ocean in the Topa Topa Mountains just north of the Ojai Valley. San Antonio Creek and Coyote Creek join the Ventura River approximately halfway between the headwaters and the ocean. The Ventura River provides habitat for several special-status wildlife species, including, southern steelhead, least Bell's vireo, and California red-legged frog in the watershed, as well as western snowy plover, brown pelican, California least tern, and tidewater goby at the mouth of the river.

The Santa Clara River bisects the southern half of the county, starting on the north slope of the San Gabriel Mountains in Los Angeles County and flowing west along the north side of the Santa Susana Mountains and out to the Oxnard Plain where it meets the Pacific Ocean between the cities of Ventura and Oxnard. The Santa Clara River is a natural river and none of it is concrete-lined. Its waters support the majority of the county's agriculture from the river valley north of the Santa Susana Mountains to the Oxnard Plain. The endangered southern steelhead trout and locally important Pacific lamprey, both anadromous fish, use this river and its tributaries for spawning habitat; however, connectivity issues greatly impede spawning and migration through many sections. This is the largest river system in the county, and provides habitat for the unarmored three-spine stickleback, southwestern pond turtle, and least Bell's vireo.

Both the Ventura and Santa Clara River watersheds are important for the recovery of southern steelhead and are identified for priority recovery actions in the Recovery Plan for the species (NMFS 2012). Calleguas Creek flows through the southeast corner of the county from the Santa Susana Pass on the eastern county boundary southwest through Camarillo to the west side of the Santa Monica Mountains and out to the Mugu Lagoon on the Pacific Ocean. Calleguas Creek once flowed only seasonally from its headwaters near the City of Simi Valley onto the Oxnard Plain, but now flows perennially with input

from wastewater treatment plants, secondary surface flows originating from rising groundwater, agricultural and urban runoff, and periodic stormwater flows. Tributaries include Arroyo Simi in Simi Valley, Conejo Creek in Camarillo, and the Revlon Slough in the Oxnard Plain. This watershed provides habitat for more than 30 special status species, and is an important source of fresh water that directly affects water quality and the health of in Mugu Lagoon (Calleguas Municipal Water District 2004; Calleguas Municipal Water District 2005).

Many intermittent drainages lead straight to the ocean along the coast of Ventura County (e.g., Red Mountain area, barrancas leading to the beaches). These drainages directly affect ocean water quality and can be affected by adjacent land uses resulting in delivery of sediment and other pollutants to the ocean. Irrigation from adjacent land uses can also introduce a permanent or semi-permanent source of water into these drainages, where naturally there is none, thereby changing the water regime and habitat within these areas.

Special-Status Species

As of November 2016, there are 417 special-status plant and animal species that are known to occur in the county. A total of 169 species were identified from the California Natural Diversity Database (CNDDB), and a total of 286 plant species and 13 wildlife species are on the Ventura County's Locally Important Plant and Animal lists. One animal and 50 plant species on the Locally Important lists for Ventura County overlap with the CNDDB records, but most species are not recorded on the CNDDB lists. These sources were used to generate the table of special-status species.

Special-status species are species whose populations are limited and/or declining, and survival and reproduction is threatened by habitat loss or degradation. Federal and state agencies as well as conservation organizations maintain lists of these species. Those species that are officially listed as threatened or endangered under the federal Endangered Species Act or California Endangered Species Act are protected by law. Lists of special-status species used by the county to determine project impacts include the following:

- Species listed as Endangered, Threatened, or Rare under the federal or state Endangered Species Acts; state and federal Candidate species, and California Fully Protected species;
- Species tracked by the CNDDB, which are considered by the CDFW to be those species of greatest conservation concern and are listed on CDFW's lists of Special Plants and Special Animals (e.g., plant species on the California Native Plant Society's [CNPS] California Rare Plant Rank, NatureServe's Natural Heritage Network Conservation Status Rankings, CDFW Species of Special Concern etc.); and
- Ventura County Locally Important Species.

As of November 2016, a total of 34 federally listed, proposed listed, or candidate species occur in Ventura County. Federally listed endangered and threatened plant and wildlife species with recent (within the last 10 years) records of occurrence in Ventura County include, but are not limited to, California condor (*Gymnogyps californianus*), arroyo toad (*Anaxyrus californicus*), southwestern willow flycatcher (*Empidonax traillii extimus*), southern steelhead (*Oncorhynchus mykiss*), coastal California gnatcatcher (*Polioptila californica californica*), California red-legged frog (*Rana draytonii*), least bell's vireo (*Vireo bellii pusillus*), Braunton's milk-vetch (*Astragalus brauntonii*), Kern mallow (*Eremalche parryi*), and Lyon's pentachaeta (*Pentachaeta lyonii*). A total of 22 State listed or candidate species occur in Ventura County.

Many of the endangered or threatened species in the county rely on marsh or river systems and associated riparian vegetation, such as least Bell's vireo, steelhead, and southwestern willow flycatcher. Others, such as California condor have extensive ranges and require large habitat corridors. Some special-status wildlife species have multiple habitat needs, and conservation and management of all habitats used throughout the animals' life is needed in order to sustain the species. For example, California red-legged frog requires aquatic habitat for breeding, and upland habitat for dispersal and aestivation. Steelhead require gravel-bottomed streams for spawning and also use estuarine and ocean waters during their life cycle. Specialstatus species identified by CDFW in Ventura County are listed in Table 8-6 (plants) and Table 8-7 (animals). The status and taxonomy of these species change frequently. The CDFW's CNDDB and associated lists should be consulted for the latest information. In addition, several species listed in Table 8-6 and Table 8-7 only have populations remaining on the Channel Islands, and no longer occur in inland areas within the county. The CDFW's CNDDB records, literature, and resource agencies should be consulted for the latest information. Finally, species on the Ventura County Locally Important Plant and Wildlife Species lists are not presented in Table 8-6 and Table 8-7 as these lists change frequently. The last update of the Locally Important Species List occurred in 2014, and the most recent update was initiated in 2017.

Critical habitat is a specific geographic area identified by the federal government as the habitat that contains features essential for the conservation of a federally-listed threatened or endangered species and that may require special management and protection. Critical habitat generally has no effect on situations that do not involve a Federal agency, and its designation requires these agencies to consult with USFWS and/or National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) on actions they carry out, fund, or authorize to ensure that their actions will not destroy or adversely modify critical habitat. However, the loss of critical habitat is also considered a potentially significant impact under the County's CEQA thresholds. Fifteen federally-listed species have final designated Critical Habitat within Ventura County, including the arroyo toad, California condor, coastal California gnatcatcher, western snowy plover, southwestern willow flycatcher, southern steelhead, tidewater goby, Conservancy fairy shrimp, Riverside fairy shrimp, vernal pool fairy shrimp, California red-legged frog, least Bell's vireo, and plant species, Lyon's pentachaeta, Braunton's milk-vetch, and Ventura marsh milk-vetch.

Figure 8-5depicts critical habitat locations for plants and animal species in the county.

TABLE 8-6
SPECIAL-STATUS PLANT SPECIES

Scientific Name and Common Name	Federal/State Status	Global/State NatureServe Rank	CNPS Rare Plant Rank
Acanthoscyphus parishii var. *abramsii* Abrams' oxytheca		G4?T1T2/S2	1B.2
Allium howelii var. *clokeyi* Mt. Pinos onion		G4T2/S2	1B.3
Aphanisma blitoides Aphanisma		G3G4/S2	1B.2
Astragalus brauntonii Braunton's milk-vetch	FE	G2/S2	1B.1
Astragalus didymocarpus var. *milesianus* Miles' milk-vetch		G2T2/S2	1B.2

TABLE 8-6 SPECIAL-STATUS PLANT SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**CNPS Rare Plant Rank**
Astragalus pycnostachyus var. *lanosissimus* Ventura marsh milkvetch	FE, SE	G2T1/S1	1B.1
Astragalus traskiae Trask's milk-vetch	SR	G3/S3	1B.2
Atriplex coulteri Coulter's saltbush		G3/S1S2	1B.2
Atriplex pacifica South coast saltscale		G4/S2	1B.2
Atriplex serenana var. *davidsonii* Davidson's saltscale		S1	1B.2
Berberis pinnata ssp. *Insularis* Island barberry	FE, SE	G5T1/S1	1B.2
Boechera hoffmannii Hoffmann's rockcress	FE	G1G2/S1S2	1B.1
California macrophylla Round leaved filaree		G3?S3?	1B.2
Calochortus clavatus var. *gracilis* Slender mariposa lily		G4T2T3/S2S3	1B.2
Calochortus fimbriatus Late-flowered mariposa lily		G3/S3	1B.3
Calochortus palmeri var. *palmeri* Palmer's mariposa lily		G3T3?/S3?	1B.2
Calochortus plummerae Plummer's mariposa lily		G4/S4	4.2
Castilleja hololeuca Island white-felted paintbrush		G3/S3	1B.2
Caulanthus lemmonii Lemmon's jewelflower		G3/S3	1B.2
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion		G5T1T2/S1	1B.1
Chloropyron maritimum ssp. *maritimum* Salt marsh bird's-beak	FE, SE	G4?T1/S1	1B.2
Chorizanthe blakleyi Blakley's spineflower		G2G3/S2S3	1B.3
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FPT, SE	G2T1/S1	1B.1
Cryptantha traskiae Trask's cryptantha		G2/S2	1B.1
Deinandra minthornii Santa Susana tarplant	SR	G2/S2	1B.2
Delphinium parryi ssp. *blochmaniae* Dune larkspur		G4T2/S2	1B.2
Delphinium umbraculorum Umbrella larkspur		G3/S3	1B.3

TABLE 8-6 SPECIAL-STATUS PLANT SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**CNPS Rare Plant Rank**
Dithyrea maritima Beach spectaclepod	ST	G1/S1	1B.1
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya		G3T2/S2	1B.1
Dudleya cymosa ssp. *agourensis* Agoura Hills dudleya	FT	G5T2/S2	1B.2
Dudleya cymosa ssp. *marcescens* Marcescent dudleya	FT, SR	G5T2/S2	1B.2
Dudleya parva Conejo dudleya	FT	G1/S1	1B.2
Dudleya verityi Verity's dudleya	FT	G1/S1	1B.1
Dudleya virens ssp. *insularis* Island green dudleya		G3?T3/S3	1B.2
Eremalche kernensis Kern mallow	FE	G3G4T2T3/S2	1B.1
Eriogonum crocatum Conejo or Saffron buckwheat	SR	G1/S1	1B.2
Eriogonum grande var. *timorum* San Nicolas Island buckwheat	SE	G4T1/S1	1B.1
Eriogonum kennedyi var. *alpigenum* Southern alpine buckwheat		G4T3/S3	1B.3
Erysimum insulare Island wallflower		G3/S3	1B.3
Fritillaria ojaiensis Ojai fritillary		G2/S2?	1B.2
Heuchera maxima Island alumroot		S3	1B.2
Horkelia cuneata var. *Puberula* Mesa horkelia		G4T1/S1	1B.1
Imperata brevifolia California satintail		G4/S3	2B.1
Isocoma menziesii var. *decumbens* Decumbent goldenbush		G3G5T2T3/S2	1B.2
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields		G4T2/S2	1B.1
Lavatera assurgentiflora ssp. *assurgentiflora* Island mallow		G1T1/S1	1B.1
Layia heterotricha Pale-yellow layia		G2/S2	1B.1
Lepechinia rossii Ross' pitcher sage		G1/S1	1B.2
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass		G5T3/S3	4.3

TABLE 8-6 SPECIAL-STATUS PLANT SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**CNPS Rare Plant Rank**
Lomatium insulare San Nicolas Island lomatium		G3/S2S3	1B.2
Lycium verrucosum San Nicolas Island desert-thorn		GXQ/SX	1A
Malacothamnus davidsonii Davidson's bush-mallow		G2/S2	1B.2
Malacothrix foliosa ssp. *crispifolia* Wavy-leaved malacothrix		G4T1/S1	1B.2
Malacothrix junakii Junak's malcothrix		G1/S1	1B.1
Malacothrix similis Mexican malacothrix		G2G3/SH	2A
Malacothrix squalida Island malacothrix	FE	G1S1/S1	1B.1
Monardella hypoleuca ssp. *hypoleuca* White-veined monardella		G4T2T3/S2S3	1B.3
Monardella linoides ssp. *oblonga* Tehachapi monardella		G5T2/S2	1B.3
Monardella sinuata ssp. *gerryi* Gerry's curly-leaved monardella		G3T1/S1	1B.1
Navarretia ojaiensis Ojai navarretia		G2S2/S1	1B.1
Navarretia peninsularis Baja navarretia		G3/S2	1B.2
Nemacladus secundiflorus var. *robbinsii* Robbins' nemacladus		G3T2/S2	1B.2
Nolina cismontana Chaparral nolina		G3/S3	1B.2
Orcuttia californica California Orcutt grass	FE, SE	G1/S1	1B.1
Orobanche parishii ssp. *brachyloba* Short-lobed broomrape		G4?T4/S3	4.2
Orobanche valida ssp. *valida* Rock Creek broomrape		G4T2/S2	1B.2
Pentachaeta lyonii Lyon's pentachaeta	FE, SE	G1/S1	1B.1
Pseudognaphlium leucocephalum White rabbit-tobacco		G4/S2	2B.2
Quercus dumosa Nuttall's scrub oak		G3/S3	1B.1
Sagittaria sanfordii Sanford arrow-head		G3/S3	1B.2
Senecio aphanactis Chaparral ragwort		G3/S2	2B.2

TABLE 8-6
SPECIAL-STATUS PLANT SPECIES

Scientific Name and Common Name	Federal/State Status	Global/State NatureServe Rank	CNPS Rare Plant Rank
Sidalcea neomexicana Salt Spring checkerbloom		G4/S2	2B.2
Streptanthus campestris Southern jewelflower		G3/S3	1B.3
Suaeda esteroa Estuary seablite		G3/S2	1B.2
Symphyotrichum greatae Greata's aster		G2/S3	1B.3
Texosporium sancti-jacobi Woven-spored lichen		G3/S1	3
Tortula californica California screw moss		G2G3/S2S3	1B.2
Viola pinetorum var. *grisea* Grey-leaved violet		G4G5T3?/S3?	1B.3

Status Key

Federal
FE: Federally-listed Endangered
FT: Federally-listed Threatened
FPT: Federally Proposed Threatened
FC: Candidate for federal listing

State
SE: California-listed Endangered
ST: California-listed Threatened
SR: California-listed Rare

Global NatureServe Rank:
G1: Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2: Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3: Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4: Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5: Secure – Common; widespread and abundant.
GH: All sites are historical; the species has not been observed for at least 20 years.
GX: All sites are extirpated; this species is extinct in the wild.
GXC: Extinct in the wild; exists in cultivation.
G1Q: The species is very rare, but there are taxonomic questions associated with it.
T-Rank refers to the status of only the subspecies.
GnGn: Range Rank - A numeric range rank (e.g., G2G3) is used to indicate any range of uncertainty about the status of the species or community.
?: Qualifier: Inexact or Uncertain - A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank.

TABLE 8-6 SPECIAL-STATUS PLANT SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**CNPS Rare Plant Rank**

State NatureServe Rank:

S1: Critically Imperiled - Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.

S2: Imperiled - Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state.

S3: Vulnerable - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4: Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5: Secure - Common, widespread, and abundant in the state.

SnSn: Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community.

?: Qualifier: Inexact or Uncertain - A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank.

SNR: Unranked - State conservation status not yet assessed.

SU: Unrankable - Currently unrankable due to a lack of information or due to substantially conflicting information about status or trends.

SH: Possibly Extirpated (Historical) - Species or community occurred historically in the state, and there is some possibility that it may be rediscovered. All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists.

SX: Presumed Extirpated - Species or community is believed to be extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

California Native Plant Society (CNPS):

Rank 1A – Presumed extinct in California;

Rank 1B – Rare, threatened, or endangered in California and elsewhere;

Rank 2A – Plants presumed extirpated in California, but more common elsewhere;

Rank 2B – Rare, threatened, or endangered in California, but more common elsewhere;

Rank 3 – Plants for which more information is needed – A review list; and

Rank 4 – Plants of limited distribution – A watch list.

Additional threat ranks endangerment codes are assigned to each taxon or group as follows:

.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).

.2 – Fairly endangered in California (20-80% occurrences threatened).

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
Amphibians			
Anaxyrus californicus Arroyo toad	FE	G2G3/S2S3	SSC
Batrachoseps pacificus Channel Islands slender salamander		G4/S3S4	
Rana boylii Foothill yellow-legged frog		G3/S3	SSC
Rana draytonii California red-legged frog	FT	G2G3/S2S3	SSC
Spea hammondii Western spadefoot		G3/S3	SSC
Taricha torosa Coast Range newt		G4/S4	SSC
Reptiles			
Anniella pulchra pulchra *Silvery legless lizard*		G3G4T3T4Q/S3	SSC, USFS S
Aspidoscelis tigris stejnegeri Coastal whiptail		G5T5/S3	SSC
Charina umbratica Southern rubber boa	ST	G2G3/S2S3	USFS S
Diadophis punctatus modestus San Bernardino ringneck snake		G5T2T3Q/S2?	USFS S
Emys marmorata *Western pond turtle*		G3G4/S3	SSC
Gambelia sila Blunt-nosed leopard lizard	FE, SE	G1/S1	FP
Phrynosoma blainvillii Coast horned lizard		G3G4/S3S4	SSC
Salvadora hexalepis virgultea Coast patch-nosed snake		G5T4/S2S3	SSC
Thamnophis hammondii Two-striped garter snake		G4/S3S4	SSC, USFS S
Thamnophis sirtalis ssp. South coast garter snake		G5T1T2/S1S2	SSC, USFS S
Xantusia riversiana Island night lizard	F Delisted	G3/S3	
Fish			
Catostomus santaanae Santa Ana sucker	FT	G1/S1	
Eucyclogobius newberryi Tidewater goby	FE	G3/S3	SSC
Gasterosteus aculeatus williamsoni Unarmored threespine stickleback	FE, SE	G5T1/S1	FP
Gila orcuttii Arroyo chub		G2/S2	SSC, USFS S

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
Oncorhynchus mykiss irideus Steelhead - southern California DPS	FE	G5T1Q/S1	
Invertebrates			
Bombus crotchii Crotch bumble bee		G3G4/S1S2	
Branchinecta conservatio Conservancy fairy shrimp	FE	G2S2	
Branchinecta lynchi Vernal pool fairy shrimp	FT	G3/S3	
Ceratochrysis longimala Desert cuckoo wasp		G1/S1	
Cicindela hirticollis gravida Sandy beach tiger beetle		G5T2/S2	
Cicindela senilis frosti Senile tiger beetle		G2G3T1T3/S1	
Coelus globosus Globose dune beetle		G1G2/S1S2	
Danaus plexippus pop. 1 Monarch - California overwintering pop		G4T2T3/S2S3	USFS S
Euproserpinus euterpe Kern primrose sphinx moth	FT	G1G2/S1	
Helminthoglypta ayresiana sanctaecrucis Ayer's snail		G1G2T1T2/S1S2	
Helminthoglypta traskii traskii Trask shoulderband		G1G2T1/S1	
Micrarionta feralis San Nicolas Island snail		G1/S1	
Micrarionta opuntia Prickly pear island snail		G1/S1	
Minymischa ventura Ventura cuckoo wasp		GU/SU	
Panoquina errans Wandering (=saltmarsh) skipper		G4G5/S2	
Plebulina emigdionis San Emigdio blue butterfly		G1G2/S1S2	USFS S
Sterkia clementina San Clemente Island blunt-top snail		G1/S2	
Streptocephalus woottoni Riverside fairy shrimp	FE	G1G2/S1S2	
Trimerotropis occidentiloides Santa Monica grasshopper		G1G2/S1S2	
Tryonia imitatormimic *tryonia* (=California brackishwater snail)		G2/S2	
Birds			
Accipiter cooperii Cooper's hawk		G5/S4	WL

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
Agelaius tricolor Tricolored blackbird	SCT	G2G3/S1S2	SSC
Aimophila ruficeps canescens southern California rufous-crowned sparrow		G5T3/S2S3	WL
Aquila chrysaetos Golden eagle		G5/S3	FP, WL
Artemisiospiza belli belli Bell's sage sparrow		G5T2T4/S2?	WL
Athene cunicularia Burrowing owl		G4/S3	SSC
Buteo regalis Ferruginous hawk		G4/S3S4	WL
Charadrius alexandrinus nivosus Western snowy plover	FT	G3T3/S2S3	SSC
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT, SE	G5T2T3/S1	USFS S
Dendragapus fuliginosus howardi *Mount Pinos sooty grouse*		G5T2T3/S2S3	SSC
Elanus leucurus White-tailed kite		G5/S3S4	FP
Empidonax traillii extimus Southwestern willow flycatcher	FE, SE	G5T2/S1	
Eremophila alpestris actia California horned lark		G5T3Q/S3	WL
Falco mexicanus Prairie falcon		G5/S4	WL
Gymnogyps californianus California condor	FE, SE	G1/S1	FP
Icteria virens Yellow-breasted chat		G5/S3	SSC
Oceanodroma homochroa Ashy storm-petrel		G2/S2	SSC
Passerculus sandwichensis beldingi Belding's savannah sparrow	SE	G5T3/S3	
Pelecanus occidentalis californicus California brown pelican	Delisted	G4T3/S3	FP, USFS S
Phalacrocorax auritus Double-crested cormorant		G5/S4	WL
Polioptila californica californica Coastal California gnatcatcher	FT	G4G5T2Q/S2	SSC
Rallus longirostris levipes Light-footed clapper rail	FE, SE	G5T1T2	FP
Riparia riparia Bank swallow	ST	G5/S2	
Setophaga petechia Yellow warbler		G5/S3S4	SSC

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
Sternula antillarum browni California least tern	FE, SE	G4T2T3Q/S2	FP
Vireo bellii pusillus Least Bell's vireo	FE, SE	G5T2/S2	
Mammals			
Ammospermophilus nelsoni Nelson's antelope squirrel	ST	G2/S2S3	
Antrozous pallidus Pallid bat		G5/S3	SSC, USFS S
Arctocephalus townsendi Guadalupe fur-seal	FT, ST	G1/S1	FP
Chaetodipus californicus femoralis Dulzura pocket mouse		G5T3/S3	SSC
Choeronycteris mexicana Mexican long-tongued bat		G4/S1	SSC
Corynorhinus townsendii Townsend's big-eared bat	SCT	G3G4/S2	SSC, USFS S
Enhydra lutris nereis Southern sea otter	FT	G4T2/S2	FP
Eumops perotis californicus Western mastiff bat		G5T4/S3S4	SSC
Lasiurus cinereus Hoary bat		G5/S4	
Macrotus californicus California leaf-nosed bat		G4/S3	SSC
Microtus californicus stephensi South coast marsh vole		G5T1T2/S1S2	SSC
Myotis ciliolabrum Western small-footed myotis bat		G5/S3	
Myotis thysanodes Fringed myotis bat		G4/S3	USFS S
Myotis volans Long-legged myotis bat		G5/S3	
Neotamias speciosus callipeplus Mt. Pinos lodgepole chipmunk		G4T1T2/S2	USFS S
Neotoma lepida intermedia San Diego desert woodrat		G5T3T4/S3S4	SSC
Perognathus alticolus inexpectatus Tehachapi pocket mouse		G1G2T1T2/S1S2	SSC, USFS S
Perognathus inornatus San Joaquin pocket mouse		G2G3/S2S3	
Peromyscus maniculatus anacapae Anacapa Island deer mouse		G5T1T2/S1S2	SSC
Sorex ornatus salicornicus Southern California saltmarsh shrew		G5T1?/S1	SSC

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
Taxidea taxus American badger		G5/S3	SSC
Urocyon littoralis dickeyi San Nicolas Island fox	ST	G1T1/S1	

Status Key

Federal:

FE – Federal Endangered;
FT – Federal Threatened;
FC – Candidate for federal listing;
USFS S – US Forest Service Sensitive

State:

SE – State Endangered;
ST – State Threatened;
SCT – State Candidate Threatened;
FP – CDFW Fully Protected;
SSC – CDFW Species of Special Concern
WL – CDFW Watch List

Global NatureServe Rank:

G1: Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2: Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3: Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4: Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5: Secure – Common; widespread and abundant.
GH: All sites are historical; the species has not been observed for at least 20 years.
GX: All sites are extirpated; this species is extinct in the wild.
GXC: Extinct in the wild; exists in cultivation.
G1Q: The species is very rare, but there are taxonomic questions associated with it.
T-Rank refers to the status of only the subspecies.
GnGn: Range Rank - A numeric range rank (e.g., G2G3) is used to indicate any range of uncertainty about the status of the species or community.
?: Qualifier: Inexact or Uncertain - A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank.

State NatureServe Rank:

S1: Critically Imperiled - Critically imperiled because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2: Imperiled - Imperiled because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state.
S3: Vulnerable - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4: Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.

TABLE 8-7 SPECIAL-STATUS ANIMAL SPECIES			
Scientific Name and Common Name	**Federal/State Status**	**Global/State NatureServe Rank**	**Other**
S5: Secure - Common, widespread, and abundant in the state. SnSn: Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. ?: Qualifier: Inexact or Uncertain - A question mark represents a rank qualifier, denoting an inexact or uncertain numeric rank. SNR: Unranked - State conservation status not yet assessed. SU: Unrankable - Currently unrankable due to a lack of information or due to substantially conflicting information about status or trends. SH: Possibly Extirpated (Historical) - Species or community occurred historically in the state, and there is some possibility that it may be rediscovered. All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists. SX: Presumed Extirpated - Species or community is believed to be extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.			

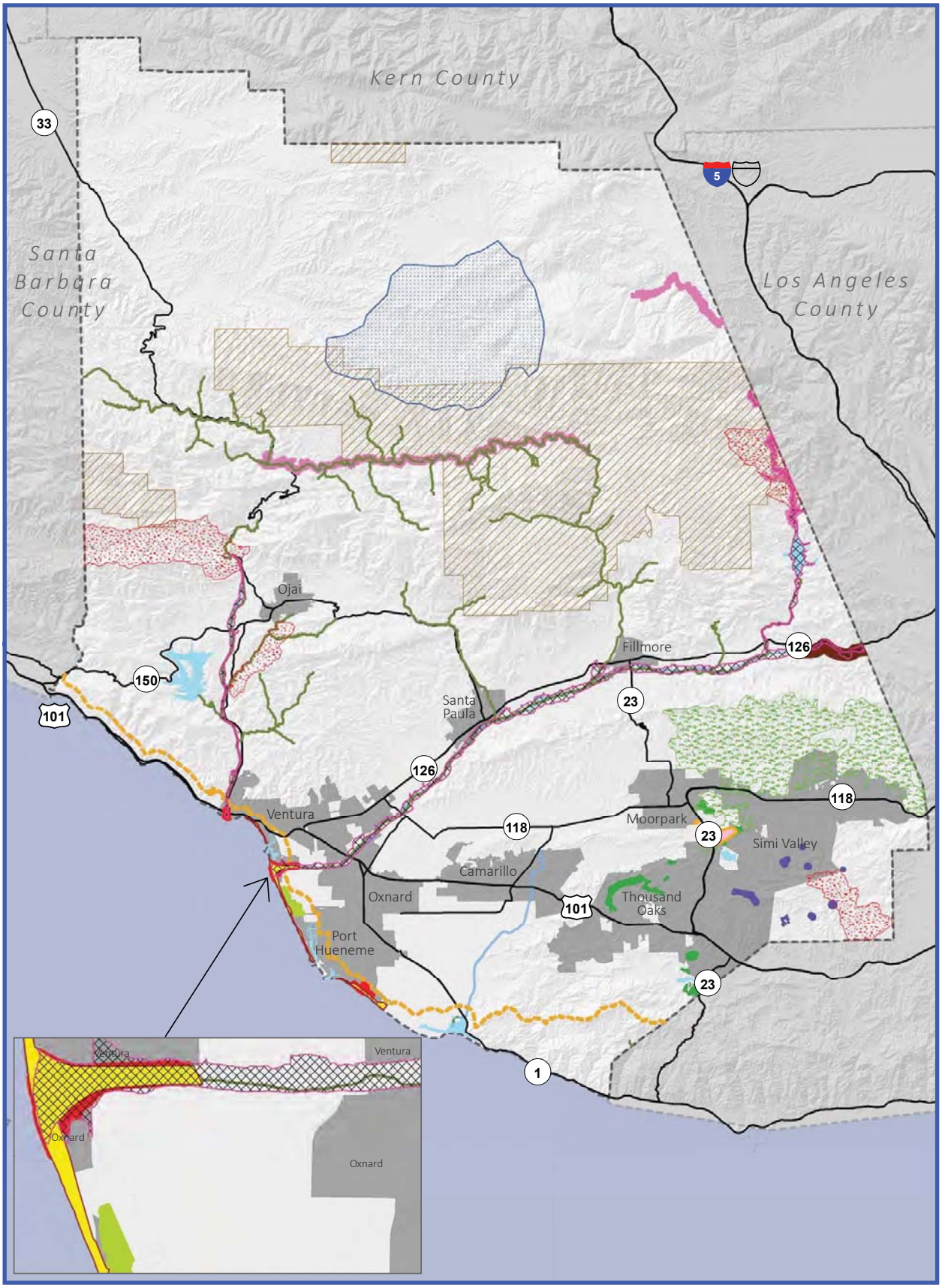


Figure 8-5
Critical Habitat

Map Date: July 20, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

FIGURE 8-5
CRITICAL HABITAT
BACK OF FIGURE

Habitat Connectivity/Wildlife Corridors

~~Habitat connectivity is defined as the degree to which the landscape facilitates or impedes movement of species among habitat areas.~~ Movement is essential to the survival of biota because it allows seasonal migrations, access to resources, dispersal of offspring, genetic diversity, and allows for long-term changes in species' range in response to climate change. (Functional) connectivity is the degree to which a physical setting (i.e., natural landscape and built environment) facilitates or impedes the movement of organisms. It is the product of both the features of the physical setting (e.g., vegetation, physical development) and the behavioral responses of plants and animals to these physical features. A high degree of connectivity among habitat types is also important for maintaining biodiversity and ecosystem functions. Loss of habitat connectivity or habitat fragmentation has occurred due to urban sprawl, roads, conversion of wildlands to intensive agricultural uses, installation of fencing that restricts or prevents wildlife movement, and other human and natural influences. Urbanization can result in the following effects on wildlife corridors:

- Decreased abundance and diversity of native species and replacement by non-native species.
- Removal and fragmentation of natural vegetation lowering habitat quality.
- Increased rates of roadkill and habitat fragmentation due to the development of a local road network.
- Spread of exotic plants through disturbance or introduction by humans that results in loss of biodiversity and habitat quality.
- Increase in perennial water which favors non-native aquatic organisms such as bullfrogs, and non-native terrestrial organism such as Argentinean ants which outcompete native species.
- Artificial night lighting which can impair the ability of nocturnal animals to navigate through a corridor.
- Increased noise, which disturbs or repels many animals and presents a barrier to movement.
- Disruption of the natural fire regime by either increasing the number of fires or suppressing fires that maintain natural ecosystem structure.

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, including within Southern California. Biological diversity benefits both the natural and built environments in several ways. It benefits wildlife and plant species by fostering vigor and resiliency. In the built and agricultural environments, biological diversity provides a variety of pollinators to assure plants and crops persist, provides a variety of wildlife that includes predators that control population levels of high-producing wildlife such as rodents, and provides an interesting natural environment for human exploration.

Within Ventura County, several regional habitat connectivity corridors have been identified by South Coast Wildlands, as part of the South Coast Missing Linkages Project (SCMLP). [3] These corridors include: 1) connections between the Santa Monica Mountains to the Santa Susana and Sierra Madre

[3] http://www.scwildlands.org/

mountain ranges (**Santa Monica-Sierra Madre Connection)**; 2) connections between the Sierra Madre to the Castaic ranges (**Sierra Madre-Castaic Connection)**; and (3) linkages provided by the Ventura and Santa Clara Rivers (**River Linkages**). These regional habitat connectivity corridors identified in Ventura County are referred to as the "Habitat Connectivity Corridors."

These habitat connectivity corridors enable the migration and dispersal of wildlife and plant species, which are critical to the long-term survival of these species in an urbanizing environment. The linkages provide: (1) buffers to mitigate for "edge effects" where dissimilar habitats meet; (2) viable habitat for species needing multiple generations to achieve gene flow through the linkage; (3) needed resources (e.g, food, water, specific habitat, breeding partners, etc.); and (4) needed habitat to allow natural processes to operate and allow for species and natural communities to respond to climate change.

The Santa Monica-Sierra Madre Connection: Ventura County has one of the few major coastal to inland habitat connections remaining in the South Coast Ecoregion. The Santa Monica-Sierra Madre Connection within Ventura County includes natural habitats within the Los Padres National Forest, the Santa Monica Mountains National Recreation Area, state and regional parks, and open space preserves (which may have varying levels of protected status and access). It is comprised of a rich mosaic of oak woodland and savanna, chaparral, coastal sage scrub, annual grasslands, woodlands, and riparian corridors (Figure 8-4). These habitats accommodate diverse species, including mountain lion, bear, bobcat, coyote, mule deer, striped skunk, small mammals, amphibians, reptiles, and birds. The size of the Santa Monica-Sierra Madre Connection is 125,613 acres, which includes 43,249 acres of public lands that already protect natural habitats from development.

The Santa Monica-Sierra Madre Connection includes the Santa Clara River watershed (**Santa Clara River Linkage**), which, as stated above along with the Santa Clara River watershed and Calleguas Creek watershed, contains riparian corridors that provide a significant link between the coastal and inland habitats, and provide habitat for many special-status species (Figure 8-5). The Santa Monica-Sierra Madre Connection also includes three north-south linkages that connect the Santa Monica Mountains in the south to the Santa Susana and Topa Topa Mountains (both part of the Transverse Ranges) in the north and cross the Simi Hills and the Conejo Valley as well as the major cities of Thousand Oaks, Simi Valley, Camarillo, and Moorpark.

For most species, U.S. Highway 101 and State Routes (SR) 23, 118, and 126 are barriers between core habitats in the Santa Monica and Sierra Madre Mountains. The direct effects of highways include increased mortality (roadkill), habitat fragmentation, and reduced connectivity. Direct roadkill affects most species, with severe documented impacts on wide-ranging predators, such as mountain lion, in southern California. Highways also increase the spread of exotic plants, and create noise and vibration that affect the ability of species to communicate, detect prey, or avoid predators. Several existing structures facilitate various degrees of animal movement across these freeways. For example, Caltrans is working with the National Park Service to monitor wildlife movement at several culverts under SR-23, SR -118, and SR- 126. Caltrans has begun conducting improvements such as clearing tunnels and culverts and installing wildlife-proof fencing with escape gates to direct animals off the road and through underpasses on SR-23.

River Linkages: The Ventura and Santa Clara River corridors have been identified as important riparian and alluvial vegetation linkages from the Pacific coastal areas east to Los Padres Forest. These linkages intersect with the Sierra Madre-Santa Monica Connection near the City of Fillmore and Lake Piru (Santa Clara River Connection) and the Sierra Madre-Castaic Connection and Los Padres Forest. Like the chokepoints associated with the Sierra Madre-Santa Monica Connections, these linkages are relatively

narrow, but vital for many threatened and endangered wildlife species.

Sierra Madre-Castaic Connection: Ventura County also has a significant portion of the Sierra Madre-Castaic Connection that covers a large area in the Los Padres National Forest providing a large expanse of chaparral and woodland habitat, and includes Sespe Creek, a very important stream for fish and wildlife including the special-status arroyo toad, southern steelhead, and other special-status species.

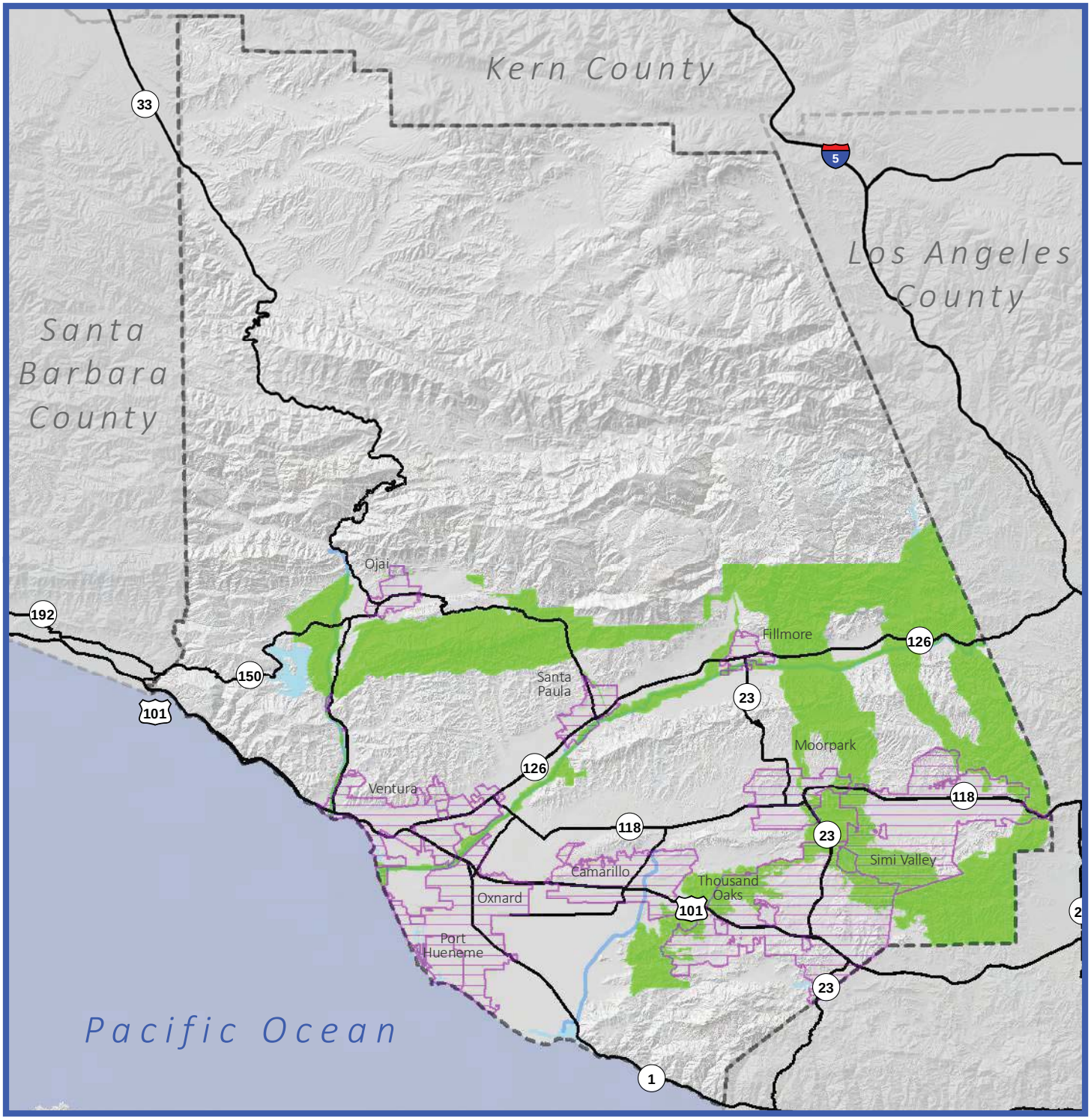
The corridor connections between Simi Valley and Thousand Oaks/Moorpark, between Thousand Oaks and Camarillo are more prone to disruption than the broader corridors across protected open space (which may have varying levels of protected status and access) such as the Los Padres National Forest. Disruption of narrow corridors such as these has potentially broad effects by preventing wildlife movement.

South Coast Wildlands developed the linkage designs based on input from a series of workshops at which 270 participants from 126 agencies, academic institutions, land managers, planners, conservation organizations, and community groups identified 109 focal species, including 26 plants, 25 insects, 4 fish, 5 amphibians, 12 reptiles, 20 birds and 17 mammals.

The mapped connectivity corridors described above have also been incorporated into the California Essential Habitat Connectivity Project, completed in 2010. The project, which included a comprehensive report, was completed for Caltrans and the California Department of Fish and Game. As explained in the report's Executive Summary, the project was commissioned, "…because a functional network of connected wildlands is essential to the continued support of California's diverse natural communities in the face of human development and climate change…"[4]

Ventura County recognizes that individual development projects have the potential to impact habitat connectivity and the County's Initial Study Assessment Guidelines include standards for assessing the impacts of discretionary projects on habitat connectivity. These are described in the Regulatory Setting section below. The County encourages development that enables wildlife migration through creation of preserves for areas containing significant habitat, clustering development to preserve larger intact areas, maintaining buffers between developed uses and natural habitat, and integrating design features to assist wildlife migration, such as wildlife overpasses and underpasses, well-designed and located culverts, and fencing that is permeable to wildlife, and use of nighttime lighting that is directed away from natural areas.

4 https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC



Ventura County 2040 General Plan

Figure 8-6: Habitat Overlay Map

Map Date: November 19, 2019

Source: Ventura County, 2016; CAL FIRE 2007 (State), 2008 (Local), and 2016 (Federal); USGS, 2013.

0 7.5 15 Miles

N

- Ventura County Boundary
- Cities
- Major Roadways
- Habitat Connectivity & Wildlife Corridors
- Major Waterways
- Water Bodies

Regulatory Setting

Biological resources in California are managed by a complex network of federal, state, and local regulations. The following discussion identifies federal, state, and local environmental regulations that serve to protect sensitive biological resources.

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, provides the regulatory framework for the protection of plants and wildlife (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened by the USFWS and NMFS. The FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the USFWS and/or NMFS, (3) prohibitions against "taking" of listed species, and (4) provisions for permits that allow incidental "take". Specifically, Section 9 of the FESA prohibits the "taking" of federally listed wildlife. Taking is defined by the FESA as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct". For plants, this statute pertains to removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code [USC] 1538). Under section 7 of the FESA, federal agencies are required to consult with the USFWS and/or NMFS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS and/or NMFS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity provided the action will not jeopardize the continued existence of the species. Section 7 consultation would be triggered if a particular project within the county affects wetlands or waters of the U.S., requiring the U.S. Army Corps of Engineers (USACE) to issue a 404 permit. Section 10 of FESA provides for issuance of incidental take permits to private parties provided a Habitat Conservation Plan is developed.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 [U.S.C. 703 et seq.), 50 Code of Federal Regulations (CFR) Part 10, implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs and nests from a variety of activities such as hunting, pursuing, capturing, killing, selling and shipping, unless expressly authorized in the regulations or by permit. With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that cause nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA. As authorized by the MBTA, the USFWS issues some permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The state of California has incorporated the protection of birds in Sections 3800, 3513, 3503, and 3503.5 of the California Fish and Game Code (see below).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) that was first passed in 1940 regulates take, possession, sale, purchase, barter, transport, import and export of any bald or golden eagle or their parts (e.g., nests, eggs, young) unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" was broadly defined to include shoot, wound, kill, capture, collect, molest, or disturb. In the 1972 amendments, penalties for violations were raised to a maximum fine of $250,000 for an individual or a maximum of two years in prison for a felony conviction, with a doubling of the penalties for organizations.

Federal Clean Water Act

The Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the U.S." without a permit from the USACE (33 U.S.C. 1344). The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands (33 CFR Part 328.3). Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (U.S. EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts on wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits.

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to also obtain a water quality certification from the state in which the discharge originates. The discharge is required to comply with the applicable water quality standards. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is issued by the State Water Resources Control Board and its nine Regional Water Quality Control Boards (RWQCBs). Required RWQCB certification would be under the jurisdiction of the Los Angeles RWQCB for southern portions of Ventura County and the Central Coast RWQCB for the northern portions of the county.

State

California Endangered Species Act

The California Endangered Species Act (CESA) of 1970 (California Code of Regulations [CCR] Title 14, Sections 670.2 and 670.51), as amended, is administered by the CDFW and generally parallels the main provisions of the FESA. Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by the CDFW. The CDFW has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA provides further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

Fully Protected Species and Species of Special Concern

The state of California first began to designate species as "Fully Protected" prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians, reptiles, birds and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA and/or FESA. The California Fish and Game Code sections (fish at Section 5515, amphibian and reptiles at Section 5050, birds at Section 3511, and mammals at Section 4700) dealing with fully protected species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species." Furthermore, the CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research. This language makes the fully protected species designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

Species of special concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologist, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

California Fish and Game Code Section 1600-1603

Streams, lakes, and riparian vegetation, as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the California Fish and Game Code. Any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a 1602 Lake and Streambed Alteration Agreement. Removal of riparian vegetation can also require a Section 1602 Lake and Streambed Alteration Agreement from the CDFW. The CDFW reviews the proposed actions and, if necessary, submits a proposal for measures to protect affected fish and wildlife resources to the applicant. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Lake and Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also

require a permit from the USACE under Section 404 of the Clean Water Act. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne) imposes stringent controls on any discharges into the "waters of the state" (California Water Code § 13000, et seq.). Waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code § 13050(e)). The State Water Resources Control Board protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. Waters of the state are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the state, the RWQCBs have the option to regulate such activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements. The Los Angeles RWQCB would have jurisdiction for southern portions of Ventura County and the Central Coast RWQCB would have jurisdiction for the northern portions of the county.

California Fish and Game Code Sections 3503, 3503.5, and 3800

According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrow (*Passer domesticus*), rock pigeon (*Columbia livia*), and European Starling (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW.

California Coastal Act

The California Coastal Act is administered by the California Coastal Commission. The California Coastal Act specifically calls for protection of "environmentally sensitive habitat areas (ESHA)". ESHA is defined as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in the ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5). ESHA has been specifically identified in the Santa Monica Mountains in Ventura County.

Oak Woodland Conservation Act

The California Oak Woodlands Conservation Act was enacted in 2001. The Oak Woodlands Conservation Program constituted formal recognition on behalf of California lawmakers that oak woodlands are a vital statewide resource that provide benefits such as, crucial plant and wildlife habitat, reduced soil erosion, and enhanced water quality. The Oak Woodlands Conservation Act acknowledges that oak woodlands are being removed throughout California. In addition, to the legislative effort to protect oak woodlands provided by the Oak Woodlands Conservation Act, the state of California passed Senate Bill 1334 (Chapter 732, and Statutes of 2004) which required a modification to the Public

Resource Code regarding oak woodlands. As of January 2005, the Public Resource Code (Section 21083.4) required that when a county is determining the applicability of CEQA to a project, it must determine whether that project would result in a conversion of oak woodlands that would have a significant effect on the environment. If such effects (either individual impacts or cumulative) are identified, the law requires that they be mitigated. Acceptable mitigation measures include, but are not limited to, conservation of other oak woodlands through the use of conservation easements and planting replacement trees, which must be maintained for seven years. One notable exemption to this law is for the "conversion of oak woodlands on agricultural land that includes land that is used to produce or process plant and animal products for commercial purposes."

Local

2005 Ventura County General Plan

The General Plan covers biological resources in Chapter 1, Resources. Section 1.5 includes goals, policies, and programs related to biological resources. The following Area Plans also contain applicable goals and policies related to biological resources:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

Ventura County Oak Woodland Management Plan

In response to the California Oak Woodland Conservation Act of 2001, Ventura County prepared and adopted an Oak Woodland Management Plan that recommended, among other things, amending the County's Initial Study Assessment Guidelines to include an explicit reference to oak woodlands as part of its definition of locally important communities. The Ventura County Initial Study Assessment Guidelines defines a locally important community as one that is considered by qualified biologists to be a quality example characteristic of or unique to the county or region, with this determination being made on a case-by-case basis. The Ventura County Board of Supervisors approved this management plan and its recommendations.

The Ventura County Oak Woodland Management Plan includes the following goals to protect oak woodlands:

- Encouraging private landowners and conservation organizations to protect oak woodlands,
- Ensuring consistent consideration of oak woodlands during discretionary permit review,

- Considering appropriate amendments to Ventura County's regulatory plans and ordinances, as funding permits, and
- Supporting countywide biological data collection, analysis, and mapping.

Ventura County Land Conservation Act Guidelines

The California Land Conservation Act (also known as the Williamson Act) was adopted by the California State Legislature in 1965. In 1969, the County Board of Supervisors adopted "Guidelines for Implementation of the Land Conservation Act of 1965/the Williamson Act" (the LCA Guidelines). These Guidelines and subsequent revisions established criteria for eligibility for Agricultural Preserves (AGPs) and Land Conservation Act (LCA) Contracts in the unincorporated areas of the county. All land with a land use designation of Agricultural within the County of Ventura General Plan is considered an AGP.

Ventura County has three contract types, Land Conservation Contract (LCA), the Farmland Security Zone Area Contract (FSZA/LCA), and the Open Space (Wildlife Habitat) Contract (OS/LCA). The goal of LCA and FSZA/LCA contracts is to preserve agricultural land, and discourage its premature conversion to non-agricultural uses. The goal of OS/LCA contracts is to protect and enhance wildlife resources. To qualify for an OS/LCA contract the subject property must be located within an AGP as well as a designated Wildlife Habitat Area (WHA), which is defined in the LCA Guidelines as "an area of great importance for the protection or enhancement of the wildlife resources of the state. (Government Code Section 51201(j))." The criteria from the County Initial Study Assessment Guidelines for Significant Biological Resources is used to determine if a subject property qualifies for the WHA designation. In exchange for agreeing to restrict the use of the property by entering into a Contract, participating property owners receive a reduction of property taxes which is generally limited to the agricultural value of the property. This reduction of property taxes remains until the property owner or the County files for a Non-Renewal or terminates the contract. Subject properties eligible for either of the contract types must be designated Agriculture or Open Space under the County General Plan or Coastal Program.

As of 2017, Ventura County had 1,074 LCA contracts totaling 127,820 acres. This total includes three Wildlife Habitat Area contracts totaling approximately 340 acres.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for biological resources. These can be found in Section 24. Biological Resources.

~~*2015*~~ *Ventura County Non-Coastal Zoning Ordinance*

Development within habitat connectivity and wildlife corridors as mapped by the County of Ventura (Figure 8-6) is subject to the provisions and standards of the Habitat Connectivity and Wildlife Corridors (HCWC) Overlay Zone and the Critical Wildlife Passage Areas (CWPA) Overlay Zone set forth in the Non-Coastal Zoning Ordinance. Within the HCWC Overlay Zone, environmental review and discretionary approval is required for the following: (1) certain new development, including the construction of certain structures and removal of native vegetation, that is proposed near natural waterbodies/riparian areas or important wildlife crossing structures (e.g., bridges, culverts), and (2) wildlife impermeable fencing that would enclose large areas. Outdoor lighting is also subject to regulations in the HCWC Overlay Zone. In order to encourage the compact siting of new development in

the CWPA overlay zone, which is a particularly sensitive wildlife movement area located within the larger HCWC Overlay Zone, certain proposed development requires environmental review and discretionary approval unless the development is sited near existing development.

In addition to wildlife corridor protections, Article 7, Section 8107-25 of t~~T~~he Non-Coastal Zoning Ordinance regulates the removal, trimming of branches or roots, or grading or excavating within the root zone of a protected tree~~biological resources, including Article 7, Section 8107-25 Tree Protection Regulations~~.

Key Terms

Biodiversity Hotspot. A biodiversity hotspot is a biogeographic region that is both a significant reservoir of biodiversity and is threatened with destruction. The term biodiversity hotspot specifically refers to 25 biologically rich areas around the world that have lost at least 70 percent of their original habitat.

California Endangered Species Act **(CESA).** The state endangered species act protects plants and wildlife listed as endangered, threatened, or as candidates for listing. The act is administered by the California Department of Fish and Wildlife.

California Natural Diversity Database (CNDDB). The CNDDB is a program that inventories the status and locations of rare plants and animals in California. The CNDDB is used frequently in planning projects to determine if special status species occur within a particular project area. Using information from CNDDB queries is often the first step in determining whether or not a project or plan may impact habitat for a certain species.

Critical Habitat. Critical habitat is a term defined and used in the Endangered Species Act. It is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Environmentally Sensitive Habitat Area (ESHA). Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development.

Federal Endangered Species Act (FESA). The federal endangered species act protects plants and wildlife that are listed as endangered or threatened by the federal government. The act is administered by the U.S. Fish and Wildlife Service (USFWS) for terrestrial and aquatic/terrestrial species and by the National Marine Fisheries Service (NMFS) for fish and marine mammal species.

Habitat Connectivity. The degree to which the landscape facilitates or impedes movement of wildlife among habitat patches.

Information for Planning and Research (IPaC). IPaC is a project planning tool developed by the USFWS which streamlines the USFWS environmental review process. IPaC Trust Resource Reports list federally-listed species, Critical Habitat, migratory birds, wildlife refuges and fish hatcheries, and wetlands in the National Wetland Inventory.

Least Cost Union. Best potential movement route for all focal species within the South Coast Missing Linkage Project.

Santa Monica-Sierra Madre Connection. The Santa Monica-Sierra Madre Connection within Ventura County includes natural habitats linking the Los Padres National Forest, Santa Monica Mountains National Recreation Area, state and regional parks, and open space preserves(which may have varying levels of protected status and access), and provides a significant link between the coast and inland habitats.

South Coast Missing Linkage Project (SCMLP). The South Coast Missing Linkages Project (SCMLP) is a collaborative effort among scientists, state and federal agencies, academic institutions, land managers, conservation organizations, and community groups that has developed a comprehensive regional network of habitat linkages between existing reserves.

South Coast Ecoregion. The South Coast Ecoregion is identified in the SCLMP as an area extending from the Tehachapi Mountains and the San Bernardino Mountains in the north to Baja California in the south and the Sonoran and Mojave Deserts in the east.

Special-status species. Plant and animal species that are listed by federal, state, local governments, or recognized on organization lists (such as the California Native Plant Society or Audubon Society) and sufficiently rare that they require special consideration and/or protection. All special-status species are considered under CEQA; impacts to state/federally listed species require permits from state/federal agencies.

Vegetation community. A group of plant species that occupy the same area at the same time, and are associated with a particular group of animal species.

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SECTION 8.3 SCENIC RESOURCES

Introduction

This section describes the existing conditions and regulatory framework related to scenic resources in the County of Ventura. Aesthetic surroundings are an important determinant in quality-of-life considerations. Evaluating aesthetic resources in a planning context is influenced by their scenic beauty elements, the distances from which they can be seen, and the sensitivity of the observer (BLM Visual Resource Handbook 1986). From the coastline to the forested mountains of the north, the county contains aesthetic features that continue to attract visitors and provide pleasure to residents. Conservation of these resources, and visual access to them, is a goal of the County. Conservation of aesthetic resources is most critical where they will be frequently viewed, such as in proximity to a highway or a residential area. From panoramic views of the Santa Monica Mountains in the south to northern vistas of the Topa mountain range in the Los Padres National Forest and scenic views of coastal beaches and cliffs in the west, Ventura County offers a variety aesthetic resources.

Major Findings

- The diversity of scenic resources is reflected in the four physiographic provinces that occur in the county, which include: Coastal Plain and Valleys, the Western Transverse Ranges, the Cuyama Badlands, and the Channel Islands.
- 54 percent of the county's lands are comprised of protected local, state, or federal open space areas (which may have varying levels of protected status and access).
- 62 percent of the county's roads are county eligible scenic highways, which require specific protection measures to maintain visual quality within each highway's scenic corridor.
- The majority of the eligible county and eligible and designated state scenic highways are located in the southern half of the county.
- The Ojai Area Plan includes the most designated Scenic Resource Areas, and the Piru Area Plan includes the second highest amount of scenic resource areas.
- The Ojai Area Plan has the most protective goals, policies, and programs among the County's area plans.
- Four of the County's eight (non-coastal) Area Plans include designated Scenic Resource Areas.

Existing Conditions

General Conditions

The aesthetic character of Ventura County includes many scenic areas and natural features that are recognized as unique aesthetic resources. Most of these are found in the varied topography, exposed rock formations, unique coastline, beaches, variety of vegetation communities, and lakes and rivers of the county. The physiographic (e.g., landform, relief, associated vegetation, water bodies) features of the county have a strong influence on the aesthetic features of the natural landscape. The county ranges in elevation from sea level on the southwest to 2,692 meters (8,831 feet) above sea level at its northern

border on Mount Pinos, and is comprised of five physiographic regions, briefly described below. More than half (54 percent) of the county's lands are in some form of protected open space from either county, state park, or federal entities (which may have varying levels of protected status and access).

For purposes of evaluating potential impacts to scenic resources within the unincorporated areas, the county considers the aesthetic qualities associated with lakes, beaches, dunes, rivers, creeks, bluffs, mountains, ridgelines, hillsides, native habitat (e.g., wetlands, oak woodlands, and coastal sage chaparral habitat), and rock outcroppings. Furthermore, the scenic resource must be visible from a public viewing location as incorporated by the Scenic Resource Protection Overlay Zone of the Non-Coastal Zoning Ordinance. (ISAGs, 2011).

Coastal Plain and Valleys

The coastal plain and valleys physiographic region is a broad, flat distributary delta that has been extensively modified by agricultural and urban development for over 200 years. This region includes the Oxnard Plain, lower Ventura River Valley, Rincon Coast, and the Santa Clara River Valley. Long-range views of this region can be seen from Highway 126.

Western Transverse Ranges

This region includes the western portion of the Santa Monica Mountains, Santa Susana Mountains, and Simi Hills. These mountains are rugged and have high relief, ranging from sea level along their southern edge to 948 m (3,111 ft.) on Sandstone Peak, immediately south of Boney Mountain, both located within Ventura County. Sandstone Peak can be viewed from both Highway 1 and U.S. 101.

Cuyama Badlands

The Cuyama Badlands is a high desert region in northwestern Ventura County. The topography is rugged with steep eroding cliffs on which few plants grow, hence the name "badlands". The non-marine sedimentary strata are quite colorful, with the banding of the sedimentary rock layers providing strikingly stark and colorful natural displays, ranging from buff to red to blue and green. Views of the Cuyama Badland features can be seen from Highway 166, which is located outside of Ventura County to the northwest.

Channel Islands

Two of California's eight Channel Islands occur within Ventura County: Anacapa Island and San Nicolas Island. Anacapa Island is made up of three connected landmasses, which are referred to as West Anacapa (the tallest, largest, and most rugged of the three), Middle Anacapa (long and narrow with a generally flat mesa top), and East Anacapa (which is similar to Middle Anacapa). East Anacapa has a lighthouse and campground at its eastern end, near Arch Rock, a characteristic landmark. Anacapa Island is the easternmost of a chain of islands forming the northern Channel Islands, and occurs east of the largest of the four islands, Santa Cruz Island. The islands can be viewed from multiple locations along Highway 1.

Scenic Resource Areas

To protect some of the county's most distinctive aesthetic resources, the Area Plans for Lake Sherwood, Oak Park, the Ojai Valley, and Piru recognize the mountain ridgelines in these areas as worthy of conservation. Likewise, the viewsheds of Lake Sherwood, Lake Piru, Lake Casitas, and Lake Matilija have all been designated as Scenic Resource Areas. These viewsheds include the areas around the lake and extend to the highest ridgeline surrounding each of the lakes. Figure 8-7 depicts the Scenic Resource Protection Overlay Zone in Ventura County, which includes the visual resources in the Ojai and Thousand Oaks areas and around the prominent lakes.

The criteria used to determine which areas are worthy of special consideration and regulation are set forth in the Scenic Resource Area Criteria Matrix (Ventura County General Plan Resources Appendix), and include the following:

- Viewable or accessible from a road
- Absence of major residential development
- Accessible for recreational use
- Percentage of land with steep slopes
- Watershed areas
- Dense vegetation cover (all types)
- Stands of trees
- Abundance of wildlife
- Open space designation
- Percentage of land in National Forest or other government ownership

Those areas which meet the criteria are known as Special Resource Areas and are depicted in Figure 8-7. Scenic Resource Areas consist of certain lakes and their viewsheds, and state and county designated scenic highway corridors.

Lakes

The areas surrounding lakes often exhibit a variety of vegetation, and contain sensitive habitats where many oaks, alders, maple trees and many other native plants grow. Lakes are usually surrounded by steep slopes, which make them sensitive to the forces of nature if greatly disturbed by wildfire, severe weather, or earthquakes. Lakes are also thought of as central foci for people who enjoy these areas as recreational and educational areas. Based on the criteria referenced above, four lakes in Ventura County were determined to be worthy of special protection as a Scenic Resource Area. The four lakes are Lake Casitas, Lake Matilija, Lake Piru and Lake Sherwood. The Scenic Resource Area of these four lakes includes the area encompassing the lakes and the viewshed extending from the lakes to the highest ridgeline surrounding the lakes, excluding land designated as Existing Community.

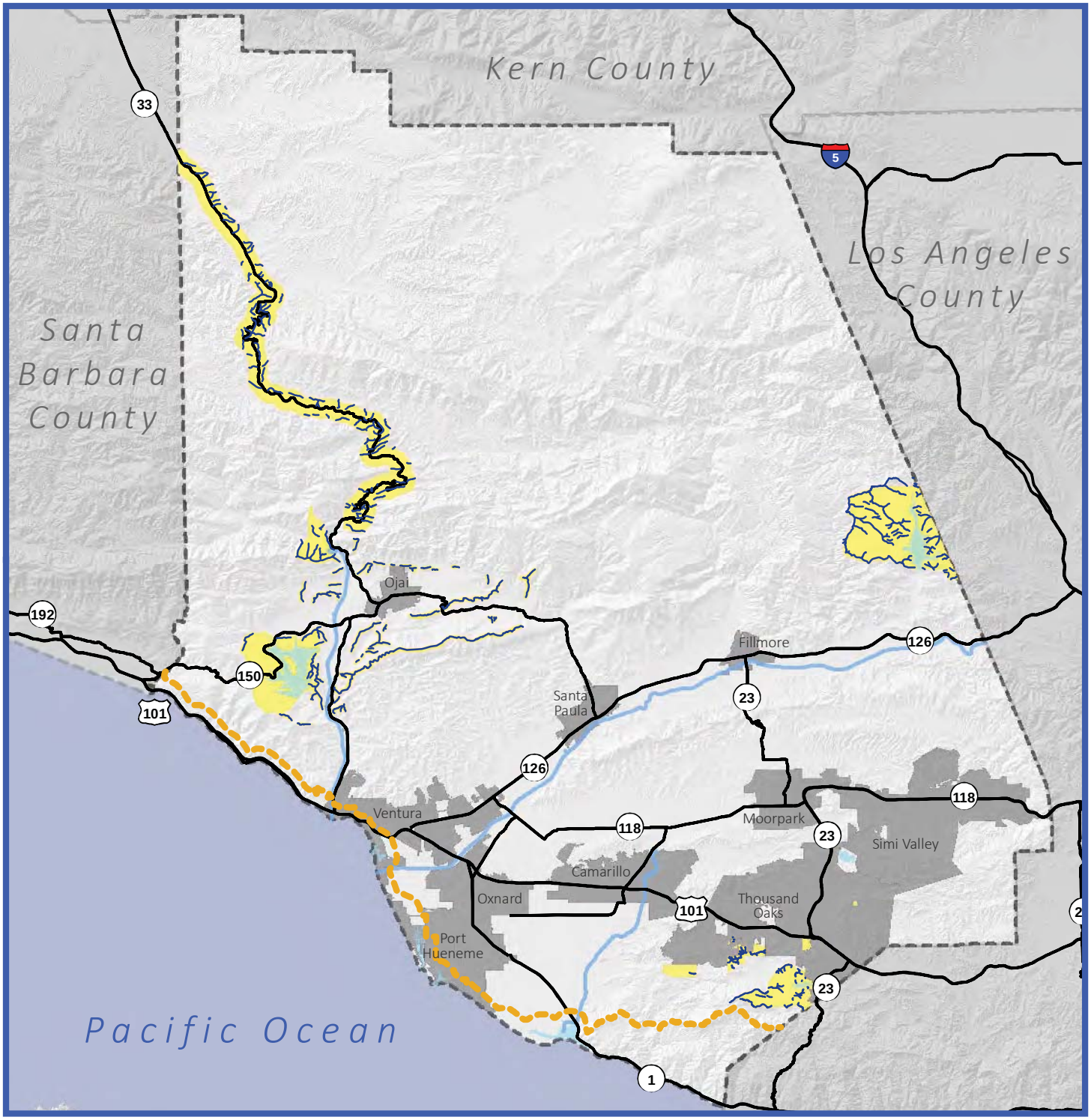

Figure 8-7:
Scenic Resource Areas

Map Date: November 20, 2017

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

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- Scenic Resource Protection Overlay Zone
- Prominent Ridgelines
- Major Waterways
- Water Bodies
- Coastal Zone Boundary
- Major Roadways
- Cities

Scenic Highways

There are many state and county highways eligible for official designation as "scenic" through the State of California Transportation Department (Caltrans) California Scenic Highway Program (see Figure 8-8). Examples of State eligible routes include Highway 126, located in the southern part of the county, and Highway 33, located in the northern half of the county. Highway 33 (Jacinto Reyes Scenic Byway) is in the Los Padres National Forest and was designated scenic by Caltrans in 1988. Portions of the highway had been previously designated scenic in 1972. The scenic designation applies to 40 miles of Highway 33 that wind through the coastal mountain range at Pine Mountain Summit, from 6.4 miles north of State Highway 150 to the Santa Barbara County line. The scenic vistas visible from this route include pine forests, semi-desert vegetation, and views of the Cuyama and Lockwood Valleys. In the southern half of the county, the sections of Highway 1 and U.S. 101 along the coast are state eligible and offer outstanding views of the Pacific Ocean, as well as the foothills and mountainous areas on the east side of these highways.

Eligible scenic highways in the southern portion of the county include Santa Ana Road and Creek Road, which occurs on the west and east sides of Highway 33, respectively. The southern portion of the County contains numerous eligible scenic highways; some of them include: Highway 23, Highway 118, and Highway 101.

Area Plan Scenic Resources

In addition to viewsheds of lakes and scenic highways designated as Scenic Resources Areas as discussed above, there are Scenic Resource Areas that are identified in some area plans. The criteria used to determine these scenic resources and the policies governing development vary from area to area.

Piru Area Plan

The Piru Area Plan includes the area in the northeastern corner of the county. State Highway 126, Main Street and Center Street, Piru Canyon Road, Guiberson Road, and Torrey Road, are designated as Local Scenic Roads. Discretionary projects located within the viewshed of a Local Scenic Road are required to comply with development standards related to scenic roadways as set forth in the Area Plan. The viewshed to the highest ridgeline surrounding Lake Piru is designated as a Scenic Resource Protection Zone. The area immediately surrounding Lake Piru includes steep slopes with a variety of vegetation, and geologic features. Piru Canyon Road follows and offers views of Piru Creek, which flows southwest from the Lake and flows along the east side of the community of Piru. The community of Piru is located in a valley, from which views of ridgelines can be seen to the north and south.

Thousand Oaks Area Plan

The area covered by the Thousand Oaks Area Plan is located west of the Oak Park Plan area, and North of the Santa Monica Mountains. It contains multiple local scenic highways and one highway (U.S. 101) that is an "Eligible County Scenic Highway" under the State Scenic Highways Program.

Lake Sherwood/Hidden Valley Area Plan

The Lake Sherwood/Hidden Valley Area Plan is located south of the City of Thousand Oaks and is bounded on the east by the Los Angeles County borderline. It includes views of the area surrounding Lake Sherwood and the Santa Monica Mountains.

Ojai Valley Area Plan

The lands included in the Ojai Valley Area Plan are located in the western part of the county, bordering Santa Barbara County on the west. This Area Plan includes a Scenic Overlay Protection Zone, and the ridgelines to the north of Ojai are considered part of the Scenic Resource Protection areas identified in the County's General Plan. Lake Casitas is included in the Protection Zone and can be seen from Highways 33 and 150.

Other Scenic Resources by Area Plans

The Saticoy, Coastal, North Ventura Avenue, El Rio/Del Norte and Oak Park Area Plans have no Scenic Resource Areas designated within their Planning Area boundaries. However, they all contain references and policies related to the protection of scenic resources.

Regulatory Setting

Scenic resources in the county are managed by a complex network of state and local regulations. At the state level, scenic resource protection is regulated by the State Scenic Highways Program, for highway corridors that are eligible or classified as scenic resources. Along the coast, scenic resources are regulated by the Coastal Act and the Local Coastal Plan. At the local level, management of scenic resources is regulated by the County's General Plan and, where applicable, County Area Plans.

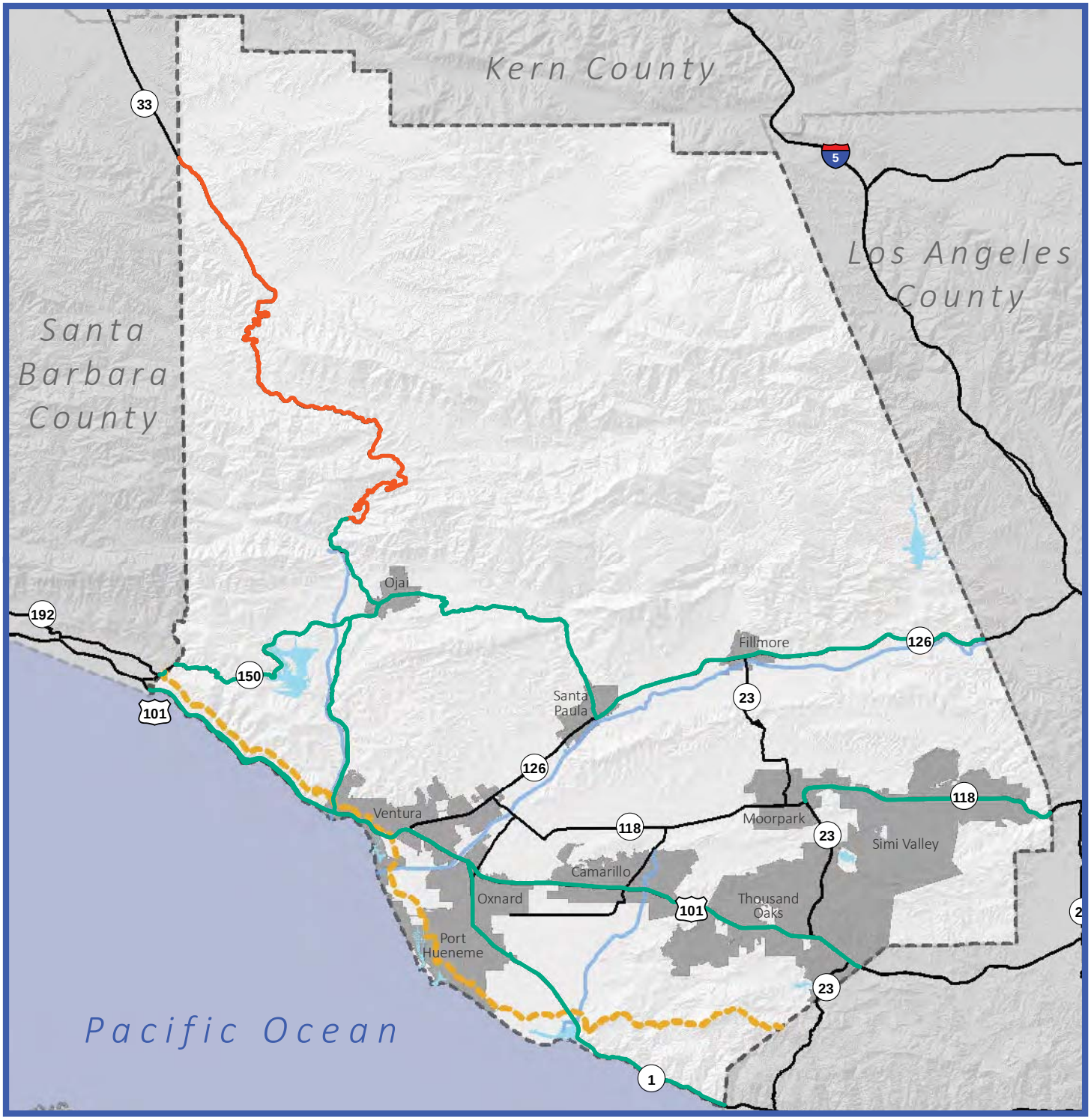
State

State Scenic Highways Program

The State has adopted legislation (Division 1, Chapter 2, Article 2.5 of the Streets and Highways Code) governing the application of the designation "State Scenic Highway." In order to receive that designation, the local jurisdiction must follow the process described below. County Scenic Highways can achieve State recognition by following the same process, save for appearing on the Master Plan of State Highways Eligible for Official Scenic Highway Designation. This program is administered by the California Department of Transportation (Caltrans).

The criteria below were used in selecting the prospective scenic highway routes depicted on the Scenic State Highway Map (Figure 8-8).

- The highway transects areas of extraordinary scenic value,
- The highway offers typical views that represent the variation in scenic factors available within the jurisdiction.
- If possible, all principal landscape and topographical type areas should be represented in the system.
- Routes of historic significance which connect places of interest should be considered even though the route is of marginal scenic value.
- The number of times a route has been suggested as a scenic highway in other plans and studies.
- The degree to which a route can be integrated into a system of "loops" or continuous scenic drives.



Ventura County 2040 General Plan

Figure 8-8
Scenic State Highways

Map Date: July 19, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

Scenic Highway Status

- Official State
- Eligible State
- Coastal Zone
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

- Whether a route connects the scenic highway systems of adjoining jurisdictions.
- The general attractiveness of the route, including the variety and diversity of its viewscape.
- The extent to which the route supports other General Plan elements or plans, such as the open space, conservation, recreation, circulation, bicycle, and parks plans.

Figure 8-8 depicts the county's eligible and designated scenic highways. The State Scenic Highways, both "Designated" and "Eligible," are as depicted on the Master Plan of State Highways Eligible for Official Scenic Highway Designation.

Coastal Act

§ 30251. "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of the surrounding area and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the [State] Department of Parks and Recreation and by local government shall be subordinate to the character of its setting."

§ 30254. "New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state or nation, public recreation, commercial recreation and visitor-serving land uses shall not be precluded by other development."

Local

2005 Ventura County General Plan

The General Plan covers scenic resources in Chapter 1, Resources. Section 1.7 includes goals, policies, and programs related to scenic resources. The following Area Plans also contain applicable goals and policies related to scenic resources:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- North Ventura Avenue Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for scenic resources. These can be found in Section 6. Scenic Resources.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance contains multiple provisions that require a coastal development permit, as well as a development plan for develop that occurs in highly scenic areas.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates scenic resources through Section 8109-4.1 Scenic Resource Overlay Protection Zone

Local Scenic Highway Protection Program

The procedure for achieving official designation of scenic highways includes the requirement that the local jurisdiction(s) prepare and adopt a program to protect and enhance the appearance of the scenic corridor. The elements of that program are described as follows:

- Regulation of land use and density of development.
- Detailed land and site planning.
- Control of outdoor advertising.
- Careful attention to and control of earthmoving and landscaping.
- County design review for the design and appearance of structures and equipment.
- The above referenced protection measures, which are to be in the form of ordinances or included in the general or specific plans, shall apply to the area of land within the scenic corridor boundaries and route limits.
- These ordinances can be new or existing, but must meet the five criteria in Section 261 of Streets and Highways Code as listed above.

Scenic Resource Areas

The area within ½ mile of an adopted County or State Scenic Highway that is designated Open Space, Agricultural or Rural on the Land Use Map of the Goals, Policies and Programs, or the parcels that are contiguous to an adopted County or State Scenic Highway that are designated Urban, Existing Community, or State and Federal Facilities on the Land Use Map of the Goals, Policies and Programs, are deemed Scenic Resource Areas and are depicted on the Scenic Resource Areas Map (Figure 8-7). Scenic Resource Areas are subject to the provisions and standards of the Scenic Resource Overlay Zone set forth in the Non-Coastal Zoning Ordinance.

Scenic Resources Areas are subject to the Scenic Resource Overlay Zone of the Non-Coastal Zoning Ordinance, which is designed to preserve, protect and enhance the county's scenic resources through the regulation of discretionary development that may adversely affect these resources. The provisions of the

overlay zone apply to Scenic Resource Areas depicted on the Resource Protection Map (Figure 8-7) of the Resources Chapter of the General Plan Goals, Policies and Programs, or Scenic Resource Areas identified in an Area Plan.

Key Terms

Barranca. A deep gully or arroyo with steep sides.

County Eligible Scenic Highway. The scenic corridor through which the highway passes has consistent scenic, historic or aesthetic value during all seasons based on evaluation criteria established by Caltrans.

Local Scenic Road. As designated within the Piru Area Plan, roads with this designation shall be reviewed for compliance with specific criteria of Policy 1.3.2.4 of the Piru Area Plan.

Physiographic region. A geographic region in which climate and geology have given rise to an array of landforms different from those of surrounding regions. Those landforms influence the amount of visual quality inherent in a natural landscape**.**

Scenic Corridor. Lands adjacent to eligible or designated county or state scenic highways that are within view of the subject road.

Scenic Resource Areas. Areas that are designated to protect distinctive scenic resources in the county, and are based on established criteria in the current Ventura County General Plan Resource Appendix.

State Eligible/Designated Scenic Highways. Scenic highways are established to protect and enhance the natural scenic beauty of California state highways and adjacent corridors, through special conservation treatment. To be eligible state highways must be nominated and subjected to an evaluation process. Highways that meet those criteria are officially designated after a local government adopts a scenic highway corridor protection program.

Viewshed. The total landscape seen, or potentially seen from a logical part of a travel route, use area, or waterbody.

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SECTION 8.4 MINERAL RESOURCES

Introduction

This section summarizes known and potential mineral and petroleum resources in Ventura County.

Major Findings

- The per-capita demand for aggregate in the Ventura County Production Consumption Region is approximately 6 tons per year and similar to the Statewide average.
- The 50-year (2011-2050) demand for aggregate in Ventura County Production Consumption Region is estimated to be 298 million tons.
- The permitted aggregate reserves in the Ventura County Production Consumption Region are currently 168 million tons (56% of the 50-year demand).
- In 2015, Ventura County produced 8,101,140 barrels of oil.
- In 2015, Ventura County produced 8,064,384 thousand cubic feet of natural gas.
- In 2015, Ventura County ranks third in State petroleum production.

Existing Conditions

Mineral Resources

Minerals are defined as a naturally occurring, inorganic elements (single or compound) that serve as the elementary units (ingredients) for rocks. Ore is the naturally occurring material from which mineral or minerals of economic value can be extracted. Mineral resources in Ventura County consist of aggregate resources, more commonly known as construction grade sand and gravel. The county also contains petroleum resources in the form of oil and gas deposits (discussed below). There are other mineral resources extracted in Ventura County, but they are not designated as significant by the state nor do they play a major role in the county's economy.

The State Geologist investigates and identifies lands in California underlain by mineral resources. Some of these lands are referred to the State Mining and Geology Board (SMGB) for designation as a Mineral Resource Zone (MRZ) based upon the known or inferred presence of mineral resources. The following MRZ categories are used by the State Geologist in classifying the state's lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to the SMGB.

MRZ-1: Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present (2a) or where such resources are inferred (2b).

MRZ-3: Areas containing known mineral deposits that may qualify as mineral resources (3a) or areas containing inferred mineral deposits that may qualify as mineral resources (3b). Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2 category.

MRZ-4: Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use

considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.

Figure 8-9 delineates the MRZ lands designated in Ventura County.

Priority is given to construction-related materials and in particular those minerals used in making Portland Cement Concrete (PCC). The reason for this is the role that construction grade aggregate (sand, gravel, and crushed rock) plays in the economy, particularly the building and paving industries. PCC grade aggregate is emphasized because of its demand and scarcity.

Aggregates (sand and gravel) and petroleum (oil and gas) are the primary geological resources in Ventura County. Asphalt, clay, expansive clay, gypsum, limestone and phosphate are other resources with commercial value, but do not contribute significantly to the physical development or economy of the county. The State classifies aggregate mineral resources into Production Consumption (P-C) Regions Ventura County constitutes a single P-C Region.

The Oak Ridge Hills extend westward from the Los Angeles County line from Simi Valley to the area between the cities of Moorpark and Fillmore. Several areas along this trend have been designated as MRZ-2 lands by the SMGB. Aggregate is extracted from the ancient streambed deposits that crop out in theses hills at several existing mining facilities. These mining facilities are the primary source of aggregate in Ventura County.

The County has determined that lands classified MRZ-2 (or otherwise designated as areas of statewide or regional significance for mineral resources) should be protected from incompatible land uses that would inhibit extraction of or access to the available mineral resources. The MRZ-2 lands are identified in the County Non-Coastal Zoning Ordinance with a Mineral Resource Protection (MRP) Overlay.

In 2013, total California production of construction aggregate (sand and gravel and crushed stone) was 132.0 million tons, valued at $1.24 billion. The two top-producing minerals were construction grade sand and gravel and Portland cement. The per-capita demand for aggregate in the Ventura County P-C Region is approximately six tons per year and similar to the statewide average. The 50-year (2011-~~2050~~2060) demand for aggregate in the Ventura County P-C Region is estimated to be 298 million tons. The permitted aggregate reserves in the Ventura County P-C Region are currently 168 million tons, or just ~~(~~56 percent~~%~~ of the 50-year demand~~)~~.

In addition to the scarcity of aggregate reserves in Ventura County, the cost of transporting the material will likely impact demand in the future. The California Geological Survey ~~, Aggregate Sustainability in California (2012)~~ reported that transportation costs plays a major role in the cost of aggregate ~~to~~paid by ~~the~~ consumers. (Aggregate Sustainability in California, 2012) ~~Aggregate is a low-unit-value, high-bulk-weight commodity. If nearby sources do not exist, then transportation costs may significantly increase the cost of the aggregate by the time it reaches the consumer.~~ Throughout California, aggregate haul distances have been gradually increasing as local sources of aggregate diminish. In addition, ~~*Based on a November 2017 article in T*~~*the Los Angeles Times* reported that some builders in the greater Los Angeles area have opted to purchase aggregate transported on carrier ships because shipping can sometimes be less expensive than trucking. Such transportation cost trends may impact how local sources of aggregate are used and whether the importation of aggregate from more distant locations may increase.

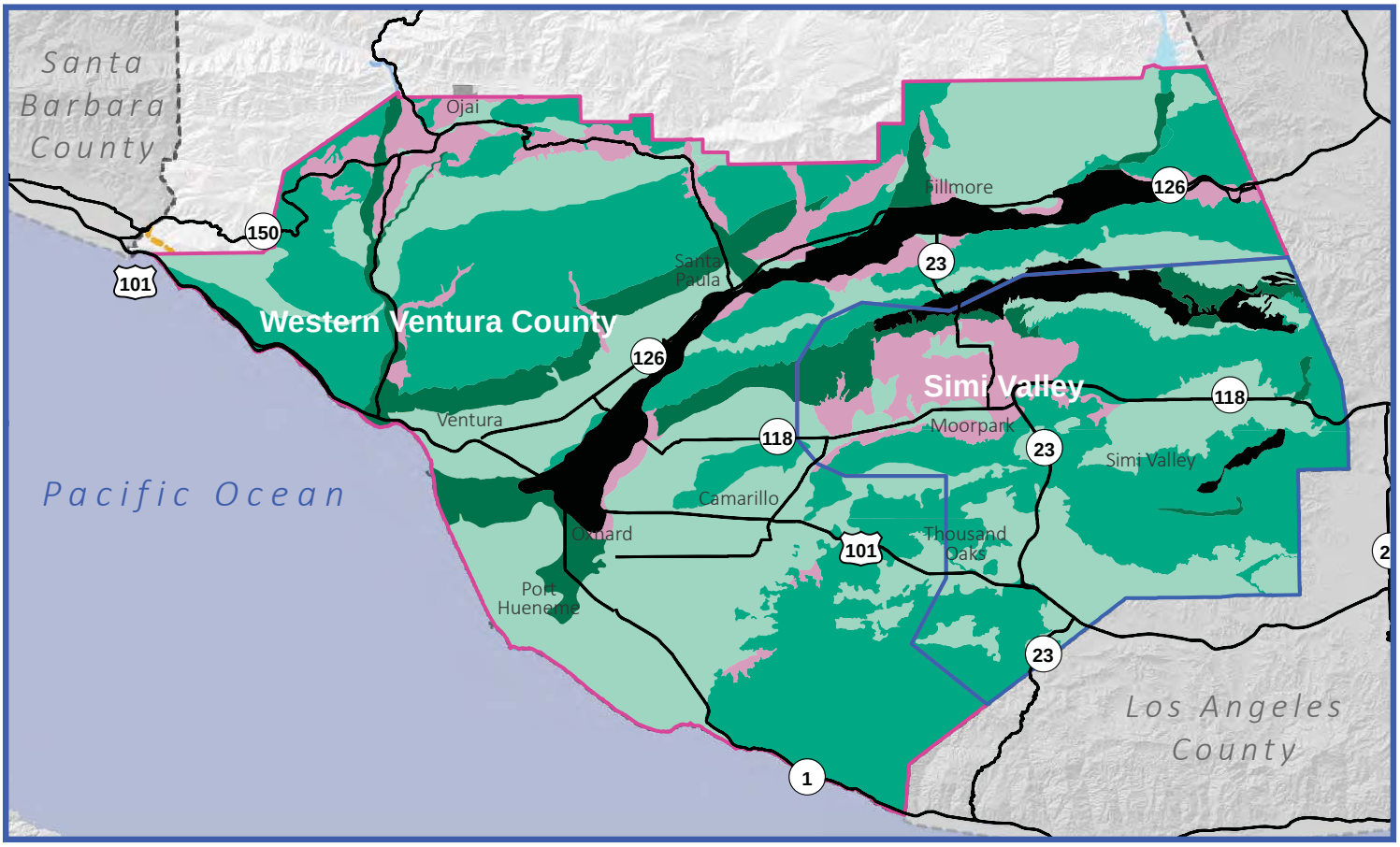


Figure 8-9
Mineral Resource Zones

Map Date: July 19, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Production Consumption Regions
- Simi Valley
- Western Ventura County

Aggregate Resource
- MRZ - 1
- MRZ - 2
- MRZ - 3
- MRZ - 3a
- MRZ - 4

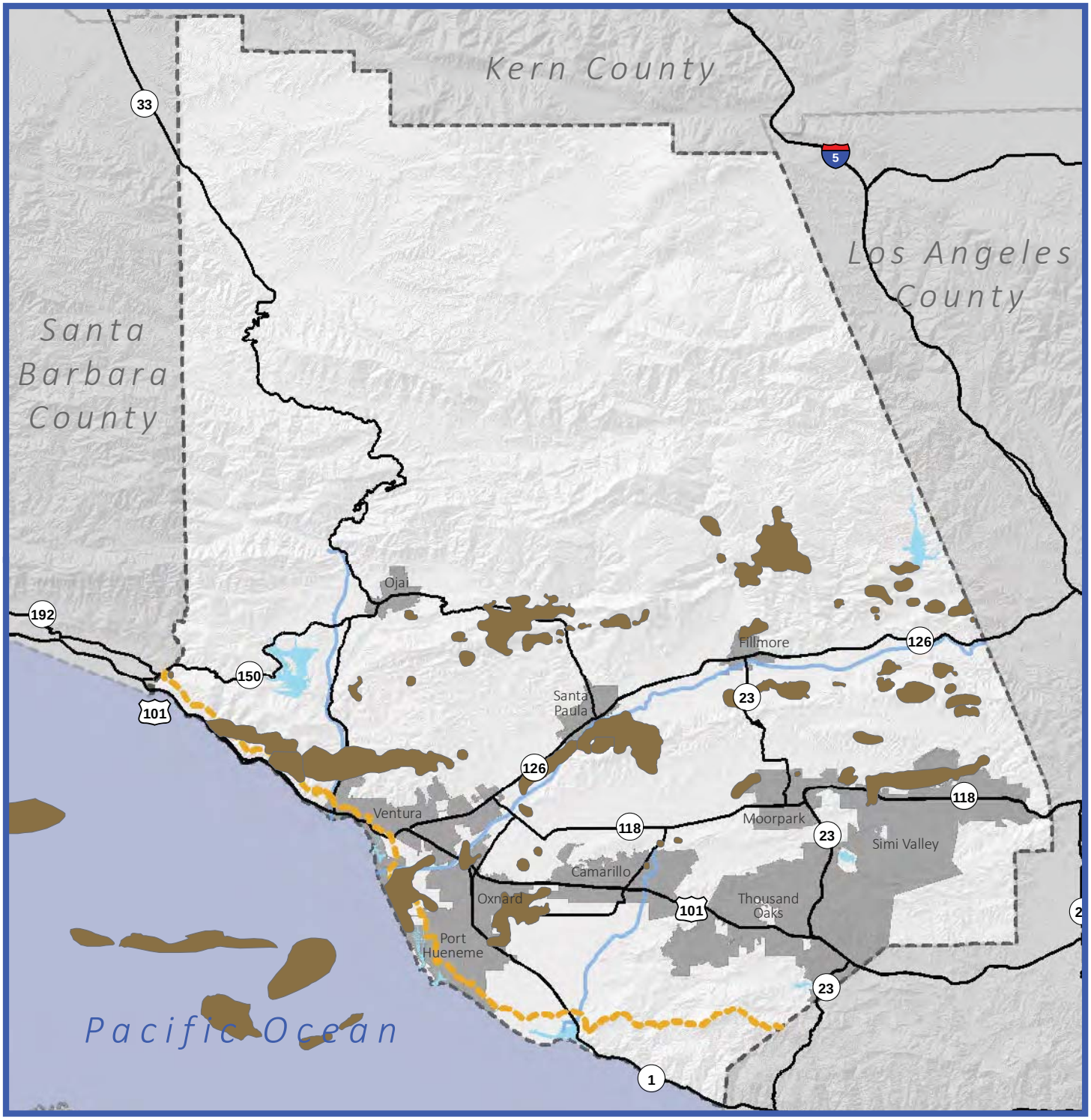
- Major Roadways
- Coastal Zone Boundary
- Major Waterways
- Water Bodies
- Cities

Petroleum Reserves

Petroleum reserves are defined as quantities of petroleum that are anticipated to be commercially recovered from known accumulations from a given date forward. Petroleum production accounts for approximately 75 percent of the total dollar value of mineral production of Ventura County. In 1988, petroleum production activities constituted 2.7 percent of the county's total economy, but by 2000 had decreased to 1.0 percent due to growth of other sectors in the county economy. In 2015, oil production in Ventura County reached 9,121,781 barrels. This level of production represents a 42 percent decrease in production from 1987 levels (15,659,398 barrels). The county's oil reserves are estimated by the State Division of Oil and Gas and Geothermal Resources (DOGGR) at 246,141,000 barrels.

The county's petroleum reserve areas are located in the northwest, northeast, central and south-coastal quadrants of the county, as well as offshore (see Figure 8-10). Production within three miles of the coast is under the jurisdiction of the State; beyond three miles, production is under federal jurisdiction. Crude oil prices influence the level of production and well-drilling activity in the county's oil fields. When prices are low, wells are placed in idle status (i.e. not in operation) and few or no new wells are drilled.

Ventura County has a number of oil reserves that are known as "heavy oil" where normal pumping methods are insufficient to bring the crude up to the surface. These heavy oil reserves require enhanced oil recovery (EOR) methods of production. The primary method of producing heavy oil is from cyclic steaming. The heat from injected steam lowers the viscosity of the heavy crude and allows it to be pumped to the surface. Another EOR method used in Ventura County is water flooding. This method (primarily used in the Ventura Avenue Oil Field) involves injection of water into an oil reservoir to increase or maintain reservoir pressure.



Ventura County 2040 General Plan

Figure 8-10
Petroleum Resources

Map Date: July 19, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

Petroleum Fields
Coastal Zone
Major Roadways
Major Waterways
Water Bodies
Cities

Regulatory Setting

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the California legislature to promote the conservation of the state's mineral resources, ensure adequate reclamation of mined lands, and prevent or minimize the negative impacts of surface mining to public health, property and the environment. Among other provisions, SMARA requires the State Geologist to classify land in California into Mineral Resource Zones (MRZs) according to the known or inferred mineral potential of the land as determined by geological study. Upon completion of each study, the State Geologist submits the mineral land classification report to the State Mining and Geology Board (SMGB). The SMGB designates certain lands as MRZ-2 where they are underlain by mineral deposits of Statewide significance. The designation information is transmitted to local governments for incorporation into general plans and implanting zoning ordinances. Local agencies can serve as a "Lead Agency" under SMARA if they have adopted a surface mining ordinance in conformance with SMARA requirements. As a Lead Agency, a local government can approve Reclamation Plans and conduct inspections of mining facilities.

SMARA applies to anyone engaged in surface mining operations in California, including government agencies, and also applies to federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. Regulated mining activities include prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials.

The California Department of Conservation, Division of Mines and Geology (DMG) "Mineral Land Classification Project" publishes mineral resource maps for land use planning and mineral conservation, with updates approximately every 10 years.

The four MRZ categories are:

- MRZ-1: Areas of No Mineral Resource Significance
- MRZ-2: Areas of Identified Mineral Resource Significance
- MRZ-3: Areas of Undetermined Mineral Resource Significance
- MRZ-4: Areas of Unknown Mineral Resource Significance

The distinction between the MRZ-1 and MRZ-4 categories is important because MRZ-4 does not imply little likelihood for the presence of mineral resources, but rather a lack of knowledge regarding mineral occurrence. Further study could determine the reclassification of land in MRZ-4 areas to another category.

Reclamation Plans

Under SMARA, there are three requirements to operate a mining facility in California including:

1. A permit to mine granted by local land use permitting authority

2. A Reclamation Plan approved by the SMARA Lead Agency

3. A Financial Assurance adequate to reclaim the mining site in conformance with the approved Reclamation Plan.

A Reclamation Plan must delineate the configuration of the final reclaimed surface of the mining site, describe the measures taken to revegetate the site, and how the site will be restored to an alternate end use in conformance with the SMGB Reclamation Regulations. All reclamation plans must be prepared in conformance with the provisions of the SMARA (Section 2772 and Section 2773) and state regulations (CCR Sections 3500-3505 and 3700-3713).

The State requires that a Mining Report be submitted annually by each mine operator and include information about the amount of land disturbed during the previous year, acreage reclaimed during the previous year, and any amendments to the mine's reclamation plan.

Local

2005 Ventura County General Plan

The General Plan covers mineral resources in Chapter 1, Resources. Section 1.4 includes goals, policies, and programs related to mineral resources. The following Area Plans also contain applicable goals and policies related to mineral resources:

- El Rio/Del Norte Area Plan;
- Ojai Valley Area Plan; and
- Piru Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for mineral resources. These can be found in Sections 3a. Mineral Resources-Aggregate and 3b. Mineral Resources-Petroleum.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates mineral resources through Section 8104-7.2 - Mineral Resources Protection (MRP) Overlay Zone.

Key Terms

Minerals. Minerals are defined as naturally occurring, inorganic, homogenous solids with a definite chemical composition and an ordered atomic arrangement.

Ore. Ore is the naturally occurring material that mineral or minerals of economic value can be extracted**.**

SMARA. The Surface Mining and Reclamation Act of 1975 was enacted to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property and the environment.

Mineral Resource Zone (MRZ). A Mineral Resource Zone indicates the significance of mineral deposits present or the likelihood of their presence. Zones are designated 1-4 according to their known or inferred mineral potential**.**

PCC. Portland Cement Concrete.

Mineral Resources. Aggregates **(**sand, gravel, and crushed rock).

PCR. A Production Consumption Region is one or more aggregate production districts (a group of producing aggregate mines) and the market area they serve, and sometimes cross county boundaries.

Petroleum Resources. Petroleum resources are defined as those quantities of petroleum which are anticipated to be commercially recovered from known accumulations from a given date forward.

DOG. California Department of Oil and Gas DOGGR. Division of Oil, Gas and Geothermal Resources.

EOR. Enhanced oil recovery methods, such as pressure, heat or chemicals used to release oil.

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Persons Contacted

Brian R. Baca. County of Ventura, Resource Management Agency Planning Division, Commercial and Industrial Permits Manager.

SECTION 8.5 ENERGY RESOURCES

Introduction

This section describes the existing conditions and regulatory framework related to energy resources in Ventura County. Energy resources are important natural resources that support the expansion of the region's economic base, its agricultural sector, and infrastructure capacity. Energy resources described in this section are limited to: onshore and offshore oil and gas production and electrical generation from renewable sources within Ventura County.

Major Findings

- No new offshore oil and gas development is anticipated within Ventura County or nearby federal waters due to regulation and opposition from the California State Lands Commission (SLC);
- Onshore oil production in Ventura County accounts for four percent of overall crude oil production in California;
- Offshore oil production in Ventura County accounts for 0.1 percent of overall crude oil production in California;
- Onshore natural gas production in Ventura County accounts for four percent of overall natural gas production in California;
- Offshore natural gas production in Ventura County accounts for 0.1 percent of overall natural gas production in California;
- According to the California Energy Commission, hydroelectric and biomass facilities are currently the ~~only current~~leading sources of renewable energy generation in Ventura County. In 2014, renewable energy generation accounted for 25,236 MWh, or approximately 1.9%, of the 1,372,930 MWh of total energy generation in Ventura County.

Existing Conditions

Oil

There are currently 57 oil companies operating in Ventura County under the authority of 135 conditional use permits granted by the County to authorize oil and gas activities. According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), 9,121,781 barrels (bbl) of oil were produced onshore, and 260,943 bbls were produced offshore in Ventura County in 2015). This accounts for four percent of overall crude oil production onshore within the State of California and 0.1 percent of offshore production (Energy Information Administration [EIA], 2016). According to the U.S. Census Bureau, there were 431 employees working in Ventura County for the oil and gas extraction establishment in 2014.

According to DOGGR, 8,369 oil and gas wells have been drilled in Ventura County, and there are 2,450 active and 1,208 idle oil and gas wells in the couny. There are also 614 active water injection wells in the county. It is illegal to inject water into drinking water aquifers with less than 3,000 Total Dissolved Solids (TDS) without an exemption from the Environmental Protection Agency (EPA). In aquifers with a TDS

of 3,000 to 10,000 an EPA exemption is required where it is demonstrated that the water in question has no potential for future beneficial use. DOGGR identifies *active* oil and gas wells as those that have been drilled and completed, whereas an *idle* well is one that is not producing at a certain period but is capable of being reactivated. DOGGR classifies wells as *new* if they are recently permitted and still in the process of being drilled. Figure 8-11 shows the locations of active, idle, and new oil and gas wells in Ventura County as of May 2017.

Oil and gas is produced in Ventura County using both traditional and enhanced recovery techniques. In all cases, oil is recovered by collecting the fluid (oil and water) that flows into a wellbore through perforations in the well casing. In almost all wells in the county, the reservoir pressure is insufficient to cause this fluid to flow to the surface. Thus, most oil is brought to the surface through the use of a pumping unit. Enhanced recovery techniques serve to increase the flow of the fluid into the wellbore. These techniques include steam injection, water injection, and hydraulic fracturing. Steam injection is typically utilized in reservoirs considered to contain heavy crude oil.

There are several federal and state oil and gas leases offshore of Ventura County. Oil and gas produced from these leases are transported by pipeline to several onshore facilities within the county. These leases were developed with the construction of offshore platforms and a manmade drilling island. The facilities that send oil and gas onshore to Ventura County are:

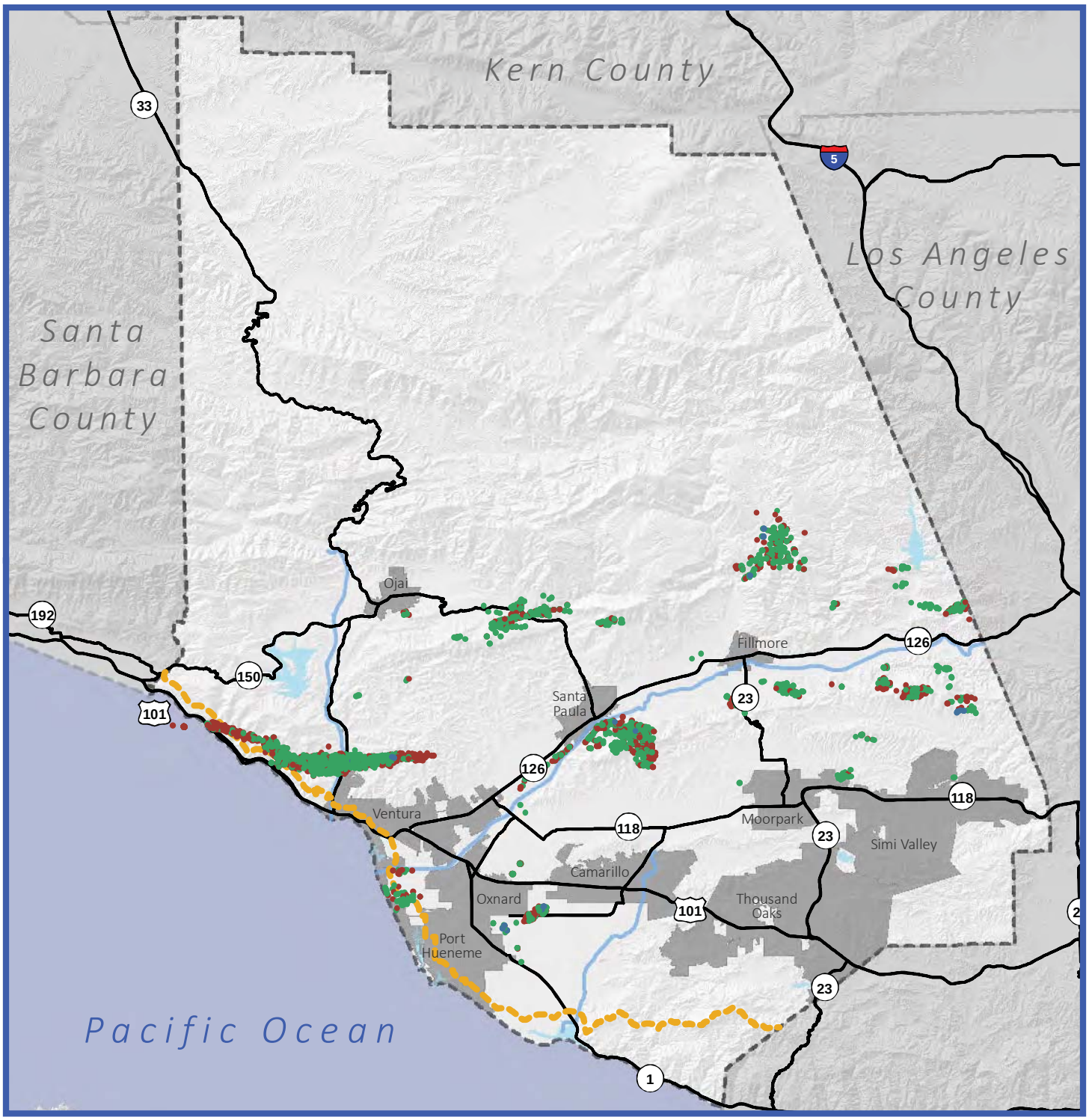
- Platform Gina
- Platform Gilda
- Platform Grace (currently not producing)
- Platform Henry
- Platform Hogan
- Platform Houchin
- Platform Hillhouse and its neighbors “A”, “B”, and “C”
- Rincon Drilling Island

The facilities listed above, with the exception of the Rincon Drilling Island, are located greater than three miles offshore within the federal Outer Continental Shelf (OCS). Due to the location of these offshore facilities, they are under the jurisdiction of the U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement and are not considered to be within the boundaries of Ventura County. The Rincon Drilling Island is a man-made island located within Ventura County and is under the jurisdiction of various state and local agencies.

Production from platforms Gina and Gilda is conveyed to the Mandalay Onshore Separation Facility located in the City of Oxnard. This facility processes the crude oil sent from the two platforms and sends any gas directly to the Mandalay Beach Electric Generating Station owned by Reliant Energy.

Production from Platforms Henry, Hillhouse, and “A”, “B”, and “C” is sent to the Rincon Oil and Gas Processing Facility. This facility exclusively processes oil and gas from OCS leases.

Production from Platforms Hogan and Houchin goes to the Pacific Offshore Operators Inc. facility in La Conchita. This facility exclusively processes oil and gas from OCS leases.



Ventura County 2040 General Plan

Figure 8-11: Oil and Gas Wells

Map Date: September 01, 2017

Source: California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR), DOGGR Wells Metadata (Table), May 15, 2017.

0 7.5 15 Miles

N

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Status

- New (38)
- Active (2,484)
- Idle (1,266)

Production from the Rincon Island is connected to the mainland by an elevated 2,700-foot-long causeway. Production is then piped to a two-phase (gas/emulsion) separator. Oil and water are separated and the oil is sent through a lease automatic custody transfer (LACT) meter at which point it is sold, and the gas is sent to a sales gas scrubber where it is sold to the Rincon Onshore Facility owned by Dos Cuadros Offshore Resources, LLC.

There was one oil refinery (i.e., the Oxnard Refinery) located in Ventura County. This facility was closed in December 2011(CEC, 2015). There are no other oil refineries located within Ventura County.

Gas

Natural gas is produced along with crude oil in Ventura County. According to the State of California's Division of Oil and Gas and Geothermal Resources (DOGGR), 8,593,807 thousand cubic feet (mcf) of natural gas were produced in Ventura County in 2015. This accounts for 0.004 percent of overall onshore natural gas production within the State of California (EIA, 2016).

The U.S. has an integrated transmission and distribution natural gas pipeline network that spans the lower 48 states. This network includes natural gas pipelines, compressor stations, delivery, receipt, and interconnection points, underground natural gas storage facilities, and liquefied natural gas import facilities. There are no interstate natural gas pipelines within Ventura County, but there are several intrastate pipelines within the county that support the natural gas pipeline network.

Offshore natural gas production in the State of California was 34,206 million cubic feet (MMcf) in 2014, Ventura County contributed 156 MMcf to that total (about 0.5 percent of the total).

Renewables

Statewide renewable energy sources include solar/photovoltaic (PV), geothermal, hydroelectric, wind, and biomass facilities. In 2014, renewable energy generation in Ventura County accounted for 25,536 MWh, or approximately 1.9%, of the 1,372,930 MWh of total energy generation (California Energy Commission [CEC], 2016). Biomass energy generation occurred at the Toland Landfill (operated by the Ventura Regional Sanitation District), Oxnard Wastewater Treatment Plan (operated by the City of Oxnard Wastewater Division) and Simi Valley Landfill (operated by WM Energy Solutions Inc.) and accounted for 23,379 MHh of energy generation. Hydroelectric energy generation occurred at the Springville Reservoir in Camarillo (operated by Calleguas Municipal Water District) and Santa Felicia Dam (operated by United Water Conservation District) and accounted for 2,157 MWh in energy generation. There are currently no large-scale solar/PV plants in Ventura County and the county does not have areas that are well-suited for such facilities (according to the National Renewable Energy Laboratory [NREL]). The County's "Build It Smart" program does, however, encourage installation of solar panel/PV systems on residential, commercial, and commercial projects. This includes providing references to incentives for existing building retrofits and new construction (e.g., California Solar Initiative, California New Solar Homes Partnership, federal tax credits, property tax exemptions).

Regulatory Setting

Federal

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing non-Federal hydropower projects. Licensing of hydroelectric under the authority of FERC includes input from State and Federal energy, environmental protection, fish and wildlife, and water quality agencies. The CECs Systems Assessment and Facilities Siting Division provides coordination to ensure that needed energy facilities are authorized in an expeditious, safe, and environmentally acceptable manner.

State

All Ventura County oil and gas wells (development and prospect wells) located onshore or offshore within three nautical miles of the coast line, located on state and private lands, are permitted, drilled, operated, maintained, plugged and abandoned under requirements and procedures administered by DOGGR. Additionally, DOGGR is the state agency responsible for issuing well stimulation technique permits to oil and gas operators utilizing hydraulic fracturing, acid fracturing, and/or acid matrix stimulation treatments. Currently, there are no active well stimulation permits for any wells located in Ventura County. Under the requirements of the California Public Resources Code, the California Energy Commission in conjunction with DOGGR is required to assess oil and natural gas resources on an annual basis or as necessary.

State tide and submerged lands include the area from mean high tide seaward to the three-mile boundary with the federal OCS. Development of oil and gas resources on existing leases in this area is subject to the regulatory authority of the State Lands Commission. The issuance of new oil and gas leases on state tide and submerged lands is currently restricted by the 1994 California Coastal Sanctuary Act, which prohibits new leasing for oil and gas extraction in State waters except: (1) in the event of a severe national energy supply interruption; or (2) when the State determines that state-owned oil or gas deposits are being drained by producing wells located upon adjacent Federal lands and the lease is in the best interests of the State. The SLC has not granted an offshore development lease in approximately 50 years, and it is anticipated that no leases would be granted in the future.

Local

2005 Ventura County General Plan

The General Plan covers mineral resources in Chapter 1, Resources. Section 1.7 (Mineral Resources) includes goals, policies, and programs related to petroleum resources (oil and gas) and aggregate resources (sand and gravel).

2016 Non-Coastal Zoning Ordinance

Section 8107-5 of the County's Non-Coastal Zoning Ordinance addresses oil and gas exploration and production. It outlines limitations, safeguards, and controls for exploration and production facilities and operations, with the intent of ensuring that development activities will be conducted in harmony with other uses and that the rights of surface and mineral owners are balanced.

Key Terms

The following key terms used in this chapter are defined as follows:

API Gravity — a measure of how heavy or light petroleum liquid is compared to water. If API gravity is greater than 10, the liquid petroleum it is lighter than, and floats on water; if less than 10, it is heavier than water and sinks. It is used to compare the relative densities of petroleum liquids.

Associated Gas – natural gas produced in association with crude oil.

Barrel (bbl) — a measure of volume for petroleum products in the United States. One barrel is the equivalent of 42 Unites States gallons, or 0.15899 cubic meters.

Development Well - a well drilled to a known producing formation in a previously discovered field.

Field — an accumulation, pool, or group of pools of hydrocarbons or other mineral resources that are subsurface. A hydrocarbon field consists of a reservoir with trapped hydrocarbons covered by an impermeable sealing rock, or trapped by hydrostatic pressure.

Heavy Crude Oil – crude oil with high viscosity and high specific gravity relative to light crude oil.

Injection Well – Wells that inject fluid or gas deep underground, also referred to as Underground Injection Control (UIC) wells. Injection well types nclude water disposal, gas storage, gas disposalsteam flood, pressure maintenance, air injection, water flood, and cyclic steam wells.

Light Crude Oil – crude oil with low viscosity and a low specific gravity relative to heavy crude oil.

Non-Associated Gas – gas produced in a gas field, not associated with crude oil production.

Prospect Wells – any well drilled for the purpose of securing geological or geophysical information to be used in the exploration or development of oil, gas, geothermal, or other mineral resources.

Well Stimulation Technique — Any treatment of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation. Well stimulation treatments include, but are not limited to, hydraulic fracturing treatments and acid well stimulation treatments. Well stimulation treatments do not include steam flooding, water flooding, or cyclic steaming and do not include routine well cleanout work, routine well maintenance, routine removal of formation damage due to drilling, bottom hole pressure surveys, or routine activities that do not affect the integrity of the well or the formation.

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SECTION 8.6 CULTURAL, HISTORICAL, PALEONTOLOGICAL, AND ARCHAEOLOGICAL RESOURCES

Introduction

The term "cultural resources" is most frequently identified with prehistoric (archaeological) or historic items. These can include prehistoric and historic districts, sites, structures, artifacts and other evidence of human use considered to be of importance to a culture, subculture, or community for traditional, religious, scientific or other reasons. Cultural resources in Ventura County include prehistoric aboriginal Indian sites, historic areas of occupation and activity, and features of the natural environment. Cultural resources also include non-renewable, nonmaterial resources such as cognitive systems (including meanings and values attached to items of material culture, biota, and the physical environment), religion and world views, traditional or customary behavior patterns, kinship and social organization, folklore, and so on.

Archaeological resources refer to the material remains (artifacts, structures, refuse, etc.) produced by human beings, whether intentionally or accidentally. The scientific study of these remains can lead to identification of activities, types of adaptation to the environment, and changes in activities and organization groups of people in the past experienced. Furthermore, these remains often have special significance to Native Americans, ethnic groups, special interest groups (e.g., avocational archaeologists), as well as the general public.

Historical resources refer to the material and nonmaterial expressions of human adaptations that characterized the post-contact (historic) period. These resources include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties, and documents and other sources of historical information, and objects of material culture. Also, more nonmaterial cultural qualities, such as folklore, social organization, and value systems, can be associated with these properties.

Paleontological resources refer to the fossilized remains of plant and animal life. In Ventura County, paleontological remains include examples from most of geological history, including the Paleozoic (600 to 225 million years ago), the Mesozoic (225 to70 million years ago), and the Cenozoic (70 million years ago to the present). Careful scientific study of fossilized life forms preserved in the sedimentary and metamorphic rocks of the Ventura County region can lead to identification of local paleo-environmental conditions and biological evolutionary trends. In addition, certain fossil remains are only found in isolated outcrops in Ventura County and are therefore of unique scientific interest.

Major Findings

- There are 1,637 prehistoric archaeological sites that have been documented within Ventura County, according to a 2016 Archaeological Records Search through the California Historical Resources Information System (CHRIS)-Southern Central Costal Information Center (SCCIC), at California State University, Fullerton.
- There are 282 historic sites that have been documented within Ventura County, according to a 2016 Historical Records Search through the CHRIS-SCCIC at California State University, Fullerton.

- There are 316 vertebrate fossil localities that have been documented within Ventura County, according to a 2016 Paleontological Record Search through the Natural History Museum of Los Angeles (NHMLAC).
- 36 historic sites are listed on the National Register of Historic Places. Among these, 10 are classified as districts, and 21 are buildings.
- One historic site is listed as a National Historic Landmark (Rancho Camulos).
- 46 historic sites are listed on the California Register of Historical Resources. Among these, 10 are classified as districts, and 25 are buildings.
- 14 historic sites are designated as California Landmarks.
- 177 historic sites are designated as Ventura County Historical Landmarks.
- Eleven historic sites are listed on the Ventura County Historical Points of Interest.
- 566 historic sites are listed asVentura County Sites of Merit.

Existing Conditions

Cultural/Historical/Paleontological/Archaeological Resources

Cultural resources in Ventura County includes an archaeological record encompassing at least 8,000 years of prehistoric settlement, from the rich Native American heritage of the Chumash people, to over two hundred years of history influenced by the Spanish, Mexican, Anglo-American, and many other immigrants who came to Ventura County.

Archaeological Resources

Ventura County is archaeologically and culturally significant and has one of the densest Native American populations in North America. Archaeological sites associated with the Ventureno Chumash exist throughout the county, particularly adjacent to existing and former natural water and food sources. Many Chumash sites have been located, and the potential for remaining undiscovered sites within the county is high (Ventura County General Plan: Goals, Policies and Programs 2015: 22).

Prehistoric Period

The Ventureno Chumash who have occupied the Ventura County area for at least 8,000 years, have a recognized chronology based on three time periods: The Early Period (ca. 8,000 B. C. - 1,200 B. C.), the Middle Period (1,200 B. C. - 1,100 A. D.), and the Late Period (1,100 A. D. – European Contact). The Chumash migrated to Ventura County around 8,000 B.C. and were linguistically distinct from their Chumash neighbors. They lived in matrilineal villages, called Rancherias by the Spanish (Grant Smith 1978:510).

The Early Period (ca. 8,000 B. C. - 1,200 B. C.) shows evidence of a well-developed hunter-gatherer subsistence and economic strategy, the utilization of land and marine resources, the gradual increase in population growth, and the implementation of social and behavioral practices (Grant 1978:519).

The Middle Period (1,200 B. C. - 1,100 A. D.) exhibited the sophisticated use of organizational technologies in the development of ocean-going vessels, the use of circular fishing hooks and fishing nets for the exploitation of marine resources. During this period, inland regions were becoming increasingly more populated, which brought about stable trade and ceremonial exchange between the coastal villages and the inland peoples (Grant1978:518).

Late Period (1,100 A. D. - Historic Chumash) indicates increase population and sophisticated refinements in the craftsmanship of basketry, stonework, beadwork, as well as seagoing craft and associated technologies. Chumash social and religious practices were also highly evolved. Large populations were supported by an abundance of varied local natural resources (Grant 1978:519).

Impacts to Archaeological Resources

The potential loss of archaeological resources means information that could be important to understanding the pre-history of Ventura County and its people would be lost. The County recognizes the significance of archaeological sites as a link to understanding human and environmental history, and has set policies and programs to protect these sites from destruction or damage to the extent feasible possible through the County's Initial Study Assessment Guidelines and General Plan (Ventura County General Plan: Goals, Policies and Programs 2015).

Historical Resources

The history of Ventura County encompasses the remains of the Spanish colonial empire, with the establishment of the Mission system from 1782 to1834, which brought an estimated 2,500 to 4,200 Ventureno Chumash Indians under Spanish control. The Rancho Era from 1835-1847 began the hacienda system of large land grants and economic organization to the area. Finally, the American Period from 1848 to the Present, saw the drafting of the California Constitution and statehood in 1849, which generated unprecedented economic growth and development to Ventura County.

Mission Period (1772-1834 A.D.)

San Buenaventura mission located in historic downtown Ventura was founded on March 31, 1782. The mission was the ninth and last mission consecrated by Father Junipero Serra during the California Mission Period from 1772 until 1834, when the missions were secularized by the Mexican Government (Dallas 2004:159). The traditional lifestyle of the Chumash people changed forever during this period with their removal from their established settlements onto the mission grounds. There the Chumash were required to work long hours at menial tasks under the strict supervision of the Spanish Missionaries. The Chumash routinely worked a 6-day work week, living in the cramped confines of the mission they were exposed to European diseases and their population dropped dramatically during this period. In 1770 there might have been over 8,000 people, but by 1852 only 1,107 Chumash are listed in the mission census. The Chumash were not equipped physiologically or mentally for the European diseases or the strict regimented life style demanded by the Spanish Missionaries (Grant 1978:507).

Rancho Period (1835 -1847A.D.)

In 1821, Mexico won independence from Spain and began to dismantle the mission system in California. The mission system was replaced by the "Rancho Period". The Rancho Period was an era in California history when the entire state was divided into large parcels of land equaling thousands of acres a piece.

These large estates were ruled over in a semi-feudal manner by men who had been deeded the land by first the Spanish crown, and later the Mexican government (Goldberg 2001:50-52). By 1882, the Mexican government had granted 19 ranchos in Ventura County (Ventura Weekly 2005). As the missions began to secularize, they were transformed into small towns and most Native Americans would later be marginalized into reservations or into American society. It was during this time that "Americans" began to enter California. Many of the American Californians married into the Rancho families, a development that would transform land ownership into American hands. By the time the United States annexed California after the Mexican-American War in 1850, much of the Rancho lands were already in the hands of Americans (Goldberg 2001:50-52).

American Period (1848-Present)

The Anglo-American Period displaced the original Spanish and Mexican rancho holders, and by the 1870s had emerged as the dominant economic class. The period saw the establishment of new local towns and economic growth as the results of the new railroad and oil exploration, which spurred development throughout Ventura County. During the oil boom of the 1920s, public and private economies flourished, though development was stalled by the Great Depression of 1929. Still, however, some vestiges of the urban and rural infrastructure developed during that time (roads, dams, farmlands, oilfields, etc.) are still evident in the county today.

Impacts to Historical Resources

There are many historical resources that are still largely intact in Ventura County. Examples include: adobe houses and structures, wharves, farms, ranches, diaries, the Mission San Buenaventura, the mission's aqueduct system, and other associated mission structures (chapel foundation, corrals and barns), or their remnants. There are many examples of historic architectural structures which showcases the county's rich history; Spanish Colonial, Mexican Rancho, Victorian and Revival, California Bungalow and California Ranch style homes and buildings. The County's Cultural Heritage Board regularly reviews historic properties and sites for listing as a Cultural Heritage Sites. The potential loss of historic resources would mean the loss of information important to an understanding of the history and development of Ventura County. The value of this information is not restricted solely to residents of the county, but to all Californians because it is part of the state's history, too. The County recognizes the significance of historic resources, sites and properties as a link to understanding human and environmental history, and has set policies and programs to protect these historic resources from destruction or damage to the extent feasible possible through the County's Initial Study Assessment Guidelines and General Plan (Ventura County General Plan: Goals, Policies and Programs 2015).

Paleontological Resources

Paleontological resources refer to the fossilized remains of plant and animal life. Examples of paleontological remains in the county are from most of geological history, including the Paleozoic (600 to 225 million years ago), the Mesozoic (225 to 70 million years ago), and the Cenozoic (70 million years ago to the present). Careful scientific study of fossilized life forms can help in understanding local paleo-environmental conditions and biological evolutionary trends. In addition, certain fossil remains are only found in isolated outcrops in the county and are therefore of unique scientific interest.

A wide variety of paleontological resources exist within the county. The coastal and interior zones of Ventura Country in particular contain areas with marine and terrestrial fossils that are among the best in Southern California. Paleontological resources are present in many of the geologic formations in the

county. The region is part of the Transverse Range, which is an east-west trending Tertiary (70 to 1 million years ago) sedimentary mountain corridor that encompasses many different kinds of fossil organisms. These fossil remains could provide a record of lifeforms over millions of years. Fossil remains are considered important if they are: 1) well preserved; 2) identifiable; 3) type/topotypic specimens; 4) age diagnostic; 5) useful in environmental reconstruction; 6) representative of rare and/or endemic taxa; 7) representative of a diverse assemblage; and/or 8) representative of associated marine and non-marine taxa. Vertebrate and Megainvertebrate fossils are considered highly important because they are comparatively rare and allow precise age determinations and environmental reconstructions for the strata in which they occur. Microinvertebrate fossils (microfossils) are much more abundant; for this reason and because of their small size, they would not be adversely impacted to the same degree as vertebrate and megainvertebrate fossils.

Impact to Paleontological Resources

Potential impacts to fossil sites from construction activities include the progressive loss of exposed rock, along with the unauthorized collection of fossil materials. Such losses would be irreplaceable. The California Environment Quality Act (CEQA) requires that impacts to paleontological resources be assessed and mitigated on all discretionary projects, public, and private under CEQA Guidelines Section 8.16.2.2. The County recognizes the significance of marine and terrestrial fossils by preserving these sites to the fullest extent possible through policies and programs set forth in the County's Initial Study Assessment Guidelines and General Plan to preserve any information these sites may yield (Ventura County General Plan: Goals, Policies and Programs 2015).

Regulatory Setting

Cultural resources are indirectly protected under the provisions of the Federal Antiquities Act of 1906 (16 U.S.C. §§ 431 et seq.) and subsequent related legislation, regulations, policies, and guidance documents (federal, state, and local) in California.

Federal

National Historic Preservation Act of 1966 (NHPA)

The NHPA establishes the nation's policy for historic preservation and a program for the preservation of historic properties, requiring federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings.

Section 106 of the Federal Guidelines

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), and that the Advisory Council on Historic Preservation (ACHP) and State Historic Preservation Officers (SHPO) must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

National Register of Historic Places (NRHP)

The NRHP was established by the NHPA as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Antiquities Act of 1906

The Antiquities Act of 1906 provides for the protection of historic, prehistoric, and scientific features located on federal lands. It authorizes the President to designate as National Monuments historic and natural resources of national significance located on federally owned or controlled land. The Secretaries of the Interior, Agriculture and Defense are authorized to issue permits for archaeological investigations on lands under their control to recognized educational and scientific institutions for the purpose of systematically and professionally gathering data of scientific value.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act of 1978 states that it is a policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

State

California Environmental Quality Act (CEQA)

Pursuant to CEQA, a historical resource is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). In addition, resources included in a local register of historic resources or identified as significant in a local survey conducted in accordance with state guidelines are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR, or is not included in a local register or survey, does not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be a historic resource as defined in California Public Resources Code (PRC) Section 5024.1.

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource or (2) the archaeological resource satisfies the definition of a "unique archaeological resource." A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1) The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

2) The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Criterion 2: It is associated with the lives of persons important in our past.
- Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource must also be approved for designation by the County Board of Supervisors or the City or Town Council in whose jurisdiction it is located, recommended by the State Historical Resources Commission, or officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR.

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
- Associated with an individual or group having a profound influence on the history of California; or
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest (Points) designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a

Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a Point, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (city or county)
- Associated with an individual or group having a profound influence on the history of the local area
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991

Section 5097.91 of the Public Resources Code (PRC) established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (NAGPRA) is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect," the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Senate Bill 18

Senate Bill (SB) 18 (California Government Code, Section 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local

government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

Assembly Bill 52

Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is also a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requests in writing to the lead agency, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes these provisions applicable to projects that have a notice of preparation, a notice of negative declaration filed, or mitigated negative declaration on or after July 1, 2015.

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease and the County Coroner be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

2005 Ventura County General Plan

The General Plan covers cultural, historical, paleontological, and archaeological resources in Chapter 1, Resources. Section 1.8 includes goals, policies, and programs related to cultural, historical, paleontological, and archaeological resources. The following Area Plans also contain applicable goals and policies related to cultural, historical, paleontological, and archaeological resources:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for cultural, historical, paleontological, and archaeological resources. These can be found in the following sections: 7. Paleontological Resources; 8a. Cultural Resources-Archaeological; and 8b. Cultural Resources-Historic.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates cultural, historical, paleontological, and archaeological resources through Section 8107-37 Cultural Heritage Sites and Section 8107-39 Historic Repositories.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates cultural, historical, paleontological, and archaeological resources through Section 8178-3 Archaeological and Paleontological Resources.

County of Ventura County Cultural Heritage Ordinance

The purpose of Ventura County Cultural Heritage Ordinance No. 4225 is to promote the economic and general welfare of Ventura County by preserving and protecting public and private historic, cultural, and natural resources that are of special historical or aesthetic character or interest, or relocating or recreating such resources where necessary for their preservation and use, education, and view by the general public. All such efforts are taken to make sure the citizens of this county, and visitors, and tourists mindful of the rich historical, cultural, and natural heritage of the county (County of Ventura 2000).

Key Terms

Assembly Bill 52. Assembly Bill (AB) 52 specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment.

Archaeological Resources. The material remains (artifacts, structures, refuse, etc.) produced purposely or accidentally by human beings.

California Historical Resources Information System (CHRIS). The California Historical Resources Information System (CHRIS) consists of the California Office of Historic Preservation (OHP), nine Information Centers (ICs), and the State Historical Resources Commission (SHRC). The nine ICs provide historical resources information, generally on a fee-for-service basis, to local governments, state and federal agencies, Native American tribes, and individuals with responsibilities under the National Environmental Policy Act, the National Historic Preservation Act, and the California Environmental Quality Act (CEQA), as well as to the general public.

California Register of Historical Resources. Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change.

California Landmarks. California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance.

Cultural Resources. Cultural resources include places, object, sites, features, districts, and settlements that are over 45 years old, which reflect group or individual religious, archaeological, architectural, or paleontological activities.

Historical Resources. Refers to the material and nonmaterial expressions of human adaptations that were produced during the post-contact or historic period, when Europeans first arrived in North America.

National Historic Landmark. National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States.

National Register of Historic Places. The National Register of Historic Places (NRHP) was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment.

Native American Sacred Site. Defined as an area that has been, and often continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people.

Paleontological Resources. Refers to the fossilized remains of plants and animal life.

Tribal Cultural Resources. A Tribal Cultural Resource as defined in AB 52 are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe(s).

Ventura County Historical Landmarks. Are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have historical County significance.

Ventura County Sites of Merit. Sites of historical, cultural, architectural or aesthetic merit which have not been officially designated, but have been surveyed according to Federal standards as required by Ventura County's Certified Local Government agreement. Said sites shall also be listed in a County approved survey with a National Register status code of 5 or above and have been so designated by the Ventura County Cultural Heritage Board or the Ventura County Board of Supervisors according to the provisions of this Ordinance.

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Persons Contacted

Nicole Doner. Resource Management Agency Planning Division and Ventura County Cultural Heritage Board (CHB) Program Planner

SECTION 8.7 APPENDICES

Appendix 8A. Ambient Air Quality Standards

TABLE 8-8 AMBIENT AIR QUALITY STANDARDS			
Pollutant	**Averaging Time**	**California Standards[1]**	**National Standards[2]**
		Concentration[3,4]	**Primary[3,5,7]**
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	—
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m^3	150 µg m^3
	Annual Arithmetic Mean	20 µg/m^3	—
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	—	35 µg/m^3
	Annual Arithmetic Mean	12 µg m^3	12.0 µg/m^3
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m^3)	—
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)
	3 Hour	—	—
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)[10]
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)[10]
Lead[12,13]	30 Day Average	1.5 µg/m^3	—
	Calendar Quarter	—	1.5 µg/ m^3 (for certain areas)[12]
	Rolling 3-Month Average	—	0.15 µg/m^3
Visibility Reducing Particles[14]	8 Hour	See footnote 13	—
Sulfates	24 Hour	25 µg/m^3	—
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	—
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	—

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard.

For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board (CARB). Ambient Air Quality Standards October 1, 2015. Data compiled by Ascent Environmental 2016.

Appendix 8B. Estimated Daily Emissions for Ventura County

TABLE 8-9
PROJECTED ANNUAL EMISSIONS (TONS PER DAY)[1]
Ventura County
2015

Category	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources								
Fuel Combustion	1.3	0.2	2.5	1.7	0.1	0.2	0.2	0.2
Waste Disposal	9.3	0.1	0.3	0.1	0.0	0.0	0.0	0.0
Cleaning and Surface Coatings	5.8	4.0	-	-	-	0.0	0.0	0.0
Petroleum Production and Marketing	23.8	2.4	0.2	0.0	0.0	0.0	0.0	0.0
Industrial Processes	0.5	0.4	0.2	0.1	0.0	0.6	0.3	0.1
Subtotal	*40.7*	*7.1*	*3.2*	*1.8*	*0.2*	*0.8*	*0.6*	*0.4*
Area-wide Sources								
Solvent Evaporation	9.9	8.6	-	-	-	-	-	-
Miscellaneous Processes	6.1	2.2	14.4	1.3	0.1	26.8	14.2	3.9
Subtotal	*16.0*	*10.8*	*14.4*	*1.3*	*0.1*	*26.8*	*14.2*	*3.9*
Mobile Sources								
On-Road Motor Vehicles	6.7	6.2	58.6	13.7	0.1	-	1.2	0.6
Other Mobile Sources	7.7	7.0	46.5	8.6	0.2	0.8	0.8	0.7
Subtotal	*14.3*	*13.1*	*105.1*	*22.4*	*0.3*	*0.8*	*2.0*	*1.3*
TOTAL (ALL SOURCES)	**71.0**	**31.1**	**122.7**	**25.5**	**0.5**	**28.4**	**16.8**	**5.5**

[1] Notes: CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; ROG = reactive organic gases; SO_x = sulfur oxides; TOG = total organic gases.
Source: California Air Resources Board (CARB). 2015 Estimated Annual Average Emissions – Ventura County. The California Almanac of Emissions and Air Quality. 2013 Edition. http://www.arb.ca.gov/app/emsinv/2013/emssumcat.php, March 22, 2016a. Data compiled by Ascent Environmental 2016.

Appendix 8C. Summary of Air Pollutant Concentrations

TABLE 8-10
SUMMARY OF AIR POLLUTANT CONCENTRATIONS
Ojai – East Ojai Avenue (Ventura County)[1,2]
2010-2015

	2010	2011	2012	2013	2014	2015
Ozone – 1 Hour						
California Maximum Concentration (ppm)	0.099	0.101	0.099	0.101	0.087	0.086
# Days > State Standard	1	2	2	1	0	0
Ozone – 8 Hour						
California Maximum Concentration (ppm)	0.084	0.086	0.082	0.085	0.082	0.077
# Days > California Standard	10	12	24	5	9	7
National Maximum Concentration (ppm)	0.083	0.086	0.082	0.085	0.082	0.076
# Days > National Standard	7	4	9	2	4	1
Fine Particulate Matter ($PM_{2.5}$) – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	33.3	17.4	22.2	15.9	17.4	17.4
National Maximum Concentration ($\mu g/m^3$)	*	*	22.2	15.9	17.4	17.4
# Days > National Standard (measured[3])	*	*	0	0	0	0
Respirable Particulate Matter (PM_{10})[4] – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	44.9	27.7	17.4	*	*	*
# Days > California Standard (measured[3])	0	0	0	0	0	0
National Maximum Concentration ($\mu g/m^3$)	46.6	28.5	17.1	*	*	*
# Days > National Standard (measured[3])	0	0	0	0	0	0
Nitrogen Dioxide (NO_2) – 1 Hour						
California Maximum Concentration (ppb)	*No data collected at this monitoring station.*					
# Days > California Standard						
National Maximum Concentration (ppb)						
# Days > National Standard						

[1] Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; * = no data: data unavailable or insufficient for this location during time period.
[2] No monitoring station in Ventura County collects CO data.
[3] Measured days are those days that an actual measurement was greater than the level of the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standard (NAAQS). Estimated days are the estimated number of days that measurement would have exceeded the applicable CAAQS or NAAQS if measurements had been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.
[4] PM_{10} statistics may include data that are related to an exceptional event, which EPA defines as an event "for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate" (CARB 2016c).
Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed October 18, 2016c. Data compiled by Ascent Environmental 2016.

TABLE 8-11
SUMMARY OF AIR POLLUTANT CONCENTRATIONS
Simi Valley – Cochran Street (Ventura County)[1,2]
2010-2015

	2010	2011	2012	2013	2014	2015
Ozone – 1 Hour						
California Maximum Concentration (ppm)	0.0.95	0.108	0.106	0.104	0.97	0.096
# Days > State Standard	3	3	3	3	1	1
Ozone – 8 Hour						
California Maximum Concentration (ppm)	0.087	0.085	0.088	0.089	0.085	0.078
# Days > California Standard	15	13	14	11	16	14
National Maximum Concentration (ppm)	0.086	0.084	0.087	0.089	0.085	0.078
# Days > National Standard	8	7	14	4	7	2
Fine Particulate Matter ($PM_{2.5}$) – 24 Hour						
California Maximum Concentration (µg/m^3)	42.4	30.5	35.3	28.6	30.8	33.0
National Maximum Concentration (µg/m^3)	20.2	24.8	28.1	28.6	30.8	30.5
# Days > National Standard (measured[3])	0	0	0	0	0	0
Respirable Particulate Matter (PM_{10})[4] – 24 Hour						
California Maximum Concentration (µg/m^3)	35.2	45.8	37.9	122.3	57.2	62.8
# Days > California Standard (measured[3])	0	0	0	2	1	3
National Maximum Concentration (µg/m^3)	34.9	45.7	39.5	41.1	49.6	63.5
# Days > National Standard (measured[3])	0	0	0	0	0	0
Nitrogen Dioxide (NO_2) – 1 Hour						
California Maximum Concentration (ppb)	69	41	58	43	47	41
# Days > California Standard	0	0	0	0	0	0
National Maximum Concentration (ppb)	69.0	41.0	58.0	43.0	47.0	41.0
# Days > National Standard	0	0	0	0	0	0

[1] Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; * = no data: data unavailable or insufficient for this location during time period.

[2] No monitoring station in Ventura County collects CO data.

[3] Measured days are those days that an actual measurement was greater than the level of the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standard (NAAQS). Estimated days are the estimated number of days that measurement would have exceeded the applicable CAAQS or NAAQS if measurements had been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

[4] PM_{10} statistics may include data that are related to an exceptional event, which EPA defines as an event "for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate" (CARB 2016c).

Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed October 18, 2016c. Data compiled by Ascent Environmental 2016.

TABLE 8-12
SUMMARY OF AIR POLLUTANT CONCENTRATIONS
Thousand Oaks – Moorpark Road (Ventura County)[1,2]
2010-2015

	2010	2011	2012	2013	2014	2015
Ozone – 1 Hour						
California Maximum Concentration (ppm)	0.104	0.093	0.090	0.099	0.092	0.078
# Days > State Standard	2	0	0	1	0	0
Ozone – 8 Hour						
California Maximum Concentration (ppm)	0.091	0.079	0.076	0.081	0.082	0.069
# Days > California Standard	9	7	2	1	6	0
National Maximum Concentration (ppm)	0.090	0.079	0.075	0.081	0.081	0.069
# Days > National Standard	6	1	0	1	3	0
Fine Particulate Matter ($PM_{2.5}$) – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	21.7	27.5	41.9	28.7	33.1	32.2
National Maximum Concentration ($\mu g/m^3$)	21.7	19.7	41.9	28.7	33.1	32.2
# Days > National Standard (measured[2])	0	0	1	0	0	0
Respirable Particulate Matter (PM_{10})[4] – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	*No data collected at this monitoring station.*					
# Days > California Standard (measured[3])						
National Maximum Concentration ($\mu g/m^3$)						
# Days > National Standard (measured[3])						
Nitrogen Dioxide (NO_2) – 1 Hour						
California Maximum Concentration (ppb)	*No data collected at this monitoring station.*					
# Days > California Standard						
National Maximum Concentration (ppb)						
# Days > National Standard						

[1] Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; * = no data: data unavailable or insufficient for this location during time period.

[2] No monitoring station in Ventura County collects CO data.

[3] Measured days are those days that an actual measurement was greater than the level of the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standard (NAAQS). Estimated days are the estimated number of days that measurement would have exceeded the applicable CAAQS or NAAQS if measurements had been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

[4] PM_{10} statistics may include data that are related to an exceptional event, which EPA defines as an event "for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate" (CARB 2016c).

Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed October 18, 2016c. Data compiled by Ascent Environmental 2016.

TABLE 8-13
SUMMARY OF AIR POLLUTANT CONCENTRATIONS
El Rio – Rio Mesa School #2 (Ventura County)[1,2]
2010-2015

	2010	2011	2012	2013	2014	2015
Ozone – 1 Hour						
California Maximum Concentration (ppm)	0.083	0.081	0.082	0.067	0.112	0.070
# Days > State Standard	0	0	0	0	1	0
Ozone – 8 Hour						
California Maximum Concentration (ppm)	0.073	0.069	0.065	0.063	0.077	0.066
# Days > California Standard	1	0	0	0	2	0
National Maximum Concentration (ppm)	0.072	0.068	0.065	0.062	0.077	0.066
# Days > National Standard	0	0	0	0	1	0
Fine Particulate Matter ($PM_{2.5}$) – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	27.8	28.7	30.8	22.2	22.2	25.5
National Maximum Concentration ($\mu g/m^3$)	21.4	18.3	30.8	19.9	22.3	25.5
# Days > National Standard (measured[3])	0	0	0	0	0	0
Respirable Particulate Matter (PM_{10})[4] – 24 Hour						
California Maximum Concentration ($\mu g/m^3$)	61.5	51.7	56.9	46.7	51.3	93.3
# Days > California Standard (measured[3])	1	1	1	4	7	6
National Maximum Concentration ($\mu g/m^3$)	59.9	50.6	56.3	45.9	51.1	92.0
# Days > National Standard (measured[3])	0	0	0	0	0	0
Nitrogen Dioxide (NO_2) – 1 Hour						
California Maximum Concentration (ppb)	60	90	57	40	39	36
# Days > California Standard	0	0	0	0	0	0
National Maximum Concentration (ppb)	60.0	90.0	57.0	40.0	39.0	36.0
# Days > National Standard	0	0	0	0	0	0

[1] Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; * = no data: data unavailable or insufficient for this location during time period.

[2] No monitoring station in Ventura County collects CO data.

[3] Measured days are those days that an actual measurement was greater than the level of the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standard (NAAQS). Estimated days are the estimated number of days that measurement would have exceeded the applicable CAAQS or NAAQS if measurements had been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

[4] PM_{10} statistics may include data that are related to an exceptional event, which EPA defines as an event "for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate" (CARB 2016c).

Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed October 18, 2016c. Data compiled by Ascent Environmental 2016.

TABLE 8-14
SUMMARY OF AIR POLLUTANT CONCENTRATIONS
Piru – Pacific (Ventura County)[1,2]
2010-2015

	2010	2011	2012	2013	2014	2015
Ozone – 1 Hour						
California Maximum Concentration (ppm)	0.087	0.100	0.087	0.092	0.097	0.085
# Days > State Standard	0	1	0	0	1	0
Ozone – 8 Hour						
California Maximum Concentration (ppm)	0.082	0.084	0.076	0.082	0.082	0.074
# Days > California Standard	4	6	14	3	9	4
National Maximum Concentration (ppm)	0.082	0.084	0.076	0.082	0.081	0.074
# Days > National Standard	1	2	1	2	5	0
Fine Particulate Matter ($PM_{2.5}$) – 24 Hour						
California Maximum Concentration (µg/m^3)	24.2	22.9	23.8	23.6	23.8	24.7
National Maximum Concentration (µg/m^3)	18.4	17.3	23.8	23.6	23.8	24.7
# Days > National Standard (measured[3])	0	0	0	0	0	0
Respirable Particulate Matter (PM_{10})[4] – 24 Hour						
California Maximum Concentration (µg/m^3)	*No data collected at this monitoring station.*					
# Days > California Standard (measured[3])						
National Maximum Concentration (µg/m^3)						
# Days > National Standard (measured[3])						
Nitrogen Dioxide (NO_2) – 1 Hour						
California Maximum Concentration (ppb)	*No data collected at this monitoring station.*					
# Days > California Standard						
National Maximum Concentration (ppb)						
# Days > National Standard						

[1] Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; * = no data: data unavailable or insufficient for this location during time period.

[2] No monitoring station in Ventura County collects CO data.

[3] Measured days are those days that an actual measurement was greater than the level of the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standard (NAAQS). Estimated days are the estimated number of days that measurement would have exceeded the applicable CAAQS or NAAQS if measurements had been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

[4] PM_{10} statistics may include data that are related to an exceptional event, which EPA defines as an event "for which the normal planning and regulatory process established by the Clean Air Act (CAA) is not appropriate" (CARB 2016c).

Source: California Air Resources Board (CARB). iADAM Top 4 Summary. http://www.arb.ca.gov/adam/topfour/topfour1.php, Accessed October 18, 2016c. Data compiled by Ascent Environmental 2016.

Appendix 8D. Facilities Emitting Toxic Air Contaminants

TABLE 8-15 AB 2588 TOXIC AIR CONTAMINANT FACILITY INVENTORY Ventura County 2014			
Facility ID	**Name**	**Street**	**City**
Mapped Facilities			
5465	1ST NOOR LLC	1099 EAST LOS ANGELES AVENUE	SIMI VALLEY
7880	212 BODY AND RESTORATION	212 BRYANT ST.	OJAI
6436	7-ELEVEN #33159	1501 W. 5TH STREET	OXNARD
6433	7-ELEVEN #33162	609 RANCHO CONEJO BLVD.	THOUSAND OAKS
6414	7-ELEVEN #33513	903 VENTURA STREET	FILLMORE
6440	7-ELEVEN FACILITY #33399	2201 E. GONZALES RD.	OXNARD
5458	7-ELEVEN STORE #33567	255 N. CARMEN DRIVE	CAMARILLO
716	A & A AUTO COLLISION CENTER	730 MERCANTILE STREET	OXNARD
626	A & G AUTO PAINTER	142 NORTH 11TH STREET	SANTA PAULA
5529	A & I MINI MART & GAS	246 W. EL ROBLAR DR.	MEINERS OAKS
7612	A & R AUTO COLLISION CENTER	771 E. WOOLEY RD.	OXNARD
207	A-1 BODY SHOP	1691 LOS ANGELES AVE.	SATICOY
66	ABA ENERGY CORP	WOOLEY ROAD AND RICE AVENUE	OXNARD
5789	ADAR CHEVRON	983 E. HARVARD BLVD.	SANTA PAULA
5507	ADOLFO GAS & FOOD	4007 ADOLFO ROAD	CAMARILLO
7372	ADVANCED STRUCTURAL ALLOYS	950 RICHMOND AVE.	OXNARD
41	AERA ENERGY LLC	3382 NORTH VENTURA AVENUE	VENTURA
784	AFFORDABLE COLLISION CENTER	4773 ORTEGA STREET NO. A	VENTURA
1099	AHERN RENTALS	701 NORTH RICE AVENUE	OXNARD
1040	AIR NATIONAL GUARD 146 AW/EM	4146 NAVALAIR ROAD	PORT HUENEME
674	AL INNOCENTI	1175 INDUSTRIAL AVENUE	OXNARD
7401	ALEXANDER BUICK GMC CADILLAC/OXNARD	1600 AUTO CENTER DRIVE	OXNARD
606	ALLEN AUTO BODY SHOP, INC.	3400 SUNSET DRIVE	THOUSAND OAKS
5464	ALLIANCE	5803 EAST LOS ANGELES AVENUE	SIMI VALLEY
5599	ALLIANCE STATION	1861 N. VENTURA ROAD	OXNARD
26	ALUMINUM PRECISION PROD, INC	1001 MC WANE BLVD	OXNARD
7484	AMERICAN ANTIQUES & CLASSICS	1519 PALMA DRIVE	VENTURA
602	AMERICAN COLLISION CENTER	2957 LOS FELIZ DRIVE	THOUSAND OAKS
125	AMERON POLE PRODUCTS	1020 'B' STREET	FILLMORE
1381	AMGEN INC.	ONE AMGEN CENTER DR 19-2-B	THOUSAND OAKS

TABLE 8-15
AB 2588 TOXIC AIR CONTAMINANT FACILITY INVENTORY
Ventura County
2014

Facility ID	Name	Street	City
845	ANACAPA BERRY FARMS	4300 ETTING RD.	OXNARD
426	ANACAPAMIDDLE SCHOOL	100 SOUTH MILLS ROAD	VENTURA
1144	ANGELUS BLOCK COMPANY	4575 VINEYARD AV	OXNARD
5782	ANITA SPIRIT	415 E. THOMPSON BLVD.	VENTURA
52	ANTERRA ENERGY SERVICES INC.	1933 EAST WOOLEY ROADD	OXNARD
6444	APRO #10	108 COCHRAN ST.	SIMI VALLEY
797	AQUA CREATIONS	1607 #D LOS ANGELES AVE.	VENTURA
5665	ARCO #42054	2124 EAST HARBOR BLVD.	VENTURA
6450	ARCO AM/PM	5669 VALENTINE RD	VENTURA
6429	ARCO AM/PM #06516	3907 E. TELEGRAPH ROAD	PIRU
5485	ARCO FACILITY #83345	650 N. ARNEILL ROAD	CAMARILLO
5492	ARCO SMOG PROS	600 MOORPARK RD.	THOUSAND OAKS
6386	ARCO/AMPM	500 S. VICTORIA AVE.	OXNARD
244	ARCTURUS MANUFACTURING CO	6001 ARCTURUS ROAD	OXNARD
8086	ARMACEL ARMOR CORP	2255 PLEASANT VALLEY ROAD	CAMARILLO
5616	ARNEILL CHEVRON AND CARWASH	255 ARNEILL ROAD	CAMARILLO
9	ARNOLD MAGNETICS CORP	841 AVENIDA ACASO	CAMARILLO
7781	ASPEN CENTER	2750 N. SYCAMORE DR.	SIMI VALLEY
560	ASPEN HELICOPTER	2899 WEST FIFTH STREET	OXNARD
95	ASSOC. READY MIX CONCRETE	3555 VINEYARD AVE	OXNARD
7675	ASTRIUM SERVICES GOV'T, INC	7676 PINE GROVE RD.	SANTA PAULA
691	ASTROFOAM MOLDING COMPANY INC.	4117 CALLE TESORO	CAMARILLO
7512	AT&T	233 A ST.	FILLMORE
7916	AT&T (NBVC-PORT HUENEME)	BUILDING #1524	PORT HUENEME
7604	AT&T (SIMICA11-KD138)	2692 E. LOS ANGELES AVE.	SIMI VALLEY
7413	AT&T OXNARD	1050 SOUTH C STREET	OXNARD
7741	AURORA VISTA DEL MAR HOSPITAL	801 SENECA ST.	VENTURA
572	AUTO BODY INTERNATIONAL	932 EAST 5TH STREET	OXNARD
604	AUTO BODY UNLIMITED	4610 LOS ANGELES AVE #C	SIMI VALLEY
881	AUTO COLLISION CENTER, INC.	299 E THOUSAND OAKS BLVD.	THOUSAND OAKS
6287	AUTO FUELS INC	2460 AUTO CENTER DRIVE	OXNARD
7511	AUTO IMAGE RESTORATIONS & CUSTOMS	1183 CALLE SUERTE	CAMARILLO
5511	AUTO TECH GAS BUSTER MART	2157 LAS POSAS ROAD	CAMARILLO

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Facility ID	Name	Street	City
774	AVENUE BODY SHOP	378 NORTH VENTURA AVENUE	VENTURA
717	AZTLAN BODY SHOP	1520 CYPRESS STREET	OXNARD
575	B & B AUTO BODY	3043 THOUSAND OAKS BLVD.	THOUSAND OAKS
1078	BAXTER BIOSCIENCE	1700 RANCHO CONEJO BOULEVARD	THOUSAND OAKS
7279	BECKER BODY SHOP	1850 SUNKIST CIRCLE #A	OXNARD
1368	BELL POWDER COATING	4747 MCGRATH STREET	VENTURA
433	BELLPORT ANACAPA MARINE SERVICES	3203 S. VICTORIA AVE.	OXNARD
7047	BESTFORMS INC	1135 AVENIDA ACASO	CAMARILLO
7888	BLENDING STATION #1	251 S. HAYES AVE.	OXNARD
7869	BLENDING STATION #3	1700 SOLAR DRIVE	OXNARD
7897	BLENDING STATION #4	3637 N. ROSE AVE.	OXNARD
7921	BLENDING STATION #5	980 E. PLEASANT VALLEY RD.	OXNARD
488	BMW - VEHICLE PREPARATION CENTER	5650 ARCTURUS ROAD	OXNARD
1084	BODYMASTER U.S.A.	6401 VENTURA BOULEVARD	VENTURA
1028	BODYTECH LTD.	2920 SEABORG AVENUE	VENTURA
7978	BONES FAB	373 S. DAWSON DR.	CAMARILLO
5455	BORCHARD ARCO AM/PM	2305 BORCHARD RD.	NEWBURY PARK
5656	BORCHARD CHEVRON	2290 W. BORCHARD RD.	NEWBURY PARK
598	BRUE'S BODY SHOP	207 BRYANT STREET	OJAI
427	BUENA HIGHSCHOOL	5670 TELEGRAPH ROAD	VENTURA
578	BUENA VISTA COLLISION CTR OF VEN	3900 MARKET ST	VENTURA
1076	BUMP & SHINE	1544 MORSE AVENUE #C	VENTURA
7019	C.I COMPOSITES	1114 EAST FIFTH STREET	OXNARD
590	CALIBER BODYWORKS, INC.	6500 LELAND STREET	VENTURA
7475	CALIBER COLLISION CENTER	1101 STURGIS RD.	OXNARD
638	CALIBER COLLISION CENTERS	390 EAST EASY STREET	SIMI VALLEY
5672	CALIFORNIA CHEVRON	507 E THOMPSON BLVD.	VENTURA
7464	CALIFORNIA LUTHERAN UNIVERSITY	60 WEST OLSEN ROAD #3200	THOUSAND OAKS
8000	CALIFORNIA PROP. HOLDINGS III, LLC	4885 CALLE ALTO	CAMARILLO
984	CALIFORNIA RESOURCES PRODUCTION CORPORATION	BARDSDALE FIELD	FILLMORE

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Facility ID	Name	Street	City
330	CALIFORNIA RESOURCES PRODUCTION CORPORATION	3501 SANTA CLARA/FREIDRICH LSE	OXNARD
77	CALIFORNIA RESOURCES PRODUCTION CORPORATION	OAK PARK & BIG MOUNTAIN FIELD	SIMI VALLEY
48	CALIFORNIA RESOURCES PRODUCTION CORPORATION	5713 W. GONZALES RD.	OXNARD
53	CALIFORNIA RESOURCES PRODUCTION CR, S. MOUTAIN & W. MOUNTAIN	19424 SOUTH MOUNTAIN ROAD	SANTA PAULA
7097	CALIFORNIA WOOD RECYCLING	2801 MADERA ROAD	SIMI VALLEY
7843	CALLEGUAS MWD LAKE BARD WATER PLANT	2100 OLSEN RD.	THOUSAND OAKS
25	CALMAT CO.	6029 VINEYARD AVE.	OXNARD
92	CALMAT COMPANY	5596 BENNETT RD.	SIMI VALLEY
6	CALMATCOMPANY	6029 VINEYARD AVENUE	SATICOY
7469	CAMARILLO AUTO BODY	695 VIA ALONDRA	CAMARILLO
4047	CAMARILLO CLEANERS	52 ELM ST.	CAMARILLO
7959	CAMARILLO HUB	1925 DAILY DR.	CAMARILLO
445	CAMARILLO SANITARY DISTRICT	150 HOWARD RD	CAMARILLO
7944	CAMPBELL'S CUSTOM PAINT & BODY	619 FITCH AVE #4	MOORPARK
6441	CAMPUS PLAZA SHELL	6599 COLLINS DRIVE	MOORPARK
5284	CARDLOCK FUEL SYSTEM, INC	75 WEST EASY STREET	SIMI VALLEY
5666	CARMEN AUTO CENTER	256 CARMEN DRIVE	CAMARILLO
831	CASTLE OF MARBLE	1607 LOS ANGELES AVE	SATICOY
1425	CATHEDRAL MORTUARY ASSOCIATES	1810 SUNKIST CR #7	OXNARD
30	CEMEX, CALIF. AGGREGATES, INC.	9035 ROSELAND AVE.	MOORPARK
31	CEMEX, CONCRETE PRODUCTION	9035 ROSELAND AVE.	MOORPARK
7137	CEMEX,CONCRETE PROD INC.	1430 SANTA CLARA STREET	SANTA PAULA
5822	CENTRAL PLAZA UNION 76	700 N. ARNEILL RD.	CAMARILLO
7513	CERES, INC.	1535 RANCHO CONEJO BLVD.	THOUSAND OAKS
7068	CHANNEL ISLAND AUTO BODY	640 MOUNTAIN VIEW AVE #B	OXNARD
1391	CHANNEL ISLAND BOAT YARD	3615 VICTORIA AV	OXNARD
74	CHANNEL ISLANDS AVIATION	CAMARILLO AIRPORT FUEL FARM	CAMARILLO
5452	CHEVRON	877 S. VENTURA RD.	OXNARD
6257	CHEVRON #200209	4870 SANTA ROSA ROAD	CAMARILLO
5673	CHEVRON #9-0576	920 S. SEAWARD AVE.	VENTURA

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Facility ID	Name	Street	City
5745	CHEVRON #9-1024	2568 SYCAMORE DRIVE	SIMI VALLEY
5767	CHEVRON #9-7983	704 VENTURA STREET	FILLMORE
5764	CHEVRON CARWASH	1196 E. LOS ANGELES AVE.	SIMI VALLEY
7191	CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY	SCHOOL CANYON REMEDIATION	VENTURA
6422	CHEVRON SS#20-8020	1900 N. ROSE AVE.	OXNARD
5413	CHEVRON STATIONS INC. #202037	2395 ERRINGER ROAD	SIMI VALLEY
7692	CHUMASH PUMP STATION	2960 CHUMASH AVE.	SIMI VALLEY
1267	CI POWER COGENERATION PLANT	1947 WEST POTRERO ROAD	CAMARILLO
6418	CIRCLE K # 2709483	490 S. VICTORIA AVE	OXNARD
5467	CIRCLE K #2211092	855 NORTH WENDY DRIVE	NEWBURY PARK
5514	CIRCLE K #2211126	942 WESTLAKE BLVD.	WESTLAKE VILLAGE
5462	CIRCLE K #2211127	2340 N. KUEHNER DRIVE	SIMI VALLEY
5460	CIRCLE K #2211185	5195 EAST COCHRAN	SIMI VALLEY
5650	CIRCLE K #2211246	45 N. REINO ROAD	NEWBURY PARK
5419	CIRCLE K #2211330	3500 E. MAIN STREET	VENTURA
6406	CIRCLE K #2709460	2200 N. ROSE AVE.	OXNARD
6186	CIRCLE K STORES SITE #01045	11408 VENTURA AVENUE	OJAI
6203	CIRCLE K STORES SITE #05238	765 W. HARVARD BOULEVARD	SANTA PAULA
586	CITY AUTO BODY	2045 EASY WAY	SIMI VALLEY
576	CITY AUTO BODY	765 EAST EASY STREET	SIMI VALLEY
1401	CITY OF SIMI VALLEY PUBLIC SER	2929 TAPO CANYON ROAD	SIMI VALLEY
7657	CITY OF SIMI VALLEY TRANSIT	490 W. LOS ANGELES AVE.	SIMI VALLEY
180	CLARK ENGINEERING CONST INC.	2235 NORTH VENTURA AVENUE	VENTURA
4002	CLEANING & LAUNDRY BY FRANK	518 EAST MAIN STREET	SANTA PAULA
1164	CMP ONE-B & B BAILEY LEASE	12516 CREEK RD	OJAI
7245	COACHCRAFT	302 ORANGE GROVE AVENUE	FILLMORE
7082	COAST INDEX CO. INC.	850 LAWRENCE DR	NEWBURY PARK
5699	COLLEGE SHELL	4111 TELEGRAPH ROAD	VENTURA
4008	COLLEGE SQUARE CLEANERS	94 N. ASHWOOD AVE.	VENTURA
1483	COMMERCIAL AUTO BODY	1237 COMMERCIAL AVENUE	OXNARD
123	COMMUNITY MEMORIAL HOSPITAL	2800 LOMA VISTA & BRENT	VENTURA
564	CONDE'S AUTO BODY & PAINT	1221 COMMERCIAL AVENUE	OXNARD
72	CONEJO MTN. MEMORIAL PARK	2052 HOWARD	CAMARILLO
607	CONEJO VALLEY AUTO BODY	102 CUNNINGHAM ROAD	THOUSAND OAKS

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Facility ID	Name	Street	City
387	CONOCOPHILLIPS	SANTA PAULA PUMP STATION	SANTA PAULA
7	CONROCK CO.-REDI MIX	1000' EAST OF LA STREET	MOORPARK
5564	CONVENIENCE RETAILERS, LLC	1445 W. CHANNEL ISLANDS BLVD.	OXNARD
6413	COSTCO WHOLESALE CORP. #128	2660 PARK CENTER DRIVE	SIMI VALLEY
6399	COSTCO WHOLESALE CORP. #420	2001 E. VENTURA BLVD.	OXNARD
7400	COUNTY OF VENTURA	9550 LOS ANGELES AVE.	MOORPARK
210	CRAZY 'J' OIL COMPANY	11955 OJAI RD./KOENIGSTEIN RD/	SANTA PAULA
621	CREATIVE WOODWORKS	387 NORTH ZACHARY ST.	MOORPARK
82	CRIMSON PIPELINE HARBOR STATION	1200 SPINNAKER DRIVE	VENTURA
38	CRIMSON PIPELINE, LP	3504 NORTH VENTURA AVENUE	VENTURA
836	CROCKETT GRAPHICS	980 AVENIDA ACASO	CAMARILLO
7131	CROP PRODUCTION SERVICES	4075 DUFAU ROAD	OXNARD
7528	CSU - CHANNEL ISLANDS	ONE UNIVERSITY DR.	CAMARILLO
103	CUSTOM INDUSTRIAL FINISHES	5711 PERKINS RD	OXNARD
7243	CUSTOM PRINTING	2001 CABOT PLACE	OXNARD
7306	CUSTOM REFINISHERS	954 E. THOMPSON BLVD.	VENTURA
7868	DAEDALUS AUTO BODY SHOP	373 S. DAWSON DR., UNIT 4N	CAMARILLO
5643	DALEX CHEVRON	172 N. MOORPARK RD.	THOUSAND OAKS
650	DATA EXCHANGE CORPORATION	3600 VIA PESCADOR	CAMARILLO
5715	DAVE'S	1404 ANCHORS WAY	VENTURA
6417	DAWSON CARWASH	2911 PETIT ST.	CAMARILLO
4039	DIAMOND CLEANERS	361 AVE DE LOS ARBOLES	THOUSAND OAKS
1100	DIP N STRIP	512 DAWSON DRIVE	CAMARILLO
7256	DIVERSIFIED MINERALS	1135 EAST WOOLEY ROAD	OXNARD
597	DJ'S AUTO COLLISION CENTER	1501 SOUTH PINE STREET	OXNARD
622	DON & SONS BODY & PAINT	660 MOUNTAIN VIEW AVENUE	OXNARD
970	DOS CUADRAS OFFSHORE RESOURCES, L.	5775 W. PACIFIC COAST HIGHWAY	VENTURA
507	DRISCOLL STRAWBERRY ASSOCIATES	3939 E HUENEME RD	OXNARD
1478	E & I PAINT AND BODY	260 WEST WOOLEY RD.	OXNARD
214	E.F. OXNARD LLC	550 DIAZ AVENUE	OXNARD
7009	E.J. HARRISON & SONS, INC.	1589 LIRIO AVENUE	SATICOY
1255	EARL SCHEIB AUTO PAINT	141 E WOOLEY RD	OXNARD
789	EDDIE'S AUTO BODY AND PAINT	1275 SOUTH OXNARD BLVD	OXNARD
7677	EDUCATION SERVICE CENTER (ESC)	255 W. STANLEY AVE.	VENTURA

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Facility ID	Name	Street	City
7660	EL RIO CO. GC-515	1630 VENTURA BLVD.	OXNARD
6408	EL RIO VINEYARD SHELL & FOODMART	2778 VINEYARD AVENUE	OXNARD
7360	ELECTRA CRAFT	2251 TOWNSGATE ROAD	WESTLAKE VILLAGE
7431	ELITE METAL FINISHING	540 SPECTRUM CIRCLE	OXNARD
1280	ELLWOOD PIPELINE 12	301 WEST FRONT STREET	VENTURA
1278	ELLWOOD PIPELINE AVE. METERS	REAR 191 OTTOWA STREET	VENTURA
1279	ELLWOOD PIPELINE UNION MARINE	1200 SPINNAKER DR.	VENTURA
7353	EMERITUS AT CAMARILLO	6000 SANTA ROSA ROAD	CAMRILLO
771	EPR COLLISION	852 VIA ALONDRA	CAMARILLO
651	ERG INTERNATIONAL	361 NORTH BERNOULLI CIRCLE	OXNARD
4130	EVERGREEN CLEANERS	3900 THOUSAND OAKS BLVD.	WESTLAKE VILLAGE
1324	FACILITY 400 NATIONAL WAY	400 NATIONAL WAY	SIMI VALLEY
7290	FAUSSET PRINTING LLC	1799 EASTMAN AVENUE	VENTURA
722	FENDER MENDER BODY SHOP	1555 MORSE AVE UNITS E & F	VENTURA
6400	FILLMORE SHELL FOOD MART	1107 W. VENTURA ST.	FILLMORE
7560	FILLMORE TELEPORT	33 E. TELEGRAPH RD.	FILLMORE
7303	FINE LINE PRECAST INCORPORATED	215 ROCKLITE RD.	VENTURA
7814	FIRE STATION #45	790 PCIFIC AVE.	SIMI VALLEY
859	FIRST COLLISION CENTER	1001 COCHRAN STREET	SIMI VALLEY
5690	FLEET VENTURA	1457 FLEET STREET	VENTURA
7113	FLUID INK TECHNOLOGY	5360 NORTH COMMERCE AVE.	MOORPARK
601	FORD OF VENTURA BODY SHOP	3680 MARKET STREET	VENTURA
4133	FOUR SEASONS CLEANERS	1746 S. VICTORIA AVE #A	VENTURA
4018	FOXY FASHION CLEANERS, LLC	2361 MICHAEL DRIVE	NEWBURY PARK
5503	FRED'S GAS & FOOD MART	3211 SAVIERS RD.	OXNARD
1321	G & H TECHNOLOGY	750 WEST VENTURA BLVD.	CAMARILLO, CA
5439	G & M OIL CO./CHEVRON #256728	2314 E. THOMPSON BLVD.	VENTURA
339	GENERAL MAGNAPLATE CALIF.	2707 PALMA DR.	VENTURA
569	GENERAL PETROLEUM	3815 VINEYARD AVE. BULK PLANT	OXNARD
7086	GI RUBBISH COMPANY	195 W. LOS ANGELES AVENUE	SIMI VALLEY
671	GIBBS INTERNATIONAL TRUCK	2201 EAST VENTURA BLVD	OXNARD
7018	GILL'S ONIONS	1051 SOUTH PACIFIC AVE.	OXNARD
1338	GILLIBRAND INDUSTRIAL SAND, INC.	5810 EAST BENNETT RD	SIMI VALLEY

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Facility ID	Name	Street	City
7407	GLOBAL AUTO PROCESSING SERVICES, INC.	USN-CBC PATTERSON RD. & 32ND AVE	PORT HUENEME
706	GM CELES BODY SHOP	238 CENTRAL AVENUE	FILLMORE
755	GM CUSTOM AUTO BODY	33 FIX WAY	VENTURA
785	GOLD COAST ACURA	3195 PERKIN AVENUE	VENTURA
6431	GOLDEN STATE PETROLEUM	55 HALLOCK DRIVE	SANTA PAULA
458	GOOCH & HOUSEGO (CALIFORNIA) LLC	554 FLYNN AVENUE	MOORPARK
4060	GREEN OAKS CLEANERS	3745 E. THOUSAND OAKS BLVD.	THOUSAND OAKS
7444	GRIMALDO ENTERPRISES	233 PALM STREET	FILLMORE
5442	GSE 76 VENTU PARK	575 N. VENTU PARK RD.	NEWBURY PARK
1439	GTS CUSTOMS	495 E. EASY STREET UNIT A	SIMI VALLEY
5477	H.D.O.C. #106	774 NORTH VENTURA AVENUE	VENTURA
7226	HAAS AUTOMATION	2800 STURGIS ROAD	OXNARD
7419	HAH MARINE PROPERTIES	3037 WEST 5TH STREET, UNIT B	OXNARD
5541	HAMPSHIRE ROAD SHELL	395 HAMPSHIRE ROAD	THOUSAND OAKS
1174	HANSON LAB FRNTR INDSTRS INC.	814 MITCHELL ROAD	NEWBURY PARK
5716	HARBOR MOBIL & SUBWAY	2121 EAST HARBOR BLVD	VENTURA
631	HARRY'S AUTO COLLISION GROUP	3610 THOUSAND OAKS BLVD	THOUSAND OAKS
5766	HD FUEL	2399 TAPO ST.	SIMI VALLEY
5743	HDOC #093	3402 VINEYARD AVE.	OXNARD
7854	HILL CANYON WASTEWATER TREATMENT PLANT	9600 SANTA ROSA ROAD	CAMARILLO
150	HILL CYN WASTEWATER TREATMENT PLANT	9600 SANTA ROSA ROAD	CAMARILLO
7779	HILTON GARDEN INN OXNARD/CAMARILLO	2000 SOLAR DR.	OXNARD
5617	HILU CHEVRON	522 NORTH LAS POSAS ROAD	CAMARILLO
8132	HOUWELINGS NURSERIES	645 WEST LAGUNA ROAD	CAMARILLO
618	HUB AUTO BODY	1401 LIRIO STREET	SATICOY
676	HUNTER OIL & GAS INC.	4100 W GONZALES ROAD	OXNARD
242	INDUSTRIAL ELECTRIC MOTORS	811 MERCANTILE STREET	OXNARD
1109	INTL COFFEE & TEA INC.	4580 CALLE ALTO	CAMARILLO
7678	IRON HORSE CUSTOM FACTORY	290 EASY ST., NO. 5	SIMI VALLEY
121	IVY LAWN MEMORIAL PARK	5400 VALENTINE ROAD	VENTURA

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Facility ID	Name	Street	City
7443	J & C AUTO BODY	6680 CRESCENT STREET	VENTURA
5862	JAMES E. CLARK II CARDLOCK	18115 EAST TELEGRAPH ROAD	SANTA PAULA
7277	JANO GRAPHICS	4893 MCGRATH STREET	VENTURA
599	JAZZ AUTO BODY	1030 DONLON AVENUE	OXNARD
5418	JENDA INC.	3995 THOUSAND OAKS BLVD.	WESTLAKE VILLAGE
7497	JENNIFER KALSTROM	1570 CALLENS RD.	VENTURA
5740	JOE'S GAS & SMOG	1720 S. OXNARD BLVD.	OXNARD
6426	JOHNSON DRIVE CARWASH & GAS	2757 JOHNSON DRIVE	VENTURA
6228	JOHNSON OIL CORP.	6762 NORTH BANK DRIVE	VENTURA
5463	KAM'S CANYON MOBIL SERVICE CENTER	2500 TAPO CANYON ROAD	SIMI VALLEY
5686	KASSRA INC.	2292 THOMPSON BLVD.	VENTURA
1387	KAVLICO CORPORATION	14501 PRINCETON AVENUE	MOORPARK
609	KEMP FORD	3810 THOUSAND OAKS BLVD.	THOUSAND OAKS
603	KIRBY OLDSMOBILE-JEEP/EAGLE	6424 LELAND STREET	VENTURA
7697	LA-SIMI VALLEY MSG SITE	4585 RUNWAY ST.	SIMI VALLEY
6281	LAKE CASITAS MARINA INC.	11311 SANTA ANA ROAD	VENTURA
6419	LAS POSAS CAR WASH	100 S. LAS POSAS RD.	CAMARILLO
5472	LAS POSAS MOBIL, INC.	501 LAS POSAS ROAD	CAMARILLO
5584	LASHKARI'S SERVICE STATION	105 NORTH OXNARD BLVD.	OXNARD
164	LAWRENCE BUSINESS CENTER	2628 LAVERY CT, #408	NEWBURY PARK
700	LEO'S BODY SHOP	3925 NORTH VENTURA AVE	VENTURA
4128	LEONARD'S CLEANERS #4	706 LINDERO CANYON RD., #764	OAK PARK
7596	LIFT STATION 29	NW CORNER OF HEMLOCK & PATTERSON	OXNARD
4108	LINCOLN OAKS CLEANERS	140 HILLCREST DRIVE NO. 109	THOUSAND OAKS
411	LOS CERRITOS INTERMEDIATE SCHOOL	2100 AVENIDA DE LAS FLORES	THOUSAND OAKS
144	LOS ROBLES HOSPITAL	215 WEST JANSS ROAD	THOUSAND OAKS
7849	LOS ROBLES SURGICENTER	2190 LYNN RD., STE. 100	THOUSAND OAKS
7200	LOW-COST AUTO BODY	1564 MORSE AVENUE, UNIT J/K	VENTURA
1326	MAACO AUTO PAINTING	1571 GOODYEAR AV	VENTURA
7117	MAACO COLLISION REPAIR & AUTO PAINT	1100 COMMERCIAL AVENUE	OXNARD
790	MACVALLEY OIL COMPANY	100 DEL NORTE BLVD.	OXNARD

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Facility ID	Name	Street	City
596	MALABAR INTERNATIONAL	220 WEST LOS ANGELES AVE	SIMI VALLEY
13	MANDALAY GENERATING STATION	393 NORTH HARBOR BLVD	OXNARD
1017	MANDALAY ONSHORE FACILITY	201 NORTH HARBOR BLVD	OXNARD
6347	MARKET STREET CARWASH & GAS	4411 MARKET STREET	VENTURA
7391	MARTINEZ BODY SHOP	1205 N. OXNARD BLVD	OXNARD
7264	MAXIM DOUGLAS	1726 NORTH VENTURA ROAD	VENTURA
7347	MAZ GRAPHIC & PRINTING	1355 LAWRENCE DR.-#111	NEWBURY PARK
7508	MEDI.COM	241 LOMBARD ST.	THOUSAND OAKS
7810	MEGGITT SAFETY SYSTEMS, INC.	1955 SURVEYOR/1915 VOYAGER AVE.	SIMI VALLEY
5468	MICHAEL E. PLY HAMPSHIRE 76	3102 EAST THOUSAND OAKS BLVD.	THOUSAND OAKS
781	MIKE'S AUTO BODY	3170 LOS FELIZ DRIVE NO. A	THOUSAND OAKS
837	MISSION LINEN SUPPLY	505 MAULHARDT AVE	OXNARD
816	MISSION OAKS AUTO BODY	575 SOUTH DAWSON DR NO. 5	CAMARILLO
8008	MISSION ROCK ROAD ASPHALT MIXING FACILITY	999 MISSION ROCK ROAD	SANTA PAULA
5668	MOORPARK CHEVRON	502 LOS ANGELES AVENUE	MOORPARK
4086	MOORPARK CLEANERS	530 E. NEW LOS ANGELES AVE. #118	MOORPARK
6342	MOORPARK PETROLEUM	50 W. NEW LOS ANGELES AVE.	MOORPARK
5667	MOORPARK SERVICE INC.	13800 PRINCETON AVE.	MOORPARK
7621	MOORPARK YARD	7150 WALNUT CANYON RD.	MOORPARK
7639	MT. MCCOY COMMUNICATION FACILITY	1195 1/2 PRESIDENTIAL DR.	SIMI VALLEY
8023	MUVICO THOUSAND OAKS	166 W. HILLCREST DR.	THOUSAND OAKS
1454	NANOFILM	2641 TOWNGATE RD., STE. 100	WESTLAKE VILLAGE, CA
1383	NAUMANN DRILL SITE	3140 ETTING ROAD	OXNARD
1207	NAVAL BASE VENTURA COUNTY	OUTLYING LANDING FIELD	SAN NICOLAS ISLAND
1006	NAVAL BASE VENTURA COUNTY	NCBC - PORT HUENEME SITE	PORT HUENEME
997	NAVAL BASE VENTURA COUNTY	POINT MUGU SITE	POINT MUGU
1430	NEW ERA BODY SHOP	700 MOUNTAIN VIEW NO. D	OXNARD
707	NEW IMAGE BODY SHOP	860 CORPORATION STREET	SANTA PAULA
157	NEW INDY OXNARD, LLC	5936 PERKINS ROAD	OXNARD
779	NEW VEHICLE AUTO BODY & PAINT	2368 N. OXNARD BLVD #8 & 9	OXNARD

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Facility ID	Name	Street	City
5448	NEWBURY 76	848 WENDY DRIVE.	NEWBURY PARK
178	NEWBURY PARK HIGH SCHOOL	456 REINO ROAD	NEWBURY PARK
574	NEWCASTLE MOTORS	4320 EAST LOS ANGELES AVE.	SIMI VALLEY
796	NEXT AUTO BODY SHOP	1378 LOS ANGELES AVE F & G	SIMI VALLEY
5568	NISSIM TOVIM, INC.	1400 S. OXNARD BLVD.	OXNARD
7982	NORDSTROM-THE OAKS	350 W. HILLCREST DRIVE	THOUSAND OAKS
7728	NORTH OXNARD HEALTH CARE SERVICES	2240 E. GONZALES RD.	OXNARD
613	NORTH RANCH BODY CRAFT	3075 LOS FELIZ DRIVE	THOUSAND OAKS
4070	OAK PARK CLEANERS	634 LINDERO CANYON ROAD	AGOURA
5528	OAK VIEW SHELL	905 VENTURA AVE.	OAK VIEW
5639	OAKS SHELL	56 E. THOUSAND OAKS BLVD.	THOUSAND OAKS
1446	OCEAN BODY SHOP	2500 CHANNEL DRIVE	VENTURA
6056	OFFSHORE GAS	1050S.VENTURA RD.	OXNARD
173	OILFIELD ELECTRIC COMPANY	1801 NORTH VENTURA AVE	VENTURA
5808	OJAI CHEVRON #9-0478	360 EAST OJAI AVE.	OJAI
7838	OJAI GARDENS NURSING CENTER	601 N. MONTGOMERY ST.	OJAI
5805	OJAI GAS INC.	1124 MARICOPA HWY	OJAI
361	OJAI OIL COMPANY	SOUTH MOUNTAIN FIELD	SANTA PAULA
362	OJAI OIL COMPANY	OJAI FEE LEASE	SANTA PAULA
4021	OJAI VALLEY CLEANERS	345 E. OJAI AVENUE	OJAI
509	OJAI VALLEY INN & SPA	905 COUNTRY CLUB ROAD	OJAI
7737	ONE BAXTER WAY	1 BAXTER WAY	WESTLAKE VILLAGE
65	ORMOND BEACH GENERATING STATION	6635 SOUTH EDISON DRIVE	OXNARD
7322	ORTEGA'S COLLISION CENTER	1742 MORSE AVENUE	VENTURA
460	OSI ELECTRONICS	2385 E. PLEASANT VALLEY ROAD	CAMARILLO
5445	OXNARD ARCO	700 SOUTH OXNARD BLVD	OXNARD
5592	OXNARD ARCO AM/PM	1132 S. OXNARD BOULEVARD	OXNARD
1043	OXNARD COLLEGE	4000 SOUTH ROSE AVENUE	OXNARD
5548	OXNARD EZ GAS	303 N. OXNARD BLVD.	OXNARD
7061	OXNARD HIGH SCHOOL	3400 WEST GONZALES RD	OXNARD
161	OXNARD LEMON CO.	2001 SUNKIST CIRCLE	OXNARD
7607	OXNARD RDC	300 KINETIC DRIVE	OXNARD
6430	OXNARD SERVICE STATION LLC	2850 S. ROSE AVENUE	OXNARD

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Facility ID	Name	Street	City
5588	OXNARD ULTRAMAR CARWASH	655 SOUTH VENTURA ROAD	OXNARD
5402	OXNARD VINEYARD CHEVRON	2251 N. OXNARD BLVD.	OXNARD
1137	OXNARD WASTEWATER TRTMNT PLANT	6001 S. PERKINS RD.	OXNARD
1300	PAC FOUNDRIES	705 INDUSTRIAL AVENUE	PORT HUENEME
581	PACIFIC COAST AUTO BODY, INC.	5162 GOLDMAN AVENUE	MOORPARK
489	PACIFIC ROCK, INC.	1000 SOUTH PANCHO RD.	CAMARILLO
7755	PACIFIC SHORES HOSPITAL	2130 VENTURA ROAD	OXNARD
879	PACIFIC VEHICLE PROCESSORS	5601 EDISON DRIVE	OXNARD
7349	PACIFICA HIGH SCHOOL	600 EAST GONZALES ROAD	OXNARD
7890	PALMERS CUSTOM COLLISION	1031 AVENIDA ACASO	CAMARILLO
7862	PALMS @ THE BONAVENTURE	111 WELLS RD.	VENTURA
583	PARADISE CHEVROLET	6350 LELAND ST	VENTURA
4129	PARK PLACE CLEANERS	501 SOUTH REINO ROAD,SUITE C	NEWBURY PARK
7324	PARKER ADVANCED FILTRATION DIVISION	2340 EASTMAN AVE.	OXNARD
6286	PECK OIL CORP	806 W. HARVARD BLVD.	SANTA PAULA
464	PENTAIR POOL PRODUCTS	10951 WEST LOS ANGELES AVE.	MOORPARK
470	PEPSI BOTTLING GROUP INC.	4375 NORTH VENTURA AVENUE	VENTURA
446	PERFORMANCE MATERIALS CORPN	1150 CALLE SUERTE	CAMARILLO
6205	PLAZA FOOD MART	1695 ROYAL AVE.	SIMI VALLEY
254	PLEASANT VALLEY HOSPITAL	2309 ANTONIO AVENUE	CAMARILLO
5480	POOLE OIL COMPANY	3885 VINEYARD AVENUE	OXNARD
227	PRE-CON PRODUCTS LTD	240 WEST LOS ANGELES AVE.	SIMI VALLEY
568	PRECISION TAG AND LABEL CORP.	4735 EAST INDUSTRIAL STREET #4C	SIMI VALLEY
589	PREMIER COACH	3053 LOS FELIZ DRIVE	THOUSAND OAKS 91362
7085	PRESTIGE AUTO WORKS	4121 N. SOUTH BANK ROAD	OXNARD
7236	PRINT CITY	1661 PACIFIC AVE. STE. 20	OXNARD
7278	PRINT N' IMAGE	4565 INDUSTRIAL STREET #7A & #8D	SIMI VALLEY
15	PROCTER & GAMBLE PAPER PRODUCTS CO.	800 NORTH RICE AVENUE	OXNARD
6192	PROUD AUTO	4676 ADOLFO RD.	CAMARILLO
1340	PTI TECHNOLOGIES INC.	501 DEL NORTE BLVD.	OXNARD

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Facility ID	Name	Street	City
7525	PUMP STATION #5	91 WOOD RD.	CAMARILLO
1097	QUINN COMPANY INC.	801 DEL NORTE BLVD.	OXNARD
7461	R & J AUTO BODY & PAINT	3120 PASEO MERCADO	OXNARD
5623	RAFI'S CHEVRON #6	1152 AVENIDA DE LOS ARBOLES	THOUSAND OAKS
402	RANCHO SIMI PARK SWIMMING POOL	1765 ROYAL AVE.	SIMI VALLEY
7852	RECON TO GO	613 FITCH AVE, UNIT #3	MOORPARK
413	REDWOOD INTERMEDIATE SCHOOL	233 GAINSBOROUGH ROAD	THOUSAND OAKS
7910	REGIONAL OCCUPATIONAL PROGRAM	465 HORIZON CIRCLE	CAMARILLO
8012	REXFORD INDUSTRIAL	3001, 3175, 3233 E. MISSION OAKS BLVD.	CAMARILLO
1241	RICHARDSON RANCH LSE	SOUTH MOUNTAIN OIL FIELD	SANTA PAULA
7536	RINCON	10151 OCEAN VIEW RD.	LA CONCHITA
7083	RINCON PIPELINE STATION	5777 W. PACIFIC COAST HIGHWAY	VENTURA
516	RIO SCHOOL DISTRICT	2715 VINEYARD AVE.	OXNARD
7909	RIO VISTA INTERMEDIATE SCHOOL	3050 THAMES RIVER DR.	OXNARD
7661	RIVERPARK JOINT-USE FIRE STATION	3301 N. VINEYARD AVE.	OXNARD
5498	RJR ENTER. DBA SIMI VALLEY ARCO	25 W. TIERRA REJADA RD.	SIMI VALLEY
812	ROBERT M. HADLEY CO. INC.	4054-B TRANSPORT STREET	VENTURA, CA
1256	ROCKWELL INT'L SCIENCE COMPANYLLC	1049 CAMINO DOS RIOS	THOUSAND OAKS
5631	ROLLING OAKS 76	293 S. MOORPARK RD.	THOUSAND OAKS
6437	ROSE & 5TH INC.	501 S. ROSE AVE.	OXNARD
6387	ROSE SHELL	1901 N. ROSE AVE.	OXNARD
660	ROTO FORM	1041 E SANTA BARBARA ST	SANTA PAULA
712	ROYAL COATINGS	3960 ROYAL AVENUE	SIMI VALLEY
5516	S & G ENERGY, INC.	445 VENTU PARK ROAD	NEWBURY PARK
5546	S & S CHEVRON	2901 SAVIERS ROAD	OXNARD
5457	S&G ENERGY, INC.	4735 PLEASANT VALLEY ROAD	CAMARILLO
6282	SAIF'S FOOD MART	423 VENTURA STREET	FILLMORE
171	SANTA CLARA WASTE WATER CO.	815 MISSION ROCK ROAD	SANTA PAULA
1132	SANTA PAULA AIRPORT ASSOC	28 WRIGHT TAXI	SANTA PAULA
718	SANTA PAULA CHEVROLET, INC.	101 WEST HARVARD BOULEVARD	SANTA PAULA

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Facility ID	Name	Street	City
138	SANTA PAULA MEMORIAL HOSPITAL	825 NORTH TENTH STREET	SANTA PAULA
6423	SANTA PAULA SHELL	100 S. HALLOCK DRIVE	SANTA PAULA
8044	SANTA PAULA WATER RECLAMATION FACILITY	921 CORPORATION STREET	SANTA PAULA
7435	SANTOS TRUCK AND AUTO REPAIR	3431 GALAXY PLACE	OXNARD
721	SATICOY AUTO BODY & TRUCK	1322 LOS ANGELES AVENUE	SATICOY
114	SATICOY FOODS CORP	554 S TODD ROAD	SANTA PAULA
130	SATICOY LEMON ASSOCIATION	103 NORTH PECK ROAD	SANTA PAULA
263	SATICOY LEMON ASSOCIATION	600 E. THIRD ST	OXNARD
155	SATICOY LEMON ASSOCIATION	7560 BRISTOL ROAD	VENTURA
7806	SATICOY PAINT BOOTH SITE #11	11201-A1 RIVERBANK DR.	SATICOY
7415	SATICOY WASTEWATER TREATMENT PLANT	1419 LIRIO AVENUE	VENTURA
5497	SAVIERS 76	3650 SAVIERS RD	OXNARD
7090	SCAT MAINTENANCE FACILITIES	301 EAST THIRD STREET	OXNARD
5725	SEAWARD GAS STATION & MINI MART	779 SOUTH SEAWARD	VENTURA
5682	SEAWARD INC.	2099 E. HARBOR BLVD.	VENTURA
7341	SEMINIS VEGETABLE SEEDS, INC.	2700 CAMINO DEL SOL	OXNARD
7451	SEMTECH CORPORATION	200 FLYNN ROAD	CAMARILLO
6397	SHELL #68511	107 W. VENTURA BLVD.	CAMARILLO
5453	SHELL #68564	301 W. NEW LOS ANGELES AVE.	MOORPARK
5558	SHELL #68579	1440 CHANNEL ISLANDS BLVD.	OXNARD
5534	SHELL #68580	2460 VINEYARD AVE.	OXNARD
5770	SHELL #68621	2390 TAPO ST.	SIMI VALLEY
5696	SHELL #68632	7841 TELEPHONE ROAD	VENTURA
5526	SHELL CAMARILLO	1604 VENTURA BLVD.	CAMARILLO
1498	SHERWIN D. YOELIN/HILL LEASE	SOUTH MOUNTAIN - LEMON ROAD	SANTA PAULA
7309	SIGNATURE GRAPHICS	4531 MARKET ST, SUITE H	VENTURA
547	SILVAS OIL CO. INC.	1230 EAST FIFTH STREET	OXNARD
6449	SILVAS OIL COMPANY, INC.	6417 VENTURA BLVD.	VENTURA
6280	SILVAS OIL COMPANY, INC.	2191 N. VENTURA AVENUE	VENTURA
5735	SILVAS OIL COMPANY, INC.	50 JULIAN STREET	VENTURA
4007	SILVER OAKS CLEANERS	2772 TOWNSGATE ROAD NO. F	WESTLAKE VILLAGE

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Facility ID	Name	Street	City
4119	SIMI CLEANERS	1834 COCHRAN STREET	SIMI VALLEY
5757	SIMI GAS	501 LOS ANGELES AVE.	SIMI VALLEY
7861	SIMI HILLS	950 SUNSET GARDEN LANE	SIMI VALLEY
5763	SIMI SHELL FOOD MART #136115	1120 LOS ANGELES AVE.	SIMI VALLEY
747	SIMI VALLEY AUTO BODY	725 EAST EASY STREET	SIMI VALLEY
7691	SIMI VALLEY CARE CENTER	5270 E. LOS ANGELES AVE.	SIMI VALLEY
6197	SIMI VALLEY CIRCLE K	510 E. LOS ANGELES AVE.	SIMI VALLEY
174	SIMI VALLEY HOSPITAL ADVENTIST HEALTH	2975 N SYCAMORE DRIVE	SIMI VALLEY
7963	SIMI VALLEY HUB	485 EASY STREET	SIMI VALLEY
1395	SIMI VALLEY LANDFILL	2801 MADERA ROAD	SIMI VALLEY
5758	SIMI VALLEY UNION 76	2706 E. LOS ANGELES AVE.	SIMI VALLEY
165	SIMI VLY CNTY SANITATION	600 WEST LOS ANGELES AVE	SIMI VALLEY
4049	SINALOA CLEANERS	660 LOS ANGELES AVENUE	SIMI VALLEY
7046	SIR SPEEDY	97 DAILY DRIVE	CAMARILLO
1291	SKYWORKS SOLUTIONS, INC.	2427 WEST HILLCREST DR	NEWBURY PARK
7578	SOUTH MOUNTAIN EARTH STATION	5990 SOLANO VERDE DRIVE	SOMIS
61	SOUTHERN CALIF GAS COMPANY	1555 NORTH OLIVE STREET	VENTURA
635	SOUTHERN CALIFORNIA EDISON CO.	3589 FOOTHILL DRIVE	THOUSAND OAKS
858	SOUTHERN CALIFORNIA EDISON CO.	10060 TELEGRAPH ROAD	VENTURA
1219	SPATZ LABORATORIES	1600 WESTAR DRIVE	OXNARD
276	SPRAGUES' ROCK AND SAND CO	5400 BENNET ROAD	SIMI VALLEY
4037	SPRING CLEANERS	475 W. CHANNEL ISLANDS BLVD., #102	PORT HUENEME
7538	ST. JOHN'S OUTPATIENT SURGERY CTR.	1700 N. ROSE AVE., SUITE 100	OXNARD
820	ST. JOHN'S REGIONAL MEDICAL CT	1600 NORTH ROSE AVE.	OXNARD
1200	ST. JOHN'S SEMINARY	5012 SEMINARY ROAD	CAMARILLO
657	STAR AUTO BODY SHOP INC.	1856 LOS ANGELES AVE	SIMI VALLEY
1365	STAR PAINT & BODY	700 EAST FIFTH STREET	OXNARD
6196	STEARNS ALLIANCE GAS MINIMART	2404 STEARNS ST.	SIMI VALLEY
5769	STEARNS PETROLEUM INC.	2605 STEARNS STREET	SIMI VALLEY
7638	STOW COMMUNICATION FACILITY	YOSEMITE AVE. & BARNARD ST.	SIMI VALLEY
7313	STREAMLINE DESIGN & SILKSCREEN, INC.	1299 WELLS ROAD	VENTURA

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Facility ID	Name	Street	City
7253	SUN AIR JETS LLC	CAMARILLO AIRPORT FUEL FARM	CAMARILLO
620	SUPERIOR COLLISION CENTER	2780 WEST WOOLEY ROAD	OXNARD
7362	SUPERIOR COLLISION CENTER	260 LAMBERT STREET - UNIT P	OXNARD
580	SUPERTECH PAINT & BODY	240 NORTH VENTURA AVENUE	VENTURA
5537	SWANK'S CHEVRON	2449 STEARNS STREET	SIMI VALLEY
5747	SYCAMORE SHELL	2405 N. SYCAMORE DR.	SIMI VALLEY
6106	SYCAMORE UNION 76	2383 SYCAMORE AVENUE	SIMI VALLEY
746	T&S AUTO REFINISHING	3800 MARKET STREET NO. E	VENTURA
6401	T.O. OIL, INC, DBA T.O. CHEVRON	3505 MOORPARK ROAD	THOUSAND OAKS
291	TAPO ROCK & SAND PRODUCTS	5023 TAPO CYN ROAD	SIMI VALLEY
5703	TBA ENTERPRISES INC	7700 TELEGRAPH ROAD	VENTURA
1311	TECHNICOLOR HOME ENTERTAINMENT SERVICES	3233 EAST MISSION OAKS BLVD.	CAMARILLO
109	TELAIR INTERNATIONAL	3303 OLD CONEJO ROAD	NEWBURY PARK
7382	TELEDYNE IMAGING SENSORS	5212 VERDUGO AVE	CAMARILLO
7015	TELEDYNE OPTIMUM OPTICAL SYSTEMS	4153 CALLE TESORO	CAMARILLO
5691	TELEGRAPH CHEVRON	3477 TELEGRAPH ROAD	VENTURA
5701	TELEPHONE ROAD CHEVRON	9460 TELEPHONE ROAD	VENTURA
4079	TEMPO CLEANERS	3949 COCHRAN STREET	SIMI VALLEY
12	TENBY PRODUCTION FACILITY	3455 EAST FIFTH STREET	OXNARD
5785	TEXACO FOOD MART	206 E. HARVARD BLVD.	SANTA PAULA
7074	TFP DATA SYSTEMS	3451 JUPITER COURT	OXNARD
224	THE BODY SHOP	2463 TAPO STREET	SIMI VALLEY
7898	THE BONAVENTURE	10949 TELEGRAPH RD.	VENTURA
4068	THE CLEANING STORE	51 W. MAIND ST., STE. L	VENTURA
1270	THE J.M. SMUCKER COMPANY	800 COMMERCIAL AVENUE	OXNARD
7062	THE PRINTING PRESS	2524 TOWNSGATE ROAD SUITE E	WESTLAKE VILLAGE
7325	THE SPOT SHOP AUTO BODY	18201 EAST TELEGRAPH ROAD	SANTA PAULA
1179	THE TERMO COMPANY	SULPHUR CREST LEASE	SANTA PAULA
7156	THE TICKET FACTORY	310 E. EASY STREET	SIMI VALLEY
1455	THE WOOD REVIVER	4445 COCHRAN ST	SIMI VALLEY
7588	THOMAS AQUINAS COLLEGE	1000 N. OJAI ROAD	SANTA PAULA
5416	THOUSAND OAKS CHEVRON	1201 E. THOUSAND OAKS BLVD.	THOUSAND OAKS
133	THOUSAND OAKS HIGH SCHOOL	2323 MOORPARK ROAD	THOUSAND OAKS

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Facility ID	Name	Street	City
7532	THOUSAND OAKS SURGICAL HOSPITAL	401 ROLLING OAKS DR.	THOUSAND OAKS
644	THOUSAND OAKS TOYOTA & SCION	2401 THOUSAND OAKS BLVD	THOUSAND OAKS
5611	THOUSAND OAKS UNION 76	2861 MOORPARK RD.	THOUSAND OAKS
5501	THOUSAND OAKS VALERO	2473 THOUSAND OAKS BLVD	THOUSAND OAKS
848	THOUSAND OAKS/MUNI SERVICE CENTER	1993 RANCHO CONEJO ROAD	THOUSAND OAKS
4109	THRIFTY CLEANERS	370 NORTH LANTANA STREET	CAMARILLO
7593	TIMELESS KUSTOMS	2255 E. PLEASANT VALLEY RD., UNIT H	CAMARILLO
587	TIP TOP BODY & PAINT SHOP	145 NORTH OLIVE STREET	VENTURA
1299	TODD RANCH JAIL	600 SOUTH TODD ROAD	SANTA PAULA
7340	TOLAND ROAD LANDFILL	3500 TOLAND ROAD	SANTA PAULA
752	TONY'S BODY SHOP	497 LAMBERT STREET	OXNARD
5614	TR OIL	3050 E. THOUSAND OAKS BLVD.	THOUSAND OAKS
666	TRI-COUNTY AUTO BODY & PAINT	6353 VENTURA BOULEVARD #36	VENTURA
843	TRI-COUNTY FIBERGLASS	3510 ARUNDELL CIRCLE	VENTURA
36	TRINITY ESC	17410 E LOCKWOOD VALLEY RD	FRAZIER PARK
7196	TURTLE STORAGE LTD.	401 S. BECKWITH RD.	SANTA PAULA
1173	U-RENT INC.	1387 LOS ANGELES AVENUE	SATICOY
1187	U-RENT INC.	92 NORTH DAWSON DRIVE	CAMARILLO
6411	UNION 76	550 W. LOS ANGELES AVE.	MOORPARK
5795	UNIVERSAL VICTORIA INC.	2440 S. VICTORIA AVE.	VENTURA
7858	UNIVERSITY VILLAGE THOUSAND OAKS	3557 CAMPUS DRIVE	THOUSAND OAKS
6389	USA GASOLINE #135721	305 CARMEN DR.	CAMARILLO
5719	USA GASOLINE #63036	887 N. VENTURA AVE.	VENTURA
5669	USA GASOLINE #63207	795 VENTURA AVENUE	OAK VIEW
5430	USA GASOLINE #63208	1501 W. GONZALES RD.	OXNARD
5435	USA GASOLINE #63211	1715 THOUSAND OAKS BLVD.	THOUSAND OAKS
5443	USA GASOLINE #63215	706 LOS ANGELES AVE.	SIMI VALLEY
5441	USA GASOLINE #63216	1356 ERRINGER RD.	SIMI VALLEY
5434	USA GASOLINE #63217	2211 TAPO STREET	SIMI VALLEY
5252	USA GASOLINE #68115	4418 E. CENTRAL AVE.	CAMARILLO
5765	USA GASOLINE #68135	660 VENTURA ST.	FILLMORE

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Facility ID	Name	Street	City
6116	USA GASOLINE #68174	518 RANCHO CONEJO BLVD.	NEWBURY PARK
5820	USA GASOLINE #68182	1790 E. PLEASANT VALLEY RD.	OXNARD
5866	USA GASOLINE #68183	5040 SAVIERS ROAD	OXNARD
5799	USA GASOLINE #68189	2651 N. VENTURA ROAD	PORT HUENEME
5523	USA GASOLINE #68224	1640 N. MOORPARK RD.	THOUSAND OAKS
5812	USA GASOLINE #68232	2661 E. THOMPSON BLVD.	VENTURA
5710	USA GASOLINE #68233	1717 S. VICTORIA AVE.	VENTURA
1389	UWCD/EL RIO BOOSTER PLANT	3561 ROSE AVENUE	OXNARD
1143	V3 CORPORATION	200 NORTH ELEVAR ST.	OXNARD
7915	VACA ENERGY, LLC/HUNSUCKER LEASE	4407 STURGIS ROAD	OXNARD
5491	VALERO	2689 N. MOORPARK RD.	THOUSAND OAKS
5502	VALERO CORNER STATION #3751	117 E. VENTURA ST.	FILLMORE
5505	VALERO CORNER STORE #3754	616 E. OJAI AVENUE	OJAI
5437	VALERO OF SANTA PAULA	145 S. 10TH ST.	SANTA PAULA
6434	VALLEY FUEL SUPPLY, INC.	200 DEL NORTE BOULEVARD	OXNARD
6427	VALLEY SHELL	1220 SYCAMORE DRIVE	SIMI VALLEY
7283	VANGUARD PRINTING	220 BERNOULLI CIRCLE	OXNARD
5797	VENTURA 76	11008 CITRUS DRIVE (WELLS)	VENTURA
628	VENTURA CO - COUNTY COMPLEX	800 S VICTORIA AVE	VENTURA
143	VENTURA CO - REG MED CENTER	3291 LOMA VISTA ROAD	VENTURA
7685	VENTURA CO. FAIRGROUNDS	10 W. HARBOR BLVD.	VENTURA
278	VENTURA COASTAL CORPORATION	2325 VISTA DEL MAR DR.	VENTURA
126	VENTURA COLLEGE	4667 TELEGRAPH ROAD	VENTURA
5604	VENTURA COUNTY CI HARBOR FUEL DOCK	3855 PELICAN WAY	OXNARD
7067	VENTURA COUNTY STAR	151 FACTORY STORES DRIVE	CAMARILLO
1202	VENTURA CREMATORY-TED MAYR'S	3150 LOMA VISTA ROAD	VENTURA
7772	VENTURA ENDOSCOPY CENTER	5810 RALSTON ST.	VENTURA
6393	VENTURA GAS & MINI MART	2599 EAST MAIN ST.	VENTURA
1083	VENTURA HARBOR BOATYARD INC.	1415 SPINNAKER DRIVE	VENTURA
253	VENTURA HARBOR MARINA & YACHT YARD	1644 ANCHORS WAY DR.	VENTURA
432	VENTURA HIGHSCHOOL	2155 EAST MAIN STREET	VENTURA
294	VENTURA MARRIOTT	2055 E. HARBOR BLVD.	VENTURA

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262	VENTURA PACIFIC COMPANY	600 N HARRISON (PLANT 1)	OXNARD
1139	VENTURA PORT DISTRICT	1603 ANCHORS WAY DRIVE	VENTURA
5544	VENTURA ROAD CHEVRON #9-7423	1860 N. VENTURA ROAD	OXNARD
1212	VENTURA U-CART	3348 VENTURA ROAD	VENTURA
5495	VENTURA VALERO	11005 CITRUS DR.	VENTURA
1377	VENTURA WASTEWATER PLANT	1400 SPINNAKER DRIVE	VENTURA
1341	VERIZON CAMARILLO PLANT YARD	201 FLYNN ROAD	CAMARILLO
7848	VICTORIA CARE CENTER	5440 RALSTON ST.	VENTURA
5700	VICTORIA CHEVRON	2199 S. VICTORIA AVENUE	VENTURA
5694	VICTORIA OIL CORP. #255523	1121 S. VICTORIA AVE.	VENTURA
6438	VINEYARD 76	2851 E. VINEYARD AVE.	OXNARD
310	VINTAGE PETROLEUM INC.	3824 GUIBERSON ROAD-GAS PL	PIRU
594	VIRGIL'S AUTO BODY	3479 OLD CONEJO RD #E11	NEWBURY PARK
7232	VISTA LANDSCAPE LIGHTING	1625 NORTH SURVEYOR AVE.	SIMI VALLEY
1399	VRSD OXNARD LANDFILLS	COASTAL LANDFILL 4105 GONZALES ROAD	OXNARD
152	W.L. RUBOTTOM COMPANY	280 WEST LEWIS STREET	VENTURA
1426	WATERWAY PLASTICS	2200 E STURGIS RD	OXNARD
35	WAYNE J. SAND AND GRAVEL INC.	9455 BUENA VISTA ST.	MOORPARK
7629	WELL NO. 15 & BOOSTER PUMP STATION	7680 GRIMES CANYON ROAD	MOORPARK
5630	WENDY AUTO CENTER INC.	420 E. THOUSAND OAKS BLVD.	THOUSAND OAKS
4081	WENDY CLEANERS	711 WENDY DR.	NEWBURY PARK
5652	WENDY DRIVE CHEVRON	2870 CAMINO DOS RIOS	NEWBURY PARK
75	WESTERN CARDINAL SELF SERVE	CAMARILLO AIRPORT	CAMARILLO
7296	WESTERN CARDINAL, INC.	CAMARILLO AIRPORT FUEL FARM	CAMARILLO
817	WESTERN SAW INC	3200 CAMINO DEL SOL	OXNARD
5403	WESTLAKE CHEVRON	225 HAMPSHIRE RD.	WESTLAKE VILLAGE
417	WESTLAKE HIGHSCHOOL	100 NORTH LAKEVIEW CANYON ROAD	WESTLAKE
4135	WESTLAKE VILLAGE CLEANERS	2785 AGOURA ROAD	WESTLAKE VILLAGE
473	WHOLESOME HARVEST BAKING, INC.	2701 STATHAM BLVD.	OXNARD
7299	WILWOOD ENGINEERING	4700 CALLE BOLERO	CAMARILLO
4127	WOOD RANCH CLEANERS	1252 MADERA ROAD, SUITE A-2	SIMI VALLEY
4118	WOODSIDE TAILOR & CLEANERS	4521 PLEASANT VALLEY ROAD	CAMARILLO

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Facility ID	Name	Street	City
5408	WOOLEY GAS FAAL CORPORATION	1060 SOUTH J STREET	OXNARD
1394	WORLD CLASS PAINT & BODY	2180 FIRST ST.	SIMI VALLEY
6338	YOSEMITE SHELL	2627 YOSEMITE AVE.	SIM VALLEY
5494	ZAITOON INC	605 S MILLS RD	VENTURA
UN-MAPPED FACILITIES[1]			
884	ADAMS PETROLEUM AGUIRRE LEASE	DEL VALLE FIELD	PIRU
813	AMPLE RESOURCES, INC.	TEMESCAL FIELD-LAKE PIRU	PIRU
1162	ASTARTA ALEXANDER OIL COMPANY	SISAR-SILVERTHREAD FIELD	SANTA PAULA
1396	B.J. SERVICES CO. USA/VENTURA	PORTABLE OILFIELD ENGINES	VENTURA COUNTY
1146	BARNETT (C. R.) TANK FARM	SIMI OILFIELD PATTERSON RANCH	SIMI VALLEY
337	BERCO OIL COMPANY, LLC NORTH TAPO LEASE	TAPO CANYON OFF HIGHWAY 126	PIRU
42	CALIFORNIA RESOURCES PRODUCTION CORPORATION	SATICOY FIELD LEASES	SANTA PAULA
939	CALIFORNIA RESOURCES PRODUCTION CORPORATION	CLARK & WEST LSES-TIMBER CANYN	SANTA PAULA
396	CALIFORNIA RESOURCES PRODUCTION CORPORATION	STATE-LEASE & COLONIA UNIT	OXNARD
58	CALIFORNIA RESOURCES PRODUCTION CORPORATION	OAKRIDGE, TAPO RIDGE/CANYON, TORREY & SANTA SUSANA	PIRU
54	CALIFORNIA RESOURCES PRODUCTION CORPORATION	SHIELLS CANYON GAS PLANT	FILLMORE
8	CALIFORNIA RESOURCES PRODUCTION CORPORATION	RINCON AREA LEASES	VENTURA
4	CALIFORNIA RESOURCES PRODUCTION CORPORATION	OJAI OIL LEASES	SANTA PAULA
670	CALTRANS COMMERCE (SPECIAL CR)	PORTABLE ROAD STRIPING	VENTURA COUNTY
1226	CASITAS MUNICIPAL WATER DIST.	RINCON PUMPING PLANT	OJAI
331	CBASE CORPORATION	BLACK LSE-RAMONA FLD	PIRU
319	CECIL BASENBERG	RAMONA FIELD AGUIRRE LEASE	PIRU
934	CHEMASSIST, L.L.C.	BASOLO LEASE - 100 GUIBERSON RD.	FILLMORE
335	CHEMASSIST, LLC	LYNN LEASE-SESPE FIELD	FILLMORE
1118	CONCORDIA RESOURCES INC.	CHAFFEE CNYN PRODCTN SITE	FILLMORE
386	CRIMSON PIPELINE, L.P.	PIRU DUMP STATION	PIRU
385	CRIMSON PIPELINE, LP	TORREY CANYON PUMP STATION	PIRU

TABLE 8-15
AB 2588 TOXIC AIR CONTAMINANT FACILITY INVENTORY
Ventura County
2014

Facility ID	Name	Street	City
363	DCOR, LLC	HOPPER CYN FLD	FILLMORE
336	H.L. HALL & SONS	CENTRAL LEASE-SESPE CYN	FILLMORE
1238	HAMMOND CANYON #2, INC.	ALTA CANADA LARGA CANYON ROAD	VENTURA
493	HAMP FEE LEASE	SILVERTHREAD AREA/OJAI FIELD	SANTA PAULA
1248	HERLEY KELLEY COMPANY	ORDUNA LSE-RAMONA OIL FIELD	PIRU
392	JORO INC.	CALUMET CYN TANK FARM / WELLS	FILLMORE
33	LA CONCHITA OIL & GAS PLANT	7459 W. PACIFIC COAST HIGHWAY	VENTURA
301	LBTH INC.	HOBSON LEASE-PADRE JUAN CANYON	VENTURA
1266	MASON CONSTUCTION COMPANY	VENTURA, CHANNEL IS., PRT HUEN	VENTURA
1264	MAVERICK OIL	SCHROEDER-SULPHUR MOUNTAIN RD.	OJAI
326	MIRADA PETROLEUM INC.	KERN LEASE	PIRU
381	MIRADA PETROLEUM INC.	HARTH LEASE	SANTA PAULA
959	MIRADA PETROLEUM INC.	HOLSER LSE-HOLSER CYN FLD	PIRU
1171	MIRADA PETROLEUM, INC.	HARTMAN LEASE-EAST SULPHUR MOUTAIN ROAD	SANTA PAULA
7383	MIRADA PETROLEUM, INC.	M.P. LANE FEDERAL KOENIGSTEIN RD	OJAI
259	NATIONALREADY MIX	13950 E. LOS ANGELES AVE.	MOORPARK
7430	OJAI FEE POWERS LEASE	UPPER OJAI AREA - HWY 150	SANTA PAULA
1252	PEAK OPERATOR II, LLC	LIOYD-BUTLER LEASE	SATICOY
1494	PLATFORM GAIL	OCS LEASE P-0205	VENTURA
1492	PLATFORM GILDA	OCS LEASE 0216/SANTA CLARA FLD	VENTURA
1491	PLATFORM GINA	OCS LEASE 0202/PT. HUENEME FLD	VENTURA
1493	PLATFORM GRACE	OCS LEASE P0217	VENTURA
1030	PRE RESOURCES, LLC	SESPE 14 TANK BTTRY	FILLMORE
1296	QUATAL CANYON GYPSUM MINE	4219 QUATAL CANYON RD.	OJAI
314	RES TECH	WELDON CANYON LOC.-OJAI FIELD	OAK VIEW

TABLE 8-15
AB 2588 TOXIC AIR CONTAMINANT FACILITY INVENTORY
Ventura County
2014

Facility ID	Name	Street	City
486	RES-TECH. INC.	FREEMAN LEASE SULPHUR MT ROAD	OJAI
1151	RIDGEWAY CORPORATION	TIMBER CANYON OILFIELD	SANTA PAULA
3	RINCON ISLAND LTD. PARTNERSHIP	RINCON ISLAND LEASES	VENTURA
7738	ROBLES FISH PASSAGE	NORTH END OF RICE ROAD	MEINERS OAKS
1242	ROSE KATHERINE STONE	COUGAR LEASE	OJAI
232	SANTA SUSANA FIELD LABORATORY	TOP OF WOOLSEY CANYON ROAD	SIMI HILLS
990	SENECA RESOURCES CORPORATION	SESPE COMPRESSOR PLANT	FILLMORE
370	SENECA RESOURCES CORPORATION	MEL BLANC ET AL- SESPE FIELD	FILLMORE
322	SENECA RESOURCES CORPORATION	SESPE FIELD LEASES	FILLMORE
366	SENECA RESOURCES CORPORATION	ROSSI ET AL LEASES - SESPE FIELD	FILLMORE
191	SILVER EXPLORATION CO. INC.	UPPER OJAI LEASE	SANTA PAULA
481	SOUTH FORK RANCH, LLC	C&H CONVERSE LEASE	SANTA PAULA
955	SOUTH MOUNTAIN RESOURCES, LLC	AGNEW LSE SISAR / SILVER STRND	OJAI
7143	SOUTH MOUNTAIN RESOURCES, LLC	ADP FEDERAL & NESBITT LEASES	SANTA PAULA
378	T.B. PROPERTIES	MERCHANTS & NELLIE BELL LEASES	FILLMORE
1147	TEG OIL & GAS USA, INC.	SLOAN RANCH-EUREKA CYN	PIRU
390	THE TERMO COMPANY	SOUTH MOUNTAIN LEASES	SOMIS
1047	THOMPSON OIL COMPANY	KAISER - AETNA LSE.	MOORPARK
332	THOMPSON OIL COMPANY INC.	BLACK LSE-RAMONA FIELD	PIRU
50	THOMPSON OIL COMPANY, INC./BURSON & ELKINS LEASES	BURSON & ELKINS LSE-BRARDSDL	FILLMORE
7173	THOMPSON OIL COMPANYINC.	SILVERTHREAD LEASE	SANTA PAULA
1273	UPLAND ROCK	1565 TELEGRAPH ROAD	FILLMORE
1021	VAQUERO ENERGY	ROBERTSON LSE-BARDSDALE FIELD	FILLMORE
365	VAQUERO ENERGY INC.	HOPPER RANCH-SESPE FIELD	FILLMORE
1020	VAQUERO ENERGY INC.	ELKINS LSE-BARDSDALE FIELDS	FILLMORE

[1] Some facilities could not be mapped due to incomplete or incorrect addresses.

Source: California Air Resources Board (CARB). AB 2588 Air Toxics "Hot Spots" Program. http://www.arb.ca.gov/ab2588/ab2588.htm, Accessed March 22, 2016d.

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Ventura County 2040 GENERAL PLAN

Chapter 9
Agriculture

9 AGRICULTURE

INTRODUCTION

This chapter provides an overview of agriculture in Ventura County, including the conditions that provide a conducive growing environment, crop patterns and production characteristics, economic impacts and benefits, and policies and programs that affect agriculture. This chapter includes the following sections:

- Agricultural Resources (Section 9.1)
- Agricultural Production (Section 9.2)
- Agricultural Policies and Programs (Section 9.3)

SECTION 9.1 AGRICULTURAL RESOURCES

Introduction

This section describes resources in Ventura County that create a conducive environment for crop production including suitable soil types, access to water, and farmland classification.

Major Findings

- Approximately 65 percent of soil types within Ventura County are suitable for agricultural production.
- According to the 2013 Ventura County Water Supply and Demand Report, the total demand for water used solely for agricultural irrigation decreased by approximately 34,000 acre feet (AF) or 11.75 percent between 1992 and 2013.
- Between 2004 and 2016, land designated as Prime Farmland decreased by 6,216 acres or 13.17 percent, and land designated as Farmland of Statewide Importance decreased by 1,987 acres or 5.68 percent.
- Approximately 430,000 acres (77 percent) of land designated as part of the Important Farmland Land Program by the Department of Conservation is in the unincorporated county. The remaining 126,000 acres (23 percent) of land is within incorporated cities.
- As of 2016, the California Department of Conservation Farmland Mapping and Monitoring Program identified approximately 197,859 acres of Grazing Land in Ventura County.

Existing Conditions

Soils

The classification of soils and their distribution in Ventura County reflect the diversity of the geography and terrain. The attributes of soil types vary with respect to texture, drainage qualities, and composition. The National Resources Conservation Service (NRCS) within the United States Department of Agriculture (USDA) oversees the organization and classification of these soils. The soil classifications are combined into soil associations to create a more clear and concise overview. The soil associations are based on NRCS soil types as identified by the University of California Cooperative Extension. The University of California has identified 14 soil associations within the county, each composed of minor and major soil classifications. The soil associations are grouped based on slope and elevation since both factors dictate the types of commodities that can be grown in specific regions. Table 9-1 shows the 14 associations in the ascending order of slope and elevation, including the percent of the county comprising the association.

TABLE 9-1
SOIL ASSOCIATIONS
Ventura County

#	Soil Association	Slope Variation	Elevation Range	Percent of County
1	Pico-Metz-Anacapa	0% - 9%	25-1,000 feet	7%
2	Mocho – Sorrento - Garretson	0% - 9%	25-1,700 feet	14%
3	Camarillo – Hueneme - Pacheco	0% - 2%	25-250 feet	8%
4	Riverwash – Sandy Alluvial Land – Coastal Beaches	0% - 5%	Sea Level-800 feet	4%
5	Rincon – Huerhuero - Azule	0% - 30%	100-500 feet	5%
6	Ojai – Sorrento, Heavy Variant	0% - 30%	25-1,700 feet	2%
7	San Benito – Naciemento - Linne	9% - 75%	100-2,000 feet	15%
8	Castaic – Balcom - Saugas	9% - 75%	500-2,500 feet	8%
9	Calleguas – Arnold	9% - 50%	100-2,200 feet	9%
10	Gazes – Saint Lucia	15% - 75%	100-2,500 feet	3%
11	Millsholm – Malibu - Los Osos	9% - 75%	100-2,500 feet	6%
12	Sespe-Lodo	15% - 75%	300-2,000 feet	4%
13	Sedimentary Rock Land – Gaviota Association	15% - 73%	100-2,500 feet	6%
14	Hambright- Igneous Rock Land - Gilroy	9% - 75%	100-3,000 feet	9%
Total				**100%**

Source: University of California Cooperative Extension: Agriculture and Natural Resources Ventura County, 2016.

Approximately 65 percent of the soil associations in the county have the capacity to produce varying amounts and types of agricultural commodities. Typically, gentler slopes can produce the largest crop variety including strawberries, irrigated vegetables, row crops, and citrus. The steeper the elevation, the more rooted the crops must be, which tends to favor tree nuts, avocados, and citrus crops. The remaining 35 percent of soil associations in the county either cannot support agricultural production due to slope, soil composition, access to water, and elevation, or the capacity for production is minimal. Figure 9-1 depicts the general location of the soil associations in the county. The color scale provided illustrates the fertility of the soil with the lighter shades representing soils which are most likely to result in crop production, and the darker shades of the colors being less likely to sustain agricultural production.

The most fertile soil association is Pico-Metz-Anacapa. This association accounts for seven percent of the soils in the county, and is generally located in temperate climates near the coast, with an average soil depth of 60 inches or more. The Pico-Metz-Anacapa Association has a shallow slope no greater than nine percent, allowing water to percolate into the ground easier, unlike areas with steep terrain, which can induce excessive runoff. Similar to Pico-Metz-Anacapa, the Mocho-Sorrento-Garretson Association yields a majority of agricultural products, spanning 14 percent of the county. Mocho-Sorrento-Garretson Association is a well-drained soil, with 60 inches or more in soil depth. This soils location is generally not far from the coastline, providing a temperate climate between 60–62 degrees Fahrenheit on average.

In contrast, the Riverwash-Sandy Alluvial Land-Coastal Beaches and Sedimentary Rock Land-Gaviota soil associations are the least productive, noted to have limited, to no capacity in sustaining agricultural production. The Riverwash Soil Association accounts for four percent of the soil in the county and is primarily located directly adjacent to the Pacific Ocean. The association is not suited for production due to the high concentration of salt water intrusion and sandy composition, lowering the necessary mineral, and chemicals to sustain crop production.

Department of Conservation Farmland Mapping and Monitoring Program

The California Department of Conservation established the Important Farmland Mapping and Monitoring Program (FMMP) in 1982 in response to the lack of data on agricultural land, grazing land, and developed areas. The intent of the program is to provide data and maps of the status of farmland in California, when planning for the state's agricultural resources. In response to the need of this critical data, the State enacted Government Code 65570 which requires a biennial report to the State Legislature outlining the conversion rates of farmland. In addition to the report, the Department of Conservation prepared an automated database system to track, report, and record farmland conversions.

The most recent data (2016) from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) inventoried over 555,000 acres of land in Ventura County, classifying over 118,000 acres of land as Important Farmland. Over 430,000 of the acres inventoried are in the unincorporated county, while the remaining 126,000 acres are part of incorporated cities. FMMP classifies land into five agricultural categories (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land) and three non-agricultural categories (Urban and Built-up Land, Other Land, Water). Four of the five agricultural categories (excluding Grazing Land) are considered important farmland due to soil temperature range, permeability rate, acid-alkali balance, moisture regime, proximity to water sources, water capacity, and climate. The fifth category, grazing land, contains vegetation suitable for livestock grazing. Below are the categories and definitions used by both the FMMP and Ventura County.

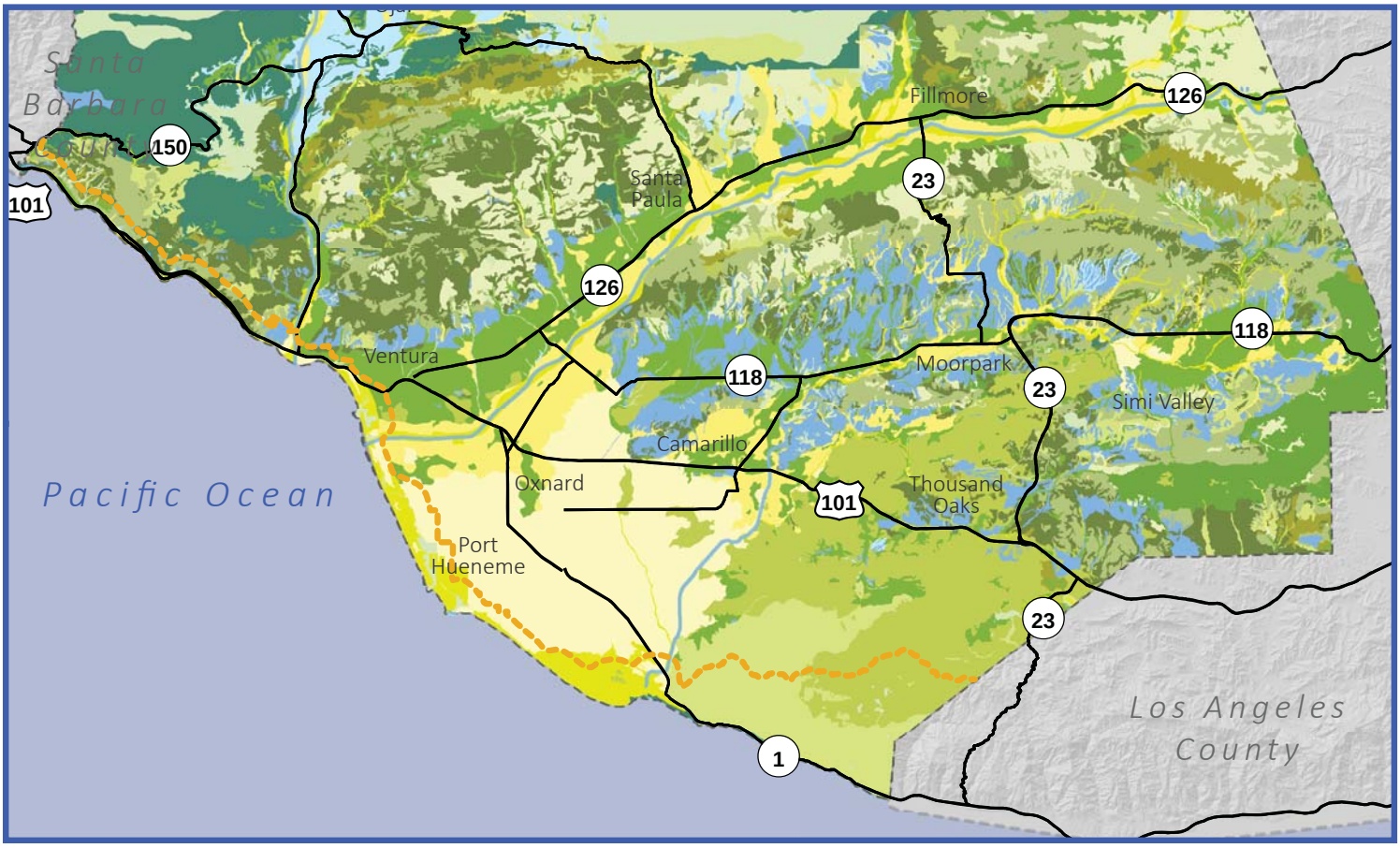


Figure 9-1:
Soil Associations

Map Date: May 31, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013; University of California Cooperative Extension, Agriculture and Natural Resources Ventura County, 2016.

0 4.5 9 Miles

N

Coastal Zone Boundary
Major Roadways
Major Waterways

Soil Associations

Pico-Metz-Anacapa Association
Mocho-Sorrento-Garretson Association
Camarillo-Hueneme-Pacheco Association
Riverwash-Sandy Alluvial Land-Coastal Beaches
Rincon-Huerhuero-Azule Association
Ojai Sorrento-Heavy Variant Association
San Benito-Nacimiento-Linne Association
Castaic-Balcom-Saugus Association
Calleguas-Arnold Association
Gazes-Santa Lucia Association
Millsholm-Malibu-Los Osos Association
Sespe-Lodo Association
Sedimentary Rock Land-Gaviota Association
Hamhright-Igneous Rock Land-Gilroy Association

- **Prime Farmland:** Has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance:** Similar to Prime Farmland but with minor shortcomings, such as greater slopes and less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland:** Consists of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in come climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance:** Consists of local soils that are listed as Prime or Statewide Importance that are not irrigated, and soils growing dryland crops (i.e. beans, grain, dryland walnuts, or dryland apricots).
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.
- **Urban and Built-up Land:** Land occupied by structures with a building density of at least 1 unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- **Other Land:** Is not included in any other mapping category. Common examples include low density rural residential developments, brush, timber, wetland, and riparian area not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines borrow pits, and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded by urban development and greater than 40 acres is mapped as other land.
- **Water:** Consists of perennial water bodies at least 40 acres in size.

The distribution of Important Farmland in Ventura County is shown in Figure 9-2. Prime Farmland is primarily located on the valley floor, stretching from the Pacific Ocean to Piru. The highest concentration is along the Highway 126 corridor from Ventura to Santa Paula and from Santa Paula to the Los Angeles County line. Farmland of Statewide Importance is distributed throughout the county in large swaths around Ventura, Oxnard, Port Hueneme, Camarillo, Fillmore, and Ojai. Lesser value farmland categories are located on the fringe of the valley, while grazing land covers much of the foothills from Lake Casitas and Lake Piru south to the communities of Thousand Oaks and Simi Valley along the Los Angeles County line.

The FMMP classifies 118,508 acres of land in Ventura County as Prime, Farmland of Statewide Importance, Unique, or Farmland of Local Importance. Of that total, 35 percent or 40,976 acres, is designated Prime Farmland, as shown in Table 9-2.[1]

[1] Small data discrepancies exist between the Department of Conservation GIS shapefiles and excel summary document, but the discrepancies are insignificant.

TABLE 9-2
IMPORTANT FARMLAND, 2016
Ventura County

Land Use Category	Acres	Percentage of Total Land	Percentage of Ag Land	Percentage of Important Farmland
Prime Farmland	40,976	7%	13%	35%
Farmland of Statewide Importance	32,992	6%	10%	28%
Unique Farmland	28,950	5%	9%	24%
Farmland of Local Importance	15,590	3%	5%	13%
Important Farmland Total*	**118,508**	**21%**	**37%**	**100%**
Grazing Land	197,859	36%	63%	N/A
Agricultural Land Subtotal	**316,367**	57%	N/A	N/A
Urban and Built-Up Land	105,966	19%	N/A	N/A
Other Land	129,688	23%	N/A	N/A
Water	3,938	1%	N/A	N/A
Total	**555,959**	**100%**	N/A	N/A

Source: California Department of Conservation Farmland Mapping and Monitoring Program, 2016
Note: Important Farmland recognized by the Farmland Mapping and Monitoring Program includes Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance*

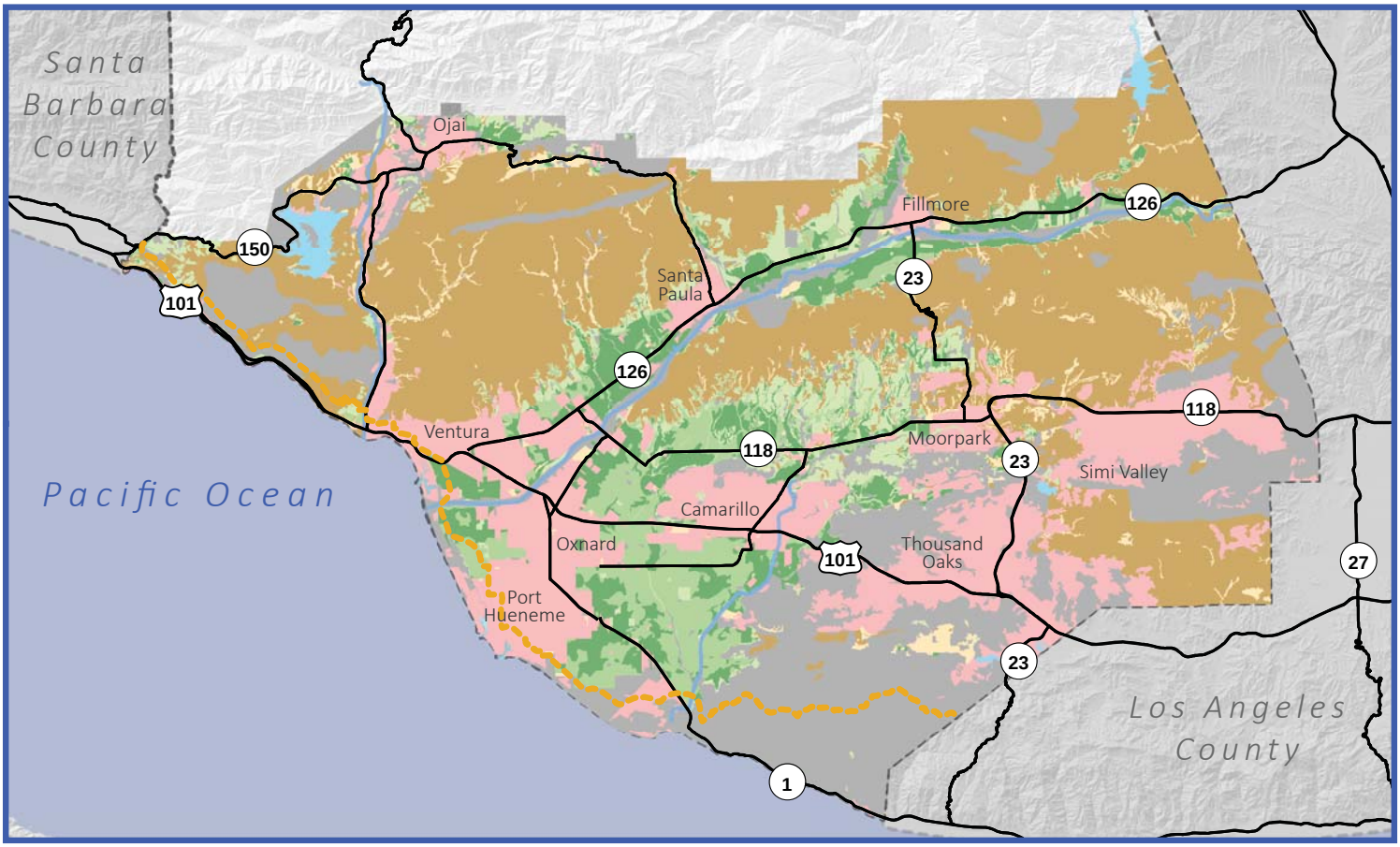


Figure 9-2:
Important Farmland Mapping

Map Date: October 03, 2017
Source: Ventura County, 2016; California Department of Conservation, 2016, California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

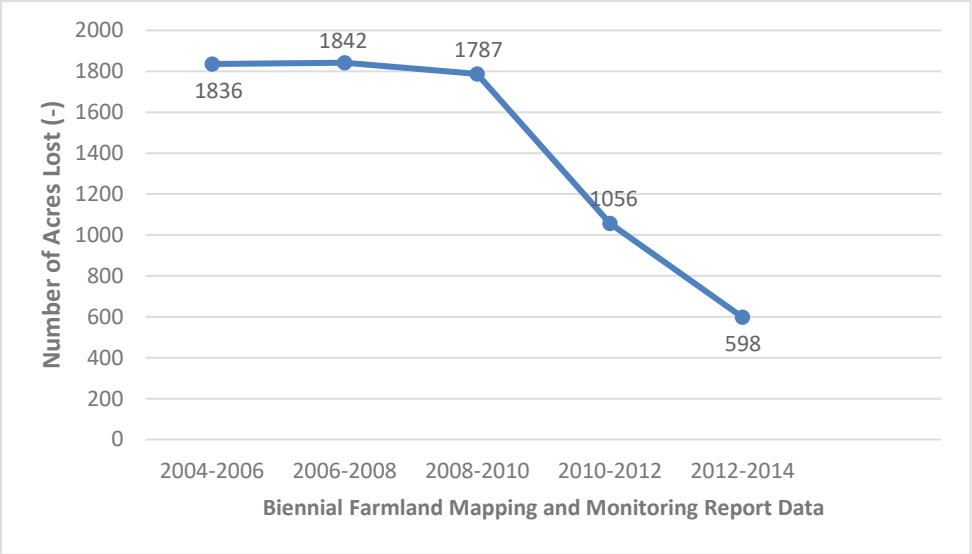
N

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Grazing Land
- Urban and Built Up Land
- Water
- Other Land

Between 2004 and 2012 over 6,000 acres of Prime Farmland were converted to numerous categories, both agricultural and non-agricultural. Prime Farmland conversion rates reached record lows in the 2014-2016 cycle, with 167 acres converted (see Figure 9-3). The Department of Conservation provided the following explanations for the conversions:

- **Irrigated Farmland to Urban Land (2 changes):** Rancho Campana High School (~30 acres) in Camarillo and addition of 15 acres of housing to the southwest of Santa Paula at the intersection of Foothill and Pine Roads.
- **Non-Irrigated Farmland and Other Land to Urban Land (18 changes):** These conversions were primarily due to new home construction. Leading the way was Moorpark with six additions of new homes, totaling 70 acres. Next was Oxnard which saw the addition of approximately 50 acres of new homes in the Riverpark development. Similarly, Camarillo added approximately 50 acres of new homes. Smaller-scale additions of new homes occurred in Ventura (~20 acres), Simi Valley (~15 acres), Fillmore (~15 acres), and Thousand Oaks (~10 acres).
- **Irrigated Farmland to Non-Irrigated Land Uses (28 changes):** This is land previously indicated as irrigated farmland or irrigated or non-irrigated fields that was left fallow for three or more cycles. The areas that showed the most conversion from irrigated farmland were Moorpark (6 changes) and Santa Paula (6 changes). The majority of the conversions were for 20 acres or less. The largest conversion to non-irrigated land uses was for 60 acres and occurred nearby Moorpark. These formerly irrigated lands will be converted to Farmland of Local Importance if they are on high quality soils, as determined by the USDA, or to Grazing Land if on lesser quality soils.
- **Irrigated Farmland to Other Land (6 changes):** These conversions were primarily due to the delineation of rural commercial uses, ranchettes, and farmsteads. One conversion was due to an area of former irrigated farmland that had been fallow for three updates and had been graded for development. These changes were generally between 10-20 acres in size.
- **Non-Irrigated Land Uses and Other Land to Irrigated Farmland (30 changes):** Additions of irrigated farmland were primarily due to new irrigated orchards such as citrus and avocados along with a few additions of row crops and nurseries. The most numerous additions of irrigated farmland were seen in Moorpark (11 changes) and Piru (7 changes). The majority of the additions of irrigated farmland made this update were for less than 20 acres. However, there were three notable additions that were for 50 acres or more. First, an addition of orchards (~90 acres), likely citrus or avocado, was made to the northeast of Santa Paula. Next, approximately 70 acres of citrus orchards were an addition in the Upper Ojai Valley. Finally, new orchards (~50 acres), likely citrus or avocado, were in evidence to the east of Fillmore near Sulphur Mountain.

FIGURE 9-3
PRIME FARMLAND LAND USE CONVERSION
2004-2016
Ventura County, California



Source: California Department of Conservation Farmland Mapping and Monitoring Program, Division of Land Resource Protection, Farmland Conversion Reports 2004-2016

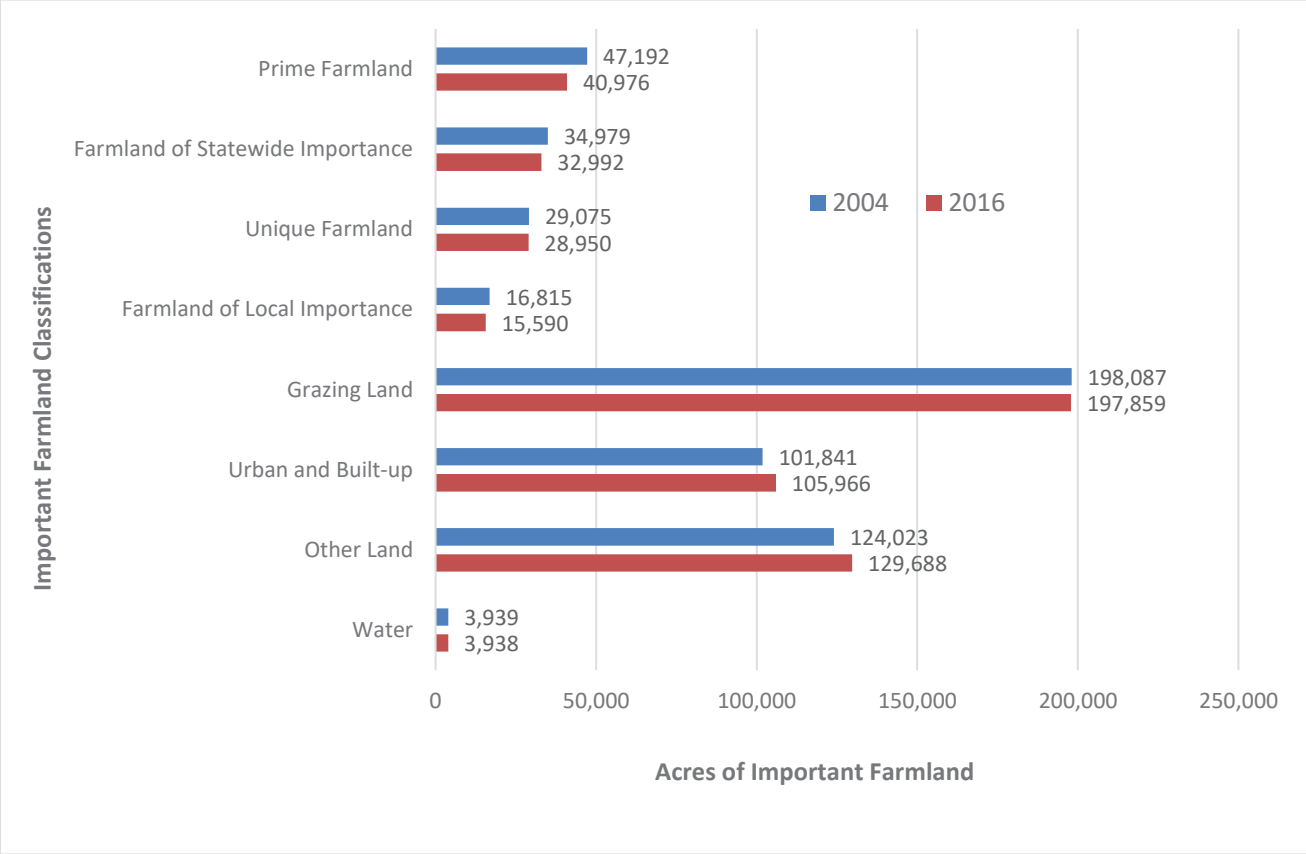
Grazing Land conversion rates have been relatively steady from 2004 to 2016, with a 228-acre loss over this period. The 2014-2016 Department of Conservation Farmland Conversion Report noted 832 acres of Grazing Land being converted, with approximately 658 acres being converted to Important Farmland. This trend can be attributed to previously fallow fields having the necessary irrigation infrastructure to sustain agriculture. As of 2016, the California Department of Conservation Farmland Mapping and Monitoring Program identified approximately 197,859 acres of Grazing Land in Ventura County. Table 9-3 summarizes the changes in land usage for the 2004-2016 period based on the biennial Farmland Conversion Reports. The amount of Important Farmland declined by approximately 7.5 percent between 2004 and 2016. The only categories that increased in acreage were Urban and Built-up (approximately 4.0 percent) and Other Land (4.6 percent), as shown in Figure 9-3. Tables from each of the 2004-2016 reporting periods can be found in Appendix 9.A (Table 9.A-1 through Table 9.A-6).

TABLE 9-3
IMPORTANT FARMLAND CHANGES, 2004-2014
Ventura County

Land Use Category	2004 Acres	2016 Acres	2004-2016 Change (Acres)	Percent Change
Prime Farmland	47,192	40,976	-6,216	-13.17%
Farmland of Statewide Importance	34,979	32,992	-1,987	-5.68%
Unique Farmland	29,075	28,950	-125	-0.43%
Farmland of Local Importance	16,815	15,590	-1,225	-7.29%
Important Farmland Total*	**128,061**	**118,508**	-9,553	**-7.46%**
Grazing Land	198,087	197,859	-228	-0.12%
Urban and Built-Up Land	101,841	105,966	4,125	4.05%
Other Land	124,023	129,688	5,665	4.57%
Water	3,939	3,938	-1	--
Total	**555,951**	**555,959**		

Source: California Department of Conservation Farmland Mapping and Monitoring Program, 2004-2016
Note: Important Farmland recognized by the Farmland Mapping Program includes: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance*
*Note**: Important Farmland acreages provided include both incorporated and unincorporated land, excluding all land in the Los Padres National Forest*

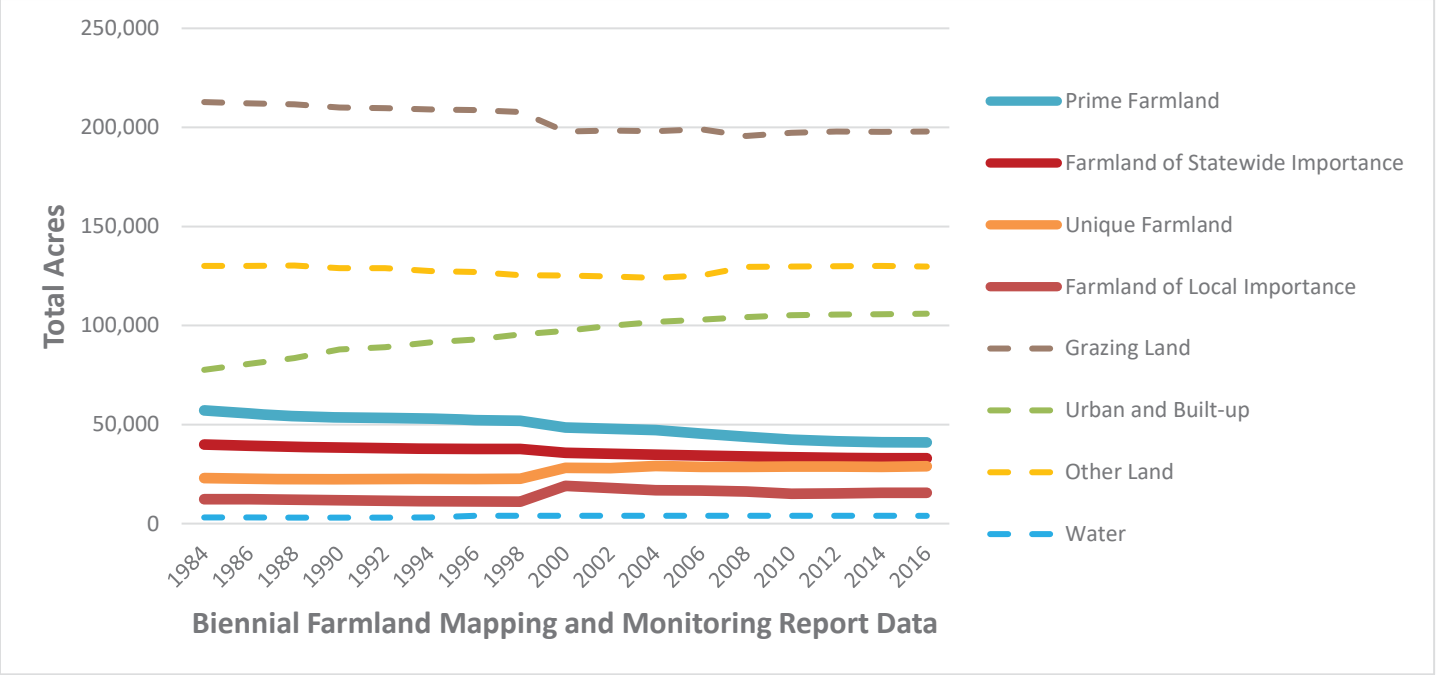
FIGURE 9-4
FMMP ACREAGE TOTALS, 2004-2016
Ventura County



Source: California Department of Conservation Farmland Mapping and Monitoring Program, 2004-2016

Figure 9-5 summarizes the changes in Important Farmland from 1984 to 2016. As shown, almost all Important Farmland categories have been on the decline over the 30-year period. Unique Farmland was the only Important Farmland category that has continued to increase, with 22,900 acres in 1984 and 28,700 acres in 2016. Prime Farmland decreased approximately 16,000 acres. The reduction of farmland can be attributed to the increase in urbanization in the mid to late 1980s, and again in the mid-1990s. Urban and Built-up Land increased over 28,000 acres during this period. Important Farmland Conversion Data from 1984-2012 can be found in Appendix 9.A (see Table 9.A-7).

FIGURE 9-5
FMMP ACREAGE CONVERSION DATA, 1984-2016
Ventura County



Source: California Department of Conservation Farmland Mapping and Monitoring Program, 1984-2016

Water

Water is crucial to agricultural production, and its availability and source of supply vary depending on location. According to the Ventura County 2013 Water Supply and Demand Report, agricultural water demand accounts for approximately 57.3 percent or 255,300 AF of total water use in the county, compared to 42.7 percent for municipal and industrial uses. This was a 10.7 percent decrease (34,000 AF) in water demand for agriculture since 1992, when 68 percent (289,300 AF) was used for agricultural irrigation. In contrast, the total water demand for municipal and industrial uses increased by 10.7 percent from 1992 to 2013 in part due to increased urbanization and population in the county. Figure 9-6 shows the types (e.g., groundwater, surface water, recycled water, imported water) and distribution of water sources used for agricultural irrigation in 2013.

The high demand for water can be attributed to crop types in the county that are considered water intensive to sustain production. Table 9-4 outlines the amount of water needed for a select group of crops

in Ventura County. Most water used for agriculture in Ventura County is extracted from three watersheds: Ventura River, Calleguas Creek, and Santa Clara River (see Figure 9-7).

TABLE 9-4
WATER USE BY CROP TYPE, 2014
Ventura County

Most Water Intensive Foods	Gallons of H_2O per lb. of food	Medium Water Intensive Foods	Gallons of H_2O per lb. of food	Acre Feet of H_2O per lb. of food	Less Water Intensive Foods	Gallons of H_2O per lb. of food	Acre Feet of H_2O per lb. of food
Avocados	262	Apricots*	170	0.0005	Cucumbers	47	0.0001
Walnuts (shelled)*	1,226	Apples*	117	0.0003	Strawberries	46	0.0001
		Lemons	85	0.0002	Broccoli	38	0.0001
		Green Beans	74	0.0002	Lettuce	31	0.00009
		Oranges	74	0.0002	Tomatoes	28	0.00008

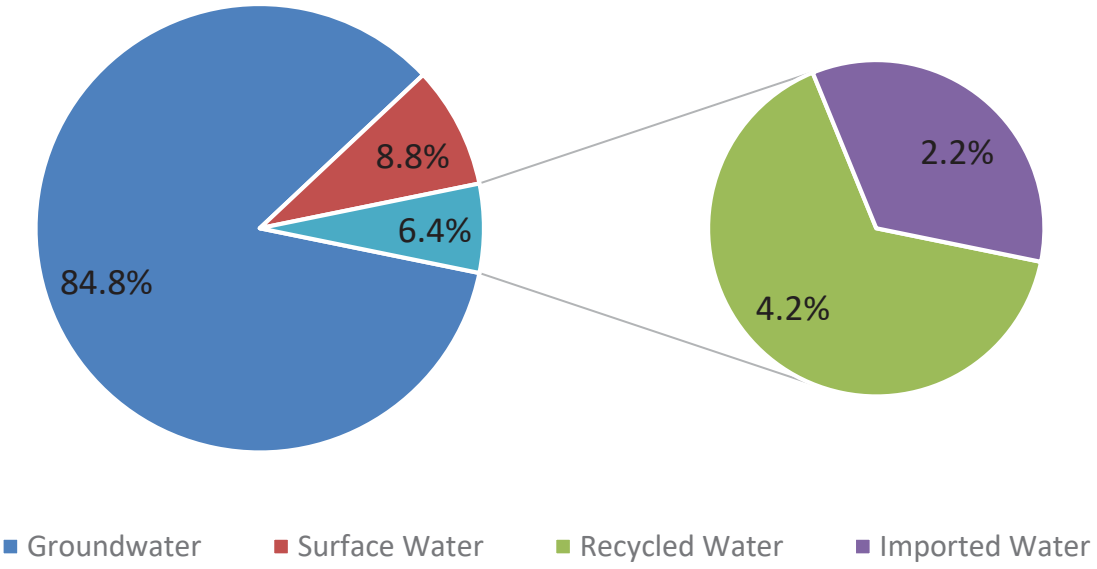
**Specified crops grown in limited quantities in Ventura County.*
Source: Ecology.com, How Water Intensive Food Choices Impact California's Drought, 2014

~~**TABLE 9-4**~~
~~**WATER USE BY CROP TYPE, 2014**~~
~~**Ventura County**~~

~~Most Water Intensive Foods~~	~~Gallons of H_2O per lb. of food~~	~~Medium Water Intensive Foods~~	~~Gallons of H_2O per lb. of food~~	~~Less Water Intensive Foods~~	~~Gallons of H_2O per lb. of food~~
~~Avocados~~	~~262~~	~~Apricots*~~	~~170~~	~~Cucumbers~~	~~47~~
~~Walnuts (shelled)*~~	~~1,226~~	~~Apples*~~	~~117~~	~~Strawberries~~	~~46~~
		~~Lemons~~	~~85~~	~~Broccoli~~	~~38~~
		~~Green Beans~~	~~74~~	~~Lettuce~~	~~31~~
		~~Oranges~~	~~74~~	~~Tomatoes~~	~~28~~

~~**Specified crops grown in limited quantitities in Ventura County.*~~
~~*Source: Ecology.com, How Water Intensive Food Choices Impact California's Drought, 2014*~~

FIGURE 9-6
AGRICULTURAL WATER SOURCES, 2013
Ventura County



Source: 2013 Water Supply and Demand Report: Ventura County

FIGURE 9-7
WATERSHEDS AND AGRICULTURAL AREAS
Ventura County, California

Source: Ventura County Watershed Protection District 2013 Water Supply and Demand, January 2015.

The Integrated Water Flow Model (IWFM) Demand Calculator (IDC) divides the county into nine subregions to calculate and analyze moisture zones, evapotranspiration, precipitation, soil characteristics and water demand (Figure 9-7). IDC calculations are based on the estimates for specific crop irrigation, climate trends, prior water usage, and population projections. In 2013, the IDC projected water demand by subregion (Table 9-5). The Santa Clara River Subregion was projected to have the highest total agricultural demand (at approximately 114,919 AF). The Calleguas Creek and Ventura River Subregions round out the top three, with projected demand of 112,701 AF and 11,745 AF, respectively. The Hall Canyon/Arundell and South Coast Subregions registered the lowest agricultural water demand of 815 AF and 86 AF, respectively. This result can be attributed to the fact that these areas have very limited amounts of agricultural land.

Ventura County actively continues to use surface water for in-stream and environmental uses. The intent is to minimize surface flow rates to protect and maintain habitats for local wildlife, fish, riparian habitats, and reptiles. According to the Ventura County 2013 Water Supply Demand Report, the following are existing in-stream and environmental uses of surface water:

- United Water Conservation District Freeman Diversion on the Santa Clara River provides bypass flows for migration of steelhead trout.
- City of Thousand Oaks surface water diversion on Conejo Creek in the Calleguas Creek watershed provides bypass flows for the protection of fish, wildlife, southwestern pond turtles, and riparian habitat and vegetation.
- Casitas Municipal Water District Robles Diversion on the Ventura River provides bypass flows for migration of steelhead trout.
- Additionally, the City of Ventura Foster Park well extracts shallow groundwater that is connected to the Ventura River. A draft biological opinion recommends restricting pumping in the Foster Park well field to prevent Ventura River flows from falling below 11-12 cubic feet per second.

TABLE 9-5
PROJECTED WATER DEMAND BY SUBREGION
Ventura County
2013

Sub region	Total Agricultural Demand (Acre-Feet)	Total Municipal/Domestic Demand (Acre-Feet)	Total Demand (Acre-Feet)
Hall Canyon/Arundell	815	9,924	10,739
Calleguas Creek	112,701	89,335	202,037
Rincon	5,727	1,848	7,575
Ormond Beach	2,797	22,913	25,710
Santa Clara River	114,919	31,284	146,203
Cuyama	5,452	0	5,452
Malibu Creek	1,083	19,291	20,374
South Coast	86	2,035	2,121
Ventura River	11,745	13,351	25,096
Total	**255,326**	**189,982**	**445,308**

Source: Ventura County Watershed Protection District 2013 Water Supply and Demand, January 2015.

In 2013, the actual water demand for agriculture was lower than the IDC demand projections. For example, the Santa Clara River Watershed, which contains the most agricultural land requiring groundwater for irrigation, accounted for a demand of 90,000 AF. This was lower than the anticipated 114,000 AF projection, due to increased urbanization in the watershed area. In the Santa Clara River Watershed, surface water is also used, but with a relatively small demand of 8,000 AF.

Over the past decade encroachment from urban development has begun to reduce the amount of water extraction for agricultural irrigation. The Calleguas Creek Watershed, like the Santa Clara River Watershed, supplies most of groundwater to agricultural operations with a demand of 88,000 AF. Users within the Calleguas Creek Watershed also use recycled water (10,700 AF), surface water (5,800 AF), and imported water (5,500 AF) for irrigation. Imported water is provided by the State Water Project through the Metropolitan Water District of Southern California, which distributes water throughout Ventura County.

Regulatory Setting

Federal

Farmland Protection Policy Act (FPPA)

The Farmland Protection and Policy Act (FPPA), 7 U.S.C. 4201, was enacted in 1981 to minimize the loss of prime and unique farmlands as a result of Federal actions by converting these lands to nonagricultural uses. It assures that federal programs are compatible with state and local governments, and private programs and policies to protect farmland. Federal agencies that authorize actions that result in the conversion of prime or unique farmland not already committed to urban development or water storage are responsible for compliance with the FPPA. Compliance is to be coordinated with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

State

Farmland Mapping and Monitoring Program (FMMP) Section 65570(b) of the California Government Code

This statute requires the Department of Conservation to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county in California and to report this information to the Legislature. This report is due biennially (every two years) on or before June 30 of every even-numbered year and includes the Important Farmland Inventory data. This statute requires the Department of Conservation to update and send copies to the counties throughout the state of current farmland maps by August 1 of each even-numbered year. Counties have the option to review the maps and notify the Department of any changes in agricultural land and request correction of any discrepancies or errors in the classification of agricultural lands on the maps. The statute also provides that the Department of Conservation may acquire supplemental information from new soil surveys and establish comparable baseline data for counties not included in the original 1984 mapping.

Local

2005 Ventura County General Plan

The General Plan covers agricultural resources in Chapter 1, Resources. Sections 1.6 and 3.2 include goals, policies, and programs related to agricultural resources. The following Area Plans also contain applicable goals and policies related to agricultural resources:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- North Ventura Avenue Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for agricultural resources. These can be found in Section 5a. Agricultural Resources-Soils and Section 5b. Agricultural Resources-Land Use Incompatibility.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates agricultural resources through Section 8104-1 Open Space/Agricultural Zones.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates agricultural resources through Section 8173-2 Coastal Agricultural (CA) Zone.

Key Terms

AF. Acre-feet

Alluvial. Sediment deposited by flowing water, such as in a riverbed.

IDC. Integrated Water Flow Model Demand Calculator

Groundwater. Water that occurs beneath the land surface and completely fills all pore spaces of the alluvium or rock formation in which it is located.

Hydrological. The distribution and cycle of surface and underground water.

Soil Association. A group of soils associated with one or more classifications and which occur in a predictable pattern.

Surface Water. Water that collects on the surface of the ground.

Watershed. A land area that drains to a common waterway, such as a stream, lake, or other water body.

SECTION 9.2 AGRICULTURAL PRODUCTION

Introduction

This section summarizes agricultural production in Ventura County, including commodities produced, market value, the farm characteristics, including the number of farms, the size of farming operations, and the types of farm operators. This section also addresses organic farming, commodity values and trends, and the potential for an expanded food processing sector.

Major Findings

- Ventura County is the eighth largest agricultural producing county in the State, with over 95 varieties of crops and 2,150 farms totaling over 281,000 acres.
- The average farm size in 2012 was 131 acres, which represents a 21 percent increase from 2007, when the average farm size was 106 acres.

Existing Conditions

Ventura County ranked eighth among California counties in total crop value in 2015, according to the compilation by the California Department of Food and Agriculture of the California County Agricultural Commissioner's annual crop and livestock reports. The most recent national data ranked Ventura County eleventh among all crop producing counties in the United States. Ventura County has a temperate climate with warm wet winters and calm, hot dry summers that support fertile soils and a wide diversity in commodity production, including strawberries, celery, lemons, raspberries, avocados, nursery stock, tomatoes, peppers, cut flowers and kale. The areas that sustain growth of agricultural commodities have a broad range of characteristics. For example, berry production requires a temperate moist climate, so most strawberry production is found close to the coast, surrounding the cities of Ventura, Oxnard, Camarillo, and Port Hueneme. The climate tends to be dryer and warmer further from the coast, favoring citrus crops. Specifically, the Highway 126 and 150 corridors are prime areas for citrus growth. The fertile soil combined with ideal temperate seasonal temperatures allow lemons, oranges, and mandarins to thrive. Some commodity types such as avocados and nursery stock can sustain growth in a variety of climate regions, allowing them to flourish countywide primarily on well-drained hillsides.

Commodities and Values

Ventura County's agricultural sector serves as one of its leading economic drivers. The Office of the Agricultural Commissioner for Ventura County provides annual reports detailing the leading crops in production for the given year, including the gross value of commodities produced. The most recent Crop and Livestock Report for Ventura County is for 2015 and was published in 2016. The report highlights eight sectors of the agricultural economy, grouped into crop types:

- Fruit and Nut Crops
- Vegetable Crops
- Livestock and Poultry
- Apiary Products
- Nursery Stock
- Cut Flowers
- Field Crops
- Sustainable Agriculture

Farms in Ventura County generated over $2.1 billion in agricultural products in 2015 (Table 9-6), although farmers may or may not earn a profit in any year. Fruit and nut crops had the highest gross value in 2015, at approximately $1.3 billion. Horticultural products, which include the nursery and cut flower industry, increased in value but continue to fall short of values prior to the 2004-2008 recession which exceeded $300 million annually. In 2015, field and vegetable crops experienced an increase of 4.5 percent over the past year. The decrease in crop values from 2013 to 2014 can be attributed to the drought in California. Ventura County only recorded 5.42 inches of rain in 2014, the county's second lowest recorded total rainfall since 1930.

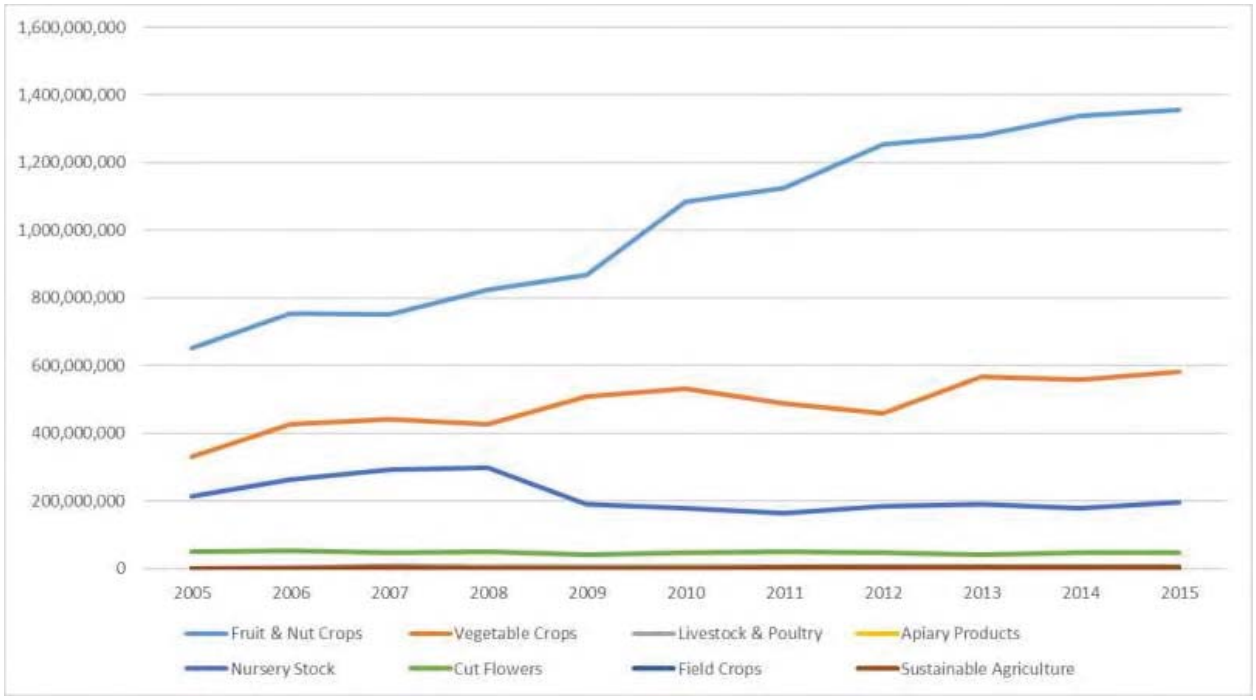
TABLE 9-6
AGRICULTURAL PRODUCT SALES TRENDS, 2010-2014
Ventura County

Year	Total Aggregate Value*	Field Crops and Vegetables	Fruits and Tree Nuts	Horticulture
2010	$1,859,151,000	$535,936,000	$1,085,677,000	$227,405,000
2011	$1,844,260,000	$491,917,000	$1,124,860,000	$216,010,000
2012	$1,963,798,000	$462,771,000	$1,254,592,000	$233,180,000
2013	$2,094,915,000	$569,196,000	$1,280,274,000	$233,968,000
2014	$2,137,003,000	$559,031,000	$1,338,004,000	$228,114,000
2015	$2,198,555,000	$584,291,000	$1,357,101,000	$244,339,000
2010-2014 CAGR[1]	2.83%	0.85%	4.27%	0.06%
2010-2015 Change	$339,404,000	$48,355,000	$271,424,000	$16,934,000

Source: 2015 Ventura County Food Processing Analysis. Ventura County Agricultural Commissioner. ADE, Inc., based on California Agricultural Commissioner Reports (2010-2014).
[1] CAGR = Compound Annual Growth Rate
Note: Previous reports used 2013 crop report from county itself - - this table uses crop data in 2013 California Commissioner's Report, which is the same. 2014 and 2015 are based on the Ventura County Crop and Livestock Agricultural Commissioner's Report for each year respectively.
**Note: Aggregate Value includes livestock and other animal specialties, along with field crops, vegetables, tree nuts, fruits, and horticultural specialties.*

Figure 9-8 and Table 9-7 show the market value of agricultural products sold in Ventura County between 2005 and 2015, based on information collected by the Ventura County Agricultural Commissioner.

FIGURE 9-8
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD, 2005-2015



Source: Ventura County Agricultural Commissioner's Office

TABLE 9-7
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD, 2005-2015
Ventura County

Crop Type	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Fruit & Nut Crops	652,777,000	755,700,000	752,138,000	823,464,000	867,759,000	1,085,677,000	1,124,860,000	1,254,592,000	1,280,274,000	1,338,004,000	1,357,101,000
Vegetable Crops	330,269,000	426,659,000	442,220,000	427,742,000	509,248,000	533,473,000	490,233,000	460,280,000	568,722,000	557,614,000	583,281,000
Livestock & Poultry	2,150,000	4,775,000	9,006,000	6,853,000	7,494,000	6,161,000	6,075,000	6,872,000	6,517,000	7,887,000	6,878,000
Apiary Products	509,000	431,000	640,000	463,000	698,000	1,505,000	2,385,000	3,326,000	1,392,000	554,000	2,108,000
Nursery Stock	213,661,000	263,890,000	292,989,000	298,690,000	191,300,000	180,057,000	163,793,000	186,351,000	190,889,000	180,499,000	195,817,000
Cut Flowers	51,751,000	52,456,000	48,646,000	51,297,000	42,763,000	47,348,000	52,217,000	46,829,000	43,079,000	47,615,000	48,522,000
Field Crops	1,193,000	1,677,000	1,624,000	2,580,000	2,313,000	2,463,000	1,684,000	2,491,000	474,000	1,417,000	1,010,000
Sustainable Agriculture	1,999,000	2,570,000	2,718,000	2,148,000	2,273,000	2,453,000	3,000,000	3,045,000	3,557,000	3,443,000	3,838,000

Source: Ventura County Agricultural Commissioner's Office

As part of the Ventura County Crop and Livestock Report, the Agricultural Commissioner's Office identifies the 10 highest grossing commodities (Table 9-8) in the county.

The estimated gross value for Ventura County agriculture for 2015 was $2,198,555,000. This represented a 2.7% increase over 2014, or $61,522,000.

TABLE 9-8
TOP TEN COMMODITY SALES, 2015
Ventura County, California

Year	Production
Strawberries	$617,832,000
Lemons	$259,539,000
Raspberries	$228,217,000
Nursery Stock	$195,817,000
Celery	$194,756,000
Avocados	$188,818,000
Peppers	$54,163,000
Tomatoes	$50,474,000
Cut Flowers	$48,088,000
Kale	$38,088,000
Total for Top Ten Commodity Sales	**$1,875,792,000**

Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

The top ten highest grossing commodities Ventura County has not remained static over time, but experienced changes as indicated in Table 9-9 which shows the top ten agricultural commodities in Ventura County between 1922 and 2012 by ranking.

TABLE 9-9
RANKING OF TOP TEN AGRICULTURAL CROPS, 1922-2012
Ventura County

Rank	2012	2002	1992	1982	1972	1962	1952	1942	1932	1922
1	Strawberries	Strawberries	Lemons	Lemons	Lemons	Lemons	Lemons	Lemons	Lemons	Beans
2	Lemons	Lemons	Strawberries	Celery	Livestock, Poultry & Dairy	Valencia Oranges	Valencia Oranges	Valencia Oranges	Valencia Oranges	Lemons
3	Raspberries	Nursery Stock	Celery	Poultry and Dairy	Celery	Livestock & Poultry	Beans	Beans	Walnuts	Walnuts
4	Nursery Stock	Celery	Nursery Stock	Strawberries	Tomatoes	Tomatoes	Misc. Vegetables	Walnuts	Beans	Apricots
5	Celery	Avocados	Valencia Oranges	Valencia Oranges	Strawberries	Celery	Walnuts	Misc. Vegetables	Sugar Beets	Valencia Oranges
6	Avocados	Cut Flowers	Avocados	Seed	Valencia Oranges	Lettuce	Livestock	Livestock	Misc. Vegetables	Sugar Beets
7	Tomatoes	Tomatoes	Lettuce	Nursery Stock	Lettuce	Green Beans	Poultry Products	Dairy Products	Navel Oranges	Navel Oranges
8	Peppers	Peppers	Cut Flowers	Lettuce	Avocados	Dairy Products	Dairy Products	Hay	Hay	Hay
9	Cut Flowers	Valencia Oranges	Broccoli	Avocados	Misc. Vegetables	Lima Beans	Navel Oranges	Navel Oranges	Apricots	Grain
10	Cilantro	Raspberries	Cabbage	Broccoli	Lima Beans	Navel Oranges	Grain	Poultry Products	Citrus Nursery Stock	Misc. Citrus

Source: Ventura County Agricultural Commissioner's Office.

The following series of tables summarizes the market value, production, production area, and trends associated with eight groupings of agricultural commodities grown in Ventura County between 2014-2015.

TABLE 9-10
FRUIT AND NUT CROP ACREAGE, PRODUCTION, AND VALUES, 2014-2015
Ventura County

Crop	Year	Production				Value	
		Acreage	Per Acre	Total	Unit	Per Unit	Total
Avocados	2015	19,459	2.90	56,512	tons	$3,341.20	$188,818,000
	2014	19,709	2.46	48,439	tons	$2,642.07	$127,978,000
Blueberries	2015	515	3.28	1,691	tons	$11,810.76	$19,972,000
	2014	528	3.91	2,066	tons	$11,549.08	$23,855,000
Grapefruit	2015	123	3.17	390	tons	$2,256.41	$880,000
	2014	100	2.93	293	tons	$1,965.69	$576,000
Lemons	2015	14,725	17.47	257,265	tons	$1,008.84	$259,539,000
	2014	14,926	18.7	279,115	tons	$965.29	$269,428,000
Mandarins & Tangelos	2015	2,310	5.32	12,286	tons	$799.69	$9,825,000
	2014	1,980	4.25	8,418	tons	$1,369.88	$11,532,000
Oranges (Navel)	2015	444	11.81	5,243	tons	$437.92	$2,296,000
	2014	457	11.93	5,448	tons	$621.15	$3,384,000
Oranges (Valencia)	2015	2,210	10.89	24,076	tons	$518.86	$12,492,000
	2014	2,414	14.21	34,307	tons	$495.82	$17,010,000
Raspberries	2015	4,834	13.53	65,389	tons	$3,489.61	$228,217,000
	2014	4,629	9.28	42,943	tons	$5,604.16	$240,662,000
Strawberries (Total)	2015	11,262	25.20	283,802	tons	$2,176.98	$617,832,000
	2014	11,630	26.27	305,520	tons	$2,055.39	$627,964,000
Fresh	2015	-	-	237,485	tons	$2,390.18	$567,633,000
	2014	-	-	222,677	tons	$2,516.25	$560,310,000
Processed	2015	-	-	46,317	tons	$1,083.81	$50,199,000
	2014	-	-	82,843	tons	$816.64	$67,653,000
Misc. Fruits & Nuts[1]	2015	1,104	-	-	tons	-	$17,230,000
	2014	848	-	-	tons	-	$15,615,000
Total	**2015**	**56,986**					**$1,357,101,000**
	2014	**56,821**					**$1,338,004,000**

[1]Misc. Fruits & Nuts include Apples, Apricots, Asian Pears, Bushberries, Cherimoya, Grapes, Guavas, Kiwi, Limes, Olives, Persimmons, Macadamias, Walnuts; and miscellaneous citrus, deciduous, and subtropical fruit.
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-11
VEGETABLE CROPS' ACREAGE, PRODUCTION, AND VALUES, 2014-2015
Ventura County

Crop	Year	Production				Value	
		Acreage	Per Acre	Total	Unit	Per Unit	Total
Asian Vegetables	2015	755	20.63	15,579	tons	$963.22	$15,006,000
	2014	810	13.23	10,714	tons	$1,375.16	$14,734,000
Beans *Green Limas, Green Snap*	2015	1,622	1.84	2,987	tons	$1,386.34	$4,141,000
	2014	3,568	1.76	6,272	tons	$1,254.39	$7,868,000
Beets	2015	107	24.50	2,621	tons	$1,056.09	$2,768,000
	2014	164	14.00	2,292	tons	$1,056.61	$2,422,000
Broccoli *Fresh & Processed*	2015	166	12.20	2,026	tons	$1,317.37	$2,669,000
	2014	359	8.46	3,038	tons	$1,387.03	$4,214,000
Cabbage	2015	3,732	26.25	97,961	tons	$304.15	$29,795,000
	2014	3,922	31.62	124,001	tons	$281.16	$34,864,000
Carrots	2015	228	35.12	8,008	tons	$181.57	$1,454,000
	2014	665	33.48	22,264	tons	$171.98	$3,829,000
Celery	2015	11,737	35.24	413,640	tons	$470.83	$194,756,000
	2014	11,003	35.38	389,308	tons	$390.83	$152,153,000
Cilantro	2015	2,977	8.44	25,125	tons	$1,099.30	$27,620,000
	2014	3,303	7.39	24,393	tons	$956.12	$23,323,000
Cucumbers[1]	2015	62	93.03	5,768	tons	$1,988.73	$11,471,000
	2014	59	63.49	3,760	tons	$2,291.51	$8,615,000
Greens[2]	2015	973	10.70	10,408	tons	$1,715.41	$17,854,000
	2014	1,480	14.58	21,576	tons	$813.40	$17,550,000
Kale	2015	1,402	5.49	7,694	tons	$4,950.35	$38,088,000
	2014	1,898	11.08	21,028	tons	$1,708.73	$35,932,000
Lettuce (Total)	2015	2,067	19.53	40,362	tons	$839.85	$33,898,000
	2014	2,456	15.44	37,919	tons	$574.80	$21,796,000
Head	2015	128	7.57	969	tons	$946.34	$917,000
	2014	160	11.65	1,863	tons	$1,133.77	$2,112,000
Leaf	2015	789	24.56	19,378	tons	$1,282.59	$24,854,000
	2014	911	15.63	14,232	tons	$948.39	$13,497,000
Romaine	2015	1,150	17.40	20,015	tons	$406.05	$8,127,000
	2014	1,385	15.76	21,825	tons	$283.48	$6,187,000
Onions *Green & Dry*	2015	338	17.83	6,025	tons	$446.31	$2,689,000
	2014	328	17.39	5,703	tons	$519.71	$2,964,000
Parsley	2015	527	18.37	9,683	tons	$1,636.16	$15,843,000
	2014	549	20.20	11,094	tons	$1,437.68	$15,949,000
Peppers *Bell & Chili*	2015	3,256	43.49	141,613	tons	$382.47	$54,163,000
	2014	4,352	39.78	173,115	tons	$388.58	$67,268,000

TABLE 9-11
VEGETABLE CROPS' ACREAGE, PRODUCTION, AND VALUES, 2014-2015
Ventura County

Crop	Year	Production				Value	
		Acreage	Per Acre	Total	Unit	Per Unit	Total
Pumpkin	2015	150	12.29	1,844	tons	$369.85	$682,000
	2014	155	15.06	2,334	tons	$339.72	$793,000
Radishes	2015	1,006	16.30	16,399	tons	$643.33	$10,550,000
	2014	999	16.28	16,271	tons	$579.87	$9,435,000
Spinach	2015	1,513	8.63	13,053	tons	$1,137.36	$14,846,000
	2014	1,261	8.21	10,353	tons	$1,095.45	$11,341,000
Sweet Corn	2015	535	7.17	3,837	tons	$555.12	$2,130,000
	2014	444	7.41	3,289	tons	$516.88	$1,700,000
Tomatoes[3]	2015	416	67.22	27,966	tons	$1,804.83	$50,474,000
	2014	466	89.66	41,740	tons	$1,729.93	$72,207,000
Vegetables, Misc.[4] *Field, Indoor & Processed*	2015	3,892	-	-	-	-	$52,384,000
	2014	1,532	-	-	-	-	$48,657,000
TOTAL	**2015**	**39,528**					**$583,281,000**
	2014	**39,671**					**$557,614,000**

[1] Includes hydroponics.
[2] Includes: chard, collard, mustard, turnip and watercress.
[3] Includes hydroponics.
[4] Includes: artichokes, arugula, asparagus, baby vegetables, cauliflower, eggplant, endive, garlic, gourds, herbs, kohlrabi, leeks, melons, mushrooms, peas, radicchio, sprouts, squash, tomatillos, and turnips.
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-12
NURSERY STOCK ACREAGE, PRODUCTION, AND VALUES, 2014-2015
Ventura County

Item	Year	Production		Production Area		Value	
		Total	Units	Greenhouse (Sq. Ft.)	Field (Acres)	Per Unit	Total
Fruit & Nut Trees	2015	1,285,601	trees	-	262	$20.07	$25,806,000
	2014	1,080,209	trees	-	231	$18.71	$20,213,000
Potted Plants	2015	2,856,802	pots	2,206,425	35	$3.71	$10,603,000
	2014	2,865,639	pots	2,266,058	36	$3.71	$10,644,000
Propagative Material	2015	58,523,867	cuttings	694,109	1	$0.11	$7,005,000
	2014	59,718,231	cuttings	679,109	1	$0.12	$7,222,000
Herbaceous Perennials	2015	2,591,514	containers	72,185	95	$3.23	$8,369,000
	2014	2,816,863	containers	54,139	90	$3.06	$8,628,000
Woody Ornamentals	2015	6,711,768	tree/shrubs	125,054	1,739	$13.29	$89,217,000
	2014	5,887,516	tree/shrubs	128,161	1,605	$12.52	$73,739,000
Bedding Plants, Ground Cover & Turf	2015	13,389,677	flats	427,846	817	$2.80	$37,501,000
	2014	19,128,110	flats	594,230	1,220	$2.17	$41,533,000
Vegetable Transplants	2015	4,204,558	flats	1,642,825	136	$4.12	$17,316,000
	2014	4,453,981	flats	1,642,825	136	$4.16	$18,520,000
TOTAL	**2015**			**5,168,444**	**3,085**		**$195,817,000**
	2014			**5,364,522**	**3,326**		**$180,499,000**

Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-13
CUT FLOWERS ACREAGE, PRODUCTION, AND VALUES, 2014-2015
VENTURA COUNTY, CALIFORNIA

Crop	Year	Acres	Production	Unit	Per Unit	Total Value
Flower Blooms & Stems	2015	52	22,960,665	blooms	-	$6,465,000
	2014	49	19,636,178	blooms	-	$5,740,000
Cut Greens & Dried Flowers	2015	62	262,543	bunches	-	$515,000
	2014	61	257,395	bunches	-	$506,000
Flower Bunches (Total)	2015	631	12,759,864	bunches	-	$41,542,000
	2014	626	12,596,809	bunches	-	$41,369,000
Statice, Lace, Aster & Gypsophila	2015	143	2,046,440	bunches	$2.45	$5,006,000
	2014	100	1,509,032	bunches	$2.45	$3,693,000
Chrysanthemums & Sunflowers	2015	47	1,901,419	bunches	$2.04	$3,872,000
	2014	56	2,263,594	bunches	$1.81	$4,104,000
Lilies & Irises	2015	142	4,211,067	bunches	$4.46	$18,768,000
	2014	135	3,861,067	bunches	$4.86	$18,766,000
Lisianthus	2015	32	508,052	bunches	$2.84	$1,444,000
	2014	35	522,324	bunches	$3.36	$1,757,000
Delphinium, Larkspur, Stock & Snapdragons	2015	204	3,058,181	bunches	$3.47	$10,621,000
	2014	191	2,935,548	bunches	$3.17	$9,319,000
Miscellaneous	2015	63	1,034,705	bunches	$1.77	$1,831,000
	2014	108	1,505,244	bunches	$2.48	$3,730,000
TOTAL	**2015**	**745**				**$48,522,000**
	2014	**736**				**$47,615,000**

Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-14
LIVESTOCK AND POULTRY PRODUCTION AND VALUES, 2014-2015
Ventura County, California

Item	Year	Production	Unit	Value	
				Per Unit	Total
Livestock *Cattle, Hogs, Sheep & Goats*	2015	16,576	cwt	-	$1,985,000
	2014	21,030	cwt	-	$3,014,000
Poultry *Chickens & Eggs*	2015	-	-	-	$4,735,000
	2014	-	-	-	$4,697,000
Other Livestock *Alpaca & Squab*	2015	-	-	-	$158,000
	2014	-	-	-	$176,000
TOTAL	**2015**				**$6,878,000**
	2014				**$7,887,000**

Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-15 FIELD CROPS ACREAGE, PRODUCTION, AND VALUES, 2014-2015 Ventura County			
Crop	**Year**	**Acreage**	**Total**
Rangeland*	2015	197,747	$41,000
	2014	97,058	$33,000
Pasture, Hay & Grain	2015	565	$168,000
	2014	739	$199,000
Seed & Dry Beans	2015	273	$801,000
	2014	404	$1,185,000
TOTAL	**2015**	**198,585**	**$1,010,000**
	2014	**98,201**	**$1,417,000**

** The increase in Rangeland acreage was the result of an error made many years ago.*
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

In 2014, the total value for apiary products experienced its lowest value since 2009, a decline of almost half its 2013 total (see Table 9-16). This decline is likely attributed to the decline in local wild sources of flowers due to drought conditions. In 2015, the value of apiary products increased to market value levels just below those observed in 2011.

TABLE 9-16 APIARY PRODUCTS AND VALUES, 2013-2015 Ventura County				
Product	Year	Production (lbs.)	Per Unit	Total
Honey	2015	183,843	$4.75	$873,000
	2014	65,550	$2.09	$137,000
	2013	80,763	$3.74	$302,000
Beeswax and Pollen	2015	14,300	$3.99	$57,000
	2014	4,695	$6.73	$19,000
	2013	11,391	$6.73	$77,000
Pollination Use	2015	n/a	n/a	$1,178,000
	2014	n/a	n/a	$398,000
	2013	n/a	n/a	$1,013,000
Total	**2015** **2014** **2013**			**$2,108,000** **$554,000** **$1,392,000**

Source: 2015 and 2014 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-17 SUSTAINABLE AGRICULTURE, 2014-2015 Ventura County			
Item	Agent	Target	Scope of Program
Biological Control *Commercial Insectaries*	Predatory Mites, Predatory Beetles, Predatory Wasps, Predatory Nematodes, Various Predatory Insects	Scale, Mealybug, Snails, Aphids, Mites, Whitefly, Psyllid, Thrip, Nematodes, Flies	262,604,496,055 beneficials released on 15,228 acres Valued at $3,838,000
Pest Mitigation	Mechanical/Digging	Dalmation Toadflax, Scotch Thistle, Euphorbia Terracina	1 site each
Pest Eradications	Mechanical/Digging	Spotted Knapweed	1 site
Pest Exclusion & Plant Quarantine*	<u>Incoming Shipments</u> UPS/Fed Express (Shipments) Truck/Air Freight Household Goods (Inspections) <u>Outgoing Shipments</u> Federal Certificates State Certificates	 Various Various Gypsy Moth Various Various	<u>Inspections</u> 1,518 1.094 64 9,840 843

* In 2015, Ventura County exported approximately 27 different commodities to 89 different countries.
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

TABLE 9-18 TRENDS IN FIELD CROPS, VEGETABLES, FRUITS AND TREE NUTS: PRODUCTION VALUE PER ACRE Ventura County, California 2010-2014				
Year	**Value per Acre Total**	**Field Crops and Vegetables**	**Fruits and Tree Nuts**	**Rangeland**
2010	$18,225	$14,111	$20,916	$13.11
2011	$19,042	$14,315	$22,248	$12.11
2012	$18,886	$12,539	$23,206	$13.70
2013	$18,664	$14,130	$21,638	$0.37
2014	$19,330	$13,662	$23,383	$0.34
2010-2014 Change	$1,105	-$449	$2,467	-$12.77
2010-2014 CAGR[1]	1.18%	-0.64%	2.25%	-51.83%

Source: 2015 Ventura County Food Processing Analysis. Ventura County Agricultural Commissioner. ADE, Inc., based on California Agricultural Commissioner Reports (2010-2014).
[1] CAGR = Compound Annual Growth Rate.

Commodities on Farms

Ventura County farms produce a wide range of agricultural commodities. The 2015 Ventura Crop & Livestock Report indicated that much of the county's agricultural production occurred on 95,802 acres of irrigated cropland out of a total farmed acreage of approximately 300,000 acres. Of the total farmed acreage, approximately 198,000 acres are considered rangeland. The following tables show the types of

commodities produced per product category including the total acreage devoted to certain types of commodities.

TABLE 9-19
COMMODITY PRODUCTION BY CROP GROUPING
Ventura County, California
2014-2015

Crop Grouping	Year	Acreage	Greenhouse *(Square Feet)*
Fruit and Nut Crops	2015	56,986	
	2014	56,821	
Vegetable Crops	2015	39,528	
	2014	39,671	
Nursery Stock	2015	3,085	5,168,444
	2014	3,326	5,364,522
Cut Flowers	2015	745	
	2014	736	
Field Crops	2015	198,585	
	2014	*97,058	

**The change in Field Crops is the result of an error made many years ago within Rangeland acreage data.*
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner.

Organic Farming

The 2015 Ventura County Crop and Livestock Report identified Organic Farming as one of eight groupings and observed an increase in the number of registered growers, market value, and acres in production between 2014 and 2015.

As with other agricultural regions in California, organic farming is recognized by the United States Department of Agriculture (USDA) as farming practices that rely on natural fertilizers such as compost, manure, green manure, and bone meal in lieu of chemical pesticides. Organic farming also emphasizes more sustainable practices, including mixed-cropping patterns, the avoidance of most synthetic pesticides, and crop rotation to lessen the impact of water usage and maintain the soil structure. The federal Organic Foods Production Act of 1990 and the California Organic Products Act of 2003 established guidelines and standards for growers, handlers, processors, wholesalers, or retailers who market their product and services as "Organic." Producers and handlers interested in working with organic commodities must register with the California State Organic Program, and if gross sales exceed $5,000, certification from a third party is required. Registration is initiated with the County Agricultural Commissioner. The Agricultural Commissioner performs routine inspections of organic produce at Certified Farmer's Markets, audits of records for organic producers, processors and handlers, as well as inspections of organic production sites, and investigation of reports of violations.

In 2015, Ventura County had 135 certified organic growers covering over 8,200 acres in organic production. This was an increase over the 85 certified organic growers in 2014. Ventura County organic farms specialize in vegetables and herbs, fruits and nuts, field and seed crops, and nursery production. In 2015, the Ventura County organic fruit and nut industry exceeded a commodity value of $121 million, which was more than double the value of all other organic crops farmed. The total value for of all organic crops was approximately $161 million in 2015. Much of the organic commodities grown in Ventura

County are sold to local consumers through a network of Certified Farmers Markets located in several communities, including Ventura, Oxnard, Camarillo, Ojai, Newbury Park, Thousand Oaks, and Simi Valley.

TABLE 9-20
ORGANIC FARMING
VENTURA COUNTY, CALIFORNIA
2014-2015

Crops	Year	Acres	Total Value
Registered Growers	2015		137
	2014		85
Vegetables & Herbs	2015	3,077	$39,377,055
	2014	3,148	$38,438,000
Fruits & Nuts	2015	4,823	$121,255,734
	2014	3,944	$83,006,000
Field & Seed Crops	2015	189	$638,305
	2014	134	$1,020,000
Cut Flowers & Nursery Stock	2015	8	$63,751
	2014	4	$127,000
Specialty Crops	2015	<1	$1,313
	2014	<1	$1,000
TOTAL*	**2015**	**8,281**	**$161,336,158**
	2014	**7,232**	**$122,592,000**

** Included in all other total values for 2015 Ventura County Crop and Livestock Report.*
Source: 2015 Ventura County Crop and Livestock Report. Ventura County Agricultural Commissioner's Office.

Commodity Processing

Ventura County currently permits limited processing operations on parcels with a zoning designation of OS, AE, RA, RE, and TP. The Non-Coastal Zoning Ordinance (Section 8105-4), permits preliminary processing that includes basic activities and operations instrumental to the preparation of agricultural goods for shipment to market without the use of structures. Preliminary processing excludes intensive operations, including canning and bottling, which are considered an industrial use. A zoning clearance or development permit is required if structures related to the processing are proposed. Industrial zoning designations (i.e., M1, M2, and M3) require a zoning clearance for preliminary processing operations with no structures.

The current trend in food production and processing is focusing on "locally" grown products. The concept of buying local commodities, rather than relying on imports is not new, but has gained traction in recent years due to climate change concerns and its potential effects on crop production. The trend for locally produced products and the existing limited opportunities for agricultural processing of commodities has spurred an ongoing discussion into expanding the allowed types of processing operations. Additional processing operations could include processing of crops for oil extraction, concentration of juice, frozen or flash freezing, and preparation of products (e.g., bottling, canning).

Commodity Packing, Shipping, and Distribution

Ventura County is home to more than 2,150 farms. Approximately 15 percent of Ventura County's agricultural products are produced for local consumption, with the remaining 85 percent shipped out of the county. Over 60 percent of the county's agricultural products are exported to foreign countries through the Port of Hueneme. The Port of Hueneme is California's fifth largest port and is known as the

"Port that Farmer's Built". Since 1993 the Port has been the primary exporter of agricultural commodities from Ventura County, replacing the Port of Long Beach. In 2013 Ventura County exported over 27 different commodities to 81 countries. Approximately 10,000 total shipments were exported, with the top destinations being Japan, Canada, South Korea, Mexico, and China. The top agricultural export in 2013 was lemons, accounting for 27 percent of total agricultural exports. Fruit and vegetable seeds were next at 23 percent, followed by blueberries, at 11 percent, and strawberries at eight percent.

Exporting agricultural products locally and regionally is a small niche in the agricultural economy in Ventura County. Local production and shipping requires the use of commercial coolers, packers and shippers. These are an integral part of the produce industry supply chain. Coolers, packers, and shippers are designed to handle each commodity's different postharvest requirements. Coolers are large scale facilities which temporarily receive and cool product directly from the field. These facilities help not only large commercial growers, but also small farming operations by allowing access to distributors and continuing the movement of agricultural products through the supply chain. Packers sort, clean, and package the commodities for resale.

Shippers transport commodities to various wholesale and retail outlets throughout the county including locally owned grocery chains, farmer's markets, and Community Supported Agriculture (CSA) operations. Community Supported Agriculture is a partnership between growers and their consumers. CSAs allow members of the community to purchase a "share" of produce from a local participating farmer. Farmers and consumers share the risks and benefits of producing the crop. Members pay a subscription at the beginning of the growing season for a share of the anticipated harvest. The increase of CSAs has mirrored its growing popularity in the county providing a direct link between the farmers, locally grown produce, and county residents. As of 2016, there are nine registered CSAs in the county, which provide a boxed selection of seasonal locally grown produce. Members typically pick up CSA boxes at designated pick-up locations.

To ensure that the processing, packing, and shipping processes are up to local and state, and federal standards, the Ventura County Agricultural Commissioner's Office performs routine inspections of such facilities. The inspection process includes the coolers, packers and shippers, to check for proper container labeling, proper use of containers and proof of ownership of produce. Inspectors also certify local commodities for export shipments, both foreign and domestic.

Farming Operations

Agricultural Operations Permitting

Currently, Ventura County has 1,075 agricultural permits issued by the Ventura County Agricultural Commissioner's Office. Permits are required for the commercial production of crops and the use of pesticides. The majority of the permits (627) are referred to as Operator Identification Numbers which allow farm operators to apply Non Restricted Use and some federally Restricted Use pesticides. More than 400 of these permits (448) are Restricted Materials Permits, which allow the use of California Restricted Use pesticides. In order to qualify for a Restricted Materials Permit, or to apply federally Restricted Use pesticides, farm operators must be licensed through the Department of Pesticide Regulation (Qualified Applicator's License) or through the County Agricultural Commissioner's Office (Private Applicator's Certificate).

Ventura County has 120 Certified Producers. In order to sell produce at a Certified Farmer's Market, farm operators must be certified by the Ventura County Agricultural Commissioner's Office.

In 2015, Ventura County had 135 registered Organic growers. In order to sell products as "Organic" in California, growers must be registered with the State Organic Program.

Invasive Pests and Diseases

Agriculture in Ventura County is made exceptionally complex by a number of factors. The Mediterranean-type climate allows for tremendous diversity of production with over 60 different crops that each generate over $1 million in gross receipts annually. The mild climate allows for significant crop production year-round allowing farmers to grow three and four crops annually in the same field. With that diversity, County farmers primarily grow specialty crops such as fruits and vegetables due to the favorable climate, high land values, and consumer preference. Fruits and vegetables require greater care and protection from insect pests and diseases. Ventura County is very different from the geographically larger agricultural counties in the Central Valley and the types of crops they produce. Central Valley counties generally have relatively large swaths of acreage with single crops such as grapes, almonds, and corn for silage, which have significantly fewer pests and less disease.

In addition to the preferable climate and crop selection, the proximity to neighboring Los Angeles County creates an additional pest and disease challenge. The County of Los Angeles is a substantial source of plant pests and diseases. The air and sea ports not only bring millions of visitors and commercial products from around the world into Los Angeles County, they also bring exotic invasive plant pests and diseases. At any given moment the Los Angeles County Agricultural Commissioner is regulating between 12 and 26 quarantines. Los Angeles County provides a significant pathway for pests that can migrate to Ventura County. Although to a lesser degree, the Port of Hueneme is another source of plant pests and diseases entering on shipments from abroad.

Currently, Ventura County is dealing with newly-introduced or identified invasive species such as the Asian citrus psyllid (ACP), light brown apple moth (LBAM), and the polyphagous shot hole borer (PSHB). Each of these pests present either a county, state or federal quarantine situation or another significant plant pest or disease issue. In the recent past the gypsy moth and the Mediterranean fruit fly have infested portions of the county. New plant pests and diseases subsequently result in more pesticide use as farmers, land managers and regulatory officials attempt to eradicate or manage the various pest populations. As an example, currently the California Department of Food and Agriculture is conducting ACP residential treatments, while citrus farmers are engaged in an area-wide management program to control the ACP.

The glassy winged sharpshooter (GWSS) is widespread in Southern California and has reduced the ability of growers in Southern California counties to produce wine grapes. The Ventura County Agricultural Commissioner's Office participates in the Pierce's Disease Control Program (PDCP) which is solely focused on preventing the spread of the GWSS from Ventura County to the grape growing areas of California that are not already infested. The GWSS is an insect that feeds on the stems and leaves of many kinds of nursery stock and citrus trees as well as on grapevines. In the process of feeding it transmits a bacterial disease, Pierce's Disease, that can seriously damage grapevines. Nursery stock from Ventura County destined for non-infested areas of the state is inspected and certified prior to shipment. Detection traps are placed in nurseries planning to send plant material north to monitor for the presence of the GWSS. Citrus growers who plan to send their fruit to packing houses north of Ventura County are required to meet cleanliness standards in order to ship.

U. S. Census of Agriculture - Farm Characteristics

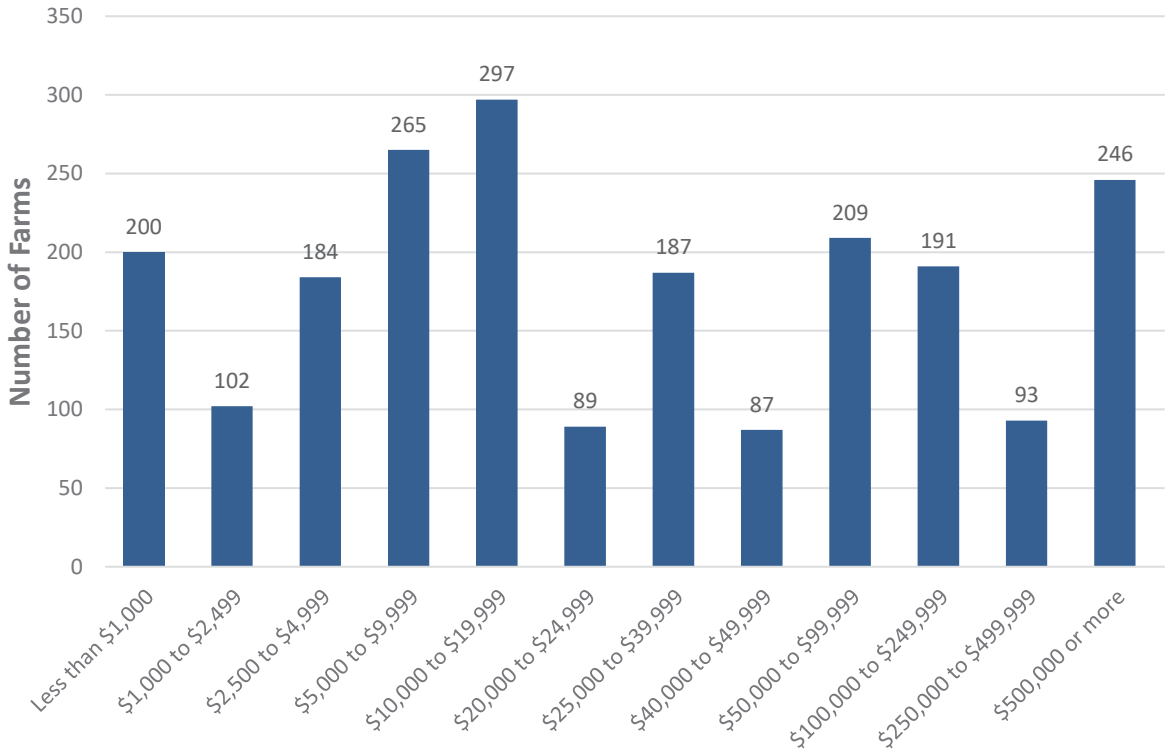
There are over 2,000 farms in Ventura County and they vary based on size, agricultural products produced, type of operator, and ownership as well as the total amount of sales. According to the federal Census of Agriculture (USDA 2012), total product sales in Ventura County equate to an average of $700,00 sales per farm annually. The total sales calculation from the 2012 Census of Agriculture differs from the total sales noted in the 2012 Ventura County Crop and Livestock Report produced by the Ventura County Agricultural Commissioner's Office due to different methodologies.

The Census defines characteristics of a farm, "as any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year." In the case of Ventura County, approximately 7.5 percent or 200 farms reported less than $1,000 in product sales.

According to the Census of Agriculture, the average size of farms in Ventura County was 131 acres while the median was 12 acres, indicating that there are many more small farms than large ones. In fact, almost 80 percent of all farms in Ventura County are 49 acres or less. Eleven percent are between 50 and 179 acres, and 11 percent are 180 acres or larger.

Figure 9-9 shows the number of farms in Ventura County by market value of the agricultural products sold.

FIGURE 9-9
NUMBER OF FARMS BY MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD, 2012
Ventura County



Source: U.S. Census of Agriculture, 2012

The Census of Agriculture indicates that 34.9 percent or 751 farms had a total market value sales of commodities of less than $10,000. The number of farms that produced sales ranging from $10,000 to $99,999 totaled 869 or 40.4 percent. Farms with product sales surpassing $1,000,000 accounted for approximately 25 percent of farms in Ventura County, at 530.

Regulatory Setting

Federal

The United States Department of Agriculture (USDA)

Supports the American agricultural economy to strengthen rural communities; to protect and conserve our natural resources; and to provide a safe, sufficient, and nutritious food supply for the American people. The Department's wide range of policies, programs and responsibilities include food security, exporting and importing goods, wildfire prevention, rural community assistance, and regulation of commodities.

State

California Department of Food and Agriculture (CDFA)

Is responsible for protecting and promoting agriculture in the state of California, while ensuring that safety standards are maintained at the consumer level. CDFA is divided into six divisions which focus on animal health and food and safety; fairs and expositions; inspections; marketing; measurements and standards, and plant health. Through these divisions, the CDFA provides oversight and regulation pertaining to pesticide and disease control, livestock health and trade, food safety, natural resources, and organic farming to name a few. In particular, the CFDA is responsible for the enforcement of the federal Organic Foods Production Act of 1990, and the California Organic Products Act of 2003. These statutes protect consumers, producers, handlers, processors and retailers by establishment of standards under which fresh agricultural products/foods may be labeled and/or sold as "organic." The California Department of Public Health enforces laws pertaining to processed products marketed as "organic."

California Food and Agricultural Code, Section 2001

There is in each County government the County department of agriculture.

California Food and Agricultural Code, Section 2002

The county department of agriculture is under the control of the county agricultural commissioner.

Local

2005 Ventura County General Plan

The General Plan covers agricultural resources in Chapter 1, Resources. Sections 1.6 and 3.2 include goals, policies, and programs related to agricultural production. The following Area Plans also contain applicable goals and policies related to agricultural production:

- Coastal Area Plan;

- El Rio/Del Norte Area Plan;
- North Ventura Avenue Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for agricultural resources. These can be found in Section 5a. Agricultural Resources-Soils and Section 5b. Agricultural Resources-Land Use Incompatibility.

2015 Ventura County Non-Coastal Zoning Ordinance

The Non-Coastal Zoning Ordinance regulates agricultural resources through Section 8104-1 Open Space/Agricultural Zones.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates agricultural resources through Section 8173-2 Coastal Agricultural (CA) Zone.

County Agricultural Commissioner

The County Agricultural Commissioner serves as the primary local enforcement agent of laws and regulations of the state, and local agricultural ordinances. The Agricultural Commissioner protects and promotes the local agricultural industry, while ensuring the welfare of the public, and the environment. The major programs administered by the agricultural commissioner include:

- **Pest Exclusion.** The Pest Exclusion Program is California's first line of defense against the introduction of exotic pests which, if they were to become established, would be detrimental to agriculture and/or the environment of the state. The state-licensed staff inspects incoming plant shipments for compliance with the state's plant quarantine laws and for the presence of insect, weed, vertebrate and disease pests.
- **Pest Detection.** The Pest Detection Program represents California's second line of defense against the introduction and establishment of pests that are known to be economically detrimental to agriculture and the environment. The Department strategically deploys and monitors insect traps throughout the county for the presence of such exotic pests as the Light Brown Apple Moth, Glassy-Winged Sharp Shooter, Asian Citrus Psyllid, Polyphagous Shot Hole Borer and others. Biologists are constantly on the lookout for new pest introductions.
- **Pest Eradication.** The Pest Eradication Program is the third line of defense in the overall Pest Prevention Program. The purpose of this program is to eradicate pest infestations that penetrate the first two lines of defense before eradication becomes economically impractical.

- **Pest Management.** The Pest Management Program utilizes specially trained staff in the control of the glassy-winged sharp shooter (GWSS). The GWSS can transmit Pierce's Disease which is deadly to grape vines. Shipments of potted plants destined for northern counties are inspected for the GWSS and issued a certificate of quarantine compliance if found free from the GWSS.
- **Pesticide Use Enforcement.** The Pesticide Use Enforcement Program includes annual registration of Agricultural and Structural Pest Control Businesses, Pest Control Advisors, and Farm Labor Contractors that work in the county. The Program includes issuance of Restricted Materials Permits, Operator Identification Numbers (for non-restricted agricultural pesticides), and monitoring of pesticides applied in the county through a mandatory use reporting system. The Agricultural Commissioner's staff verifies compliance with pesticide laws by periodic inspections of pesticide applications, mixing and loading operations, employee headquarters inspections and inspection of pesticide storage facilities. Staff also investigates all reports of pesticide related illnesses, pesticide drift and wildlife losses, as well as complaints of other alleged misuse of pesticides in the county that may be detrimental to human health and safety or the environment.
- **Seed Inspection.** Under the Seed Inspection Program, the Agricultural Commissioner's staff periodically inspects seed for agricultural planting for compliance with State labeling requirements for purity and germination percentages.
- **Nursery.** The Department's staff routinely inspects nurseries within the county to ensure that nursery stock is properly labeled, commercially clean with respect to weeds, insect pests, diseases, and that only vigorous healthy plants are offered for sale to the consumer.
- **Standardization.** The Standardization Program involves periodic inspection of fruits, nuts, vegetables and honey offered for sale at local retail outlets to ensure they meet minimum quality standards as established by the State.
- **Citrus Maturity.** This program involves testing oranges at packing houses to ensure that maturity requirements are met.
- **Certified Farmer's Markets.** This program provides oversight of direct marketing activities. This involves issuance of Certified Producer Certificates, Farmer's Market Certificates, and periodic inspections of such producers and markets to ensure consumers that all produce offered for sale was grown by the seller.
- **Organic Program.** Agricultural Commission staff register local growers that desire to market their agricultural commodities as "Organically Grown", to provide assurance to consumers that such products are grown in accordance with California's strict standards for organically grown food products.
- **Apiary.** This program emphasizes registration of honeybee colonies located in the county so that notification of nearby applications of pesticides, toxic to bees, can be issued. The program also involves enforcement of the County Bee Ordinance with respect to complaints of improperly placed apiaries which adversely impact local residents.
- **Statistics.** The County Agricultural Commissioner is required to compile an annual report of agriculture. These reports are used by a variety of businesses and institutions such as banks and other lending institutions, schools, government agencies and research facilities. Additionally, the Department is also called upon to conduct surveys relating to the impacts of natural disasters such as drought, flood and wildland fire on the local agricultural economy. Such statistical data is often

instrumental in securing state and federal disaster relief for the affected segment of local agricultural industry.

- **Land Use.** The Agricultural Commissioner also provides review of land use development projects that may impact or be impacted by agriculture. When appropriate, the Agricultural Commissioner will make recommendations to mitigate such impacts.

Key Terms

Forage. Harvested dry hay, haylage, grass silage, or greenchop which is primarily used as feed for livestock.

SECTION 9.3 AGRICULTURAL POLICIES AND PROGRAMS

Introduction

This section describes local, state, and federal policies and programs that impact agriculture.

Major Findings

- Together, the Guidelines for Orderly Development, Land Conservation Act, and Save Open Space and Agricultural Resources (SOAR) initiatives have created one of the most effective agricultural land preservation programs in the state.
- As of 2016, over 204,000 acres in the county were designated as Agricultural Preserve (AE-40 ac).

Existing Conditions

The following is a description of the Ventura County agricultural land protection policies and programs.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act (also known as the Williamson Act) was adopted by the California State Legislature in 1965. In 1969, the County Board of Supervisors adopted "Guidelines for Implementation of the Land Conservation Act of 1965/the Williamson Act" (the LCA Guidelines). These Guidelines and subsequent revisions established criteria for eligibility for Agricultural Preserves (AGPs) and Land Conservation Act (LCA) Contracts in the unincorporated areas of the county. All land with a land use designation of Agricultural within the County of Ventura General Plan is considered an AGP.

The California Land Conservation Act is regulated through three contract types, Land Conservation Contract (LCA), the Farmland Security Zone Area Contract (FSZA/LCA), and the Open Space Contract (OS/LCA) shown in Figure 9-10. In Ventura County, the Open Space Contracts became available in 2009. These contracts intend to preserve agricultural land, and discourage its premature conversion to non-agricultural uses. In exchange for the preservation of agricultural land, participating property owners receive a reduction of property taxes that are limited to the agricultural value of the property. This reduction of property taxes remains until the property owner or the County files for a Non-Renewal or terminates the contract. Properties eligible for either of the contract types are designated Agriculture or Open Space under the County General Plan. The properties must be zoned AE-40 ac, or CA if the property is in the Coastal Zone. If the properties under consideration for a LCA or FSZA/LCA Contract are in neither of those zones, then a zone change must occur in conjunction with the Contract. If the property is currently zoned OS with a designated minimum parcel size of 80-acres, it must be rezoned to AE-40 ac with a minimum parcel size consistent with the average density of surrounding parcels. If the subject property under consideration for contract is in irrigated crop production, it may be rezoned to AE-40 ac, regardless of the average surrounding parcel size.

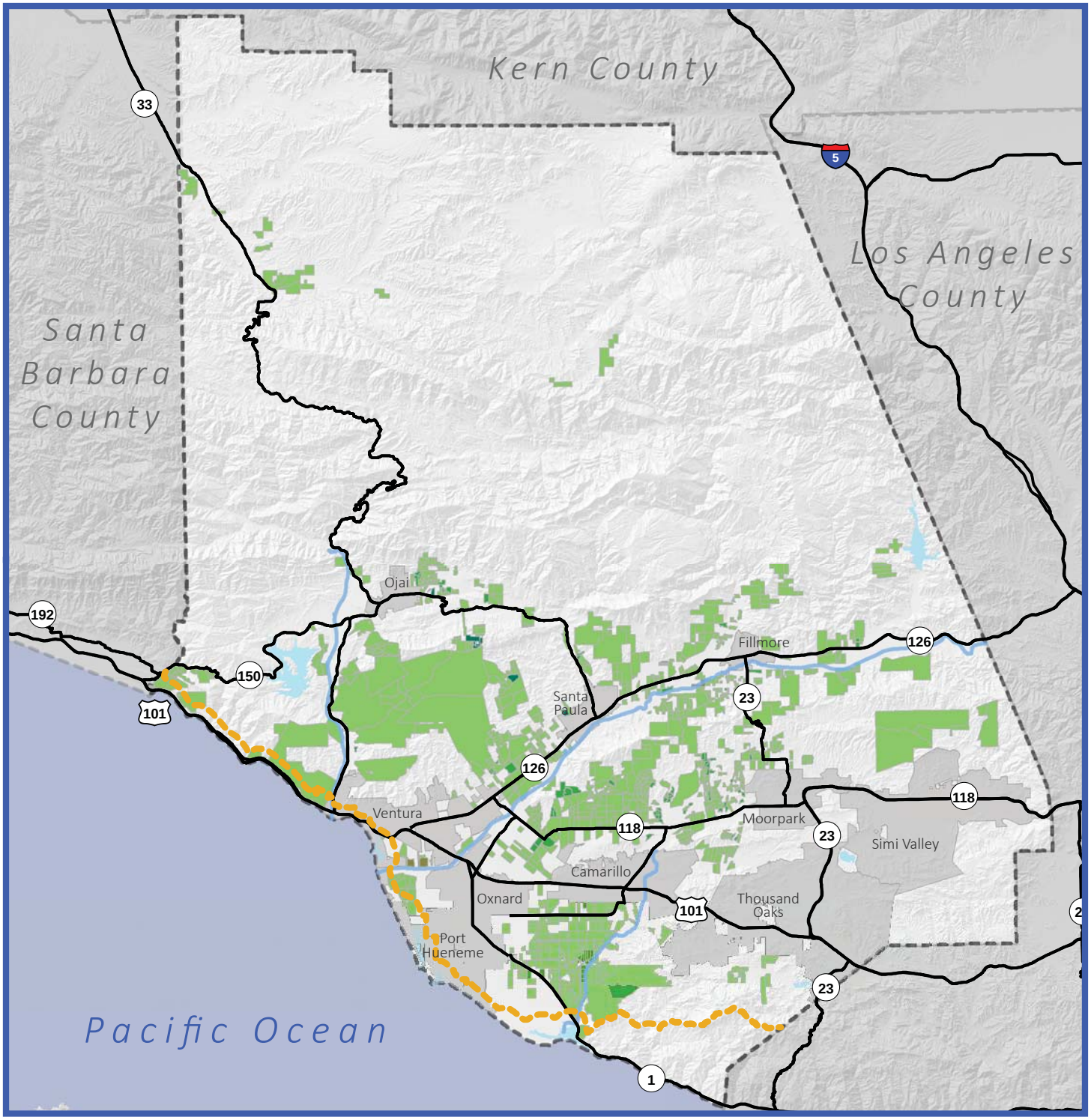
The LCA Contract is a 10-year agreement that permits either irrigated or non-irrigated crop production or animal husbandry/grazing. If irrigated crop production on the subject property(s) is to be eligible for the contract program, it must have produced plants for commercial purposes for three years of the previous five years, or be planted with non-bearing fruit or nut trees, vines, bushes, or crops which has a non-

bearing period of less than five years. The property must be irrigated, and shall have grossed no less than $500 per acre for at least three of the previous five years. If the bearing period has not yet begun, the property shall reasonably be expected to gross no less than $500 per acre for three out of five years. If non-irrigated crop production on the subject property(s) is to be eligible for the contract program, it must have cultivated and produced plants for commercial purposes for three years of the previous five years, or be planted with non-bearing fruit or nut trees, vines, bushes, or crops which has a non-bearing period of less than five years. The land shall have gross no less than $50 per acre for at least three of the previous five years. If the bearing period has not yet begun, the property shall reasonably be expected to gross no less than $50 per acre for three out of five years.

As of 2017, Ventura County had 1,074 LCA contracts totaling 127,820 acres. This total includes three Wildlife Habitat Area contracts totaling approximately 340 acres. Under the 10-year LCA Contract, animal husbandry and grazing must support 20 animal units per year as determined by personal property taxes paid on the animals by the owner or operator, or other evidence such as rent receipts, as may be required for the previous five (5) years and be reasonably expected to continue to support such animals on a bona fide commercial basis. The selling of animals or their food or fiber products annually shall constitute raising animals on a commercial basis. The land shall also be fenced to contain to the animals, and proper livestock facilities such as corrals should be provided. Subject properties must also maintain a minimum of 80 acres to support grazing and animal husbandry.

The 20-year FSZA/LCA Contract is subject to the same standards of the 10-year LCA Contract, which includes requirements relating to irrigated crops, non-irrigated crops, and grazing land. The FSZA/LCA Contract does require additional standards to be eligible to enter into the new contract. As of 2015, Ventura County had 77 FSZA/LCA contracts totaling over 3,900 acres. Land within the FSZA/LCA must be within a designated AGP, and shall be one of the registered Important Farmland Categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Any land located within a city sphere of influence shall not be included in an FSZA, unless the creation of the FSZA has been approved by resolution by the city with jurisdiction within the sphere. If more than one owner of contiguous properties requests the creation of an FSZA, the County shall place those properties in the same FSZA. Upon termination of a FSZA/LCA contract, the FSZA shall simultaneously be terminated.

The LCA and FSZA/LCA contracts must meet a minimum agricultural utilization for crop production or animal husbandry, as shown in Table 9-21.



Ventura County 2040 General Plan

Figure 9-12:
Land Subject to Land Conservation Contracts

Map Date: October 26, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

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Coastal Zone Boundary
Major Roadways
Major Waterways
Water Bodies

LCA Contracts
10-year LCA Contract
20-year Farmland Security LCA Contract
OS 20-year
Notice of Non-Renewal

TABLE 9-21 MINIMUM UTILIZATION OF LAND FOR LCA AND FSZA/LCA CONTRACTS Ventura County, California		
Legal Lot/Contract Size	**Utilization Percentage* for LCA (10-year) Contracts**	**Utilization Percentage* for FSZA/LCA (20-year) Contracts**
9** To 15 Acres	90%	90%
15.1 To 25 Acres	75%	80%
25.1 To 40 Acres	65%	75%
Over 40 Acres	50%	70%
Animal Husbandry/Grazing -80 Acre Minimum	75%	No Animal Husbandry/Grazing Contracts

Source: 2015 Ventura County Food Processing Analysis. Ventura County Agricultural Commissioner. ADE, Inc., based on Ventura County Agricultural Commissioner Reports (2010-2014).
Note: Onsite water recycling ponds and other facilities required by a permitting authority shall be included in the calculation of utilization percentage for nurseries (open fields or in greenhouses).*
*Note**: The Board of Supervisors has determined that prime agricultural lands in Ventura County are highly productive due to the combination of soils, climate, and water availability; are suitable for a variety of orchard, row, and horticultural crops; and can support commercially viable agricultural operations on minimum nine-acre parcels. Therefore, these parcels are contract eligible.*

Open Space contracts are designated as OS/LCA and are primarily used for the preservation of natural habitats and systems such as wetlands, native grass lands, native woodlands, individual species, and wildlife corridors under either a 10-year or 20-year timeframe. As of 2015, Ventura County had three Open Space contracts totaling over 360 acres. Unlike LCA Contracts where the Contract Area is coterminous with parcel boundaries, the Contract Area of an OS/LCA contract may be a portion of one parcel. For these reasons, the minimum Contract Area for OS/LCA Contracts shall be determined on a case-by-case basis. For an area to be considered eligible, the subject property must either have, or be capable of being restored to have, significant biological resources which include, but are not limited to the following:

- Habitats of endangered, threatened or rare species
- Sensitive Plant Communities
- Waters and Wetlands
- Environmentally Sensitive Habitat Areas (ESHA)
- Wildlife Movement Corridor

Special Area contracts are designated under new LCA and FSZA/LCA contracts, when a certain criterion is met. These contracts are for specific circumstances when the agricultural contract requirements do not comply (i.e., minimum lot size and utilization requirements) and may lead to an inconsistency with the provisions and guidelines set forth by the Land Conservation Act. Per the Ventura County LCA Guidelines, the Board of Supervisors may approve special contracts if all the following criteria is satisfied:

- The proposed Contract Area must be used for crop production (land used for animal husbandry/grazing is not eligible for Special Area Contracts);

- The proposed Contract Area must be located adjacent to parcels primarily in crop production on a minimum of two sides. Land isolated from existing agricultural production is not eligible for a Special Area Contract. Although not required, a Special Area Contract will be more favorably considered if it located either adjacent to or in proximity to existing LCA Contracts or FSZA/LCA Contracts, or if it establishes a buffer between existing urban uses and land in agricultural production;
- The proposed Contract Area is no less than 80 percent of the size of the legal lot;
- The agricultural utilization is a minimum 85 percent of propose Contract Area (e.g., if the Contract Area is eight acres, the agricultural utilization must be at least 6.8 acres);
- The proposed contract furthers the primary goal of the Land Conservation Act and these guidelines-to preserve commercially viable agricultural land.

In 2015, pursuant to Government Code §§ 51190, 51191 et seq., and 51255.1, Revenue and Taxation Code § 402.1, Fish and Game Code §§ 2805, 2835, 3511, 4700, 5050, and 5515, and Title 14, California Code of Regulations, §§ 3100 through 3117 (Senate Bill (SB) 618 and Assembly Bill (AB) 2241), the County of Ventura amended the LCA Guidelines to allow for solar-use easement contracts. Therefore, a landowner who wishes to enter into a solar-use easement contract with the County may rescind a LCA Contract (or a portion thereof) and simultaneously enter into a solar-use easement contract, provided that the property meets the criteria established by the California Department of Conservation. The California Department of Conservation's "Solar Use Easements Advice for Applicants, Cities, and Counties" sets forth the minimum eligibility criteria, required application materials, and approval process to enter into a solar-use easement contract. Furthermore, the easement must require that the land be used for solar photovoltaic facilities for a term of 20 years or, if the landowner requests, for a term of not less than 10 years.

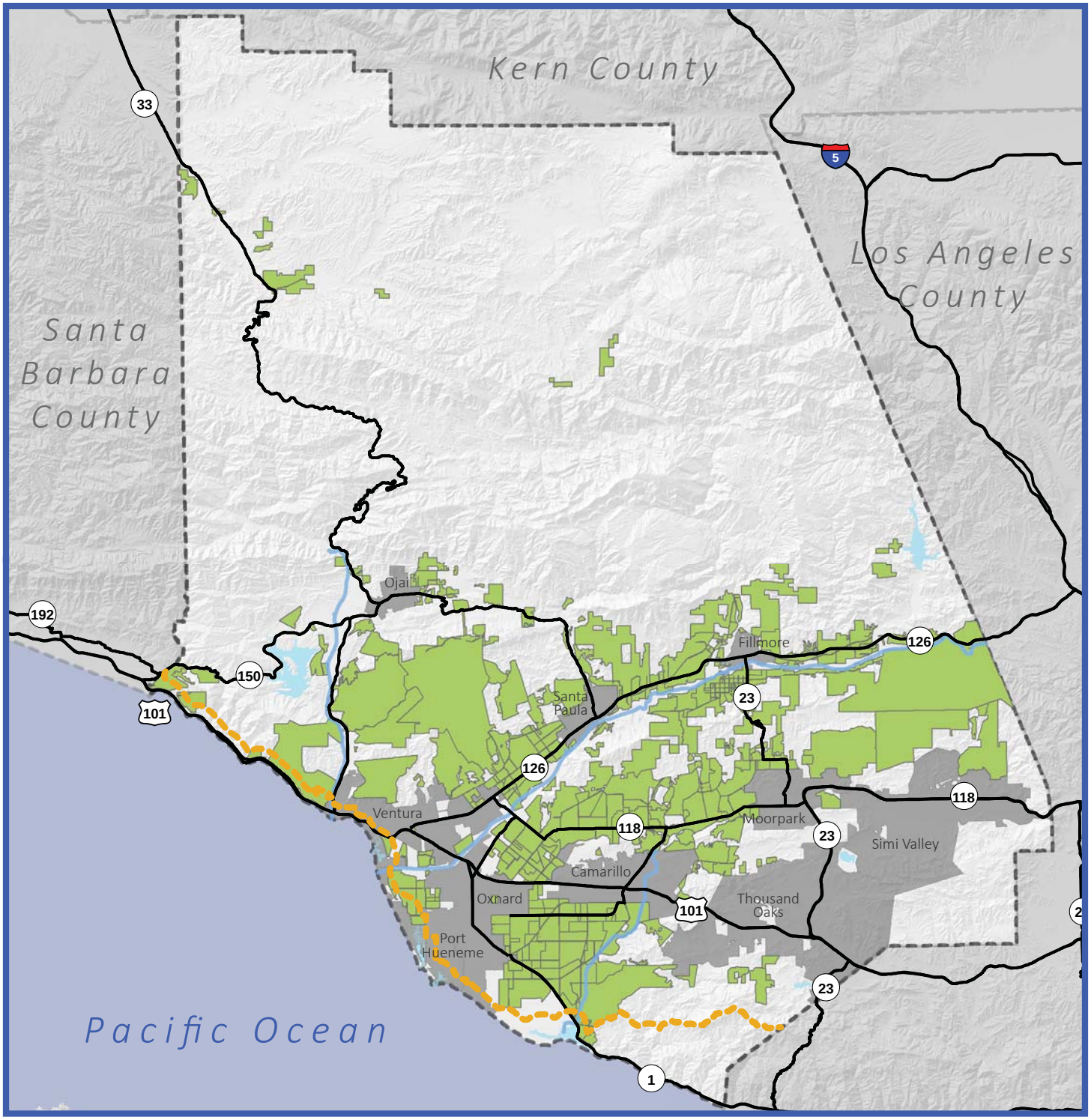
If a property owner decides that they no longer wish to participate in the either of three contracts, they must file for one of three termination types; either a Notice of Non-Renewal of the Entire Contract (ENNR), a Notice of Non-Renewal of a Portion of the Contract (PNNR), or termination of contact. A Non-Renewal results in a nine-year phase out of the LCA Contracts and OS/LCA (10-year) Contracts, and a 19-year phase out of the FSZA/LCA Contracts and OS/LCA Contract (20-year). Upon completion of the phase out periods, property owners are no longer eligible for a property tax reduction. A PNNR occurs when a portion of the property is to remain under contract, while the remaining portion will be phased out and will no longer be eligible for property tax reduction. The remaining portion of the property used for agriculture must be found to be consistent with the state law and the Ventura County LCA Guidelines prior to Board approval.

As of 2015, Ventura County had 12 contracts undergoing the ENNR process that have been recorded with the County since 2008. The total acreage under these 12 contracts that will come out of the Program by 2024 totals 861 acres. Five of the 12 contracts totaling 226.61 acres, will expire in 2020, while the remaining seven contracts totaling 634.32 acres will expire in 2024.

The other form of contract termination is Contract Cancellation, which requires a majority vote by the Board of Supervisors, as well as state imposed fees for the past reduction in property taxes. Cancellation of a Contract also requires the property owner to pay a "cancellation fee." (Government Code Sections 51283 and 51297.) The required cancellation fee for a 10-year LCA Contract is 12½ percent of the current fair market value of the property, determined as if the property were free of the Contract restriction. The cancellation fee for a 20-year FSZA/LCA Contract is 25 percent of the current fair market value of the property.

Ventura County Agricultural Preserves

All land designated "Agricultural" by the County General Plan is considered an Agricultural Preserve (AGP). As of 2016, over 204,000 acres are designated as AGP (see Figure 9-11). Land designated "Open Space" by the County General Plan, while potentially eligible for a Contract, may or may not be located within an AGP. If a property owner wishes to enter into a Contract, and the property is not within the boundaries of a previously established AGP, the owner must request the Board to expand the AGP or establish a new AGP simultaneously with the approval of the Contract. Prior to 1988, Government Code Section 51230 required that an AGP consist of no less than 100 acres, unless the Board determined that the unique characteristics of the agricultural operations in the area call for smaller preserves, and that the establishment of the preserve is consistent with the General Plan. AGPs may be made up of land in one or more ownerships. Property owners with less than 100 acres may combine two or more contiguous parcels to form standard-size preserves. All properties that are designated AE-40 (40-acre minimum) after 1988 were noted to be considered part of an agricultural preserve. In order for a property owner to be part of an agricultural preserve, the property must meet the parcel size requirements and receive approval from the Board through a General Plan amendment.



Ventura County 2040 General Plan

Figure 9-11: Designated Agricultural Preserves

Map Date: October 26, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

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- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Agricultural Preserves
- Cities

Initial Study Assessment Guidelines

Ventura County adopted the Initial Study Assessment Guidelines (ISAGs) in 1992 consistent with State CEQA Guidelines and comprehensively revised them in April 2011. The ISAGs are intended to inform the public, project applicants, consultants, and County staff of the threshold criteria and standard methodology used in determining whether a project could have significant effects on the environment. The ISAGs present a range of quantitative, qualitative, and performance levels for specific environmental effects on a broad range of topics, including air, water, transportation infrastructure, scenic resources, and agricultural resources.

Regarding impacts to agricultural soils, the ISAGs state that any project that would result in the direct and/or indirect loss of soils designated Prime, Statewide Importance, Unique, or Local Importance will have an impact. Furthermore, any project that would result in the direct or indirect loss of agricultural soils exceeding certain acreage-loss thresholds identified in the ISAGs will be considered to have a significant project impact as shown in Table 9-22. For example, projects in areas designated as Agricultural Land Use in the General Plan that are located on Prime and Statewide Farmland will be considered to have a significant impact if the project would result in the loss of five acres or more of agricultural soil.

TABLE 9-22
THRESHOLD OF SIGNIFICANCE FOR LOSS OF AGRICULTURAL SOILS
Ventura County, California

General Plan Land Use Designation	Important Farmland Inventory Classification	Acres Lost
Agricultural	Prime/Statewide	5
	Unique	10
	Local	15
Open Space/Rural	Prime/Statewide	10
	Unique	15
	Local	20
All Others	Prime/Statewide	20
	Unique	30
	Local	40

Source: Ventura County Initial Study Assessment Guidelines, April 2011

The ISAGs also address cumulative agricultural resource impacts. The ISAGs state that any project that would result in the direct or indirect loss of agricultural soils is considered to also contribute to the cumulative impact associated with such a loss. However, the cumulative loss of agricultural soils was discussed in the Final EIR for the Comprehensive Amendment to the County General Plan in 1988. The conclusions of that EIR stated that there will be significant loss of agricultural soils and although the General Plan contains policies and programs that serve to partially mitigate the cumulative impact, the impact cannot be reduced to a less-than-significant level. Therefore, in accordance with Section 15183 of the CEQA Guidelines, additional cumulative environmental analysis is not required for any project that is consistent with the General Plan. Furthermore, any project that entails a General Plan Amendment and would result in the loss of agricultural soils less than that indicated in the significance thresholds is considered as having a minimal contribution to a significant cumulative impact and would not require an EIR. Conversely, any project that entails a General Plan amendment that would result in the loss of

agricultural soils equal to or greater than the threshold is considered a substantial contributor to a significant cumulative impact and thus would require preparation of an EIR.

To reduce incompatibility between classified farmland and adjacent land uses, the ISAGs set forth a threshold of significance for the evaluation of all projects involving non-agricultural uses or non-agricultural operations. This threshold is based on the distance from new non-agricultural uses or structures to common lot boundary lines of parcels that are deemed classified farmland. Projects that are closer than the set thresholds shown in Table 9-23 will then be considered to potentially have a significant environmental effect on the farmland property and agricultural resources. For a non-agricultural project to be deemed as not having a potentially significant environmental impact, the project proponent must obtain a waiver or deviation. For a project or use to receive a waiver or deviation, it must satisfy the criteria requirements set forth in the ISAGs. The project impacts can be determined to be less than significant if the project is consistent with the General Plan and does not increase project specific effects.

TABLE 9-23
EVALUATION FOR ALL NON-AGRICULTURAL OR NON-AGRICULTURAL OPERATIONS PROJECTS
Ventura County, California

Land Use or Project	Distance from Non-Agricultural Structure or Use Common Boundary Line Adjacent to Classified Farm
Without Vegetative Screening	300 feet
With Vegetative Screening	150 feet
New K-12 School	1,320 feet

Source: Ventura County Initial Study Assessment Guidelines, April 2011

Guidelines for Orderly Development

Ventura County's "Guidelines for Orderly Development" were originally adopted by the Board of Supervisors, all city councils within Ventura County, and the Local Agency Formation Commission (LAFCo) in 1969. They are a unique collaborative commitment to encourage urban development to occur within cities whenever and wherever practical, enhance the regional responsibility of county government, and facilitate orderly planning and development in Ventura County. The Guidelines were revised and adopted in December 1996, culminating an effort to improve the clarity of relationships between local agencies with respect to urban development projects. The intent of the Guidelines is threefold: (1) clarify the relationship between the cities and the county with respect to urban planning; (2) facilitate a better understanding regarding development standards and fees; and (3) identify the appropriate governmental agency responsible for making determinations on land use requests.

The policies in the Guidelines for Orderly Development outline different approaches for land located within the different policy boundaries established in the county. Within city spheres of influence, the Guidelines call for applicants for land use permits or entitlements for urban uses to apply to the city rather than the county and to annex to the city prior to development occurring. In cases where the county approves development within spheres of influence, the standards for such development should be equal to or more restrictive than land uses allowed by the city.

Within established areas of interest associated with cities, but outside their spheres of influence, the Guidelines call for cities and the county to collaborate in considering applications for discretionary land

use permits or entitlements. While the county is primarily responsible for local land use planning in these areas, decisions should account for the general land use goals and objectives of the city. Within established areas of interest that are not associated with cities, the county is solely responsible for land use planning and for providing municipal services. Urban development in these areas should be allowed only in Unincorporated Urban Centers or Existing Communities as designated in the county's General Plan. In Unincorporated Urban Centers, urban development should only be allowed when an Area Plan has been adopted by the County.

The County's existing General Plan integrates the Guidelines for Orderly Development through Land Use Goal 3.1.1-5, and Policies 3.1.2-1 (Land Use Maps) and 3.1.2-11 (Discretionary Permit Consistency with the Guidelines).

Save Open Space and Agricultural Resources (SOAR)

Save Open Space & Agricultural Resources (SOAR) refers to a series of voter initiatives that individual jurisdictions adopted to protect open space and agricultural land. Ventura County adopted the countywide SOAR ordinance in 1998. As described further below, voters renewed the ordinance through 2050. The County SOAR ordinance requires countywide voter approval of any change to the General Plan involving the Agricultural, Open Space, or Rural land use designations, or any changes to a General Plan goal or policy related to those land use designations.

In addition to the County SOAR ordinance, eight of the 10 cities in the county enacted SOAR ordinances/initiatives: Ventura (1995 and 2001), Camarillo (1998), Oxnard (1998), Simi Valley (1998), Thousand Oaks (1998), Moorpark (1999), Santa Paula (2000), and Fillmore (2002). The cities of Camarillo, Fillmore, Moorpark, Oxnard, Santa Paula, Simi Valley, and Thousand Oaks adopted SOAR ordinances to establish voter-controlled urban growth boundaries, known as City Urban Restriction Boundaries (CURBs). CURBs are lines around each city that require voter approval to allow city annexation and development of land outside of the CURB boundary. The county SOAR ordinance requires voter approval to amend the Open Space, Agriculture and Rural general plan land designations and the goals and policies as they specifically apply to those land use designations unless such amendment is approved by a vote of the people.

The City of Ventura has two measures to protect open space and agricultural land: the original SOAR ordinance and the Hillside Voter Participation Act (HVPA). The City of Ventura SOAR ordinance requires voter approval of any change to the General Plan involving the Agriculture land use designation. The HVPA requires voter approval of any urban development within the HVPA boundary line.

Each of the SOAR ordinances/initiatives contains a limited number of exceptions to the general requirement for voter approval. Most of the original SOAR ordinances/initiatives were structured to stay in effect until December 31, 2020; the exceptions were the cities of Ventura and Thousand Oaks, which were scheduled to stay in effect until December 31, 2030. In November 2016, the voters of Ventura County and 8 of the county's 10 cities renewed the SOAR ordinances and extended their controls through 2050. Ojai and Port Hueneme were not part of this voter initiative, (sometimes referred to as Measure C.) Ojai will continue to rely on locally adopted planning measures, while Port Hueneme is landlocked, with no room to expand beyond its current boundaries. Measure C included amendments to the goals, policies, and programs located within Sections 1.6 Farmland Resources and 3.2 Land Use Designations of the Ventura County General Plan – Goals, Policies & Programs.

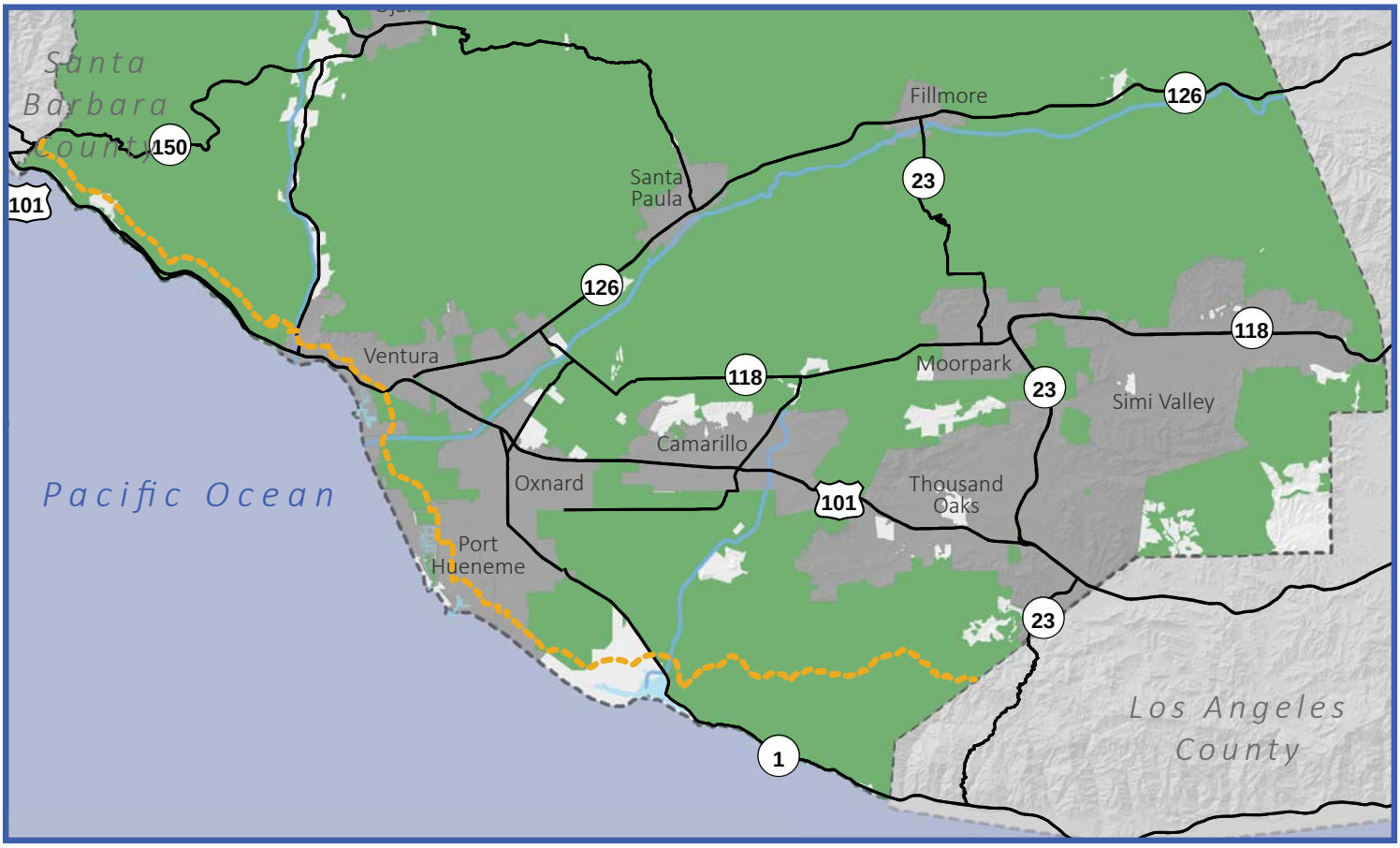

Figure 9-12:
Land Subject to SOAR

Map Date: July 08, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 4.5 9 Miles

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Coastal Zone Boundary
Major Roadways
Major Waterways
Water Bodies
Cities
Land Subject to SOAR

Greenbelt Agreements

Greenbelt agreements are voluntary agreements between the Board of Supervisors and one or more city councils regarding development of agricultural and/or open space areas beyond city limits. They protect open space and agricultural lands and reassure property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses. Cities commit not to annex any property within a greenbelt while the Board agrees to restrict development to uses consistent with existing zoning. Ventura County has a total of seven greenbelt agreements that together total approximately 164,000 acres. The seven greenbelts are listed below:

- Ventura-Santa Paula Greenbelt
- Santa Paula-Fillmore Greenbelt
- Camarillo-Oxnard Greenbelt
- Santa Rosa Valley Greenbelt
- Tierra Rejada Greenbelt
- Ventura-Oxnard Greenbelt
- Fillmore-Piru Greenbelt

For an expanded discussion on each of the seven greenbelts within Ventura County, reference Chapter 3: Land Use, Section 3.3 Annexation and Development Trends

Ventura County Agricultural/Urban Buffer Policy

This policy provides guidelines to prevent and/or mitigate conflicts that may arise at the agricultural/urban interface. This policy is intended to protect the economic viability and long-term sustainability of the Ventura County agricultural industry. It applies where urban structures or ongoing non-farming activities are permitted adjacent to land: 1) in crop or orchard production; or 2) classified by the California Department of Conservation Important Farmland Inventory as Prime, Statewide Importance, Unique or Local Importance farmland. These guidelines apply to projects requiring discretionary approval by the County or a city where the proposed non-farming activity is abutting or on land zoned “Agriculture Exclusive”, “Open Space” or “Rural Agriculture”, and the farming activity is located outside a Sphere of Influence. Where applicable, urban developments or non-agricultural uses are conditioned to provide and maintain a 300-foot setback and chain-link fence on the non-agricultural property between the urban use and the agriculture, or a 150-foot buffer/setback if a vegetative screen as is used.

Right-to-Farm Ordinance

The Ventura County Right-to-Farm Ordinance was adopted by the Board of Supervisors in the late 1970s. It is administered by both the Planning Division through the Zoning Ordinance and by the Agricultural Commissioner’s Office. The Right-to-Farm Ordinance is intended to support and provide a safeguard for existing agricultural and farming operations that could be threatened by encroaching residential development. This is achieved through mandatory disclosure notifications provided to property owners who will be developing residential uses adjacent or near existing agricultural operations. The disclosure

informs people seeking to develop or purchase homes of the Right-to-Farm ordinance and the potential impacts that may be generated by nearby farming operations. The Ordinance also protects farms from nuisance complaints associated with proper farming practices.

1988 Ventura County General Plan

State law (Government Code 65300, et. seq.) mandates that each county and city in California adopt and update a general plan with at least seven elements, including land use, circulation, housing, conservation, open space, noise and safety. Specific topics such as open space and agriculture are found throughout the General Plan, specifically in the land use, conservation, and open space elements. Local governments also can add other material such as economic development, and air quality elements, and some counties have adopted separate agricultural elements. The 1988 Ventura County General Plan addresses agriculture in the chapter on Land Use and provides the Goals is Section 3.2.1-4 and Policies pertaining to agriculture in Section 3.2.1-4.

Ventura County Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance regulates land uses, establishes height, bulk, and space standards, and includes development standards for a variety of other uses such as signs, parking, and landscaping. The Non-Coastal Zoning Ordinance also seeks to provide the preservation of natural resources, prevent urban sprawl, and protect prime agricultural land. The Non-Coastal Zoning Ordinance regulates agricultural land through two zoning designations: Open Space (OS), Agricultural Exclusive (AE).

Local Coastal Program

The Local Coastal Program, mandated by the California Coastal Act of 1976, is the Land Use Plan for the unincorporated portions of the coastal areas of Ventura County. It addresses the County's significant coastal issues with a combination of land use designations, resource protection, and development policies. The coastal zone was divided into three sub-areas: The North Coast, the Central Coast and the South Coast, each with its respective issues, objectives, and policies. These policies evaluate issues pertaining to environmentally sensitive habitats, archaeological and paleontological resources, agriculture, commercial fishing, recreation and access, hazards, beach erosion, energy and industrial facilities, public works, housing and the location and planning of new development. In specific, all three sub areas provide objectives and policies directly related to agriculture. One of the Plan objectives is to preserve agricultural lands through mitigation measures from new development, reduce land divisions which could affect productivity, minimize soil erosion, and designate minimum parcel size standards.

Coastal Zoning Ordinance

The purpose of the Coastal Zoning Ordinance is to protect and promote the public health, safety, and general welfare; and to provide the environmental, economic, and social advantages that result from an orderly, planned use of resources; and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment, by protecting the ecological balance of the coastal zone and preventing its destruction and deterioration. The Coastal Zoning Ordinance also seeks to provide the preservation of open space and agricultural lands as a limited and irreplaceable resource, through the regulation of four zoning designations (Section 8173, Coastal Open Space (COS), Costal Agriculture (CA), Coastal Rural (CR), Coastal Rural Exclusive (CRE)).

Regulatory Setting

Federal

Farmland Protection Policy Act (FPPA)

The Farmland Protection and Policy Act (FPPA), 7 U.S.C. 4201, was enacted in 1981 to minimize the loss of prime farmland and unique farmlands because of Federal actions by converting these lands to nonagricultural uses. It assures that federal programs are compatible with state and local governments, and private programs and policies to protect farmland. Federal agencies that authorize actions that result in the conversion of prime or unique farmland not already committed to urban development or water storage are responsible for compliance with the FPPA. Compliance is to be coordinated with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

State

Open Space Subvention Act (OSSA)

The OSSA provides for the partial replacement of local property tax revenue foregone as a result of participation in the Land Conservation (Williamson) Act and other enforceable open space restriction programs (Government Code §16140 et seq.). Participating local governments receive annual payments on the basis of the number of eligible acres, quality (soil type and agricultural productivity), and, for Farmland Security Zone contracts, location (proximity to a city) of land enrolled under eligible enforceable open space restrictions.

Farm and Ranch Lands Protection Program (FRPP)

The FRPP provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partnered with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act)

The CKH Act established procedures for local agency changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.) While LAFCO does not have any direct land use authority, the CKH Act assigns LAFCOs a significant role in planning issues by requiring them to consider a wide range of land use and growth factors when they consider proposed boundary changes. California Government Code Section 56001 specifically states that "the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing that development with sometimes competing State interests of discouraging urban sprawl, preserving open space and prime agricultural lands, [and] efficiently extending government services."

California Farmland Conservancy Program (CFCP)

The CFCP is a statewide grant funding program that supports local efforts to establish agricultural conservation easements and planning projects for the purpose of preserving important agricultural land resources. The CFCP provides grants to local governments and qualified non-profit organizations.

Farmland Mapping and Monitoring Program (FMMP) Section 65570(b) of the California Government Code

This statute requires the Department of Conservation to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county and to report this information to the Legislature. This report is due biennially (every two years) on or before June 30 of every even-numbered year. This statute requires the Department of Conservation to update and send counties copies of current farmland maps by August 1 of each even-numbered year. Counties have the option to review the maps and notify the Department of any changes in agricultural land and request correction of any discrepancies or errors in the classification of agricultural lands on the maps. The statute also provides that the Department of Conservation may acquire supplemental information from new soil surveys and establish comparable baseline data for counties not included in the original 1984 mapping.

California Land Conservation Contract (Williamson Act)

For a discussion on California Land Conservation Act (Williamson Act), reference Chapter 9: Agriculture, Section 9.3 Agricultural Policies and Programs, Existing Conditions.

Local

(See Existing Conditions discussion above)

Key Terms

Agricultural Preserve (AGP). In Ventura County, an Agricultural Preserve (AGP) is an area devoted to plant and animal production for commercial purposes, and for other compatible uses. The boundaries of the Preserve are designated by resolution of the Board of Supervisors.

Cancellation. The immediate termination of a Williamson Act Contract.

Farmland Security Zone Area (FSZA). The area that is created within an Agricultural Preserve by the Board upon request by a landowner or group of landowners. Once the designation has been made, the property owner may enter into a FSZA/LCA Contract.

Farmland Security Zone Contract (FSZA/LCA). A contract between a private landowner and the County that restricts land to agricultural or open space uses. The minimum initial term is 20 years.

Greenbelt Agreement. A joint resolution between interested cities and the County to protect open space and agricultural lands and reassure that land will not be converted to urban uses.

Land Conservation Act Contract (LCA Contract). Land Conservation Contract is the legal document that contractually obligates the property owner (and his or her successors of interest) to the enforceable

restrictions provided in the Act. Only land, which has been put into an Agricultural Preserve by resolution of the Board of Supervisors, is eligible for a contract.

Local Agency Formation Commission (LAFCo). A commission within each county that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, and merger of districts with cities.

Nonrenewal. Withdrawal of land subject to Williamson Act contract.

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APPENDIX 9.A: IMPORTANT FARMLAND MAPPING CONVERSION RATE TABLES

This appendix provides additional detail and analysis of the Important Farmland Mapping acreage conversions in Ventura County. The conversion rates account for all the important farmland categories classified by the biennial Department of Conservation's reports from 2004 to 2014. Also included is a summary table of conversion rates dating back to the first reports that tracked agricultural land in 1984. The summary table provides data up to 2012.

TABLE 9.A-1
VENTURA COUNTY
2004-2006 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2004-06 ACREAGE CHANGES			
	2004	2006	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	47,192	45,430	1,836	74	1,910	-1,762
Farmland of Statewide Importance	34,978	34,231	759	12	771	-747
Unique Farmland	29,074	28,581	1,183	690	1,873	-493
Farmland of Local Importance	16,816	16,717	1,137	1,038	2,175	-99
IMPORTANT FARMLAND SUBTOTAL	128,060	124,959	4,915	1,814	6,729	-3,101
Grazing Land	198,087	199,004	460	1,377	1,837	917
AGRICULTURAL LAND SUBTOTAL	326,147	323,963	5,375	3,191	8,566	-2,184
Urban and Built-up Land	101,841	102,873	29	1,061	1,090	1,032
Other Land	124,021	125,173	400	1,552	1,952	1,152
Water Area	3,939	3,939	0	0	0	0
TOTAL AREA INVENTORIED	555,948	555,948	5,804	5,804	11,608	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2006
Prime Farmland	301
Farmland of Statewide Importance	182
Unique Farmland	129
Farmland of Local Importance	940
IMPORTANT FARMLAND SUBTOTAL	1,552
Grazing Land	3,924
AGRICULTURAL LAND SUBTOTAL	5,476
Urban and Built-up Land	0
Other Land	861
Water Area	0
TOTAL ACREAGE REPORTED	6,337

PART III Land Use Conversion from 2004 to 2006

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland (1)	to:	--	2	342	812	1,156	9	1,165	328	343	0	1,836
Farmland of Statewide Importance (1)	to:	1	--	236	195	432	2	434	156	169	0	759
Unique Farmland	to:	3	3	--	6	12	627	639	43	501	0	1,183
Farmland of Local Importance	to:	68	7	17	--	92	715	807	61	269	0	1,137
IMPORTANT FARMLAND SUBTOTAL		72	12	595	1,013	1,692	1,353	3,045	588	1,282	0	4,915
Grazing Land	to:	0	0	29	10	39	--	39	151	270	0	460
AGRICULTURAL LAND SUBTOTAL		72	12	624	1,023	1,731	1,353	3,084	739	1,552	0	5,375
Urban and Built-up Land	to:	0	0	29	0	29	0	29	--	0	0	29
Other Land	to:	2	0	37	15	54	24	78	322	--	0	400
Water Area	to:	0	0	0	0	0	0	0	0	0	--	0
TOTAL ACREAGE CONVERTED	to:	74	12	690	1,038	1,814	1,377	3,191	1,061	1,552	0	5,804

(1) Conversion to Unique Farmland due to the expansion of existing wholesale potted plant nurseries or the addition of new nurseries near Fillmore, Piru, Oxnard, Ventura, and Moorpark.

Source: Table A-45, Ventura County 2004-2006 Land Use Conversion Report, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx

TABLE 9.A-2
VENTURA COUNTY
2006-2008 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2006-08 ACREAGE CHANGES			
	2006	2008	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	45,431	43,790	1,842	201	2,043	-1,641
Farmland of Statewide Importance	34,230	33,841	455	66	521	-389
Unique Farmland	28,583	28,643	890	950	1,840	60
Farmland of Local Importance	16,716	16,218	1,702	1,204	2,906	-498
IMPORTANT FARMLAND SUBTOTAL	124,960	122,492	4,889	2,421	7,310	-2,468
Grazing Land	199,002	195,674	5,070	1,742	6,812	-3,328
AGRICULTURAL LAND SUBTOTAL	323,962	318,166	9,959	4,163	14,122	-5,796
Urban and Built-up Land	102,874	104,282	79	1,487	1,566	1,408
Other Land	125,174	129,562	834	5,222	6,056	4,388
Water Area	3,939	3,939	0	0	0	0
TOTAL AREA INVENTORIED	555,949	555,949	10,872	10,872	21,744	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2008
Prime Farmland	291
Farmland of Statewide Importance	178
Unique Farmland	121
Farmland of Local Importance	782
IMPORTANT FARMLAND SUBTOTAL	1,372
Grazing Land	3,752
AGRICULTURAL LAND SUBTOTAL	5,124
Urban and Built-up Land	0
Other Land	1,321
Water Area	0
TOTAL ACREAGE REPORTED	6,445

PART III Land Use Conversion from 2006 to 2008

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland (1)	to:	--	2	280	999	1,281	4	1,285	363	194	0	1,842
Farmland of Statewide Importance (1)	to:	3	--	76	115	194	4	198	225	32	0	455
Unique Farmland	to:	12	4	--	64	80	617	697	11	182	0	890
Farmland of Local Importance	to:	131	36	36	--	203	983	1,186	131	385	0	1,702
IMPORTANT FARMLAND SUBTOTAL		146	42	392	1,178	1,758	1,608	3,366	730	793	0	4,889
Grazing Land (2)	to:	7	5	311	15	338	--	338	346	4,386	0	5,070
AGRICULTURAL LAND SUBTOTAL		153	47	703	1,193	2,096	1,608	3,704	1,076	5,179	0	9,959
Urban and Built-up Land	to:	7	1	18	5	31	5	36	--	43	0	79
Other Land	to:	41	18	229	6	294	129	423	411	--	0	834
Water Area	to:	0	0	0	0	0	0	0	0	0	--	0
TOTAL ACREAGE CONVERTED	to:	201	66	950	1,204	2,421	1,742	4,163	1,487	5,222	0	10,872

(1) Conversion to Unique Farmland due to delineation of potted plant nurseries and nonirrigated orchards.
(2) Conversion to Other Land largely due to the delineation of oil fields on which grazing is not permitted, including the San Miguelito, Shiells Canyon, and Torrey Canyon fields.

Source: Table A-45, Ventura County 2006-2008 Land Use Conversion Report, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx

TABLE 9.A-3
VENTURA COUNTY
2008-2010 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2008-10 ACREAGE CHANGES			
	2008	2010	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	43,791	42,420	1,787	416	2,203	-1,371
Farmland of Statewide Importance	33,841	33,482	702	343	1,045	-359
Unique Farmland	28,643	28,793	1,535	1,685	3,220	150
Farmland of Local Importance	16,218	14,988	2,260	1,030	3,290	-1,230
IMPORTANT FARMLAND SUBTOTAL	122,493	119,683	6,284	3,474	9,758	-2,810
Grazing Land	195,674	197,278	743	2,347	3,090	1,604
AGRICULTURAL LAND SUBTOTAL	318,167	316,961	7,027	5,821	12,848	-1,206
Urban and Built-up Land	104,280	105,233	108	1,061	1,169	953
Other Land	129,563	129,816	1,242	1,495	2,737	253
Water Area	3,939	3,939	0	0	0	0
TOTAL AREA INVENTORIED	555,949	555,949	8,377	8,377	16,754	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2010
Prime Farmland	284
Farmland of Statewide Importance	165
Unique Farmland	118
Farmland of Local Importance	732
IMPORTANT FARMLAND SUBTOTAL	1,299
Grazing Land	3,694
AGRICULTURAL LAND SUBTOTAL	4,993
Urban and Built-up Land	0
Other Land	1,375
Water Area	0
TOTAL ACREAGE REPORTED	6,368

PART III Land Use Conversion from 2008 to 2010

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland (1)	to:	--	3	583	695	1,281	9	1,290	207	290	0	1,787
Farmland of Statewide Importance (1)	to:	1	--	242	244	487	10	497	117	88	0	702
Unique Farmland (2)	to:	36	7	--	20	63	1,027	1,090	30	415	0	1,535
Farmland of Local Importance (2)	to:	172	163	183	--	518	1,272	1,790	108	362	0	2,260
IMPORTANT FARMLAND SUBTOTAL		209	173	1,008	959	2,349	2,318	4,667	462	1,155	0	6,284
Grazing Land	to:	6	4	287	42	339	--	339	83	321	0	743
AGRICULTURAL LAND SUBTOTAL		215	177	1,295	1,001	2,688	2,318	5,006	545	1,476	0	7,027
Urban and Built-up Land	to:	20	23	44	2	89	0	89	--	19	0	108
Other Land	to:	181	143	346	27	697	29	726	516	--	0	1,242
Water Area	to:	0	0	0	0	0	0	0	0	0	--	0
TOTAL ACREAGE CONVERTED	to:	416	343	1,685	1,030	3,474	2,347	5,821	1,061	1,495	0	8,377

(1) Conversion to Unique Farmland is due to the identification of potted plant nurseries on land previously mapped as irrigated farmland.
(2) Conversion to Grazing Land is primarily due to irrigated crops or nonirrigated grain fields left fallow for three or more update cycles.

Source: Table A-45, Ventura County 2008-2010 Land Use Conversion Report, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx

TABLE 9.A-4
VENTURA COUNTY
2010-2012 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2010-12 ACREAGE CHANGES			
	2010	2012	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	42,422	41,570	1,056	204	1,260	-852
Farmland of Statewide Importance	33,484	33,337	197	50	247	-147
Unique Farmland	28,792	28,725	528	461	989	-67
Farmland of Local Importance	14,989	15,168	795	974	1,769	179
IMPORTANT FARMLAND SUBTOTAL	119,687	118,800	2,576	1,689	4,265	-887
Grazing Land	197,278	197,866	260	848	1,108	588
AGRICULTURAL LAND SUBTOTAL	316,965	316,666	2,836	2,537	5,373	-299
Urban and Built-up Land	105,233	105,461	223	451	674	228
Other Land	129,816	129,887	630	701	1,331	71
Water Area	3,939	3,939	0	0	0	0
TOTAL AREA INVENTORIED	555,953	555,953	3,689	3,689	7,378	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2012
Prime Farmland	DATA
Farmland of Statewide Importance	NOT
Unique Farmland	AVAILABLE
Farmland of Local Importance	0
IMPORTANT FARMLAND SUBTOTAL	0
Grazing Land	0
AGRICULTURAL LAND SUBTOTAL	0
Urban and Built-up Land	0
Other Land	0
Water Area	0
TOTAL ACREAGE REPORTED	0

PART III Land Use Conversion from 2010 to 2012

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland	to:	--	2	23	846	871	4	875	40	141	0	1,056
Farmland of Statewide Importance	to:	0	--	30	85	115	5	120	10	67	0	197
Unique Farmland (1)	to:	63	20	--	9	92	233	325	14	189	0	528
Farmland of Local Importance	to:	106	16	51	--	173	558	731	9	55	0	795
IMPORTANT FARMLAND SUBTOTAL		169	38	104	940	1,251	800	2,051	73	452	0	2,576
Grazing Land	to:	1	1	164	11	177	--	177	25	58	0	260
AGRICULTURAL LAND SUBTOTAL		170	39	268	951	1,428	800	2,228	98	510	0	2,836
Urban and Built-up Land (2)	to:	0	1	1	10	12	20	32	--	191	0	223
Other Land	to:	34	10	192	13	249	28	277	353	--	0	630
Water Area	to:	0	0	0	0	0	0	0	0	0	--	0
TOTAL ACREAGE CONVERTED	to:	204	50	461	974	1,689	848	2,537	451	701	0	3,689

(1) Conversion to Prime Farmland is due to the delineation of irrigated agriculture that had previously been mapped as potted plant nurseries.
(2) Conversion from Urban and Built-Up Land was primarily due to the removal of tanks at the Ormond Beach Power Plant and the Willett Tank Farm in Ventura and small areas lacking structures in North Fillmore, Thousand Oaks, Camarillo, and Oxnard.

Source: Table A-45, Ventura County 2010-2012 Land Use Conversion Report, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx

TABLE 9.A-5
VENTURA COUNTY
2012-2014 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2012-14 ACREAGE CHANGES			
	2012	2014	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	41,570	41,143	598	171	769	-427
Farmland of Statewide Importance	33,339	33,045	415	121	536	-294
Unique Farmland	28,726	28,700	578	552	1,130	-26
Farmland of Local Importance	15,169	15,560	295	686	981	391
IMPORTANT FARMLAND SUBTOTAL	118,804	118,448	1,886	1,530	3,416	-356
Grazing Land	197,865	197,796	465	396	861	-69
AGRICULTURAL LAND SUBTOTAL	316,669	316,244	2,351	1,926	4,277	-425
Urban and Built-up Land	105,462	105,671	186	395	581	209
Other Land	129,888	130,104	368	584	952	216
Water Area	3,939	3,939	0	0	0	0
TOTAL AREA INVENTORIED	555,958	555,958	2,905	2,905	5,810	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2014
Prime Farmland	DATA
Farmland of Statewide Importance	NOT
Unique Farmland	AVAILABLE
Farmland of Local Importance	
IMPORTANT FARMLAND SUBTOTAL	
Grazing Land	
AGRICULTURAL LAND SUBTOTAL	
Urban and Built-up Land	
Other Land	
Water Area	
TOTAL ACREAGE REPORTED	

PART III Land Use Conversion from 2012 to 2014

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland	to:	--	1	38	343	382	6	388	75	135	0	598
Farmland of Statewide Importance	to:	1	--	6	267	274	8	282	43	90	0	415
Unique Farmland	to:	30	27	--	36	93	318	411	1	166	0	578
Farmland of Local Importance	to:	104	54	38	--	196	28	224	52	19	0	295
IMPORTANT FARMLAND SUBTOTAL		135	82	82	646	945	360	1,305	171	410	0	1,886
Grazing Land	to:	3	5	342	8	358	--	358	49	58	0	465
AGRICULTURAL LAND SUBTOTAL		138	87	424	654	1,303	360	1,663	220	468	0	2,351
Urban and Built-up Land (1)	to:	0	6	4	30	40	30	70	--	116	0	186
Other Land	to:	33	28	124	2	187	6	193	175	--	0	368
Water Area	to:	0	0	0	0	0	0	0	0	0	--	0
TOTAL ACREAGE CONVERTED	to:	171	121	552	686	1,530	396	1,926	395	584	0	2,905

(1) Conversion from Urban and Built-up Land is primarily the result of a lack of sufficient infrastructure and the use of detailed digital imagery to delineate more distinct urban boundaries.

Source: Table A-45, Ventura County 2012-2014 Land Use Conversion Report, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx

TABLE 9.A-6
VENTURA COUNTY
2014-2016 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monitoring Program

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		2014-16 ACREAGE CHANGES			
	2014	2016	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	41,143	40,976	409	242	651	-167
Farmland of Statewide Importance	33,045	32,992	191	138	329	-53
Unique Farmland	28,699	28,950	584	835	1,419	251
Farmland of Local Importance	15,560	15,590	383	413	796	30
IMPORTANT FARMLAND SUBTOTAL	118,447	118,508	1,567	1,628	3,195	61
Grazing Land	197,794	197,859	832	897	1,729	65
AGRICULTURAL LAND SUBTOTAL	316,241	316,367	2,399	2,525	4,924	126
Urban and Built-up Land	105,673	105,966	82	375	457	293
Other Land	130,105	129,688	792	375	1,167	-417
Water Area	3,940	3,938	2	0	2	-2
TOTAL AREA INVENTORIED	555,959	555,959	3,275	3,275	6,550	0

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	TOTAL ACREAGE 2016
Prime Farmland	DATA
Farmland of Statewide Importance	NOT
Unique Farmland	AVAILABLE
Farmland of Local Importance	
IMPORTANT FARMLAND SUBTOTAL	
Grazing Land	
AGRICULTURAL LAND SUBTOTAL	
Urban and Built-up Land	
Other Land	
Water Area	
TOTAL ACREAGE REPORTED	

PART III Land Use Conversion from 2014 to 2016

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Water Area	Total Converted To Another Use
Prime Farmland (1)	to:	--	8	106	181	295	4	299	36	74	0	409
Farmland of Statewide Importance (1)	to:	11	--	79	37	127	0	127	24	40	0	191
Unique Farmland (2)	to:	70	63	--	33	166	356	522	3	59	0	584
Farmland of Local Importance	to:	128	33	37	--	198	45	243	82	58	0	383
IMPORTANT FARMLAND SUBTOTAL		209	104	222	251	786	405	1,191	145	231	0	1,567
Grazing Land	to:	3	4	504	147	658	--	658	84	90	0	832
AGRICULTURAL LAND SUBTOTAL		212	108	726	398	1,444	405	1,849	229	321	0	2,399
Urban and Built-up Land (3)	to:	8	1	4	7	20	9	29	--	53	0	82
Other Land	to:	22	29	105	8	164	483	647	145	--	0	792
Water Area	to:	0	0	0	0	0	0	0	1	1	--	2
TOTAL ACREAGE CONVERTED	to:	242	138	835	413	1,628	897	2,525	375	375	0	3,275

(1) Conversion to Unique Farmland is primarily due to soil unit changes from the incorporation of the statewide gridded soil survey.
(2) Conversion to Prime Farmland and Farmland of Statewide Importance is primarily due to soil unit changes from the incorporation of the statewide gridded soil survey.
(3) Conversion from Urban and Built-up Land is primarily due to a lack of sufficient infrastructure and the use of detailed digital imagery to delineate more distinct urban boundaries.

TABLE 9.A-7
VENTURA COUNTY
1984-2016 Land Use Conversion

Land Use Category	Acreage By Category (1)																		1984-2016 Net Acreage Changed	Avg Annual Change
	1984	1986	1988	1990	1992	1994	1996 (2)	1998	2000 (3)	2002	2004	2006	2008	2010	2012	2014 (4)	2016		
Prime Farmland	57,138	55,587	54,246	53,574	53,284	53,026	52,141	51,818	48,573	47,877	47,192	45,431	43,791	42,422	41,570	41,143	40,976		-16,162	-505
Farmland of Statewide Importance	39,917	39,327	38,779	38,278	38,082	37,811	37,611	37,700	35,792	35,204	34,978	34,230	33,841	33,484	33,337	33,045	32,992		-6,925	-216
Unique Farmland	22,978	22,626	22,326	22,507	22,454	22,516	22,437	22,643	28,103	27,982	29,074	28,583	28,643	28,792	28,725	28,700	28,950		5,972	187
Farmland of Local Importance	12,355	12,340	12,139	11,691	11,440	11,415	11,148	11,076	19,044	18,042	16,816	16,716	16,218	14,989	15,168	15,560	15,590		3,235	101
Important Farmland Subtotal	**132,388**	**129,880**	**127,490**	**126,050**	**125,260**	**124,768**	**123,337**	**123,237**	**131,512**	**129,105**	**128,060**	**124,960**	**122,493**	**119,687**	**118,800**	**118,448**	**118,508**		**-13,880**	**-434**
Grazing Land	212,779	212,160	211,573	210,106	209,668	209,086	208,752	207,852	197,973	198,372	198,087	199,002	195,674	197,278	197,866	197,796	197,859		-14,920	-466
Agricultural Land Subtotal	**345,167**	**342,040**	**339,063**	**336,156**	**334,928**	**333,854**	**332,089**	**331,089**	**329,485**	**327,477**	**326,147**	**323,962**	**318,167**	**316,965**	**316,666**	**316,244**	**316,367**		**-28,800**	**-900**
Urban and Built-Up Land	77,613	80,657	83,603	87,859	89,035	91,541	92,883	95,522	97,236	99,789	101,841	102,874	104,280	105,233	105,461	105,671	105,966		28,353	886
Other Land	130,036	130,118	130,272	128,922	128,974	127,524	127,041	125,403	125,291	124,746	124,021	125,174	129,563	129,816	129,887	130,104	129,688		-348	-11
Water Area	3,137	3,137	3,015	3,015	3,015	3,033	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,938		801	25
Total Area Inventoried	**555,953**	**555,952**	**555,953**	**555,952**	**555,952**	**555,952**	**555,952**	**555,953**	**555,951**	**555,951**	**555,948**	**555,949**	**555,949**	**555,953**	**555,953**	**555,958**	**555,959**		**6**	**0**

(1) Figures are generated from the most current version of the GIS data. Files dating from 1984 through 1992 were reprocessed with a standardized county line in the Albers Equal Area projection, and other boundary improvements.

(2) Acreage for Water changed in 1996 when refinements were made to lake and river boundaries from imagery and 1:24,000 scale quadrangles.

(3) Due to the incorporation of digital soil survey data (SSURGO) in 2000, acreages for farmland, grazing and other land categories may differ from those published in the 1998-2000 Farmland Conversion Report.

(4) Conversion of geospatial data to North American Datum 1983 (NAD 83) led to minor changes in total FMMP acreage beginning in 2014.

Percentage of County Inventoried: 47%

Ventura County 2040 GENERAL PLAN

Chapter 10
Water Resources

10 WATER RESOURCES

INTRODUCTION

This chapter summarizes the various water resources and water resource issues in Ventura County. It is organized into the following sections:

- Major Findings (Section 10.1)
- Legal and Regulatory Framework for Water Management (Section 10.2)
- Integrated Regional Water Management (0)
- Existing Conditions (by watershed) (Section 10.4)
- Trends and Future Conditions (Section 10.5)
- Key Terms (Section 10.6)
- References (Section 10.7)

The organization of this chapter differs from others in the Background Report because of the nature of its subject matter. First, because the overall legal and regulatory framework affecting water resources is key to understanding how such resources are managed, the framework is the first substantive discussion in this chapter. Second, because water resources are so integrally tied to geography, the existing conditions discussions are organized according to the county's watersheds, with each aspect of the resource addressed as it relates uniquely to each watershed.

SECTION 10.1 MAJOR FINDINGS

Adequate water supply is a current and ongoing concern in Ventura County due to climate change and drought, the related declines in river flows and reservoir levels, historic overdraft of several local groundwater basins, curtailment of groundwater supplies in southern Ventura County, new groundwater well prohibitions, and reduced deliveries of imported water. More than 850,000 residents and 156 square miles (95,802 acres) of irrigated farmland in Ventura County experienced direct impacts from the drought that began in 2012.

- **The water supply challenges are great and could impact residents, businesses, agriculture, and the environmental resources of Ventura County without concerted action.**
    - **Climate change poses major challenges for water supply**. Climate change is causing warmer temperatures, altered patterns of precipitation, runoff, and rising sea levels. Climate change may compromise the ability to effectively manage water supplies, floods and other natural resources. It is anticipated that climate change will increase demand for water as temperatures rise, increase the need for water for firefighting purposes, change the timing and pattern of snowmelt and runoff, and sea level rise will threaten aging coastal water infrastructure. Planning for and adapting to these changes, particularly impacts to long-term water supply reliability, will be a significant challenge. Additional

details on climate change are found in Chapter 12 of the General Plan Background Report.

- **Declines in surface water flow and reservoir levels in Western Ventura County**. The water for more than 70,000 people in western Ventura County is at risk due to the drought that began in 2012. Imported water cannot currently be delivered to western Ventura County and groundwater is very limited. Water agencies that typically get all or part of their water from wells have had to start purchasing Lake Casitas water, as their wells have run dry. During the drought, purchases of Lake Casitas water increased by 1,000%. The lake is an important, but dwindling, resource threatened by both water quality and water supply concerns. For the first time since 1968, levels in Lake Casitas are expected to drop below 35% volume. Low water levels in 1968 resulted in significant thermal stratification and anoxic (without dissolved oxygen) conditions. The low oxygen levels created an environment where manganese and hydrogen sulfide, normally trapped in sediments, became soluble, causing the lake water to have a brown color and bitter metallic taste. There were also large blue-green algae blooms. Normally creek inflows provide supply and facilitate lake mixing (which helps maintain good water quality). Inflows have significantly decreased since 2012, causing the lake to stratify and stagnate. Casitas Municipal Water District has had to add aeration facilities to combat the water quality affects from the drought.

- ~~**Drought has significantly affected local water supplies.** More than 850,000 residents and 156 square miles (95,802 acres) of irrigated farmland in Ventura County experienced direct impacts from the drought that began in 2012.~~

- ~~**There are inadequate water supplies to meet future demands in some areas of the county.** Developing new water supplies is costly and requires a significant amount of time for planning, identifying and securing funding, environmental review, permitting, and construction. Some of the new supplies being considered include advanced treatment of wastewater for use as potable water, stormwater capture and reuse, treatment of brackish groundwater, and ocean desalination. Facilities to import and deliver locally-held, State Water Project entitlements are being considered. In addition, significant water conservation efforts have begun, mainly in municipal and industrial uses. Agricultural practices are also increasing in efficiency. These efforts will need to continue and be sustained.~~

- **Groundwater basins in the county are experiencing overdraft conditions**. Groundwater is estimated to provide 67 percent of the local water supply. The California Department of Water Resources (DWR) has identified the following groundwater basins in Ventura County as being in critical overdraft[1]: Cuyama Valley (the basin as a whole is considered to be in overdraft, however~~,~~ the United States Geological Survey estimates the portion in Ventura County not to be in overdraft), Oxnard Plain, and Pleasant Valley. These basins serve both urban populations and agriculture. In April 2014, to protect groundwater supplies, the Fox Canyon Groundwater Management Agency, passed Emergency Ordinance E which mandated reduced extractions in many of the groundwater basins in southern Ventura County. In December 2014 the Ventura County Board of Supervisors approved and adopted Ordinance 4468 which prohibits new water

[1] As defined in the Sustainable Groundwater Management Act, a basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts such as persistent lowering of groundwater levels, drying of wells, reductions in groundwater storage, sea water intrusion, degradation of water quality, land subsidence, and reduction of water in streams and lakes.

wells in the unincorporated County in the majority of groundwater basins. These prohibitions will not be removed until Groundwater Sustainability Agencies are formed and have completed groundwater sustainability plans per the Sustainable Groundwater Management Act. Implementation of the Sustainable Groundwater Management Act will require an assessment of the condition of groundwater basins, managing groundwater demand, and undertaking groundwater recharge projects to achieve long-term sustainability.

- **Variability in deliveries of imported water.** Approximately three-quarters of Ventura County residents receive imported supply from Calleguas Municipal Water District. The amount of imported water varies depending on climatic conditions, regulatory conditions and regional demands. The California Department of Water Resources prepares a biennial report to evaluate the reliability of imported water from the State Water Project. The most recent update, the 2015 State Water Project Delivery Capability Report, anticipates greater extremes in the imported water system with lower than historic water availability in dry years and greater than historic water availability in wet years, with the long-term average deliveries decreasing.
- **Water resources dedicated to environmental purposes may change**. State and federal requirements dictate the amount of water that must be available for endangered species and this affects management of water resources. Potential requirements to provide increased instream flows could further reduce water available for municipal, agricultural, and other uses.
- **There are inadequate water supplies to meet future demands in some areas of the county.** Developing new water supplies is costly and requires a significant amount of time for planning, identifying and securing funding, environmental review, permitting, and construction. Some of the new supplies being considered include advanced treatment of wastewater for use as potable water, stormwater capture and reuse, treatment of brackish groundwater, and ocean desalination. Facilities to import and deliver locally-held, State Water Project entitlements are being considered. In addition, significant water conservation efforts have begun, mainly in municipal and industrial uses. Agricultural practices are also increasing in efficiency. These efforts will need to continue and be sustained.

- **Shift toward integrated watershed management.** In the past, different elements of the water system were managed separately from other elements, i.e., groundwater was managed as a separate resource from stormwater and separate from recycled water. There has been a shift in water resources management and regulation toward watershed based approaches. This approach integrates on a regional level the many facets of water resources management, including water supply, water quality, flood management, ecosystem health, and recreation through enhanced collaboration across geographic and political boundaries and diverse stakeholder groups.
- ~~**Water supplies dedicated to environmental purposes may change**. State and federal requirements dictate the amount of water that must be available for endangered species and this affects management of water resources. Potential requirements to provide increased instream flows could further reduce water available for municipal, agricultural, and other uses.~~
- **There is great diversity in the size, source, and organization of water suppliers in Ventura County.** Many properties are served by private wells and surface water diversions. Other properties are served by mutual water companies, irrigation companies, special districts, cities, private utilities, and wholesale water agencies. There are more than 162 water suppliers in the county.

- **Land development significantly affects demand and supply.** The type of land use greatly drives the demand and dictates the type of water needed. High-density residential development will require water treated to drinking water standards. Water sent to users with sewer systems is collected and can be used as a secondary recycled water supply. Agricultural users may be able to utilize raw or recycled water and application of water in agricultural fields may recharge groundwater.
- **Urban land development can impact water ~~quality~~resources**. Land development can impact water quality, but there are best management practices and other methods to avoid and lessen such impacts. Land development commonly creates an increase in impervious surfaces, which increases the amount of runoff and pollutants in stormwater. As stormwater runs over impervious surfaces such as rooftops, roadways, and parking lots, the runoff accumulates pollution and sediment, nutrients, bacteria, and other pollutants. Pollutants in stormwater are typically transported directly to local channels, rivers, and the ocean, without any treatment. Land development impacts floodplains, the risk of flooding, and the ability to manage storm waters naturally. Development in floodplains may impact the ability to recharge groundwater basins through infiltration and may remove potential sites with recharge capabilities. In addition to altering stormwater runoff, land development introduces other sources of pollution including discharges from sewage-treatment plants, septic tanks, and industrial facilities.
- **Agriculture land development can impact water ~~quality~~resources**. Tillage and irrigation of land changes the runoff and infiltration characteristics of the land, affecting recharge to groundwater, and increases erosion and resulting sediment deposit into surface-water bodies, while altering evapotranspiration. This in turn affects the interaction of groundwater and surface water.
- **Poor water quality limits beneficial uses of water**. Poor water quality can limit suitability of a water ~~body~~ resource for beneficial uses such as agriculture, recreation, fisheries, and riverine habitat. Poor water quality also can limit the use of the water for a water supply or drastically increase the treatment cost.
- **Development can affect natural hydrologic processes.** Some development can significantly alter land topography. Removal of natural vegetation and manmade structures such as levees, dams, and diversion structures disrupt natural hydrologic processes (i.e. sediment transport and deposition, groundwater recharge). These changes alter water velocity, river substrate, water shading, soil moisture, and other ecosystem characteristics needed by fish and wildlife.

SECTION 10.2 LEGAL AND REGULATORY FRAMEWORK FOR WATER MANAGEMENT

The framework for water management in Ventura County is complex and reflects the network of laws, policies, and regulations governing California water. Many laws and many institutions influence water planning; Table 10- provides a broad regulatory overview. Additional details on several of these laws, and a discussion of regulations with land use linkages, are further summarized on the following pages.

TABLE 10-1 FRAMEWORK FOR WATER MANAGEMENT	
Statute, Code, or Authority	**Relationship to Water Management**
State of California Constitution, Article X, Section 2	Requires that all entities in the State use water in a beneficial manner and prohibits unreasonable use and water waste.
State of California Riparian Water Rights	Allows owners of land on a stream to divert and use a portion of the flow.
State of California Appropriative Water Rights	The right to divert, store, and use water on any land, provided the use is reasonable and does not harm earlier appropriators. Appropriative rights are managed by the State Water Resources Control Board.
State of California Water Commission Act	Established a system of State-issued permits and licenses to appropriate water.
Federal Endangered Species Act	Designed to protect endangered and threatened species and promote species recovery. Requires that federal agencies consult with the US Fish and Wildlife Service and the National Marine Fisheries Service to ensure that federal actions do not jeopardize endangered or threatened species or their habitat.
National Environmental Policy Act	Requires federal agencies to conduct an environmental review for federal actions that may affect the environment; encourages implementation of mitigation measures to avoid impacts.
State of California Endangered Species Act	Designed to protect endangered and threatened species and promote species recovery. Requires that state and local agencies consult with the California Fish and Wildlife Service to ensure that their actions do not jeopardize endangered or threatened species or their habitat.
California Environmental Quality Act (CEQA)	Requires state and local governments to evaluate environmental effects and find ways to mitigate effects where feasible, prior to approving projects.
State of California Porter-Cologne Water Quality Control Act	This is a water quality control law and regulatory program to protect water quality and beneficial use of the State's water. This act allows regulation of discharges to water.
Federal Clean Water Act	Requires permits for the discharge of pollutants to waters of the United States from any point source. See additional detail below.
Federal and State Safe Drinking Water Act	Under this law, federal and state agencies set and enforce standards for drinking water quality.
State of California Regional and Local Water Agency Formation enabling acts	Guides the formation of districts for controlling, conserving, managing, and distributing water.
State of California Urban Water Management Planning (UWMP) Act	Requires urban water suppliers to conduct regular comparisons of supplies and demands. (See additional detail below.) Within the UWMP, water suppliers must include, to the extent practicable, information on the water quality of existing sources and the manner in which water

TABLE 10-1 FRAMEWORK FOR WATER MANAGEMENT	
Statute, Code, or Authority	**Relationship to Water Management**
	quality affects supply reliability. Based on the UWMP, water suppliers explore enhancing basic supplies from traditional sources such as the State Water Project (SWP) as well as other options. These include groundwater extraction, water exchanges and transfers, water conservation, recycling, brackish water desalination and water banking/conjunctive use. Each option will involve evaluations of how it would: (1) fit into the overall supply/demand framework; (2) impact the environment; and (3) affect customers. The objective of these more detailed evaluations would be to find the optimum mix of conservation and supply programs that ensure customers' needs are met.
State of California Agricultural Water Management Act	Senate Bill X7-7, the Water Conservation Act of 2009 (SB X7-7), requires agricultural water suppliers who provide water to more than 25,000 irrigated acres (excluding acreage irrigated by recycled water) to adopt and submit Agricultural Water Management Plans (AWMP) to DWR and to implement Efficient Water Management Practices, including the measurement and volumetric pricing of water deliveries. Within Ventura County, Casitas Municipal Water District, Camrosa Water District, and Ventura County Waterworks District No. 1 prepared AWMPs in 2015.
State of California Water Conservation in Landscaping Act	Requires specific water efficiencies for landscapes in new or redevelopment projects.
State of California Energy Commission Title 20	Sets standards for toilets, urinals, faucets, and showerheads. The appliance standards dictate what can be sold in California and impact new construction and replacement fixtures in existing homes.
State of California CAL Green Building Code	Requires residential and non-residential water efficiency and conservation measures for new structures that will reduce the overall potable water use by 20 percent. Water savings can be achieved by installing plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or by other measures that meet the reduction standard.
State of California Sustainable Groundwater Management Act	Requires entities using water from groundwater basins designated as high or medium priority by the Department of Water Resources to assess the condition of groundwater basins and to develop a framework for long-term sustainability through demand management and groundwater recharge activities. (See additional discussion on the Sustainable Groundwater Management Act further in this Section below .)
State of California Class II Underground Injection Control Program	Regulation of wells used to inject fluids associated with oil and natural gas production. The purpose of the regulation is to ensure fluids associated with oil and gas production are not introduced into drinking water sources. (See additional details below.)

TABLE 10-1 FRAMEWORK FOR WATER MANAGEMENT	
Statute, Code, or Authority	**Relationship to Water Management**
State of California Permitting of Water Systems	Regulates the formation of new public water systems by the State Water Resources Control Board. (See additional detail below.)
County of Ventura General Plan Goals, Policies and Programs	Complies with Section 65300 of the California Government Code which requires that, "Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning."
County of Ventura Subdivision Ordinance	Regulates and control subdivisions of land and in conjunction implements the County's General Plan. (See additional detail below.)
County of Ventura Coastal Zone Ordinance	Regulates all proposed development in the Coastal Zone of Ventura County. (See additional detail below.)
County of Ventura Non-Coastal Zone Ordinance	Regulates all proposed development in the Non-Coastal Zone of Ventura County. (See additional detail below.)
Ventura County Groundwater Conservation Ordinance	Regulates construction, maintenance, operation, use, repair, modification, and destruction of groundwater wells. (See additional detail below.)
County of Ventura Landscape Design Criteria	Requires approval of a landscape plan for new and modified developments. Limits the plant types and plant pallets so as to conserve water, and requires minimum irrigation efficiency.
State of California Propositions 50, 84, and 1	Grant funding to encourage regional integrated planning of water resources. (See additional detail below.)
State of California Nonpotable Water Reuse Systems-Chapter 15 of the California Plumbing Code (CPC) (as of 2017)	Allows for use of nonpotable water (i.e., graywater), which includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs. Requires a plumbing permit from the County of Ventura Resource Management Agency, Building and Safety Division.

Urban Water Management Plan Act (State)

State law requires that urban water suppliers with more than 3,000 customers, or who deliver more than 3,000 acre-feet per year (AFY) adopt water management and conservation plans that evaluate water supplies and water demands for a 20-year period. Urban Water Management Plans (UWMP) are to be updated every five years or when there are significant changes in available supplies or demands. An UWMP is a planning tool that generally guides the actions of water management agencies. It provides managers and the public with a broad perspective on a number of water supply issues. It is not a substitute for project-specific planning documents, nor was it intended to be when mandated by the State Legislature. For example, the Legislature mandated that the Plan include a Section that "describes the opportunities for exchanges or water transfers on a short-term or long-term basis." (California Urban

Water Management Planning Act, Article 2, Section 10630(d)). The identification of such opportunities, and the inclusion of those opportunities in a general water service reliability analysis, neither commits a water management agency to pursue a particular water exchange/transfer opportunity, nor precludes a water management agency from exploring exchange/transfer opportunities not identified in the Plan. When specific projects are chosen to be implemented, detailed project plans are developed, environmental analysis, if required, is prepared, and financial and operational plans are detailed.

"A plan is intended to function as a planning tool to guide broad-perspective decision making by the management of water suppliers." (Sonoma County Water Coalition v. Sonoma County Water Agency (2010) 189 Cal. App. 4th 33, 39). It should not be viewed as an exact blueprint for supply and demand management. Water management in California is not a matter of certainty and planning projections may change in response to a number of factors. "[L]ong-term water planning involves expectations and not certainties. Our Supreme Court has recognized the uncertainties inherent in long-term land use and water planning and observed that the generalized information required . . . in the early stages of the planning process are replaced by firm assurances of water supplies at later stages." (Id., at 41). From this perspective, it is appropriate to look at the UWMP as a general planning framework, not a specific action plan. It is an effort to generally answer a series of planning questions including:

- What are the potential sources of supply and what is the reasonable probable yield from them?
- What is the probable demand, given a reasonable set of assumptions about growth and implementation of good water management practices?
- How well do supply and demand figures match up, assuming that the various probable supplies will be pursued by the implementing agency?

Using these "framework" questions and resulting answers, the implementing agency will pursue feasible and cost-effective options and opportunities to meet demands.

Based on the UWMP, water suppliers explore enhancing basic supplies from traditional sources such as the State Water Project (SWP) as well as other options. These include groundwater extraction, water exchanges and transfers, water conservation, recycling, brackish water desalination and water banking/conjunctive use. Specific planning efforts will be undertaken in regard to each option, involving detailed evaluations of how each option would fit into the overall supply/demand framework, how each option would impact the environment and how each option would affect customers. The objective of these more detailed evaluations would be to find the optimum mix of conservation and supply programs that ensure that the needs of customers are met.

The Urban Water Management Plan Act requires coordination with local land use entities. At least 60 days prior to the public hearing on the plan any applicable city or county where the water agency supplies water must be notified that the plan is being updated. The water supplier must also provide notice when the Draft UWMP is available for review and comment. Upon completion of the UWMP a copy of the plan must be provided to the applicable land use jurisdictions.

Sustainable Groundwater Management Act (State)

In September 2014, the California legislature enacted comprehensive legislation to manage California groundwater. Known as the Sustainable Groundwater Management Act (SGMA) of 2014, the legislation provides a framework for sustainable management of groundwater supplies by local authorities, but with

the potential for state intervention if necessary. The first step in the process laid out by the legislation is the formation of local groundwater sustainability agencies (GSAs). These GSAs must be formed to address groundwater basins determined by the state to be of high or medium priority, unless adjudicated. In Ventura County, seven basins are designated as medium priority, Ojai Valley, Upper Ventura River, Cuyama Valley, Arroyo Santa Rosa Valley, Mound, Santa Paula (which is adjudicated), Fillmore and four are designated as high priority, Oxnard Plain, Pleasant Valley, Las Posas, and Piru. Three basins are listed as in "critical overdraft:" Oxnard Plain, Pleasant Valley, and Cuyama Valley. The Santa Paula Basin is adjudicated, and is currently only subject to annual reporting requirements to DWR under SGMA.

GSAs are empowered to utilize a number of new management tools to achieve the sustainability goal. For example, GSAs may require registration of groundwater wells, mandate annual extraction reports from individual wells, impose limits on extractions, and assess fees to support creation and adoption of a groundwater sustainability plan (GSP). GSAs also may request a revision of a groundwater basin boundary.

GSPs for critically overdrafted basins must be completed and adopted by January 31, 2020. GSPs for high- and medium-priority basins not in overdraft must be completed and adopted by the GSA by January 31, 2022. All high- and medium-priority groundwater basins must achieve sustainability within 20 years of GSP adoption.

The aim of the legislation is to have groundwater basins managed within the sustainable yield of each basin. The legislation defines "sustainable groundwater management" as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results, which are defined as any of the following effects: chronic lowering of groundwater levels; significant and unreasonable reductions in groundwater storage; significant and unreasonable seawater intrusion; significant and unreasonable degradation of water quality; significant and unreasonable land subsidence; and surface water depletions that have significant and unreasonable adverse impacts on beneficial uses.

The SGMA amends planning and zoning laws to require increased coordination among land use planning agencies and GSAs regarding groundwater plans and any updates or modifications of General Plans. Existing local government land use and groundwater authorities are not modified in the Act.

Specific changes to California Government Code resulting from SGMA are detailed in Appendix 10.A at the end of this chapter.

Class II Underground Injection Control Program (State)

As discussed in Chapter 8, Section 8.1 (Energy Resources) there are currently 57 oil companies operating in Ventura County under the authority of 135 conditional use permits granted by the County to authorize oil and gas activities, including the underground injection of water. According to the California Department of Conservation, Division of Oil, Gas and Geothermal Resources' (DOGGR), there are 614 active Underground Injection Control (water injection) wells in Ventura County. The State of California was delegated primary responsibility for implementing the Class II Oil and Gas Underground Injection Control [UIC] program of the federal Safe Drinking Water Act [SDWA] in 1983.

To determine whether certain UIC wells were posing a threat to water supply wells, the State Water Resources Control Board and its regional water quality control boards (Water Boards) completed an

evaluation of certain UIC wells in December 2016.[2] Staff from the Water Boards reviewed 6,157 UIC wells determined by DOGGR to be injecting into non-exempt aquifers.[3] This evaluation included Class II UICs located in Ventura County. UIC wells were screened for proximity to water supply wells or any other indication of risk of impact to drinking water and other beneficial uses.

Based on this screening criteria, DOGGR ordered the immediate shut-in of 23 UIC wells, none of which were in Ventura County. (A shut-in well is one which is capable of injection or production, but is not in operation). Additionally, the Water Boards issued 71 Information Orders (IOs), requesting additional information from operators of 256 UIC wells. One operator in Ventura County received an IO for a UIC well, which has been abandoned.

In addition to the above UIC regulations, Public Resources Code Section 3106 et. seq. grants DOGGR with the authority to supervise the drilling, operation, maintenance, and abandonment of wells and the operation, maintenance, and removal or abandonment of tanks and facilities attendant to oil and gas production and designated pipelines, so as to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil and gas deposits from infiltrating water and other causes; loss of oil, gas, or reservoir energy, and damage to underground and surface waters suitable for irrigation or domestic purposes by the infiltration of, or the addition of, detrimental substances.

Furthermore, the California Code of Regulations, Title 14, Division 2, Chapter 4, Development, Regulation, and Conservation of Oil and Gas Resources includes several provisions which regulate injection projects (water injection wells). DOGGR is the responsible agency for approving all underground injection and disposal projects before any subsurface injection or disposal project can begin. This includes all EPA Class II wells and air- and gas-injection wells. There are requirements for filing, notification, operating, and testing for underground injection projects (Sections 1724.10 1748.2, 1748.3), and standards for freshwater protection when plugging and abandoning wells (Section 1723.2). This includes DOGGR's authority to require testing as necessary to prevent damage to life, health, property, and natural resources (Section 1954).

Clean Water Act (Federal)

The Clean Water Act, as amended, requires permits for the discharge of pollutants to waters of the United States. Implementation of the Clean Water Act and the Porter-Cologne Water Act is the responsibility of the State Water Resources Control Board and the Regional Water Quality Control Boards. In the Ventura area the applicable Regional Board is the Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB). The Los Angeles RWQCB lays out the water quality objectives, regulations, and programs to implement the regulations in the Los Angeles Basin Plan (Los Angeles RWQCB 2014). The Basin Plan is reviewed and updated every three years, but can be amended at any time. The Los Angeles RWQCB manages water quality based on "beneficial uses". In Ventura County, there are twenty-four identified beneficial uses:

[2] The State evaluated "non-exempt" aquifers. The following federal and state criteria must be met for an aquifer to be considered exempt: (a) cannot be a current drinking water source; (b) unlikely to be a future source of drinking water; (c) injection must not impact current/potential future beneficial use; and (d) injection fluids must remain in the proposed exempted area.

[3] U.S. EPA, Region IX (Pacific Southwest Region) has approved six DOGGR aquifer exemption requests, none of which are in Ventura County.

1. **Municipal and Domestic Supply (MUN).** Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

2. **Agricultural Supply (AGR).** Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

3. **Industrial Process Supply (PROC).** Uses of water for industrial activities that depend primarily on water quality.

4. **Industrial Service Supply (IND).** Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

5. **Ground Water Recharge (GWR).** Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

6. **Freshwater Replenishment (FRSH).** Uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

7. **Navigation (NAV).** Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

8. **Hydropower Generation (POW).** Uses of water for hydropower generation.

9. **Water Contact Recreation (REC-1).** Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

10. **Non-contact Water Recreation (REC-2).** Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

11. **Marine Habitat (MAR).** Uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

12. **Wildlife Habitat (WILD).** Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

13. **Commercial and Sport Fishing (COMM).** Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

14. **Aquaculture (AQUA).** Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

15. **Warm Freshwater Habitat (WARM).** Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic

habitats, vegetation, fish, or wildlife, including invertebrates.

16. **Cold Freshwater Habitat (COLD).** Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

17. **Inland Saline Water Habitat (SAL)**. Uses of water that support inland saline water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates.

18. **Estuarine Habitat (EST).** Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).

19. **Wetland Habitat (WET).** Uses of water that support wetland ecosystems, including, but not limited to, preservation or enhancement of wetland habitats, vegetation, fish, shellfish, or wildlife, and other unique wetland functions which enhance water quality, such as providing flood and erosion control, stream bank stabilization, and filtration and purification of naturally.

20. **Preservation of Biological Habitats (BIOL)**. Uses of water that support designated areas or habitats, such as Areas of Special Biological Significance (ASBS), established refuges, parks, sanctuaries, ecological reserves, or other areas where the preservation or enhancement of natural resources requires special protection.

21. **Rare, Threatened, or Endangered Species (RARE).** Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

22. **Migration of Aquatic Organisms (MIGR).** Uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.

23. **Spawning, Reproduction, and/or Early Development (SPWN).** Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

24. **Shellfish Harvesting (SHELL).** Uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sports purposes.

To protect these beneficial uses, the Los Angeles RWQCB has many regulatory programs to reduce pollutants that originate in stormwater, wastewater, agricultural runoff, and recycled water.

Los Angeles RWQCB regulates discharges from many classes of municipal stormwater systems through a permit program. The Ventura County Watershed Protection District, County of Ventura, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks are named as co-permittees under a countywide municipal National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges issued by the Regional Water Quality Control Board. The co-permittees are required to administer, implement, and enforce a Stormwater Quality Management Program. The goal is to minimize runoff pollution typically caused by land development and protect the beneficial uses of receiving waters by limiting effective impervious area to no more than five percent of the project area and retaining stormwater on site. The co-permittees require

"Site Design Principles and Techniques," "Source Control Measures," "Retention Best Management Practices [BMPs]," "Biofiltration BMPs," and "Treatment Control Measures" be incorporated into new development and redevelopment projects.

Wastewater from wastewater treatment or industrial activities is typically regulated through waste discharge permits (also referred to as Waste Discharge Requirements). Through this permit process the RWQCB regulates the place, volume, and specific constituents in discharges to California's coastal waters, surface waters, and groundwater.

In 2016, the Los Angeles RWQCB readopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region. Typically referred to as the "Conditional Waiver" program, it requires the owners of irrigated farmland to prepare and submit water quality management plans, conduct monitoring in agricultural drains and other sites influenced by agricultural runoff, and implement BMPs that address the quantity and quality of irrigation return flows and stormwater runoff. The purpose is to limit these discharges, which carry nutrients, pesticides, sediment, salts, and other pollutants from cultivated fields, from reaching surface waters. The Conditional Waiver allows growers to comply as individuals or by working collectively as a "discharger group." In response to the Conditional Waiver, the Farm Bureau of Ventura County formed the Ventura County Agricultural Irrigated Lands Group (VCAILG), which serves as a unified discharger group for those agricultural landowners and growers who agree to join. The Farm Bureau of Ventura County administers the program on behalf of VCAILG members.

Both the State Water Resources Control Board (SWRCB) and RWQCBs regulate recycled water. Permits are required to operate recycled water facilities and these permits mandate the type of treatment and resultant water quality, mandate ongoing water quality monitoring, and regulate the place and manner of recycled water use. The State Water Resources Control Board's 2009 Recycled Water Policy, amended in 2013, requires groundwater basins receiving recycled water (e.g., effluent discharge in waterways, injection, recharge, or irrigation) to be managed by Salt and Nutrient Management Plans. The purpose of a Salt Nutrient Management Plan is to optimize recycled water use while ensuring the protection of groundwater supply and beneficial uses, agricultural beneficial uses, and human health. Salt and Nutrient Management Plans are submitted to the RWQCB, which incorporate the plans into the applicable Basin Plan and the RWQCB requires recycled water facilities and wastewater dischargers to operate in a manner consistent with applicable salt nutrient management plan.

The Clean Water Act also includes a regulatory mechanism called the Total Maximum Daily Load (TMDL) program. A TMDL is specific to a given impairment (chloride, nutrients) and a specific waterbody. A TMDL is a kind of "pollution budget" and includes a calculation of the maximum amount of a pollutant that can occur in a waterbody and still meet water quality standards so as to protect beneficial uses. The TMDL also allocates the necessary reductions to one or more pollutant sources. TMDLs can force the implementation of BMPs, infrastructure improvements, and other actions to limit pollution. Within Ventura County the following TMDLs are in place:

- Ventura River Watershed
  - Algae, Eutrophic Conditions, and Nutrients
  - Trash
- Santa Clara River Watershed
  - Bacteria
  - Chloride
- Calleguas Creek Watershed

- Metals
- Salts
- Trash
- Toxicity
- Toxins/Historic Pesticides
- Nitrogen/Nutrients

Under section 303(d) of the Clean Water Act, states, territories, and tribes are to develop lists of waterbodies that are polluted or otherwise degraded and not meeting water quality standards. The 303(d) List is used to develop TMDLs and/or are used to identify other mechanisms to improve water quality. Several waterbodies in Ventura County are on the current 303(d) List for California (SWRCB 2016).

Permitting of Public Water Systems

The State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) oversees the permitting of Public Water Systems. On September 29, 2016, Governor Jerry Brown approved Senate Bill 1263 to prevent the formation of small unsustainable water systems. This bill requires a person submitting a permit application for a proposed new public water system to first submit a preliminary technical report to the SWRCB. The bill directs the applicant to undertake additional discussion and negotiation with existing public water systems with the technical, managerial, and financial capacity to provide an adequate and reliable supply of domestic water to the service area of the proposed new public water system. If the SWRCB determines that it is feasible for the service area of the proposed public water system to be served by one or more currently permitted public water systems and if it is reasonably foreseeable that the proposed new public water system will be unable to provide affordable, safe drinking water in the reasonably foreseeable future, the permit will be denied.

County of Ventura Role in Water Management

The County of Ventura has a large role to play in water management. Through the General Plan Goals, Policies and Programs, Subdivision and Zoning Ordinances and Building Code, the County of Ventura conditions development to ensure adequate water supply, availability of wastewater disposal, and protection of groundwater and surface water quality. Through its Landscape Design Criteria, Ventura County requires water budget and project use calculations, use of reclaimed water if feasible, and water-efficient model home requirements. Per the authority of the Floodplain Management Ordinance, the County restricts and prohibits land uses or land alteration which may be dangerous to health, safety, and property due to modification or obstruction of flood waters or alteration of a water course.

In addition to the regulatory setting, the County of Ventura actively undertakes projects to manage water resources, which include but are not limited to, well permitting, groundwater recharge, stormwater treatment and infiltration, as well as levees and flood control channels. Ventura County also is responsible for the operation and maintenance of several water and sewer utilities within the county. Various county departments also collect and maintain data on countywide water resources. For example, the VCWPD maintains a network of rainfall and streamflow gauges, inventories and inspects groundwater wells, collects water quality data, and groundwater level information.

County of Ventura General Plan Goals, Policies and Programs

The General Plan (2005) Goals Policies and Programs (GPP) includes goals, policies, and programs related to water resources in Chapter 1, Resources, Section 1.3. In addition to policies in the GPP, the following Area Plans also contain applicable goals and policies related to water resources:

- El Rio/Del Norte Area Plan;
- North Ventura Avenue Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

County of Ventura Ordinances

Subdivision Ordinance

The intent of the County of Ventura Subdivision Ordinance is to regulate and control subdivisions of land and, in conjunction, implement the County's General Plan. The Subdivision Ordinance applies to "all divisions, reversions to acreage, lot line adjustments, and mergers respecting real property located wholly or partially within the unincorporated areas of Ventura County" and "governs the filing, processing, approval, conditional approval, or disapproval of tentative, final and parcel maps, map waivers, and any modifications thereto." The Subdivision Ordinance includes the following provisions meant to ensure adequate provision of water, to protect water supply, and to protect surface and groundwater quality.

Provisions to ensure adequate provision of water:

- Section 8203-3, Section 8206-3.8, and Section 8206-3.9. At the tentative tract stage, requires a description of the method and plan for providing a permanent domestic water supply. If the water supply is to be provided by a public water system the tentative tract map must be accompanied by a "water availability letter."[4] In areas where groundwater supplies have been determined to be questionable or inadequate, a report must also be submitted demonstrating the availability of a permanent domestic water supply to each lot for a period of at least 60 years. At the final map phase, developments not being served water by individual wells, must provide a "water supply certificate" documenting that a binding agreement has been entered into between the owner of the land and water supplier. Also at the final map stage a registered civil engineer must determine (a)

[4] A water availability letter pursuant to the §8203-3 (l) of the Ventura County Subdivision Ordinance, which requires that the proposed water system of a subdivision provide a letter stating that they will supply permanent domestic water supply to each lot, is not synonymous with the requirement for a water purveyor to supply a "water availability letter" as defined in §1.3.6 of the Ventura County Waterworks Manual, which shall demonstrate that the water purveyor has the necessary water capacity for their entire service area.

that the water suppliers system complies with the quality and quantity standards of Title 22 of the California Code of Regulations and that the new development will not impact the water supplier in a way such that the water system will not comply with Title 22 and (b) the facilities of the water supplier's system, including the portion to serve the proposed subdivision, meet or exceed the requirements of the County of Ventura Improvement Standards and Specifications.

- Section 8204-7. Requires that whenever a proposed subdivision is located within the boundaries of a public water agency willing and able to provide water service to the lots, the public water agency shall be chosen as the water purveyor for the proposed subdivision.
- Section 8205-5.1. Requires notification to water, sewage and other service providers prior to Planning Commission hearing on a subdivision (when a tentative map and final map are required).
- Section 8207-2. Prior to recordation of a final map or parcel map, or at such earlier time as may be specified in this Article, the subdivider shall complete or shall enter into an improvement agreement to complete specific improvements including permanent domestic water supply.

Provisions to protect surface and groundwater quality:

- Section 8203-2. Requires water courses and existing or abandoned water wells be identified on tentative maps.
- Section 8203-3. Requires a hydrologic and hydraulic study be submitted with the tentative map indicating the following conditions before and after proposed development of the subdivision: drainage areas, major watercourses, quantity and pattern of storm water, and diversion and collection systems.
- Section 8203-3. Requires a description of the proposed method and plan for sewage disposal for each proposed lot.
- Section 8204-5. Design of a subdivision shall conform to the County of Ventura Flood Plain Management Ordinance and shall provide for the proper drainage of all lots and improvements based on the runoff that can be anticipated from ultimate development of the watershed in accordance with the General Plan. All public facilities including water and sewer, must be located and constructed in a manner to minimize potential flood damage. Any concentrations or increases of surface water resulting from the development of the subdivision must be conveyed by means of adequate facilities to a suitable natural watercourse in the area.
- Section 8207-2. Prior to recordation of a final map or parcel map, or at such earlier time as may be specified in this Article, the subdivider shall complete or shall enter into an improvement agreement to complete specific improvements including: (a) all improvements for drainage and erosion control required for the proposed subdivision, regardless of location, including improvements necessary to prevent sedimentation or damage to off-site property, (b) sewage and permanent domestic water supply systems shall be installed in each proposed subdivision and connections thereto made from each lot within the subdivision, (c) all abandoned water wells within the proposed subdivision shall either be destroyed or be retained subject to a Certificate of Exemption in compliance County of Ventura Code.
- Section 8209-5. As a condition of approval of any subdivision, the tentative map for which is filed no sooner than 30 days after the adoption of any applicable drainage or sanitary sewer plan

for a particular drainage or sanitary sewer area, the subdivider may be required to pay fees or consideration in lieu thereof for the purpose of defraying the actual or estimated costs of constructing planned drainage facilities for the removal of surface and storm waters from local or neighborhood drainage areas and of constructing planned sanitary sewer facilities.

Coastal Zone and Non-Coastal Zone Ordinances

The County of Ventura Coastal Zoning Ordinance (CZO) regulates all proposed development in the Coastal Zone of Ventura County; areas outside of this zone are regulated by the Non-Coastal Zoning Ordinance (NCZO). Many of the provisions of the Coastal Zone and Non-Coastal Ordinance are similar to those in the Subdivision Map Act. Though provisions differ given the proposed land use, generally these ordinances require:

- Obtaining a permit or zoning clearance prior to: (a) constructing or expanding a septic system; (b) constructing or expanding a water well, and (c) constructing private water storage and distribution facilities.
- A 100- to 300-foot setback from water channels and prohibits obstruction of drainage courses.
- Development to be undertaken in accordance with conditions and requirements established by the Ventura Countywide Stormwater Quality Management Program, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS063339 and the Ventura Stormwater Quality Management Ordinance No. 4142 and as these permits and regulations may be amended.
    - Construction activity including clearing, grading or excavation that requires a grading permit shall be undertaken in accordance with any conditions and requirements established by the NPDES Permit or other permits which are reasonably related to the reduction or elimination of Pollutants in Stormwater from the construction site.
    - Preparation of a Stormwater Pollution Control Plan or Stormwater Pollution Prevention Plan for construction activities.
    - Generally new development or redevelopment projects affecting 5,000 square feet or greater must incorporate post-construction stormwater quality design principals, details are provided in the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures.

A unique provision in the NCZO is the definition of the Arroyo Santa Rosa/Tierra Rejada Groundwater Quality Impact Area. In this area, the ratio of developed floor area relative to the parcel size for a second dwelling unit is regulated to limit the amount of septic discharge to groundwater.

Ventura County Watershed Protection Act

This act established the Ventura County Watershed Protection District, its general purpose, and authorities. Pursuant to the Act, the Watershed Protection District is to:

- provide for the control of flood and storm waters;
- conserve such waters for beneficial and useful purposes by spreading, storing, retaining and causing to percolate into the soil;

- save or conserve in any manner all or any of such waters and protect from such flood or storm waters the watercourses, watersheds, public highways, life and property in the District;
- prevent waste of water or diminution of the water supply in, or exportation of water from the District;
- obtain, retain and reclaim drainage, storm, flood and other waters for beneficial use; and
- provide for the protection from erosion of beaches and shorelines and to provide for the restoration of such beaches and shorelines.

Under the Act, the Watershed Protection District has the power to undertake projects consistent with its purpose and to adopt and enforce regulations consistent with its purpose. The District has the power to prescribe, revise, and collect fees as a condition of development of land. A permit from the Watershed Protection District must be obtained for most activities in, on, over, under, or across the bed, banks, and overbank areas of local streams and channels.

County of Ventura Flood Plain Management Ordinance

This ordinance restricts and prohibits land uses or land alteration which may be dangerous to health, safety, and property due to modification or obstruction of flood waters or alteration of a water course. Further, this ordinance requires that uses vulnerable to floods be protected against flood damage at the time of initial construction. The Watershed Protection District implements the Flood Plain Management Ordinance through its encroachment and watercourse permit programs.

County of Ventura Building Code

Submittal of grading plans during the permitting process requires an applicant evaluate soils and geology and site drainage patterns prior to grading. Site design must include measures to detain or retain stormflows so that runoff is not appreciably different post-development. Design must include measures to prevent erosion of slopes, such as vegetation, soil stabilizers, and rip rap. The County of Ventura requires (Building Code Section J112) that best management practices be used to prevent erosion and stormwater flows from discharging offsite.

County of Ventura Groundwater Conservation Ordinance

The purpose of Ordinance No. 4468, division 4, Chapter 8, Article 1 is to protect groundwater quality, supply and quantity by regulating the construction, maintenance, operation, use, repair, modification, and destruction of wells and engineering test holes in Ventura County. Such work requires obtaining a permit and approval from the respective agency authorized to regulate new well construction. Permits shall require compliance with all applicable standards set forth in the Ordinance, and in accordance with DWR California Well Standards Bulletins Nos. 74-81 and 74-90, and County of Ventura Water Well Standards Bulletin No. 74-9.

SECTION 10.3 INTEGRATED REGIONAL WATER MANAGEMENT

Integrated Regional Water Management (IRWM) became a new paradigm for managing water resources with the passage of Proposition 50 in 2002. This approach integrates the many facets of water resources management on a regional level, including water supply, water quality, flood management, ecosystem health, and recreation through enhanced collaboration across geographic and political boundaries and diverse stakeholder groups. The Watersheds Coalition of Ventura County (WCVC) was formed as the IRWM group to develop and implement a plan to identify water management challenges, resolve conflicts over the best use of resources, bridge gaps in data, find common ground, and seek innovative solutions among stakeholders. A primary goal is implementation of projects and programs that efficiently address water management priorities.

The 2014 WCVC Integrated Regional Water Management Plan Goals are outlined as follows:

- Reduce dependence on imported water and protect, conserve and augment water supplies
- Protect and improve water quality
- Protect people, property and the environment from adverse flooding impacts
- Protect and restore habitat and ecosystems in watersheds
- Provide water-related recreational, public access, stewardship, engagement and educational opportunities
- Prepare for and adapt to climate change

Grant funds made available through Proposition 50 (2002), Proposition 84 (2006), and Proposition 1 (2014), have leveraged local funds for project implementation. These funds helped communities, including disadvantaged communities, throughout Ventura County to enhance the availability of clean water supplies for the benefit of people and the environment, to protect communities from flood damage, and to provide access to water-related recreation opportunities. WCVC participants benefit from the cost-sharing, collaboration, and effective problem-solving opportunities made possible by working together.

One example of an ongoing project partially funded through the IRWM Program with Proposition 84 grant funds is the Natural Floodplain Protection Program (NFPP), which is focused on preserving a critical section of the remaining floodplain in the Santa Clara River Watershed. A Floodplain Working Group was formed to develop the project and is comprised of the County's Watershed Protection District, the Ventura County Farm Bureau, The Nature Conservancy, and the Ventura County Resource Conservation District.

The Working Group developed the concept of incentivizing farmers to continue to farm in the floodplain, thus leaving their land undeveloped. This is done by offering to purchase flood (inundation) easements over private land within the floodplain. These easements cover working farmland, a use that is encouraged to continue under the easement. The farmers are financially compensated for keeping their property in the floodplain and giving up rights they may have to develop the land. The value of easements is established through negotiations with individual land owners and verified by an appraisal.

To date, almost 500 acres of flood plain within the Santa Clara River Watershed have been acquired through the Natural Floodplain Protection Program.

SECTION 10.4 EXISTING CONDITIONS

Ventura County covers approximately 1,873 square miles, a large proportion of which (860 square miles, over half a million acres) lies within the Los Padres National Forest. The coastal areas have a generally mild climate, with an average high temperature of 73 degrees Fahrenheit (ºF) in July and an average January low temperature of 45 ºF (Western Regional Climate Center web site at www.wrcc.dri.edu for Station 049285 Ventura, January 1900 to August 2013). Average rainfall in the coastal areas is 14.67 inches per year (Western Regional Climate Center web site at www.wrcc.dri.edu for Station 049285 Ventura, January 1900 to August 2013). Interior valleys without coastal influence have hotter summers (average high temperature of 93.20 ºF in July) and cooler winters (average low temperature of 44.35 ºF) but also modest average rainfall of 14.37 inches per year (California Irrigation Management Information System data provided from Station No. 219, Los Angeles region, September 2011 to November 2015 and Station No. 204, Los Angeles Region, January 2007 to August 2011).

The Region contains four major watersheds, smaller coastal watersheds, and 23 basins (see Figure 10-1 and Figure 10-2). This background report has organized information according to major watershed: Ventura River, Cuyama, Santa Clara River, and Calleguas Creek. A small portion of the Malibu Creek Watershed falls in Ventura County; for the purposes of this document, this area is included with information on the Calleguas Creek Watershed. The Oxnard Plain, while not a watershed is an important water feature in the county and is given its own discussion in the text.

Ventura River Watershed

The Ventura River Watershed is located in the northwestern portion of Ventura County and drains an approximately 228 square mile (145,920 acres) area. The watershed extends 33.5 miles from the steep Transverse Ranges of the Matilija Wilderness to the Pacific Ocean. The Matilija, North Fork Matilija, San Antonio, and Cañada Larga are the major tributaries. The watershed is unique in that developed land makes up only 13 percent of the watershed area (Ventura River Watershed Council 2015). Approximately half of the Ventura River Watershed is Forest Service land. This means the upper portion of the Ventura River Watershed is minimally developed and has large areas with good water quality and excellent aquatic habitat. A 30-mile portion of the upper fork of Matilija Creek and its tributaries are designated as Wild and Scenic Rivers. Most of the southern half of the watershed lies within unincorporated Ventura County.

Precipitation in the Ventura River Watershed varies greatly between seasons and across years. There are notable cycles of drought and flood. Most of the precipitation is in the form of rain, but a small portion of the upper watershed experiences snow. Most precipitation occurs during just a few storms between November and March; summer and fall months are typically dry. Many parts of the Ventura River and its tributaries are dry during the summer and fall months (Ventura River Watershed Council 2015).

The cities of Ojai and Ventura are located in the Ventura River Watershed as are the unincorporated communities of Meiners Oaks, Mira Monte, Oak View, and Casitas Springs. Land uses in the watershed are as follows:

- Federal land/National Forest 47.7%
- Undeveloped land 29.8%
- Agriculture 18.5%
- Urban uses 4% (3.1% in cities, 0.9% in unincorporated County)

Surface Water

The major surface water features in the watershed are the Matilija Reservoir, Lake Casitas, and Ventura River.

Matilija Reservoir. Matilija Creek originates in the steep mountains in the northwest corner of the watershed and is considered the headwaters of the Ventura River. Matilija Dam captures the creek to create the Matilija Reservoir, which is owned by the Ventura County Watershed Protection District. Matilija Dam was built in the late 1940s for the purpose of providing irrigation water to the western Ojai Valley. Matilija Reservoir originally provided for 7,018 acre-feet (AF) of water storage. However, the storage capacity of the reservoir has been significantly reduced by sedimentation and is now estimated to be only about 500 AF (Tetra Tech 2009). The majority of the sediment was deposited during a few big storm years (USACE 2004). Matilija Reservoir no longer provides any water supply benefit. In fact, the dam is now considered an environmental liability. The dam prevents the natural flow of sand and sediment from the mountains to the beaches and it also blocks the endangered steelhead trout from upstream habitat. Since 1999, the Ventura County Watershed Protection District, in partnership with the US Bureau of Reclamation and the US Army Corps of Engineers, have evaluated means to remove the dam. The US Congress approved removal of the dam in 2007. However, dam removal efforts have been stalled by the complicated process of removing the sediment in the reservoir, while protecting fish and wildlife and by significant cost. Efforts to remove the dam are ongoing. In March 2016 the Dam Oversight Group completed an evaluation of three different dam removal concepts, including features to handle the estimated eight million cubic yards of sediment and mitigations for water supply, water quality, and fisheries. The next step is to develop a funding plan.

Lake Casitas. Lake Casitas, also called Casitas Reservoir, is the largest reservoir in the Ventura River Watershed, with a capacity of 254,000 AF. The approximate safe yield is 20,000 AFY. When full, the reservoir covers a surface area of 4.3 square miles and has 32 miles of shoreline. Source water for Lake Casitas is direct rainfall on the lake surface, local watershed runoff from Coyote and Santa Ana Creeks, and diversions of the Ventura River made through the Robles Diversion Facility. The lake is operated by the Casitas Municipal Water District. The primary purpose of Lake Casitas is to supplement local groundwater. Local groundwater comes from mostly unconfined aquifers whose available supply varies greatly based on rainfall and streamflow conditions. In dry periods, local wells can go dry and water demands are then met using water from Lake Casitas. Casitas Municipal Water District is the primary and/or backup water supply for nine retail water purveyors and for some individual agricultural customers with groundwater wells (Casitas Municipal Water District 2016). Casitas Municipal Water District estimates that there are 70,288 persons within its service area and 8.4 square miles (~5,400acres) of irrigated crops (Casitas Municipal Water District 2016).

Ventura River. The Ventura River gives its name to the watershed. The condition of the river varies widely over its journey from the mountains to the ocean. The river is typically categorized in five segments:

- The segment above Robles Diversion. Here the river is in steep and narrow terrain.
- The segment below Robles Diversion and above San Antonio Creek. This segment is less mountainous and has a gentle gradient. The Robles Diversion diverts from the west bank of the River. Below the diversion the river widens and becomes a braided channel. Until the confluence with San Antonio Creek, the river is commonly dry – about 80 percent of the time there is no significant flow in the section (Cardno-Entrix 2012).

Ventura County 2040 General Plan

Figure 10-1:
Ventura County Watersheds

Map Date: December 02, 2016

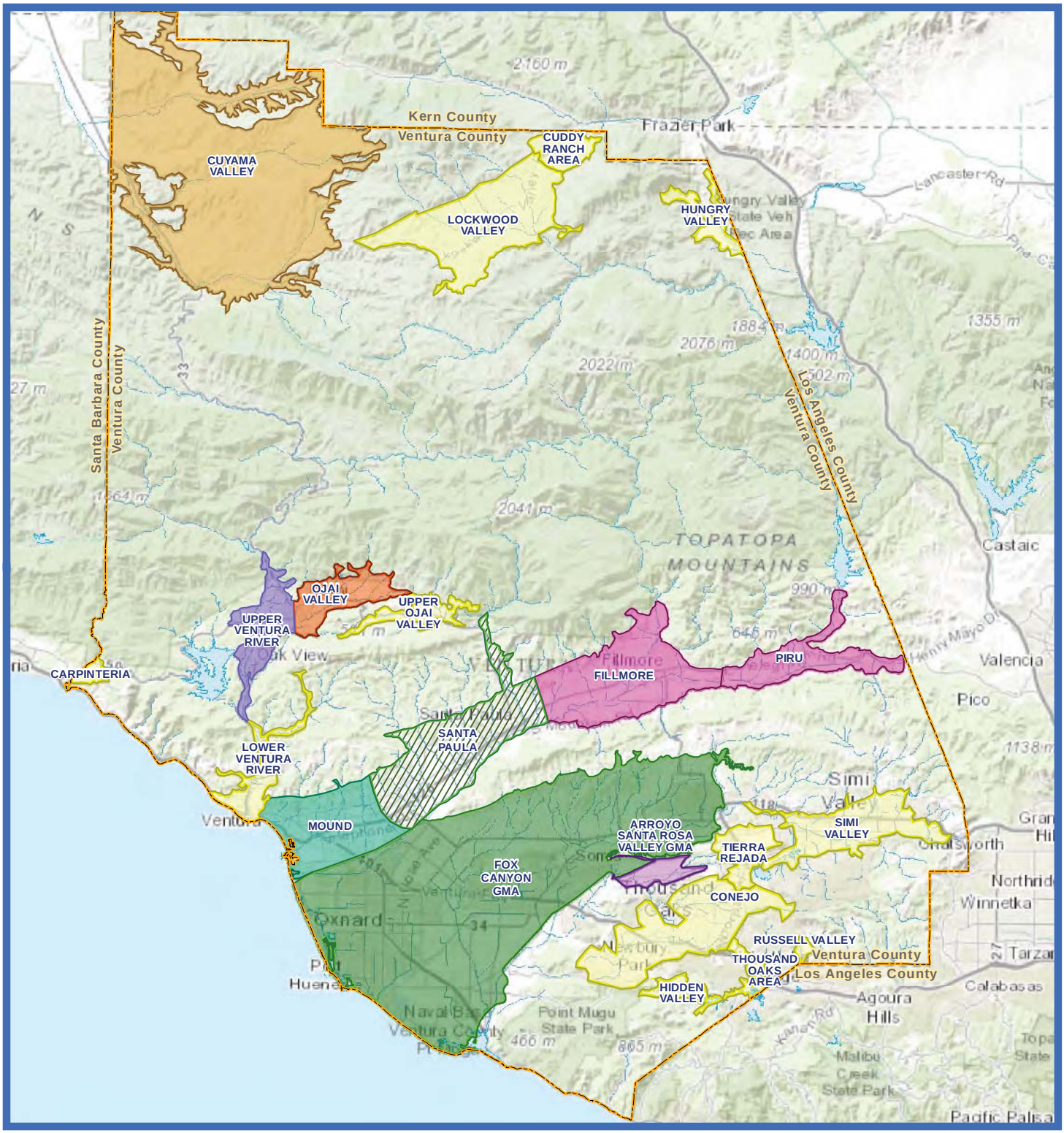
Source: Kennedy/Jenks Consultants, 2016.

0 7.5 15 Miles

N

Ventura County Boundary
Rivers/Streams
Water Bodies

Subwatersheds
Calleguas Creek Watershed
Cuyama River Watershed
Santa Clara River Watershed
Santa Monica Bay Watershed
Ventura River Watershed



Ventura County 2040 General Plan

Figure 10-2: Groundwater Basin Oversight

Map Date: December 2017
Source: Kennedy/Jenks Consultants, 2017

0 7.5 15 Miles

N

- Ventura County
- Rivers/Streams
- Water Bodies

Groundwater Management Agency

- Arroyo Santa Rosa Valley GMA
- Cuyama Valley Groundwater GSA
- Fillmore and Piru Basins GSA
- Fox Canyon GMA
- Mound Basin GSA
- No Agency
- Ojai Basin GMA
- Upper Ventura River GSA
- Adjudicated Basin

- San Antonio Creek Confluence to Foster Park. Here the river again narrows. San Antonio Creek enters in this segment. In wet periods this portion of the river can also receive water from "daylighting" groundwater, where groundwater is forced to the surface as a result of geologic constriction near the downstream margin of the upper Ventura River basin. This reach typically flows year-round except in multiyear dry periods (Ventura River Watershed Council 2015).
- Foster Park to Ventura River Estuary. In this reach, the river receives treated effluent from the Ojai Valley Sanitation District wastewater treatment plant. The effluent is a significant input to river flow. Cañada Larga Creek, and several minor drainages (Manuel Canyon Creek, Cañada de San Joaquin, and Dent Drain) also enter in this segment (Ventura River Watershed Council 2015). In this portion of the river, the City of Ventura can divert surface water via subsurface collectors and shallow wells. The wells are located at Foster Park, upstream of the Ojai Valley Sanitation District point of discharge. Between 2010 and 2014, annual production by the City of Ventura from the Ventura River averaged 3,051 AFY.
- The Ventura River Estuary. The estuary is a shallow body of water where the Ventura River mixes with salt water. During the dry season a sandbar typically separates the estuary from the ocean; when storms breach the sandbar, the flow of the river directly enters the Pacific Ocean (Ventura River Watershed Council 2015).

Groundwater

There are four major groundwater basins in the Ventura River Watershed: the Upper Ojai (DWR Basin 4-1), Ojai Valley (DWR Basin 4-2), Upper Ventura River (DWR Basin 4-3.01), and Lower Ventura River (DWR Basin 4-3.02) (see Figure 10-2). These are unconfined groundwater basins and fluctuate greatly depending precipitation.

In 2014, DWR ranked California's groundwater basins as "high," "medium," "low," or "very low" priority. This ranking was based on the following:

- Overlying population
- Projected growth of overlying population
- Public supply wells
- Total number of wells
- Irrigated acreage overlying the basin
- Reliance on groundwater as the primary source of water
- Impacts on the groundwater; including overdraft, subsidence, saline intrusion, and other water quality degradation
- Other information determined to be relevant by Department of Water Resources

In this ranking process the Ojai Valley groundwater basin and Upper Ventura River groundwater basins were deemed medium priority basins. The great dependency on groundwater in this area was a primary factor in the ranking.

The Ojai Valley Groundwater Basin is currently managed by the Ojai Basin Groundwater Management Agency (Ojai Basin GMA) and this agency will be the groundwater sustainability agency under SGMA. The Ojai Basin GMA has submitted an Alternative to the GSP which demonstrates that the Ojai Basin is already being sustainably managed, in-lieu of preparing a GSP.

Casitas Municipal Water District, Meiners Oaks Water District, Ventura River Water District, the City of Ventura and the County of Ventura have started the process of forming a new groundwater sustainability agency for the Upper Ventura River Groundwater Basin.

Important Recharge Areas

In the Ventura River Watershed, groundwater basins are typically surrounded by mountainous areas of impermeable bedrock. Recharge primarily occurs within the permeable unconsolidated deposits of gravel and sand within stream channels.

In order to increase groundwater storage and recharge in the Ojai Valley Groundwater Basin, the San Antonio Spreading Grounds Rehabilitation Project was completed by the Ventura County Watershed Protection District in 2014. It is anticipated the project will increase recharge to the basin by an average of 126 AFY.

Other Water Supplies

The Ventura River Watershed relies entirely on local water. No imported water is used in the watershed. Both Casitas Municipal Water District and the City of Ventura hold entitlements to State Water Project water (5,000 and 10,000 acre-feet per year [AFY] respectively), however there is currently no means to deliver imported water to the watershed. The City of Ventura is currently evaluating options for delivery of those entitlements, a report is due at the end of 2017.

Water Quality

As described in Section 10.2, the Los Angeles RWQCB has identified beneficial uses for the Ventura River Watershed. Table 10-2 is taken from the *Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties* and provides detail on beneficial uses for specific Ventura River reaches. The Los Angeles RWQCB has developed permit programs and the TMDLs to protect these beneficial uses. The following TMDLs are in place for portions of the Ventura River Watershed:

- Algae, Eutrophic Conditions, and Nutrients in the Ventura River including the Estuary and its Tributaries – TMDL effective June 28, 2013
- Ventura River Estuary Trash – TMDL effective March 6, 2008

In addition to the existing TMDLs, other TMDLs may be developed as several Ventura River Watershed areas are included in California's 303(d) List (list of impaired waters). Identified impairments in the Ventura River and its tributaries include fish barriers and pumping/water diversion, total dissolved solids, aluminum, and mercury. Rincon Beach and the Ventura Harbor are listed for impairments due to bacteria. The Ventura Marina jetties are listed as impaired with DDT and PCBs.

TABLE 10-2
DESIGNATED BENEFICIAL USES IN THE VENTURA RIVER WATERSHED

WATERSHED[a]	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
VENTURA COUNTY COASTAL STREAMS																						
Los Sauces Creek	P*	I	I	I	I						I	I				E			I	I		
Poverty Canyon	P*	I	I	I	I						I	I				E			I	I		
Madrania Canyon	P*	I	I	I	I						I	I				E			I	I		
Javon Canyon	P*	I	I	I	I						I	I				E			I	I		E
Padre Juan Canyon	P*	I	I	I	I						I	I				E			I	I		
McGrath Lake									P					E		E		Ee				E
Big Sycamore Canyon Creek	P*				I						I	E				E			P	P		E
Little Sycamore Canyon Creek	P*										I					E		E		P		
VENTURA RIVER WATERSHED																						
Ventura River Estuary[c]							E		E		E			E	E	E		Ee	Ef	Ef	E	E
Ventura River Reach 1 (Ventura River Estuary to Main St.)	P*	E		E	E	E					E	E				E		E	E	E		E
Ventura River Reach 2 (Main St. to Weldon Canyon)	P*	E		E	E	E					E	E				E		E	E	E		E
Cañada Larga	P*		I	I	I	I					I	I				E			I	I		
Lake Casitas	E	E	E	E	P	P		P			E	E				E		E				
Lake Casitas tributaries	E*			P	E						E	E				E		P	E	E		E
Ventura River Reach 3 (Weldon Canyon to Casitas Vista Rd.)	P*	E		E	E	E					E	E				E		E	E	E		E
Ventura River Reach 4 (Casitas Vista Rd. to San Antonio Creek)	P*	E		E	E	E					E	E				E		E	E	E		E
Ventura River Reach 4 (San Antonio Creek to Camino Cielo Rd.)	E	E	E	E	E	E					E	E				E		Eg	E	E		E
Coyote Creek	P*				E						E	E				E			E	E		E
San Antonio Creek (Ventura River Reach 4 to Lion Creek)	E	E	E	E	E						E	E				E			E	E		E
San Antonio Creek (above Lion Creek)	E	E	E	E	E	E					E	E				E			E	E		E
Lion Creek	I*	I	I	I							I	I				E						
Reeves Creek	I*	I	I	I	I						I	I				E			I	I		
Mirror Lake	P*				E						E					E						E
Ojai Wetland	P*										E					E						E

TABLE 10-2
DESIGNATED BENEFICIAL USES IN THE VENTURA RIVER WATERSHED

WATERSHED[a]	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
VENTURA COUNTY COASTAL STREAMS																						
Ventura River Reach 5 (above Camino Cielo Rd.)	E	E	E	E	E	E					E	E				E		Eg	E	E		E
Matilija Creek Reach 1 (Ventura River Reach 5 to Matilija Reservoir)	P*				E							E				E			E	E		E
Matilija Creek Reach 2 (above Matilija Reservoir)	P*				E							E				E			E	E		E
Murietta Canyon Creek	P*				E							E				E			E	E		E
North Fork Matilija Creek	E*	E	E	E	E						E	E				E		E	E	E		E
Matilija Reservoir	E			E	E	E					E	E				E			E	E		E

E: Existing beneficial use
P: Potential beneficial use
I: Intermittent beneficial use
E,P, and I: shall be protected as required
* Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some destinations may be considered for exemption at a later date.

a: Waterbodies are listed multiple times if they cross hydrologic area or subarea boundaries. Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
b: Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
c: Coastal waterbodies which are also listed in inland Surface Waters Tables (2-1) or in Wetlands Table (2-4).
e: One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
f: Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.
g: Condor refuge.

Source: Table 2-1. Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties (electronic copy accessed December 27, 2016).

Available Water Supplies

The sources of water supply in the Ventura River watershed include surface water from Lake Casitas, Ventura River, and groundwater. Available surface water supplies (from Lake Casitas) have been quantified by Casitas Municipal Water District (2016) as 20,000 acre-feet (AF). The City of Ventura produced an average of 3,051 AFY from 2010 to 2014 from the Ventura River. It is estimated that private landowners may divert as much as 1,100 AFY from the Ventura River, but records are not available to confirm the long-term Ventura River surface water supply available to private users (SWRCB eWRIMS database).

Estimating groundwater supply is quite a bit more difficult. To understand long-term yield of a groundwater basin recharge from precipitation must be estimated, recharge from irrigation and other return flows must be calculated, and underflow and outflows to and from adjacent groundwater basins must be analyzed. There is not an accepted long-term yield for any of the groundwater basins in the Ventura River Watershed. However, the Department of Water Resources has made rough estimates of groundwater "budgets" by evaluating available groundwater studies and by evaluating past groundwater extractions. The Ventura County Watershed Protection District has also prepared estimates of groundwater use in different basins. Groundwater use is only a rough estimate of supply. Groundwater extractions may include water recharged in the distant past and may not be representative of the long-term yield. Table 10-3 provides an estimate of supply by groundwater basin in the Ventura River Watershed. The difference in the high and low supply estimates document the lack of data on groundwater supply.

TABLE 10-3
GROUNDWATER SUPPLY ESTIMATES
VENTURA RIVER WATERSHED

Basin	DWR Estimate of Groundwater Budget (AFY)	Past Groundwater Extractions (AFY)	Notes
Upper Ojai	1,320	700	1
Ojai Valley	3,150 to 3,300	8,404	2, 3
Upper Ventura	None	10,392	4, 5
Lower Ventura	1,200	400	6
Low Estimate Groundwater Supply Ventura River Watershed		*14,600*	7
High Estimate Groundwater Supply Ventura River Watershed		*21,300*	7

Notes:
1. DWR 2003, Basin 4-1
2. DWR 2003, Basin 4-2
3. Ventura County Watershed Protection District 2015a
4. DWR 2003, Basin 4-3.01
5. Ventura County Watershed Protection District 2015a
6. DWR 2003, Basin 4-3.02
7. Rounded to nearest 100 AF

A total estimate of supply in the Ventura River Watershed is provided in Table 10-4.

TABLE 10-4
CURRENT (2016) TOTAL WATER SUPPLY ESTIMATES
VENTURA RIVER WATERSHED

Supply Source	Annual Volume (AF)
Surface Water, Lake Casitas	20,000
Surface Water, Ventura River	3,051
Groundwater (see Table 10-3)	14,600 to 21,300
Low Estimate (rounded to nearest 100 AF)	*37,700*
High Estimate (rounded to nearest 100 AF)	*44,400*

Water Suppliers

There are five major water suppliers (entities serving more than 1,000 persons) in the Ventura River Watershed as well as 11 mutual water companies. Persons or businesses in the Ventura River Watershed are also supplied by private wells and surface water diversions.

The major urban suppliers, documented in Table 10-5 provide water to the cities of Ojai and Ventura, and also to the unincorporated County. These are also mapped in Figure 10-3.

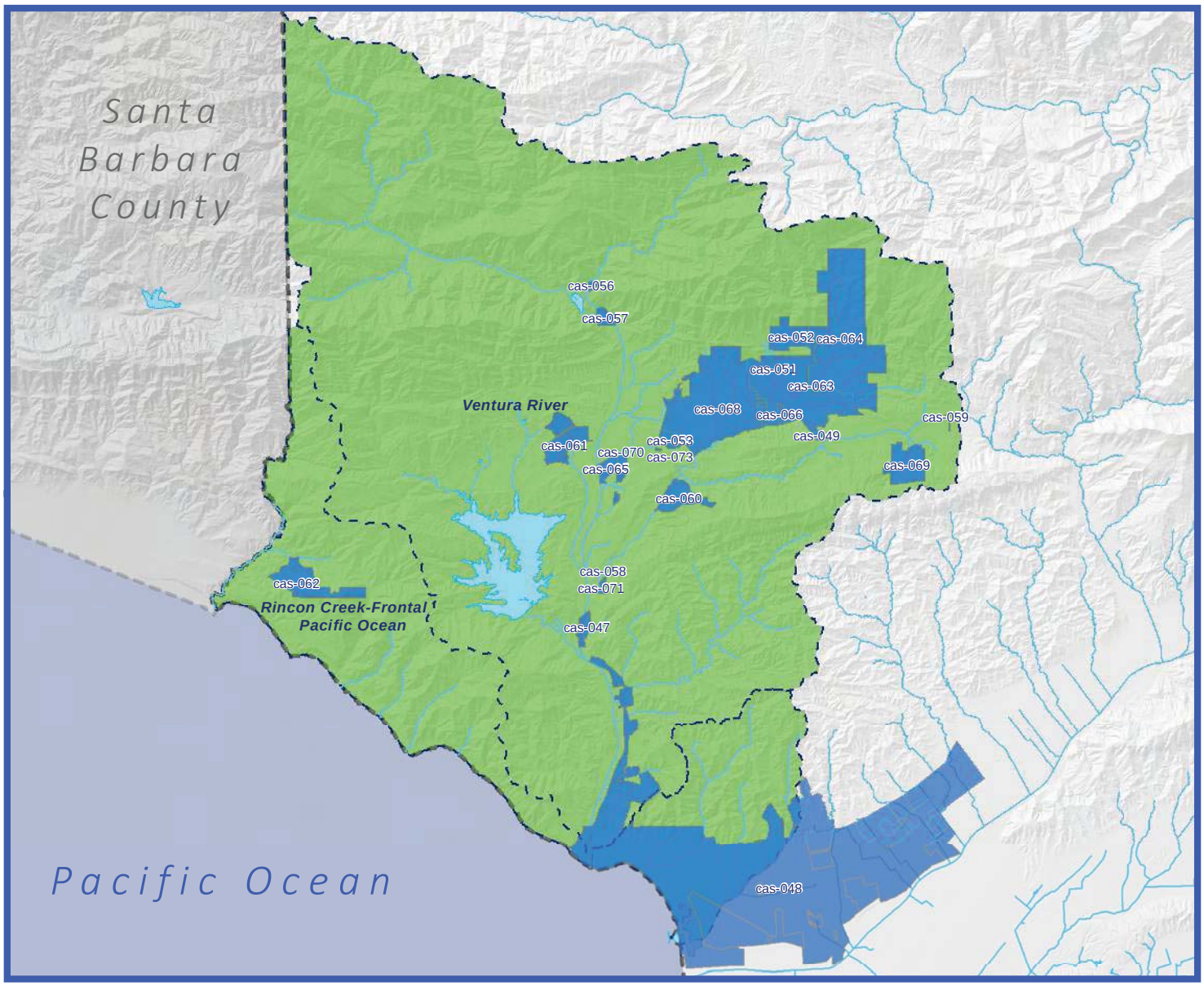
The 11 mutual water companies provide water to their stockholders and members. These mutual water companies can serve as few as 10 people and up to 800 persons. The mutual water companies, documented in Table 10-6 provide water almost exclusively to residents and businesses in the unincorporated County (see also Figure 10-3).

TABLE 10-5
MAJOR WATER SUPPLIERS - VENTURA RIVER WATERSHED

Supplier/Primary Source(s)	Type	Area Served	Estimated Population Served	Annual Water Supplied*
Casitas Municipal Water District Surface water from Lake Casitas	Special District	City of Ojai, portion of the City of Ventura, coastal Rincon, Upper Ojai, and Ventura River Valley.	~70,300	~16,700 AF, includes ag sales and sales to other agencies
Ventura Water Lake Casitas water, Ventura River, groundwater (Oxnard Plain, Mound, Santa Paula Basins), recycled water	City	City of Ventura and 1.5 square miles (~960 acres) within City's sphere of influence. City falls within both the Ventura and Santa Clara Watersheds.	~112,400	~16,700 AF, a portion of this supply is provided by Casitas Municipal Water District (5-year average 2011 to 2015 City of Ventura 2016a)
Golden State Water Company Ojai Valley groundwater and Lake Casitas	Investor Owned Utility	City of Ojai and adjacent unincorporated County.	~8,200	~2,300 AF, a portion of this supply is provided by Casitas Municipal Water District.
Ventura River Water District Upper Ventura River groundwater and Lake Casitas	Special District	Part of Casitas Springs, Burnham Road area west of the Ventura River, northern portion of Oak View	~6,000	~1,400 AF, a portion of this supply is provided by Casitas Municipal Water District
Meiners Oaks Water District Upper Ventura River groundwater and Lake Casitas water	Special District	Portion of the Meiners Oaks Community east of the Ventura River.	~4,000	~1,100 AF, a portion of this supply is provided by Casitas Municipal Water District

*Estimated based on records of water supplied 2010 to 2015, rounded to nearest 100 AF. Does not account for planned future expansion of demands and supplies.

Source: Ventura River Watershed Council 2015 Table 3.4.1.2.1, Casitas Municipal Water District 2016, City of Ventura 2016a, City of Ventura 2016b, Meiners Oaks Water District 2014, Ventura River Water District http://venturariverwd.com/about-2/ accessed December 29, 2016.



WATER PURVEYOR

CASITAS WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
Casitas (cas-047)	Casitas MWC
Casitas (cas-048)	City of San Buenaventura
Casitas (cas-048)	City of Buenaventura
Casitas (cas-049)	Dennison Park Water System
Casitas (cas-068)	Golden State Water Company - Ojai
Casitas (cas-051)	Gridley Road Water Group
Casitas (cas-052)	Hermitage MWC
Casitas (cas-053)	Krotona Institute of Theosophy
Casitas (cas-056)	North Fork Springs MWC
Casitas (cas-063)	Ojai Water Conservation District
Casitas (cas-057)	Ojala
Casitas (cas-058)	Old Creek Road MWC
Casitas (cas-059)	Oviatt Water Association
Casitas (cas-060)	Rancho del Cielo MWC
Casitas (cas-061)	Rancho Matilija MWC
Casitas (cas-062)	Rincon Water and Roadworks
Casitas (cas-064)	Senior Canyon MWC
Casitas (cas-065)	Sheriff's Honor Farm
Casitas (cas-066)	Siete Robles MWC
Casitas (cas-069)	Sulphur Mountain Road Water Association
Casitas (cas-070)	Tico MWC
Casitas (cas-071)	Tres Condados
Casitas (cas-073)	Villanova Road Water Well Association

Figure 10-3:
Water Purveyors in
Ventura River Watershed

- Ventura County Boundary
- Rivers Streams
- Water Bodies
- Subwatersheds
- Ventura River Watershed

Water Purveyor

- Casitas Wholesale District

0 4 8 Miles

N

Map Date: December 02, 2016

Source: Kennedy/Jenks Consultants, 2016.

TABLE 10-6 MUTUAL WATER COMPANIES VENTURA RIVER WATERSHED			
Supplier	**Type**	**Area Served**	**Estimated Population Served**
Casitas Mutual Water Company	Mutual	Residents in Casitas Springs, west of Highway 33.	~250
Gridley Road Water Group	Mutual	Agriculture in the Gridley Road and Grand Avenue area in eastern Ojai Valley.	~44
Hermitage Mutual Water Company	Mutual	Agriculture and several large residential estates in the area of Gridley and Senior canyons north of the Ojai Valley.	~35
North Fork Springs Mutual Water Company	Mutual	Residential users located along Highway 33 north of the City of Ojai and east of the Matilija Reservoir, in Los Padres National Forest.	~10
Old Creek Road Mutual Water Company	Mutual	Residential users along East Old Creek Road.	~12
Rancho Matilija Mutual Water Company	Mutual	Agricultural parcels in the Rancho Matilija subdivision, north of Baldwin Road and west of Meiners Oaks.	0
Rancho del Cielo Mutual Water Company	Mutual	Residential and agricultural users along Creek Road along San Antonio Creek.	~18
Senior Canyon Mutual Water Company	Mutual	Northeast end of the Ojai Valley, north of Reeves Creek, east of Carne Road.	~800
Siete Robles Mutual Water Company	Mutual	Housing tract east of the City of Ojai	~245
Sisar Mutual Water Company	Mutual	Summit area of the Upper Ojai Valley	~325
Tico Mutual Water Company	Mutual	Residential are in Mira Monte, west of Highway 33	~77

Source: Ventura River Watershed Council 2015 Table 3.4.1.3.1

Private wells and water diversions serve the remaining agricultural and domestic water users in the watershed. Twenty-one different entities are registered with the State Water Resources Control Boards as having rights to withdraw surface water from the Ventura River Watershed (SWRCB 2014 cited in Ventura River Watershed Council 2015). There are 442 active wells in the Ventura River watershed (Ventura River Watershed Council 2015). It is estimated that these private users extract as much as 2,100 AF (Hydrometrics 2015).

Estimates of Water Demand

In 2014, the Ventura County Watershed Protection District undertook an estimate of countywide water demand. This effort used data from water agencies and groundwater reporting (where available). However large geographic areas of Ventura County are not served by a water agency, but rather private wells or surface water diversions. Also, not all groundwater production is reported. Further, the agricultural groundwater production that is reported is not metered in many areas but rather estimated from electrical use or crop type. To fill in data gaps a demand calculator was used. In this case the Integrated Water Flow Model (IWFM) Demand Calculator developed by the California Department of Water Resources was used. This is a non-proprietary model that computes water demands for cropped areas using specified climatic and irrigation information. The IWFM calculator also estimates urban water requirements and return flows based on population and per-capita water usage. The resulting report, *County of Ventura 2013 Water* Supply and Demand, estimates current demands for each of the major watersheds, including the Ventura River Watershed. Results of the study are provided in Table 10-7.

TABLE 10-7
ESTIMATED VENTURA RIVER WATERSHED DEMAND

Watershed/Sub-watershed	Total Agricultural Demand (AF)	Total Municipal Demand (AF)	Total Demand (AF)
Rincon	5,727	1,848	7,575
Ventura River	11,745	13,351	25,096
Subtotal (rounded to nearest 100 AF)	*17,500*	*15,200*	**32,700**

Source: Hydrometrics 2015. Table 6.

Notable in Table 10-7 is the distribution of demands. Agricultural demand is estimated to be slightly higher than municipal demand.

Demand Management

Table 10-8 summarizes the various water conservation actions undertaken in the Ventura River Watershed. Table 10-8 summarizes demand management measures undertaken under normal conditions as well as those extra ordinary efforts taken during drought periods. Conservation actions intensify during drought. Most agencies continuously provide public information on how to conserve water, however these efforts expand exponentially during dry periods. During normal conditions a water provider may just provide public information on their website or billing inserts; during drought, the water provider is likely to take out radio advertisements, place roadway signs, and run conservation contests to bring attention to the drought. Many agencies offer water use surveys to customers upon customer request; during drought the water agencies contact high water users and offer water efficiency incentives. The demand management measures undertaken during drought depend on the severity and length of drought. In the beginning of a drought outdoor irrigation may be limited to 3 days a week, as drought continues outdoor watering may be restricted to one day a week or even prohibited all together.

TABLE 10-8
DEMAND MANAGEMENT MEASURES IN VENTURA RIVER WATERSHED

Agency	Conservation Measures in Effect at All Times							Conservation Measures that May Be Implemented in Drought				
	Public Information and Outreach	Water Waste Prohibitions	Metering	Volume-Based Pricing	Water Efficiency Surveys Offered to Customers	Rebates for High Efficiency Plumbing Fixtures	Turf Removal Incentives	Drought Surcharge	Limitations on Irrigation/ Outdoor Watering	Mandatory Reductions/ Allocation	Fines	Suspension of new water connections
Casitas Municipal Water District	X	X	X	X	X	X	X		X	X	X	X
Ventura Water	X	X	X	X	X	X	X	X	X	X	X	X
Golden State Water Company	X	X	X	X	X	X		X	X			
Ventura River Water District	X		X	X	X*	X*	X*	X	X		X	
Meiners Oaks Water District	X		X	X	X*	X*	X*	X		X	X	X
Ojai Basin Groundwater Management Agency	X		X	X								

*Offered by Casitas Municipal Water District

Sources: Casitas Municipal Water District 2016; City of Ventura 2016b; Golden State Water Company 2011; Ventura River Water District 2016; Meiners Oaks Water District 2016.

Comparison of Supply and Demand

While it is difficult to quantify, it is estimated that there is between 37,700 AF to 44,400 AF of annual water supply in the Ventura River Watershed. This supply will vary given drought and operational conditions. Estimated demand is approximately 32,700 AF and is only about 13 percent greater than demand.

There are concerns about long-term supplies. SGMA could result in a need to reduce groundwater pumping. Some water agencies in the Ventura River Watershed are evaluating projects to increase supply. Several mutual water agencies that receive water from Casitas Municipal Water District have sent letters to Casitas Municipal Water District urging them to pursue options to bring imported water into the watershed. The City of Ventura is pursuing additional use of recycled water, including indirect and direct potable reuse and is studying ocean desalination (City of Ventura 2016b).

Water-Related Challenges

Below are the water related challenges for the Ventura River Watershed as of late 2016:

Drought and Supply Variability

The 70,000 people in western Ventura County have been impacted by the drought that began in 2012. Due to lack of distribution infrastructure and required agreements, imported water cannot be delivered to western Ventura County and groundwater is very limited. Recharge to groundwater is primarily from Ventura River flow and smaller amounts from direct precipitation, percolation from lesser creeks and channels, and mountainfront recharge. The groundwater in the area is relatively shallow and responds quickly to rainfall or lack thereof. Wells operated by Meiners Oaks Water District have gone dry due to low water levels in the Ventura River and they are now entirely dependent on purchases of Lake Casitas water. Ventura River Water District has only one of its four wells still in operation; customer needs are being served through purchases of Lake Casitas water supplies. Since 2011, purchases of Lake Casitas water have increased by 1,000 percent. The lake is an important, but dwindling, resource with both water quality and water supply concerns.

The water level in Lake Casitas has dropped below 40 percent of its “full” volume since the onset of the drought in 2012. Low water levels in 1968 resulted in significant thermal stratification and anoxic (without dissolved oxygen) conditions, rendering the lake generally unsuitable for aquatic life. The low oxygen levels also created an environment where manganese and hydrogen sulfide, normally trapped in sediments, became soluble, causing the lake water to have a brown color and bitter metallic taste. There were also large blue-green algae blooms (Casitas Municipal Water District 2013). Casitas Municipal Water District has had to install a second lake aeration system to avoid anoxic conditions.

Mandatory drought reductions are in place for customers in the Ventura Watershed. Depending on the water supplier, customers need to reduce water use by up to 30 percent.

Water for Environmental Purposes

As water agencies plan to rehabilitate infrastructure or develop more supply there can be conflicts with protecting environmental resources and demonstrates the influence laws and regulations, such as the Endangered Species Act, have on water resources.

The Robles Diversion is the facility that diverts Ventura River water to Lake Casitas. A "Biological Opinion," (BO) written by the National Marine Fisheries Service includes requirements to provide flow for the migration and passage of the steelhead up and down the main stem of the Ventura River and past the diversion during the steelhead migration season (January 1 to June 30). Implementation of the flow release requirements of the BO started in 2005. The Robles Fish Passage Facility became operational in 2006. There is concern by Casitas Municipal Water District that future changes to the BO could require costly infrastructure and impact diversions to, and the water supply within, Lake Casitas.

In 2008, the City of Ventura began conducting studies of Ventura River flow conditions in order to operate its Foster Park facilities in a more sustainable manner. The City is working towards developing a pumping regime that will balance production demands with environmental concerns. Presently, the City has voluntarily adopted a production schedule that limits its pumping based on annual rainfall conditions. Ventura Water intends to work with experts to ascertain a pumping regime that will balance production with environmental concerns and is presently studying the relationship between groundwater production and surface flows.

Quality

In the Ventura River Watershed water quality is generally not an impairment to using water for domestic water supply. However, other beneficial uses such as fisheries habitat, wildlife habitat, and recreation are negatively affected by water quality in the Ventura River. The majority of water quality problems involve eutrophication (excessive nutrients, nitrogen, and the resulting algae blooms) and affect the portion of the river from Foster Park to the Estuary. The major nitrogen contributors to the Ventura River were identified by the Los Angeles RWQCB as: wet-weather runoff from urban areas, wet-weather runoff from horse/livestock land uses, wet-weather runoff from open space, and discharges from the Ojai Valley Sanitary District Wastewater Treatment Plant. The Algae TMDL was adopted by the Los Angeles Regional Water Board in December 2012. The TMDL sets limits on the amount of nutrients that can be discharged from various sources, and requires upgrades to the sewage treatment plant and widespread implementation of BMPs to limit fertilizer and animal waste and other sources of nitrogen from the river.

Cuyama Watershed

Only limited data is available on the portion of the Cuyama Watershed within Ventura County. The Cuyama Watershed originates in a remote mountainous area of Ventura County within the Los Padres National Forest, but also falls within Kern, Santa Barbara, and San Luis Obispo counties. The California Department of Water Resources has categorized the Cuyama Groundwater Basin as being in "critical overdraft" and a groundwater sustainability agency is being formed. Based on information from the United States Geological Survey (USGS), the critical overdraft conditions of the Cuyama Groundwater Basin reflect extractions and uses outside of Ventura County. The portion inside Ventura County is referred to as the Ventucopa Uplands (USGS 2014). The area is lightly populated, but is used for irrigated agriculture. The USGS estimates the groundwater supply in the Ventucopa Uplands to be approximately 22,000 AFY with domestic demands of only 8 AFY and agricultural demands of approximately 10,000 AFY. Nevertheless, as a whole, the basin is in a condition of overdraft.

Oxnard Plain

The Oxnard Plain is an important geographic area for water resources (see Figure 10-2). The Oxnard Plain supplies large amounts of groundwater for municipal users including the county's largest city, Oxnard. It's estimated that the Oxnard Plain also supplies the water for more than half of the county's $2.2 billion agricultural industry (Ventura County Agricultural Commissioner 2016). The Oxnard Plain Groundwater Basin is a subbasin of the Santa Clara River Valley Groundwater Basin (DWR Groundwater Basin Number 4-4.02). The Oxnard Plain Groundwater Basin is an alluvial basin containing a collection of interconnected aquifers separated by layers of clay strata. The Oxnard Plain Groundwater Basin can be generally categorized into three parts: the Oxnard Forebay, the Upper Aquifer System and the Lower Aquifer System.

The Oxnard Forebay is the unconfined portion of the Oxnard Plain Basin generally located along the Santa Clarita River northeast of where the Pacific Coast Highway joins U.S. Highway 101 in the City of Oxnard. The Oxnard Forebay is the primary means by which the Oxnard Plain Groundwater Basin is recharged. The Forebay Basin is recharged by infiltration from the riverbed of the Santa Clara River and spreading basins constructed for that purpose. From the Oxnard Forebay, located in the upper most portion of the Oxnard Plain Basin, groundwater moves into the Upper and Lower Aquifer Systems because the clay layers which separate the aquifers are not continuous at this location.

The Upper Aquifer System (UAS) comprises of the upper 500 feet of the confined portions of the Oxnard Plain Basin which includes a semi-perched zone and the Oxnard and Mugu aquifers. The UAS is hydraulically connected to the Pacific Ocean through the Oxnard and Mugu aquifers and is the route by which seawater intrusion enters the Oxnard Plain Basin. The Lower Aquifer System (LAS) includes the deeper confined aquifers including the Hueneme, Fox Canyon, and Grimes Canyon aquifers. The LAS is separated by an approximately 80-foot thick layer of silty clay which is continuous except near the Oxnard Forebay.

Because of its importance as a water source, there is great concern about the health of the Oxnard Plain basin. In fact, the Fox Canyon Groundwater Management Agency (Fox Canyon GMA) was formed in 1982 to control groundwater overdraft and minimize the threat of seawater intrusion in the Oxnard Plain. A major goal of the Fox Canyon GMA is to regulate groundwater from the Oxnard subbasin and operate the basin at a safe yield. However, today DWR has characterized the basin as being in "critical overdraft". Evidence suggests that groundwater in the Oxnard Plain dropped below sea level as early as the 1940s. The annual overdraft is estimated to be 20,000 to 25,000 AFY (UWCD 2017b). This continued overdraft allows seawater intrusion and puts the area at risk of land subsidence.

Santa Clara River Watershed

The Santa Clara River headwater is at Pacifico Mountain in the San Gabriel Mountains and it flows in a generally western direction for approximately 84 miles through Tie Canyon, Aliso Canyon, Soledad Canyon, the Santa Clarita Valley, the Santa Clara River Valley, and the Oxnard Plain before discharging to the Pacific Ocean near the Ventura Harbor. The Santa Clara River and tributary system has a watershed area of about 1,634 square miles (~1,000,000 acres). Approximately 40 percent of the watershed is in Los Angeles County, with the remaining 60 percent in Ventura County. The Santa Clara River is unique in that it is the largest river system in Southern California remaining in a relatively natural state.

The climate of the Santa Clara River watershed is characterized by long, dry periods and a relatively short wet winter. Near the coast, cool moist ocean winds produce moderate temperature; summer highs average 74ºF, winter lows average 44 ºF, and frost is rare (Western Regional Climate Center Station 0492852 Ventura). Inland temperatures can exceed 110 ºF in the summer and drop below freezing in the winter (Western Regional Climate Center Station 047957 Santa Paula). Precipitation is generally in the form of winter storms, thunderstorms, and tropical cyclones. Approximately 75 percent of the annual precipitation occurs from December through March. The mean seasonal precipitation varies from about 40 inches in the mountainous portions of the watershed, to about 18 inches in the Piru and Fillmore areas (Western Regional Climate Center Stations 046940 Piru ESE and Station 043050 Fillmore WNW) and under 15 inches at the coast (Western Regional Climate Center Station 049285 Ventura).

The cities of Fillmore, Santa Paula, Oxnard (portion), and Ventura (portion) are located in the watershed as are the communities of Piru, Bardsdale, Saticoy, and El Rio. Land uses in the Ventura County portion of the watershed are as follows:

- Agriculture 42%
- Open Space 27%
- Urban Uses 26%
- Other (urban reserve, open space reserve, harbor) 5%

Surface Water

The major surface water features in the watershed are the Lake Piru Reservoir and the Santa Clara River.

Lake Piru Reservoir. The construction of Santa Felicia Dam on Piru Creek in 1955 created the Lake Piru Reservoir for the specific purpose of recharging groundwater. The reservoir can store approximately 82,000 AF (UWCD 2016). The reservoir receives winter runoff from local drainages and can receive imported SWP water. Water from Lake Piru is released into Piru Creek and flows to the Santa Clara River where it is joined by runoff from Sespe and Santa Paula Creeks. The releases are used to replenish underground aquifers, and water is made available to municipalities, industry, and agriculture (UWCD 2016). Lake Piru is operated by United Water Conservation District (UWCD). Generally, UWCD schedules a fall conservation release from Lake Piru (water stored/conserved in the Lake is released) to recharge both the Piru and Fillmore groundwater basins. The remaining portion of the flows are diverted at the Freeman Diversion for recharge in the Oxnard Forebay and distribution to agricultural users. However, drought and low inflow into Lake Piru will prevent UWCD from performing conservation releases in some years. Operation of Santa Felicia Dam is regulated by the Federal Energy Regulatory Commission (FERC). The FERC license to operate Santa Felicia Dam has many requirements for structural safety, public safety, water quality, recreational opportunities and protection of biological resources. Specific FERC requirements include releasing water to allow migration of steelhead in Piru Creek and portions of the Santa Clara River (dependent on river conditions), based on the applicable National Marine Fisheries Service biological opinion.

Santa Clara River. Due to climatic and geologic factors streamflow in the Santa Clara River can be described as interrupted perennial, with alternating perennial reaches and intermittent (summer dry) reaches influenced by surface water-groundwater interactions (SFEI 2011). Flow is supplemented by releases from Lake Piru Reservoir and inflows from tributaries. About 10 miles from the River mouth, UWCD can divert water at the Freeman Diversion for recharge of the Oxnard groundwater basin. Several mutual water companies operate small diversions located on Piru Creek, Sespe Creek, Santa Paula Creek,

and the Santa Clara River for agricultural irrigation; the amount of water diverted at these locations are unknown (Ventura County Watershed Protection District 2015b). In the past, several wastewater treatment plants discharged to the Santa Clara River. With the exception of the City of Ventura, most wastewater treatment facilities have been upgraded and now percolate treated effluent to groundwater rather than releasing water to the Santa Clara River (Ventura County Watershed Protection District 2015b). The City of Ventura currently discharges to the Santa Clara River Estuary but is actively studying ways to increase recycled water use in a manner protective of the Santa Clara River Estuary (City of Ventura 2016b).

Groundwater

The Santa Clara River Valley Basin is the primary basin underlying the Santa Clara River Watershed. This basin is subdivided into sub-basins: Piru (DWR Basin 4-4.06), Fillmore (DWR Basin 4-4.05), Santa Paula (DWR Basin 4-4.04), Mound (DWR Basin 4-4.03), and Oxnard (DWR Basin 4-4.02). All groundwater basins in the Ventura County portion of the Santa Clara River, with the exception of the Santa Paula Basin (which is adjudicated) are subject to SGMA. As described earlier, in 2014, the California Department of Water Resources ranked California's groundwater basins as "high," "medium," "low," or "very low" priority. In this ranking process the Oxnard and Piru groundwater basin were deemed "high" priority and the Fillmore, Santa Paula, and Mound deemed "medium" priority basins. The great dependency on groundwater in this area was a primary factor in the ranking. The Oxnard basin was also listed as being in "critical overdraft."

Stakeholders have met to discuss forming the necessary groundwater sustainability agency for the Piru, Fillmore, and Mound basins. As of the preparation of this background report, no formal notification of groundwater sustainability agency formation has been filed with the Department of Water Resources for those basins.

The Fox Canyon GMA elected to be the groundwater sustainability agency under SGMA for the basins within its Fox Canyon GMA boundary, including the Oxnard subbasin.

Important Recharge Areas

The Oxnard Forebay was described above.

Imported Supplies

In 1964, the Ventura County Flood Control District (currently the Ventura County Watershed Protection District) contracted with the State of California Department of Water Resources for a SWP allocation of 20,000 AF. Currently, the City of Ventura has an allocation of 10,000 AF, Casitas Municipal Water District has an allocation of 5,000 AF, and UWCD has an allocation of 5,000 AF. Port Hueneme Water Agency uses 1,850 AF of UWCD's entitlement but receives the water through Calleguas Municipal Water District. The SWP contract expires in 2035 but negotiations are underway to extend the contract. Up to 3,150 AF of SWP water is permitted to be released from Pyramid Lake and sent to Lake Piru. From 1991 to 2013 the total SWP delivery has been 34,212 AF and SWP has not been purchased or delivered in every year (Ventura County Watershed Protection District 2015b). The amount of SWP water allocated in each year depends on availability, and delivery is only allowed from November 1 through the end of February (Ventura County Watershed Protection District 2015b). In addition, UWCD has periodically entered into annual agreements with Casitas Municipal Water District and the City of

Ventura to purchase a portion of their unused SWP allocation. According to UWCD "The purchase of SWP water will be considered by United annually on an as-need basis" (UWCD 2016).

In addition to the SWP supplies delivered to Lake Piru Reservoir, the City of Oxnard purchases imported water from Calleguas Municipal Water District. During the period from 1991-2013 direct deliveries of SWP water to the Oxnard area were 316,000 AF – nearly 10 times the amount of water delivered to Lake Piru. These supplies are in turn provided to the Channel Islands Beach Community Services District, the City of Port Hueneme, and Naval Base Ventura County, via the Port Hueneme Water Agency.

At this time the City of Ventura does not have the facilities needed to deliver SWP water into its distribution system. Ventura is currently working with Calleguas Municipal Water District and others on a potential project to bring SWP allocation to the City's system.

Other Supplies

Several water agencies in the Santa Clara River Watershed produce and deliver recycled water, including the following:

- The City of Fillmore
- City of Oxnard
- City of Ventura

Water Quality

The Los Angeles RWQCB has identified beneficial uses for the Santa Clara River Watershed as detailed in Table 10-9. Permit programs and TMDLs have been developed to protect these beneficial uses. The following TMDLs are in place for portions of the Santa Clara Watershed:

- Bacteria in the Santa Clara River Estuary and Reaches 3 (area between Fillmore and Saticoy), 5 (Los Angeles County and eastern 4,500 feet of Santa Clara River within Ventura County), 6 (Los Angeles County), and 7 (Los Angeles County) – TMDL effective March 21, 2012
- Chloride in the Santa Clara River Reach 3 (area between Fillmore and Saticoy) – TMDL effective June 18, 2003
- Chloride in the Upper Santa Clara River (only a small portion lies within the county) – TMDL effective April 28, 2015

In addition to the existing TMDLs, other TMDLs may be developed as several Santa Clara Watershed areas are included in California's 303(d) List. Identified impairments in the Santa Clara River and its tributaries include chloride, pH, boron, sulfates, total dissolved solids, toxicity, as well as multiple chemicals generally referred to as "Chem A". The McGrath Beach area is considered to be impaired by coliform bacteria and toxic sediments.

TABLE 10-9
DESIGNATED BENEFICIAL USES IN THE SANTA CLARA RIVER WATERSHED

WATERSHED[a]	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
SANTA CLARA RIVER WATERSHED																						
Santa Clara River Estuary (Ends at Harbor Blvd.) [c]							E		E					E	E	E		Ee	Ef	Ef		E
Santa Clara River Reach 1																						
Santa Clara River (Estuary to Highway 101 bridge)	P*	E	E	E	E	E					E	E				E		E	E			E
Santa Clara River Reach 2																						
Santa Clara River (Highway 101 bridge to Ellsworth Barranca)	P*	E	E	E	E	E					E	E				E		E	E			E
Santa Clara River (Ellsworth Barranca to Freeman Diversion)	P*	E	E	E	E	E					E	E				E		E	E			E
Santa Clara River Reach 3																						
Santa Clara River (Freeman Diversion Dam to Santa Paula Creek)	P*	E	E	E	E	E					E					E		E	E			E
Santa Clara River (Santa Paula Creek to Sespe Creek)	P*	E	E	E	E	E					E					E		E	E			E
Santa Clara River (Sespe Creek to A Street, Fillmore)	P*	E	E	E	E	E					E					E		E	E			E
Santa Clara River Reach 4A																						
Santa Clara River (A Street Fillmore to Piru Creek)	P*	E	E	E	E	E					E					E		E	E			E
Santa Clara River Reach 4B																						
Santa Clara River (Piru Creek to Blue Cut gaging station)	P*	E	E	E	E	E					E					E		E	E			E
Santa Clara River Reach 5																						
Santa Clara River (Blue Cut gaging station to West Pier Highway 99)	P*	E	E	E	E	E					E					E		E				E
Santa Clara River Reach 9																						
Santa Paula Creek (above Santa Paula Water Works Diversion Dam)	P*	E	E	E	E	E					E	E				E		E	E	E		
Santa Clara River Reach 10																						
Sespe Creek (gaging stn below Little Sespe Creek to Potrero John Creek)	P	E	P	E	E						E	E				E	E	Eg	E	E		E
Santa Clara River Reach 11																						
Piru Creek (gaging stn below Santa Felicia Dam to Agua Blanca Creek)	P	E	E	E	E	E					E	E				E		Eg				
Santa Paula Creek (Santa Clara River R4A to Santa Paula Water Works Diversion)	P	E	E	E	E	E					E	E				E		E	E	E		
Sisar Creek	P	E	P	E	E						E	E				E		Eg		E		E

TABLE 10-9
DESIGNATED BENEFICIAL USES IN THE SANTA CLARA RIVER WATERSHED

	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
SANTA CLARA RIVER WATERSHED																						
Sespe Creek (Santa Clara River R3 to gaging station below Little Sespe)	P	E	E	E	E						E	E				E	E	E	E	E		E
Timber Creek	P*				E							E				E	E	E	E	E		E
Bear Canyon	P*				E						E	P				E	E	E	E	E		E
Trout Creek	P*				E						E	E				E		E	E	E		E
Piedra Blanca Creek	P*				E							E				E		E	E	E		E
Lion Canyon	P*				E						E	E				E			E	E		E
Rose Valley Creek	P*				E						E	E				E				E		E
Howard Creek	P*				E							E				E	E	E	E	E		E
Tule Creek	P*				E							P				E	E	E	E	E		E
Potrero John Creek	P*				E							P				E		E	E	E		E
Hopper Creek	P*	E		E	E	E					E	E				E		Eg				E
Piru Creek (Santa Clara River R4A to Santa Paula Water Works Diversion	P	E	E	E	E	E					E	E				E		Eg	E	E		E
Lake Piru	P	E	E	E	E	P					E	E				E		E		E		

E: Existing beneficial use
P: Potential beneficial use
I: Intermittent beneficial use
E,P, and I: shall be protected as required
* Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some destinations may be considered for exemption at a later date.

a: Waterbodies are listed multiple times if they cross hydrologic area or subarea boundaries. Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
b: Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
g: Condor refuge.
j: Out of service.

Source: Table 2-1. Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties (electronic copy accessed December 27, 2016).

Available Supplies

The sources of water supply in the Santa Clara River Watershed include surface water, imported water, groundwater, and recycled water. A total estimate of supply in the Santa Clara Watershed is provided in Table 10-11.

Surface Water

UWCD collects and releases surface water at Santa Felicia Dam/Lake Piru. The purpose of this water and the releases from the dam are to replenish the Piru, Fillmore, and Santa Paula basins, and provide flows to benefit facilities receiving water from the Freeman Diversion. Releases since 1999 averaged 28,369 AFY with an annual minimum of zero and a maximum of 47,400 AF, dependent on rainfall that year and environmental bypass flow requirements (UWCD 2014). UWCD estimates that approximately ten percent of the water released from Santa Felicia Dam is delivered to agricultural users in the Calleguas Creek Watershed via the Pumping Trough Pipeline and Pleasant Valley Pipeline. UWCD also has a right to divert Santa Clara River flows at the Freeman Diversion. In recent years UCWD has diverted between 2,500 AF (in 2015) and 94,000 AF (in 2011) at this location (UWCD 2017b). Water diverted in this location is used for both artificial recharge – the primary source of recharge to the Oxnard coastal plain – and direct delivery to agricultural users. To avoid over counting supplies, surface water used for recharge is not counted as a supply in this report.

It is estimated that private landowners may divert as much as 880 AFY from the Santa Clara River, but records are not available to confirm the long-term Santa Clara River surface water supply available to private users (SWRCB eWRIMS database).

Imported Water

Since 1991, UWCD has received from 0 up to 4,047 AF of imported SWP water in any given year, an average of 1,487 AF.

DWR prepares a biennial report to assist SWP users and local planners in assessing the near and long-term availability of supplies from the SWP. DWR issued its most recent update, the 2015 DWR State Water Project Delivery Capability Report (DCR), in July 2015. In the 2015 update, DWR provides SWP supply estimates for SWP contractors to use in their planning efforts. The 2015 DCR includes DWR's estimates of SWP water supply availability under both current and future conditions. The DCR estimates that UWCD on average, will receive between 45 and 70 percent of its allocation, depending on implementation of California WaterFix (SWP Delivery Capability Report, Existing Conveyance High Outflow Scenario Table D.31 and Alternative 4 H3Scenario Table F.31).

The imported water acquired by UWCD is intermingled with surface water at Lake Piru and released for groundwater recharge. It is not possible to track UWCD's imported water separate from surface water; any discussion on direct surface water deliveries and groundwater recharge by UWCD may include a small component of SWP water.

Besides UCWD, the City of Oxnard receives imported water within the Santa Clara River Watershed. The City of Oxnard receives imported water from Calleguas Municipal Water District (Calleguas), who is a member agency of the Metropolitan Water District of Southern California (MWD), a wholesale supplier of State Water Project water. In 2015 the City of Oxnard purchased 12,187 AF from Calleguas; in the

future (2020-2040) the City anticipates receiving 11,826 AF of imported water from Calleguas (Oxnard 2016).

Groundwater

Estimating groundwater supply is a difficult and time-consuming process and must take into account not only basin configuration, underflow, and weather, but other management practices such as volume of applied water and recharge operations. There is not an accepted long-term-yield for groundwater in the Santa Clara Watershed. As part of the SGMA process stakeholders will evaluate long-term sustainable yield. Table 10-10 presents a high-level estimate of available groundwater based on available data. The difference in the high and low supply estimate documents the lack of data or consensus on groundwater supply.

TABLE 10-10
GROUNDWATER SUPPLY ESTIMATES
SANTA CLARA RIVER WATERSHED

Basin	Estimate of Groundwater Budget (AFY)	Past Groundwater Extractions (AFY)	Notes
Piru	9,050	12,403	1, 2
Fillmore	22,625	44,598	3, 4
Santa Paula	26,000	25,699	5, 6
Oxnard Subbasin	71,000	78,000	7, 8
Mound	8,000	10,000	9, 10
Low Estimate Groundwater Supply Santa Clara River Watershed		136,400	11
High Estimate Groundwater Supply Santa Clara River Watershed		171,000	11

Notes:
1. DWR 2003, Basin 4-4.06. Assumes low estimate of 5,900 AFY outflow to Fillmore Basin.
2. UWCD 2016. 2014 and 2015 Piru and Fillmore Basins AB 3030 Biennial Groundwater Conditions Report. Average annual extractions 1980-2015.
3. DWR 2003, Basin 4-4.05. Assumes low estimate of 2,400 AFY outflow to Santa Paula Basin.
4. UWCD 2016. 2014 and 2015 Piru and Fillmore Basins AB 3030 Biennial Groundwater Conditions Report. Average annual extractions 1980-2015.
5. Information from the Santa Paula Basins Expert Group estimates annual yield at no less than 26,000 AFY (UWCD 2015). DWR 2003, Basin 4-4.04 budget is 5,593 AFY. Data from the Santa Paula Basins Expert Group is shown in the table.
6. UWCD 2015. 2012 Santa Paula Basin Annual Report. Average annual extractions 1980-2012.
7.USGS 2003.
8.UWCD 2017b.
9. Fugro West, Inc. 1997. Mound Groundwater Basin Annual Report. June.
10. City of Ventura 2011. City of San Buenaventura Water Master Plan and personnel communication D. Detmer of United Water Conservation District.
11. Rounded to the nearest 100 AF

Recycled Water

Ventura County Waterworks District No. 16 plans to construct a tertiary treatment upgrade for the existing Piru Wastewater Treatment Plant. After tertiary treatment, effluent from the Piru Wastewater Treatment Plant will meet California Code of Regulations, Title 22 requirements for unrestricted recycled

water, and approximately 500 AFY will be available for use as a new, lower cost irrigation supply for up to 1 square mile (640 acres) of nearby agricultural property. This supply is anticipated before year 2020. In the meantime, treated effluent is discharged to percolation basins.

The City of Fillmore completed a recycled water plant in 2009 and distributes approximately 2,000 AFY of reclaimed water to parks and school fields and groundwater percolation basins (Hydrometrics 2015, Fillmore 2016).

The City of Santa Paula utilizes its recycled water for groundwater recharge. To avoid over counting, Santa Paula's recycled water supply is categorized as a groundwater supply.

The City of Oxnard has been pursuing a recycled water program for more than 10 years. The City has constructed an Advanced Water Purification Facility (AWPF) as well as extensive transmission pipelines for the recycled water system. As of 2015 the AWPF has the capacity to produce 7,000 AFY; but in 2015 delivered only 605 AF. The City is actively pursuing users for its recycled water including landscape irrigation of parks, schools, golf courses and residential common areas. The City has entered into an agreement with agricultural users in the Oxnard Plain to provide recycled water when available. The pipeline to serve the Oxnard Plain is planned for completion in the future. Oxnard anticipates putting between 7,000 up to 14,000 AFY of recycled water to beneficial use in the next 10 years.

The City of Ventura has access to recycled water supply through the Ventura Water Reclamation Facility. Currently, the Ventura Water Reclamation Facility discharges most of its tertiary treated effluent to the Santa Clara River Estuary with approximately 700 AFY diverted as recycled water for landscape irrigation by several users along the City's recycled water pipeline alignment. In the next ten years the City of Ventura intends to increase the amount of recycled water delivered to irrigation customers and is examining direct potable use of recycled water. The City of Ventura service area includes portions in both the Ventura and Santa Clara watersheds, but the recycled water supply is being accounted for in the Santa Clara watershed.

TABLE 10-11
CURRENT (2016) ESTIMATE OF SUPPLY
SANTA CLARA RIVER WATERSHED

Supply Source	Annual Volume (AF)
Surface Water, Santa Clara River[1]	0
Imported Water, City of Oxnard from Calleguas [1]	12,000
Recycled Water	10,200 to 19,700
Groundwater (see Table 10-10)	136,400 to 171,000
Low Estimate (rounded to nearest 100 AF)	*158,400*
High Estimate (rounded to nearest 100 AF)	*202,700*

1. UWCD directly delivers approximately 12,000 AFY to agricultural users in the Calleguas Creek Watershed. This water is diverted in the Santa Clara Watershed but is a supply in the Calleguas Creek Watershed.

Water Suppliers

There are six major water suppliers (entities serving more than 1000 persons) in the Ventura County portion of the Santa Clara River Watershed as well as 74 smaller water systems and irrigation companies. Persons or businesses in the Watershed are also supplied by private wells and surface water diversions. The major urban suppliers, documented in Table 10-12 provide water to the cities but also to the unincorporated County. These are also mapped in Figure 10-4.

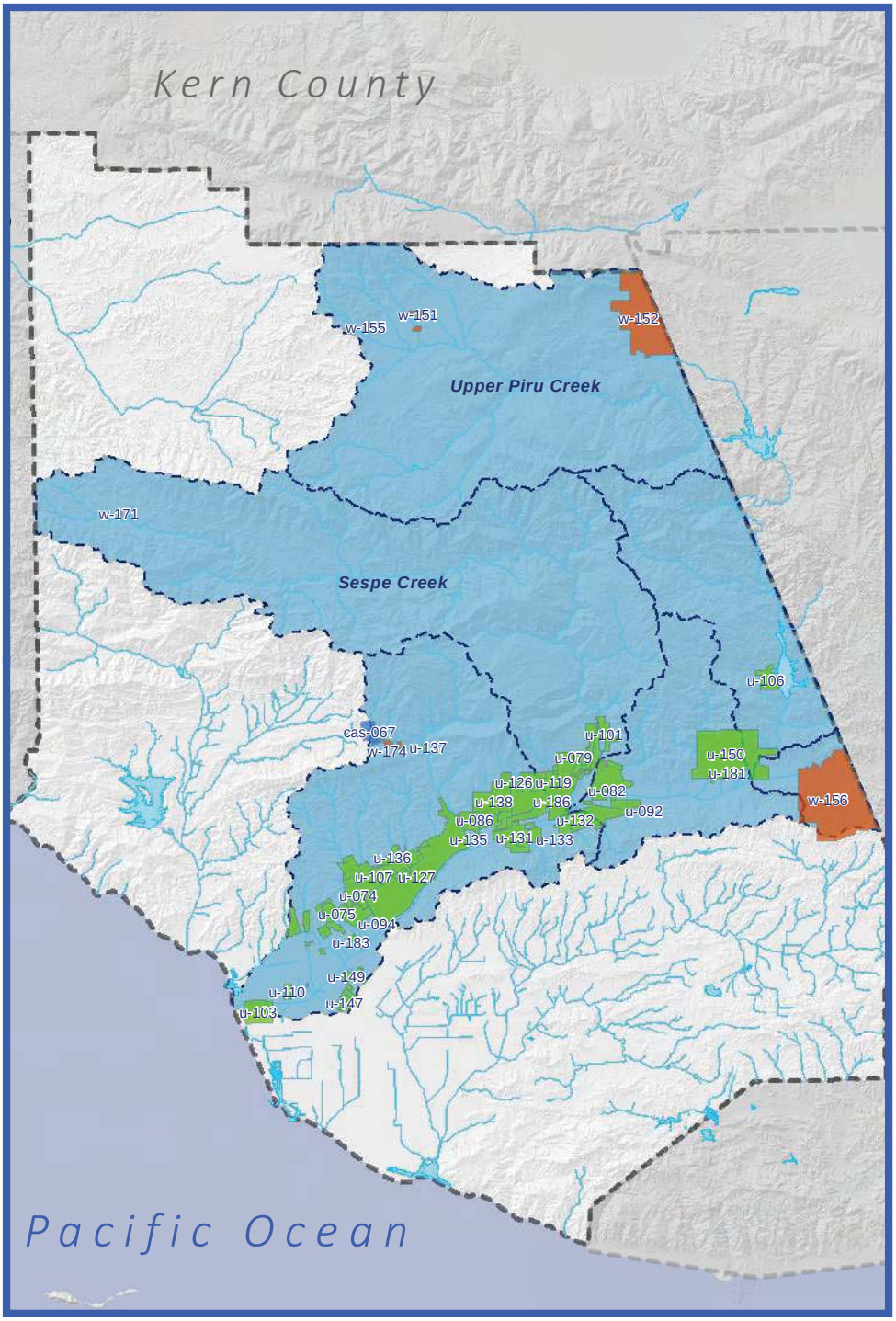
TABLE 10-12
MAJOR WATER SUPPLIERS
SANTA CLARA RIVER WATERSHED

Supplier/Primary Source(s)	Type	Area Served	Estimated Population Served	Annual Water Supplied*
Castaic Lake Water Agency Imported water and local groundwater	Special District	The Castaic Lake Water Agency service area extends into Ventura County but at the current time Castaic Lake Water Agency does not supply any water to Ventura County.	NA	NA
City of Fillmore Groundwater	City	City of Fillmore north of Santa Clara River, east of Sespe Creek.	18,600	~ 3,400 AF
City of Oxnard Imported water, groundwater, recycled water	City	City of Oxnard and County unincorporated area along Hueneme Road to Naval Base Ventura County. Excludes Channel Islands Beach.	193,654	~28,600 AF
City of Santa Paula Groundwater	City	Approximately 4.5 square miles (~2,880 acres) within the City of Santa Paula.	29,000	~4,400 AF
United Water Conservation District Surface water, imported water, groundwater	Special District	333 square miles (~ 213,120 acres) in Santa Clara River Valley (portion within Ventura County) and the Oxnard Plain.	**	**
Ventura Water Lake Casitas water, Ventura River, groundwater (Oxnard Plain, Mound, Santa Paula Basins), recycled water	City	City of Ventura and 1.5 square miles (960 acres) within City's sphere of influence. City falls within both the Ventura and Santa Clara Watersheds.	***	***

*Estimated based on records of water supplied 2010 to 2015, rounded to nearest 100 AF. Does not account for planned future expansion of demands and supplies.
**United Water Conservation District provides groundwater recharge and water to retail water agencies, to avoid double counting, information is only listed for retail water agencies.
*** City of Ventura information is described under Ventura River Watershed, to avoid double counting no population or water supply is provided in this table.
Source: UWCD 2016, City of Ventura 2016a and 2016b, City of Fillmore 2005 and 2016, City of Oxnard 2016, City of Santa Paula 2011.

WATER PURVEYORS

UNITED WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
United (u-074)	Aliso MWC
United (u-075)	Alta MWC
United (u-076)	Beedy Street Well
United (u-079)	Brownstone MWC
United (u-082)	City of Fillmore
United (u-082)	City of Fillmore
United (u-084)	Cloverdale MWC
United (u-086)	Community MWC
United (u-091)	El Rio Processing
United (u-092)	Elkins Ranch Company
United (u-094)	Farmers Irrigation Company
United (u-095)	Fillmore Irrigation Company
United (u-096)	Fillmore West Mobile Home Park
United (u-101)	Goodenough MWC
United (u-103)	Coastal Berry
United (u-104)	Alger Family Trust
United (u-106)	Lake Piru Recreation Area
United (u-107)	Limoneira Associates
United (u-108)	Linda Vista Junior Academy
United (u-109)	Middle Road MWC
United (u-110)	Montalvo MWC
United (u-119)	Rancho Sespe
United (u-122)	Rio Plaza Water Company
United (u-123)	Rio Real/Rio del Valle Schools
United (u-126)	San Cayetano MWC
United (u-127)	City of Santa Paula
United (u-129)	Sherwin Acres MWC
United (u-131)	South Mountain MWC
United (u-132)	Southside Improvement Company
United (u-133)	Storke MWC
United (u-134)	Strictland MWC
United (u-135)	Teague-McKevett Company-Limoneira
United (u-136)	Thermal Belt MWC
United (u-137)	Thomas Aquinas College
United (u-138)	Timber Canyon MWC
United (u-139)	Tobock Ranch MWC
United (u-145)	G.P. Resources
United (u-147)	Vineyard Ave Acres MWC
United (u-148)	Vineyard Ave Estates
United (u-149)	Vineyard MWC
United (u-150)	Warring Water Service
United (u-181)	Piru MWC
United (u-183)	Ventura County Property Administrator
United (u-185)	Hardscrabble MWC
United (u-186)	Sespe Agricultural Water
United (u-192)	Citrus MWC
United (u-202)	Rancho Sespe Workers Improvement Association
United (u-203)	Toland Road Water System
CALLEGUAS WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
Casitas (cas-067)	Sisar MWC
SUPPLIERS WITHOUT WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
None (w-151)	Greeleaf Springs Water System
None (w-152)	Antelope Valley East Kern Water Agency
None (w-152)	East Kern Water Agency
None (w-155)	Camp Three Falls
None (w-156)	Castaic Lake Water Agency
None (w-168)	New Camp Barlett
None (w-171)	Pine Mountain Inn
CASITAS WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
None (w-174)	Sweetwater Spring Ranch



Ventura County 2040 General Plan

Figure 10-4:
Water Purveyors in
Santa Clara River Watershed

Map Date: December 02, 2016
Source: Kennedy/Jenks Consultants, 2016.

N

0 9 18 Miles

Ventura County Boundary
Rivers Streams
Water Bodies
Subwatersheds
Santa Clara River Watershed

Water Purveyor

Casitas Wholesale District
United Wholesale District
Suppliers Without Wholesale District

Estimate of Demand

As described previously, in 2014, the Ventura County Watershed Protection District undertook an estimate of Countywide water demand, documented in the County of Ventura 2013 Water Supply and Demand (January 2015). Results of the study for the Santa Clara Watershed are provided Table 10- .

TABLE 10-13
ESTIMATED SANTA CLARA RIVER WATERSHED DEMAND

Watershed/Sub-watershed	Total Agricultural Demand (AF)	Total Municipal Demand (AF)	Total Demand (AF)
Hall Canyon/Arundel	815	9,924	10,739
Ormond Beach	2,797	22,913	25,710
Santa Clara River	114,919	31,284	146,203
Subtotal (Rounded to nearest 100 AF)	*118,500*	*64,100*	**182,600**

Source: Hydrometrics 2015. Table 6.

Notable in Table 10- is the distribution of demands. Agricultural demand is estimated to be significantly higher than municipal demand.

Demand Management

Table 10- summarizes the various water conservation actions undertaken in the Santa Clara River Watershed. Table 10- summarizes demand management measures undertaken under normal conditions and those extra ordinary efforts taken during drought periods.

Comparison of Supply and Demand

While it is difficult to quantify, it is estimated that there is an annual supply of 158,400 AF to 202,700 AF in the Santa Clara Watershed. This supply of course will vary given drought and operational conditions. Estimated demand is approximately 182,600 AF and is outpacing the low-end estimate of annual supply. The high-end estimate of supplies assumes increased recycled water use, the timing of which is uncertain. If the higher supply is achieved, supply could be a little less than 10 percent greater than demand.

Water-Related Challenges

Below are the water related challenges for the Santa Clara River Watershed as of late 2016:

TABLE 10-14
DEMAND MANAGEMENT MEASURES IN SANTA CLARA RIVER WATERSHED

Agency	Conservation Measures in Effect at All Times							Conservation Measures that May Be Implemented in Drought				
	Public Information and Outreach	Water Waste Prohibitions	Metering	Volume-Based Pricing	Water Efficiency Surveys Offered to Customers	Rebates for High Efficiency Plumbing Fixtures	Turf Removal Incentives	Drought Surcharge	Limitations on Irrigation/ Outdoor Watering	Mandatory Reductions/ Allocation	Fines	Suspension of new water connections
City of Fillmore		X	X	X				X	X			
City of Oxnard	X	X	X	X		X	X		X	X	X	X
City of Santa Paula	X	X	X	X					X			
Ventura Water	X	X	X	X	X	X	X	X	X	X	X	X
United Water Conservation District	X		X	X						X*	X	

*UWCD's groundwater allocation is subject to the Fox Canyon GMA. In the event of reductions from FCGMA, UWCD informs their retail agencies of the reductions.
Sources: City of Oxnard 2016; City of Ventura 2016b; United Water Conservation District 2016.

Coastal Groundwater Overdraft

As described earlier, groundwater in the Oxnard Plain dropped below sea level as early as the 1940s. Overdraft conditions now persist in the southern and eastern portions of the Oxnard Plain, the annual overdraft is estimated to be 20,000 to 25,000 AFY (UWCD 2017b). This continued overdraft allows seawater intrusion and puts the area at risk of land subsidence.

Sea Water Intrusion

The low water levels in the Oxnard Plain allow seawater (chloride) to enter into freshwater aquifers. The USGS and UWCD have documented the inland movement of seawater adjacent to the Hueneme and Mugu submarine canyons.

Water for Environmental Purposes

UWCD diverts Santa Clara River water at the Freeman Diversion to recharge groundwater basins and for direct delivery to agricultural users. UWCD provides bypass flows at the Freeman Diversion for the upstream and downstream migration of southern California Steelhead. In July 2008, the National Marine Fisheries Service (NMFS) issued a final Biological Opinion that concluded that operations at the Freeman Diversion were likely to jeopardize the continued existence of southern California Steelhead in the Santa Clara River. UWCD is currently developing a multi-species habitat conservation plan and is in consultation with NMFS. The resulting bypass flows are unknown, but it is estimated that the current bypass flow regime has decreased diversions (and hence water supply) by up to 22,500 AFY, though this is highly variable from year to year (personnel communication Robert Richardson, United Water Conservation District).

Quality

The Los Angeles RWQCB has identified the Santa Clara River, downstream of Piru Creek, as having water quality impairments related to bacteria. The Los Angeles RWQCB has identified runoff from residential, industrial, and commercial areas as the source of the bacteria. This includes fertilizer used for lawns and landscaping, organic debris from gardens, landscaping, and parks; trash such as food wastes; domestic animal waste; and human waste from areas inhabited by the homeless. The indicator bacteria point to the potential contamination of the Santa Clara River by pathogens or disease producing bacteria or viruses. Some waterborne pathogenic diseases include ear infections, dysentery, typhoid fever, viral and bacterial gastroenteritis, and hepatitis A. Elevated bacteria levels are an indicator that a potential health risk exists for individuals exposed to this water and therefore limit the recreational uses of the Santa Clara River.

Calleguas Creek Watershed

The Calleguas Creek Watershed is located in the southeastern portion of Ventura County and drains an approximately 343 square mile (219,520 acres) area. The Santa Susana and Oak Ridge Mountains form the northern boundary, the southern boundary is delineated by the Simi Hills and Santa Monica Mountains. Major creeks and rivers include the Conejo Creek, Arroyo Simi, Arroyo Las Posas, Arroyo Santa Rosa, Calleguas Creek, Revolon Slough, and Mugu Lagoon.

Long-term monitoring by the Ventura County Watershed Protection District shows that the Calleguas Creek Watershed cycles through wet and dry periods and does not have a common “normal” period.

Precipitation is in the form of rain and about 85 percent of the rainfall occurs from November to March (Calleguas Creek Steering Committee 2004). Near the coast, cool moist ocean winds moderate temperature; summer highs average 64ºF and winter lows average 53 ºF (Calleguas Creek Steering Committee 2004). Inland temperatures can exceed 106 ºF in the summer and drop below freezing in the winter (Western Regional Climate Center Station 048904 Thousand Oaks 1 SW).

The watershed includes the cities of Oxnard (portion), Port Hueneme, Camarillo, Moorpark, Simi Valley, Thousand Oaks, and unincorporated areas of Ventura County. According to the Watersheds Coalition of Ventura County (2014), land uses in the watershed are as follows:

- Undeveloped land 50%
- Agriculture 25%
- Urban uses 25%

Surface Water

The major surface water features in the watershed are Lake Bard, the Arroyo Simi/Arroyo Las Posas/Calleguas Creek system, Conejo Creek system, and Honda Barranca/Beardsley Wash/Revolon Slough system.

Lake Bard. Lake Bard is an approximately 10,500 AF surface water reservoir constructed to store treated water from the Metropolitan Water District of Southern California. This water is used to meet emergency demands. Lake Bard is operated by Calleguas Municipal Water District (Calleguas Municipal Water District 2016).

Arroyo Simi/Arroyo Las Posas/Calleguas Creek. This series of creeks drain precipitation and urban runoff from the Simi Valley, the eastern Las Posas Valley, much of Pleasant Valley, and the eastern portion of the Oxnard Plain. In addition to precipitation and urban runoff, the Arroyo Simi also carries discharges from a series of dewatering wells operated by the City of Simi Valley as well as treated effluent from the Simi Valley Water Quality Control Plant. Under certain conditions the Ventura County Waterworks District #1 Moorpark Wastewater Treatment and the Camrosa Water District Water Reclamation Facility may discharge effluent into Calleguas Creek (Calleguas Creek Steering Committee 2004).

Conejo Creek System. The Arroyo Santa Rosa, Arroyo Conejo, and Conejo Creek make up this drainage system. The Santa Rosa Valley, a portion of Pleasant Valley, Tierra Rejada Valley and the City of Thousand Oaks are drained by this system. This system caries precipitation, agricultural runoff, and effluent from the Hill Canyon Wastewater Treatment Plant and Camarillo Sanitary District Wastewater Reclamation Plant.

The Honda Barranca/Beardsley Wash/Revolon Slough. The western portion of the Las Posas valley, a portion of Pleasant Valley and a portion of the Oxnard Plain are drained by the Honda Barranca/ Beardsley Wash/Revolon Slough. The majority of flow comes from agricultural and storm water drainage (Calleguas Creek Steering Committee 2004).

Groundwater

There are multiple groundwater basins within the Calleguas Creek Watershed. These include the, Pleasant Valley Basin (DWR Basin 4-06), Arroyo Santa Rosa (DWR Basin 4-07), Las Posas Valley

(DWR Basin 4-08), Simi Valley (DWR Basin 4-09), Tapo/Gillibrand (a portion of DWR Basin 4-09), and Tierra Rejada (DWR Basin 4-15). Several smaller basins also exist in the watershed but provide only a minor amount of supply due to low production or poor water quality (less than 500 AFY each basin). As part of SGMA the Pleasant Valley and Las Posas groundwater basins were deemed "high" priority and the Arroyo Santa Rosa Valley deemed a "medium" priority basin. The great dependency on groundwater in this area was a primary factor in the ranking. The Pleasant Valley basin was also listed as being in "critical overdraft."

As described earlier, the Fox Canyon GMA was created by state legislation in 1982 to manage local groundwater basins and resources in a manner to reduce overdraft of the Oxnard subbasin and to stop seawater intrusion. Besides the Oxnard subbasin, the Fox Canyon GMA has also elected to be the groundwater sustainability agency under SGMA for the Pleasant Valley and Las Posas Valley basins, as well as the portion of the Arroyo Santa Rosa Basin within Fox Canyon GMA boundaries.

The Arroyo Santa Rosa Basin GSA, organized in 2016 under a Joint Powers Agreement between the Camrosa Water District and the County of Ventura, with participation from the City of Camarillo, has elected to become the groundwater sustainability agency for the portion of the Arroyo Santa Rosa Groundwater Basin east of the Bailey Fault, outside of the Fox Canyon GMA jurisdiction.

Important Recharge Areas

Important recharge areas for the groundwater basins in the Calleguas Watershed include the Oxnard Forebay of the Oxnard Plain (described earlier), Calleguas Creek, small tributary stream channels and drainages from the surrounding mountain fronts, and areas of bedrock outcrops (USGS 2003). In addition, Calleguas Municipal Water District conducts artificial recharge through injection of imported water in the East Las Posas Basin, as part of the Las Posas Aquifer Storage and Recovery Project.

Imported Supplies

Calleguas Municipal Water District is a wholesale water provider for the Calleguas Creek Watershed and portions of the Santa Clara River Watershed on the Oxnard Plain. Calleguas distributes the water supplies to its 19 retail purveyors through 140 miles of pipeline operated and maintained by Calleguas. Calleguas is a member agency of the MWD. Calleguas anticipates receiving approximately 122,000 AF imported water from MWD each year, but this will vary depending on climatic conditions, regulatory conditions and regional demands.

Other Supplies

Within the Calleguas Creek Watershed, Camrosa Water District in conjunction with the City of Thousand Oaks, the City of Camarillo, Ventura County Waterworks District 8 (City of Simi Valley), Ventura County Waterworks District 1 (Moorpark), produce and deliver recycled water. In addition, recycled water produced by the Tapia Water Reclamation Facility in the Malibu Creek Watershed is delivered to users within the Conejo Valley.

Water Quality

The Los Angeles RWQCB has identified beneficial uses for the Calleguas Creek Watershed as well as its tributaries, and industrial channels in the area as documented in Table 10-15. The following TMDLs are in place for portions of the Calleguas Creek Watershed:

- Calleguas Creek, Its Tributaries and Mugu Lagoon Metals and Selenium – approval of TMDL by SWRCB and US EPA pending.
- Calleguas Creek Salts – TMDL effective December 2, 2008
- Revolon Slough and Beardsley Wash Trash – TMDL effective March 6, 2008
- Calleguas Creek Toxicity – TMDL effective March 24, 2006
- Calleguas Creek Organochlorine Pesticides and PCBs - TMDL effective March 24, 2006
- Oxnard Drain 3 Pesticides, PCBs, and Sediment Toxicity – approved by EPA approval October 6, 2011
- Calleguas Creek Nitrogen Compounds and Related Effects – TMDL effective October 15, 2009

In addition to the existing TMDLs, other TMDLs may be developed. Identified impairments in the Calleguas Creek and its tributaries include ammonia, boron, copper, bacteria, nitrogen, nitrate, selenium, and sulfate, as well as insecticides and pesticides such as DDT, Dieldrin, and Toxaphene. The Channel Islands Harbor area is limited by lead and zinc in sediments; several Oxnard area beaches are limited by bacteria.

Available Supplies

The water supplies for the Calleguas Creek Watershed consist of imported water from Calleguas, groundwater, a minor amount of potable surface water, non-potable surface water provided by UWCD from the Freeman Diversion delivered to agricultural users in the Pleasant Valley Basin, and recycled water. A total estimate of supply in the Calleguas Creek Watershed is provided in Table 10-17.

Imported Water

Calleguas anticipates receiving approximately 122,000 AF imported water from MWD in each year, but this will vary depending on climatic conditions, regulatory conditions and regional demands (CMWD 2016). The City of Oxnard receives approximately 12,000 AFY of water from Calleguas; this volume is included in the imported supplies in the Santa Clara Watershed and is not reflected in supplies for the Calleguas Creek Watershed.

TABLE 10-15
DESIGNATED BENEFICIAL USES CALLEGUAS CREEK WATERSHED

WATERSHED[a]	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
CALLEGUAS-CONEJO CREEK WATERSHED																						
Calleguas Creek Estuary [c]							P		E					E		E		Ee,p	Ef	Ef		E
Calleguas Creek Reach 1																						
Mugu Lagoon [c]							E		Ed					E	E	Eo	E	Ee,p	Ef	Ef	Ed	E
Calleguas Creek Reach 2																						
Calleguas Creek (Estuary to Potrero Rd.)	P*			E	E	E					E	E				E		Ep				E
Calleguas Creek Reach 3																						
Calleguas Creek (Potrero Rd. to Conejo Creek)	P*	E	E	E	E						E					E						
Calleguas Creek Reach 4																						
Revolon Slough (Calleguas Creek Rch 2 to Pleasant Valley Rd.)	P*	P		E	E						E					E						E
Revolon Slough (Pleasant Valley Rd. to Central Ave.)	P*	P		E	E						E					E						E
Calleguas Creek Reach 5																						
Beardsley Channel (above Central Ave.)	P*					E					E					E						
Calleguas Creek Reach 6																						
Arroyo Las Posas (Calleguas Creek Rch 3 to Long Canyon)	P*	P	P	P	E						E	P				E						
Arroyo Las Posas (Long Canyon to Hitch Rd.)	P*	P	P	P	E	E					E	P				E						
Calleguas Creek Reach 7																						
Arroyo Simi (Hitch Rd. to Happy Camp Canyon)	P*	I			I	I					I					E		E				
Arroyo Simi (Happy Camp Canyon to Alamos Canyon)	P*	I			I	I					I					E		E				
Arroyo Simi (Alamos Canyon to Tapo Canyon Creek)	I*	I			I	I					I					E						
Arroyo Simi (above Tapo Canyon Creek)	I*	I			I	I					I					E						
Calleguas Creek Reach 8																						
Tapo Canyon Creek (above Arroyo Simi)	I*		P	P	I						I					E						
Calleguas Creek Reach 9A																						
Conejo Creek (Camrosa Diversion to Camarillo Rd.)	P*	E	E	E	E						E					E						
Conejo Creek (Camarillo Rd. to Arroyo Santa Rosa)	P*				I	I					I					E				E		

TABLE 10-15
DESIGNATED BENEFICIAL USES CALLEGUAS CREEK WATERSHED

WATERSHED[a]	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
CALLEGUAS-CONEJO CREEK WATERSHED																						
Calleguas Creek Reach 9B																						
Conejo Creek (Calleguas Creek Rch 3 to Camrosa Diversion)	P*	E	E	E	E						E					E						
Calleguas Creek Reach 10																						
Arroyo Conejo (Conejo Creek to North Fork Arroyo Conejo)	P*				I	I					I					E		E				
Calleguas Creek Reach 11 (Arroyo Santa Rosa)																						
Arroyo Santa Rosa (above confl. with Conejo Creek)	P*				I	I					I					E						
Calleguas Creek Reach 12																						
North Fork Arroyo Conejo (above confl. with Arroyo Conejo)	P*		<del>	E	E						E					E				E		
Calleguas Creek Reach 13																						
Arroyo Conejo (above confl. with North Fork Arroyo Conejo)	P*				I	I					I					E						
Gillibrand Canyon Creek (Tapo Canyon Creek to Windmill Canyon)	P*				I	I					I					E						
Gillibrand Canyon Creek (above Windmill Canyon)	P*				I						I					E						
Lake Bard (Wood Ranch Reservoir)	E	E	E	E	P						E					E						

E: Existing beneficial use
P: Potential beneficial use
I: Intermittent beneficial use
E,P, and I: shall be protected as required
* Asterisked MUN designations are designated under SB 88-63 and RB 89-03. Some destinations may be considered for exemption at a later date.

a: Waterbodies are listed multiple times if they cross hydrologic area or subarea boundaries. Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
b: Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
c: Coastal waterbodies which are also listed in inland Surface Waters Tables (2-1) or in Wetlands Table (2-4).
d: Limited public access precludes full utilization.
e: One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
f: Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs.
o: Marine habitats of the Channel Islands and Mugu Lagoon serve as pinniped haul-out areas for one or more species (i.e. sea lions).
p: Habitat of the Clapper Rail.

Source: Table 2-1. Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties (electronic copy accessed December 27, 2016).

Groundwater

There is not an accepted groundwater supply estimate for the Calleguas Creek Watershed. As part of the SGMA process stakeholders will evaluate long-term sustainable yield. Table 10-16 presents a high-level estimate of available groundwater based on available data. The difference in the high and low supply estimate documents the lack of data and consensus on groundwater supply. Table 10- does not include the approximately 3,500 AFY of groundwater that the City of Thousand Oaks is planning on developing from the Conejo Groundwater Basin.

Surface Water

The Conejo Creek system, owned and operated by Camrosa Water District, does supply some surface water. The average supply from this creek system is estimated to be 7,920 AF (FCGMA 2016). It is estimated that small private water users may divert and use as much as 3,400 AFY from local surface water (SWRCB eWRIMS database).

TABLE 10-16
GROUNDWATER SUPPLY ESTIMATES
CALLEGUAS CREEK WATERSHED

Basin	Estimate of Groundwater Budget (AFY)	Past Groundwater Extractions (AFY)	Notes
Pleasant Valley Basin	11,418	18,500	1
Arroyo Santa Rosa	3,325 to 8,410	5,000	2
Las Posas Valley	29,280	30,560	3
Simi Valley	5,400	5,500	4
Tapo/Gillibrand	1,350	550	5, 6
Tierra Rejada	1,300	1,500	7
Low Estimate Groundwater Supplies		51,300	8
High Estimate Groundwater Supplies		82,300	8

1. DWR 2003, Basin 4-06.
2. DWR 2003, Basin 4-07.
3. DWR 2003, Basin 4-08.
4. DWR 2003, Basin 4-09.
5. City of Simi Valley, Geohydrologic Evaluation of Maximum Perennial Yield, Tapo Canyon Tributary SubArea (September 2006)
6. Waterworks District 8. 2016. 2015 Urban Water Management Plan. June.
7. DWR 2003, Basin 4-15.
8. Rounded to nearest 100 AF.

Recycled Water

Based on recently completed urban water management plans by water purveyors in the Calleguas Creek Watershed, an estimate of recycled water in the Calleguas Creek area has been prepared. This estimate uses supplies planned in the next 10 years (by 2025).

TABLE 10-17
CURRENT (2016) ESTIMATE OF SUPPLY
CALLEGUAS CREEK WATERSHED

Supply Source	Annual Volume (AF)
Surface Water, Conejo Creek Diversion [1]	11,324
Imported Water Calleguas and UWCD Deliveries from Santa Clara Watershed [2]	119,417
Recycled Water [3]	13,931
Groundwater (see Table 10-16)	51,300 to 82,300
Low Estimate (rounded to nearest 100 AF)	*196,000*
High Estimate (rounded to nearest 100 AF)	*227,000*

1. FCGMA 2016. Preliminary Draft Pleasant Valley Groundwater Sustainability Plan Tasks 6 – 10 Report. May.
2. Supplies from Calleguas are anticipated imported water supplies less 12,000 AF expected to go to Oxnard in the Santa Clara Watershed (CMWD 2016, Oxnard 2016). Supplies from UWCD are on average 9,417 AF to the Calleguas Creek Area from the Santa Clara Watershed (FCGMA 2016).
3. Camrosa 2016; Camarillo 2016, VCWWD8 2016, and VCWWD1 2016.

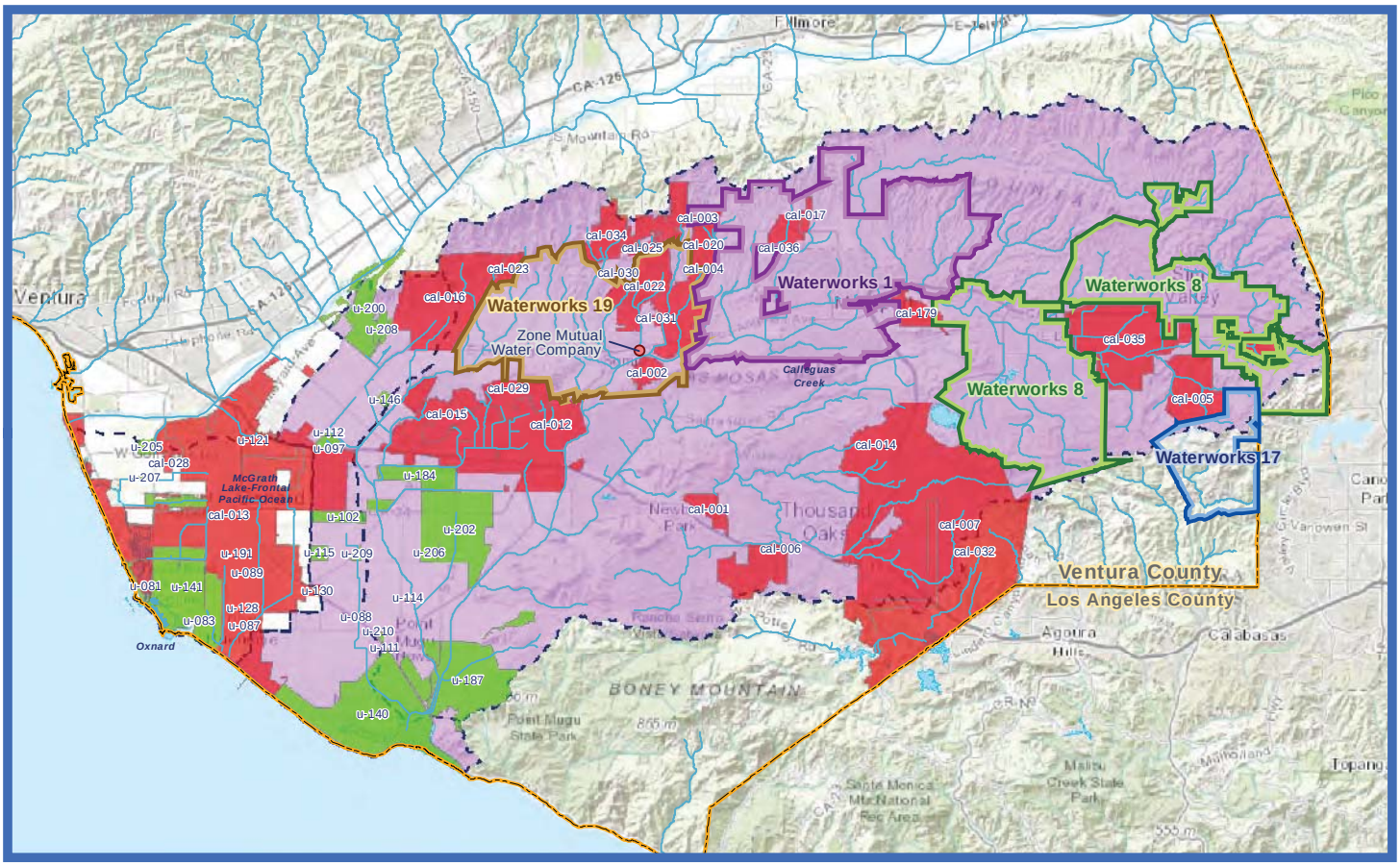
Suppliers

There are nine major water suppliers (entities serving more than 1,000 persons) in the Calleguas Creek Watershed as well as 52 smaller water systems and irrigation companies. Persons or businesses in the Watershed are also supplied by private wells and surface water diversions. The major urban suppliers, documented in Table 10-18 provide water to cities and the unincorporated County. These are also mapped in Figure 10-5.

TABLE 10-18
MAJOR WATER SUPPLIERS - CALLEGUAS CREEK WATERSHED

Supplier/Primary Source(s)	Type	Area Served	Estimated Population Served	Annual Water Supplied*
Calleguas Municipal Water District Imported water	Special District	Calleguas Creek Watershed	**	**
City of Simi Valley/Ventura Co. Waterworks District 1 Imported water, groundwater, recycled water	City	Approximately 68 percent of the developed portion of the City of Simi Valley and unincorporated areas located southeast and north of the City boundary.	~97,300	~ 23,800 AF
City of Oxnard Imported water, groundwater, recycled water	City	City of Oxnard, but excluding Channel Islands Beach and County unincorporated area along Hueneme Road to Naval Base Ventura County.	***	***
City of Thousand Oaks Imported water	City	Approximately 36 percent of the City of Thousand Oaks	~53,300	~12,600 AF
City of Camarillo Imported water, groundwater, recycled water	City	14 square miles (8,960 acres) within the western portion of the City, about 75 percent of the City of Camarillo	~42,900	~8,600 AF
Port Hueneme Water Agency Groundwater, imported water	City	Generally, the City of Port Hueneme	~22,000	~5,000 AF
Camrosa Water District Imported water, groundwater, surface water, recycled water	Special District	31 square miles (19,840 acres) within the eastern portion of the City of Camarillo and Santa Rosa Valley.	~30,000	~14,400 AF
Ventura County Waterworks District No. 1 Imported water, groundwater, recycled water	Special District	Generally, the City of Moorpark and ag lands between Camarillo and Thousand Oaks (33.7 square miles / 21,568 acres).	~36,000	~11,800 AF
Ventura County Waterworks District No. 19 Imported water, groundwater	Special District	23 square miles (14,720 acres) of the Somis community and surrounding rural areas.	~3,300	~3,000 AF
Oak Park Water Service Imported water	Special District	Oak Park community, encompassing 4.1 square miles (2,624 acres).	~12,200	~2,200 AF
California American Water Company – Ventura District Imported water	Private Company	Approximately half of Thousand Oaks (25 sq. mi.) and a small portion of unincorporated county in the Las Posas Country Club area.	~63,400	~15,200 AF
California Water Service Company – Westlake District Imported water, recycled water	Private Company	13 square miles (8,320) in south east City of Thousand Oaks	~19,500	~8,100 AF
Golden State Water Company – Simi Valley Imported water, groundwater	Private Company	A portion of the City of Simi Valley and a portion of unincorporated Ventura County including Runkle Canyon	~45,200	~6,500 AF
Pleasant Valley Mutual Water Company Imported water, groundwater	Private Company	Northwestern portion of the City of Camarillo	~7,500	~900 AF
Crestview Mutual Water Company Imported water, groundwater	Private Company	Western portion of the City of Camarillo	Unknown	~900 AF
Zone Mutual Water Company Groundwater, imported water	Private Company	A private agricultural water supplier serving the unincorporated area around Somis.	Ag water supplier	~5,000-6,000 AF

**Estimated based on records of water supplied 2010 to 2015, rounded to nearest 100 AF. Does not account for planned future expansion of demands and supplies.*
***Calleguas Municipal Water District is a wholesale supplier, to avoid double counting information is only provided for retail water agencies.*
****Oxnard falls across two watersheds. Oxnard population and supply provided as part of the Santa Clara River Watershed discussion.*
Source: Calleguas Municipal Water District 2016, City of Simi Valley 2016, City of Thousand Oaks 2016, Ventura County Waterworks District No. 1 2011 and 2016, City of Camarillo 2011 and 2016, Port Hueneme Water Agency 2011 and 2016, California American Water Company 2012 and 2016, California Water Service Company 2011 and 2016, Golden State Water Company 2011 and 2016.



WATER PURVEYORS

UNITED WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
United (u-016)	Del Norte MWC
United (u-080)*	Camarillo Airport Utility Enterprise
United (u-081)*	Channel Islands Beach Community Services District
United (u-083)*	City of Port Hueneme
United (u-087)	Cypress MWC
United (u-088)	Sunshine Trailer Park
United (u-089)	Dempsey Road MWC
United (u-093)	Evergreen Trailer Park
United (u-097)	Garden Acres MWC
United (u-099)	Glennview Mobile Home Park
United (u-102)	Hailwood, Inc.
United (u-111)	Navalair Mobilehome Court
United (u-112)	Nyeland Acres NWC
United (u-114)	Ocean View School District
United (u-115)	Oxnard Lemon MWC
United (u-121)	Rio Manor MWC
United (u-128)	Saviers Road MWC
United (u-130)	Silver Wheel Ranch Mobile Home Park
United (u-140)*	U.S.N.A.S. - Point Mugu
United (u-141)*	U.S.N.C.B.C. - Port Hueneme
United (u-146)	Ventura School
United (u-184)	Ventura County Dept of Airports
United (u-187)	Guadalasca MWC
United (u-191)	Santa Clara High School
United (u-200)	Lloyd-Butler MWC
United (u-202)	Rancho Sespe Workers Improvement Association
United (u-204)	Thornhill MWC
United (u-205)	Santa Clara Resources
United (u-206)	Houweling's Nursery
United (u-207)	Pyramid Flowers
United (u-208)	Saticoy Country Club
United (u-209)	Vujovich Ranch
United (u-210)	Bouquet Multimedia

* Denotes agencies within the wholesale area of both United and Calleguas

CALLEGUAS WHOLESALE DISTRICT	
SUPPLIER	**WATER COMPANY**
Calleguas (cal-001)	Academy MWC
Calleguas (cal-002)	Arroyo Las Posas MWC
Calleguas (cal-003)	Balcom Bixby MWA
Calleguas (cal-004)	Berylwood Heights MWC
Calleguas (cal-005)	Brandeis-Bardin MWC
Calleguas (cal-006)	Conejo Trailer Park
Calleguas (cal-007)	California Water Service Company
Calleguas (cal-012)	City Camarillo Water District
Calleguas (cal-013)*	City of Oxnard
Calleguas (cal-014)	City of Thousand Oaks
Calleguas (cal-015)	Crestview MWC
Calleguas (cal-017)	Epworth MWC
Calleguas (cal-020)	Fuller Falls MWC
Calleguas (cal-022)	Sunshine Ranch
Calleguas (cal-023)	La Loma Ranch MWC
Calleguas (cal-025)	Las Lomas Water Systems
Calleguas (cal-028)	Oxnard Union High School District
Calleguas (cal-029)	Pleasant Valley MWC
Calleguas (cal-030)	Rancho Canada Water Company
Calleguas (cal-031)	Tom Grether Farms, Inc.
Calleguas (cal-032)	Russell Valley MWD
Calleguas (cal-034)	Solano Verde MWC
Calleguas (cal-035)	Golden State Water Co. - Simi Valley
Calleguas (cal-036)	Thermic MWC
Calleguas (cal-042)	Waters Road Users Group
Calleguas (cal-179)	Butler Ranch MWC
Calleguas (cal-190)	Water Canyon Water Well
	Zone Mutual Water Company

* Denotes agencies within the wholesale area of both United and Calleguas

Ventura County 2040 GENERAL PLAN

Figure 10-5: Water Purveyors in Calleguas Creek Watershed

- Ventura County
- Subwatersheds
- Calleguas Creek Watershed
- Rivers Streams
- Water Bodies

Water Purveyor

- Calleguas Wholesale District
- United Wholesale District

Map Date: December 2017
Source: Kennedy/Jenks Consultants, 2017

N

0 4 8 Miles

Estimate of Demand

As described previously, in 2014, the County of Ventura Watershed Protection District undertook an estimate of Countywide water demand, documented in the *County of Ventura 2013 Water Supply and Demand* (January 2015). Results of the study for the Calleguas Creek Watershed are provided in Table 10-19.

TABLE 10-19
ESTIMATED CALLEGUAS CREEK WATERSHED DEMAND

Watershed/Sub-watershed	Total Agricultural Demand (AF)	Total Municipal Demand (AF)	Total Demand (AF)
Calleguas Creek	112,701	89,335	202,036
Malibu Creek	1,083	19,291	20,374
South Coast	86	2,035	2,121
Subtotal (rounded to nearest 100 AF)	*113,900*	*110,700*	**224,600**

Source: Hydrometrics 2015. Table 6.

Comparison of Supply and Demand

Estimated supply in the Calleguas Creek Watershed ranges from 196,000 AF to 227,000 AF in any given year. This supply of course will vary given drought and operational conditions. Estimated demand is approximately 224,600 AF. If the low-end estimate of supply is correct, demand is outpacing supply. If the high-end supply estimate is correct, supply is only slightly greater (1%) than demand.

Water-Related Challenges

Below are the water related challenges for the Calleguas Creek Watershed as of late 2016.

Long-Term Groundwater Overdraft and Increased Salinity

The Pleasant Valley Basin is in long-term overdraft (UWCD 2017a). Declining groundwater levels and over pumping in the southern portion of the basin has led to upwelling of brines from high chloride zones (UWCD 2017b). In the northern Pleasant Valley, streambed recharge with treated wastewater has caused increased salinity in the vicinity of the Arroyo Las Posas.

Localize Pumping Depressions

Within the West Las Posas subbasin, groundwater levels have dropped by 325 feet between 1950 and the early 1990s (LPUG 2012). This is raising concerns about subsidence, increased pumping lifts, decreased production and, eventually, dry wells (LPUG 2012). In addition, depressed groundwater levels may induce inflows of poor quality groundwater from surrounding areas.

Heavy Dependence on Imported Water by Urban Users

Imported water makes up roughly 20 percent of Ventura County water supply. Drought, earthquakes, and environmental demands on the SWP system could limit or even interrupt this water supply. Calleguas Municipal Water District, the primary imported water wholesaler in the region, has taken proactive steps to mitigate supply disruptions, including the construction of a local surface water storage reservoir (Lake Bard), construction of facilities to store surface water in local groundwater basins as well as facilities to

extract this water if needed, obtaining and storing spare pipe for emergencies, and building multiple interconnections with other water suppliers.

SECTION 10.5 TRENDS AND FUTURE CONDITIONS

As documented above, traditional water supplies are limited in the Ventura County area and it is necessary to develop different supplies for Ventura County. Trends going forward include:

- Increased use of brackish groundwater. Ventura County has abundant sources of groundwater in parts of the county, but particularly in the Calleguas Creek Watershed, much of it is too high in salts for municipal and agricultural use. Two brackish groundwater treatment plans are currently in operation in the county (Port Hueneme Water Authority's Brackish Water Reclamation Demonstration Facility, Camrosa Round Mountain Desalter). Other additional desalters are proposed. Use of this brackish groundwater would require connection to salinity management pipeline such as that operated by the Calleguas Municipal Water District.
- Delivery of SWP water to western Ventura County. The City of Ventura, UWCD, Casitas Municipal Water District, and Calleguas are coordinating a study to build a connection to the SWP.
- Increased use of recycled water. The City of Oxnard has constructed the Advanced Water Purification Facility, sometimes called the AWPF, which intensively treats wastewater to produce water suitable for irrigation, industrial processes, groundwater recharge, and could be used for potable water in the future. Many other water agencies in Ventura County are proposing increased use of recycled water and many are building infrastructure to deliver recycled water to agriculture and other irrigation users. In June 2016, the City of Ventura launched the Recycled Water Mobile Reuse Program whereby business, residents and other property owners in the City can use the City's recycled water fill station, fill their own containers, then haul the water for use within the City. Agencies are also actively pursuing groundwater recharge with recycled water and direct potable reuse of recycled water.
- Expanded conjunctive use. Conjunctive use is the coordinated and planned use and management of both surface water and groundwater resources to maximize the availability and reliability of water supplies. Conjunctive use involves planned and managed operation of a groundwater basin and a surface water storage system using coordinated conveyance infrastructure. When surface water is available it is recharged and stored in a groundwater basin for later use.
- Increased use of stormwater and dry weather runoff. Currently these are underutilized sources of supplies that could augment groundwater supplies. This will include stormwater detention in medians and along curbs, permeable pavement, and other means to retain and recharge runoff. Various agencies within Ventura County are planning and coordinating increased use of stormwater as documented in the Ventura Countywide Municipal Storm Water Resource Plan (September 2016).
- Ocean desalination. The City of Ventura, Channel Islands Beach Community Services District and Calleguas are exploring the feasibility of ocean desalination (City of Ventura 2016b; Citizens Journal 2015; Calleguas 2016).
- Increased call for urban water use efficiency. In May 9, 2016, Governor Brown issued Executive Order B-37-16, which called for the establishment of long-term water conservation measures. DWR and the SWRCB are to publicly release a draft long-term conservation framework by January 2017. This framework will include new water use targets based on strengthened

standards for indoor residential water use, outdoor irrigation, commercial/institutional/industrial water use, and distribution system water loss.

- Increased call for agricultural water use efficiency. Grant-funded efforts are being developed and implemented to provide financial incentives for equipment upgrades and similar efforts will likely continue, dependent upon funding availability.
- Changes in the operation of surface water supplies to protect endangered species. Water users are likely to pay more to build and maintain habitat protection measures. There will likely be less water available for agriculture and urban users because more flow will need to be left in waterways to protect habitat.

SECTION 10.6 KEY TERMS

The following key terms used in this report are defined as follows:

303(d) List. References section 303(d) of the Clean Water Act whereby states, territories, and tribes are to develop lists of waterbodies that are polluted or otherwise degraded and not meeting water quality standards. The 303(d) List is used to develop Total Maximum Daily Loads and or identify other mechanisms to improve water quality.

Acre-feet (AF). The amount of water necessary to cover an acre (43,560 square feet) to a depth of one foot, or 43,560 cubic feet, which is equivalent to 325,828 gallons.

Adjudication: With regard to water rights, a legal decision that allocates water to parties in proceedings and is overseen by a court-appointed watermaster.

Aquifer. A subsurface geological formation sufficiently permeable to conduct groundwater and capable of yielding usable quantities of water to a well or surface water spring.

Beneficial Uses. The various purposes for which water or aquatic ecosystems may be used. Examples include municipal and domestic water supply, agricultural water supplies, preservation and protection of areas of special biological significance resources, freshwater habitat, commercial and sport fishing, estuarine habitat, freshwater replenishment, groundwater recharge, industrial supply, marine habitat, fish migration, navigation, preservation of rare and endangered species, recreation, shellfish harvesting, and wildlife habitat.

Best Management Practice (BMP). Any program, technology, process, siting criteria, operational methods or measures, or engineered systems, which when implemented prevent, control, remove, or reduce pollution.

Conjunctive Use. The practice of storing surface water in a groundwater basin (typically in wet years) and withdrawing it from the basin in later (typically dry) years.

Critical Overdraft. As defined in the Sustainable Groundwater Management Act a basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts.

Coastal Zone. That portion of the land and water area of Ventura County as shown on the "Coastal Zone" maps adopted by the California Coastal Commission.

Groundwater Basin. An aquifer or system of aquifers that has reasonably well–defined boundaries and more or less definite areas of recharge and discharge. Refers to subsurface deposits and geologic formations that are capable of yielding usable quantities of water to a well or spring. The Sustainable Groundwater Management Act defines "basin" as a groundwater basin or subbasin identified and defined in Department of Water Resources Bulletin 118 or as modified pursuant to Section 10722 of the Act.

Integrated Regional Water Management. A comprehensive and collaborative approach for managing water to concurrently achieve social, environmental and economic objectives. This integrated approach delivers higher value for investments by considering all interests, providing multiple benefits, and working across jurisdictional boundaries at the appropriate geographic scale. Examples of multiple benefits include improved water quality, better flood management, restored and enhanced ecosystems, and more reliable water supplies" (Department of Water Resources 2014, California Water Plan Update 2013).

Mutual Water Company. A private corporation or association organized for the purposes of delivering water to its stockholders and/or members.

Permanent domestic water supply. A supply or supplies of potable water to be provided by a system or systems approved by a public health agency of the State of California or the Environmental Health Division of the Ventura County Resource Management Agency and the Ventura County Public Works Agency in a quantity sufficient to supply adequately and continuously the total domestic requirements of all consumers under maximum demand conditions.

Retail Water Supplier. A water agency that provides water to individual customers and end users such as homes and businesses.

Safe Yield. Commonly defined as the maximum quantity of water that can be continuously withdrawn from a reservoir or groundwater basin without causing adverse effects.

State Water Project. The SWP is the largest state-built, multi-purpose water project in the country. It was authorized by the California State Legislature in 1959, with the construction of most initial facilities completed by 1973. Today, the SWP includes 28 dams and reservoirs, 26 pumping and generating plants and approximately 660 miles of aqueducts. The primary water source for the SWP is the Feather River, a tributary of the Sacramento River. Storage released from Oroville Dam on the Feather River flows down natural river channels to the Sacramento-San Joaquin River Delta (Delta). While some SWP supplies are pumped from the northern Delta into the North Bay Aqueduct, the vast majority of SWP supplies are pumped from the southern Delta into the 444-mile-long California Aqueduct. The California Aqueduct conveys water along the west side of the San Joaquin Valley to Edmonston Pumping Plant, where water is pumped over the Tehachapi Mountains into Southern California.

Stormwater Pollution Control Plan. A plan identifying potential pollutant sources from a construction site and describing proposed design, placement and implementation of Best Management Practices to effectively prevent non-stormwater discharges and reduce pollutants in stormwater discharges to the storm drain system, to the maximum extent practicable during construction activities.

Stormwater Pollution Prevention Plan. A plan, as required by a State General Permit for Stormwater Discharges, identifying potential pollutant sources and describing the design, placement and implementation of Best Management Practices, to effectively prevent non-stormwater discharges and reduce pollutants in stormwater discharges during activities covered by the General Permit.

Stormwater Quality Master Plan. A plan that defines the strategy and describes the design, placement and implementation of Best Management Practices to effectively prevent non-stormwater discharges and reduce pollutants in stormwater discharges to the maximum extent practicable, for post-construction discharges to the stormdrain system.

Total Maximum Daily Load. A regulatory "pollution budget" based on a calculation of the maximum amount of a pollutant that can occur in a waterbody and still meet water quality standards so as to protect beneficial uses. The TMDL also allocates the necessary reductions to one or more pollutant sources. TMDLs can force the implementation of BMPs, infrastructure improvements, and other actions to limit pollution.

Watershed. A geographic region within which all water drains into a particular river, stream, or other waterbody. Also referred to as a catchment area.

Wholesale Water Supplier. A water agency that provides water to retail water agencies rather than directly providing water to the end user (homes, businesses, etc.).

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APPENDIX 10.A: SGMA/CALIFORNIA GOVERNMENT CODE

65350.5. REVIEW AND CONSIDERATION OF GROUNDWATER REQUIREMENTS

Before the adoption or any substantial amendment of a city's or county's general plan, the planning agency shall review and consider all of the following:

(a) An adoption of, or update to, a groundwater sustainability plan or groundwater management plan pursuant to Part 2.74 (commencing with Section 10720) or Part 2.75 (commencing with Section 10750) of Division 6 of the Water Code or groundwater management court order, judgment, or decree.

(b) An adjudication of water rights.

(c) An order or interim plan by the State Water Resources Control Board pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code.

65352. REFERRAL OF PROPOSED GENERAL PLAN UPDATES TO OTHER AGENCIES

(a) Before a legislative body takes action to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to all of the following entities:

(1) A city or county, within or abutting the area covered by the proposal, and any special district that may be significantly affected by the proposed action, as determined by the planning agency.

(2) An elementary, high school, or unified school district within the area covered by the proposed action.

(3) The local agency formation commission.

(4) An areawide planning agency whose operations may be significantly affected by the proposed action, as determined by the planning agency.

(5) A federal agency, if its operations or lands within its jurisdiction may be significantly affected by the proposed action, as determined by the planning agency.

(6) (A) The branches of the United States Armed Forces that have provided the Office of Planning and Research with a California mailing address pursuant to subdivision (d) of Section 65944, if the proposed action is within 1,000 feet of a military installation, or lies within special use airspace, or beneath a low-level flight path, as defined in Section 21098 of the Public Resources Code, and if the United States Department of Defense provides electronic maps of low-level flight paths, special use airspace, and military installations at a scale and in an electronic format that is acceptable to the Office of Planning and Research.

(B) Within 30 days of a determination by the Office of Planning and Research that the information provided by the Department of Defense is sufficient and in an acceptable scale and format, the office shall notify cities, counties, and cities and counties of the availability of the information on the Internet. Cities, counties, and cities and counties shall comply with subparagraph (A) within 30 days of receiving this notice from the office.

(7) A public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, that serves water to customers within the area covered by the proposal. The public water system shall have at least 45 days to comment on the proposed plan, in accordance with subdivision (b), and to provide the planning agency with the information set forth in Section 65352.5.

(8) Any groundwater sustainability agency that has adopted a groundwater sustainability plan pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code or local agency that otherwise manages groundwater pursuant to other provisions of law or a court order, judgment, or decree within the planning area of the proposed general plan.

(9) The State Water Resources Control Board, if it has adopted an interim plan pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code that includes territory within the planning area of the proposed general plan.

(10) The Bay Area Air Quality Management District for a proposed action within the boundaries of the district.

(11) A California Native American tribe that is on the contact list maintained by the Native American Heritage Commission and that has traditional lands located within the city's or county's jurisdiction.

(12) The Central Valley Flood Protection Board for a proposed action within the boundaries of the Sacramento and San Joaquin Drainage District, as set forth in Section 8501 of the Water Code.

(b) An entity receiving a proposed general plan or amendment of a general plan pursuant to this section shall have 45 days from the date the referring agency mails it or delivers it to comment unless a longer period is specified by the planning agency.

(c) (1) This section is directory, not mandatory, and the failure to refer a proposed action to the entities specified in this section does not affect the validity of the action, if adopted.

(2) To the extent that the requirements of this section conflict with the requirements of Chapter 4.4 (commencing with Section 65919), the requirements of Chapter 4.4 shall prevail.

65352.5. REQUIREMENT TO PROVIDE WATER-RELATED DOCUMENTS TO GENERAL PLAN AGENCY

(a) The Legislature finds and declares that it is vital that there be close coordination and consultation between California's water supply or management agencies and California's land use approval agencies to ensure that proper water supply and management planning occurs to accommodate projects that will result in increased demands on water supplies or impact water resource management.

(b) It is, therefore, the intent of the Legislature to provide a standardized process for determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies and the impact of land use decisions on the management of California's water supply resources.

(c) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, shall provide the planning agency with the following information, as is appropriate and relevant:

(1) The current version of its urban water management plan, adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.

(2) The current version of its capital improvement program or plan, as reported pursuant to Section 31144.73 of the Water Code.

(3) A description of the source or sources of the total water supply currently available to the water supplier by water right or contract, taking into account historical data concerning wet, normal, and dry runoff years.

(4) A description of the quantity of surface water that was purveyed by the water supplier in each of the previous five years.

(5) A description of the quantity of groundwater that was purveyed by the water supplier in each of the previous five years.

(6) A description of all proposed additional sources of water supplies for the water supplier, including the estimated dates by which these additional sources should be available and the quantities of additional water supplies that are being proposed.

(7) A description of the total number of customers currently served by the water supplier, as identified by the following categories and by the amount of water served to each category:

(A) Agricultural users.

(B) Commercial users.

(C) Industrial users.

(D) Residential users.

(8) Quantification of the expected reduction in total water demand, identified by each customer category set forth in paragraph (7), associated with future implementation of water use reduction measures identified in the water supplier's urban water management plan.

(9) Any additional information that is relevant to determining the adequacy of existing and planned future water supplies to meet existing and planned future demands on these water supplies.

(d) Upon receiving, pursuant to Section 65352, notification of a city's or a county's proposed action to adopt or substantially amend a general plan, a groundwater sustainability agency, as defined in Section 10721 of the Water Code, or an entity that submits an alternative under Section 10733.6 shall provide the planning agency with the following information, as is appropriate and relevant:

(1) The current version of its groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

(2) If the groundwater sustainability agency manages groundwater pursuant to a court order, judgment, decree, or agreement among affected water rights holders, or if the State Water Resources Control Board has adopted an interim plan pursuant to Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code, the groundwater sustainability agency shall provide the planning agency with maps of recharge basins and percolation ponds, extraction limitations, and other relevant information, or the court order, judgment, or decree. Sustainable Groundwater Management Act, and related provisions (as chaptered) Page 6 As Effective January 1, 2016 [rev. 1/15/2016]

(3) A report on the anticipated effect of proposed action to adopt or substantially amend a general plan on implementation of a groundwater sustainability plan pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

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Ventura County 2040 GENERAL PLAN

Chapter 11
Hazards and Safety

11 HAZARDS AND SAFETY

INTRODUCTION

This chapter summarizes the hazards and safety issues for the County of Ventura. It is organized into the following sections:

- Geologic and Seismic Hazards (Section 11.1)
- Flood Hazards (Section 11.2)
- Wildfire Hazards (Section 11.3)
- Aviation Hazards (Section 11.4)
- Hazardous Materials (Section 11.5)
- Noise and Vibration (Section 11.6)

SECTION 11.1 GEOLOGIC AND SEISMIC HAZARDS

Introduction

This section addresses the geology and soils conditions within Ventura County and the potential risk these conditions pose. Existing and potential problems related to geology and soils include seismic ground shaking, ground failure, and unsuitable soils. This chapter, which is consistent with the 2015 Ventura County Multi-Hazard Mitigation plan, summarizes the geologic and seismic conditions for the County of Ventura, which include the following areas of concern:

- Known Earthquake Faults
- Liquefaction
- Landslides
- Soil Erosion
- Unstable Geologic Units and Soil
- Expansive Soils

Major Findings

- There are several earthquake faults in the County of Ventura that have a status of "Active" or "Potentially Active," according to the California Geological Survey's Regional Geologic Hazards and Mapping Program. Fault designations within the County are subject to change as further evidence is received, providing either clearer proof of potential for activity or convincing geologic evidence of inactivity.
- The entire County of Ventura, including all cities, is susceptible to liquefaction, but the most vulnerable locations are along the Santa Clara River and in the Oxnard Plain.

Existing Conditions

Geologic Structures

Local physiography is dominated by the rugged slopes of the Transverse Ranges and reflects several water courses that run through the County. Three major riverine systems extend from the mountains to the ocean in the county: the Ventura River (watershed area is 227 square miles), the Santa Clara River, (watershed area is 1,634 square miles, approximately 60 percent of which is in Ventura County), and Calleguas Creek (watershed area is 343 square miles). Incised creeks, including Prince Barranca (from Hall Canyon) and Sanjon Barranca, dissect the hills to the north of the City of Ventura. Elevations range from sea level to 2,163 feet along the ridgeline of Red Mountain that lies between the Lake Casitas basin and the Pacific Ocean. The very large Ventura Oil Field runs along the axis of the Ventura Avenue Anticline. Residential and commercial development fills most of the coastal plain and the lowlands along the Ventura River.

Ventura County generally includes late Quaternary alluvial and fluvial sedimentary deposits, beach deposits, and artificial fill. These deposits are composed mainly of volcanic, marine and non-marine sedimentary rocks overlying a basement complex of granitic and metamorphic rock. The Oxnard Plain is immediately underlain by thick alluvial sediments, which overlie the older sedimentary and volcanic rocks. Young Quaternary deposits cover about 13 percent of the Ventura County Quadrangle. Most of the exposed valley alluvium is Holocene (<11,700 years old), with older Quaternary sediments locally exposed on the lower slopes of surrounding hills. Most Holocene sediments exposed along the Ventura River valley are wash (Qw), alluvial (Qya), and marine (Qym) deposits. Superficially, the alluvial fan units are composed of material ranging in size from boulders to clay, with silt and clay being the major components.

Expansive Soils

Soils within Ventura County vary, ranging from soils that are well-drained to excessively drained loamy sands to silty clay barns on alluvial fans and plains, and poorly drained loamy sands to silty clay barns in basins. The soils formed in alluvium derived predominantly from sedimentary rocks and to a lesser extent from basic igneous rocks. These generalized soil types have been derived from the more detailed soil survey of Ventura County and soils map. "Expansive soils" are soils that expand when wet and contract when dry. Historically, expansive soils have caused considerable damage in Ventura County. In the early 1960s, numerous homes were razed and many more were severely damaged in the Shadow Oaks Tract, adjacent to the City of Thousand Oaks. This area experienced soil expansion that cracked many two-inch-thick concrete slabs. As the damage started to appear in the new homes of this tract, many of them were vacated. Other houses were rented; a transient group of people occupied these and the neighborhood generally declined. In time, repairs saved some homes while others were replaced using sturdier construction techniques. The Shadow Oaks case was primarily responsible for the establishment of more stringent building code requirements. Since the initial damage in the 1960s, engineering studies have resulted in design techniques and procedures that provide for safe and economical construction on expansive soils. Local building ordinances have incorporated these techniques and procedures. This has allowed construction even in areas where the hazard is severe.

The resources most often affected by expansive soils are structures. Even though expansive soils are scattered throughout the County, their potential impact on structures is limited to just a few developed areas: portions of the Ojai Valley, the Camarillo Hills and areas around the community of Moorpark. The presence of expansive soils in these developed areas presents no threat, however, because soils tests and engineering solutions can overcome the dangers of expansive soils.

Mineral Resources

The hilly middle and southern onshore areas of the county are developed as oil fields (San Miguelito and Ventura Avenue Oil Fields). The large-scale structural feature responsible for petroleum accumulation is the Ventura Anticline, an east-west trending geologic structure 16 miles long, visible in the numerous rock outcrops in the rugged topography of the area. Within this feature, the primary petroleum-bearing unit is the Pico Formation, a sedimentary unit of turbidite sands of high porosity (16 to 20 percent). Oil was first discovered in the area in March 1919, reaching a depth of 3,498 feet. In 2009, an average of 11,600 barrels of oil per day was being drawn from the formation.

Earthquake Faults

The Transverse Range's geomorphic province is characterized by west-trending folds, thrust faults, and fault-bounded valleys. The structural framework of the region is generally considered the result of regional compression caused by right-lateral, strike-slip movement on the "Big Bend" segment of the San Andreas Fault. Major faults in the region are west-trending reverse faults. The significant faults summarized below are described in the 2015 Ventura County Multi-Hazard Mitigation Plan.

Malibu Coast Fault System

The Malibu Coast fault system includes the Malibu Coast, Santa Monica, and Hollywood faults. The system begins in the Hollywood area, extends along the southern base of the Santa Monica Mountains, and passes offshore a few miles west of Point Dume. The 1973 Point Mugu earthquake is believed to have originated on this fault system.

Oak Ridge Fault System

The Oak Ridge fault system is a steep (65 degrees) southerly dipping reverse fault that extends from the Santa Susana Mountains westward along the southerly side of the Santa Clara River Valley and into the Oxnard Plain. The system is more than 50 miles long on the mainland and may extend an equal or greater distance offshore. Several recorded earthquake epicenters on land and offshore may have been associated with the Oak Ridge fault system. Portions of the system are zoned by the state as active.

Pine Mountain Thrust Fault and Big Pine Fault

These two large faults occur in the mountainous portion of Ventura County, north of the Santa Ynez fault; the faults are located 9 and 16 miles north of the City of Ojai, respectively. The Pine Mountain thrust fault is reported to have ruptured the ground surface for a distance of 30 miles along its length during the northern Ventura County earthquakes of November 1852.

San Andreas Fault

San Andreas is the longest and most significant fault in California. While it does not run through Ventura County, it is located just north of the county boundary, in some cases less than a mile away. Because of clearly established historical earthquake activity, this fault has been designated as active by the State of California. The last major earthquake on the San Andreas Fault near Ventura County was the Fort Tejon earthquake of 1857, which was estimated at magnitude M 8.0 on the Mercalli Scale, causing the roof of Mission San Buenaventura to collapse and damaging its bell tower. It would have caused considerably

more damage if there had been structures in the county at the time. There is a 59 percent chance that a magnitude M 6.7 quake or larger will occur on this fault within the next 30 years.

San Cayetano–Red Mountain–Santa Susana Fault System

This fault system consists of a major series of north-dipping reverse faults that extend over 150 miles from Santa Barbara County into Los Angeles County. Within this system, the San Cayetano fault is the greatest hazard to Ventura County; it is a major, north-dipping reverse fault that extends for 25 miles along the northern portion of the Ventura Basin. The San Fernando earthquake of 1971 was caused by activity along this fault.

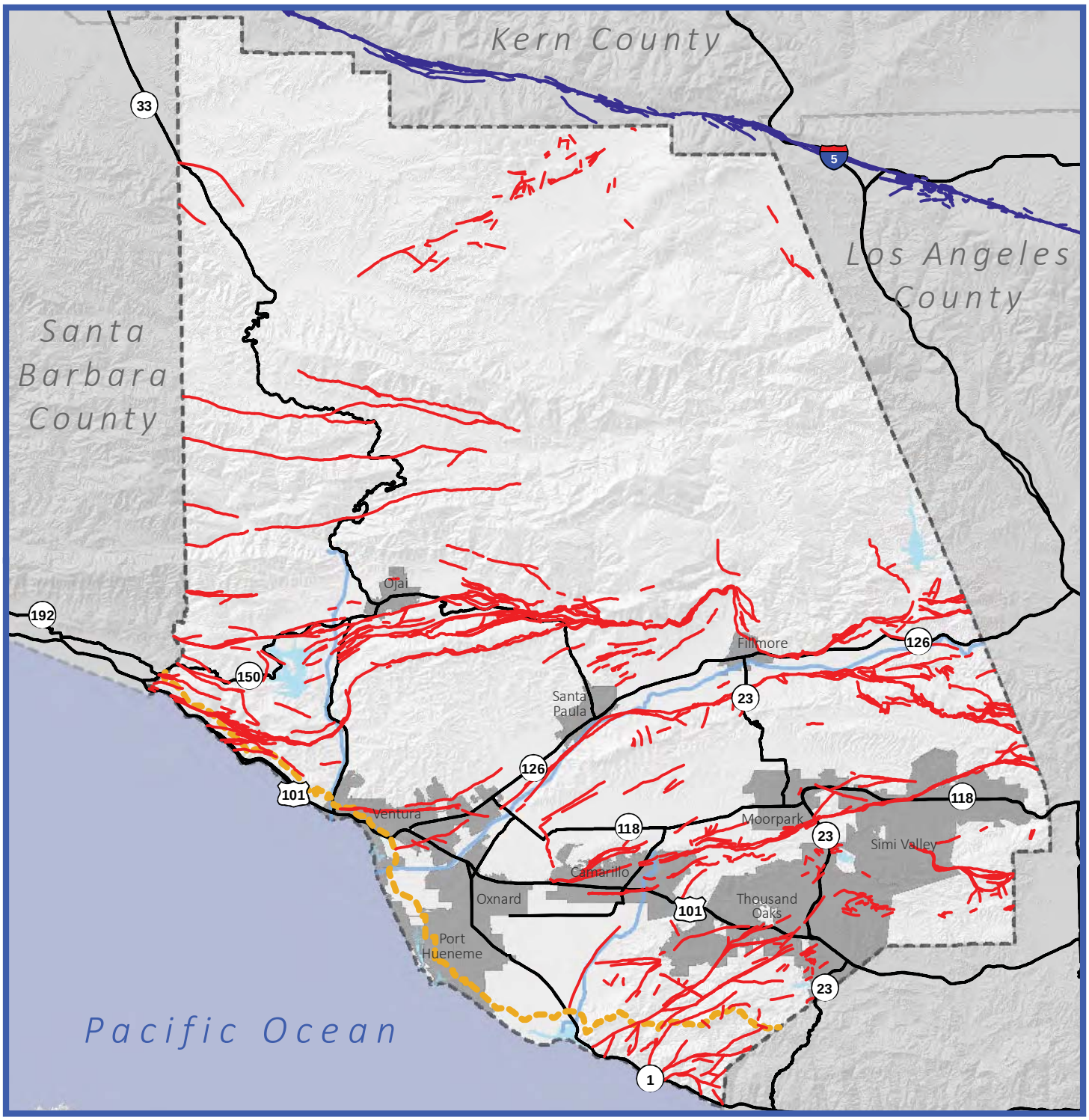
Simi–Santa Rosa Fault System

This fault system extends from the Santa Susana Mountains westward along the northern margin of the Simi and Tierra Rejada valleys and along the southern slope and crest of the Las Posas Hills to its westerly termination.

Ventura-Pitas Point Fault

The western half of this fault is known as the Pitas Point fault, and the eastern half is known as the Ventura fault. The Pitas Point fault extends offshore into the Pacific Ocean and is roughly 14 miles long. The Ventura fault extends into the communities of Ventura and Sea Cliff and runs roughly parallel to portions of U.S. 101 and State Route 126. The fault is roughly 12 miles long. The Ventura-Pitas Point fault is a left-reverse fault.

Figure 11-1 shows the general locations of faults in Ventura County.



Ventura County 2040 General Plan

Figure 11-1: Faults

Map Date: December 08, 2017

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2017.

0 7.5 15 Miles

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- Faults within Ventura County
- San Andreas Fault Zone
- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Ground Shaking

Seismically-induced ground shaking is a critical potential seismic hazard in Ventura County. The severity of ground shaking depends primarily upon the magnitude of the earthquake, the location of the fault with respect to the site, and the soil and/or rock conditions at the site. The two most common measures of earthquake intensity used in the United States are the Modified Mercalli Intensity Scale, which measures felt intensity, and peak ground acceleration (PGA), which measures instrumental intensity by quantifying how hard the earth shakes in a given location. Magnitude is measured by the amplitude of the earthquake waves recorded on a seismograph using a logarithmic scale. The following table, taken from the 2015 Ventura County Multi-Hazard Mitigation Plan, presents intensities that are typically observed at locations near the epicenter of earthquakes of different magnitudes, with interpretations of perceived shaking and potential damage to the built environment (Table 11-1).

TABLE 11-1
MAGNITUDE/INTENSITY/GROUND-SHAKING COMPARISONS

Magnitude	Instrumental Intensity	PGA (% g)	Perceived Shaking	Potential Damage
0 – 4.3	I	<0.17	Not Felt	None
	II – III	0.17 – 1.4	Weak	
4.3 – 4.8	IV	1.4 – 3.9	Light	
	V	3.9 – 9.2	Moderate	Very Light
4.8 – 6.2	VI	9.2 – 18	Strong	Light
	VII	18 – 34	Very Strong	Moderate
6.2 – 7.3	VIII	34 – 65	Violent	Moderate to Heavy
	IX	65 – 124	Very Violent	Heavy
7.3 – 8.9	X	124+	Extreme	Very Heavy
	XI			
	XII			

Source: United States Geological Survey, Earthquake Hazards Program: https://earthquake.usgs.gov/.

The effects of ground shaking in Ventura County depend on 1) conditions of the local geology influence events: solid bedrock is far less subject to intense shaking than loose sediment; 2) duration and intensity of the earthquake are subject generally to the size of the earthquake; and (3) distance (as the distance from the epicenter drops off so the intensity of the shaking decreases). The duration of strong ground motion is a function of magnitude, underlying geology, and distance from the fault. It is probably the single most important factor in producing excessive damage to structures. Long duration, reasonably high acceleration, and considerable amplitudes, such as would likely occur from a maximum seismic event on the Malibu Coast Fault system, are the combination that would cause the most damage to buildings in the County. A distant, maximum seismic event on the San Andreas Fault would produce less intensity of shaking; however, the duration of strong ground motion would be longer, resulting in a high potential for damage to high-rise flexible structures.

Distance is another important factor affecting the severity of ground shaking. Ground shaking from distant seismic events (greater than 40 miles) will be different than events within 10 miles of the County. For more distant, large events (greater than 7.5M), such as those that occur on the San Andreas Fault, the ground shaking will reflect a predominance of long period waves. This will have minimal effects upon structures less than three stories in height, but will affect flexible structures (typically high-rise buildings, and other

buildings taller than three stories), especially if the natural period of the building should coincide with that of the long period earthquake waves. The amplifications of such motions could result in serious damage to high-rise structures. Short period waves, however, are generally very destructive near the epicenter of moderate- and large-magnitude seismic events, causing severe damage predominately to low-rise rigid structures (less than three stories) not specifically designed to resist them.

The ground-shaking hazard exists throughout Ventura County, as it does throughout California. Certain areas may have increased ground shaking due to local geologic conditions, as well as, the location and orientation of the earthquake fault. The highest amplification of ground shaking occurs in areas with the greatest potential for long period wave shaking. Basically, this is the San Andreas Fault zone in the northern part of the county and the Oakridge Fault zone in the southern part of the county.

The areas with the greatest amplification of short period shaking are along the base of the hills, in minor river valleys and in the broken bedrock along fault lines such as the San Cayetano, Oak Ridge and Simi-Santa Rosa Faults. Slight to moderate amplification of short period oscillations may occur on terrace deposits or soft bedrock. However, certain locations may experience higher than normal ground shaking due to boundary effects or wave propagations. These materials are found in young hill areas such as South Mountain, Oak Ridge, Sulphur Mountain, the north coastal hill lands and the Piru area in the south half of the county. In the north half of the county, these are along the margins of the valley areas such as Hungry and Lockwood Valleys and north of Cuyama.

In addition to the forces causing horizontal movement, such as those that predominant along the San Andreas Fault, Ventura County and portions of adjacent areas are subject to compressional forces acting in north-south directions. These forces tend to compress or shorten the distance from the San Andreas Fault south to the coast. These compressional forces caused the San Fernando Earthquake of 1971, resulting in the thrusting of the southern margin of the San Gabriel Mountains several feet southward over the north margin of the San Fernando Valley. These forces also resulted in the 1994 Northridge Earthquake. Several faults in Ventura County have been formed by and are related to these same forces. These fault systems are described in the Surface Fault Rupture section below.

Southern Ventura County

The south half of the county is considered that portion southerly of the east-west projection of Nordoff Ridge located immediately north of Ojai Valley. Even though the historic record indicates that no strong earthquakes or surface displacement have occurred along the faults within the south half, the likelihood of the occurrence of one or more of such events within the next 50 to 100 years is not remote. The San Fernando Earthquake of 1971 occurred along a fault having little historic record of activity. Several of the faults within the south half of the county, such as Santa Susana and San Cayetano, are subject to similar tectonic forces as those that caused the San Fernando Earthquake. Crustal deformation (shortening) resulting in earthquakes will continue into the indefinite future. It is probable that earthquakes of magnitude 6 or larger will occur in the south half of the county, in the nearby offshore areas, and along the San Andreas in the northern portion of the county.

According to the "Geology and Mineral Resources Study of Southern Ventura County" (CDMG 1972) prepared by the State Division of Mines and Geology in cooperation with the Ventura County Department of Public Works, the earthquake history of the south half of the county is dominated by small to moderate shocks. No earthquake greater than magnitude 4.7 has been recorded in Ventura County, or the immediate offshore area, since 1934, when adequate instrumental records became available. These relatively minor shocks have caused local damage but no recorded loss of life. A review of the earlier, less accurate record

from 1769 to 1934 suggests a similar history for the south half, although there were significant earthquakes in 1812, 1857, 1925, 1971, and 1994 that caused structural damage in specific areas of the south half of the county.

Northern Ventura County

The most important faults in the vicinity of the northern county area are the San Andreas, Big Pine, San Gabriel, and Frazier Mountain Thrust, all of which converge at the northeast corner of Ventura County. All of these faults, except perhaps the Frazier Mountain Thrust Fault, are considered to be active (i.e., are potential focal points for the occurrence of earthquakes and displacement of the ground surface). Other mapped and unknown faults within the north half may also prove to be active by future displacement or detailed investigations. The earthquakes of November 1852 were accompanied by about 30 miles of surface faulting in Lockwood Valley. The exact location of the surface breaks is unknown, but geologic evidence and reports indicate that it may have been along the Big Pine Fault, a major left-lateral fault with some oblique slip (subject to both horizontal and vertical displacement).

Several other faults found in the Lockwood Valley area have had recent movement identified by virtue of their cutting of terrace deposits and offset of other faults. These faults range from several hundred to a few thousand feet in length. Some of them indicate the region has recently undergone, and is probably still undergoing compression along north-south directions.

Geologic and survey evidence indicate that stress is building up along the San Andreas Fault to the north. It is just a question of time until the fault in this area again displaces; the resulting earthquake will probably be severe. Prediction of when displacement will occur is not possible at this time; however, it is likely that it will occur within 100 years and possibly much sooner.

Earthquakes and strong-to-severe ground shaking originating along faults within the north half is highly possible, but again, prediction of when this will happen is not possible. The historic record shows that the north half has experienced several severe shocks originating along faults both within and immediately outside of the county.

All of Ventura County is vulnerable to ground shaking from an earthquake and the entire county is in the severe, violent or extreme ground shaking potential categories. Table 11-2 provides information on the percentage of the county's population by jurisdiction that could be affected by severe, violent, or extreme ground shaking.

During severe, violent and extremely violent ground shaking events buildings can be damaged by the shaking itself or by the ground beneath them settling to a different level than it was before the earthquake (subsidence). Buildings can even sink into the ground if soil liquefaction occurs. Liquefaction is the mixing of sand or soil and groundwater (water underground) during the shaking of a moderate or strong earthquake. Buildings can also be damaged by strong surface waves making the ground heave and lurch. Any buildings in the path of these surface waves can lean or tip over from all the movement. The ground shaking may also cause landslides, mudslides, and avalanches on steeper hills or mountains, all of which can damage buildings and hurt people.

TABLE 11-2
PERCENT OF COUNTY POPULATION AFFECTED BY EARTHQUAKE RELATED GROUND SHAKING
(Ventura County, California)

Jurisdictional Area	Severe	Violent	Extreme
Camarillo	–	97.40	2.60
Moorpark	–	89.20	10.80
Ojai	–	100	–
Oxnard	–	20.40	79.6
Santa Paula	–	0.10	99.9
Simi Valley	0.02	49.60	50.3
Thousand Oaks	0.70	99.30	–
Ventura	–	25.30	74.4
Unincorporated	2.90	70.90	26.0
Fillmore	–	–	100
Port Hueneme	–	–	65.9

Source: Ventura County Multi-Hazard Mitigation Plan, September 2015.

Ground Failure

Seismically-induced ground failure includes liquefaction, differential compaction, ground lurching, ground cracking, and earthquake-induced slope failures.

Liquefaction

Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure, and causing some of the empty spaces between granules to collapse. Poor water pressure may also increase sufficiently to cause the soil to behave like a fluid for a brief period and cause deformations. Liquefaction causes lateral spreads (horizontal movements of commonly 10 to 15 feet, but up to 100 feet), flow failures (massive flows of soil, typically hundreds of feet, but up to 12 miles), and loss of bearing strength (soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property. Figure 11-2 shows areas prone to liquefaction within the County.

The entire county, including all cities, is susceptible to liquefaction, but the most vulnerable locations are along the Santa Clara River and in the Oxnard Plain. The following percentages of the population live in liquefaction susceptible areas: Camarillo, 23.10 percent; Fillmore, 97.81 percent; Moorpark, 48.64 percent; Ojai, 11.48 percent; Oxnard, 99.99 percent; Port Hueneme, 100 percent; Santa Paula, 34.74 percent; Simi Valley, 42.10 percent; Thousand Oaks; 2.79 percent; Ventura, 40.26 percent; and Unincorporated Ventura County, 32.23 percent.

Liquefaction can result in settling of roadways, rupture of underground pipelines and cables, and shifting of building foundations. As foundations lose support, buildings and other objects on the ground surface can settle, tilt, and collapse. Lightweight buried structures can float to the surface. Four types of failure commonly result from liquefaction: lateral spreading, flow failure, ground oscillation and loss of bearing strength.

Low coastal terraces could be subject to liquefaction where groundwater is less than 15 feet from the surface. The coastal area of the Oxnard Plain may be particularly prone to liquefaction. A special study

completed after the February 21, 1973, Point Mugu earthquake indicates that the areas south of the Santa Clara River, generally between Gonzales Road and Oxnard Shores, have a moderate to low liquefaction potential, while the Preble and Olivas communities, and Channel Islands Harbor extending southward to Arnold Road, have a moderate to high liquefaction potential.

The Central Coast coastal zone is the most heavily populated area along the Ventura coastal zone. Several large industries and utilities are located there, including Southern California Edison Company's Mandalay and Ormond Beach power plants, Oxnard and Ventura wastewater treatment plants, and three harbors. Liquefaction from severe ground shaking could cause major damage and disruption of services.

Differential Compaction/Consolidation or Settlement

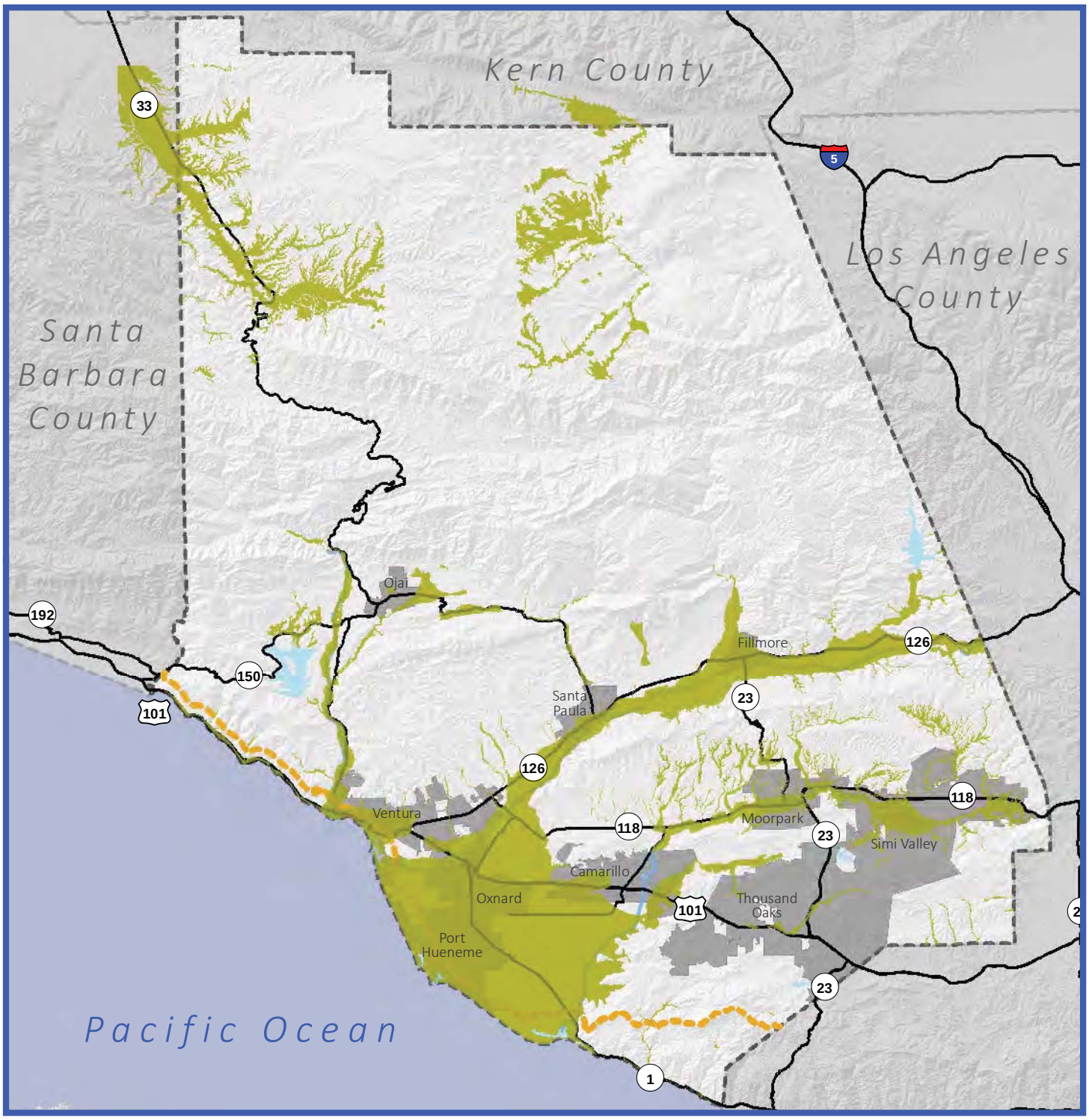
Collectively, differential compaction and differential consolidation are known as "differential settlement." Differential compaction is caused by differences in soil types and densities in adjacent materials, leading to varying degrees of settlement when subjected to loads (e.g., buildings or vehicles). Differential consolidation occurs in saturated or nearly saturated soils when excess water pressure in one area is forced to other areas with lower pressure.[1] Differential settlement is a potential hazard in parts of Ventura County. The significance of the hazard at any particular site can be determined only by a site-specific geotechnical investigation.

Ground Cracking, Ground Lurching and Lateral Spreading

Both ground lurching and cracking are secondary effects of strong-to-moderately strong ground shaking and also may be associated with liquefaction. Ground cracking usually occurs in near-surface materials, reflecting the differential compaction or liquefaction of underlying materials. The potential for ground cracking exists especially in areas of the county that have a moderate -to-high potential for liquefaction as well as in areas on known artificial fill. Ground lurching can result when soft, water-saturated surface soils are thrown into undulatory motion. Figure 11-2 shows areas prone to liquefaction within the county.

Lateral spreading is referred to as limited displacement ground failure, and is often associated with liquefaction. Compact surface materials may slide on a liquefied, or low shear strength, layer at shallow depth, moving laterally several feet down slopes of less than two degrees. Lack of adequate subsurface data prohibits delineating areas in Ventura County prone to lateral spreading. Such a hazard may be present where conditions conducive to shallow liquefaction exist or where soils exist along the bluffs adjacent to the Ventura River.

[1] Soil consolidation relates to forcing water out of soil pores, whereas soil compaction relates to forcing air out of soil pores. Consolidation is the process by which soil particles, under saturated or nearly saturated conditions, are packed more closely together under the application of static loading (e.g. buildings), resulting from gradual drainage of water from soil pores. Consolidation is a natural and gradual process that takes years, compared to soil liquefaction, which results from earthquakes/strong ground shaking.



Ventura County 2040 General Plan

Figure 11-2
Liquefaction

Map Date: July 18, 2016

Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 7.5 15 Miles

N

- Liquefaction
- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Surface Fault Rupture

Surface fault rupture is the differential movement of two sides of a fault at the earth's surface. Displacement along faults—both in terms of length and width—varies but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface fault rupture can cause severe damage to linear structures, including railways, highways, pipelines, tunnels, and dams. The likelihood of surface rupture on a given fault can be determined principally by studying the seismic history of the fault and reviewing geologic evidence, which suggests historic or prehistoric surface rupture. Many past studies have shown that future surface fault rupture is most likely to occur where the trace ruptured before, especially so if there is evidence of repeated and significant displacement on the trace. Faults affecting Ventura County are described under Earthquake Faults earlier in this section.

Seiche

A seiche can be considered very similar to a tsunami with the difference being that the water waves are generated in a closed or restricted body of water such as a lake or within a harbor. The most common seiche experienced by county residents in most swimming pools occurred during the 1994 Northridge earthquake. The shaking of an earthquake (or other vibration) can result in large and destructive oscillations that produce waves tens of feet above normal lake (water) level. In harbors (such as Ventura Harbor, Mandalay Bay and the Port of Hueneme) and closed or restricted bays, these waves can destroy harbor and shore facilities. Indirectly, tsunamis, can set up smaller internal oscillations in bays and harbors by causing a rapid change in sea level or more commonly by the wave itself. These seiches are very similar to tsunamis, but the waves are usually smaller and of lower energy. The trigger mechanism for seiche waves is similar to tsunamis wave generation.

The extent of most seiches is small, usually no more than ten to twenty feet above water level, and the duration is short, usually only a few minutes. However, a landslide can displace a wave that could travel hundreds of feet up the opposite shore of a body of water. Also, tsunami-caused seiches can last for many hours due to the possible rejuvenation of the seiche by each passing tsunami crest; however, each seiche would last only a few minutes and be of decreasing severity.

There is no way to alleviate the effects of possible seiches except by prohibiting construction within the hazard area. Typically, where practical, the structure is moved to a slightly higher elevation to reduce the damage potential and amount. Due to the indefinite nature of the triggering mechanisms, it seems doubtful that enough information will ever be known for general prediction of the hazard or predicting accurate seiche uprush limits for planning purposes.

There is no record of a seiche occurring in Ventura County. As such, the actual threat that is posed by seiches in Ventura County is small, in that it is probably the most remote of the hazards studied, although it may not be the least severe.

Erosion

Erosion is the removal of soil and rock from the landscape as a result of wind, water, ice. Erosion occurs as a result of three processes: detachment, entrainment, and transport. Detachment results in particles losing cohesion with surrounding material via a medium that moves the particles, most commonly wind, water, or ice. Entrainment is the lifting of particles, and transport is their movement. The process of erosion eventually ends in the deposition of the eroded particles by some factor that reduces their velocity until they settle.

Erosion can result in a variety of hazards and issues within the planning area. Wind-related erosion and wind-blown sand can cause visibility problems and damage architectural coatings and building material. Erosion due to rain or other fluvial events can deposit sediments in downstream water bodies, possibly changing drainage patterns and affecting biological regimes. Recently-graded soils are most susceptible to erosion. Unpaved roadways and other areas not stabilized by vegetation or otherwise capped can also be eroded. Erosion can also result in the loss or dispersion of nutrient rich topsoil.

Landslide

Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface, or for the dislodged mass itself. The term is used for varying phenomena, including mudflows, mudslides, debris flows, rock falls, rock slides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hillside and mountainous areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stable geologic conditions.

Additionally, landslides often occur together with other natural hazards, thereby exacerbating conditions, as described below:

- Shaking due to earthquakes can trigger events ranging from rock falls and topples to massive slides.
- Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides.
- Wildfires can remove vegetation from hillsides, significantly increasing runoff and landslide potential.
- Landslides into a reservoir can indirectly compromise dam safety; a landslide can even affect the dam itself.

Another type of landslide occurs in areas cut by perennial streams. As floodwaters erode channel banks, rivers have undercut clay-rich sedimentary rocks along their south bank, thereby destabilizing the ground and causing the ground above it to slide.

Landslides have occurred in areas along the Rincon Fault, hillsides south of the Santa Clara River, and the east side of the Ventura River. In recent years, the most damaging landslides in Ventura County have occurred in the coastal community of La Conchita, just southeast of the Santa Barbara county line. La Conchita has been the site of multiple non-earthquake-induced landslides.

La Conchita was built on ground that had been graded by the Southern Pacific Railroad after a 1909 landslide slid into the railroad tracks. The land was intended to be a buffer zone between the retreating and eroding cliff and the Pacific Ocean. However, it was subdivided into smaller residential lots in 1924. Along the bluff face above La Conchita, the upper portion of the bluff is underlain by two rock formations separated by the Red Mountain fault.

The bluff above La Conchita has been associated with a variety of landslide activity, with historical accounts dating back to 1865. More recently, two small slides occurred in 1988 and 1991, followed by large movements of the same landslide mass in 1995 and 2005. The 1995 landslide, which occurred one

month after the heaviest rainfall of an extraordinarily wet year, was considered to be a deep, slow-moving landslide. This landslide destroyed nine houses. The January 2005 event was a shallow and highly fluid remobilization of the same material that carried a thick layer of dry, viscous material. This landslide, which occurred at the peak of an extremely wet 2-week period, killed 10 people and destroyed 13 homes. Approximately 400,000 tons of debris cascaded down the slope behind the La Conchita housing development.

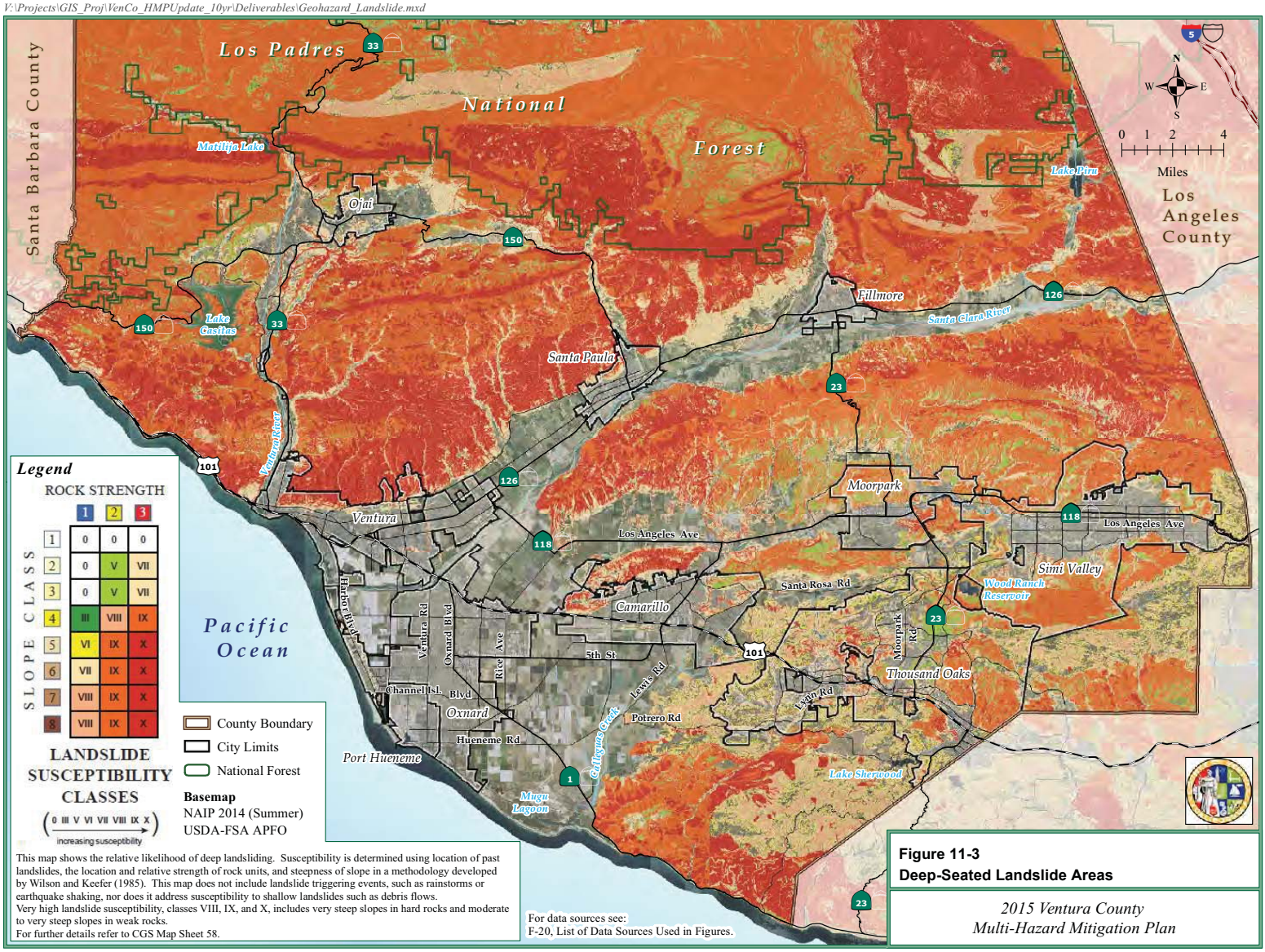
Slope failures are associated with landslides, and occurred along shattered ridge crests of the Santa Susana Mountains during the 1994 Northridge Earthquake.

In 2011, the California Geological Survey (CGS) created the "Susceptibility to Deep-Seated Landslides" grip map, covering the entire state of California. The map shows the relative likelihood of deep landsliding based on a methodology developed by Wilson and Keefer (1985), and uses the following information:

- Landslide inventory, including all previously mapped deep-seated landslides in California (approximately 57,000) that were assigned the lowest value of rock strength.
- Geology from a general geologic statewide map and a detailed geologic map over the most populated areas.
- Rock strength to measure the resistance to landsliding, developed from geologic and landslide inventory maps. Geologic units were classified into three rock strength units: (1) highest rock strength unit, which includes crystalline rocks and well-cemented sandstones; (2) intermediate rock strength unit, including weakly cemented sandstones; and (3) weakest rock strength unit, including shale, claystone, pre-existing landslides, and unconsolidated surficial units.
- Slope, including eight slope classes ranging from nearly flat (less than 3 degrees) to very steep (greater than 40 degrees).
- Average annual rainfall in inches.
- Earthquake shaking potential.

As shown on Figure 11-3, the factors listed above were combined to create classes of landslide susceptibility. These classes express the generalization that on very low slopes, landslide susceptibility is low even in weak materials, and that landslide susceptibility increases with slope and in weaker rocks. Very high landslide susceptibility—classes VIII, IX, and X—includes very steep slopes in hard rocks and moderate to very steep slopes in weak rocks. In Ventura County, areas most susceptible to landslide are generally located on the edge of cities, outside of the cities, and in the northern portion of the county. Each city in the county, with the exception of Port Hueneme, has some land mass in the class VII, IX, and X landslide susceptibility zones. Approximately 1,110 square miles of Ventura County located in the Very High Landslide Susceptibility area, including 175 square miles in class VIII, 670 square miles in class IX, and 265 square miles in class X.

V:\Projects\GIS_Proj\VenCo_HMPUpdate_10yr\Deliverables\Geohazard_Landslide.mxd



This map shows the relative likelihood of deep landsliding. Susceptibility is determined using location of past landslides, the location and relative strength of rock units, and steepness of slope in a methodology developed by Wilson and Keefer (1985). This map does not include landslide triggering events, such as rainstorms or earthquake shaking, nor does it address susceptibility to shallow landslides such as debris flows.
Very high landslide susceptibility, classes VIII, IX, and X, includes very steep slopes in hard rocks and moderate to very steep slopes in weak rocks.
For further details refer to CGS Map Sheet 58.

For data sources see:
F-20, List of Data Sources Used in Figures.

Figure 11-3
Deep-Seated Landslide Areas

2015 Ventura County
Multi-Hazard Mitigation Plan

Subsidence

"Subsidence" is any settling or sinking of the ground surface over a regional area arising from surface or subsurface causes, such as earthquakes or groundwater, or oil and gas extraction. The damage caused by subsidence is generally not of an immediate or violent nature. Except when prompted by seismic shaking, the compaction of alluvium and settling of the land surface is a process that occurs over several tens to thousands of years and over a large area.

Subsidence that results from groundwater withdrawal can be responsible for numerous structural effects. Most seriously affected are long, linear surface infrastructure facilities that are sensitive to slight changes in gradient or slope. Drainage courses, roads, rail lines, wells, oil/gas pipelines, and utility (water, gas, power, and sewer) lines are potentially the most vulnerable to damage. Basically, the process by which this most important type of subsidence occurs involves the extraction of a large quantity of water from an unconsolidated aquifer. As water is removed from the aquifer, the total weight of the overburden that the water used to help to support is placed on the alluvial structure; the overburden can then become compressed. If fine-grained silts and clays make up portions of the aquifer, the additional load can squeeze the water out of these layers and into the coarser grained portions of the aquifer. All of this compaction produces a net loss in volume and hence a depression in the land surface.

Several areas within Ventura County are experiencing subsidence due to groundwater extraction including the Oxnard Plain, the Las Posas Valley, and the Santa Clara River Valley.

Regulatory Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972 (renamed the Alquist-Priolo Earthquake Fault Zoning Act in 1994). The Act's primary purpose is to mitigate the fault rupture hazard on human life and property by limiting the potential for siting human occupancy structures across an active fault trace.

The Act requires the State Geologist (Chief of the California Geological Survey) to delineate Earthquake Fault Zones along faults that are "sufficiently active and well defined." These faults show evidence of Holocene surface displacement along one or more of their segments (sufficiently active) and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface (well defined). The boundary of an Earthquake Fault Zone is generally about 500 feet from major active faults, and 200 to 300 feet from well-defined minor faults. The Act dictates that cities and counties withhold development permits for sites within an Earthquake Fault Zone until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting.

Alquist-Priolo maps are distributed to all affected cities and counties for planning and controlling new or renewed construction. Local agencies must regulate most development projects within these zones, including all land divisions and most structures for human occupancy. State law exempts single-family wood-frame and steel-frame dwellings less than three stories that are not part of a development of four units or more. However, local agencies can be more restrictive.

Seismic Hazards Mapping Act

The Alquist-Priolo Earthquake Fault Zoning Act addresses the hazard of surface fault rupture but is not directed toward other earthquake hazards. Recognizing this, the State passed the Seismic Hazards Mapping Act (SHMA) in 1990, which addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction and seismically induced landslides. The California Geological Survey (CGS) is the principal state agency charged with implementing the Act. Pursuant to the SHMA, the CGS is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides and other ground failures. The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the CGS are referred to as "zones of required investigation." Site-specific geological hazard investigations are required by the SHMA when construction projects fall within these areas.

Pursuant to the 1990 SHMA, the CGS has been releasing seismic hazards maps since 1997, with emphasis on the large metropolitan areas of Los Angeles, Orange, and Ventura counties. To date, the CGS has collected data for "zones of required investigation" for most of the county.

California Building Code

The California Building Standards law states that every local agency enforcing building regulations must adopt the provisions of the California Building Code (CBC) within 180 days of its publication; however, each jurisdiction can require more stringent regulations issued as amendments to the CBC. The publication date of the CBC is established by the California Building Standards Commission and the code is known as Title 24 of the California Code of Regulations. In the past, the CBC was modeled on the Uniform Building Code (UBC); however, beginning with the 2007 version, the CBC is now modeled after the International Building Code (IBC). Building codes provide minimum requirements to prevent major structural failure and loss of life related to floods, fires, and earthquakes.

The County of Ventura adopted the 2013 CBC through Ordinance 4456 on January 9, 2014. The 2013 CBC bases its seismic design criteria on maximum considered ground motion through maps prepared by the United States Geological Survey (USGS) for the National Seismic Hazard Mapping Program (see Section 1613). Chapter 18 (Soils and Foundations) and Appendix J (Grading) of the 2013 CBC have also been adopted by the County to establish grading and foundation standards. Standards include requirements for excavation, fill, footings, retaining walls, and pier and pile foundations. Pursuant to the CBC, soils reports are required to be submitted prior to issuance of grading or depending on the permit type, other permits that allow ground disturbance.

Real Estate Disclosure Act

Since June 1, 1998, the Natural Hazards Disclosure Act has required that sellers of real property and their agents provide prospective buyers with a *Natural Hazard Disclosure Statement* when the property being sold lies within one or more State-mapped hazard areas. If a property is located in a Seismic Hazard Zone as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers. The law specifies two ways that this disclosure can be made. One is to use the Natural Hazards Disclosure Statement as provided in Section 1102.6c of the California Civil Code. The other way is to use the Local Option Real Estate Disclosure Statement as provided in Section 1102.6a of the California Civil Code. The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement only if the Local Option Statement contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement.

Unreinforced Masonry Laws

Enacted in 1986, the Unreinforced Masonry Law (Section 8875 et seq. of the California Government Code) required all cities and counties in Seismic Zone 4 (zones near historically active faults) to identify potentially hazardous unreinforced masonry (URM) buildings in their jurisdictions, establish a URM loss reduction program, and report their progress to the State by 1990. The owners of such buildings were to be notified of the potential earthquake hazard these buildings pose.

Local

2005 Ventura County General Plan

The General Plan covers geologic and seismic hazards in Chapter 2, Hazards. Sections 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, and 2.8 includes goals, policies, and programs related to geologic and seismic hazards. The following Area Plans also contain applicable goals and policies related to geologic and seismic hazards:

- Coastal Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for geologic and seismic hazards. These can be found in the following sections: 10. Fault Rupture Hazard; 11. Ground Shaking Hazard; 12. Liquefaction Hazards; 13. Seiche and Tsunami Hazards; 14. Landslide/Mudflow Hazards; 15. Expansive Soil Hazards; and 16. Subsidence Hazard.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates geologic and seismic hazards through Section 8178-4 Mitigation of Potential Hazards

Key Terms

Alluvium. Loose, unconsolidated soil or sediments, which has been eroded, reshaped by water in some form, and redeposited in a non-marine setting.

Anticline. Anticlines are folds in which each half of the fold dips away from the crest.

Fluvial. Refers to processes associated with rivers and streams and the deposits and landforms created by them.

Holocene. The geological epoch that began after the Pleistocene at approximately 9,700 BCE (before common era) and continues to the present time.

Liquefaction. The process by which water-saturated, unconsolidated sediments are transformed into a substance that acts like a liquid, often in an earthquake.

Pleistocene. The geological epoch that lasted from about 2,588,000 to 11,700 years ago, spanning the earth's recent period of recent glaciations.

Quaternary. The current and most recent of the three periods of the Cenozoic Era. It follows the Neogene Period and span from 2.588 (±0.005) million years ago to the present time. The Quaternary period is divided into two epochs: the Pleistocene and the Holocene.

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SECTION 11.2 FLOOD HAZARDS

Introduction

This section addresses the flood hazard conditions within Ventura County and the potential risk these conditions pose. Existing and potential problems related to flood hazards include annual flooding, dam failure, and seismic-induced flooding. This section summarizes the flood hazard conditions for the County of Ventura, which include the following areas of concern:

- General Flooding
- Dam Failure Inundation
- Levee Failure Inundation
- Post-Fire Debris Flow
- Tsunami

These summaries are derived from the County's 2015 Multi-Hazard Mitigation Plan (VCMHMP). Consistent with the VCMHMP, each section includes explanations of the nature, history, location, extent, and probability associated with each type of flood hazard.

Major Findings

- Three types of flood risk have been mapped in Ventura County: upland, broad floodplain, and coastal. The Ventura County Digital Flood Insurance Rate Map (DFIRM) identifies the following Special Flood Hazard Area (SFHAs): 7.8 square miles in the 100-year "coastal high hazard" flood zone; 78.4 square miles in the 100-year flood zone; and 51.7 square miles in the 500-year flood zone.
- According to the Federal Emergency Management Agency's (FEMA) definition, ten dams in Ventura County are considered high hazard (i.e., over 1,000 acre-feet of storage capacity). Eight of these are under State jurisdiction and are inspected annually to ensure that they are in good operating condition. There is no record of a failure of any dam located in Ventura County.
- The Ventura County Watershed Protection District (VCWPD) monitors nine provisionally accredited levees (PALs) in the Calleguas Creek, Santa Clara River, and Ventura River watersheds. Most of these levees, which protect a total 5.2 square miles of land in the county, require rehabilitation to be fully compliant with FEMA levee certification regulations.
- Because of its history of wildfires, Ventura County is susceptible to potentially hazardous debris flows. The susceptibility affects areas adjacent to and downslope of these burn areas, especially in locations that are in ravines and canyons, and at the mouths of canyons.
- Coastal areas in Ventura County are subject to inundation resulting from tsunamis, including areas within the cities of Oxnard, Port Hueneme, and Ventura and unincorporated areas south of Ormond Beach and around Mugu Lagoon.

Existing Conditions

General Flooding

Nature

A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. Flooding can also occur in areas in low lying areas that have no outlet. In coastal areas, flooding may occur when high winds or tides result in a surge of seawater into areas that are above the normal high tide line.

A floodplain is the area adjacent to a watercourse or other body of water that is subject to recurring floods. Floodplains may change over time as a result of natural processes, changes in the characteristics of a watershed, or human activity such as construction of bridges or channels. In areas where flow contains a high sediment load, such as along the Santa Clara River in Ventura County, the course of a river or stream may shift dramatically during a single flood event. Coastal floodplains may also change over time as waves and currents alter the coastline. Secondary hazards from floods can include the following:

- Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features.
- Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and from debris carried by floodwaters. Such debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects.
- Destruction of crops, erosion of topsoil, and deposition of debris and sediment on croplands.
- Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed.

In areas such as Ventura County that do not have extended periods of below-freezing temperatures or significant snowfall, floods usually occur during the season of highest precipitation or during heavy rainfalls after prolonged dry periods. Ventura County is dry during the late spring, summer, and early fall and receives most of its rain during the winter months. The rainfall season extends from October 1st through April 15th, with approximately 95 percent of the annual rainfall occurring during this period. The average annual rainfall in Ventura County ranges from less than 8 inches in the Cuyama Valley in northwestern Ventura County to 38 inches in the Ventura River watershed west of Ojai (as measured in the general area of Matilija Dam). Along the coast near Oxnard, Ventura, Simi Valley, and Thousand Oaks, the average rainfall is approximately 14 inches.

The prevailing weather patterns during the winter and the orientation of the mountain ranges in the northern half of the county combine to produce extremely high-intensity rainfall. The peak historic rainfall intensity recorded by a Ventura County rain gage occurred on February 12, 1992. A rainfall intensity of approximately 4 inches per hour was measured during a 15-minute period at the Wheeler Gorge gage, approximately 3 miles northeast of Matilija Dam. Such intensities can produce severe flooding conditions, particularly in small watersheds where flash floods are likely.

Flash floods are particularly dangerous. The National Weather Service (NWS) defines a flash flood as one in which the peak flow travels the length of a watershed within a 6-hour period. These floods arise when

storms produce a high volume of rainfall in a short period over a watershed where runoff collects quickly. They are likely to occur in areas with steep slopes and sparse vegetation. They often strike with little warning and are accompanied by high-velocity flow.

History

Damaging floods in Ventura County were reported as early as 1862. A 1945 report by the Ventura County Flood Control District reported that floods of sufficient magnitude to cause extensive damage occurred in 1862, 1867, 1884, 1911, 1914, 1938, 1941, 1943, and 1944.

The largest and most damaging natural floods recorded in the Santa Clara and Ventura watersheds occurred in January and February of 1969. The January flood was a result of the highest monthly precipitation total ever recorded in Ventura County at that time. The February flood was a result of intense rainfall similar in magnitude to the rainfall that caused the record-breaking flood in January. The combined effects of the 1969 floods were disastrous: 13 people lost their lives, and property damage was estimated at $60 million (1969 dollars). Homes in Casitas Springs, Live Oak Acres, and Fillmore were flooded, and 3,000 residents in Santa Paula and several families in Fillmore were evacuated twice. A break in the Santa Clara River levee threatened the City of Oxnard. Agricultural land, primarily citrus groves, was seriously damaged or destroyed. All over the county, transportation facilities, including roads, bridges, and railroad tracks, were damaged. The Fillmore, Oak View, and Ventura sewage treatment plants were severely damaged and dumped raw sewage into the Santa Clara and Ventura rivers. The untreated sewage polluted the rivers and the beaches at their outlets into the ocean. In addition, sewer trunk lines were broken along the Ventura River and its tributary, San Antonio Creek. Suspended sediment concentrations and discharge in many streams greatly exceeded any previously measured levels in the flood-affected areas. Suspended sediment concentrations reached a maximum of about 160,000 milligrams per liter in the Santa Clara River at Saticoy, and the maximum daily sediment discharge was 20 million tons during the storm peak.

In 1980, Calleguas Creek breached its levee in the Oxnard Plain and caused approximately $9 million (in 1980 dollars) in damage to the Point Mugu Naval Base from flooding and sediment deposition. In addition, approximately 1,500 acres of farmland were covered by floodwaters. The peak discharge was 9,310 cubic feet per second at the Madera Road Bridge in Simi Valley.

In 1983, a federal disaster was declared because of storm damage. Repairs to flood-control facilities have been estimated to cost $15 million (in 1983 dollars). Improved channels in Moorpark and Simi Valley suffered severe damage from erosion during this event, and Calleguas Creek experienced record flooding. Damage to other public and private facilities has been estimated at approximately $39 million, with little more than half of that total due to damage to agricultural lands.

Table 11-1 details the major flood events to affect Ventura County over the past 20 years.

TABLE 11-1 MAJOR DISASTER DECLARATIONS FOR FLOODS, 1995-2015	
Date	**Description**
January 1995	On January 9 and 10, the region was subjected to an intense winter storm that produced more than 6 inches of rain in some areas. A major Disaster Declaration was declared for all but one county throughout California on January 10, 1995.
January through March 1995	A second powerful winter storm brought heavy rain, heavy snow, and strong winds throughout much of California from mid-January to mid-March. On January 13, a Major Disaster Declaration was declared for nearly half the counties in California.
December 1996 through January 1997	A series of subtropical storms hit California from late December through early January, resulting in one of the wettest Decembers on record. On January 4, 1997, a Major Disaster Declaration was declared for half of the counties in California, including Ventura County.
February 1998	El Niño conditions led to extensive flooding throughout California. A Major Disaster Declaration was declared for more than 30 counties, including Ventura County. Countywide damages exceeded $50 million.
December 2004 through January 2005	A powerful Pacific storm brought heavy rain, snow, flash flooding, high winds, and landslides to Central and Southern California. During the multi-day event, rainfall totals ranged from 3 to 10 inches over coastal areas, with up to 32 inches in the mountains. A Major Disaster Declaration was declared on February 4, 2005, for multiple counties, including Ventura County.

Location

Figure 11-4 shows the special flood hazard areas (SFHAs) in Ventura County, including 100- and 500-year flood zones according to the 2015 FEMA Digital Flood Insurance Rate Maps (DFIRMs). The areas of the county that are susceptible to flooding can be categorized into three types: upland, broad floodplains, and coastal, as described below.

Upland Flooding

The mountainous terrain of northern Ventura County and the hills in the central and eastern parts of the county give rise to numerous annual streams, many draining into steep canyons. These streams are subject to floods of relatively short duration, often following high-intensity rainfall. Such floods may occur with little warning and carry large quantities of sediment and debris. Communities adjacent to the upland areas, such as Fillmore, Ojai, Piru, and Santa Paula, are subject to this hazard. Many of the watersheds in question contain dams or basins designed to attenuate flow and trap debris, reducing the effects on downstream communities.

Broad Floodplains

The watersheds of the Santa Clara River (watershed area of 1,650 square miles), Ventura River (watershed area of 226 square miles), and Calleguas Creek (watershed area of 325 square miles) drain to the broad coastal plain in the southern part of Ventura County. This plain is subject to inundation during longer intervals of rain, typically as the result of a series of winter storms. These floods typically have longer duration and may be forecast with more warning time. The Santa Clara River Valley, which crosses central Ventura County, is also subject to flooding. Numerous levees have been built to protect the agricultural lands along the river; because of its sediment load, the river has historically migrated across the valley floor during flooding intervals. The levees are typically not sufficient to withstand severe flood events.

Coastal Flooding

The county's 43-mile coastline is subject to tidal flooding, storm surge, and wave action, all of which usually occur during winter storms. Areas that are susceptible to severe wave action are generally confined to a narrow area immediately adjacent to the tidal zone, including Sea Cliff Colony, Oxnard Shores, Silver Strand Beach, and several sections of U.S. 101 from Rincon Point to Emma Wood State Beach. However, the effects of coastal flooding can be severe—in addition to wave action, beach and bluff erosion can cause significant damage to coast-side homes and infrastructure. Coastal flooding may also occur as the result of tsunamis, which are waves, or series of waves, generated by an earthquake, landslide, volcanic eruption, or even large meteor hitting the ocean. In addition to flooding, winter coastal storms can cause coastal erosion along the shores of Ventura County. Coastal erosion is a natural process that occurs particularly in the winter, when coastal storms wear away land by wave action, tidal currents, or wave currents. Material deposited on beaches during the mild summer and fall months gets redistributed by the waves. According to City of Ventura engineers, the majority of the sand is pulled just off coast and then comes back to shore over time. Although most receding sand stays fairly close to shore, some sand is driven south by currents until it reaches Hueneme Canyon, a large deep-water depression near the Port of Hueneme.

The anticipated rise in sea levels will also impact coastal flooding. As discussed in Chapter 12 (Climate Change), the California Energy Commission has calculated sea-level estimates due to the impacts of climate change. Ventura County could experience coastal erosion of up to 1.4 meters per year (approximately 4.6 feet), by 2100 as a result of sea-level rise and related coastal flooding.

Potential climate impacts due to sea-level rise and storm events in Ventura County include:

- more frequent flooding events due to rising sea levels;
- more extensive and longer duration of flooding;
- permanent inundation in coastal areas due to higher ocean levels and shifts in the tidal range;
- increased shoreline erosion; and
- elevated groundwater levels and salinity intrusion.

Critical infrastructure within the county, including 170 miles of roads and railways, hospitals, schools, emergency facilities, wastewater treatment plants, three power plants, and facilities and structures at Naval Base Ventura County, will be at increased risk of inundation, as will wetland areas and other natural ecosystems. In addition, the cost of replacing property at risk of coastal flooding with a 1.4-meter rise in sea levels is projected at $2.2 billion (in year 2000 dollars) (CEC 2009).

Notably, FEMA released preliminary flood maps for coastal areas of Ventura County in April 2017 and initiated a 90-day Appeal Period, which started in June 2017 and ended in September 2017. FEMA is tentatively anticipating making map changes effective in July 2018. FEMA initiated the California Coastal Analysis and Mapping Project (CCAMP) in December 2011 to restudy coastal flooding risks in all 15 California open Pacific coastal counties. Results from the study are used to remap the coastal flood risk and wave hazards for the entire California coastline. In Ventura County, new flood hazard zones, floodplain boundaries, and coastal base flood elevations for the cities of Ventura, Oxnard, and Port Hueneme, Point Mugu Naval Base, and county unincorporated areas are presented in the revised Flood Insurance Study Report and on the preliminary flood maps. (More information about the updated FEMA maps is available at **www.r9map.org**.)

Unmapped Flood Hazards

Unmapped flood hazard areas include numerous small channels. Agricultural drainage ditches and urban drains cover much of the flatter parts and urban areas of Ventura County. Flooding in these areas is due to high-intensity rainfall occurring over a very short period. The flooding is usually shallow and mainly affects roadways and other low-lying areas. In particular, the Hollywood Beach and Silver Strand residential coastal communities have historically experienced localized flooding conditions primarily due to inadequate storm drainage infrastructure and topography (hence, the "Zone B"/"Zone X-Shaded" FEMA designations on the Flood Insurance Rate Maps [FIRMs] / Digital Flood Insurance Rate Map [DFIRMs]). These residential coastal communities, (which are largely built out) are not currently mapped by FEMA in the "Zone VE" coastal high hazard Special Flood Hazard Area (SFHA). These communities have historically been mapped by FEMA as a Zone B and most recently under the DFIRMs as a Zone X-Shaded (500-year floodplain). Other unmapped hazards include debris flows in the Coastal Mountain areas that can occur after saturation of the surface and intense rainfall storms that deliver 2-inch per hour intensities. Examples are in the Casitas Springs area and the La Conchita Community.

Extent

The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of one percent in any given year. This flood is also known as the 100-year flood or the base flood. The most readily available source of information regarding the 100-year flood, as well as the 500-year flood, is on the FIRMs prepared by FEMA. These maps are used to support the National Flood Insurance Program (NFIP) described in more detail in the Regulatory Setting section below.

FEMA has recently prepared and updated countywide DFIRM and a Flood Insurance Study (FIS) for the unincorporated areas of Ventura County and for each incorporated city in the county. Figure 11-4 shows the SFHAs identified in the Ventura County DFIRM. The Ventura County DFIRM identifies the following SFHAs: 7.8 miles in the 100-year "coastal high hazard" flood zone; 78.4 square miles in the 100-year flood zone; and 51.7 square miles in the 500-year flood zone.

Probability of Future Events

On average, floods causing major damage within Ventura County occur every 5 years.

Figure 11-4
Special Flood Hazard Areas

Dam Failure Inundation

Nature

Dam failure involves unintended releases or surges of impounded water, resulting in downstream flooding. The high-velocity, debris-laden wall of water released from dam failure results in the potential for human casualties, economic loss, disruption of lifelines (e.g., electric, water, transportation, and emergency service systems), and environmental damage. Although dam failure may involve the total collapse of a dam, this is not always the case, because damaged spillways, overtopping from prolonged rainfall, or other problems—including the unintended consequences from normal operations—can result in the creation of a hazardous situation. Because they occur without advance warning, failures from natural events such as earthquakes or landslides may be particularly severe. Dam failure may be caused by a variety of natural events, human-caused events, or a combination thereof. Dam failure usually occurs when the spillway capacity is inadequate and water overtops the dam, or when internal erosion through the dam foundation occurs (also known as piping). Factors contributing to dam failure events may include structural deficiencies from poor initial design or construction, lack of maintenance or repair, and the gradual weakening of the dam through the normal aging process.

History

There is no record of a failure of any dam located in Ventura County. The 1928 failure of the St. Francis Dam in Los Angeles County, however, had catastrophic effects in Ventura County. The dam, located in the San Francisquitos Canyon in the Santa Clara River watershed, was constructed to provide 38,000 acre-feet of storage for water from the Los Angeles–Owens River Aqueduct. The collapse of the dam occurred after the newly constructed concrete-arch dam was completely filled for the first time. The resulting flood swept through the Santa Clara Valley in Ventura County toward the Pacific Ocean, about 54 miles away. At its peak, the wall of water was reported to be 78 feet high; by the time it hit Santa Paula, 42 miles south of the dam, the water was estimated to be 25 feet deep. Almost everything in its path was destroyed, including structures, railways, bridges, livestock, and orchards. By the time the flood subsided, parts of Ventura County lay under 70 feet of mud and debris. Nearly 500 people were killed, and damage estimates exceeded $20 million. The communities of Piru, Fillmore, Santa Paula, Bardsdale, Saticoy, Montalvo, and El Rio sustained extensive life and property loss from the flood.

Location

Table 11-2 shows the name, year built, capacity, type, and inundation area for the dams that constitute failure hazards for Ventura County. Figure 11-5 shows the name, location, and extent of the dam failure inundation areas for every dam failure that would affect Ventura County. Clearly, it is not anticipated that every dam would fail at the same time. Rather, this map is intended to provide an approximate assessment of total risk for the county. Figure 11-6 illustrates dam failure inundation areas for particular dams. In some instances, if one dam fails there is potential that another dam downstream will also fail. For instance, according to the 2015 Ventura County Multi-Hazard Mitigation Plan, if the Pyramid Dam fails, the Santa Felicia Dam will likely fail too. Figure 11-6 does not illustrate cumulative effects. Additional information on specific dam inundation areas may be obtained from the agency that owns the dam. The map shows that dam failures may occur outside Ventura County but still pose a threat of inundation within the county. In particular, if dams in the Santa Clara River watershed in Los Angeles County fail, the resulting flood would affect the Santa Clara River corridor, which includes the cities of Santa Paula and Oxnard, as demonstrated by the 1928 St. Francis dam failure described above.

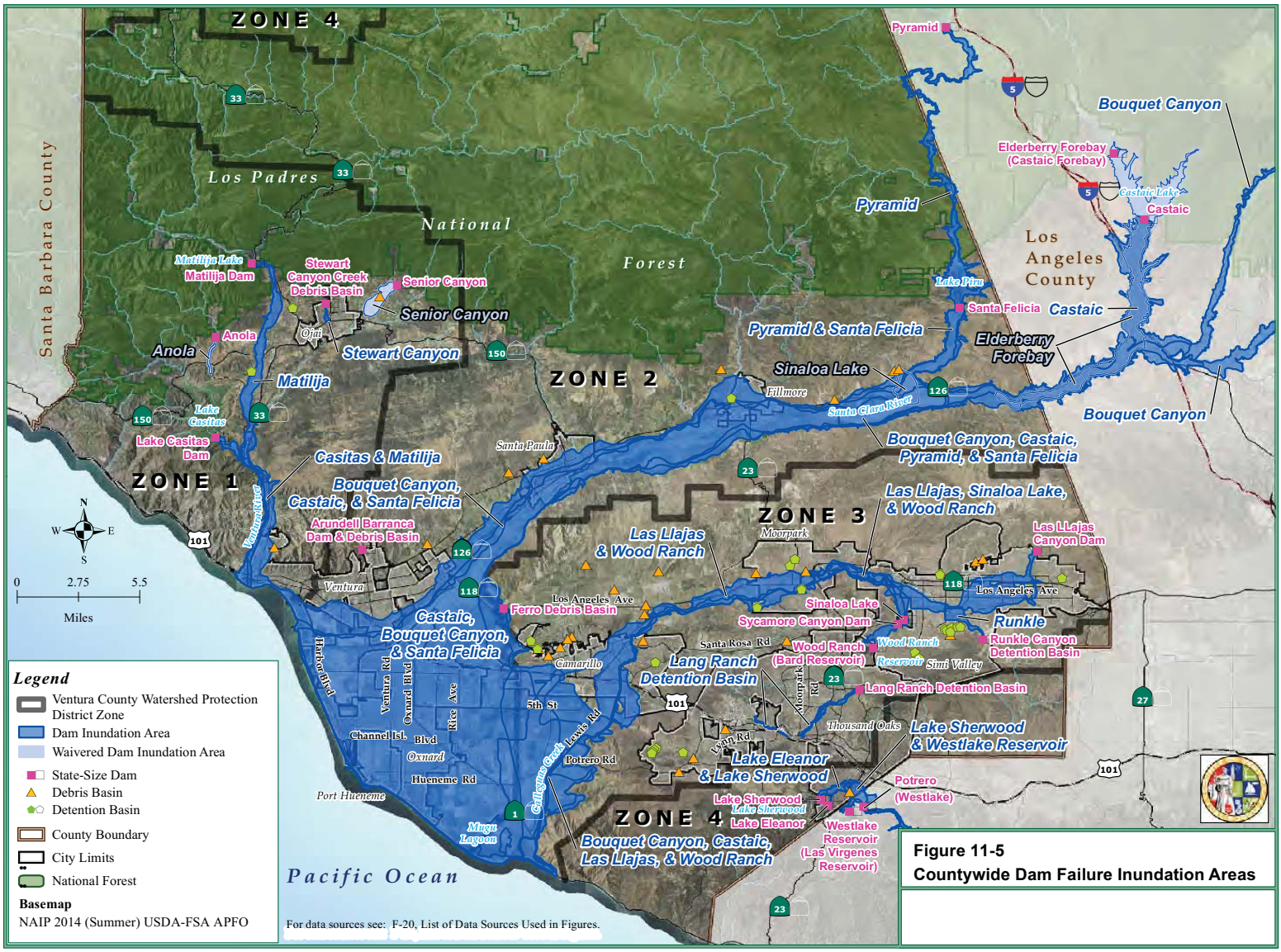
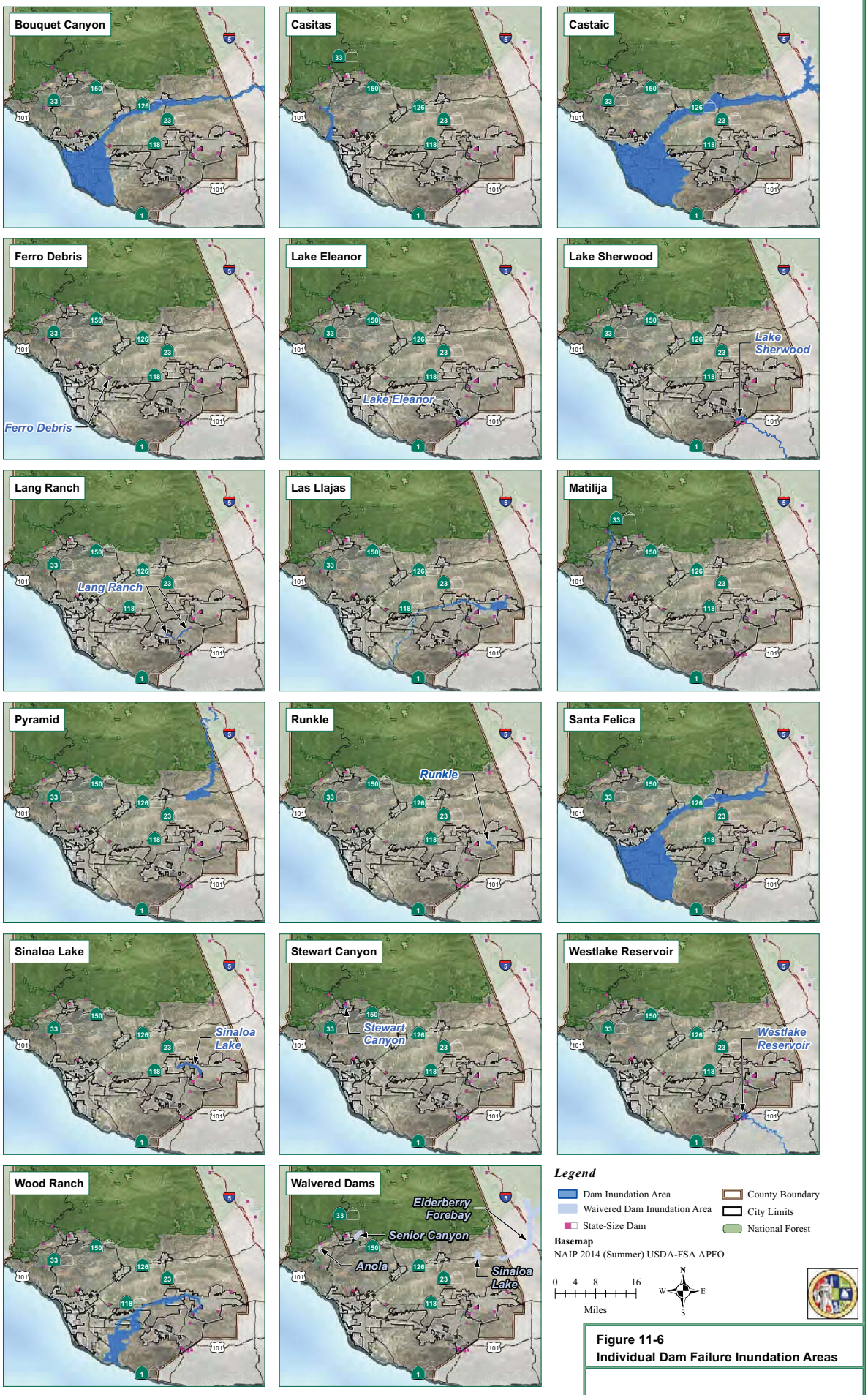


Figure 11-5
Countywide Dam Failure Inundation Areas



For data sources see: F-20, List of Data Sources Used in Figures.

Figure 11-6
Individual Dam Failure Inundation Areas

a

BACK OF FIGURE 11-6
DAM FAILURE INUNDATION: INDIVIDUAL DAMS

TABLE 11-2
DAMS UNDER STATE OR FEDERAL JURISDICTION WITH INUNDATION AREAS
Ventura County

Dam	Year Built	Capacity (Acre Feet)	Height (Feet)	Type	Inundation Area (Sq. Mi.)
Bouquet Canyon	1934	36,505	190	earth	109.67
Casitas	1958	254,000	279	earth	5.09
Castaic	1973	323,700	340	earth	163.41
Ferro Debris	1986	24	45	earth	0.06
Lake Eleanor 1763	N/A	128	37	earth	0.32
Lake Sherwood	1904	2,694	45	constant radius arch	2.01
Lang Creek Detention Basin	2004	263	67	earth	0.48
Las Llajas	1981	1,250	96	earth	8.13
Matilija	1949	1,800	163	variable radius arch	3.85
Pyramid	1973	178,700	386	earth and rock	13.94
Runkle	1949	100	41	earth	0.65
Santa Felicia Dam	1955	100,000	213	earth	121.19
Sinaloa Lake	1925	205	30	earth	2.32
Stewart Canyon Debris Basin	1963	67	34	earth	0.06
Westlake Reservoir	1972	9,200	158	earth	2.65
Wood Ranch	1965	11,000	146	earth	33.61

Source: DSOD 2015.

Extent

FEMA characterizes a dam as a high hazard if it stores more than 1,000 acre-feet of water, is taller than 150 feet, and has the potential to cause downstream property damage. The hazard ratings for dams are set by FEMA and confirmed with site visits by engineers. Most dams in the county are characterized by increased hazard potential because of downstream development and increased risk as a result of structural deterioration or inadequate spillway capacity.

The Division of Safety of Dams (DSOD) regulates state-size dams and inspects them annually to ensure that they are in good operating condition. Also, as required by DSOD regulations, the flood inundation limits resulting from a dam breach during the design storm (probable maximum precipitation) are established for each state-size dam. The resultant maps contain flood-wave arrival time estimates and flood inundation areas. These maps are developed by Cal Office of Emergency Services (OES) and provided to DSOD and local communities. Inundation areas are shown in Table 11-2.

Probability of Future Events

The probability of dam failure inundation is unknown, but such an event would likely be the result of an extreme storm.

Levee Failure Inundation

Nature

Levees are typically earthen embankments designed to contain, control, or divert the flow of water to provide some level of protection from flooding. Some levee systems are built for agricultural purposes and provide flood protection and flood loss reduction for farm fields and other land used for agricultural purposes. Urban levee systems are built to provide flood protection and flood loss reduction for population centers and the industrial, commercial, and residential facilities within them.

Levees are designed to provide a specific level of flood protection. Agricultural levee systems provide a level of protection that is appropriate based on the value of the assets being protected. Because urban levee systems are designated to protect urban areas, they are generally built to higher standards. Urban levee systems that are shown to provide protection from a one percent annual chance flood occurrence event on a FEMA FIRM must document ongoing compliance with the FEMA Levee Certification requirements found in Section 65.10 of the NFIP regulations (i.e., 44 CFR 65.10). No levee system provides full protection from all flooding events to the people and structures located behind it. Some level of flood risk exists in the levee-affected areas.

Levee failure is the overtopping, breach, or collapse of a levee wall. Levees can fail because of an earthquake, internal erosion, seepage, poor engineering/construction or maintenance, or landslides, but levees most commonly fail as a result of significant flows. During heavy precipitation periods or sudden melting of accumulated snow, excessively large flows may overtop levee sections and cause failure. The overflow of water washes away the top portion of the levee, creating deep grooves. Eventually, the levee weakens, resulting in a breach or collapse of the levee wall and the release of uncontrollable amounts of water.

History

The floods of January and February 1969 were the most damaging floods along the Santa Clara River in Ventura County. The estimated peak discharge of the 1969 flood was 165,000 cubic feet per second (cfs), before the gage data adjustment referenced in the Ventura County hydrology report titled *Santa Clara River 2006 Hydrology Update: Phase I, From Ocean to County Line* (VCWPD 2006) was performed.

The following excerpts taken from the United States Army Corps of Engineers (USACE) report entitled *Floods in Southern California during January and February 1969* (USACE 1969) document the significant damage that occurred to the SCR-1 Levee protecting Oxnard, specifically within the reach from Highway 118 to Highway 101.

> *"The only significant damage that occurred during this reach during the January (1969) flood was damage to the revetment of an existing levee constructed by the Corps of Engineers. February flood flows washed out about 500 feet of State Route 118 Bridge, damaged agricultural properties constructed by the Corps of Engineers. ... The flood eroded the south bank (of the Santa Clara River) near the existing Corps levee, damaging some groins; then deflected, ricocheted from the State Route 118 bridge, and returned to the south bank – where the flood flows cut in close to the Corps levee, bounced off the north bank, and carved a long arch. The flood flows then deflected to south bank where they undercut the toe protection on the Corps levee, causing the failure of about 2,000 feet of levee and eroding the ground behind the levee for a distance of about 100 feet."*

After the 1969 flood, USACE repaired the resulting damage (completed in 1971). In December 1985, the VCWPD completed additional repairs in the vicinity of the 1969 levee failure location. The damage repaired in 1985 may have been due to the 1983 flood, which had a peak discharge of 100,000 cfs. The damage was likely due to the low-flow channel encroaching and washing out parts of the levee. The repair included removal of approximately two feet of existing rock and placement of two tons of rock riprap back to the original design dimensions and backfilling the uncompacted fill. This is the only known non-Corps stone that has been added to the SCR-1 Levee.

Location

In November 2009, the VCWPD completed federally-mandated engineering evaluations of nine provisionally accredited levees (PALs) within the Calleguas Creek, Santa Clara River, and Ventura River watersheds. At that time, VCWPD submitted Levee Certification Report (LCR) compliance documentation packages to FEMA for three of the nine PAL-designated levees. As shown on Figure 11-7, these levees include the ASR-2 Levee Floodwall along Arroyo Santa Rosa in the unincorporated community of Santa Rosa Valley, the AS-6 Levee along Arroyo Simi in Simi Valley, and the SC-1 Levee along Sespe Creek in Fillmore.

At that same time, PAL-Response Reports (PRRs) were also submitted to FEMA for the remaining six PAL-designated levees also shown on Figure 11-7. These are AS-7 along Arroyo Simi in Simi Valley, CC-2 and CC-3 along Calleguas Creek in Camarillo, SCR-1 along the Santa Clara River in Oxnard, VR-1 along the Ventura River in Ventura, and VR-3 in the unincorporated areas of the Ventura River Valley. The PRRs indicated that in their current condition, those six levees could not be certified by the VCWPD before FEMA's November 30, 2009, compliance submittal deadline date.

Subsequently, two additional levee systems, SC-2 (the south half of the Sespe Creek levee in Fillmore) and SCR-3 (along the Santa Clara River in Oxnard) were added to the above list of six VCWPD levees requiring rehabilitation work to be fully compliant with federal levee certification regulations (i.e., 44 CFR 65.10). Also, the VR-2 levee system, along the west bank of the Ventura River, which was originally constructed by the Natural Resources Conservation Service (NRCS) in 1979 to provide flood protection for the unincorporated community of Casitas Springs, was added to the list of VCWPD levees requiring rehabilitation and/or improvement work.

Extent

There are 5.17 square miles in Ventura County protected by VCWPD PALs from the 100-year flood.

Probability of Future Events

The probability of future levee failures in Ventura County is unknown, but may result from a large winter storm or seismic event.

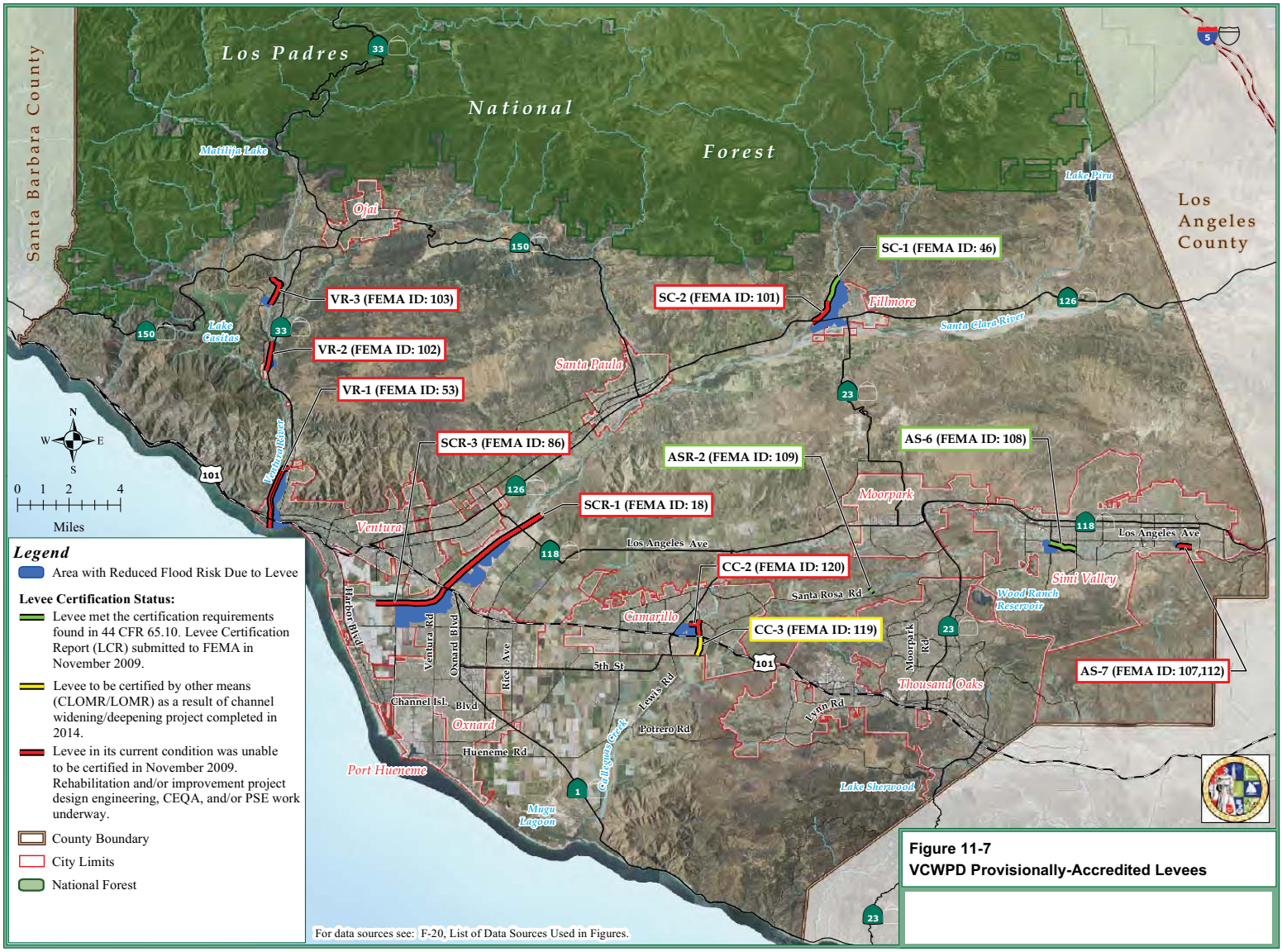


Figure 11-7
VCWPD Provisionally-Accredited Levees

Post-Fire Debris Flow

Nature

Wildfires are a common occurrence in the hills and mountainous regions of Ventura County. By reducing or destroying vegetative cover and altering soil characteristics, fires often result in conditions that can significantly increase runoff and erosion when winter rains begin to fall. These conditions may result in a debris flow (also referred to as mud flow), which is a slurry of water, sediment, and rock that converges in a stream channel.

The threats of erosion, flooding, and debris flows are significantly increased by the following processes:

- **Reduced infiltration and increased runoff:** A fire's consumption of vegetative cover increases exposure of the soil surface to raindrop impact. Soil heating destroys organic matter that binds the soil together. Extreme heating may also cause the development of water-repellant, or "hydrophobic," soil conditions that further reduce infiltration.
- **Changes in hill slope conditions:** Fires remove obstructions to overland flow, such as trees, downed timber, and plants, increasing flow velocity and therefore erosive power. Increased sediment movement also fills depressions, reducing storage capacity and further contributing to increased velocity and volume of flow. These factors combine to allow more of the watershed to contribute flow to the flood at the same time, increasing the volume of the flood.
- **Changes in channel conditions:** Increased overland flow and sediment transport result in increased velocity and volume of flow in defined channels. Channel erosion increases, as do peak discharges.

The occurrence of erosion, floods, and debris flows in burned areas is also dependent on precipitation intensity—storms with high intensity are more likely to initiate the processes described above and result in flood events. Additionally, easily eroded soils facilitate changes in hill slope conditions and increase the volume of runoff. Both of these conditions are likely to occur in Ventura County.

In extreme situations, the conditions described above combine to form a debris flow. These flows are often the most destructive events resulting from heavy rainfall in fire-affected areas. They occur with little warning, carry vast quantities of rock and other material, and strike objects with extreme force. Because of their viscosity and density, debris flows can move or carry away objects as large as vehicles and bridges, and they may travel great distances down canyons and stream valleys. Debris flow fronts may also travel at high speeds, exceeding 50 miles per hour.

History

Evidence of debris-flow movement was widespread following the 1969 storms throughout the mountain ranges in Ventura County. Debris flows occurred in numerous watersheds, including Cozy Dell Canyon, Stewart Canyon, Senior Canyon, Orcutt Canyon, Jepson Wash, and others. Mudflows also occurred in 1969 and 1971 in watersheds that were underlain by fine-grained sedimentary rocks and had been more recently burned by wildfires near Ojai. Witnesses to the mudflows described surges of what appeared to be mud covered with water behind a moving boulder.

In 2014, two post-fire debris flows occurred in the Camarillo Springs area. Around midnight on November 1, 2014, a heavy rain—the first in Ventura County in many months—dislodged debris and

created thick mud from the hills recently burned by the Springs Fire in May 2013. Twenty homes were evacuated, including two homes that were severely damaged. According to the Ventura County Fire Department, a storm drain system that should have prevented the mud and debris from flooding the area apparently filled to capacity, in part because of additional amounts of debris left on the hillside due to Springs Fire.

On December 12, 2014, a second debris flow affected Camarillo Springs when a storm dumped 1.8 inches of rainfall over the region. According to the Ventura County Fire Department, 16 homes were damaged, including 10 homes that were red-tagged. Hours before the storm was expected, mandatory evacuations were ordered for 124 homes. Contractors hired by the City of Camarillo worked to clear drainage areas before the storm hit and had put up K-rails to direct water and mud away from homes in the projected debris flow area. The City of Camarillo has installed steel mesh nets in hillside areas that successfully contain alluvial fan flows and will prevent further damage to private property.

Location

Areas of Ventura County that have been subject to recent wildfires are susceptible to potentially hazardous debris flows. Areas susceptible to debris flow include localities that are adjacent to and downslope of these burn areas, especially in locations that are in ravines and canyons, and at the mouths of canyons. Figure 11-8 shows wildfire perimeters of concern; this includes wildfires since 2012 (Grand and Springs fires) and burned areas that are recovering slowly (Day fire).

Extent and Probability of Future Events

Ventura County has a long history of flooding and wildfires, which are two major factors in the occurrence of post-fire debris flow. However, because a number of complex factors lead to debris flow (basin morphometry, burn severity, soil properties, and rainfall characteristics), the probability and estimate of the volume of post-fire debris flow in Ventura County is unknown. The USGS has developed model predictions that can be calculated at specific basin outlets, and along the draining network within and immediately downstream of a burn area. These models can be applied post- fires to predict the probabilities of debris flows and estimate debris-flow volumes throughout a burn area in response to a specific rainstorm event.

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Figure 11-8
Wildfire Perimeters of Concern

Tsunami

Nature

A tsunami is a series of traveling ocean waves of extremely long length, generated by disturbances associated primarily with earthquakes occurring below or near the ocean floor. Subduction zone earthquakes at plate boundaries often cause tsunamis. However, tsunamis can also be generated by submarine landslides, submarine volcanic eruptions, the collapse of volcanic edifices, and—in very rare instances—large meteorite impacts in the ocean.

In the deep ocean, a tsunami may have a length from wave crest to wave crest of 100 miles or more but a wave height of only a few feet or less. Thus, the wave period can be up to several hours, and wavelengths can exceed several hundred miles. Therefore, tsunamis are unlike typical wind-generated swells on the ocean, which might have a period of about 10 seconds and a wavelength of up to 300 feet. Tsunamis cannot be felt aboard ships and they cannot be seen from the air in the open ocean. In deep water, the waves may reach speeds exceeding 700 miles per hour.

Tsunamis can originate hundreds or even thousands of miles away from coastal areas. Local geography may intensify the effect of a tsunami. Areas at greatest risk are less than 50 feet above sea level and within one mile of the shoreline. Tsunamis arrive as a series of successive crests (high water levels) and troughs (low water levels). These successive crests and troughs can occur anywhere from five to 90 minutes apart. They usually occur 10 to 45 minutes apart.

Tsunamis not only affect beaches that are open to the ocean, but also bay mouths, tidal flats, and the shores of large coastal rivers. Tsunami waves can also diffract around land masses. Because tsunamis are not symmetrical, the waves may be much stronger in one direction than another, depending on the nature of the source and the surrounding geography. However, tsunamis do propagate outward from their source, so coasts in the shadow of affected land masses are usually fairly safe.

History

According to the California Tsunami Evacuation Playbook, City of Ventura – Ventura County (No. 2014-Vent-01), and as shown in Table 11-3, there have been eight notable tsunami events run-ups recorded in Ventura County.

Location

Figure 11-9 shows tsunami evacuation areas based on two scenarios—Phase 3 and Maximum Phase—as described in the California Tsunami Evacuation Playbook, City of Ventura – Ventura County. This map illustrates coastal land areas, including areas in the cities of Oxnard, Port Hueneme, and Ventura, that can become submerged due to tsunami run-up. The area of land subject to inundation is a factor of the following factors:

- Distance of shoreline from the tsunami-generating event
- Magnitude of the earthquake causing the event; duration and period of waves
- Run-up elevations
- Tidal level at time of occurrence
- Location along shore and direction of shore in respect to propagated waves
- Topography of the seabed

TABLE 11-3 TSUNAMI EVENTS Ventura County			
Year	**Source/Source Location**	**Tsunami Location**	**Remarks**
12/21/1812	Earthquake and Landslide	City of Ventura	6.5-foot run-up
4/01/1946	Earthquake – Aleutian Islands, Alaska	Port Hueneme	3-foot run-up
		Ormond Beach	5-foot run-up
11/4/1952	Earthquake – Kamchatka Peninsula	Port Hueneme	2-foot run-up
3/09/1957	Earthquake – Aleutian Islands, Alaska	Port Hueneme	2-foot run-up
3/28/1964	Earthquake and Landslide – Alaska	City of Ventura	Tide dropped 8.0 feet
		Oxnard	Large swells
9/29/2009	Earthquake – Samoa	Ventura	Buoys moved near mouth of harbor
2/27/2010	Earthquake – Chile	Ventura, Oxnard, Port Hueneme	3-foot run-up
3/11/2011	Earthquake – Japan	Ventura, Oxnard	4-foot run-up
		Port Hueneme	5-foot run-up

Source: CGS 2014.

Run-up = the large amount of water that a tsunami pushes onto the shore above the regular sea level, that is the maximum vertical height onshore above sea level reached by a tsunami

Extent

Figure 11-9 shows the Phase 3 Evacuation and Maximum Evacuation Phase, based on models of maximum local and distance tsunamis and for tsunamis coming from the Cascadia Subduction Zone. The Phase 3 Evacuation estimates a tsunami flood level of 1.7 to 5.0 feet above the high tide line, and a tsunami flood level of 7.7 to 11.0 feet above low tide conditions. The Maximum Evacuation Phase estimates a tsunami flood level of more than 5.0 feet above the high tide line, and a tsunami flood level of more than 11.0 feet above low tide conditions.

Probability of Future Events

Based on the history of tsunami run-ups in the region and the history of earthquakes in the Pacific Rim, another tsunami event is likely to occur, although the extent and probability is unknown.

For data sources see: F-20, List of Data Sources Used in Figures.

Figure 11-9 Tsunami Evacuation Areas

Regulatory Setting

The most effective means of preventing flood damage appears to be floodplain management (i.e., the regulation of the types of activities permitted in flood hazard areas). Floodplain management addresses the problems encountered in the utilization of floodplains and considers the total spectrum of possible solutions to problems involving possible future land uses. Floodplain management cannot, however, protect all existing development. Therefore, to provide for the maximum alleviation of flood hazards, a combination of federal, state, and local corrective and preventive measures is necessary. These measures are discussed in detail below.

Federal

Federal Emergency Management Act (FEMA).

FEMA is the Federal agency that oversees floodplains and manages the National Flood Insurance Program (NFIP), as adopted under the National Flood Insurance Act of 1968. FEMA's regulations govern the delineation of floodplains and establish requirements for floodplain management. FEMA prepares Digital Flood Insurance Rate Maps (DFIRMs) that indicate the regulatory floodplain to assist communities such as Ventura County with land use and floodplain management decisions to meet the requirements of the National Flood Insurance Program. FEMA has prepared a DFIRM for all of Ventura County, effective January 20, 2010.

National Flood Insurance Program (NFIP)

The regulations of the National Flood Insurance Program, which is administered by FEMA, require that communities adopt land use restrictions for the 100-year floodplain to qualify for federally subsidized insurance. The NFIP was enabled by the National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973. The type of restrictions communities must adopt are listed in some detail in Title 44 Code of Federal Regulations, Sections 59 through 70. Additionally, the Ventura County Floodplain Management Ordinance 4465, includes a requirement that habitable structures be elevated a minimum of one foot of freeboard above the base flood elevation of the one percent annual chance flood and be flood-proofed. Participation in the National Flood Insurance Program is virtually mandatory, since flood insurance (within identified "special flood hazard" areas) is a prerequisite for receiving mortgages or construction loans from federally regulated lending institutions. Disaster assistance is not available to public agencies in hazard areas if they do not participate and remain compliant in the Program. Thus, the County must be, and is a participating community in the National Flood Insurance Program and thus qualifies for disaster assistance in the event of a declared natural disaster. Outside these limits, the prime responsibility for regulating activities in flood hazard areas lies with state and local government.

Community Rating System for Flood Control

The Community Rating System (CRS) is a program administered by FEMA. The program offers financial incentives to cities and counties that voluntarily exceed the minimum requirements of the National Flood Insurance Program. The three goals of the CRS are to: (1) reduce and avoid flood damage to insurable property; (2) strengthen and support the insurance aspects of the NFIP; and (3) foster comprehensive flood plan management. The CRS includes multiple programs or "activities" in which communities can participate to earn CRS points. These include public outreach and education on flood prevention measures, preserving open space, maintaining special certifications for staff members as Certified Floodplain

Managers, removing debris and sediment from flood control channels, and adoption of an All-Hazards Mitigation Plan. Each community receives a Class Rating based on the number of points earned. The number of points a community has earned determines if a discount is available to property owners on their flood insurance policies. As of 2016, five percent of all NFIP member communities participate in the CRS program, and fifteen percent of all NFIP California communities participate in the program.

CRS Classes are rated from 1 to 9, with Class 1 representing the highest (best) class. On May 1, 2016, Ventura County received a Class 6 rating, and consequently, properties within a floodplain in the unincorporated areas of Ventura County are eligible for a 20 percent premium discount on flood insurance.

Disaster Mitigation Act of 2000 (DMA 2000)

On October 30, 2000, Congress passed DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Stafford Act) (Title 42 of the United States Code Section 5121 et seq.) by repealing the Act's previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the FEMA's mitigation plan requirements for mitigation grant assistance. Under DMA 2000, local governments throughout the United States must adopt and maintain mitigation plans in order to be eligible for specific types of grant assistance. DMA 2000 is administered by FEMA (in California, Region IX) in collaboration with State Hazard Mitigation Officers (in California, the State Office of Emergency Services).

State

California Dam Safety Act

The California Dam Safety Act (Section 8589.5 California Emergency Services Act) requires the preparation of dam inundation maps showing areas of potential flooding in the event of sudden or total dam failure as well as emergency procedures for notification and evacuation of nearby residents.

Local

2005 Ventura County General Plan

The General Plan covers flood hazards in Chapter 2, Hazards. Section 2.10 includes goals, policies, and programs related to flood hazards. The following Area Plans also contain applicable goals and policies related to flood hazards:

- Coastal Area Plan;
- El Rio/Del Norte Area Plan;
- North Ventura Avenue Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for flood hazards. These can be found in Sections 17a. Hydraulic Hazards-Non-FEMA and 17b. Hydraulic Hazards-FEMA.

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates flood hazards through Section 8178-4 Mitigation of Potential Hazards

Ventura County Emergency Operations Plan (2012)

The Ventura County Emergency Operations Plan (EOP) describes what the County's general actions will be during a response to an emergency. The EOP also includes appendices that describe in more detail the actions required of each local jurisdiction's departments/agencies. Further, EOP describes the role of the Emergency Operation Center (EOC) and the coordination that occurs between the EOC and each local jurisdiction's departments and other response agencies. Finally, the EOP describes how the EOC serves as the focal point among local, state, and federal governments in times of disaster.

Ventura County Floodplain Management Ordinance

Ventura County's Flood Plain Management Ordinance (Ordinance No. 4465) ensures compliance with the National Flood Insurance Program. This includes permit review for structures built in the floodplain and evaluation of site plans for developments that include identified floodplains. Residential development is not allowed in the FEMA designated floodway.

Office of Emergency Services (OES)

In Ventura County, disaster coordination and planning is the responsibility of the Sheriff's Department through its Office of Emergency Services (OES). The OES serves as the depository for the County's Dam Inundation maps and is charged with ongoing maintenance of the County's Dam Failure Response Plan, which was adopted by the Board of Supervisors on September 13, 1983.

Key Terms

Alluvial Fan. An alluvial fan is a triangle-shaped deposit of gravel, sand, and even smaller pieces of sediment, such as silt (i.e., alluvium). Alluvial fans are usually created as flowing water interacts with mountains, hills, or the steep walls of canyons. Streams carrying alluvium can be trickles of rainwater, a fast-moving creek, a powerful river, or even runoff from agriculture or industry. As a stream flows down a hill, it picks up sand and other particles (alluvium).

Anticlinal. In structural geology, an anticline is a type of fold that is an arch-like shape and has its oldest beds at its core.

Erodibility. An indicator of a soil's susceptibility to rain, runoff, and other erosive processes.

Inundation. To cover with water, especially flood waters. To overwhelm as if with a flood.

Levee. Levees are typically earthen embankments designed to contain, control, or divert the flow of water to provide some level of protection from flooding. Some levee systems are built for agricultural purposes and provide flood protection and flood loss reduction for farm fields and other land used for agricultural purposes. Urban levee systems are built to provide flood protection and flood loss reduction for population centers and the industrial, commercial, and residential facilities within them. Agricultural levee systems provide a level of protection that is appropriate based on the value of the assets being protected.

National Flood Insurance Program (NFIP). The National Flood Insurance Program aims to reduce the impact of flooding on private and public structures. It does so by providing affordable insurance to property owners and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of general risk insurance, but also of flood insurance, specifically.

Slurry. A semi-liquid mixture, typically of fine particles of manure, cement, or coal suspended in water.

Special Flood Hazard Area (SFHA): The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The SFHA includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V.

References

Reports/Publications

Ventura, County of. Ventura County Hazard Mitigation Plan. Adopted by the Ventura County Board of Supervisors September 2015.

Websites

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SECTION 11.3 WILDFIRE HAZARDS

Introduction

This section addresses the wildfire hazard (also referred to as fire hazard) conditions within Ventura County and the potential risk these conditions pose. Issues related to fire hazards include fire hazard management, emergency response, and high fire hazard areas. This section summarizes the fire hazard conditions in Ventura County based on information from the 2015 Ventura County Multi-Hazard Mitigation Plan (VCMHMP). Consistent with the VCMHMP, each section includes explanations of the nature, history, location, extent, and probability associated with fire hazards. A discussion of fire protection services is included in Section 7.6 of Chapter 9 of this Background Report.

Major Findings

- Within Ventura County, very high fire hazard severity zones (FHSZs) are located in mountainous or hillside areas (west of Lake Casitas, northeast of Ojai, north of Fillmore, and surrounding Thousand Oaks and Simi Valley), where the greatest fuel density exists; very high FHSZs are also located throughout much of the county's large agricultural and cattle-grazing areas. 81.9 square miles are in the high FHSZ and 504.4 square miles are in the very high FHSZ. The populations that live in the very high FHSZ are mainly located in the cities of Moorpark (44.0 percent), Simi Valley (27.7 percent), Thousand Oaks (43.1 percent), as well as the unincorporated area (37.1 percent).
- Vegetation that has dried during long, hot summers provides a living fuel for wildfires and the Santa Ana winds combine to contribute to the high incidence of wildfires in Ventura County. In the past, fires burning more than 1,000 acres have occurred about every one to three years.

Existing Conditions

A wildfire is an uncontrolled fire that spreads through vegetative fuels, exploding and possibly consuming structures. Wildfires often begin unnoticed, spread quickly, and are usually signaled by dense smoke that may be visible from miles around. Wildfires can be human-caused (e.g., by arson or campfires), or can be caused by natural events such as lightning. Wildfires can be categorized into four types:

- **Wildland fires** occur mainly in areas under federal control, such as national forests and parks, and are fueled primarily by natural vegetation.
- **Interface or intermix fires** occur in areas where both vegetation and structures provide fuel. These are also referred to as urban-wildland interface fires.
- **Firestorms** occur during extreme weather (typically high temperatures, low humidity, and high winds) with such intensity that fire suppression is virtually impossible. These events typically burn until the conditions change or the fuel is exhausted.
- **Prescribed fires and prescribed natural fires** are intentionally set or natural fires that are allowed to burn for beneficial purposes.

The following three factors contribute significantly to wildfire behavior; as described more fully below, these factors can be used to identify wildfire hazard areas:

- **Topography:** As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to greater solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill.
- **Fuel:** The type and condition of vegetation play a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available to fuel the fire (referred to as the "fuel load"); the ratio of living to dead plant matter is also important. The risk of fire is increased significantly during periods of prolonged drought as the moisture content of both living and dead plant matter decreases. The fuel's continuity is also an important factor, both horizontally and vertically.
- **Weather:** The most variable factor affecting wildfire behavior is weather. Variables such as temperature, humidity, wind, and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signals reduced wildfire occurrence and easier containment. Years of precipitation followed by warmer years tend to encourage more widespread fires and longer burn periods. Also, since the mid-1980s, earlier snowmelt and associated warming due to global climate change has been associated with longer and more severe wildfire seasons in the western United States.

If not promptly controlled, wildfire may grow into an emergency or disaster. Even small fires can threaten lives and resources and destroy improved properties. It is also important to note that in addition to affecting people, wildfire may severely affect livestock and pets. Such events may require the emergency watering/feeding, shelter, evacuation, and even burying of animals.

Wildfires can have serious effects on the local environment. In addition to stripping the land of vegetation and destroying forest resources, including the wildlife that lives in these areas, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capacity to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above. Wildfires can also greatly affect the air quality of the surrounding area.

History

Wildfires are a common occurrence in Ventura County. In the last 50 years (1965 through 2015), 23 wildfires, with an extent greater than 10,000 acres, have occurred. Table 11-4 illustrates the 10 largest fires over the last 50 years and Figure 11-10 shows the location of these and other fires between 1965 and 2015. In May 2013, the Springs fire burned 24,251 acres; 10 structures were destroyed and 12 were damaged, and 10 injuries were recorded.

TABLE 11-4 TEN LARGEST VENTURA COUNTY FIRES, 1965 THROUGH 2015		
Name	**Date**	**Acres Affected***
Day	September 2006	162,702
Simi Valley	October 2003	108,204
Piru	October 2003	63,991
Ranch**	October 2007	58,401
Ferndale	October 1985	47,064
Green Meadow	October 1993	38,477
Creek Road	September 1979	32,000
Steckel	October 1993	27,088
Parker Ranch	October 1967	25,000
Hopper	August 1997	24,793

Source: Cal FIRE 2015

*Acres affected = total acreage.

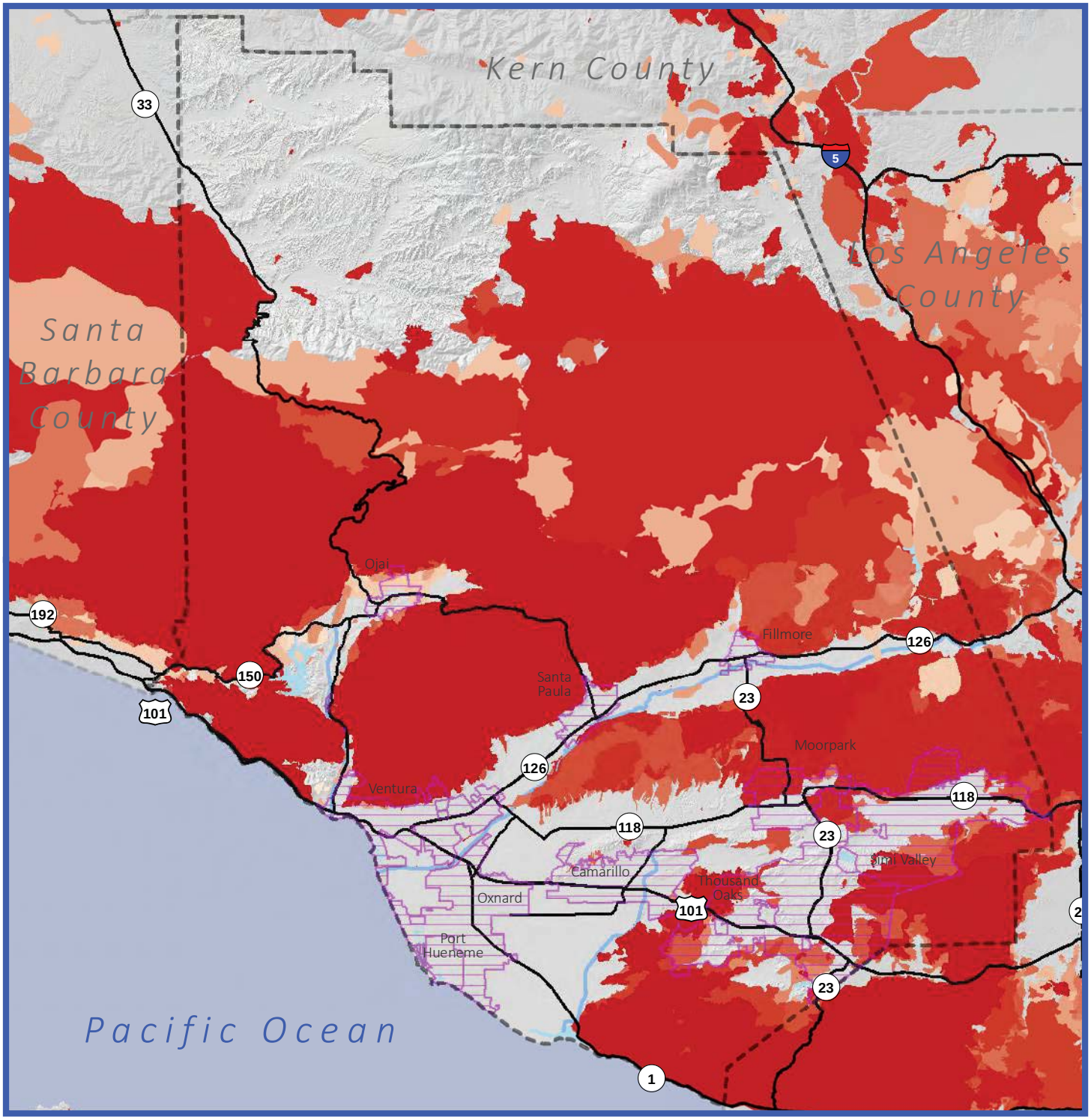
** Fire occurred in both Ventura and Los Angeles counties.

Location and Extent of Fire Hazard Severity Zones

Public Resources Code 4201-4204 and Government Code 51175-89 directed the California Department of Forestry and Fire Protection (Cal FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZs), are represented as very high, high, or moderate. Specifically, the maps were created using data and models describing development patterns, potential fuels over a 30- to 50-year time horizon, expected fire behavior, and expected burn probabilities. The maps are divided into local responsibility areas and state responsibility areas. Local responsibility areas generally include cities, cultivated agriculture lands, and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by Cal FIRE under contract to the local government. State responsibility area is a legal term defining the area where the state has financial responsibility for wildfire protection. Incorporated cities and federal ownership are not included. The prevention and suppression of fires in all areas that are not state responsibility areas are primarily the responsibility of federal or local agencies.

Figure 11-11 displays the areas of Ventura County most susceptible to wildfires. Within the unincorporated county, very high FHSZs are located in mountainous or hillside areas (west of Lake Casitas, northeast of Ojai, north of Fillmore, and surrounding Thousand Oaks and Simi Valley), where the greatest fuel density exists; as well as throughout much of the county's large agricultural and cattle-grazing areas. Although these areas are not heavily populated, they are near populated communities. Approximately 37.1 percent of the unincorporated area population is exposed to very high FHSZs. Population exposure in cities is highest in Moorpark (44.0 percent), Simi Valley (27.7 percent), and Thousand Oaks (43.1 percent)

As shown on Figure 11-11, in Ventura County there are 81.9 square miles in the high FHSZ and 504.4 square miles in the very high FHSZ.



Ventura County 2040 General Plan

Figure 11-10: Wildfires History Map

Map Date: November 19, 2019

Source: Ventura County, 2016; CAL FIRE 2007 (State), 2008 (Local), and 2016 (Federal); USGS, 2013.

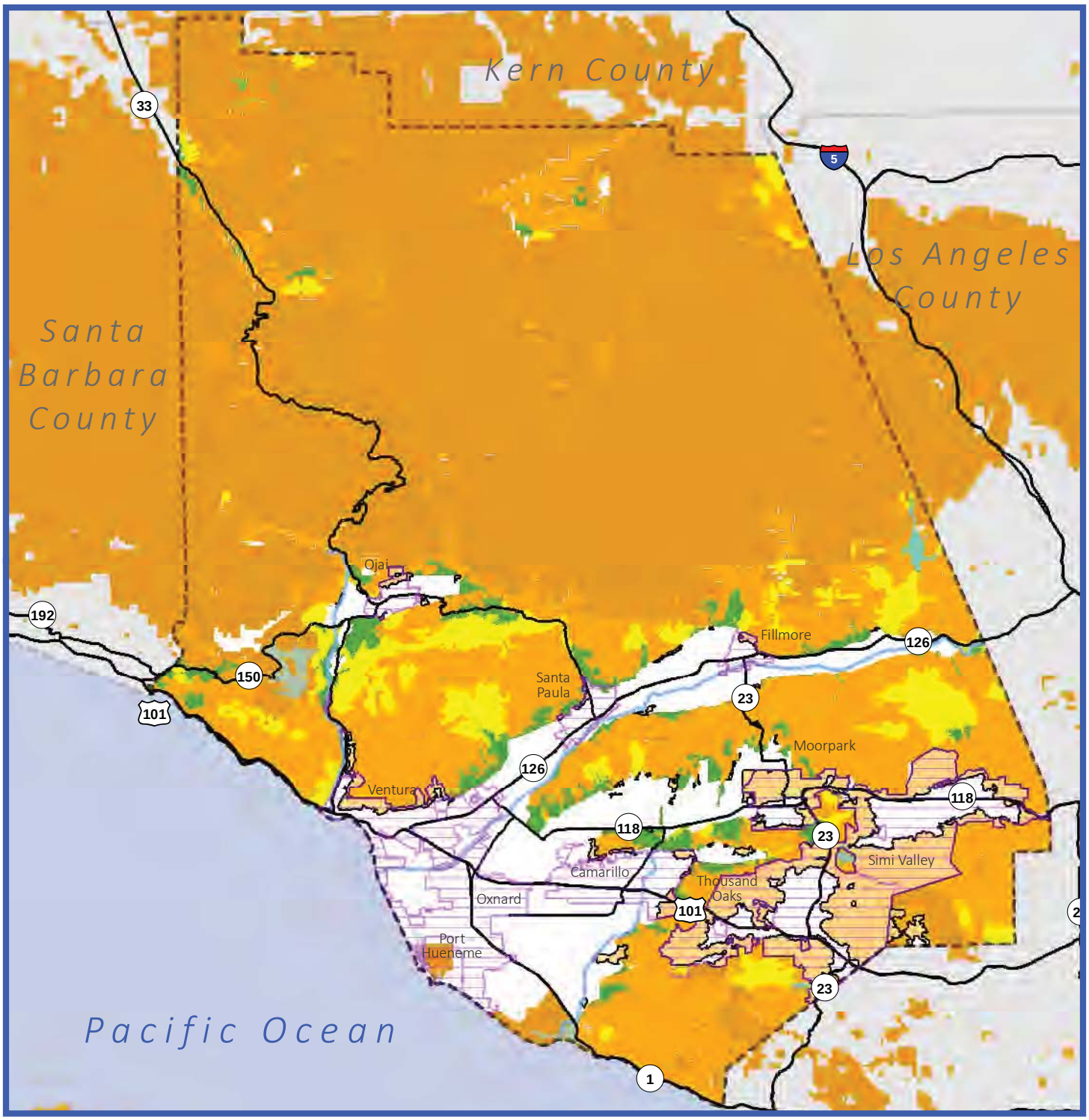
0 7.5 15 Miles

N

- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- Water Bodies

Fire History:

1878 — 2018



Ventura County 2040

Figure 11-11:
Fire Hazard Areas by Responsibility Area Federal, State, and Local

Map Date: January 09, 2017

Source: Ventura County, 2016; CAL FIRE 2007 (State), 2008 (Local), and 2016 (Federal); USGS, 2013.

0 7.5 15 Miles

N

- Ventura County Boundary
- Cities
- Major Roadways
- Major Waterways
- Water Bodies

Responsibility Areas:

- LRA - Very High
- SRA - High
- SRA - Moderate
- SRA - Very High
- FRA

Probability of Future Events

The climate in Ventura County is characterized as Mediterranean dry-summer featuring cool, wet winters and warm, dry summers. High moisture levels during the winter rainy season significantly increase the growth of plants. However, the vegetation is dried during the long, hot summers, decreasing plant moisture content and increasing the ratio of dead fuel to living fuel. As a result, fire susceptibility increases dramatically, particularly in late summer and early autumn. In addition, the presence of chaparral, a drought-resistant variety of vegetation that is dependent on occasional wildfires, is expected in Mediterranean dry-summer climates. Also, the history of plant succession in Ventura County is important in predicting fire susceptibility. For several years after a fire has occurred, easily flammable herbaceous species predominate and increase the likelihood of new fires. When woody species become reestablished, they contribute to a lower overall level of fire susceptibility for approximately 10 years. However, after this period, the slow aging plant community becomes ever more likely to burn because of increased levels of dead plant material and lowered plant moisture levels (Ventura County Multi-Hazard Mitigation Plan, September 2015).

In addition, the local meteorological phenomenon known as the Santa Ana winds contributes to the high incidence of wildfires in Ventura County. These winds originate during the autumn months in the hot, dry interior deserts to the north and east of Ventura County. They often sweep west into the county, bringing extremely dry air and high wind speeds that further desiccate plant communities during the period of the year when the constituent species have very low moisture content. The effect of these winds on existing fires is particularly dangerous, as the winds can greatly increase the rate at which fires spread.

Based on the conditions described above and the history of occurrence in the past, future events are very likely to occur. In the past, fires burning more than 1,000 acres have occurred about every one to three years. The extent of future events will depend on specific conditions at the time of the fire.

Regulatory Setting

Federal

Federal Land Assistance, Management, and Enhancement (FLAME) Act

In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement (FLAME) Act (FLAME) as the basis for the U.S. Department of Agriculture (USDA) and the Department of the Interior (DOI) to develop a national cohesive wildland fire management strategy. In response to the FLAME Act, USDA and DOI published the National Cohesive Wildland Fire Management Strategy, which includes the National Strategy and the National Action Plan, both completed in April 2014. Together, these documents address elements requested by Congress after the passage of the FLAME Act and represent an approach wildland fire management based on the goal of achieving safer, more efficient, cost-effective public, and resource protection goals and more resilient landscapes.

Healthy Forest Restoration Act (HFRA)

The Healthy Forest Restoration Act (HFRA), enacted by the U.S. Congress on January 7, 2003, established a protocol for the creation of a type of document that articulated a wildfire safety plan for communities at risk from wildland fires- a Community Wildfire Protection Plan (CWPP). The Ventura County Fire Department has prepared a CWPP for all of Ventura County. As specified by the HFRA, the

Ventura County CWPP was developed in collaboration with local, county, state, and federal agencies as well as various community organizations within the County. The CWPP identifies wildfire risks and clarifies priorities for funding and programs to reduce impacts of wildfire on the communities at risk within Ventura County.

State

Strategic Fire Plan for California

Public Resources Code §4114 and §4130 authorize the State Board of Forestry and Fire Protection (Board) to establish a fire plan which, among other things, establishes the levels of statewide fire protection services for State Responsibility Area (SRA) lands. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. In 2010 the Board of Forestry and Fire Protection adopted the Strategic Fire Plan for California. This statewide fire plan was developed in concert between the State Board of Forestry and Fire Protection of and the California Department of Forestry and Fire Protection (CAL FIRE), in consultation with a group of outside experts to complete a needs assessment and to form the Fire Plan Steering Committee. This Committee worked for over a year preparing the 2010 Strategic Fire Plan. The Strategic Fire Plan seeks to protect lives, residential property, and natural resources. It is the basis for assessing California's complex and dynamic natural and man-made environment, and identifying a variety of actions to minimize the negative effects of wildland fire. Implementation of the 2010 Strategic Fire Plan for California is intended to occur at all levels of CAL FIRE, as well as through partnerships with local, state and federal agencies, private organizations (Fire Safe Councils, homeowners associations, industry, etc.) and citizens.

Senate Bill 1704 (Vegetation Management Program)

Senate Bill 1704 established the basic processes and procedures needed to manage chaparral-covered and associated lands within California. The Vegetation Management Program allows private landowners to enter into a contract with the California Department of Forestry and Fire Protection to use prescribed fire to accomplish a combination of fire protection and resource management goals. The main goals of the program are the reduction of conflagration fires, the optimization of soil and water productivity, and the protection and improvement of intrinsic floral and faunal values.

Public Resources Code Section 4291/Government Code Section 51182

Public Resources Code Section 4291 and Government Code Section 51182 require property owners in mountainous areas, forest-covered, lands, or any land that is covered with flammable material to create, at minimum, a 100-foot defensible space (or to the property line) around their homes and other structures. Under the law, property owners or those who control property must establish a 30-foot clean zone and a 70-foot reduced fuel zone.

Local

2005 Ventura County General Plan

The General Plan covers wildfire hazards in Chapter 1, Resources. Section 2.13 includes goals, policies, and programs related to wildfire hazards. The following Area Plans also contain applicable goals and policies related to wildfire hazards:

- Coastal Area Plan;
- Oak Park Area Plan;
- Ojai Valley Area Plan;
- Piru Area Plan;
- Saticoy Area Plan;
- Thousand Oaks Area Plan; and
- Lake Sherwood/Hidden Valley Area Plan.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for rural and wildland areas of the County. These can be found in Section 18. Fire Hazards,

2016 Coastal Zoning Ordinance

The Coastal Zoning Ordinance regulates wildfire hazards through Section 8178-4 Mitigation of Potential Hazards

Unit Strategic Fire Plan, Ventura County Fire Protection District

Ventura County maintains a contractual relationship with Cal Fire. A Unit Plan that is part of the California Strategic Fire Plan is used within the Ventura County Unit. The Unit Fire Plan also serves as the Community Wildfire Protection Plan (CWPP) for the County. The CWPP identifies wildfire risks and clarifies priorities for funding and programs to reduce impacts of wildfire on the communities at risk within Ventura County. Building on the proven and highly effective Weed Abatement Program implemented by Ventura County Fire Department under the authority of the Healthy Forests Restoration Act (HFRA), the County's CWPP documents and prioritizes the projects that stakeholders within communities at risk have identified.

Ventura County Fire Protection District Fire Hazard Reduction Program

The Ventura County Fire Protection District adopted a local ordinance that, among other things, requires mandatory 100-feet of brush clearance around structures located in or adjacent to Hazardous Fire Areas. The Fire Hazard Reduction unit manages this requirement throughout the VCFPD jurisdiction. Failure to comply with the program by the annual June 1st deadline can result in the Fire District completing the work and assessing a fee to the homeowner through a tax lien on their property. The role of individual property owners in responding to fire hazards is probably the most critical. Because of the large size of

the county and the preference of many homeowners to build within or adjacent to Hazardous Fire Areas, these individuals must assume responsibility for the prevention of conditions, that may result in property damage during the fire season. Measures that may be taken by property owners, include the planting of fire-resistant landscaping, landscape maintenance, mandatory clearance of brush around structures, and site design.

Key Terms

Conflagration. An extensive fire that destroys a great deal of land or property.

Herbaceous. Of, denoting, or relating to herbs (in the botanical sense).

Prescribed Fire. The knowledgeable and controlled application of fire to a specific land area to accomplish planned resource management objectives and weather conditions.

References

Reports/Publications

Ventura, County of. Ventura County Hazard Mitigation Plan. Adopted by the Ventura County Board of Supervisors September 2015.

Websites

N/A

Persons Consulted

N/A

SECTION 11.4 AVIATION HAZARDS

Introduction

This section summarizes the aviation issues for the County of Ventura. This chapter discusses the following issues pertaining to aviation:

- Airport Setting
- Airport Facilities
- Aircraft Incidents

Major Findings

- Airspace within the county can be heavily congested. Oxnard and Camarillo airports had a combined total of over 220,000 flights in 2015. Naval Base Ventura County Point Mugu averaged 29,493 annual flight operations between 2009-2013, and an estimated 70,000 flights occur at the Santa Paula Airport.
- Since 2010, there have been a total of 23 reported aviation incidents at Camarillo, Oxnard, Point Mugu, and Santa Paula, of which eight resulted in fatalities. During this same period, there have been a total of 33 reported incidents (five of which resulted in substantial damage to aircraft), and eight near mid-air collisions (all of them at Camarillo).

Existing Conditions

Airport Setting

There are four airports in Ventura County: the County-owned and operated airports at Camarillo and Oxnard, a private airstrip at Santa Paula that is open to the public, and the federally-operated Navy Base Ventura County Point Mugu Site, formerly the Point Mugu Naval Air Weapons Station. Figure 11-12 shows airport spheres of influence in the County. The California Air National Guard has an operation on a 204-acre site adjacent to, and utilizes the runways at, the Point Mugu Site. In addition, there are approximately 13 heliports (five associated with hospitals/medical centers), and a few privately-owned landing strips located in various parts of the county.

Airport Environs Land Use Plans

The *Airport Comprehensive Land Use Plan for Ventura County* is intended to protect and promote the safety and welfare of residents near the military and public use airports in the County, as well as airport users, while promoting the continued operation of those airports. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

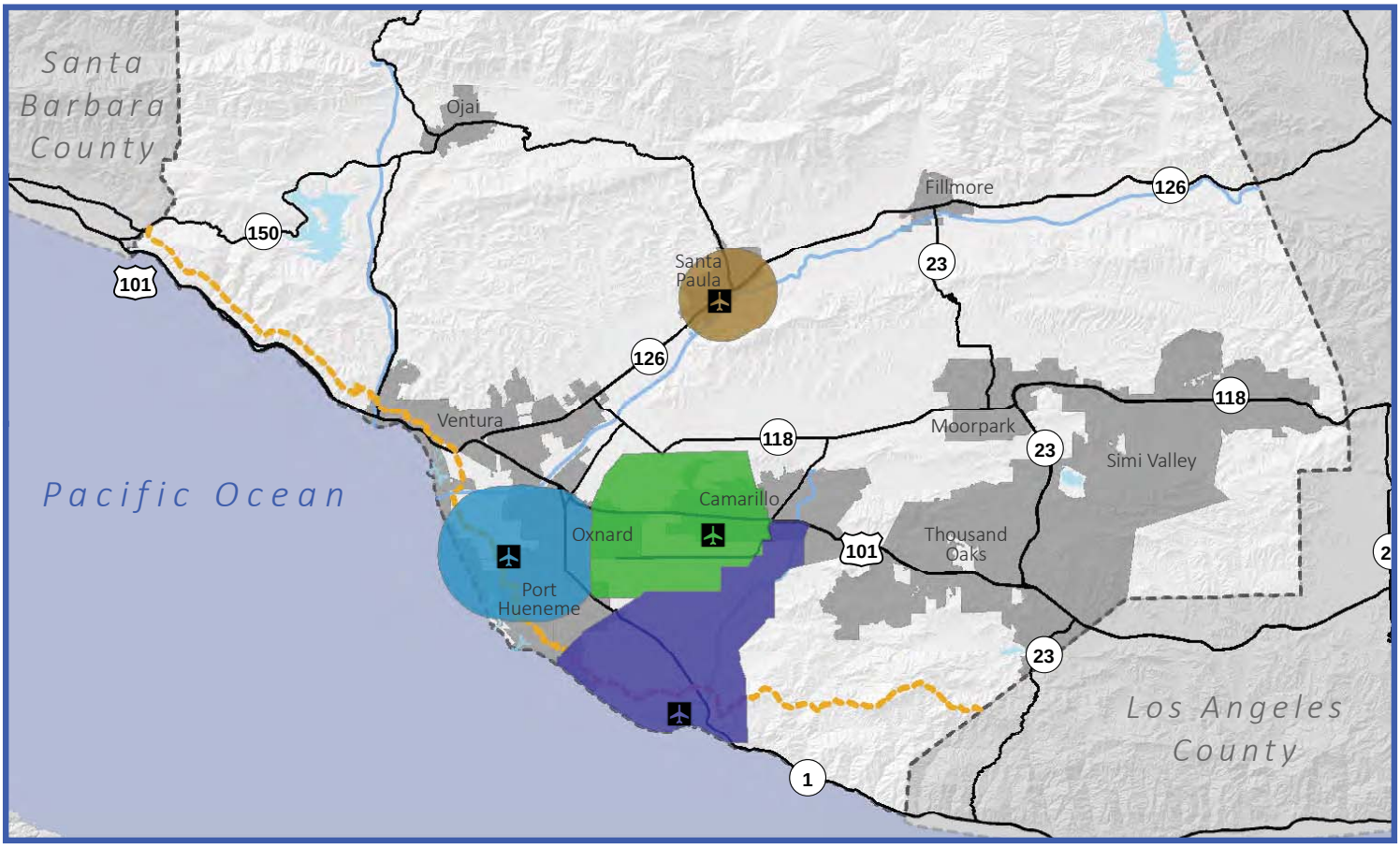


Figure 11-12
Airport Spheres of Influence

Map Date: July 18, 2016
Source: Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Airports

Airport Spheres of Influence

- Camarillo Airport
- Naval Base Ventura County
- Oxnard Airport
- Santa Paula Airport

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Implementation of the Comprehensive Land Use Plan for Ventura County promotes compatible urban development and restricts incompatible development in the vicinity of the county's airports, thus allowing for the continued operation of those airports. The three areas of compatibility that are considered in the Plan include:

- Compatibility of surrounding land uses with airport noise levels;
- Compatibility of surrounding land uses with respect to the safety of persons on the ground and persons on board aircraft making controlled crash landings; and
- Protection of airspace needed for safe air navigation near airports.

The Plan applies to all four airports in the county.

Airport Facilities

Oxnard Airport

The Oxnard Airport is 223 acres. Although it is located within the Oxnard city limits, it is owned and operated by the County of Ventura. Oxnard Airport is approximately two miles east of the Pacific Ocean coastline, and is bordered on sides by roads, three of which are major arterials. This airport is situated along the coastal edge of the 200-square mile Oxnard Plain. The City of Oxnard lies equidistant between Santa Barbara to the northwest and Los Angeles to the southeast. Oxnard Airport is classified in the *National Plan of Integrated Airport Systems* (NPIAS) as a primary commercial service airport with inactive status due to not providing scheduled airline service since June 2010. There are 169 aircraft based at the airport. In 2015, there were 75,000 aircraft operations at the Oxnard Airport: 90 percent general aviation, five percent combined air taxi and commuter, and the remaining five percent helicopters.

Camarillo Airport

The Camarillo Airport, owned and operated by the County of Ventura, was formerly known as Oxnard Air Force Base. The airport consists of 654 acres and is located within Camarillo city limits, three miles southwest of the city's central business district. The airport is less than one mile south of the US-101 and seven miles west of the Pacific Ocean coastline. The City of Camarillo lies within the Oxnard Plain, approximately 45 miles northwest of Los Angeles. Camarillo Airport is classified in the *National Plan of Integrated Airport Systems (NPIAS)* as a general aviation reliever for the Los Angeles metropolitan area. Reliever airports provide an alternative to general aviation users in major metropolitan areas. There are 468 fixed-wing aircraft based at the airport. In 2015, there were 136,510 aircraft take-offs and landings at the airport: 93 percent general aviation, four percent air taxi flights, and the remaining three percent helicopters.

Santa Paula Airport

Santa Paula Airport is a privately-owned, public use airport located one mile east of the Santa Paula central business district, south of SR-126. The 24.5-acre airport is owned by the Santa Paula Airport Association, Ltd. and is operated by the owners/stockholders. Santa Paula Airport is classified in the *National Plan of Integrated Airport Systems (NPIAS)* as a general aviation airport. Currently there are several airport-related businesses located at the airport, including the Santa Paula Flight Center, which provides parts, supplies, instruction, fuel and maintenance, plus the airport café and additional aircraft-related businesses. Virtually

all of the estimated 52,400 annual aircraft operations at the airport involve general aviation aircraft. There is no tower, so hours of operation are limited to daytime only. Helicopters also operate out of this facility.

Naval Base Ventura County: Point Mugu

Naval Base Ventura County consists of three operating facilities – Point Mugu, Port Hueneme, and San Nicolas Island – and supports approximately 80 tenant commands that encompass a diverse set of specialties, including three warfare centers (Naval Air Warfare Center – Weapons Division, Naval Surface Water Center – Port Hueneme Division, and Naval Facilities Engineering and Expeditionary Warfare Center). NBVC is also home to deployable units, including the Pacific Seabees and the West Coast E-2 C Hawkeyes.

NBVC Point Mugu occupies 4,486 acres located at the western end of the agricultural lands of the Oxnard Plain, six miles southeast of Oxnard and just over seven miles southwest of Camarillo. The Ventura County and Point Mugu Game preserves (private clubs with no association to the Navy), and Ormond Beach are located to the northwest of the base. California State University Channel Islands is four miles to the northeast. The base is flanked by the Santa Monica Mountains on the east and by the Pacific Ocean to the south. The facility was originally developed during World War II as an extension of the base at Port Hueneme.

The primary mission of NBVC Point Mugu is to provide support for aircraft and test range operations at the installation and surrounding airspace. NBVC Point Mugu is home to the Naval Air Warfare Center – Weapons Division, which manages the 36,000-square mile Point Mugu Sea Range, used for research, development, acquisition, test and evaluation of weapons systems and related devices, and other associated activities. NBVC also manages several special areas, including facilities on Laguna Peak, and the off-shore islands of San Nicholas, Santa Cruz, San Miguel, and Santa Rosa. San Nicolas Island, located approximately 60 miles off the coast of Point Mugu within the Point Mugu Sea Range, serves as an instrumented maritime environment needed for test and evaluation of weapons systems and air-to-sea maneuvering and fleet operations.

NBVC Point Mugu serves a variety of based and transient aircraft. The based military aircraft fleet consists of approximately 75 aircraft. Squadrons based on NBVC Point Mugu include four E-2 Hawkeye squadrons, one test and evaluation squadron and a Reserve C-130T squadron. In 2015, the U.S. Coast Guard announced that two air crews and MH-65D Dolphin helicopters would relocate to NBVC Point Mugu to provide search and rescue operations, homeland security patrols, cargo transport, and drug interdiction operations for the greater Los Angeles region.

NBVC Point Mugu maintains an air traffic control center, which controls all aircraft in southern Ventura County. The air traffic control center provides service seven days a week. Mugu Approach Control provides flight- following service to approximately 125,000 aircraft annually.

Per the 2015 Air Installations Compatible Use Zone (AICUZ) Study, NBVC Point Mugu had 29,493 average total annual flight operations (CY 2009 - 2013). The AICUZ projects 39,500 total annual operations in CY2020. Hours of operation of the airfield are normally between 7 a.m. and 11 p.m. daily and closed on Christmas and New Year's Day. Utilization of the airfield is very low in the early morning and evening hours. Peak hours vary from day to day, depending on changing mission requirements. The least active day is Sunday.

Naval Base Ventura County Joint Land Use Study (JLUS)

The Naval Base Ventura County Joint Land Use Study (JLUS) is a joint, collaborative effort between the cities of Camarillo, Oxnard, and Port Hueneme, the County of Ventura, NBVC, and other stakeholders, to guide planning and land use decisions about development in local governments surrounding NBVC and its operational areas at NBVC Point Mugu, NBVC Port Hueneme, and NBVC San Nicolas Island. The goal of the NBVC JLUS is to protect current and future military training operations while simultaneously guiding community growth, sustaining the environmental and economic health of the region, and protecting public health, safety, and welfare.

Key to the JLUS is the Air Installations Compatible Use Zones (AICUZ) program, which is designed to protect the health, safety, and welfare of civilians and military personnel by encouraging land uses compatible with aircraft operations while protecting the public investment in the installation. The program recommends compatibility measures for both the Navy and surrounding communities, and recommends land uses that are compatible with elevated sound level, accident potential zones, and obstruction clearance criteria associated with military airfield operations.

The JLUS includes diagrams (figures) of Military Compatibility Areas (MCAs), which are used to formally designate a geographic area where military operations may impact local communities, and conversely, where local activities may affect the military's ability to conduct its mission(s). The MCAs include subzones that delineate areas of concern for bird/wildlife aircraft strike hazards, safety, noise, and airfield imaginary surfaces. The MCAs are intended to promote an orderly transition between community and military land uses so that land uses remain compatible; protect public health, safety, and welfare; maintain operational capabilities of military installations and areas; promote an awareness of the size and scope of military training areas to protect areas separate from the actual military installation (e.g., critical air space) used for training purposes; and establish compatibility requirements within the designated area, such as requirements for sound attenuation or avigation easements.

NBVC Point Mugu MCA encompasses four subzones: Bird/Wildlife Aircraft Strike Hazard (BASH), Safety, Noise, and Airfield Imaginary Surfaces.

Bird/Wildlife Aircraft Strike Hazard (BASH) Subzone

The NBVC Point Mugu MCA includes a Bird/Wildlife Aircraft Strike Hazard (BASH) Subzone. The BASH Subzone is a five-mile statutory area from the center of the runway based on Federal Aviation Administration (FAA) recommendations. The BASH Subzone is characterized as an area that could be affected by bird and wildlife strikes due to the lower altitude of flying operations in the area. The following land uses near the NBVC Point Mugu airfield that have the potential to increase BASH incidents include: duck club activities, wetlands, other habitat restorations or new establishments, levees and plantings that attract birds, and changes in land use.

NBVC Point Mugu is located adjacent to the wetlands of Mugu Lagoon, which is an attractive habitat for bird species. There are also two game preserves located immediately west of NBVC Point Mugu. While the Navy's BASH Plan provides a protocol and measurement of management when conditions are high risk for BASH incidents, it does not address or identify the immediate concern of the duck clubs or game preserves adjacent to the airfield. Conversely, the Ventura County Zoning Ordinance does not consider

military compatibility as it relates to BASH incidents, nor does it address concern of duck clubs and game reserves.

Safety Subzone

The Safety Subzone guides compatible land use types, densities, and intensities within the Clear Zones (CZs) and Accident Potential Zones (APZs) I and II of Point Mugu's runways. The purpose of a Safety Subzone is to prevent the development of incompatible land uses in area with the greatest potential for an incident. The location of each Safety Subzone is based on the airfield layout and air operations identified by the Navy.

Noise Subzone

The Noise Subzone is a concern to the public surrounding military installations with flyer missions. NBVC Point Mugu is home to a large airfield that can support many types of aircraft. The area immediately surrounding NBVC Point Mugu is mostly agriculture and open space, which is compatible with military land uses. However, the flight paths could affect population centers and noise sensitive land uses. The Noise Subzone includes all land located off-installation within the 60 dB CNEL noise contour for NBVC Point Mugu.

Imaginary Surfaces Subzone

The Imaginary Surfaces Subzone provides guidance on the height of structures and buildings within the imaginary surfaces areas defined by the FAA and Navy. Imaginary surfaces are 3-D geographic areas comprising approach and departure airspace corridors and safety buffers. The height of structures and buildings are a major concern for flight operations because of the potential for a structure to extend into navigable airspace. Structures of concern include cell towers, power lines, wind turbines, buildings, and trees.

Channel Islands Air National Guard Base

The California Air National Guard 146 Tactical Airlift Wing officially dedicated a 208-acre installation in September of 1990. This property is north of NBVC, at the intersection of Hueneme and Naval Air Roads. This Wing began relocating their C-130 aircraft to this site from Van Nuys Airport in 1989. The Wing uses the NBVC Point Mugu runway and its 2,500-foot taxiway.

The mission of this unit is training for other assigned units once a month with various two-week active duty obligations. This results in over 1,500 personnel during training activities on the base. The Wing operates under the Air Force Mobility Command (AMC). Normal activities average 30 take offs and landings per day between 8 a.m. and 10 p.m. Monday through Friday, with an additional five return flights on weekends. Flight activity increases when the unit performs Fire Support Missions in conjunction with the U.S. Forest Service or the California Department of Forestry.

Aircraft Incidents

The most critical stages of the flight of an aircraft are takeoff and landing where accidents occur more frequently than at other flight stages. This places property in airport approach and departure zones at a higher risk. Hazard zones have been established for the four airports in Ventura County, based on landing

and takeoff patterns, with clear zones (areas that lie immediately beyond the ends of a runway) extending beyond the runway as recommended by the Federal Aviation Administration (FAA).

Oxnard and Camarillo airports had a combined total of over 220,000 annual flights in 2015. With an additional 29,493 average annual aircraft flights at Naval Base Ventura County, Point Mugu, and an estimated 70,000 at Santa Paula Airport, the airspace in this area can be heavily congested. According to Federal Aviation Administration and National Transportation Safety Board databases, since 2010 there have been 12 reported accidents at Camarillo (and one fatality), one accident at Oxnard (one fatality), three accidents at Point Mugu (two fatalities), and seven accidents at Santa Paula (four fatalities). There have been 25 reported incidents at Camarillo (four resulting in substantial aircraft damage, and the rest minor damage), three incidents at Oxnard (all resulting in minor damage), three incidents at Point Mugu (one resulting in substantial aircraft damage, the rest minor damage), and two incidents at Santa Paula (one resulting in substantial aircraft damage, the other minor damage). Only eight near mid-air collisions were reported, all at Camarillo. Air Traffic Control Tower at Camarillo is staffed by FAA personnel and the Tower at Oxnard airport is a Federal Contract Tower. The Towers provide control for aircraft in their respective areas from 7 a.m. to 9 p.m. The tower at Point Mugu is staffed by Navy personnel and is active from 7 a.m. to 10 p.m.

Damage from aircraft accidents varies depending on the weight, speed, and fuel load of the aircraft, as well as the actual land uses (i.e., structures) in the area. The risk to lives would tend to increase with greater density in use (e.g., a school versus a single-family house).

Other effects of aircraft operations include resident concerns over potential aircraft accidents, and aircraft noise.

Regulatory Setting

Federal

FAR 77

Title 14, Regulation 49 of the Code of Federal Regulations (CFR) includes Federal Aviation Regulation, Part 77 (FAR 77). FAR 77 establishes evaluation standards and notification requirements for objects affecting navigable airspace. This includes new construction as well as alterations to existing developments in the vicinity of airports. FAR 77 allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing possible adverse impacts to the safe and efficient use of navigable airspace. The regulation also requires evaluation and determination about potential hazardous effects of proposed construction or alterations, identifies mitigating measures to enhance safe air navigation, and charts new potentially hazardous objects. FAR 77 establishes a series of "Imaginary Surfaces", or horizontal and vertical planes, around airports in order to provide the dimensions within which objects are considered hazardous to airport operating procedures and/or air navigation. These surfaces cover every angle of approach and departure and are based on the specific dimensions, runway types, and operations of a given airport.

State

California Public Utilities Code

The State of California Public Utilities Code (PUC), Sections 21670 et seq., requires the County Board of Supervisors to establish an Airport Land Use Commission (ALUC) in each county with an airport operated for the benefit of the general public. The PUC also sets forth the range of responsibilities, duties, and powers of the Commission. Instead of creating a new body to serve as the ALUC, State law allows the county board of supervisors to authorize an appropriately designated body to fulfill ALUC responsibilities (See Section 21670.1). In Ventura County, the Board of Supervisors has designated the Ventura County Transportation Commission (VCTC) to act as the ALUC for the County. PUC Section 21675 requires the Airport Land Use Commission to formulate a comprehensive land use plan for the area surrounding each public use airport in the County. The Commission is also tasked with formulating a plan for the area surrounding each federal military airport located in the County. Section 21675 specifies that comprehensive land use plans shall provide for the orderly growth of each airport and the area surrounding the airport, and safeguard the welfare of the inhabitants within the vicinity of the airport and the public in general. Section 21676 requires that local general plans conform with the ALUC's comprehensive airport land use plan and grants the ALUC authority to review amendments to general plans, specific plans and zoning ordinances and building regulations that apply within the airport planning boundary.

Senate Bill 1462

Senate Bill 1462 (Chapter 906, Statutes of 2004) expanded the requirements for local governments to notify military installations of proposed development and planning activities. This statute states that "prior to action by a legislative body to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to the branches of the Armed Forces when the proposed project is located within 1,000 feet of a military installation, beneath a low-level flight path, or within Special Use Airspace (SUA)...."

Senate Bill 1468

Senate Bill 1468 (Chapter 971, Statutes of 2002) requires State Office of Planning and Research (OPR) to include guidance concerning incorporating military installation compatibility into a general plan, and how a general plan should consider the impact of civilian growth on readiness activities at military bases, installations, and training areas.

California Aviation System Plan-Policy Element

The California Aviation System Plan (CASP) Policy Element (PE) is the basis for implementing the State Aeronautics Act and identifying the Division of Aeronautics (Division) role in the California Department of Transportation (Caltrans) mission, vision, and values for a multimodal, interregional, transportation system. The PE is updated on approximately a five-year cycle with the last update published in October 2011.

LOCAL

Ventura County Airport Land Use Commission Airport Comprehensive Land Use Plan

Adopted in July 2000, The Airport Comprehensive Land Use Plan (ACLUP) for Ventura County is intended to protect and promote the safety and welfare of residents near the military and public use airports in the County, as well as airport users, while promoting the continued operation of those airports. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

The ACLUP for NBVC Point Mugu is based on a 1992 AICUZ Study and is due to be updated to reflect the 2015 AICUZ Study. The 2015 AICUZ Study contains updated compatibility analyses and updated noise contour analysis.

2005 Ventura County General Plan

The General Plan covers aviation hazards in Chapter 2, Hazards. Section 2.14 includes goals, policies, and programs related to aviation hazards.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for aviation hazards. These can be found in Section 19. Aviation Hazards.

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SECTION 11.5 HAZARDOUS MATERIALS

Introduction

This section addresses hazardous materials, which includes any material that, because of its quantity, concentration, physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that the administering agency determines to be potentially injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. This section summarizes hazardous materials and hazardous waste programs that exist in Ventura County, the types of materials that are managed, and briefly discusses current hazardous waste cleanup efforts within the county.

Major Findings

- There are over 2,600 facilities within Ventura County that store and use hazardous materials, maintain above-ground and under-ground hazardous substance storage tanks, and generate hazardous wastes. The majority of hazardous waste generated in the county is comprised of used oil, waste solvents and waste batteries.
- As of November 2016, there were 300 Hazardous Materials sites located in the unincorporated area of Ventura County, of these sites:
    - 27 were permitted underground storage tanks.
    - 273 have undergone or are undergoing hazardous materials remediation or may require remediation pending further testing. Of these, 162 have been designated as "Completed-Case Closed" including:
        - 22 Cleanup Program Sites,
        - 10 Landfill Disposal Sites,
        - 130 leaking underground fuel storage tank (LUST) sites,
    - One LUST site is designated “Open--Site Assessment,”

Existing Conditions

General Hazardous Materials Framework

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in CA HSC Section 25501 as: any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that meets the definition according to the handler or the administering agency. Chemical and

physical properties of a substance are directly related to the degree of hazard it poses, including properties of toxicity, ignitability, corrosiveness, and reactivity.

These materials can pose a substantial present or future hazard to human health or the environment if improperly handled, stored, disposed, remediated, or otherwise managed. If improperly handled, hazardous materials can result in public health hazards through direct human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern (e.g., drinking water contamination). The health effects of hazardous materials exposure are influenced by the dose to which a person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

Hazardous material releases can result in both short- and long-term effects on the local population and environment. Hazardous materials are governed by regulations that require proper storage and handling, business and environmental management plans, spill contingency plans, employee and public noticing, and other emergency preventive and response measures to minimize the risk of accidental releases and related environmental impacts. Chemicals and other materials found in soils of agricultural land or industrial sites as a result of current or past activity may also be of concern. When development on such sites is considered, potentially hazardous materials are identified and evaluated through a Phase I and/or Phase II environmental site assessment review conducted by the developer.

Hazardous Materials/Waste Generation and Management

Hazardous materials and hazardous waste is generated by a diverse range of industries in the county including agriculture, aerospace, on-shore and off-shore petroleum exploration, biotech, military, automotive services, public utilities, and various manufacturing and service industries. There are over 2,600 facilities within Ventura County that store and use hazardous materials, maintain above-ground and under-ground hazardous substance storage tanks, and generate hazardous wastes. The majority of hazardous waste generated in the county is comprised of used oil, waste solvents and waste batteries. (J. Wada; VC CUPA)

In addition to hazardous materials stored/handled at many facilities within the county, the county is intersected by numerous major transportation routes for highway, rail, ocean, pipeline, and aircraft travel that all carry hazardous substances. The release of hazardous materials is considered a significant environmental and public health threat. Therefore, substantial resources have been dedicated by a variety of agencies to create effective management programs.

Certified Unified Program Agency – CUPA

Part of the Ventura County Environmental Health Division (EHD) is the Ventura County Certified Unified Program Agency, (CUPA). The CUPA implements state and federal laws, regulations, county codes and local policies related to hazardous materials management. The Ventura County CUPA provides regulatory oversight for the following six statewide environmental programs:

- **Hazardous Waste:** The purpose of the hazardous waste program is to ensure that hazardous wastes are properly managed to protect public health and the environment. Waste is generally considered hazardous if it is ignitable, corrosive, toxic, reactive, or if it can be shown to be detrimental to human health or the environment. The EHD conducts routine inspections of

facilities that generate hazardous waste to verify compliance with State hazardous waste laws and regulations contained in the California Health and Safety Code, Chapter 6.5 and the California Code of Regulations, Title 22, Division 4.5. Ventura County facilities that generate hazardous waste, except those in the city of Oxnard, are required to obtain a hazardous waste producer's permit from EHD.

- **Hazardous Materials Business Plan:** A Hazardous Materials Business Plan (HMBP) provides the CUPA, local fire agencies, and the public with information regarding hazardous materials stored/handled at businesses and government facilities. The law requires facilities that store, use, or handle hazardous materials at or above specified threshold amounts to provide the CUPA with a HMBP. The CUPA has developed a Hazardous Materials Reporting Chart that explains the inventory reporting requirements and conditional exemptions in the California Health & Safety Code (HSC), Chapter 6.95, Article 1. The CUPA provides HMBP data to the local fire agencies. These agencies use the information during hazardous materials emergency responses. The CUPA is responsible for HMBP program compliance for the unincorporated area in Ventura County and within the cities of Simi Valley, Thousand Oaks, Moorpark, Fillmore, Santa Paula, Camarillo, Port Hueneme, and Ojai. However, within the cities of Oxnard and Ventura, the city fire departments are responsible for HMBP program compliance.

  The CUPA conducts routine HMBP inspections to ensure compliance, provide guidance on preventing or minimizing the risk of hazardous materials spills or releases, and to verify hazardous materials inventories, Emergency Response Plans, site maps, and training. The law requires that the HMBP, records of employee training, and updated site maps be available for review as part of the inspection process.

- **California Accidental Release Prevention Program (CalARP):** The objective of the CalARP program is to identify the risks associated with the use of extremely hazardous materials and to reduce the chances and negative effects to the public of an extremely hazardous materials release. To accomplish this, a facility must develop and maintain risk management plans and programs contained in the California Code of Regulations, Title 19, Chapter 4.5. Facilities subject to CalARP are inspected and evaluated to determine the completeness and effectiveness of risk management plans and programs. The CUPA regulates facilities subject to CalARP within Ventura County, with the exception of the cities of Oxnard and Ventura.

- **Underground Hazardous Materials Storage Tanks:** EHD regulates the construction, operation, repair and removals of underground storage tank (UST) systems within Ventura County, with the exception of the cities of Oxnard and Ventura. The goal of the UST Program is to protect public health, the environment and groundwater. To accomplish this goal, EHD ensures that facilities with UST operations are properly permitted and meet applicable monitoring requirements. This is accomplished during plan check and inspection activities. Each UST site is inspected annually to determine if the UST facility is in compliance with all applicable sections of the California Health and Safety Code Chapter 6.7 and California Code of Regulations Title 23.

- **Aboveground Petroleum Storage Tanks:** The CUPA regulates facilities subject to the Aboveground Petroleum Storage Act (APSA) within Ventura County with the exception of the cities of Oxnard and Ventura. In general, facilities storing at least 1,320 gallons of petroleum products in aboveground storage tanks/containers are subject to APSA requirements per California Health and Safety Code, Chapter 6.67. APSA requires the facility to maintain a Spill Prevention, Control, and Countermeasure (SPCC) Plan. This plan includes information on: the stored petroleum products, how the tanks/containers will be maintained and inspected, spill prevention measures, and spill response procedures. Such facilities are also required to annually submit a

Tank Facility Statement or Hazardous Materials Business Plan (HMBP). The program allows for certain types of facilities, such as farms, nurseries and construction sites, to qualify as "conditionally exempt" from certain APSA requirements. CUPA is required to establish a fee in order to administer the inspection and enforcement of APSA and to collect a surcharge for Office of the State Fire Marshall for oversight of the program.

- **Onsite Hazardous Waste Treatment/Tiered Permit:** In most cases, businesses in the county that treat hazardous waste onsite (except those in the City of Oxnard), are required to notify the CUPA of the treatment activity and comply with state laws and regulations pertaining to onsite hazardous waste treatment. Treatment is any process designed to change the physical, chemical or biological characteristic or composition of the hazardous waste. Depending on the treatment process and type and amount of hazardous waste treated, the treatment activity may be allowed under one of three treatment tiers managed by the CUPA.

In addition to these programs, the CUPA is involved with hazardous materials emergency response, investigation of illegal disposal of hazardous waste, and public complaints.

Other County Agencies Involved in Hazardous Materials Management

The Ventura County Fire Protection District is responsible in conjunction with an Automatic Aid Agreement to provide hazardous materials response capability to the cities and unincorporated areas of the county. The FPD also participates on a variety of committees that focus on pre-planning, preparation, and grant coordination for terrorism events and hazardous materials response.

The Sheriff, as Director of the Office of Emergency Services (OES), is responsible for population protection activities. The Sheriff's OES, a non-sworn component of the Sheriff's Department, carries out the functions of emergency management, planning and exercise development for response and recovery activities related to hazardous materials and other natural and man-made disasters.

The county's Public Health Officer enforces and observes all of the following in the unincorporated area of the county: (a) orders and ordinances of the Board of Supervisors pertaining to public health and sanitary matters; (b) orders including quarantine and other regulations prescribed by the department; and (c) statutes related to public health. The Public Health Officer may take any preventive measure that may be necessary to protect and preserve the public health from any public health hazard during any "state of war emergency," "state of emergency," or "local emergency," as defined by Section 8558 of the Government Code, within his or her jurisdiction. "Preventive measure" means abatement, correction, removal or any other protective step that may be taken against any public health hazard that is caused by a disaster and affects the public health.

Household Hazardous Waste Management

Residential households generate hazardous wastes that must be property disposed. These wastes may include latex paint, batteries, electronic waste, fluorescent lights, solvents, cleaners, oils, pool chemicals, and medications. The Ventura County Integrated Waste Management Division administers the Household Hazardous Waste (HHW) collection program and the operation of the Pollution Prevention Center, a permanent HHW collection facility which specifically serves residents of the unincorporated area and from the cities of Ojai, Santa Paula, and Fillmore. The County maintains information on permitted household hazardous waste facilities for residents to find out where to drop off various types of household hazardous waste. The County of Ventura holds monthly household hazardous waste collection

events at the County's Pollution Prevention Center. Most municipal jurisdictions within the county also offer similar monthly collection events.

Tracking Hazardous Materials Sites in Ventura County

Information on hazardous materials and contaminated properties is maintained by both the State of California and the County of Ventura. This section explains the agencies and programs responsible for managing this information and explains the presence of hazardous materials and sites in Ventura County.

The California Environmental Protection Agency (CalEPA) maintains the State of California Hazardous Waste and Substances List (also known as the "Cortese List"). Government Code Section 65962.5 requires CalEPA to annually update the Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for providing a portion of the Cortese List information, while other State and local agencies provide the remaining information. The EnviroStor database, managed by DTSC, lists Brownfield sites (a US EPA program for contaminated properties), sites undergoing hazardous materials mitigation, sites with known contamination that may require further investigation, Federal Superfund sites, State response sites, voluntary cleanup sites, and school cleanup sites.

The California Water Resources Control Board and the State's Regional Water Quality Control Boards maintain "GeoTracker," which is a data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for permitted facilities such as Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites. GeoTracker portals retrieve and compile records from multiple State Water Board programs and other agencies.

Effective on January 1, 2013, all businesses that submit facility information such as hazardous materials business plans, underground storage tank, and hazardous waste generator forms and related documents, will be required to use the internet to submit this information to their local agency electronically through an electronic information management system known as the California Environmental Reporting System (CERS). CERS will benefit regulated facilities by simplifying the document submittal process, including new information submittals and updating existing information to the CUPA. CERS will allow response agencies quick access to current data during emergency response activities.

According to State-maintained data (i.e., EnviroStor and GeoTracker), as of November 2016, there were 295 Hazardous Materials sites listed in the unincorporated area of Ventura County, 22 of which were permitted underground storage tanks (while the State reported 22 sites, the county was monitoring 27 sites, therefore for purposes of this Background Report, the County is reporting a total of 300 Hazardous Materials sites and 27 permitted underground storage tanks sites), of these sites:

- 273 have undergone or are undergoing hazardous materials remediation or may require remediation pending further testing. Of these, 162 have been designated as "Completed-Case Closed" including:
    - 22 Cleanup Program Sites,
    - 10 Landfill Disposal Sites,
    - 130 leaking underground fuel storage tank (LUST) sites,
- One LUST site is designated "Open--Site Assessment."

Following is a summary of the geographic distribution of sites within the unincorporated county:

- Newbury Park: 71 sites (47 closed or permitted);
- Somis: 47 sites (23 closed or permitted);
- Saticoy: 22 sites (20 closed or permitted),
- Oak View: 19 sites (18 closed or permitted),
- Piru: 19 sites (10 closed or permitted),
- Other Unincorporated Areas : 117 sites (66 closed or permitted)

Updated information on State-maintained data is available through DTSC's EnviroStor at http://www.envirostor.dtsc.ca.gov/public/ and the Water Boards' GeoTracker at http://geotracker.waterboards.ca.gov/.

Through the CUPA, the County maintains records on particular types of sites that are more up-to-date than those maintained by the State. For instance, as of November 2016, the county was monitoring 27 permitted underground storage tanks in the unincorporated area (as opposed to the 22 reported by the State). A full list of Ventura County CUPA facilities and programs, including USTs, can be found at: http://www.vcrma.org/envhealth/EHD_FACILITY_LISTS/cupa_facilities.pdf.

Ongoing Hazardous Waste Cleanup Sites in Ventura County

Halaco Superfund Site

The Halaco site is located in Oxnard at 6200 Perkins Road. The Halaco Engineering Company operated a secondary metal smelter at the site from 1965 to 2004, recovering aluminum, magnesium, and zinc from dross, castings, cans, car parts, and other scrap metal. The Site includes an 11-acre area containing the former smelter, and an adjacent 26-acre waste management area where wastes were deposited. The site includes a portion of the Ormond Beach wetlands, one of the few remaining wetlands in the area and home to several endangered or threatened species.

During its 40 years of operation, Halaco produced a large quantity of waste (i.e., slag) containing residual metals from the smelting process. From about 1965 to 1970, Halaco discharged waste into unlined settling ponds in or adjacent to the Oxnard Industrial Drain. From about 1970 to 2002, Halaco deposited wastes into unlined earthen settling ponds east of the smelter. More than 700,000 cubic yards of waste remain on-site. The U.S. Environmental Protection Agency took over site clean-up activities in 2007 and is currently conducting a Feasibility Study that will analyze options for site cleanup and reuse.

Santa Susana Field Lab (SSFL)

The SSFL site is comprised of 2,850 acres located in rocky terrain above Simi Valley. The facility opened in 1948 and began as a research, development, and testing location for rocket engines. During its history, the site has been managed by North American Aviation, Rocketdyne, Rockwell, and Boeing, in cooperation with the U.S. Army and Air Force. NASA acquired a portion of the site from the Air Force in 1973 and still manages 451.2 acres within the SSFL site today. The Boeing Company manages the remaining 2,398.8 acres. All operations at SSFL ceased in 2006.

For several decades, state and federal agencies have conducted environmental analysis to determine the extent of potential contamination on site. Studies have been conducted on soils, groundwater, and surface water. In addition, certain facilities on site, including the rocket test stands and other related ancillary structures have been found to have historical significance based on the historic importance of the engine testing and the engineering and design of the structures. The NASA-administered areas of SSFL also contain cultural resources not related to rocket development. SSFL is located near the crest of the Simi Hills that are part of the Santa Monica Mountains running east-west across Southern California. The diverse terrain consists of ridges, canyons, and sandstone rock outcrops.

A clean-up plan addressing soil and water contamination has been developed for the site by state and federal regulators, as well as by Boeing and NASA. Remediation activities are ongoing.

USA Petrochem

The USA Petroleum/Petrochem site is located at 4777 Crooked Palm Road in the unincorporated area of Ventura County, approximately 100 feet from the Ventura River. The refinery was built in the late 1970s, operated for less than 10 years, and shut down in 1984. The site contained a number of very large above ground storage tanks, many of which had oily sludge left from when the refinery closed. Since site closure, a number of leaks were observed from the piping throughout the facility. There was also a large amount of asbestos on the pipes and process units.

Since August 2012, at the request of EHD, the U.S. EPA assumed oversight of cleanup operations at the site. Cleanup activities are ongoing and include, but are not limited to removal of contaminated soil and structures, spill cleanup, and removal of all remaining fuel, sludge, and refining chemicals. The property owner has already located and closed off all outfalls and drainages from the site to the Ventura River.

Talley Facility – Telair International (TFX Aviation site)

The Talley Facility is located at 3085 Old Conejo Road, in Newbury Park. The Facility originally was built in the early 1950s on approximately 12.85 acres of property. The Facility was used by Talley Corporation for manufacturing civilian and military aircraft components from approximately 1956 to 1989. Seven buildings were located on the Facility supporting various manufacturing processes including metal casting, degreasing, pickling, and plating. During the manufacturing process, the Facility generated hazardous wastes, which included the following hazardous constituents: hexavalent chromium (Cr+6), other metals, cyanide, Trichloroethylene (TCE), miscellaneous chlorinated solvents, and waste oils, some of which contained low concentrations of polychlorinated biphenyls (PCBs). On-site waste disposal practices included the use of a surface impoundment and a leachfield.

In 1983 it was discovered that the surface impoundment had leaked. Subsequent investigations revealed that soil and groundwater were contaminated with solvents and heavy metals (mainly TCE and Cr+6). In 1984 the Facility submitted a closure plan to Department of Toxic Substances Control (DTSC) for the surface impoundment. The impoundment was closed in 1984 and a total of 3,200 cubic yards of contaminated soil were later removed. An engineered cap was then installed over the impoundment area.

A final post-closure permit was issued by DTSC on November 24, 1992 which addressed water quality monitoring of the former surface impoundment, closure of the solid waste management units, and post-closure care of the former surface impoundment. Operation of the groundwater treatment plan was subsequently taken out of the final post-closure permit and covered by DTSC's Permit by Rule process. The groundwater treatment plant was authorized by Ventura County under Permit by Rule and is not part

of this permit. The Post-Closure Permit was renewed/ reissued in October 7, 2005, with an expiration date of October 7, 2015.

Corrective action at the Facility has been conducted pursuant to the requirements of the Administrative Order on Consent issued by U.S. EPA in 1988 and the Post-Closure Permit issued by DTSC in 1992. In 1993, U.S. EPA selected extraction and treatment as the remedy for groundwater contamination. The remediation is currently ongoing, treating about 2.5 million gallons of groundwater a month and involving a total of 40 wells used for extraction and monitoring. Continuation of the pumping and treating of the groundwater is necessary to eliminate further migration and prevent future exposure. The groundwater remedy is ongoing and is expected to continue throughout the period of this permit.

Commonly Found Hazardous Materials

Commonly found hazardous materials can occur in structural building components, particularly in older buildings, which sometimes contain hazardous materials such as asbestos, polychlorinated biphenyls (PCBs), lead, and mercury. Businesses that store, use, or handle hazardous materials at or above specified threshold amounts are required to prepare a Hazardous Materials Business Plan and submit it to the County's Certified Unified Program Agency (CUPA). Also, households can generate hazardous materials, and the County of Ventura holds monthly events for the collection of household hazardous waste on an appointment basis at the Pollution Prevention Center.

Structural Building Components

Asbestos. "Asbestos" is a general name for a group of naturally occurring minerals composed of small fibers. Structures built or remodeled between 1930 and 1981 could contain asbestos-containing building materials (ACBM), such as floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation, and fireproofing materials. The presence of ACBM in a building does not mean that the building is itself a health hazard; as long as ACBM remains in good condition and are not disturbed or damaged, exposure is unlikely. Exposure is most likely to result during demolition. Many buildings in Ventura County were constructed prior to 1981 and, therefore, have the potential to contain ACBM.

Regulations formulated by the Ventura County Air Pollution Control District (VCAPCD) and California Division of Occupational Safety and Health (CalOSHA) restrict asbestos emissions from building demolition and renovation activities, and specify safe work practices to minimize release of asbestos fibers. These regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, and construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos; and require notice to Federal and local government agencies prior to beginning building demolition or renovation activity that could disturb asbestos. CalOSHA and the U.S. EPA define any material with one percent or more asbestos by weight as an ACBM.

PCBs. The manufacture and import of polychlorinated biphenyls (PCBs) have been banned in the U.S. since 1978. Sources of PCBs often include fluorescent light ballasts, electric transformers, and televisions, all of which are presumed to be present in Ventura County. Such items are regulated as hazardous waste and must be transported and disposed of accordingly. DTSC classifies PCBs as hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids.

Lead. Lead is a highly toxic metal that was used in products found in and around residences. Lead exposure from paint is possible when paint peels or is removed, and the lead can contaminate dust and soil. Construction workers can be exposed to airborne lead during demolition, renovation, or maintenance work. Although lead-based paints were banned from production in the 1970s, many buildings in Ventura County were constructed prior to that and may still contain lead. In addition to residences, areas along older, major roadways may contain aerially deposited lead (ADL), which could have been deposited from vehicle exhaust prior to 1996 when the sale of lead-based gasoline was banned.

CalOSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where materials containing lead are present; removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structures with materials containing lead. Inspection, testing, and removal of lead-containing building materials must be performed by State-certified contractors who comply with applicable health and safety and hazardous materials regulations.

Mercury. Mercury is another toxic metal considered hazardous. It can be found in fluorescent light tubes and bulbs, thermostats, and other electrical equipment. If these items are disposed of in landfills mercury could leach into the soil or groundwater. The mercury typically found in lighting tubes has been known to exceed regulatory thresholds and therefore must be managed in accordance with hazardous waste regulations. Mercury can also be present in traps in the plumbing of older buildings, where mercury-containing equipment has been used. Any items that contain mercury must be disposed of according to applicable hazardous waste regulations.

Business Hazardous Waste

Businesses are required to safely dispose of hazardous waste. Illegal disposal of hazardous waste, such as dumping in the trash, down storm drains, or abandoning it in alleyways, can result in serious legal ramifications for business owners such as fines and/or jail time. Legal disposal for businesses can become complicated, time-consuming, and expensive, since businesses are required to pay for disposal, and business owners will often hire a contractor to dispose of the waste. Ventura County offers several options for certain businesses that make disposal of hazardous waste easier and/or less expensive.

Household Hazardous Waste

Residential households are another source of hazardous materials. The Ventura County Integrated Waste Management Division administers the Household Hazardous Waste (HHW) collection program and the operation of the Pollution Prevention Center, a permanent HHW collection facility which specifically serves residents of the unincorporated area and from the cities of Ojai, Santa Paula, and Fillmore. The County maintains information on permitted household hazardous waste facilities for residents to find out where to drop off various types of household hazardous waste. These wastes may include latex paint, batteries, electronic waste, fluorescent lights, solvents, cleaners, oils, pool chemicals, medications, and more, depending on the location. The County of Ventura holds monthly household hazardous waste collection events at the County's Pollution Prevention Center. Most municipal jurisdictions within the County also offer similar monthly collection events.

Regulatory Setting

This section describes the Federal, State, and local regulatory setting related to existing and potential hazardous materials.

Federal

Federal agencies that regulate hazardous materials include the U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), the United States Department of Transportation (DOT), and the National Institutes of Health (NIH). The following Federal laws and guidelines govern hazardous materials storage, handling, and remediation in Ventura County:

- Occupational Safety and Health Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Resource Conservation and Recovery Act
- Toxic Substances Control Act

U.S. Environmental Protection Agency

The Environmental Protection Agency (EPA) is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and local government responsibility for issuing permits, and monitoring and enforcing compliance. EPA Region IX has authority over the Ventura County region, regulating chemical and hazardous materials use, storage, treatment, handling, transport, and disposal practices; protects workers and the community (along with CalOSHA, see below); and integrates the federal Clean Water Act and Clean Air Act into California legislation.

Federal Occupational Safety and Health Administration

The Federal Occupational Health and Safety Administration (OSHA) establishes and enforces Federal regulations related to health and safety of workers exposed to toxic and hazardous materials. In addition, OSHA sets health and safety guidelines for construction activities and manufacturing facility operations.

State

California passed the Hazardous Waste Control Act (HWCA) in 1972, which created the California Hazardous Waste Control Program. The program surveyed existing hazardous waste generation to determine the need for new or expanded facilities for meeting future waste management demands. The facility permitting program, designed to protect public health and the environment through the issuance of operating permits for facilities that treat, store, or dispose of hazardous wastes, provided a mechanism for in-depth inspections and a permit review of each hazardous waste facility at least every ten years.

California Environmental Protection Agency

In 1991, the California Environmental Protection Agency (CalEPA) was established to oversee and coordinate the activities of the Air Resources Board, Integrated Waste Management Board (succeeded by the Department of Resources Recycling and Recovery), Department of Pesticide Regulation, Department

of Toxic Substances Control, Office of Environmental Health Hazard Assessment, and State Water Resources Control Board.

Certified Unified Program Agency Program

In 1992, Senate Bill 1082 created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), to ensure consistency throughout the state regarding hazardous waste and materials standards. Cal EPA oversees the entire Unified Program and certifies local government agencies, known as Certified Unified Program Agencies (CUPA), to implement the program standards.

A local agency, such as a county or city, applies to Cal/EPA for certification as the Unified Program Agency, responsible for implementing the Unified Program within its jurisdiction. A Certified Unified Program Agency must establish a program that consolidates, coordinates and makes consistent the administrative requirements, permits, inspection activities, enforcement activities, and hazardous waste and hazardous materials fees. The implementation of the Unified Program must not result in more fragmentation between jurisdictions than existed before the Unified Program, and the Unified Program must be consistent throughout the entire county.

The Unified Program is implemented at the local level, but the program is certified by the Secretary of California Environmental Protection Agency (CalEPA). The Governor's Office of Emergency Services, Department of Toxic Substances Control, Office of the State Fire Marshal, and State Water Resources Control Board are also involved with the Unified Program.

California Governor's Office of Emergency Services

The California Governor's Office of Emergency Services (OES) supports and enhances emergency management, including preparedness, response, recovery, and mitigation needs, and assists local and tribal governments with hazard mitigation planning. The OES also develops the State Hazard Mitigation Plan, and respond to and aids in the recovery from emergencies within the State. In addition, the OES is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) and the Area Plan Programs.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates hazardous substances and wastes, oversees remedial investigations, protects drinking water from toxic contamination, and warns public exposed to listed carcinogens. DTSC also provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting).

CAL FIRE- Office of the State Fire Marshal (CAL FIRE-OSFM)

The Office of the State Fire Marshal (OSFM) is responsible for ensuring the implementation of the Hazardous Material Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) and the Aboveground Petroleum Storage Act (APSA) Programs. The HMMP and HMIS Program is closely tied to the Business Plan Program. In addition, Cal FIRE-OSFM also handle the oversight and enforcement for the aboveground storage tank program. The OSFM is also responsible for ensuring the implementation of the California Fire Code HMMP/HMIS and the APSA program elements.

California Highway Patrol/ California Department of Transportation

The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) have primary regulatory responsibility for the transportation of hazardous wastes and materials.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (CalOSHA) is responsible for promulgating and enforcing State health and safety standards, and implementing Federal OSHA laws. CalOSHA has authority to set and enforce standards to minimize the potential for release of asbestos and lead during construction and demolition activities.

State Water Resources Control Board/Regional Water Quality Control Board

The State Water Resources Control Board provides technical assistance and evaluation for the underground storage tank program. The Los Angeles Regional Water Quality Control Board (RWQCB) is one of nine regional boards in the state charged with protecting surface and groundwater quality from pollutants discharged or threatened to be discharged to the Waters of the State. The RWQCB issues and enforces National Pollutant Discharge Elimination System (NPDES) permits and regulates leaking underground storage tanks and other sources of groundwater contamination.

Local

Local agencies that coordinate and implement hazardous materials regulations and protocols in Ventura County include the Ventura County Air Pollution Control District (VCAPCD), Ventura County CUPA, and the Ventura County Fire Protection District.

Ventura County Air Pollution Control District

The Ventura County Air Pollution Control District (VCAPCD) regulates the demolition of buildings and structures that may contain asbestos through both inspection and law enforcement The VCAPCD is to be notified 10 days in advance of any proposed demolition or abatement work. The provisions that cover these operations are found in VCAPCD Regulation 1, Rule 62 and 62-1: Hazardous Materials and Airborne Toxics; Hazardous Materials. Individual project contractors are required to implement standard State and Federal procedures for asbestos containment and worker safety. The rule requires special handling of asbestos-containing building materials (ACBM) (e.g., by keeping materials continuously wetted). The Rule prohibits any visible emissions of ACBM to outside air. Individual project applicants are required to consult with the VCAPCD Enforcement Division prior to commencing demolition of a building containing ACBM.

Ventura County Environmental Health Division, CUPA Program

Ventura County Environmental Health Division, Certified Unified Program Agency (VC CUPA) is the CUPA for all incorporated and unincorporated areas of Ventura County, with the exception of the City of Oxnard., This means VC CUPA has been certified by the CalEPA to implement the following six state environmental programs:

- Hazardous Waste
- Hazardous Materials Business Plan (HMBP)

- California Accidental Release Prevention Program (CalARP)
- Underground Hazardous Materials Storage Tanks (UST)
- Aboveground Petroleum Storage Tanks /Spill Prevention Control & Countermeasure Plans (APSA)
- Onsite Hazardous Waste Treatment / Tiered Permit

The Hazardous Materials Business Plan (HMBP) is required to include a summary of business activities, owner and operator information including emergency contacts, the type and quantity of reportable hazardous materials, a site map, emergency response procedures, and an employee training program. In general, the submittal of a HMBP is required if a business handles and/or stores a hazardous material equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet (at standard temperature and pressure) for compressed gases. Exemptions to filing a HMBP are listed in the Health and Safety Code.

The Ventura County Environmental Health Division also administers the Medical Waste Program, Body Art Program, and has emergency on-call staff available to respond to hazardous and medical waste incidents/releases.

Ventura County Fire Protection District (VCFPD)

The Ventura County Fire Protection District serves the communities of Camarillo, Moorpark, Ojai, Port Hueneme, Simi Valley, and Thousand Oaks. Formed in May 1928, the VCFPD provides all-risk services including Fire Suppression, Rescue, Emergency Medical, Hazardous Materials, Urban Search and Rescue (USAR), Water Rescue, Operational Training, Fire Prevention, Investigation, Community Education, Community Emergency Response Teams (CERT) and Public Information. The VCFPD service area encompasses approximately 484 square miles and serves a population of more than 480,000. All VCFPD fire stations have a staffed fire engine in service. At strategic fire stations throughout the county, the VCFPD staffs a ladder truck along with a fire engine. Fire engines attack a fire; ladder trucks provide support to the fire attack crew. All apparatus are equipped to deliver emergency medical care. Some apparatus staffed with personnel EMTs to provide basic life support (BLS). While other apparatus are staffed with paramedics to deliver advance life support (ALS). In addition the department provides ALS services through the use of staffed paramedic squads.

The VCFPD also maintains other pieces of specialized apparatus throughout the county. The on-duty crew at the station will staff and operate these specialized units when needed. The Department responds to approximately 35,000 calls for service annually.

Ventura County Certified Unified Program Agency Program

The Ventura County CUPA implements Federal and State laws and county regulations related to hazardous waste use, storage, transport, and disposal. The CUPA activities include education on proper handling, storage, and disposal of hazardous wastes; inspections of hazardous waste generators; the investigation of illegal disposal and public complaints; and emergency response to hazardous materials. Additionally, the CUPA provides oversight and regulation of statewide environmental programs, which include the following:

- Hazardous Waste,
- Hazardous Materials Business Plan,
- California Accidental Release Prevention Program,

- Underground Hazardous Materials Storage Tanks,
- Aboveground Petroleum Storage Tanks/ Spill Prevention Control & Countermeasure Plans
- Onsite Hazardous Waste Treatment/ Tiered Permit

For emergency response services, the City of Ventura Fire Department and the Oxnard Fire Department are Participating Agencies of the CUPA and implement the programs in their respective jurisdictions. The remainder of CUPA responsibilities in the county rest with the County Environmental Health Division.

2005 Ventura County General Plan

The General Plan covers hazardous materials in Chapter 2, Hazards. Section 2.15 includes goals, policies, and programs related to hazardous materials.

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for hazardous materials. These can be found in Sections 20a. Hazardous Materials/Waste-Materials and 20b. Hazardous Materials/Waste-Waste.

Key Terms

Biohazard. An infectious agent or hazardous biological material that presents a risk or potential risk to the health of humans, animals, or the environment. The risk can be direct through infection or indirect through damage to the environment.

Brownfield. Abandoned, idled, or under-used real property where expansion or redevelopment is complicated by the presence or potential presence of environmental contamination.

Carcinogen. Any substance that can cause or aggravate cancer.

Corrosiveness. The ability to eat away materials and destroy human and animal tissue by chemical action (e.g., oven cleaner).

Exposure Pathway. The route through which a chemical can enter the body (e.g., through the skin, inhaling, ingesting).

Groundwater. Water that exists beneath the land surface in openings (space) between soil and rock. Does not include water residue from underground mining.

Heavy Metal. An individual metal or metal compound that can negatively affect people's health. Though in very small amounts certain heavy metals are necessary to support life (e.g., iron, copper, manganese, zinc), when heavy metals are not metabolized by the body, they can accumulate in the soft tissues and become toxic.

Ignitability. The ability to catch fire; flammable (e.g., lighter fluid, paint remover).

Leach. The process by which soluble substances are dissolved and transported through the soil, which may result in hazardous substances entering surface water, groundwater, or nearby soil.

Petroleum Hydrocarbons. The primary constituents in oil, gasoline, and diesel, plus a variety of solvents.

Polychlorinated Biphenyls (PCBs). Chemicals formerly manufactured for use as coolants and lubricants in transformers, and in other electrical equipment (e.g., fluorescent light ballasts, old televisions). In 1978, PCB production was banned in the U.S. because accumulation in the environment can cause harmful health effects, including cancer.

Reactivity. The ability to create an explosion or produce deadly vapors (e.g., bleach mixed with an ammonia-based cleaner).

Release/Occurrence. Any means by which a substance could harm the environment (e.g., spilling, leaking, dumping).

Remediate. The act or process of removing pollution or contaminants from the soil, groundwater, sediment, or surface water to protect human health and the environment.

Solvent. A substance that dissolves another substance (or substances) to form a solution. Solvents are usually, but not always, liquids. Liquid solutions that do not have water as a solvent are called non-aqueous solutions. For example, solvents can be used to dissolve greases, oils, and paints or thin or mix pigments, paints, glues, pesticides, and epoxy resins.

Toxicity. The ability to produce injury, illness, or damage to people, domestic animals, or wildlife through ingestion, inhalation, or absorption through the body (e.g., cleaning fluids, pesticides, bleach, drain cleaner).

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SECTION 11.6 NOISE AND VIBRATION

Introduction

This section includes a description of relevant acoustical background information, including fundamental principles of acoustics, a description of the existing community noise environment in Ventura County, applicable federal, state and local regulations, and key terms.

Major Findings

The major findings with respect to noise are as follows:

- Based on ambient noise level measurements throughout unincorporated areas of the county, the predominant sources of noise include traffic noise on major roadways, transit and freight trains, and aircraft.
- Roadway traffic is the predominant source of noise affecting sensitive land uses in the county. Freeways and major arterial roadways are the primary sources of traffic noise. Based on traffic-noise modeling, the roadways in unincorporated Ventura County with the greatest modeled traffic-noise levels are US-101 and State Routes 23, 118, and 126.
- Of the roadway segments modeled, the 60 A-weighted decibels (dBA) traffic noise contour ranges from 4 to 1,792 feet from the centerline of the roadway. Residential land uses located within the 60 dBA contour along these roadway segments are currently exposed to noise levels above the 60 dBA Community Noise Equivalent Level (CNEL) standard for residential land uses.
- In addition to traffic noise on local roadways and state highways, passenger and freight trains operating within the unincorporated areas of the county contribute to community noise levels. Based on the modeling conducted, the 60 dBA CNEL railroad noise contour is between approximately 154 to 165 feet from the centerline of the rail line. Residential land uses located within the 60 dBA contour along these railroad lines are currently exposed to noise levels above the 60 dBA CNEL standard for residential land uses.
- The Airport Comprehensive Land Use Plan (CLUP) for Ventura County establishes noise compatibility policies for sensitive land uses within the 60 dBA and higher CNEL noise contours. The plan restricts extremely sensitive land uses (e.g., mobile home parks) within the 60 dBA CNEL contour and requires mitigation measures for moderately sensitive land uses within the 60 dBA CNEL contour.
- Noise generated by industrial facilities and other stationary sources contribute to the ambient noise environment in their immediate vicinities.

Existing Conditions

Acoustics Fundamentals

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a

solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Common sources of environmental noise and noise levels are presented in Table 11-5.

TABLE 11-5
TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher in next room
Quiet urban nighttime	40	Theatre, Large conference room (background)
Quiet suburban nighttime	30	Library, Bedroom at night, Concert hall (background)
Quiet rural nighttime	20	Broadcast/Recording Studio
Threshold of Human Hearing	0	Threshold of Human Hearing

Notes: dB=decibel
Source: California Department of Transportation [Caltrans] 2013.

Sound Properties

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, or the diaphragm of a radio speaker). The wave consists of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variation cycles occurring per second is referred to as the frequency of the sound wave and is expressed in hertz.

Directly measuring sound pressure fluctuations would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable numbering system, the decibel scale was introduced. A sound level expressed in decibels (dB) is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. For sound pressure in air the standard reference quantity is generally considered to be 20 micropascals, which directly corresponds to the threshold of human hearing. The use of the decibel is a convenient way to handle the million-fold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. There is a strong correlation between the way humans perceive sound and

A-weighted sound levels (dBA). For this reason, the dBA can be used to predict community response to noise from the environment, including noise from transportation and stationary sources. All sound levels discussed in this section are A-weighted decibels unless otherwise noted.

Noise can be generated by a number of sources, including: mobile (i.e., transportation) sources such as automobiles, trucks, and airplanes; and stationary (i.e., non-transportation) sources such as construction sites, machinery, and commercial and industrial operations. As acoustic energy spreads through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Noise generated from mobile sources generally attenuate at a rate of 4.5 dB per doubling of distance. Stationary noise sources spread with more spherical dispersion patterns that generally attenuate at a rate of 6 to 7.5 dB per doubling of distance.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a large object (e.g., barrier, topographic features, and intervening building façades) between the source and the receptor can provide significant attenuation of noise levels at the receiver. The amount of noise level reduction (i.e., shielding) provided by a barrier primarily depends on the size of the barrier, the location of the barrier in relation to the source and receivers, and the frequency spectra of the noise. Natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may be used as noise barriers.

All buildings provide some exterior-to-interior noise reduction. A building constructed with a wood frame and a stucco or wood sheathing exterior typically provides a minimum exterior-to-interior noise reduction of 25 dB with its windows closed, whereas a building constructed of a steel or concrete frame, a curtain wall or masonry exterior wall, and fixed plate glass windows of one-quarter-inch thickness typically provides an exterior-to-interior noise reduction of 30–40 dB with its windows closed (Caltrans 2009).

Effects of Noise on Humans

Excessive and chronic exposure to elevated noise levels can result in auditory and non-auditory impacts to humans. Auditory effects of noise on people are those related to temporary or permanent hearing loss caused by loud noises. Non-auditory effects of exposure to elevated noise levels are those related to behavioral and physiological effects. The non-auditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research infers that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The extent to which noise contributes to non-auditory health effects remains a subject of considerable research, with no definitive conclusions.

The degree to which noise results in annoyance and interference is highly subjective and may be influenced by several non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary depending on individual characteristics of the noise environment such as sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in the noise levels that are attributed to a new noise

source, relative to the environment an individual has become accustom to, the less tolerable the new noise source will be perceived.

With respect to how humans perceive and react to changes in noise levels, a 1 dB increase is imperceptible, a 3 dB increase is barely perceptible, a 6 dB increase is clearly noticeable, and a 10 dB increase is subjectively perceived as approximately twice as loud (Egan 2007). These subjective reactions to changes in noise levels was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dB, as this is the usual range of voice and interior noise levels. For these reasons, a noise level increase of 3 dB or more is typically considered substantial for humans in terms of the degradation of the existing noise environment.

Negative effects of noise exposure include physical damage to the human auditory system, interference, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period of time. Gradual and traumatic hearing loss both may result in permanent hearing damage. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication. Although most interference may be classified as annoying, the inability to hear a warning signal may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases depends on the frequency, bandwidth, level of the noise, and the exposure time (Caltrans 2009).

Noise levels can also have adverse impacts on animals. (See Section 8.2, "Biological Resources," for more detail.)

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include non-human-caused phenomena (e.g., earthquakes, volcanic eruptions, sea waves, and landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, and construction equipment). Vibration sources may be continuous (e.g., operating factory machinery) or transient (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency (relative to displacement), velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (Federal Transit Association [FTA] 2006). This is based on a reference value of 1 micro (μ) in/sec.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a

vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate ground vibrations, which can pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006).

Construction vibrations can be transient, random, or continuous. Transient construction vibrations are generated by events such as blasting, impact pile driving, and wrecking balls. Continuous vibrations result from activities such as vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. Table 11-6 describes the general human response to different levels of ground vibration-velocity levels.

TABLE 11-6
HUMAN RESPONSE TO DIFFERENT LEVELS OF GROUND NOISE AND VIBRATION

Vibration-Velocity Level (VdB)	Human Reaction
65	Approximate threshold of perception.
75	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB=vibration decibels referenced to 1 µ inch per second and based on the root mean squared velocity.
Source: FTA 2006

Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, sensitive habitats, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship, hotels and other short-term lodging, libraries, and other places where low interior noise levels are desirable are also considered noise-sensitive. These noise-sensitive uses are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

The following sensitive land uses have been identified in Ventura County (Ventura County 2015a):

- Residential land uses
- Schools;
- Historic Sites;
- Cemeteries;
- Parks, Recreation, and Open Space Areas;
- Hospitals and Care Facilities;

- Sensitive wildlife habitats, including the habitat of rare, threatened, or endangered species;
- Hotels and other short-term lodging (e.g., bed and breakfasts, motels);
- Places of Worship; and
- Libraries.

Existing Community Noise Environment

The predominant noise sources within Ventura County are mobile sources, including motor vehicles on roadways, freight and passenger trains, and aircraft. Stationary sources from existing land uses such as industrial and agricultural operations also contribute to the existing noise environment. A total of 15 ambient noise level measurements consisting of fourteen 30-minute short-term (ST) measurements and one 24-hour long-term (LT) measurement, were conducted to characterize the existing noise environment at different locations throughout the unincorporated county. Figure 11-13 shows the locations of each sound level measurement and Table 11-7 summarizes the measured sound level at each location.

TABLE 11-7
SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS
Ventura County

Measurement Location	Start (Date/Time)	Stop (Date/Time)	A-Weighted Sound Level (dB)			Nearby Noise-Sensitive Land Uses
Short-Term			L_{eq}	L_{max}	L_{min}	
ST-1: Intersection of SR 33 and Valley Mead Road	August 8, 2016/10:22 AM	August 8, 2016/10:52 AM	48.0	73.5	40.9	Residential
ST-2: Holser Canyon Road near the Wes Thompson Piru Rifle Range	August 8, 2016/11:24 AM	August 8, 2016/11:54 AM	64.8	83.9	49.0	Open Space
ST-3: Intersection of SR 126 and Hooper Canyon Road	August 8, 2016/12:12 PM	August 8, 2016/12:42 PM	68.5	84.3	41.6	Open Space
ST-4: Near intersection of 3rd Street and F Avenue	August 8, 2016/2:01 PM	August 8, 2016/2:31 PM	70.9	83.2	46.8	Residential
ST-5: Intersection of SR 1 and Yerba Buena Road, near Neptune's Net Restaurant	August 8, 2016/3:35 PM	August 8, 2016/4:05 PM	75.4	100.1TBD	46.6	Recreation Area
ST-6: Intersection of Vista Del Rincon Drive and	August 8, 2016/4:48 PM	August 8, 2016/5:18 PM	73.2	84.5	48.8	Residential, Open Space

TABLE 11-7
SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS
Ventura County

Measurement Location	Start (Date/Time)	Stop (Date/Time)	A-Weighted Sound Level (dB)			Nearby Noise-Sensitive Land Uses
Short-Term			L_{eq}	L_{max}	L_{min}	
Carpinteria Avenue near SR 1						
ST-7: Intersection of North Ventura Avenue and Holt Street Near SR 33	August 8, 2016/5:37 PM	August 8, 2016/6:07 PM	66.9	85.2	49.2	Residential
ST-8: Intersection of Santa Clara Avenue and Friedrich Road	August 9, 2016/10:26 AM	August 9, 2016/10:56 AM	49.7	69.3	36.2	Open Space, Residential
ST-9: Intersection of Tapo Canyon Road and Bennett Road	August 9, 2016/11:10 AM	August 9, 2016/11:40 AM	62.1	70.8	49.2	Open Space
ST-10: Along Lower Lake Road on Lake Sherwood	August 9, 2016/12:09 PM	August 9, 2016/12:39 PM	64.7	69.9	45.9	Residential, Recreation, Open Space
ST-11: Intersection of Lindero Canyon Road and Lakeview Canyon Road	August 9, 2016/1:17 PM	August 9, 2016/1:47 PM	62.1	83.4	34.5	Residential
ST-12: Along SR 23 at the intersection of Happy Camp Road and Broadway	August 9, 2016/3:12 PM	August 9, 2016/3:42 PM	63.6	84.7	44.0	Open Space
ST-13: Along SR 118, north of the Arch Street / North Street intersection	August 10, 2016/1:23 PM	August 10, 2016/1:53 PM	64.9	83.0	45.4	Residential
ST-14: Santa Rose Road and Yucca Drive	August 10, 2016/2:06 PM	August 10, 2016/2:36 PM	58.8	76.5	41.2	Open Space
Measurement Location	**Start (Date/Time)**	**Stop (Date/Time)**	**CNEL/L_{dn}**	**Daytime**	**Nighttime**	

TABLE 11-7
SUMMARY OF AMBIENT NOISE LEVEL MEASUREMENTS
Ventura County

Measurement Location	Start (Date/Time)	Stop (Date/Time)	A-Weighted Sound Level (dB)							Nearby Noise-Sensitive Land Uses
Short-Term			L_{eq}		L_{max}		L_{min}			
Long-Term				L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}	
LT-1: near SR 118 in open space area south of Riverbank Drive, north east of Santa Clara River	August 8, 2016/1:43 PM	August 9, 2016/2:35 PM	59.3[1]/58.7	56.8	69.6	45.0	48.6	63.5	35.7	Open Space, Commercial Office Buildings

Notes: CNEL=community noise equivalent level, dB=decibel, Leq=equivalent sound level, L_{max}=maximum noise level, L_{min}=minimum noise level, LT= long term, ST= short term. See Figure 11-13 for map of locations.
[1] The LT measurement does not exceed the applicable 60 dB CNEL for the noise-sensitive land uses near this location.
Source: Field data collected by Ascent Environmental, Inc., August and October 2016.

As shown in Table 11-7, the L_{eq} for ST measurement-2, 3, 4, 5, 6,7, 8, 9, 10, 11, and 12 exceed 60 dB. Sensitive receptors near these measurements include residential land use, open space, and recreational areas. It should be noted that these values were taken over the duration of 30 minutes and are intended to reflect ambient noise levels during that period alone; therefore, these values do not indicate CNEL levels at these locations. LT measurement-1, taken over a 24-hour period, provides the CNEL values for that location of 59.3 dB, which does not exceed the applicable threshold of 60 dB.

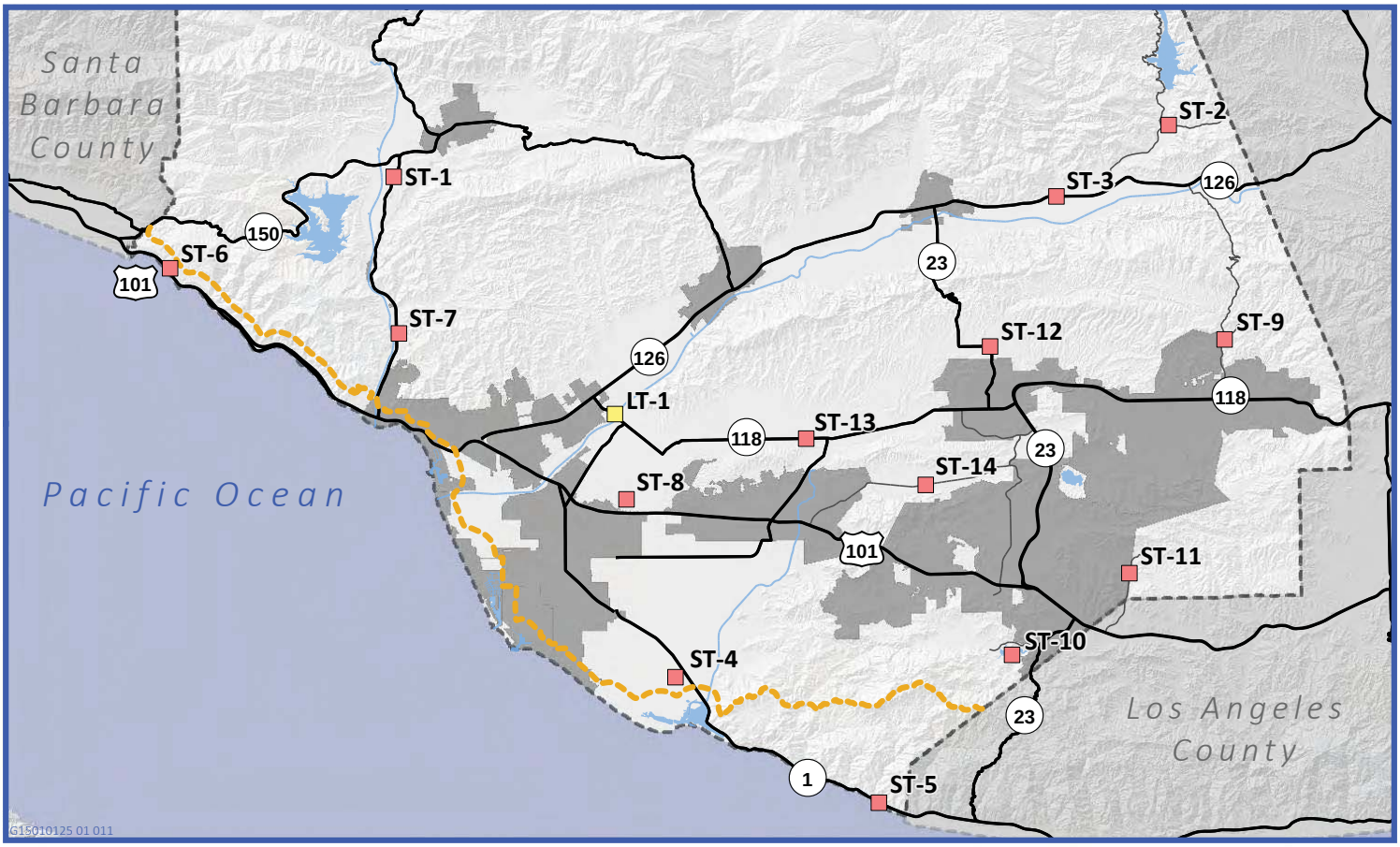


Figure 11-13:
Ambient Noise Measurement Locations

Map Date: November 16, 2016
Source: Ascent Environmental, 2016; Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Noise Monitoring Locations
- Long-term
- Short-term

Coastal Zone Boundary
Major Roadways
Major Waterways

Water Bodies
Cities

Existing Traffic Noise

Major highways in Ventura County include US 101, SR 1, SR 33, SR 150, SR 126, and SR 118. There is also a network of rural roadways throughout the county.

Traffic noise was modeled for 131 County-operated roadways segments and 82 state highway segments within the unincorporated county and adjacent areas. Table 11-8 summarizes the modeled existing traffic noise levels at 50 feet from the centerline of each major roadways and lists distances from each roadways centerline to the 70, 65, 60, and 55 dBA CNEL/L_{dn} traffic noise contours. Ascent Environmental performed noise modeling in 2016 based on existing average daily traffic (ADT) volumes and speeds as indicated by a 2015 traffic volumes report provided by the County of Ventura Public Works Agency and supplemented by Caltrans data for freeway segments (Ventura County 2015b; Caltrans 2014). Traffic noise modeling was conducted based on Caltrans' traffic noise analysis protocol and the technical noise supplement (Caltrans 2006, 2013). The modeling does not account for any natural or human-made shielding (e.g., the presence of topography, vegetation, berms, walls, or buildings) and, consequently, represents worst-case noise levels on a horizontal plane.

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
County Operated Roadways						
Aggen Rd.	n/o L.A. Ave. (SR 118)	55.0	3	10	32	101
Balcom Canyon Rd.	s/o South Mountain Rd.	54.6	3	9	32	101
Balcom Canyon Rd.	n/o L.A. Ave. (SR 118)	56.1	4	13	41	129
Bardsdale Ave.	e/o Sespe St.	56.4	4	14	44	139
Beardsley Rd.	n/o Central Ave.	61.2	13	42	133	420
Bennett Rd.	n/o Tapo Canyon Rd.	47.4	1	2	6	17
Box Canyon Rd.	s/o Santa Susana Pass Rd.	57.7	6	18	58	184
Bradley Rd.	n/o L.A. Ave. (SR 118)	61.2	13	42	133	420
Briggs Rd.	s/o Telegraph Rd.	62.8	19	61	191	605
Briggs Rd.	n/o Telegraph Rd.	58.4	7	22	69	218
Bristol Rd.	w/o Montgomery Ave.	64.8	30	96	302	956
Broadway Rd.	w/o Grimes Canyon Rd. (SR 23)	58.8	8	24	76	241
Burnham Rd.	s/o Baldwin Rd. (SR 150)	55.1	3	10	32	101
Burnham Rd.	e/o Santa Ana Rd.	54.4	3	9	28	88

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Calle Yucca	n/o Camino Manzanas	54.2	3	8	26	83
Camino Dos Rios	w/o Lynn Rd.	56.6	5	14	45	143
Canada Larga Rd.	e/o Ventura Ave.	54.3	3	8	27	85
Carne Rd.	n/o Ojai Ave. (SR 150)	50.7	1	4	12	37
Casitas Vista Rd.	w/o Ojai Fwy. (SR 33)	55.6	4	12	36	115
Cawelti Rd.	w/o Lewis Rd.	60.0	10	32	101	319
Center School Rd.	s/o L.A. Ave. (SR 118)	55.8	4	12	38	119
Center St. (Piru)	w/o Telegraph Rd. (SR 126)	54.2	3	8	26	84
Central Ave.	w/o Ventura Fwy. (US 101)	66.3	42	134	423	1137
Central Ave.	w/o Santa Clara Ave.	66.9	49	156	494	1563
Central Ave.	e/o Vineyard Ave. (SR 232)	62.9	20	62	197	624
Channel Islands Blvd.	w/o Rice Ave.	67.7	58	185	585	1849
Creek Rd.	e/o Country Club Dr.	52.5	2	6	18	56
Creek Rd.	e/o Ventura Ave. (SR 33)	59.4	9	28	88	279
Deer Creek Rd.	n/o Pacific Coast Hwy. (SR 1)	43.1	<1	1	2	6
Deerhill Rd.	n/o Kanan Rd.	59.2	8	26	83	263
Del Norte Rd.	s/o Rancho Dr.	47.7	1	2	6	18
Donlon Rd.	n/o La Cumbre Rd.	50.6	1	4	12	37
Doris Ave.	e/o Victoria Ave.	63.6	23	72	229	723
El Roblar Dr.	w/o Maricopa Hwy. (SR 33)	57.3	5	17	54	170
Etting Rd.	e/o Dodge Rd.	61.6	14	45	144	454
Fairview Rd.	e/o Maricopa Hwy. (SR 33)	50.7	1	4	12	37
Fairway Dr.	n/o Valley Vista Dr.	56.7	5	15	47	148
West Fifth St.	e/o North Harbor Blvd.	58.7	7	14	74	235
Foothill Rd.	w/o Peck Rd.	59.3	9	27	85	269
Foothill Rd.	w/o Briggs Rd.	56.0	4	13	40	126

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Foothill Rd.	e/o North Wells Rd.	61.1	13	40	128	403
Foothill Rd.	e/o Saticoy Ave.	63.4	22	69	218	689
Gonzales Rd.	e/o North Harbor Blvd.	63.4	22	69	218	689
Grand Ave.	e/o Fordyce Rd.	60.3	11	34	106	336
Grand Ave.	w/o Fordyce Rd.	53.0	2	6	20	63
Grimes Canyon Rd.	n/o L.A. Ave (SR 118)	60.5	11	35	112	354
Guiberson Rd.	e/o Chambersburg Rd. (SR 23)	56.8	5	15	48	151
Harbor Blvd.	n/o Gonzales Rd.	70.2	106	334	1058	3345
Harbor Blvd.	s/o Gonzales Rd.	0	0	0	0	0
Hitch Blvd.	s/o L.A. Ave. (SR 118)	54.0	2	8	25	79
Howe Rd.	e/o Torrey Rd.	48.6	1	2	7	23
Hueneme Rd.	e/o Las Posas Rd.	66.5	45	142	448	1417
Hueneme Rd.	e/o Nauman Rd.	66.2	42	133	420	1328
Hueneme Rd.	e/o Wood Rd.	66.2	42	132	416	1315
Hueneme Rd.	w/o Olds Rd.	66.9	49	156	492	1556
Kanan Rd.	e/o Lindero Canyon Rd.	66.2	41	131	414	1309
Kanan Rd.	e/o Hollytree Dr./Oak Hills Dr.	66.0	40	126	399	1263
Kanan Rd.	s/o Tamarind St.	67.9	62	197	623	1969
La Luna Ave.	s/o Lomita Ave.	56.1	4	13	41	129
La Vista Ave.	n/o L.A. Ave (SR 118)	57.3	5	17	53	168
Laguna Rd.	e/o Pleasant Valley Rd.	60.7	12	37	117	370
Laguna Rd.	n/o Hueneme Rd.	60.5	11	35	112	353
Las Posas Rd.	n/o East Fifth St. (SR 34)	66.5	45	141	446	1414
Las Posas Rd.	s/o East Fifth St. (SR 34)	66.7	47	150	473	1496
Las Posas Rd.	s/o Hueneme Rd.	65.1	32	103	324	1025
East Las Posas Rd.	n/o Santa Rosa Rd.	58.8	8	24	76	241
Lewis Rd.	s/o Pleasant Valley Rd.	67.9	62	196	620	1961
Lewis Rd.	n/o Potrero Rd.	67.0	50	160	505	1597
Lockwood	w/o Kern	56.3	4	12	43	134

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Valley Rd.	County Line					
Lockwood Valley Rd.	e/o Maricopa Hwy. (SR 33)	53.3	2	7	21	67
Lomita Ave.	e/o Tico Rd.	57.8	6	19	60	189
Main St. (Piru)	n/o Telegraph Rd. (SR 126)	56.2	4	13	42	132
McAndrew Rd.	n/o Reeves Rd.	48.6	1	2	7	23
Moorpark Rd.	n/o Santa Rosa Rd.	69.6	91	287	909	2874
Old Telegraph Rd.	w/o Grand Ave.	57.9	6	19	61	194
Olds Rd.	n/o Hueneme Rd.	59.8	10	30	96	303
Olivas Park Dr.	w/o Victoria Ave.	69.0	64	202	638	2017
Panama Dr.	s/o Lake Shore Dr.	44.4	<1	1	3	9
Pasadena Ave.	e/o Sespe St.	49.4	1	3	9	28
Patterson Rd.	s/o Doris Ave.	51.6	1	5	15	46
Piru Canyon Rd.	n/o Orchard St.	48.6	1	2	7	23
Pleasant Valley Rd.	s/o East Fifth St. (SR 34)	69.3	85	267	845	2672
Pleasant Valley Rd.	w/o Las Posas Rd.	67.6	58	182	576	1821
Potrero Rd.	e/o Lake Sherwood Dr.	62.6	18	57	180	571
Potrero Rd.	w/o Stafford Rd.	58.5	7	23	71	226
Potrero Rd.	w/o Hidden Valley Rd.	50.6	1	4	12	37
Potrero Rd.	Milepost 2.75	57.0	5	16	50	157
Potrero Rd.	e/o Lewis Rd.	62.8	19	61	192	607
Price Rd.	n/o L.A. Ave. (SR 118)	55.0	3	10	32	101
Rice Ave.	s/o East Fifth St. (SR 34)	71.0	127	401	1268	4010
Rice Ave.	n/o Channel Islands Blvd.	70.2	105	331	1048	3314
Rice Ave.	n/o Hueneme Rd.	61.6	14	46	144	455
Rice Rd. (Meiners Oaks)	s/o Lomita Ave.	59.2	8	27	84	266
Riverside Ave.	w/o Chambersburg Rd. (SR 23)	53.1	2	6	21	65
Rose Ave.	s/o L.A. Ave.	62.4	17	55	174	551

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
	(SR 118)					
Rose Ave.	s/o Central Ave.	63.4	22	70	220	697
Rose Ave.	n/o Collins Ave.	65.9	39	124	392	1241
Santa Ana Blvd.	e/o Ventura River	58.1	6	20	65	204
Santa Ana Rd.	s/o Baldwin Rd. (SR 150)	54.7	3	9	29	93
Santa Ana Rd.	s/o Santa Ana Blvd.	57.5	6	18	56	176
Santa Clara Ave.	n/o Friedrich Rd.	68.4	69	217	686	2168
Santa Clara Ave.	s/o L.A. Rd (SR 118)	69.1	82	256	819	2588
Santa Rosa Rd.	w/o Moorpark Rd.	70.2	105	331	1047	3311
Santa Rosa Rd.	w/o East Las Posas Rd.	69.4	88	277	877	2773
Santa Susana Pass Rd.	e/o Katherine Rd.	58.5	7	22	70	221
Sespe St.	n/o South Mountain Rd.	60.0	10	32	101	319
Sespe St.	s/o Pasadena Ave.	55.0	3	10	32	101
South Mountain Rd.	e/o Balcom Canyon Rd.	54.4	3	9	28	88
South Mountain Rd.	s/o Santa Clara River	57.2	6	18	57	180
Stockton Rd.	e/o Balcom Canyon Rd.	52.4	2	6	18	55
Sturgis Rd.	w/o Pleasant Valley Rd.	63.1	20	64	202	639
Tapo Canyon Rd.	s/o Bennet Rd.	53.9	2	8	25	78
Telegraph Rd.	w/o Briggs Rd.	63.0	20	63	200	632
Telegraph Rd.	w/o Hallock Dr.	0	0	0	0	0
Telegraph Rd.	w/o Olive Rd.	63.4	22	70	220	696
Telephone Rd.	n/o Olivas Park Dr.	67.4	54	172	544	1720
Tico Rd.	n/o Ventura Ave (SR 150)	56.6	5	14	45	143
Tierra Tejada Rd.	e/o Moorpark Frwy. (SR 23)	69.4	87	274	866	2740
Torrey Rd.	s/o Telegraph Rd. (SR 126)	54.2	3	8	27	84
Valley Vista Dr.	s/o Calle Aurora	59.1	8	26	82	258

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Ventura Ave.	n/o Canada Larga Rd.	56.3	4	13	43	134
Ventura Ave.	n/o Shell Rd.	59.4	9	28	88	277
Victoria Ave.	s/o Olivas Park Dr.	73.8	239	755	2386	7547
Villanova Rd.	e/o Ventura Ave. (SR 33)	55.4	4	11	35	111
Walnut Ave.	n/o L.A. Ave. (SR 118)	53.3	2	7	21	67
Wendy Dr.	n/o Gerald Dr.	62.8	19	60	191	604
Wood Rd.	s/o Hueneme Rd.	60.0	10	32	101	319
Wood Rd.	s/o East Fifth St. (SR 34)	58.0	6	20	64	202
Wooley Rd.	w/o Rice Ave.	67.0	52	163	516	1630
Wright Rd.	e/o Santa Clara Ave.	58.7	7	24	74	235
Yerba Buena Rd.	n/o Pacific Coast Hwy. (SR 1)	50.1	1	3	10	32
State Highways within Ventura County[1]						
Route 1	Callegus Creek	70.6	114	361	1143	3614
Route 1	Oxnard, Pleasant Valley Rd./Rice Ave.	64.7	30	94	295	943
Route 1	Oxnard, Saviers Rd.	65.7	37	117	369	1166
Route 1	Oxnard, Jct. Rte. 34, Fifth Rd. (West)	64.6	29	92	290	917
Route 1	Oxnard, Jct. Rte. 34, Fifth Rd. (East)	65.1	32	100	316	1001
Route 1	Oxnard, Jct. Rte. 232, Vineyard Ave. (West)	70.7	117	369	1166	3688
Route 1	Oxnard, Jct. Rte. 232, Vineyard Ave. (East)	69.3	86	272	860	2720
Route 1	Oxnard, Jct. Rte. 101 (South)	70.7	117	369	1168	3692
Route 1	Oxnard, Jct. Rte. 101 (North)	63.6	23	73	232	732
Route 1	Seacliff Colony, Jct. Rte. 101	58.3	7	21	68	214
Route 1	Las Cruces, Jct. Rte. 101, Mobil Oil Pier	59.0	8	25	80	252

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Route 23	Thousand Oaks, Triunfo Canyon Rd. (Back)	71.1	128	403	1276	4035
Route 23	Thousand Oaks, Triunfo Canyon Rd. (Ahead)	73.0	197	624	1973	6241
Route 23	Thousand Oaks, Jct. Rte. 101 (South)	74.8	301	953	3013	9527
Route 23	Thousand Oaks, Jct. Rte. 101 (North)	79.9	984	3112	9842	31,123
Route 23	Moorpark, Jct. Rte. 118, Ronald Reagan Fwy.	73.1	204	644	2038	6445
Route 23	Moorpark, Jct. Rte. 118, New Los Angeles Ave. (West)	72.4	173	547	1729	5467
Route 23	Moorpark, Jct. Rte. 118, New Los Angeles Ave. (East)	68.1	65	205	647	2046
Route 23	Spring Rd. (Back)	59.0	8	25	79	249
Route 23	Spring Rd. (Ahead)	68.0	63	199	629	1990
Route 23	Grimes Canyon Rd.	68.6	73	229	726	2295
Route 23	Fillmore, Jct. Rte. 126, Ventura Rd.	67.1	51	161	508	1607
Route 33	Ventura, Jct. Rte. 101, Ventura Fwy.	75.4	343	1085	3430	10,846
Route 33	Ventura, Ventura Ave.	67.3	54	171	541	1711
Route 33	West Jct. Rte. 150, Baldwin Rd. (West)	66.5	45	142	450	1424
Route 33	West Jct. Rte. 150, Baldwin Rd. (East)	57.1	5	16	51	162
Route 33	El Roblar Dr.	57.4	5	17	54	172
Route 33	Los Padres National Forest Boundary	55.6	4	11	36	115
Route 33	Sespe Gorge Maint. Station	50.2	1	3	10	33
Route 33	Ventura/Sant Barbara County Line	53.4	2	7	22	69
Route 34	Oxnard, Jct. Rte. 1, Oxnard Blvd.	62.4	17	55	174	549
Route 34	Oxnard, Rice Ave.	66.5	44	140	443	1399

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Route 34	Camarillo, Jct. Rte. 101, Ventura Fwy. (South)	70.0	99	313	990	3132
Route 34	Camarillo, Jct. Rte. 101, Ventura Fwy. (North)	70.6	116	366	1158	3660
Route 34	Somis, Jct. Rte. 101, Ventura Fwy.	67.4	55	175	554	1751
Route 101	Thousand Oaks, Jct. Rte. 23 South (South)	82.1	1625	5137	16,245	51,372
Route 101	Thousand Oaks, Jct. Rte. 23 South (North)	82.1	1626	5142	16,262	51,424
Route 101	Thousand Oaks, Jct. Rte. 23 North (South)	82.3	1713	5416	17,126	54,158
Route 101	Thousand Oaks, Jct. Rte. 23 North (North)	82.0	572	4972	15,725	49,723
Route 101	Thousand Oaks, Wendy Dr. (Back)	80.8	1199	3790	11,985	37,900
Route 101	Thousand Oaks, Wendy Dr. (Ahead)	80.8	1213	3836	12,130	38,359
Route 101	Camarillo, Pleasant Valley Rd. (Back)	80.8	1201	3802	12,024	38,025
Route 101	Camarillo, Pleasant Valley Rd. (Ahead)	80.8	1193	3774	11,933	37,735
Route 101	Camarillo, Jct. Rte. 34, Lewis Rd. (West)	81.0	1262	3992	12,623	39,916
Route 101	Camarillo, Jct. Rte. 34, Lewis Rd. (East)	81.3	1350	4268	13,495	42,684
Route 101	Oxnard, Jct. Rte. 232, Vineyard Ave.	81.0	1271	4019	12,711	40,195
Route 101	Oxnard, Jct. Rte. 1 South, Pacific Coast Hwy.	81.2	133	4216	13,333	42,161
Route 101	Ventura, Victoria Ave.	80.3	1082	3421	10,820	34,215
Route 101	Ventura, Jct. Rte. 126, Santa Paula Fwy. (West)	79.4	873	2760	8727	27,597

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Route 101	Ventura, Jct. Rte. 126, Santa Paula Fwy. (East)	80.7	1179	3729	11,791	37,286
Route 101	Ventura, Jct. Rte. 33, Ojai Fwy. (South)	79.8	956	3024	9561	30,236
Route 101	Ventura, Jct. Rte. 33, Ojai Fwy. (North)	78.7	739	2336	7386	23,355
Route 101	Ventura/Santa Barbara County Line	78.4	694	2196	6943	21,957
Route 118	Ventura, Jct. Rte. 126, Santa Paula Fwy.	74.3	272	861	2722	8608
Route 118	Jct. Rte. 232, Vineyard Ave. (West)	74.6	288	912	2882	9115
Route 118	Jct. Rte. 232, Vineyard Ave. (East)	72.9	796	621	1963	6206
Route 118	Jct. Rte. 34, Somis Rd. (West)	71.7	149	472	1492	4718
Route 118	Jct. Rte. 34, Somis Rd. (East)	71.9	156	492	1557	4923
Route 118	Grimes Canyon Rd.	72.3	169	535	1691	5346
Route 118	Moorpark, West Jct. Rte. 23, Moorpark Ave.	71.7	147	466	1475	4663
Route 118	Moorpark, East Jct. Rte. 23, at Spring Rd.	72.5	178	462	1781	5627
Route 118	Moorpark, Jct. Rte. 23, Moorpark Fwy.	74.1	255	806	2548	8056
Route 118	Tapo Rd.	80.9	1125	3874	12,250	38,739
Route 126	EB on from Main St. and Ventura, Jct. Rte. 101	76.8	481	1520	4808	15,203
Route 126	Ventura, Jct. Rte. 118 (West)	76.1	407	1287	4070	12,869
Route 126	Ventura, Jct. Rte. 118 (East)	77.1	510	1613	5100	16,127
Route 126	Laurie Lane Ped OC; e/o Peck Rd.	76.4	434	1373	4342	13,729
Route 126	Santa Paula, Jct. Rte. 150, 10th Rd. (West)	76.1	408	1289	4075	12,888
Route 126	Santa Paula, Jct. Rte. 150, 10th Rd. (East)	75.4	347	1097	3468	10,966

TABLE 11-8
SUMMARY OF MODELED EXISTING TRAFFIC NOISE LEVELS
Ventura County

Roadway Segment	Location	CNEL (dB) at 50 feet from Roadway Centerline	Distance from Noise Contours (Feet from Roadway Centerline)			
			70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Route 126	Fillmore, Jct. Rte. 23, A Rd. (South)	73.2	209	659	2085	6594
Route 126	Fillmore, Jct. Rte. 23, A Rd. (North)	72.9	197	623	1970	6230
Route 126	Piru	73.1	202	640	2023	6396
Route 150	Santa Barbara/Ventura County Line	57.2	5	17	53	168
Route 150	Jct. Rte. 33 South, Ventura Ave. (South)	62.9	20	62	196	618
Route 150	Jct. Rte. 33 South, Ventura Ave. (North)	65.8	38	122	385	1216
Route 150	Ojai, Jct. Rte. 33 North, Maricopa Hwy. (South)	65.8	38	121	382	1207
Route 150	Ojai, Jct. Rte. 33 North, Maricopa Hwy. (North)	66.7	47	149	470	1487
Route 150	Ojai East City Limits	60.9	12	39	122	386
Route 150	Santa Paula, North City Limit	57.7	6	18	58	185
Route 150	Santa Paula, Jct. Rte. 126, Santa Paula Fwy.	63.5	22	70	222	703
Route 232	Oxnard, Jct. Rte. 1, Oxnard Blvd.	66.1	41	129	409	1293
Route 232	Oxnard, Jct. Rte. 101	65.4	34	109	344	1089
Route 232	Jct. Rte. 118, Los Angeles Ave.	64.7	29	93	293	926

Notes: CNEL=community noise equivalent level, dB=decibel, Ave.=avenue, Rd.=Road, Blvd.=boulevard, Dr.=drive, Jct.=junction, Rte.=route, Fwy.=freeway, Hwy=highway, n/o=north of, s/o=south of, e/o=east of, w/o=west of
[1] Where applicable, direction of travel is specified based on Caltrans' nomenclature for traffic counts. Even route numbers are assumed to follow an east-to-west pattern and odd route numbers are assumed to follow a north-to-south pattern. ADT values for unnumbered roadways where direction is unclear are labeled either "back" or "ahead." Back typically represents traffic movement south or west of the count location; ahead usually represents traffic north or east of the count location.
Source: Modeling performed by Ascent Environmental, Inc. in 2017 based on Caltrans Annual Average Daily Truck Traffic on California State Highways, 2014; and Traffic Volumes of Ventura County Roadways, 2015.

Existing Railroad Noise

Noise from railroads is generated primarily by diesel locomotive engines, warning horns, and gate bells at railroad crossings. Other components of noise include diesel exhaust, cooling fans, and railroad car wheel/rail interaction. Amtrak, Metrolink, Fillmore and Western Railway, Union Pacific Railroad, and Ventura County Railroad Company all affect portions of the county.

Railroad data (e.g., engine type, trains per day) for the county were obtained from Amtrak (2016), Metrolink (2014), and the Multi-County Goods Movement Action Plan (2008). Using this data, railroad noise generated by Amtrak and Metrolink commuter diesel locomotives and general freight movement was modeled based on Noise Impact Assessment Guidelines for assessing railroad and transit noise (FTA 2006; Amtrak 2016; Metrolink 2014; Los Angeles County Metropolitan Transportation Authority et. al 2008). Table 11-9 summarizes the modeled existing railroad noise levels at 50 feet from the railroad centerline, along with approximate distances from the railroad centerlines to the 70 dB, 65 dB, 60 dB, and 55 dB CNEL/L_{dn} noise contours. The values shown in Table 11-9 assume that the receiver category is residential with no natural or human-made noise shielding or barriers (e.g., topography, vegetation, berms, walls, or buildings, or other attenuation measures), and are therefore considered "worst case" railroad noise conditions along the length of each corridor. The contours shown in Table 11-15 may be used to estimate noise levels at potential sensitive receptors near railroad lines. It is possible that existing or future sensitive receptors (e.g., residential land uses, recreation and open space, hospitals) could be located within the vicinity of a railroad. It should be noted that these contours are not based on data from specific railroad segments and therefore can be used to represent the expected noise levels for areas adjacent to these railroads throughout the unincorporated county.

TABLE 11-9
SUMMARY OF MODELED EXISTING RAILROAD NOISE LEVELS
Ventura County

Railroad Line	CNEL (dB) at 50 feet from Roadway Centerline	Distance (feet)			
		70 CNEL (dBA)	65 CNEL (dBA)	60 CNEL (dBA)	55 CNEL (dBA)
Amtrak	64.1	35	71	154	321
Metrolink	68.5	38	76	164	343
Freight Trains	68.7	38	76	165	344

Notes: CNEL=community noise equivalent level, dB=decibel
Source: Modeling conducted by Ascent Environmental, Inc. 2016 based on FTA, 2006.

Existing Airport Noise

Ventura County contains the Camarillo Airport, Santa Paula Airport, Oxnard Airport, and the Naval Base Ventura County Point Mugu. Camarillo Airport is located within the City of Camarillo, three miles southwest of the city's central business's district. The airport is situated less than one mile south of US-101 and seven miles east of the Pacific Ocean coastline. The Oxnard Airport is located one and a half miles from the Pacific Ocean coastline, four miles south of US-101 and one mile west of the SR 1. The Santa Paula Airport lies within the City of Santa Paula between SR 126 and the Santa Clara River. NBVC Point Mugu is located approximately six and a half miles southeast of Oxnard on the Pacific Coast and is bounded by SR 1 on the east.

The operations and land-use compatibility of these airports are covered by the Ventura County Airport Comprehensive Land Use Plan. A complete discussion of existing and future airport-related noise as described in this plan is discussed in detail below under the Regulatory Setting.

Existing Stationary Source Noise

The primary sources of stationary noise in unincorporated Ventura County consist of industrial and agricultural operations, and miscellaneous sources such as a shooting range in Holser Canyon, and a motocross facility near Piru. Major industrial noise sources include concrete and rock batch plants, sand and gravel mines, and Pepsi Cola and oil supply facilities. Noise from agricultural activities are generated from cultivation and harvesting equipment, irrigation and domestic water pumps, and anti-frost equipment (e.g., wind generators). Noise measurements and modeling were conducted for existing stationary noise sources at the Pepsi Cola supply facility, a batch plant, and a shooting range. See the data presented for Short-Term Measurement 1 (ST-1) for ambient noise levels at the Pepsi Cola supply facility taken in October 2016, ST-2 for ambient noise levels at the Wes Thompsons Shooting Range taken in August 2016, and ST-9 for ambient noise levels at the batch plant taken in August 2016, all contained in Table 11-7, "Summary of Ambient Noise Level Measurements."

Regulatory Setting

Federal

The Federal Noise Control Act of 1972

The Federal Noise Control Act of 1972 established a requirement that all federal agencies must comply with applicable federal, state, interstate, and local noise control regulations. Federal agencies also are directed to administer their programs in a manner that promotes an environment free from noise that jeopardizes public health or welfare.

U.S. Department of Transportation

To address the human response to groundborne vibration, the FTA of the U.S. Department of Transportation (DOT) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. Among these guidelines are the following:

- 65 vibration velocity decibels (VdB), referenced to 1 µin/sec and based on the RMS velocity amplitude, for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, and laboratory facilities);
- 80 VdB for residential uses and buildings where people normally sleep; and
- 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, and offices) (FTA 2006).

State

California requires each local government to implement a noise element as part of its general plan. California Administrative Code, Title 4, has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

Title 24 of the California Code of Regulations

California's noise insulation standards became effective in 1974. In 1988, the Building Standards Commission approved revisions to these standards (Title 24, Part 2, California Code of Regulations). The ruling established that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is measured in either CNEL or L_{dn}, consistent with the noise element of the local general plan. The commission also specifies that residential buildings or structures proposed to be located within exterior L_{dn} contours of 60 dB or greater, generated by an existing or planned freeway, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, shall require an acoustical analysis showing that the building has been designed to limit intruding noise to an interior L_{dn} of 45 dB.

California Governor's Office of Planning and Research

The California Governor's Office of Planning and Research (OPR) publishes the State of California General Plan Guidelines (OPR 2003), which provide recommended standards for the acceptability of various types of land uses within specific Community Noise Equivalent Level (CNEL) contours. The noise standards are intended to provide guidelines for the development of noise elements. These basic guidelines may be tailored to reflect the existing noise and land use characteristics of a particular community. The Noise Compatibility Guidelines in Table 11-10 show the exterior noise standards recommended by the State for new development projects according to land use.

TABLE 11-10
STATE LAND USE COMPATIBILITY STANDARDS FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (db)						
	50	55	60	65	70	75	80
Residential – Low-Density Single Family, Duplex, Mobile							
Residential - Multi-Family							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: California Governor's Office of Planning and Research 2003

Caltrans

In 2004, Caltrans published the Transportation- and Construction-Induced Vibration Manual (Caltrans 2004), which provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage.

Table 11-11 presents recommended levels of vibration that could result in damage to structures exposed to continuous vibration.

TABLE 11-11
CALTRANS RECOMMENDED VIBRATION LEVELS

PPV (in/sec)	Effect on Buildings
0.4-0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwellings
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006-0.019	Vibration unlikely to cause damage of any type

Notes: PPV=peak particle velocity, in/sec=inches per second
Source: Caltrans 2004

In May 2011, Caltrans adopted the Traffic Noise Analysis Protocol (Protocol) for New Highway Construction, Reconstruction, and Retrofit Barrier Projects pursuant to Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772). The Protocol applies to any highway projects or multimodal project that: 1) require FHWA approval regardless of funding sources; or 2) is funded with federal-aid highway funds. Application of the Protocol and the procedures it provides ensures compliance with FHWA noise standards (Caltrans 2011).

Local

2005 General Plan

The Hazards Element in the Ventura County General Plan contains goal and policies that apply to noise in the county under Goals 2.16.1 and 2.16. 2. Table 11-12 summarizes the County's noise compatibility standards that apply to noise-sensitive uses and noise generators during discretionary review, as outlined in Policies 2.16.2.

The Ventura County General Plan also includes several area plans where local issues and concerns are dealt with in greater detail than the countywide elements of the Ventura County General Plan. The area plans with goals and policies differing from those contained in the General Plan are listed below. The Coastal Area and Local Coastal, El Rio/Del Norte, and North Ventura Avenue plans do not contain supplemental noise policies beyond those set forth in the General Plan.

TABLE 11-12
2005 VENTURA COUNTY GENERAL PLAN NOISE COMPATIBILITY STANDARDS (POLICIES 2.16.2)

Type of Use or Activity, and Location	Standards
(1) Noise sensitive uses proposed to be located near highways, trucks routes, heavy industrial activities, and other relatively continuous noise sources	Incorporate noise control measures so that: a. Indoor habitable rooms do not exceed CNEL 45 b. Outdoor noise levels do not exceed CNEL 60 or $L_{eq}1H$ of 65 dB(A) during any hour.
(2) Noise sensitive uses proposed to be located near railroads	Incorporate noise control measures so that: a. Indoor habitable rooms do not exceed CNEL 45 b. Outdoor noise levels do not exceed L_{10} of 60 dB(A)
(3) Noise sensitive uses proposed to be located near airports	a. Prohibited in CNEL 65 or greater noise contour b. Permitted in CNEL 60 to 65 only if measures are taken to ensure interior noise levels of CNEL 45 or less
(4) Noise generators proposed to be located near any noise sensitive use	Noise control measures must ensure that ongoing outdoor noise levels received by sensitive receptors, as measured as the exterior wall of the building, does not exceed any of the following standards: a. $L_{eq}1H$ of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m. b. $L_{eq}1H$ of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m. c. $L_{eq}1H$ of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.
(5) Construction noise	Shall be evaluated and, if necessary, mitigated in accordance with the County Construction Noise Threshold Criteria and Control Plan

Notes: CNEL = Community Noise Equivalent Level; dB(A) = A-weighted decibel; $L_{eq}1H$ = equivalent noise level for a one-hour period; L_{10} = noise level exceeded for 10 percent of the measurement duration
Source: County of Ventura 2005.

Oak Park Area Plan

The Hazards Element of the Oak Park Area Plan (2005) contains policies related to noise under Goals 2.4.1-1 and 2.4.1-2. (Ventura County 2005)

Ojai Valley Area Plan

The Hazards Element of the Ojai Valley Area Plan (1995) contains policies related to noise under Goals 2.4.1-1 and 2.4.1-2. (Ventura County 2015c)

Piru Area Plan

The Hazards Element of the Piru Area Plan (2011) contains policies related to noise under Goals 2.4.1-1 and 2.4.1-2. (Ventura County 2011)

Saticoy Area Plan

The Land Use and Mobility elements of the Saticoy Area Plan (2015) contain policies related to noise under LU Goal 3 and MOB Goal 1. (Ventura County 2015d)

Thousand Oaks Area Plan

The Hazards Element of the Thousand Oaks Area Plan (2015) contains policies related to noise Goals 2.3.1.-1 and 2.3.1-2 (Ventura County 2015e)

Lake Sherwood/Hidden Valley Area Plan

The Hazards Element of the Lake Sherwood/Hidden Valley Area Plan (2010) contains policies related to noise under Goals 3.3.1.-1 and 3.3.1-2 and their associated policies. (Ventura County 2010a)

Construction Noise Threshold Criteria and Control Plan

Standardized federal or State criteria have not been adopted for assessing construction noise impacts; therefore, municipal planning criteria are generally developed and applied on a project-specific basis. Construction project noise criteria take into account the existing noise environment, the time-varying noise during the various phases of construction activities, the duration of the construction, and the adjacent land use.

As specific construction noise limits for noise-sensitive locations are not currently specified in the general plan or administrative code of Ventura County, the Construction Noise Threshold Criteria and Control Plan establishes construction noise thresholds and standard noise monitoring and control measures. These threshold criteria, monitoring, and control measures are required for all discretionary development projects. Projects that exceed the noise threshold criteria at sensitive receptor sites are required to implement effective noise mitigation measures recommended by manufacturers (Ventura County 2010b).

Noise sensitive-receptors that would be affected by construction activities within the county are listed in Table 11-13, along with their corresponding periods of greatest sensitivity to construction noise.

TABLE 11-13
NOISE-SENSITIVE RECEPTORS
Ventura County

Sensitive Receptor	Typical Sensitive Time Period
Hospitals, Nursing Homes (quasi-residential)	24 hours
Single-Family and Multi-Family Dwellings (residential)	Evening/Night
Hotels/Motels (quasi-residential)	Evening/Night
Schools, Churches, Libraries (when in use)	Daytime/Evening

Source: Ventura County 2010b

Noise-Sensitive Receptors

Normally, no evening or nighttime construction activity is permitted in areas having noise-sensitive receptors; however, in the event that an activity is deemed necessary and is permitted (e.g., emergency situations or roadway repairs that are timed to avoid peak hour traffic conditions), reduced noise threshold

criteria are provided for construction that must occur during those hours. The County of Ventura construction noise threshold criteria for daytime, evening, and nighttime hours is shown in Table 11-14.

TABLE 11-14
DAYTIME[1] CONSTRUCTION ACTIVITY NOISE THRESHOLD CRITERIA
Ventura County

Construction Duration Affecting Noise-Sensitive Receptors[2]	Noise Threshold Criteria[1]	
	Fixed $L_{eq}(h)$ (dB)	Hourly L_{eq} (dB)[2,3]
Daytime (Mon. to Fri. from 7:00 a.m. to 7:00 p.m.; Sat., Sun., and Holidays from 9:00 a.m. to 7:00 p.m.)		
0 to 3 days	75	Ambient $L_{eq}(h)$ + 3
4 to 7 days	70	Ambient $L_{eq}(h)$ + 3
1 to 2 weeks	65	Ambient $L_{eq}(h)$ + 3
2 to 8 weeks	60	Ambient $L_{eq}(h)$ + 3
Longer than 8 weeks	55	Ambient $L_{eq}(h)$ + 3
Evening (7:00 p.m. to 10:00 p.m.)		
Any Duration	50	Ambient $L_{eq}(h)$ + 3
Nighttime (Mon. to Fri. from 10:00 p.m. to 7:00 a.m.; Sat., Sun., and Holidays from 10:00 p.m. to 9:00 a.m.)		
Any Duration	45	Ambient $L_{eq}(h)$ + 3

Notes: L_{eq}=equivalent noise level, $L_{eq}(h)$=hourly equivalent noise level, dB= decibel, L_{max}=maximum sound level
[1] The applicable noise threshold criteria shall be the greater of the noise levels presented in the table at the nearest receptor area or 10 feet from the nearest noise sensitive building.
[2] The instantaneous L_{max} shall not exceed the noise threshold criteria by 20 dB more than eight times per daytime hour, six times per evening hour, or four times per nighttime hour.
[3] Local ambient L_{eq} measurements shall be made on any mid-week day prior to project work.
Source: Ventura County 2010b

Ventura County Noise Ordinance

The Ventura County Noise Ordinance was adopted by the County Board of Supervisors to protect residential communities from loud or raucous nighttime noise. The Ordinance prohibits the creation of loud or raucous noise from within a residential zone, which is audible to the human ear during the hours of 9:00 p.m. to 7:00 a.m. at a distance of 50 feet from the property line of the noise source or 50 feet from any such noise source if the noise source is in a public right-of-way. The Ordinance defines "loud or raucous noise" as sounds from (1) the use or operation of any radio, musical instrument, phonograph, television receiver, video cassette recorder, or any machine or device for the production, reproduction, or amplification of the human voice or any other sound, or (2) the use or operation of any lawn mower, backpack blower, blower, lawn edger, riding tractor, or other mechanical or electrical device or hand tool.

Airport Comprehensive Land Use Plan for Ventura County

The State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the preparation of an airport land use compatibility plan (ALUCP) for nearly all public-use airports in the State. The intent of an ALUCP is to encourage compatibility between and airport and the various land uses surrounding it (Caltrans 2011).

California State law requires the County Board of Supervisors to establish an airport land use commission (ALUC) in each county with an airport operated for the benefit of the general public. The Code also sets forth a range of responsibilities, duties, and powers of the ALUC. These include reviewing general plans,

proposed changes to zoning code and ordinances, land use actions and development projects, and airport development plans for consistency with compatibility policies. California State law also dictates that the county and affected cities modify their general and specific plans to be consistent with the ALUC's plan, or to take steps to overrule the ALUC. State law allows the County Board of Supervisors to authorize and appropriately designated body to fulfill ALUC responsibilities. For Ventura County, the Board of Supervisors has designated the Ventura County Transportation Commission (VCTC) to act as the ALUC for the County (Ventura County ALUC 2000).

The Ventura County Airports Comprehensive Land Use Plan (CLUP) serves as a complete plan for the County's three public-use airports and one military airport (i.e., Camarillo, Oxnard, Santa Paula, and Naval Base Ventura County Point Mugu). The CLUP is the primary document used by the Ventura County ALUC to help promote compatibility between the four airports and their environs. Included in the CLUP are a series of compatibility factors, zones and policies related to noise, safety, airspace protection, and over-flight activity (Ventura County ALUC 2000). For the purposes of this section, noise-related impact zones and compatibility policies in the CLUP are discussed below.

The CLUP includes four maps (depicted in Figure 11-14, Figure 11-15, Figure 11-16, Figure 11-17 of this document) showing noise contours depicting the greatest annualized noise impact, measured in terms of CNEL. The mapped noise contours for Oxnard Airport and NBVC Point Mugu are shown for the year 1991, Santa Paula Airport for 2015, and Camarillo Airport for the composite years 2003 and 2018. According to the CLUP, all proposed land use changes beyond the 60 CNEL contour are considered consistent with the noise compatibility policies set forth by the CLUP. For any proposed land-use changes within the 60 CNEL or greater, specific noise compatibility criteria apply based on corresponding land use categories and subcategories. Design and construction mitigation to attenuate noise must be applied to certain land uses to achieve consistency with the CLUP. The CLUP noise compatibility criteria are shown in Table 11-15.

TABLE 11-15
VENTURA COUNTY AIRPORT CLUP: NOISE COMPATIBILITY CRITERIA

Land Use Category1	Exterior Noise Exposure (dB CNEL)				
	60-65	65-70	70-75	75-80	>80
Residential					
Single Family	C[1]	U	U	U	U
Multi-Family	C[1]	U	U	U	U
Mobile Home Parks	U	U	U	U	U
Public/Institutional					
Hospitals/Convalescent Homes	C[1]	C[2]	U	U	U
Schools	C[1]	C[2]	U	U	U
Churches/Synagogues	C[1]	C[2]	U	U	U
Auditoriums/Theatres	C[1]	C[2]	C[3]	U	U
Transportation Terminals	A	A	C[4]	C[5]	C[6]
Communication/Utilities	A	A	C[4]	C[5]	C[6]
Automobile Parking	A	A	C[4]	C[5]	C[6]
Commercial					
Hotels and Motels	C[1]	C[2]	C[3]	U	U
Offices and Business/Professional Services	A	A	C[7]	C[8]	U
Wholesale	A	A	C[4]	C[5]	C[6]
Retail	A	A	C[7]	C[h]	U
Industrial					
Manufacturing—General/Heavy	A	A	C[4]	C[5]	C[6]
Light Industrial	A	A	C[4]	C[5]	C[5]
Research and Development	A	A	C[4]	C[5]	C[5]
Business Parks/Corporate Offices	A	A	C[4]	C[5]	C[5]
Recreation/Open Space					
Outdoor Sports Arenas	A	C	C	U	U
Outdoor Amphitheaters	U	U	U	U	U
Parks	A	A	A	U	U
Outdoor Amusement	A	A	A	U	U
Resorts and Camps	A	A	A	U	U
Golf Course and Water Recreation	A	A	A	U	U
Agriculture	A	A	A	A	A

Notes: A=Acceptable land use, C=Land use is conditional upon meeting compatibility criteria (see footnotes), U=Unacceptable land use, CNEL=community noise equivalent level, dB=decibel, NLR=noise level reduction, dBA=A-weighted decibels

[1] New construction or development may be undertaken only after an analysis of noise reduction requirements and necessary noise insulation is included in the design.

[2] NLR from outdoors to indoor of at least 25 dBA must be achieved by incorporation of noise attenuation into the design and construction of the structure.

[3] NLR from outdoor to indoor of at least 30 dBA must be achieve by incorporation of noise attenuation into the design and construction of the structure.

[4] Measures to achieve NLR of 25 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

[5] Measures to achieve NLR of 30 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

[6] Measures to achieve NLR of 35 dBA must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.

[7] NLR of 25 dBA is required.

[8] NLR of 30 dBA is required.

Notes: A=Acceptable land use, C=Land use is conditional upon meeting compatibility criteria (see footnotes), U=Unacceptable land use, CNEL=community noise equivalent level, dB=decibel

Source: Ventura County ALUC 2000.

As shown in Figure 11-14 through Figure 11-17, residential, commercial, and/or industrial land uses are located within the 60 CNEL noise contour. Any proposed land use changes in this vicinity may be subject to the Noise Compatibility Criteria. As demonstrated in Table 11-15, land use subcategories within the 60-65 CNEL range identified as "Conditional" would be subject to design and/or construction standards to attenuate airport-related noise on such land uses.

Ventura County Department of Aviation Noise Abatement Procedures

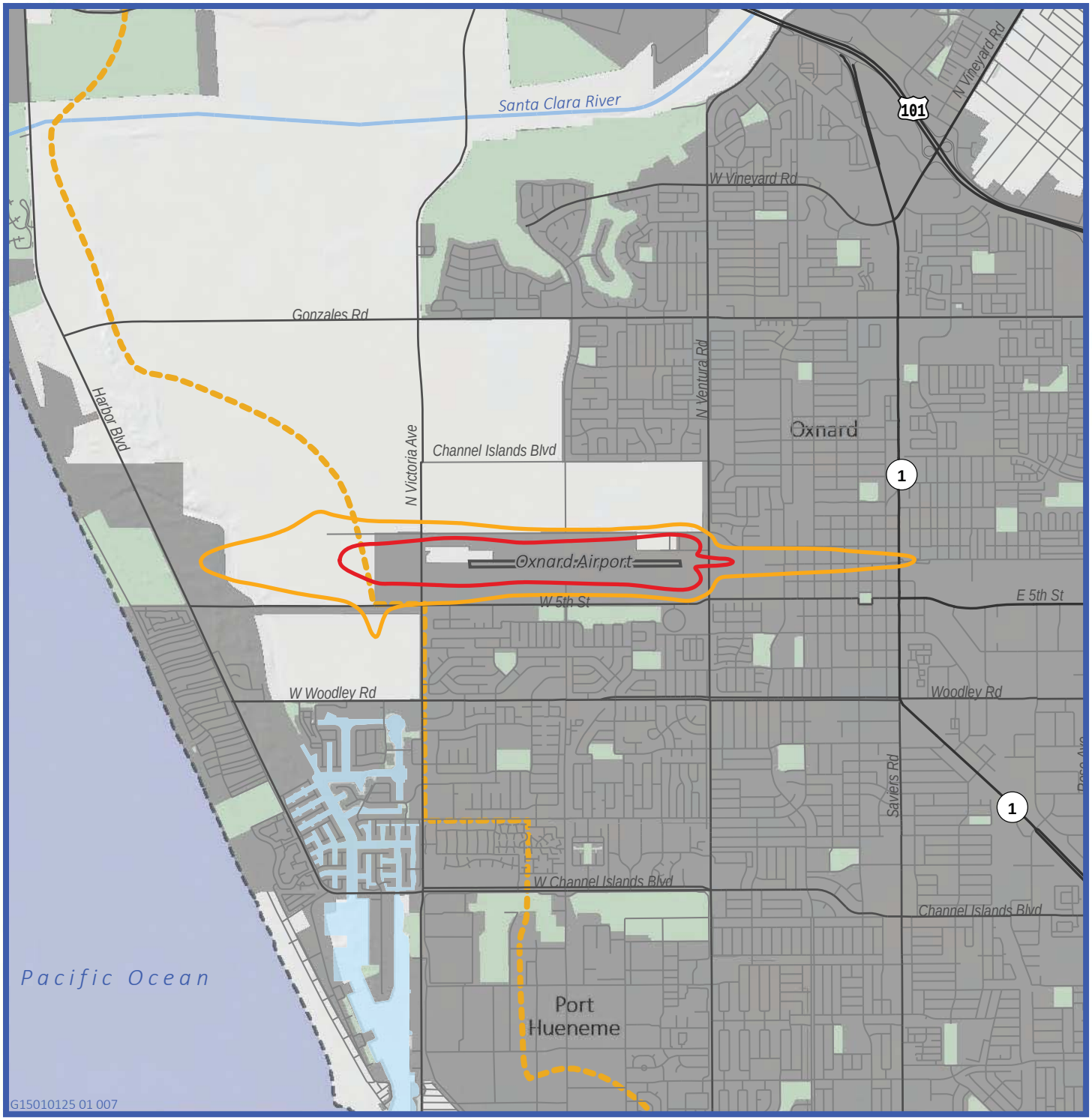
The Ventura County Department of Airports (collectively, "the Department") has adopted noise abatement procedure for visual flight rules (VFR) for Oxnard and Camarillo airports. The Department provides instructions outlining departures, arrivals, and pattern procedures at each airport that are aimed at minimizing noise exposure over noise-sensitive areas without compromising safety. Pilots are requested to follow the published procedures unless circumstances render them unsafe, weather conditions do not allow, or they are otherwise instructed to deviate by the airport traffic control tower.

The following noise abatement procedures apply to all aircrafts departing and/or approaching the Oxnard Airport (Ventura County 2016a):

- Voluntary curfew from 11:00 p.m. to 6:00 a.m.;
- Remain as high as practical over residential areas during overflight, approaches, and departures;
- Use best rate of climb when departing any runway;
- No formation takeoff or landings without prior permissions of the Airport Director;
- Touch-and-go's (i.e., landing on a runway and taking off again without coming to a complete stop) and stop-and-go's are prohibited between the hours of 8:00 p.m. and 7:00 a.m. from Monday to Friday, and from 8:00 p.m. to 8:00 a.m. on the weekends;
- Full stop/taxi back operations will be permitted only if the aircraft plans to depart the airport traffic area; and
- No high-power engine run-ups for maintenance between 7:00 p.m. and 7:00 a.m.

The following noise abatement procedures apply to all aircrafts departing and/or approaching the Camarillo Airport (Ventura County 2016b):

- No aircraft departures between 12:00 a.m. and 5:00 a.m. without prior approval from the Airport director;
- Remain as high as practical over residential areas during overflight, approaches, and departures;
- Use best rate of climb when departing any runway;
- No formation takeoffs or landings without prior permission of the Airport Director;
- Utilize low energy approaches;
- Avoid residential overflights ("Fly Friendly," Air Craft Owners and Pilots Association Guidelines); and
- North traffic fly downwind over US-101.



Ventura County 2040 General Plan

Figure 11-14:
Oxnard Airport Noise Contours

Map Date: November 16, 2016

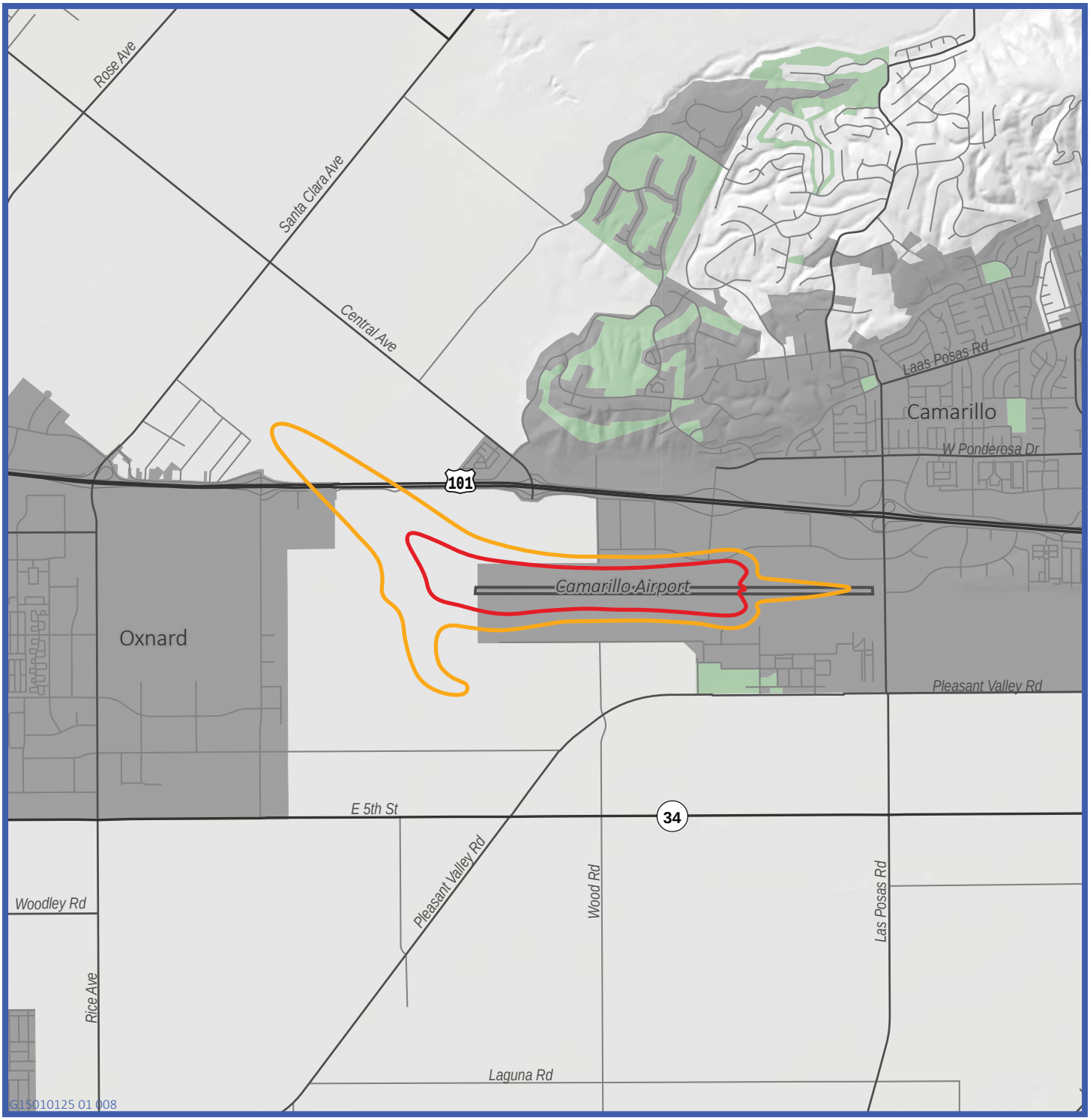
Source: Ventura County, 2016;
California Department of Transportation, 2007; USGS, 2013.

0 0.7 1.4 Miles

N

- Coastal Zone Boundary
- Major Roadways
- Water Bodies
- Cities

Noise Contours
- 60 dBA CNEL
- 65 dBA CNEL



Ventura County 2040 General Plan

Figure 11-15:
Camarillo Airport Noise Contours

Map Date: November 16, 2016

Source: Ventura County, 2016;
California Department of Transportation, 2007; USGS, 2013.

0 0.7 1.4 Miles

N

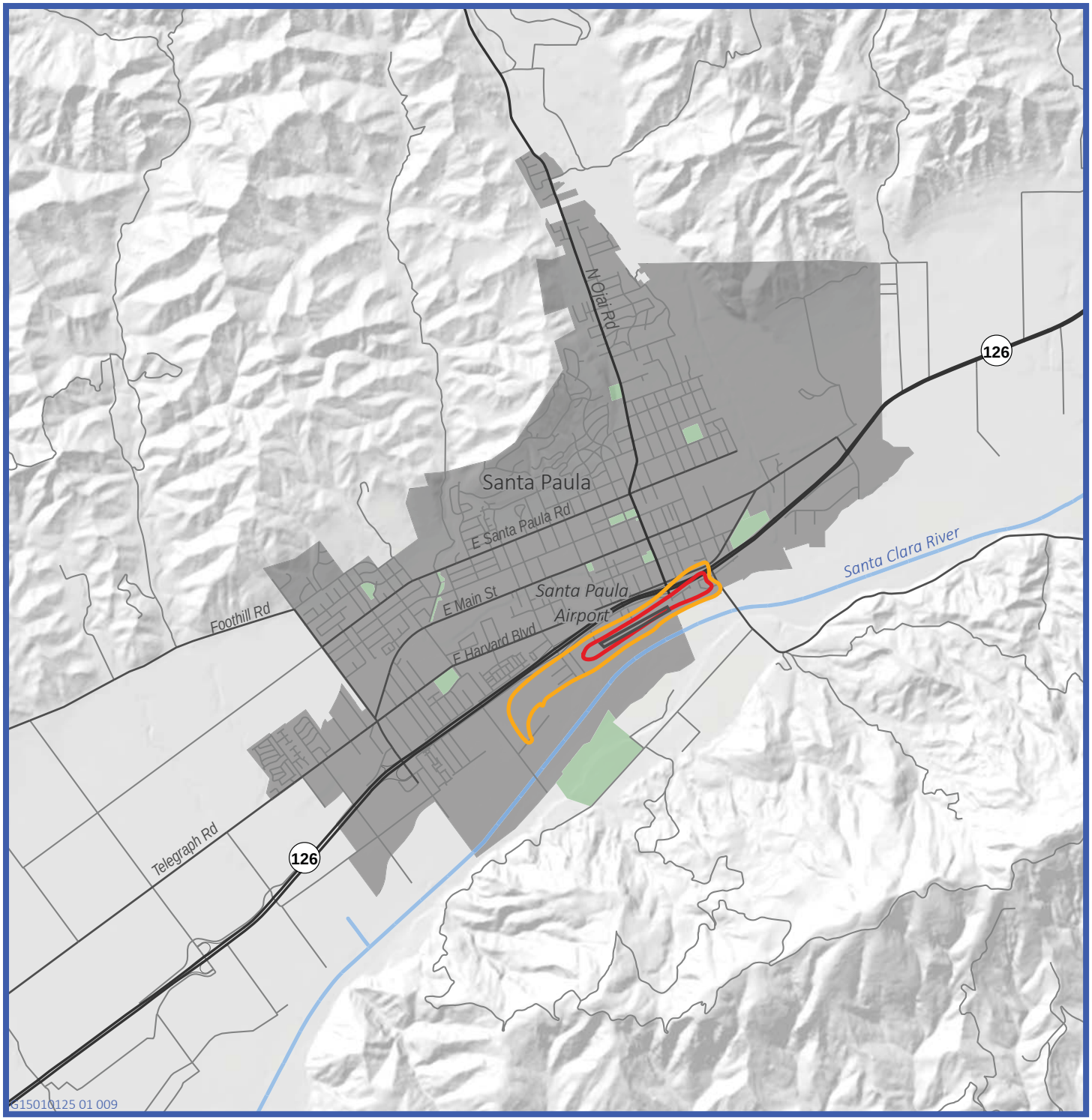
Major Roadways

Cities

Noise Contours

60 dBA CNEL

65 dBA CNEL



Ventura County 2040 General Plan

Figure 11-16:
Santa Paula Airport Noise Contours

Major Roadways
Major Waterways
Cities

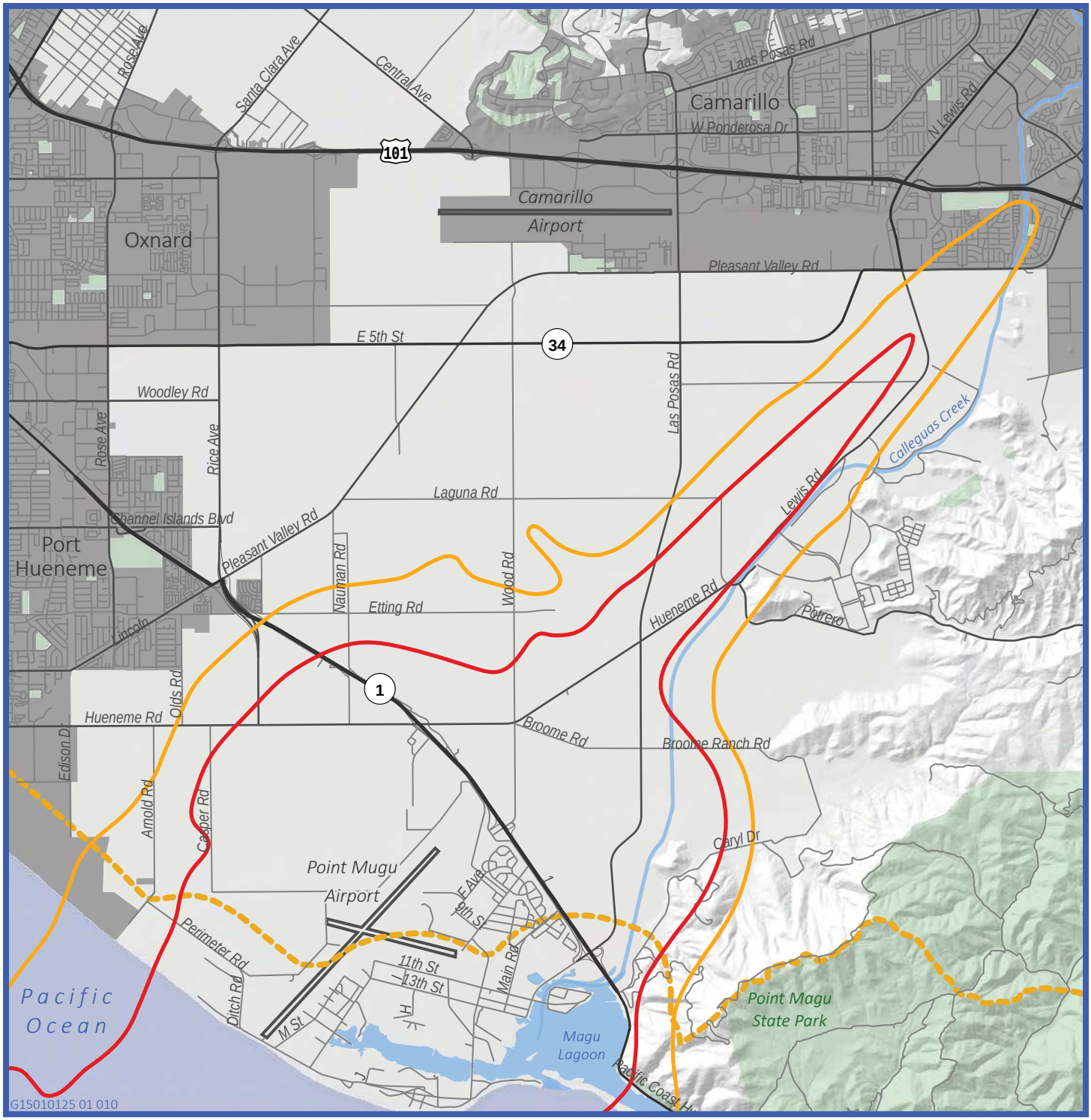
Noise Contours
60 dBA CNEL
65 dBA CNEL

Map Date: November 16, 2016

Source: Ventura County, 2016;
California Department of Transportation, 2007; USGS, 2013.

0 0.7 1.4 Miles

N



Ventura County 2040 General Plan

Figure 11-17: NAWS at Point Mugu Noise Contours

Map Date: November 16, 2016

Source: Ventura County, 2016;
California Department of Transportation, 2007; USGS, 2013.

0 1 2 Miles

N

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

Noise Contours

- 60 dBA CNEL
- 65 dBA CNEL

Key Terms

A-Weighted Sound Level. An A-weighted sound level is the frequency-response adjustment of a sound level meter that conditions the output signal to approximate human hearing response.

Airport Land Use Compatibility Plan (ALUCP). The California State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the preparation of an airport land use compatibility plan (ALUCP) for nearly all public-use airports in the state. The intent of the ALUCP is to encourage compatibility between airports and the various land uses that surround them.

Community Noise Equivalent Level (CNEL). A CNEL is similar to the L_{dn} with an additional 5 dB penalty applied during the noise-sensitive hours from 7 p.m. to 10 p.m., which are typically reserved for relaxation, conversation, reading, and watching television.

Day-Night Noise Level (L_{dn}). L_{dn} is the 24-hour L_{eq} with a 10 dB penalty applied during the noise-sensitive hours from 10 p.m. to 7 a.m., which are typically reserved for sleeping.

Decibel (dB). A dB is a sound level expressed in decibels which is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure.

Equivalent Noise Level (L_{eq}). An L_{eq} is the equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time-varying noise level during the same period (i.e., average noise level).

Maximum Noise Level (L_{max}). The L_{max} is the highest instantaneous noise level during a specified time period.

Minimum Noise Level (L_{min}). The L_{min} is the lowest instantaneous noise level during a specified time period.

Noise Exposure Contours. Noise exposure contours are noise exposure levels as a function of distance from the noise source.

Noise-Sensitive Area. A noise-sensitive place in a place where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Examples include residences, cemeteries, churches, and hospitals.

Peak Particle Velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings.

Root-Mean-Square (RMS). RMS is the average of the squared amplitude of a vibration signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration. Because the human body responds to average vibration amplitude, RMS velocity values as measured in VdB are used to estimate vibration effects on humans.

Single-Event Noise Exposure Level (SENEL). The single event noise exposure level, in decibels (dB), is the noise exposure level of a single event, such as an aircraft flyby, measured over the time interval

between the initial and final times for which the noise level of a single event exceeds a given threshold noise level.

Vibration Decibels (VdB). Average vibration amplitude is a more appropriate measure for human response as it takes time for the human body to respond. Average particle velocity over time is zero, so the root-mean-square (RMS) amplitude velocity level, measured in VdB, is used to quantify annoyance.

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Ventura County 2040 GENERAL PLAN

Chapter 12
Climate Change

12 CLIMATE CHANGE

INTRODUCTION

This chapter summarizes climate change issues for Ventura County. This chapter is organized into two sections: Greenhouse Gas Emissions (Section 12.1) and Climate Change Effects and Impacts (Section 12.2).

SECTION 12.1 GREENHOUSE GAS EMISSIONS

Introduction

This section provides a discussion of climate change science and greenhouse gas (GHG) emissions sources in California and Ventura County. This section also provides a summary of applicable regulations with respect to local, regional, and statewide GHG emission sources. A discussion of the impacts caused by global climate change in Ventura County is included in Section 12.2 (Climate Change Effects).

Human-caused GHG emissions adversely affect the environment because, on a cumulative basis, they are the primary cause of global climate change. Global climate change is already causing rising sea levels, alterations of rain and snowfall, leading to changes in water supply, and impacts to habitat and other biological resources. Because GHG emissions come from many different sources, identification and reduction of GHG emissions is an important consideration for long-range planning efforts.

The County of Ventura will develop a Climate Action Plan (CAP) as part of the 2040 General Plan Update. The CAP will include GHG reduction measures, policies, and programs that reduce GHG emissions to achieve County targets. The CAP will also comply with CEQA Guidelines Section 15183.5, Tiering and Streamlining the Analysis of Greenhouse Gas Emissions, enabling project-specific environmental documents to tier from, or incorporate by reference, the programmatic CEQA analysis and mitigations for significant effects of greenhouse gas emissions at a programmatic level.

Major Findings

- Total countywide GHG emissions were approximately 7.2 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2012. The unincorporated area of Ventura County accounted for 1.3 $MMTCO_2e$ in 2012, or 18 percent of countywide emissions.
- The primary source of countywide GHG emissions is on- and off-road transportation, comprising about 53 percent of all GHG emissions in the county in 2012. Electricity generation and natural gas combustion associated with buildings comprised nearly 37 percent of countywide emissions in 2012.
- The county set GHG emissions reduction goals in 2011 for GHG emissions sources from county operations. The goal includes achieving a 15 percent reduction in emissions by 2020, relative to GHG emissions levels in the established 2005 base year.
- The County has adopted several goals that address the reduction of GHG emissions and related efforts to improve sustainability in County operations. While the County has not formally adopted a local climate action plan (CAP) that addresses community-wide emissions, the County's Climate

Adaptation Workgroup presented the Board of Supervisors with a Climate Protection Plan (CPP) that focused on GHG reduction opportunities in government operations and set out six major action areas with 15 goals.

Existing Conditions

Certain gases in the Earth's atmosphere, classified as GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the Earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The Earth has a much lower temperature than the sun; therefore, the Earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth. Without the greenhouse effect, Earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases (also known as "F-gases") that include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change. According to the Intergovernmental Panel on Climate Change (IPCC), it is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcings-together (IPCC 2014:3, 5).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be precisely identified, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. CO_2 sinks, also known as reservoirs, include vegetation and the ocean, which sequester CO_2 through photosynthesis and dissolution, respectively, two of the most common processes of CO_2 sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years. The remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013:467).

Some GHG emissions are referred to as "short-lived climate pollutants" (SLCPs) due to their characteristically short atmospheric lifespan and high global warming potentials (GWPs) as compared to other GHGs with longer lifespans and lower GWPs. SLCPs include, but are not limited to, fluorinated gases (e.g., HFCs, PFCs), CH_4, and black carbon. Despite the short period in which they occupy the atmosphere, the GWPs of SLCPs can trap significantly more heat in the atmosphere and therefore these emissions constitute a significant contribution to global climate change (California Air Resources Board [CARB] 2017a).

The physical impacts of climate change are also influenced by land use changes, specifically those that result in the removal or addition of vegetation, forests, woodlands, and other photosynthesizing organisms. The planting or enhancement of photosynthesizing resources increases the Earth's carbon sequestration potential. Conversely, the removal of vegetation lowers the Earth's carbon sequestration potential. In combination with emissions of GHGs, global climate change has been exacerbated by deforestation fueled by agricultural and commercial practices. The practice of burning forests not only eliminates the carbon sequestering capabilities of a landscape, but releases considerable quantities of GHGs into the atmosphere in the process (IPCC 2005).

The quantity of GHGs in the atmosphere that ultimately results in climate change is not precisely known, but it is enormous; no single project alone would measurably contribute to an incremental change in the global average temperature, or to global, local, or micro climates.

Statewide GHG Emissions

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial on-site fuel usage, high-GWP gases, the recycling and waste sectors, and agriculture. (CARB 2017b). The agriculture sector generates emissions of GHGs primarily from methane (CH_4) and nitrous oxide (N_2O) sources. Such sources include enteric fermentation and manure management of livestock, crop production (e.g., fertilizer use, soil preparation and disturbances, and crop burning), and fuel combustion associated with agricultural management activities (e.g., water pumping, cooling and heating of buildings and commodities) (CARB 2017).

The most recent California statewide GHG emissions inventory (2015) is summarized in Table 12-1~~Table 12-1~~. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB 2017b). Emissions of CO_2 are largely byproducts of fossil fuel combustion. CH_4, a highly potent GHG and SLCP, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, leaks from petroleum and natural gas operations, and landfills. N_2O emissions are also largely attributable to agricultural practices and soil management. Additionally, high-GWP gases have atmospheric insulative properties that are hundreds to tens of thousands of times greater than that of CO_2, meaning that high-GWP gases can trap far more heat in the atmosphere than the same amount of CO_2. F-gases such as HFCs, PFCs, and SF_6, are some of the most common types of high-GWP gases and result from a variety of industrial processes. HFCs and PFCs are used as refrigerants and can be emitted through evaporation and leakage. SF_6 is a powerful electrical insulator used in power transmission and semiconductor manufacturing and is emitted through evaporation and leakage into the atmosphere. Due to their high GWP values and short atmospheric lifespan, F-gases are classified as SLCPs.

TABLE 12-1
CALIFORNIA STATEWIDE GREENHOUSE GAS EMISSIONS INVENTORY
1990-2015

Emissions Sector	$MMTCO_2e$				Percent of Total (2015) (%)	Percent Change (1990-2015) (%)
	1990[1]	2000	2010	2015		
Transportation	151	176	170	163	37	8
Industrial	103	98	92	92	21	-12
Electricity Generation[2]	111	105	90	84	19	-24
Commercial and Residential Fuel Use	44	43	45	40	9	-10
Agriculture	23	32	35	35	8	56
High GWP	-[3]	7	15	18	4	n/a
Recycling and Waste	-[3]	7	8	9	2	n/a
Total[4]	**432**	**469**	**456**	**459**	**100**	**n/a**

Notes: GWP = global warming potential; $MMTCO_2e$ = million metric tons of carbon dioxide equivalent
[1]California's first 1990 GHG emissions inventory was prepared in 2007 by CARB using GWP values from the IPCC Second Assessment Report. All other inventory years shown use GWP values from the IPCC Fourth Assessment Report.
[2]Includes both in-state electricity generation and out-of-state imported electricity
[3]High GWP and Recycling and Waste sectors were included in the Industrial sector for the 1990 inventory only.
[4]Totals may not sum exactly due to rounding.
Sources: CARB 2007, CARB 2017b; data compiled by Ascent Environmental 2017.

Countywide, Unincorporated, and Local Government GHG Emissions

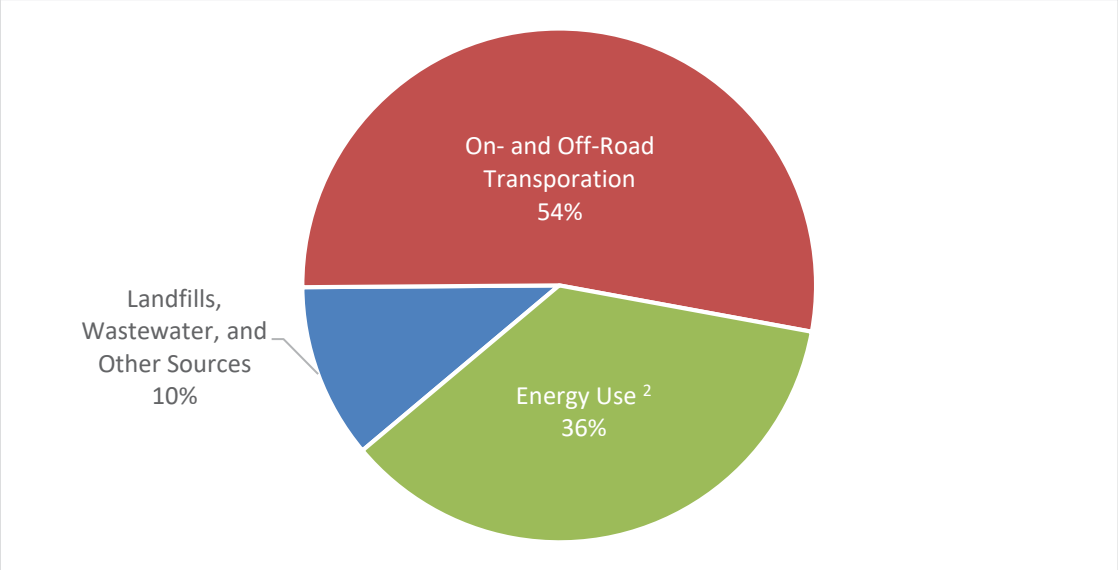
Ventura County 2012 Greenhouse Gas Inventories

Countywide Community GHG Emissions in 2012

The Ventura County Regional Energy Alliance (VCREA) is a joint powers authority with representation from local governments, schools, and investor-owned utilities. In 2015, VCREA prepared an integrated community inventory of GHG emissions both regionally and for each of its local government member organizations using GWP values from the IPCC's fourth assessment report consistent with CARB's approach for evaluating GHG inventories (CARB 2017b). The most recent version of the community inventory was published by VCREA in December 2015 and reported emissions for calendar years 2010 – 2012. The summary below focuses on the latest available annual emissions for 2012.

The VCREA inventory is divided into three broad areas: energy (electricity and natural gas combustion), mobile sources (on- and off-road burning of diesel and gasoline) and other emission sources (including landfill gas, emissions from wastewater treatment plants, and emissions of high GWP GHGs (i.e., HFCs, PFCs, SF_6)). In 2012, total county emissions were approximately 7.2 $MMTCO_2e$. Figure 12-1~~Figure 12-1~~ illustrates countywide emissions by sector in 2012 (VCREA 2015). The existing countywide inventory does not currently account for agricultural emissions. However, a future inventory, expected in 2018, will account for applicable emission sectors consistent with the statewide inventory. This will include agricultural emissions.

FIGURE 12-1
COUNTYWIDE GREENHOUSE GAS EMISSIONS[1]
Ventura County
2012

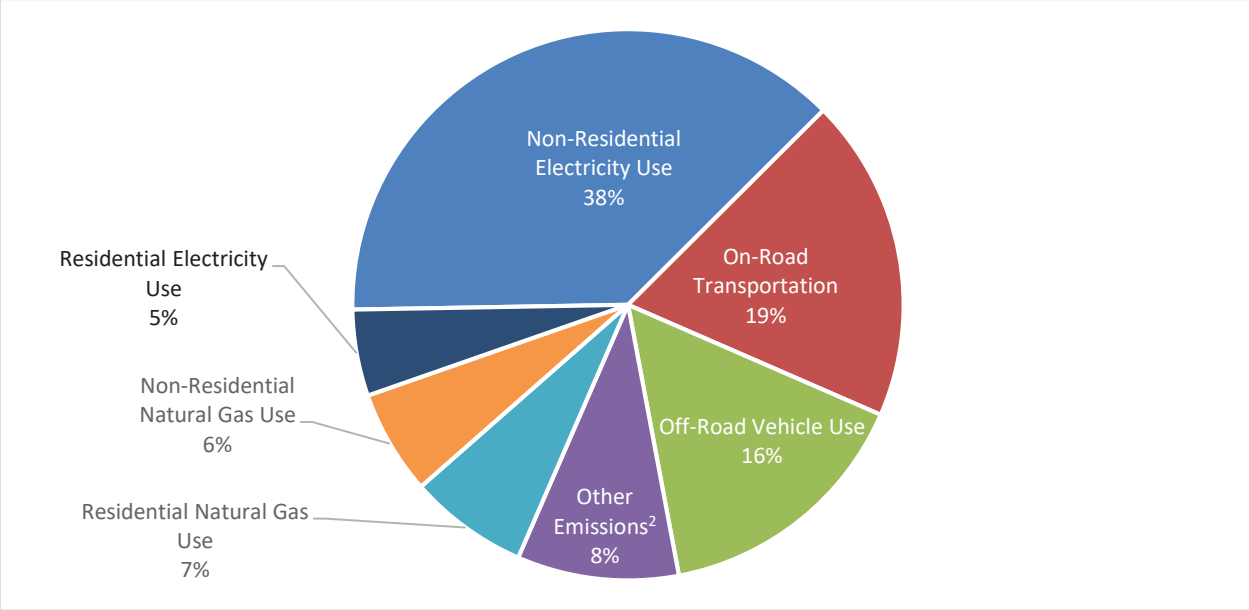


[1] Note: Totals may not sum exactly, due to rounding of figures.
[2] Energy Use includes electricity consumption and on-site combustion of natural gas.
Source: Ventura County Regional Energy Alliance (VCREA). Climate on the Move. December 2015.

Unincorporated Ventura County Community GHG Emissions

The VCREA inventory also provided specific community emissions inventories by government jurisdictions in Ventura County. For the unincorporated area of Ventura County, GHG emissions were approximately 1.3 $MMTCO_2e$ in 2012. Figure 12-2~~Figure 12-2~~ illustrates these emissions by sector (VCREA 2015).

FIGURE 12-2
GREENHOUSE GAS EMISSIONS[1]
Unincorporated Ventura County
2012



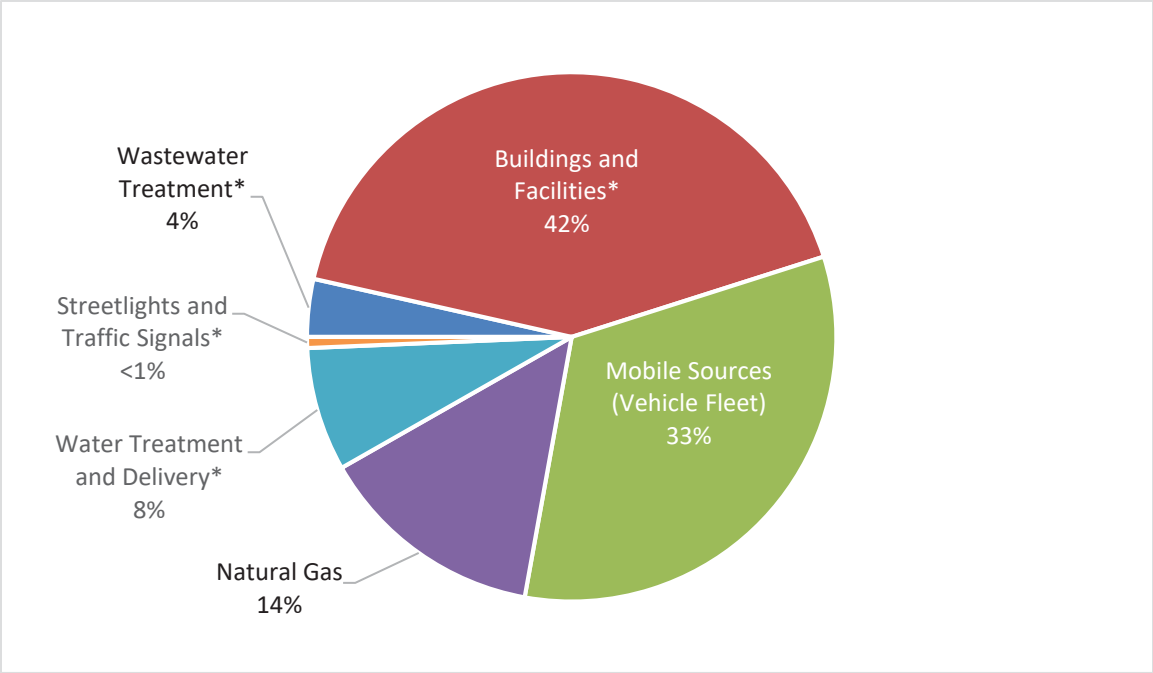
[1] Notes: Totals may not sum exactly, due to rounding of figures.
[2] Other emissions include both direct (Scope 1) and indirect (Scope 2) emissions. Direct emissions are from sources that are owned or controlled by an organization (e.g., stationary combustion, mobile combustion, process emissions, fugitive emissions). Indirect emissions are from the consumption of purchased electricity, steam, or other sources of energy generated upstream from an organization.
Source: Ventura County Regional Energy Alliance (VCREA). Climate on the Move. December 2015.

County of Ventura Government Operations

The VCREA inventory included estimates of operational emissions for County of Ventura operations. The inventory was prepared consistent with the Local Government Operations Protocol (LGOP) developed by CARB and The Climate Registry (TCR), which guides the reporting of GHG emissions by local governments. The LGOP defines the categories under which government operations are categorized, including facilities, lighting and traffic control, water pumping, and wastewater pumping. Because there were no significant changes between 2010 and 2012, the following chart shows the relative contribution of various sources to GHG emissions from County government operations. Total GHG emissions from government operations in Ventura County was approximately 38,787 metric tons of carbon dioxide equivalent ($MTCO_2e$) in 2012 (VCREA 2015). Figure 12-3~~Figure 12-3~~ illustrates these emissions by government operations sector. This estimate does not include emissions associated with commute activities of County employees.

FIGURE 12-3
GREENHOUSE GAS EMISSIONS FROM COUNTY OF VENTURA GOVERNMENT OPERATIONS[1]

Ventura County
2010-2012



[1] Notes: * = emissions from use of electricity. Totals may not sum exactly, due to rounding of figures.
Source: Ventura County Regional Energy Alliance (VCREA). Climate on the Move. December 2015.

Regulatory Setting

This report has been prepared at a time when accepted practice and legislation regarding how government agencies should address climate change continue to evolve. This section summarizes the current federal, state, and local regulatory programs, plans, and policies that apply to GHG emissions and land use planning.

Federal

Supreme Court Ruling of Carbon Dioxide as a Pollutant

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA) and its amendments. The Supreme Court of the United States ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. The ruling in this case resulted in EPA taking steps to regulate GHG emissions and lent support for state and local agencies' efforts to reduce GHG emissions.

Endangerment and Cause or Contribute Findings

On December 7, 2009, EPA adopted its Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA (Endangerment Finding). The EPA Administrator found that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The evidence supporting this finding consists of human activity resulting in "high atmospheric levels" of GHG emissions, which are very likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wild fires, droughts, sea-level rise, and higher-intensity storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations. The Administrator also found that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHGs fit within the CAA definition of air pollutants.

National Program to Cut GHG Emissions and Improve Fuel Economy for Cars and Trucks

On August 28, 2012, EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) issued joint Final Rules for Corporate Average Fuel Economy (CAFE) standards for vehicle model years 2017 and beyond (NHTSA 2016). These first-ever national GHG emissions standards will increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) for cars and light-duty trucks by model year 2025. EPA approved these standards under the CAA, and NHTSA approved them under the Energy Policy and Conservation Act.

State

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988. CARB is also designated as the lead state agency for implementing the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) and related efforts to reduce statewide GHG emissions in California. CARB coordinates closely with other state agencies and regional and local entities to implement AB 32 and related laws, rules and regulations.

Executive Order S-3-05

Executive Order (EO) S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea level. To combat those concerns, the EO established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. This EO is binding only on State agencies, and has no force of law for local governments; however, the signing of EO S-3-05 sent a clear signal to the California Legislature about the framework and content for legislation to reduce GHG emissions.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a new California GHG reduction target of 40 percent below 1990 levels by 2030, as well as increase statewide efforts to address the need for increased climate change adaptation measures by state agencies. This EO aligns

California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target as part of the 2030 Climate and Energy Framework in October 2014. California is on track to meet or exceed its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32 (summarized below). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 °C, the warming threshold at which there will likely be major climate disruptions such as super droughts and rising sea levels. The targets stated in EO B-30-15 have not been adopted by the State legislature.

Assembly Bill 32, The California Global Warming Solutions Action of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions and are being implemented through the California Cap-and-Trade regulation starting in 2012, along with other regulations and programs to achieve GHG emissions reductions in sectors that are included under the statewide cap.

Assembly Bill 32, Climate Change Scoping Plan

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 $MMTCO_2e$, or approximately 22 percent, from the State's projected 2020 emission level of 545 $MMTCO_2e$ under a business-as-usual (BAU) scenario. This is a reduction of 47 $MMTCO_2e$, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 $MMTCO_2e$, but this revised 2020 projection takes into account the economic downturn that occurred in 2008 (CARB 2011a). The Scoping Plan reapproved by CARB in August 2011 includes the Final Supplement to the Scoping Plan Functional Equivalent Document (FED), which further examined various alternatives to Scoping Plan measures. The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. CARB estimates the largest reductions in GHG emissions to be achieved by implementing the following measures and standards (CARB 2011a):

- improved emissions standards for light-duty vehicles (26.1 $MMTCO_2e$),
- the Low-Carbon Fuel Standard (LCFS) (15.0 $MMTCO_2e$),
- energy efficiency measures in buildings and appliances (11.9 $MMTCO_2e$), and
- renewable portfolio and electricity standards for electricity production (23.4 $MMTCO_2e$).

Senate Bill (SB) 32 and AB 197, Statutes of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below the AB 32 goal of 1990 levels by 2020 by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

SB 32 is contingent upon AB 197, which grants the State Legislature stronger oversight over CARB's implementation of its GHG reduction programs. AB 197 amended the existing Health and Safety Code sections and establish new statutory directions, including the following provisions. Section 9147.10 establishes a six-member Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature. CARB is required to appear before this committee annually to present information on GHG emissions, criteria pollutants, and toxic air contaminants from sectors covered by the Scoping Plan. Section 38562.5 requires that CARB consider social cost when adopting rules and regulations to achieve emissions reductions, and prioritize reductions at large stationary sources and from mobile sources. Section 38562.7 requires that each Scoping Plan update identify the range of projected GHG and air pollution reductions and the cost-effectiveness of each emissions reduction measure.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) aligns regional transportation planning efforts, regional GHG emission reduction targets for cars and light trucks, land use planning, and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which integrates regional land use and transportation planning within an MPO's Regional Transportation Plan (RTP).

SB 375 requires CARB, in consultation with MPOs, to provide each region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years, if advancements in emissions technologies affect the reduction strategies to achieve the targets.

Ventura County is under the jurisdiction of the Southern California Association of Governments (SCAG), which includes Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial Counties. In April 2016, SCAG adopted its 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which is the region's transportation and sustainability investment strategy for protecting and enhancing the region's quality of life and economic prosperity through this period. Plan implementation is expected to result in regional benefits to mobility, economy, health and sustainability. SCAG's plan is also expected to help California reach its greenhouse gas reduction goals, with an 8 percent reduction in GHG emissions per capita by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040—compared with 2005 levels (SCAG 2016).

Senate Bill 97

SB 97 directed the California Natural Resources Agency (CNRA) to adopt amendments to the California Environmental Quality Act (CEQA) Guidelines related to analysis of GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

CEQA allows lead agencies to analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, or as part of a separate plan (e.g., a climate action plan) to reduce GHG emissions (CEQA 15183.5).

Renewable Electricity (or Renewable Portfolio) Standard

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor owned utilities and community choice aggregators, to provide at least 20 percent of their power supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. On November 17, 2008, Governor Schwarzenegger signed EO S-14-08 requiring all retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020. The following year, EO S-21-09 directed CARB, under its AB 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020. In 2011, Governor Brown signed SB X1-2, which codified the 33 percent by 2020 standard into law.

The California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) jointly implement the statewide Renewable Portfolio Standard (RPS) program through rulemakings and monitoring the activities of electric energy utilities in the state (CPUC 2016).

Senate Bill 350, the Clean Energy and Pollution Reduction Act of 2015

In consideration of the approaching expiration of Senate Bill X1-2 goals in 2020, SB 350 of 2015 calls for 1) a new objective to procure 50 percent of the state's electricity from renewables by 2030 and 2) a doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030 with annual targets established by the CEC.

California Building Efficiency Standards (Title 24, Part 6)

Buildings in California are required to comply with California's Energy Efficiency Standards for Residential and Nonresidential Buildings established by the CEC regarding energy conservation standards and found in Title 24, Part 6 of the California Code of Regulations. California's Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated on a three-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. CEC adopted the 2016 Building Energy Efficiency Standards in 2015. The 2016 Title 24 standards went into effect on January 1, 2017. For single-family residences, the 2016 Title 24 standards will result in about 28 percent less energy use for lighting, heating, cooling, ventilation and water heating than the 2013 Title 24 standards (CEC 2015a). For non-residential land uses, the 2016 standards would result in 5 percent less energy use than those built to 2013 standards (CEC 2015b).

California Building Efficiency Standards (Title 24, Part 11): CALGreen

The 2016 Energy Provisions of CALGreen employ a range of voluntary energy efficiency measures to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals are met. The 2016 Energy Provisions of CALGreen provide example building energy efficiency provisions that will lead to additional energy and water savings than would be achieved by complying with the Energy Code. Interested persons may choose to follow these voluntary measures, or local jurisdictions may elect to make the measures mandatory to realize the potential energy and cost savings and other benefits. These provisions help address three problems: (1) achieving the State's goals, including reducing energy consumption and greenhouse gas emissions associated with energy production; (2) having zero net energy buildings (i.e., buildings whose energy consumption is balanced by on-site generation), and; (3) testing energy efficiency-related measures for future inclusion in the Energy Code, so that the Energy Code will better achieve the aforementioned goals.

Low-Carbon Fuel Standard

EO S-1-07, signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. It establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10 percent by 2020. This order also directed CARB to determine if this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early action measure after meeting the mandates in AB 32. CARB adopted the LCFS regulation in 2009, and subsequently re-adopted the regulation with modifications in 2015, in response to an order of the California Appellate Court.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2011b).

SLCP Reduction Strategy

CARB adopted the SLCP Reduction Strategy on March 24, 2017, pursuant to SB 605, SB 1383, and other legislative mandates. The SLCP Reduction Strategy identifies CH_4, F-gases, and black carbon as the three most prominent and potent SLCPs in the state and lays out a range of options to accelerate SLCP emission reduction activities in the state including regulations, incentives, and other market-supporting activities. The SLCP Reduction Strategy establishes reductions targets for SLCPs of 40 percent reduction CH_4 emissions, 40 percent reduction in F-gases, and 50 percent reduction in black carbon emissions by 2030. The SLCP Reduction Strategy is integrated into the 2017 Climate Change Scoping Plan Update as a contribution to state strategies to meet the 2030 GHG reduction target pursuant to SB 32.

Emissions of F-gases are curtailed through CARB's Refrigerant Management Program which requires facilities with refrigeration systems with 50 or more pounds of high-GWP refrigerants (i.e., HFCs or PFCs) to conduct inspections, repair leaks, and keep records. The SLCP Reduction Strategy also identifies measures and regulations to reduce emissions of CH_4 from the agricultural sector, landfills, and wastewater treatment. Mobile sources (primarily from diesel exhaust) and wildfire constitute the primary statewide sources of black carbon. The SLCP Reduction Strategy includes a statewide inventory for black carbon and notes that black carbon emissions from mobile sources have been reduced dramatically in recent decades and will continue to be reduced by recent actions contained in the State's Mobile Source Strategy, Sustainable Freight Strategy, and other regulations and actions related to mobile source emissions. Notably, as identified in Appendix C to the Reduction Strategy, accurate statewide black carbon estimates are difficult to estimate due to the various factors that influence black carbon emissions

such as fuel type, engine operating conditions, age, maintenance, emission control technology, load, and drive cycle. Further, wildfires, which are now the largest statewide source of black carbon, occur in varying degrees of frequency and magnitude on a year-to-year basis. Due to these variables, there is inherent uncertainly regarding the state's total emissions of black carbon.

Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

On March 23, 2017, CARB adopted the Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities ("Methane Regulation") to reduce GHG emissions (fugitive methane) from onshore and offshore crude oil and/or natural gas production; crude oil, condensate, and produced water separation and storage; natural gas underground storage; natural gas gathering and boosting stations; natural gas processing plants; and natural gas transmission compressor stations. The Methane Regulation imposes emissions standards for the oil and gas industry to comply with the emissions standards set forth by AB 32 as well as meet the standards set forth in the National Ambient Air Quality Standards and California Ambient Air Quality Standards. As such, the Methane Regulation established uniform control requirements for methane sources and expands upon some existing local air district volatile organic compound regulations by including additional infrastructure components such as valves, flanges, and seals for oil and gas extracting activities. Further, the Methane Regulation requires that vapors from separator and tank systems be collected and conveyed into existing sales lines, existing fuels lines, or existing injection wells first, with the use of existing vapor control devices to reduce emissions of nitrogen oxides (CARB 2017c).

California Solar Initiative

The California Solar Initiative (CSI) was authorized in 2006 under SB 1 and allows CPUC to provide incentives to install solar technology on existing residential, commercial, nonprofit, and governmental buildings if they are customers of the State's investor owned utilities (IOUs), including Southern California Edison (SCE). The CSI program had a budget of nearly $2.2 billion to be expended between 2007 and 2016, with a goal to reach 1,940 megawatts (MW) of installed solar power throughout the state by that time (CPUC 2015). The CSI program has several components, including Research and Development, Single-family Affordable Solar Housing (SASH), Multi-family Affordable Solar Housing (MASH), and Solar Water Heating Pilot Program, each of which provides incentives to further the installation of solar technology on California's buildings.

Assembly Bill 939, the California Integrated Waste Management Act

AB 939 (Sher, Statutes of 1989) established the California Integrated Waste Management Act of 1989. Among the bill's provisions is a requirement that each city and county develop and adopt a plan to divert 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995, through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000, through source reduction, recycling, and composting activities (CalRecycle 2016).

Assembly Bill 341

AB 341 (Chesbro, Chapter 476, Statutes of 2011) established a policy goal for the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. The California Department of Resources Recycling and Recovery's (CalRecycle) identified five priority strategies for achieving the 75 percent statewide waste diversion target, which include:

- Moving organics out of the landfill;

- Expanding recycling/manufacturing infrastructure;
- Exploring new approaches for state and local funding of sustainable waste management programs;
- Promoting state procurement of post-consumer recycled content products; and,
- Promoting extended producer responsibility (CalRecycle 2015).

Model Policies for Greenhouse Gases in General Plans

In June 2009, the California Air Pollution Control Officers Association (CAPCOA) prepared a white paper that presented model policies for addressing GHG emissions in general plans. CAPCOA intends this paper to be a resource rather than a guidance document intended to dictate how local communities should address GHG emission in their general plans. Model language is provided in nine major categories: GHG reduction planning (overall); land use and urban design; transportation; energy efficiency; alternative energy; municipal operations; waste reduction and diversion; conservation and open space; and education (CAPCOA 2009).

Quantifying Greenhouse Gas Mitigation Measures

In August 2010, the CAPCOA prepared a report on quantifying greenhouse gas emissions from select mitigation strategies to provide a common platform of information and tools to support local governments. CAPCOA intends this paper as a resource rather than a guidance document that dictates how cities or counties address greenhouse gas emissions in the context of projects they review or in the preparation of a General Plan. The report includes information related to the purpose of quantifying mitigation measures, quantification concepts, quantification approaches and methods, discussion of select quantified measures, understanding and using fact sheets, and quantification fact sheets for individual measures (CAPCOA 2010).

Regional

Ventura County Regional Energy Alliance – Regional Emissions Forecasts and Reduction Targets

In coordination with preparation of the integrated countywide GHG emissions inventory described earlier, VCREA prepared regional GHG emissions forecasts and identified potential GHG emissions reduction targets for 2020 for all cities in the county (VCREA 2015).

Forecasted GHG emissions countywide were developed for the major sectors in the inventory (energy use and on-road mobile source emissions) for the year 2020, assuming two business-as-usual (BAU) scenarios: (1) no additional state or local actions would be taken other than those taken by the state previously under AB 32; and, (2) an adjusted BAU condition that includes some state actions that would be taken through 2020 (e.g., statewide achievement of the Renewable Portfolio Standard [RPS] and clean vehicle regulations by 2020). Countywide, emissions are expected to decrease by 8.2 percent by 2020 compared to 2010 levels under the adjusted BAU scenario (VCREA 2015).

Based on the adjusted BAU forecasts, VCREA developed three scenarios for setting potential regional emissions reduction targets: 5 percent, 10 percent and 15 percent below adjusted BAU levels in 2020. Additional local or regional measures would need to be implemented in order to achieve these reductions. (VCREA 2015). While the potential targets developed by VCREA are not binding on any local

jurisdiction, they could be adopted and applied by each jurisdiction within the county as part of local climate action plans or other plans for the reduction of GHG emissions.

Local

2015 Saticoy Area Plan

The Saticoy Area Plan addresses reduction of GHGs as a key feature of its Guiding Principle to promote sustainable development and a healthy community and as important underpinnings of its Mobility and Resources elements. It also includes a technical appendix on Air Quality and Greenhouse Gas Emissions Analysis (Appendix E).

2011 Initial Study Assessment Guidelines

The Initial Study Assessment Guidelines include criteria for evaluating environmental impacts for greenhouse gas emissions. These can be found in Section 24. Greenhouse Gases.

County of Ventura Climate Protection Plan for Internal Operations

In January 2011, the Board of Supervisors set an emissions reduction target of 15 percent by 2020, using a 2005 baseline inventory, focused on County of Ventura government operations and in April 2011, the county's draft Climate Protection Plan was presented to the Board of Supervisors. The 2005 baseline inventory was estimated using reporting protocols adopted by The Climate Registry (TCR) and CARB. Additional inventories for County of Ventura government operations have been completed for calendar years 2006 through 2015 (Ventura 2012; VCREA 2015).

Key Terms

Carbon dioxide (CO_2). An odorless and colorless GHG emitted from natural sources, such as the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out-gassing. Anthropogenic (man-made) sources include the burning of fossil and other fuels (e.g., coal, oil, natural gas, wood).

Carbon dioxide equivalent (CO_2e). A unit for describing how much global warming a given type and amount of GHG may cause, normalized to a functionally equivalent amount or concentration of CO_2 as the reference. See Global Warming Potential.

Carbon Sequestration. Atmospheric CO_2 taken up through leaves and becomes carbon in the woody biomass of trees and other vegetation where it is stored.

Climate Action Plan (CAP). A planning document that lays out a set of strategies and policy recommendations intended to reduce GHG emissions associated with a given entity, agency, or jurisdiction.

Climate Change. Long-term changes in temperature, precipitation, and other elements of the Earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHGs, particularly those generated from the human production and use of fossil fuels.

Fluorinated gases (F-gases). Refers to a group of man-made GHGs with short atmospheric lifespans and high GWPs. F-gases include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

Global Warming Potential (GWP). One type of simplified index based upon properties of the GHG that can be used to estimate the effect on the climate system with reference to CO_2. For example, one ton of methane is as potent a GHG as 25 tons of CO_2. Methane has GWP of 25 CO_2e. See also Carbon dioxide equivalent.

Greenhouse Effect. The Earth's natural warming process. Certain atmospheric gases that trap heat in the atmosphere, causing the greenhouse effect, are referred to as GHGs.

Greenhouse Gases (GHGs). Gases that contribute to the greenhouse effect. Some GHGs such as carbon dioxide (CO_2) occur naturally, and are emitted to the atmosphere through natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities. The principal GHGs that enter the atmosphere because of human activities include: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons (CFCs), and fluorinated gases (hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Greenhouse Gas (GHG) Inventory. An accounting of the amount of GHGs emitted to or removed from the atmosphere over a specific period of time (e.g., one year) for a specified area.

Methane (CH_4). A GHG with GWP of 25. Anthropogenic (human-caused) sources of methane emissions include agricultural activities, natural gas consumption, landfills, wastewater treatment plants, and mobile sources.

Nitrous oxide (N_2O). A GHG with GWP of 298. Nitrous oxide sources include wastewater treatment plants, fertilizer application and soil management in agricultural activities, and mobile sources.

Short-Lived Climate Pollutants (SLCPs). A classification of GHGs that have characteristically short atmospheric lifespans and high GWPs. Black carbon, methane, and F-gases are considered SLCPS.

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SECTION 12.2 CLIMATE CHANGE EFFECTS

Introduction

This section presents a summary of the current state of climate change science; the effects of climate change and associated impacts in California and Ventura County; and, a summary of applicable federal, State, and local regulations, policies, programs, and plans that address the effects of climate change.

Greenhouse gas (GHG) emissions associated with human activities are the primary cause of global climate change, and while the topic of GHG emissions is related to global warming and associated climate change effects, GHG emissions are addressed in detail in Section 12.1 of the chapter.

Major Findings

- Annual average temperatures in Ventura County are projected to rise by three to six degrees Fahrenheit (°F) by 2090, with the range based on low and high global GHG emissions scenarios (Cal-Adapt 2016).
- Climate change impacts due to sea-level rise and storm events in Ventura County include:
    - more frequent flooding events due to rising sea levels;
    - more extensive and longer duration of flooding;
    - permanent inundation in coastal areas due to higher ocean levels and shifts in the tidal range;
    - increased shoreline erosion; and
    - elevated groundwater levels and salinity intrusion.
- Ventura County could experience coastal erosion of up to 1.36 meters per year by 2100 as a result of sea-level rise and related coastal flooding. (The Nature Conservancy, 2013)
- Currently 7,300 people, or one percent of Ventura County's population, live in areas at risk of being inundated in a 100-year flood event. A 1.4-meter rise in sea level will put an additional 16,000 people at risk of exposure to a 100-year flood event, for a total of 23,300 people. While the racial composition of populations vulnerable to a 100-year flood event generally reflects the county as a whole, a disproportionate number of affected persons (located largely in southeastern Oxnard) are low-income and are especially vulnerable. (California Energy Commissions [CEC] 2009).
- Critical infrastructure in Ventura County, including 170 miles of roads and railways, hospitals, schools, emergency facilities, wastewater treatment plants, three power plants, and a naval base will be at increased risk of inundation, as will areas of wetlands and other natural ecosystems due to sea-level rise. In addition, the cost of replacing property at risk of coastal flooding with a 1.4-meter rise in sea levels is projected at $2.2 billion (in year 2000 dollars) (CEC 2009).
- Biological resources in Ventura County will be affected by multiple climate change-related factors. Increased temperatures will induce movement of terrestrial species to higher elevations resulting in habitat fragmentation. Changes in precipitation will lead to prolonged periods of

drought and/or more intense rain events, which could adversely affect river flow and riparian habitat. Rising sea levels will inundate existing coastal biotic communities.

- Areas south of U.S. 101 in the City of Ventura, including the Ventura County Fairgrounds, the City of Ventura Marina, and some residential uses along North Harbor Boulevard, as well as some commercial and residential uses southeast of State Route (SR) 1 in Oxnard and around Naval Base Ventura County - Point Mugu are currently vulnerable to flooding. Taking varying levels of sea-level rise into consideration (up to 1.4 meters) along with existing flood risks, additional inundation areas in Ventura County will be exposed to flooding further upland and closer to SR 1.
- According to Cal-Adapt, the countywide average extreme heat day for Ventura County is 88°F and the county has a historical average of four extreme heat days a year. Under a low-emissions scenario, the number of extreme heat days is projected to increase to an average of 20 days per year between 2040 and 2045 and an average of 31 days per year from 2095 to 2099. Further, under a high-emissions scenario, an average of 20 extreme heat days are projected to occur between 2040 and 2045 with an average of 79 from 2095 to 2099.
- Ventura County is projected to experience a 15 percent increase in the potential amount of area burned by wildfire between 2020 and 2085 (Cal-Adapt 2016).

Existing Conditions

Effects of Climate Change on the Environment

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. Global climate change is already responsible for a number of adverse effects on natural resources and the human population that will continue to worsen in the coming decades. These include:

- rising sea levels around the world due to melting of polar ice caps and sea ice, which can inundate low-lying areas and increase the severity of flooding risk;
- changes in the timing or amounts of rainfall and snowfall, leading to changes in water supply;
- increased stress to vegetation and habitat, leading to adverse effects on biological resources and sensitive species;
- increased frequency and duration of heat waves and droughts, which can affect human populations and the infrastructure on which they depend; and,
- increases in wildfire hazards and related effects on forest health.

Based on the work of IPCC and research conducted by the State of California and partner agencies and organizations, it has been shown that climate change is already affecting, and will continue to affect, the physical environment throughout California and Ventura County. To identify local impacts, the climate change scenario planning tool Cal-Adapt may be used. Cal-Adapt was developed by CEC and the University of California Berkeley Geospatial Innovation Facility. Cal-Adapt downscales global climate simulation model data to local and regional resolution under two emissions scenarios: the A-2 scenario represents a higher, future global GHG emissions scenario, and the B-1 scenario represents a lower future GHG emissions scenario. Which scenario occurs in the future depends on the efficacy of programs

implemented to reduce GHG emissions. Because the degree of efficacy is not yet known, results from both emissions scenarios are considered in this background report and distinguished, where possible.

Not all climate change effects within Cal-Adapt have data aggregated specifically for countywide description. Cal-Adapt downscales most of its data to grid cells 12 kilometers (km) by 12 km (approximately 60 square miles) in size. Thirty-nine grid cells are located entirely or partially within Ventura County boundaries. For the purposes of this background report, where countywide data are not available, a composite score of the total county was developed and will be used for consistency in comparisons.

Cal-Adapt data describing future climate conditions for Ventura County are summarized in the sections below.

Increased Temperatures

According to IPCC, global average temperature is expected to increase relative to the 1986-2005 period by 0.3–4.8 degrees Celsius (°C) (0.5-8.6 °F) by the end of the 21st century (2081-2100), depending on future GHG emission scenarios (IPCC 2014:SPM-8). According to the California Natural Resources Agency (CNRA), downscaling of global climate simulation model data suggests that average temperatures in California are projected to increase 2.7 °F above 2000 averages by 2050 and, depending on emission levels, 4.1–8.6 °F by 2100 (CNRA 2012a:2).

According to Cal-Adapt, annual average temperatures in Ventura County will rise by 3.6 to 6.0 °F by 2090, based on the low- and high-emission scenarios (Cal-Adapt 2016). With a total area of 2,208 square miles, temperature increases within the county would be expected to be more severe farther inland.

Ventura County supports a prosperous agricultural industry. According to the Farm Bureau of Ventura County, the county is considered the tenth most productive county in the country with a gross value of approximately $2.1 billion in 2014 (County of Ventura 2014). Increased temperatures associated with climate change pose potential challenges and opportunities to the county's production of crops. Recently, the county's most lucrative crop has been berries. Berries are a perennial crop, and are considered temperature-sensitive. Statistical modeling projections based on historic crop yield and temperature data suggest a 2°F warming will have a differential impact on yield across crops. As temperature-sensitive crops, it would be expected that berry production could be adversely affected from projected increases in temperature; however, a warming of the Ventura County climate could create an opportunity to grow heat-tolerant crops that historically have been unavailable (California Department of Food and Agriculture [CDFA] 2013).

Increased temperatures will also result in adverse impacts to biological species within the county. Ventura County is characterized as a Mediterranean climate and experiences warm, wet winters and calm, hot, dry summers. This environment fosters an abundance of biodiversity; while only covering two percent of the world's land area, Mediterranean habitats contain 16 percent of the world's plant species. The warming of the climate in the county could lead to the movement of terrestrial species to areas of higher elevation to track suitable habitat conditions. This movement could lead to loss of habitat within linkages between core habitats. Timing and success of species reproduction could likely be affected. Further, longer-lived species with limited reproductive output or dispersal capacities (e.g., oaks) may be less able to adapt to the shifting climatic conditions (The Nature Conservancy 2008). Additionally, increased temperatures have the potential to result in more invasive species introductions through expanded habitat range (CDFA 2013).

Changes to Precipitation Patterns

Global climate change will affect physical conditions beyond average temperatures. For example, changes in weather patterns resulting from increases in global average temperature will result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada and other mountain ranges in the state. Snowpack and rainfall in the mountain ranges within Los Padres National Forest (e.g., Sierra Madre), which supplies watersheds in Ventura and Santa Barbara counties, is projected to decrease by 17 percent, which could affect water supply to the Ventura River and Santa Clara River Watersheds (County of Ventura 2015a).

According to Cal-Adapt, Ventura County has historically received an average of approximately 17 inches of precipitation annually, with the majority of rain events occurring in the winter months. Under the low-emission scenario, Cal-Adapt projects an overall decrease in countywide precipitation of about 1 to 2 inches for the years 2040 and 2100, respectively. Under the high-emission scenario, Cal-Adapt projects a 2-inch decrease in countywide precipitation by 2040 and a 4-inch decrease by 2100 (Cal-Adapt 2016).

As discussed above, decreases in precipitation associated with climate change may affect delivery of water for agricultural and other uses. While changes in precipitation at the local level are difficult to predict, it is expected that California's water resources will deplete over the course of the century due to a decrease in snowpack in the Sierra Nevada Range. Of the 20,000 acre-feet of State Water Project (SWP) contracted to Ventura County Water Protection District (WPD), a 10,000 acre-feet entitlement is held by the City of Ventura and 5,000 acre-feet entitlement is held by Casitas Municipal Water District. The remaining 5,000 acre-feet entitlement is held by United Water Conservation District which is located in the Santa Clara River Watershed. As of 2016, these entities currently are not fully exercising their entitlements from the SWP due to a lack of facilities. It would be reasonable to assume that if water supply in the county became constrained, Ventura County could invest in facilities to receive the allocation (Ventura Water 2014). It should be noted, however, that changes in precipitation patterns and rates may affect the availability of SWP resources.

Additionally, drought conditions combined with warming temperatures have affected insect populations. For example, in Ventura County, strawberry yields in 2013 were greatly affected by a burst in population of spider mites due to lack of rain, which caused major damage to strawberry fields throughout the county (Ventura County 2013). Increases in the frequency and persistence of future drought conditions in the state and county could result in similar impacts to crop yields.

Changes in precipitation patterns will also affect the endemic ecosystems of Ventura County. Increased frequency and periods of drought and/or more severe rain events could affect the flow regime of the Calleguas Creek, Santa Clara River, and Ventura River watersheds. Alterations in precipitation patterns producing drought conditions may result in increased salinity in estuaries and near-shore aquifers (Watersheds Coalition of Ventura County [WCVC] 2014). A study of the Santa Clara River found that climate change could result in more extreme fluctuations in water flow, leading to the scouring of the riparian zone and loss in habitat for aquatic vertebrates (The Nature Conservancy 2008).

Sea-Level Rise

Another outcome of global climate change is sea-level rise. The average global sea level rose approximately seven inches during the last century. According to the CEC's 2009 report, *The Impacts of Sea-Level Rise on the California Coast*, currently 7,300 people, or approximately one percent of the county's population, live in areas currently at risk of being inundated in a 100-year flood event. Based on a set of climate scenarios prepared by the CEC's Public Interest Energy Research Climate Change

Research Program, under medium- to high-emissions scenarios, mean sea level along the California coast will rise from 1.0 to 1.4 m by the year 2100.

Under a high-emissions scenario, a 1.4-meter rise in sea level will put an additional 16,000 people at risk, raising the total number of people at risk to 23,300. While the racial composition of populations vulnerable to a 100-year flood event generally reflects the county as a whole, a disproportionate number of affected persons (located largely in southeastern Oxnard) are low-income and are especially vulnerable. Critical infrastructure in Ventura County, including 170 miles of roads and railways, hospitals, schools, emergency facilities, agricultural lands, wastewater treatment plants, three power plants, and a major military facility will be at increased risk of inundation due to coastal flooding as a result of sea-level rise and a 100-year flood event, as will vast areas of wetlands and other natural ecosystems. In addition, the cost of replacing property in the county at risk of coastal flooding with a 1.4-meter rise in sea level is $2.2 billion (in year 2000 dollars), a 120 percent increase as compared to current risk. Continued development in vulnerable areas would put additional Ventura County areas at risk and raise flood protection costs (CEC 2009).

Although California does not typically experience hurricane events, the state is routinely affected by the El Niño Southern Oscillation (ENSO), which is characterized by a warming of wind and sea surface temperatures over the Pacific Ocean. ENSO events typically result in an increase in precipitation over southern California as compared to normal conditions. Combined with a projected rise in sea temperature, low lying coastal areas of Ventura County such as Ventura Harbor and the Oxnard Shores are particularly vulnerable to flooding associated with ENSO storm surges, which can be 0.5 to 1 foot above normal conditions. According to the Federal Emergency Management Agency (FEMA), an ENSO-related storm during the winter of 1997 to 1998 caused storm damage totaling approximately $50,000,000. During that event, swells overtopped revetments and flooded several roads, a bike path, and a parking lot causing considerable destruction (FEMA 2011).

Using data developed by the United States Geological Survey (USGS) and the Pacific Institute, the Cal-Adapt tool depicts sea-level rise projections and existing storm-related flooding events using a "bathtub model," which shows the consequences of a 100-year flood event combined with up to 1.4-meter sea-level rise (without taking into account protective structures, such as levees or wave run-up). As shown in Figure 12-4~~Figure 12-4~~, several areas in Ventura County (10,530 acres) are currently vulnerable to flooding in 100-year storm events (Cal-Adapt 2016; Ventura County 2015a). These include areas south of U.S. 101 in the City of Ventura, including the Ventura County Fairgrounds, the City of Ventura Marina, and some residential uses along North Harbor Boulevard, as well as some commercial and residential uses southeast of SR 1 in Oxnard, as well as around Naval Base Ventura County - Point Mugu. Taking varying levels of sea-level rise into consideration (up to 1.4 meters) along with existing flood risks, the tool projects additional inundation areas in Ventura County further upland past SR 1, with a 36 percent increase in total acreage of land vulnerable to a 100-year flood event. As shown in Figure 12-5~~Figure 12-5~~, south-eastern Oxnard is especially vulnerable (Cal-Adapt 2016).

As previously discussed, several areas of Ventura County are at high risk of inundation from the combined effects of sea-level rise and a 100-year flood event; however, coastal areas of the county will also experience permanent inundation due to rising sea levels alone. Through close coordination with private and public entities, the Nature Conservancy's Coastal Resilience Project has collected sufficient data to map the areas of Ventura County vulnerable to inundation from rising tides for the years 2030, 2060, and 2100 under low, medium, and high sea-level rise scenarios (The Nature Conservancy 2015).

Rising sea levels will also result in the inundation of coastal and riparian habitats in Ventura County. Vulnerable ecological communities include those endemic to McGrath Beach, the Santa Clara River

estuary, Ormond Beach, and Point Mugu. As sea levels rise, species will be forced into land farther from the existing coast, and the movements of these species could be impeded by urban infrastructure (The Nature Conservancy 2008).

As a coastal community, Ventura County is at high risk of erosion associated with sea-level rise. Coastal erosion occurs as a function of artificial elements (e.g., jetties, rock revetments) with natural stressors such as wave action, tidal and wave currents, drainage features, and sediment composition. Currently, Ventura County contains several sites that have experienced a cumulative adverse effect related to urbanization over the past century (i.e., Oil Piers beaches, Hobson County Park, North Rincon Parkway, South Rincon Parkway, Emma Wood State Beach, Surfers Point Park, San Buenaventura State Beach, Pierpont Beach, Oxnard Shores, and Hueneme Beach). Damming of streams and rivers upstream from the shoreline, coastal urbanization, and other development impacts have impacted the balance of sand movement and the process of natural beach replenishment (Coastal Sediment Management Workgroup 2010).

A study performed in 2013 modeled the impacts to coastal erosion employing three scenarios of differing sea-level rise at Mandalay Beach Road. The model applied three components: historic rates of erosion, additional erosion due to sea-level rise, and the potential erosion impact caused by a large storm wave event (i.e., 100-year or 500-year). Using a combination of the three components, under the low sea-level rise scenario (0.44 meters by 2100), by the year 2100, the area was expected to experience erosion at a rate 0.52 meters per year. Under the medium sea-level rise scenario (0.93 meters by 2100), erosions rates would occur at 0.88 meters per year by 2100. Under the high sea-level rise scenario (1.48 meter by 2100), the area was modeled to experience erosion at a rate of 1.36 meters per year (The Nature Conservancy 2013).

Further, as sea levels rise, saltwater intrusion to groundwater supply occurs. Due to the contentious and highly politicized nature of groundwater extraction, groundwater resources are especially vulnerable to the effects of rising sea levels. In cases where groundwater extraction exceeds recharge in coastal communities, a vacuum-like phenomenon pulls saltwater into aquifers. Saltwater intrusion has already been documented in the deep aquifer system of the South Oxnard Plain (The Nature Conservancy 2016). Rising sea levels combined with the potential for future overdraft associated with changes in precipitation patterns could exacerbate this effect.

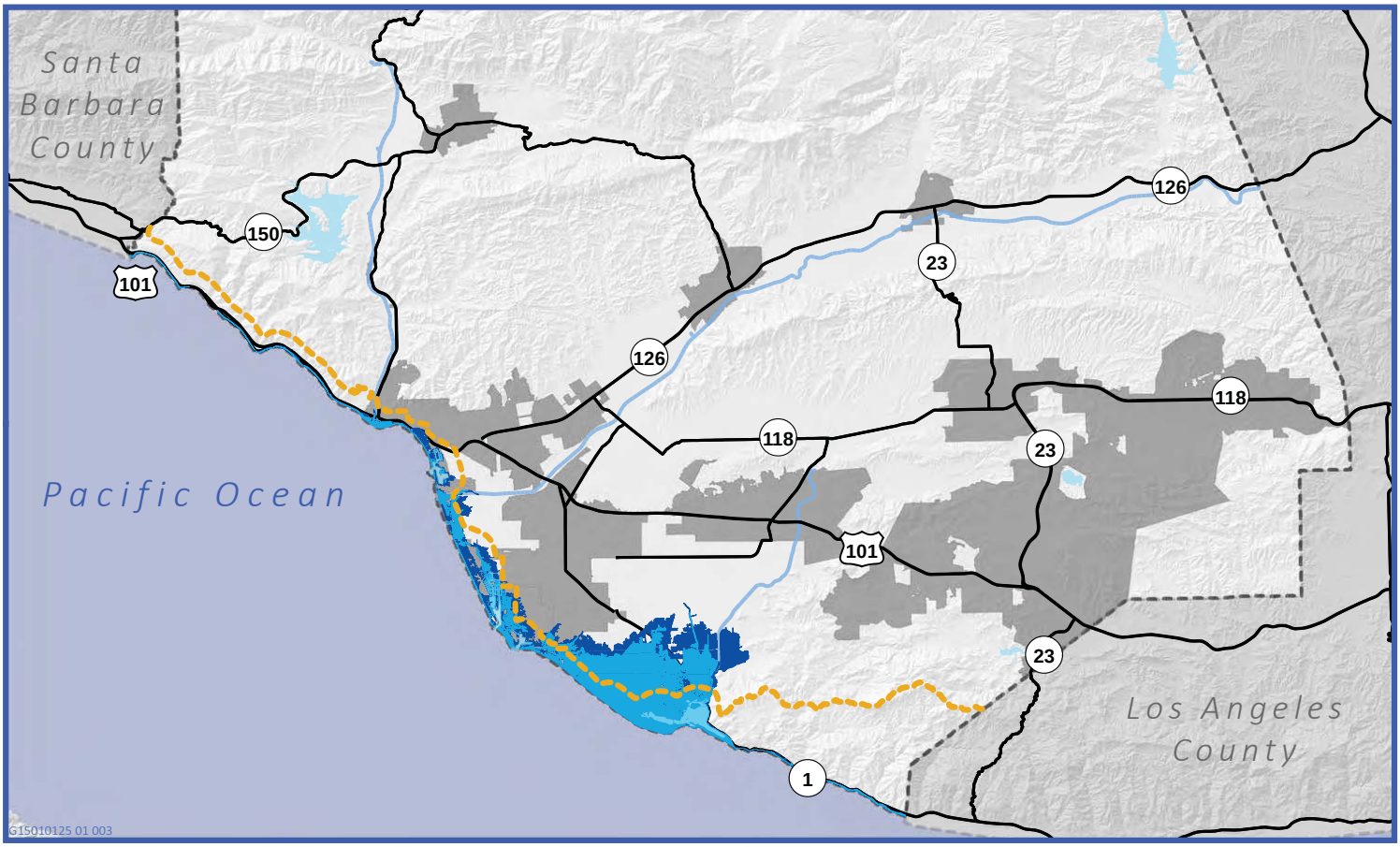

Figure 12-4
Impacts of Sea-Level Rise on the Ventura County Coast

Map Date: June 10, 2016
Source: Pacific Institute, 2009; Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 5 10 Miles

N

Inundation Area
- Current with 100-year Flood Event Exposure
- Current with 100-year Flood Event Exposure + 1.4 meter sea-level rise

- Coastal Zone Boundary
- Major Roadways
- Major Waterways
- Water Bodies
- Cities

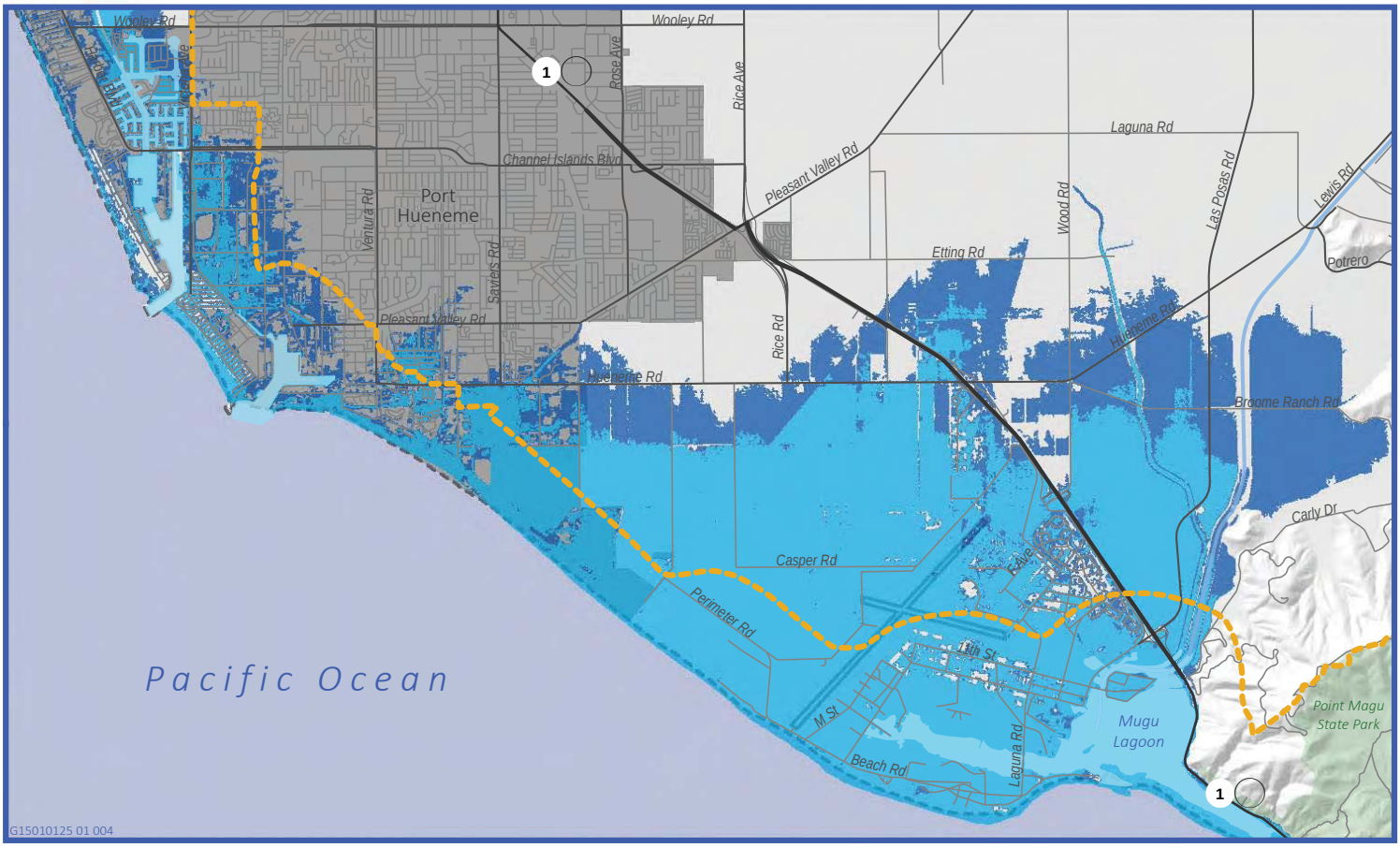

Figure 12-5
Impacts of Sea-Level Rise on the Ventura County Coast (Point Mugu)

Map Date: June 10, 2016
Source: Pacific Institute, 2009; Ventura County, 2016; California Department of Transportation, 2007; USGS, 2013.

0 1 2 Miles

N

Inundation Area
- Current with 100-year Flood Event Exposure
- Current with 100-year Flood Event Exposure + 1.4 meter sea-level rise

- Coastal Zone Boundary
- Major Roadways
- Major Waterways

- Water Bodies
- Cities

Increased Frequency of Extreme Heat Events and Wildfire Risk

Changes in precipitation patterns and increased temperatures associated with climate change will alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes will lead to increased frequency and intensity of large wildfires (CNRA 2012a:11).

Cal-Adapt defines the extreme heat day as any day between April and October where the maximum temperature exceeds the 98th historical percentile of maximum temperatures based on daily temperature maximum data between 1961 and 1990. Using data provided by Scripps Institution of Oceanography, the countywide average extreme heat day for Ventura County is 88°F according to Cal-Adapt. Cal-Adapt data show that Ventura County has a historical average of four extreme heat days a year and show a range of projected increases in the number of extreme heat days until the year 2099. Under a low-emissions scenario, the number of extreme heat days is projected to increase to an average of 20 days per year between 2040 and 2045 and an average of 31 days per year from 2095 to 2099. Further, under a high-emissions scenario, an average of 20 extreme heat days are projected to occur between 2040 and 2045 with an average of 79 from 2095 to 2099. Notably, Cal-Adapt's extreme heat day tool accounts for historic annual variability as well as general uncertainty regarding modeling future conditions, which results in peaks and dips on a year-to-year basis. For this reason, five-year averages have been taken to demonstrate a more comprehensive trend of increases in future temperatures and extreme heat days.

It should be noted that due to its geographical location, portions of Ventura County will experience a range of temperature-related effects depending on their proximity to the Pacific Ocean. Coastal communities may not experience the same increase in extreme heat days due to the Pacific Ocean's coastal influence. Water has a high specific heat, meaning it requires a high amount of energy to alter its temperature; therefore, climatic forces which may otherwise result in more extreme fluctuation in temperature are regulated in coastal areas. Further, wind direction in Ventura County is regulated by the behavior of Ferrel Cells which move wind west to east pulling cooler, oceanic air onto the coast. Conversely, communities in Ventura County that are located farther inland (e.g., Piru) will experience greater variation in temperature due to their distance from the Pacific Ocean, and will be more susceptible to impacts related to extreme heat.

The Ventura County Multi-Hazard Mitigation Plan (MHMP) identifies 23 fires that consumed greater than 10,000 acres over the past 50 years. Most recently, the 2013 Springs Fire constitutes the most recent fire in the county burning over 24,251 acres over the course of a week destroying 10 structures, damaging 12, and resulted in 10 injuries (Ventura County 2015a). Within Ventura County, zones at risk of high, very high, or extreme wildfire threat are located in mountainous or hillside areas (west of Lake Casitas, northeast of Ojai, north of Fillmore, and surrounding Thousand Oaks and Simi Valley) (County of Ventura 2015a). According to Cal-Adapt, a majority of Ventura County will experience an increase of 15 percent in the potential amount of area burned by wildfire between 2020 and 2085. Ventura County will experience a similarly minor projected increase in wildfire risk for both the low and high emissions scenarios (Cal-Adapt 2016).

Regulatory Setting

A variety of federal, state, and local laws, policies, and guidance address the adverse impacts of global climate change. Climate change effects and adaptation may be considered within the existing policy and regulatory framework for natural resources and hazards; however, a number of specific regulatory considerations and related climate change and adaptation planning studies and initiatives are applicable to Ventura County and are discussed below.

Federal

Executive Order 13653

Executive Order (EO) 13653, signed by President Barack Obama on November 1, 2013, directs Federal agencies to take a series of steps to make it easier for American communities to strengthen their resilience to climate change. The EO requires agencies to modernize Federal programs to support climate resilient investments; manage lands and waters for climate preparedness and resilience; provide information, data, and tools for climate preparedness and resilience; and plan for climate change related risks. Among other steps, the EO established a State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience (Task Force) to advise the Administration on how the federal government can respond to the needs of communities nationwide that are dealing with the impacts of climate change. To implement these actions, the EO also established a Council on Climate Preparedness and Resilience (Council).

Executive Order 13690

EO 13690, signed by President Barack Obama on January 30, 2015, aims to reduce the risk and cost of future flood disasters by requiring all Federal investments in and affecting floodplains to meet higher flood risk management standards. The EO requires federally funded buildings, roads, and other infrastructure be constructed to better withstand the impacts of flooding. The EO provides agencies with flexibility to use data and methods informed by best-available science or to build to a set height above the 100- or 500-year flood elevation.

President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience: Recommendations to the President

The President charged the Task Force, established by EO 13653, with providing recommendations on how the Federal Government can respond to the needs of communities nationwide that are dealing with the impacts of climate change. The President's Task Force released its Recommendations to the President report in November 2014. Recommendations in the report include building resilient communities, improving resilience in the Nation's infrastructure, ensuring resilience of natural resources; preserving human health and supporting resilient populations; supporting climate-smart hazard mitigation and disaster preparedness and recovery; understanding and acting on the economics of resilience; and building capacity for resilience (Task Force 2014).

Progress Report: Highlighting Federal Actions Addressing the Recommendations of the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience

The Obama Administration in July 2015 released the Progress Report: Highlighting Federal Actions Addressing the Recommendations of the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience (Progress Report). The Progress Report focuses on key actions taken by the

Federal Government and describes more than one hundred completed and ongoing initiatives that Federal agencies have taken to support efforts, at all levels of government, to prepare for changing climate conditions. The Administration issued the report in response to a list of Task Force recommendations received in 2014 (Task Force 2015).

Priority Agenda: Enhancing the Climate Resilience of America's Natural Resources

The Priority Agenda: Enhancing the Climate Resilience of America's Natural Resources, was prepared by the Council and Natural Resources Working Group in October 2014. The Agenda builds upon the robust climate change adaptation work already accomplished by Federal agencies and identifies significant actions moving forward. It identifies the following four priority strategies to make the Nation's natural resources more resilient to climate change, including:

- foster climate-resilient lands and waters;
- manage and enhance U.S. carbon sinks;
- enhance community preparedness and resilience by utilizing and sustaining natural resources; and
- modernize federal programs, investments, and delivery of services to build resilience and enhance sequestration of biological carbon.

The Agenda also provides an implementation strategy and priority actions to focus on (Council 2014).

Open Pacific Coast Study. FEMA is performing detailed coastal engineering analysis and mapping of the Pacific coast of California pursuant to FEMA's February 2005 Pacific guidelines for new coastal studies. The Open Pacific Coast Study will include mapping of coastal flood risk and wave hazards along the California coast including Ventura County. Following the completion of flood plain mapping, FEMA will present coastal counties with Flood Insurance Rate Maps and coordinate with local stakeholders in developing risk awareness strategies to communicate risks to impacted residents and businesses. Completion of the process will differ county-to-county, but it is expected that mapping for the Ventura County coast will be available between 2016 and early 2018 (FEMA 2015).

State

Executive Order S-13-08

EO S-13-08, signed by Governor Arnold Schwarzenegger on November 14, 2008, required CNRA to develop California's first Climate Adaptation Strategy in coordination with local, regional, State, and federal public and private entities. Under the EO, the National Academy of Sciences was instructed to issue a report on sea-level rise to advise California planning efforts, which was released in June 2012. It also directed the Governor's Office of Planning and Research (OPR) to provide State land-use planning guidance related to sea-level rise and other climate change impacts. The Interim Guidance Document was released in November 2008, with an update released in 2013.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a new California GHG reduction target of 40 percent below 1990 levels by 2030, as well as increase statewide efforts to address the need for increased climate change adaptation measures by State agencies. These measures include:

- incorporating climate change impacts into the State's Five-Year Infrastructure Plan;
- updating the Safeguarding California Plan to identify how climate change will affect California infrastructure and industry, and what actions the State can take to reduce the risks posed by climate change;
- factoring climate change into State agencies' planning and investment decisions;
- requiring OPR to establish a technical advisory group to help state agencies incorporate climate change impacts into planning and investment decisions; and,
- implementing measures under existing agency and departmental authority to reduce greenhouse gas emissions.

Senate Bill 379, Climate Change Adaptation in General Plan Safety Elements

Senate Bill (SB) 379 (Jackson, Chapter 608, Statutes of 2015), requires all cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans. The update must include the following:

- a climate change vulnerability assessment;
- adaptation and resilience goals, policies, and objectives;
- feasible implementation measures; and,
- reference to or attachment of a separate adaptation plan, if it fulfills these requirements.

The general plan safety element update is due at the time of a jurisdiction's first FEMA Local Hazard Mitigation Plan adopted after January 1, 2017, or if no such FEMA plan has been adopted, after January 1, 2022. The bill also references specific sources of useful climate information to consult, such as Cal-Adapt.

Senate Bill 246, Integrated Climate Adaptation and Resiliency Program

SB 246 (Wieckowski, Chapter 606, Statutes of 2015), establishes the Integrated Climate Adaptation and Resiliency Program, which is to be administered by OPR. The Program will coordinate regional and local adaptation planning efforts with statewide climate adaptation strategies. The bill also requires, within one year of an update to the Safeguarding California Plan, Cal OES to review and update, as necessary, the Adaptation Planning Guide, in coordination with CNRA, OPR, and relevant public and private entities. The bill establishes an advisory council to support the goals of OPR and requires OPR to establish a clearinghouse for climate adaptation information.

2009 California Climate Adaptation Strategy

In compliance with EO S-13-08, CNRA, in coordination with local, regional, State, and federal public and private entities, prepared the 2009 California Climate Adaptation Strategy. The 2009 California Climate Adaptation Strategy summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The report was the first of its kind to use downscaled climate models to assess statewide climate impacts with more accuracy as a basis for

providing guidance for establishing actions that prepare, prevent, and respond to the effects of climate change (CNRA 2009).

Safeguarding California: Reducing Climate Risk

Safeguarding California is California's overall plan for climate adaptation (CNRA 2014). The plan provides policy guidance for state decision-makers, and is part of continuing efforts to reduce impacts and prepare for climate risks. This plan, which updates the 2009 California Climate Adaptation Strategy, highlights climate risks in nine sectors in California, discusses progress to date, and makes realistic sector-specific recommendations (CNRA 2014).

In March 2016, CNRA released the final Safeguarding California Implementation Action Plans, which provide more specific guidance and actions to implement Safeguarding California's statewide strategies (CNRA 2016).

Sea-Level Rise Policy Guidance

In August 2015, the California Coastal Commission (CCC) adopted a Sea-Level Rise Policy Guidance document that provides an overview of the best available science on sea-level rise for California and recommended methodology for addressing sea-level rise in CCC planning and regulatory actions. It is intended to serve as a multi-purpose resource for a variety of audiences and includes a high level of detail on many subjects. Because the document is not specific to a particular geographic location or development density, the content serves as a menu of options for use if relevant, rather than a checklist of required actions (CCC 2015).

State of California Sea-Level Rise Interim Guidance Document and Update

In October 2010, the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), in response to EO S-13-08, developed the State of California Sea-Level Rise Interim Guidance Document. This document provided guidance for incorporating sea-level rise projections into planning and decision making for projects in California (CO-CAT 2010). In March 2011, the Ocean Protection Council adopted a Resolution stating that state agencies should follow the Interim Guidance Document, as well as future guidance documents developed by the CO-CAT. In March 2013, an update to the State of California Sea-Level Rise Guidance Document was released. The purpose of the Guidance remains the same: to help State agencies incorporate future sea-level rise impacts into planning decisions; however, it has been updated to include the best available science, as summarized in the National Academy of Sciences Sea-Level Rise for the Coasts of California, Oregon, and Washington (CO-CAT 2013).

Adapting to Sea Level Rise: A Guide for California's Coastal Communities

In 2012, CEC released Adapting to Sea Level Rise: A Guidance for California's Coastal Communities as a document intended to guide and assist managers and planners in California in developing sea-level rise adaption plans for their communities. The document provides a framework for performing sea-level rise vulnerability assessments and risk analyses for the development of adaptation plans that can be tailored specifically to their individual communities (CEC 2012).

California Adaptation Planning Guide

The California Governor's Office of Emergency Services (Cal OES) and CNRA prepared and adopted the California Adaptation Planning Guide in July 2012. The purpose of the Guide is to assist local and

regional jurisdictions with proactively addressing unavoidable consequences of climate change. It provides a step-by-step process for conducting a local and regional climate vulnerability assessment, as well as developing and implementing adaptation strategies and other responses to the effects of climate change. The Guide allows for flexibility in the commitment of time, money, and effort when conducting adaptation planning efforts to suit the needs of a particular community (CNRA 2012b).

Water Quality Control Policy for the Enclosed Bay and Estuaries of California

Initially adopted in 1974 and amended in 1995 by the State Water Resources Control Board, the Water Quality Control Policy for the Enclosed Bay and Estuaries of California provides water quality principles and guidelines to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. The policy directs the phase out of discharge of municipal wastewaters and industrial process waters to enclosed bays and estuaries, excepting the San Francisco Bay-Delta System. Exceptions to this policy may be granted by the applicable Regional Water Quality Control Board.

Local

2005 Ventura County General Plan

The General Plan Resources and Hazards Elements contain goals and policies that may relate to climate change effects and adaptation.

Ventura County Multi-Hazard Mitigation Plan

In September 2015, unincorporated Ventura County, nine of the county's ten cities, and seven county-based agencies developed the Ventura County Multi-Hazard Mitigation Plan (MHMP) for Ventura County. The MHMP addresses the local planning requirements of the Federal Disaster Mitigation Act for unincorporated Ventura County and other local participants.

The MHMP identifies natural hazards with the greatest impact to Ventura County including climate change, flooding, landslides, wildfires, invasive species, and drought. The Plan discusses the role that climate change plays in increasing the frequency and intensity of these hazards. The MHMP establishes a countywide mitigation strategy designed to minimize the physical and financial risks associated with the identified hazards. The mitigation strategy contains updates to previous mitigation goals, identifies new mitigation actions, prioritizes mitigation actions, and implements mitigation action plans.

County of Ventura Climate Protection Plan

In April 2011, a Climate Protection Plan and its first annual report was presented to the County Board of Supervisors. The Plan identified six major action areas and included 15 climate protection goals to achieve a 15 percent reduction in GHG emissions as compared to the 2005 baseline inventory. More information regarding the Climate Protection Plan can be found in the "Regulatory Setting" of Chapter 12.1, "Greenhouse Gases."

Conservation Plan for the Lower Santa Clara River Watershed and Surrounding Areas

In 2008, the Nature Conservancy released the Conservation Plan for the Lower Santa Clara River Watershed and Surrounding Areas (Plan). Though not strictly a regulatory document, the Conservation Plan has the support of several public stakeholders, including the California Department of Fish and Wildlife, EPA, and the County of Ventura. The Plan provides an overview of the biodiversity found

within the Lower Santa Clara River Watershed, which is located within Ventura County. The Plan identifies conservation targets, which are elements of biodiversity that serve as the focus of planning efforts. Within the county, coastal communities, riparian forest and scrub communities, grasslands, coastal sage scrub communities, oak woodlands, chaparral communities, aquatic vertebrates, and wide-ranging terrestrial vertebrates were identified as the conservation targets in the Plan. The Plan also categorizes six critical threats to conservation targets: incompatible urban development, altered fire regime, bank stabilization and channelization, invasive plants, aquatic barriers, and climate change.

The Plan identifies long-term conservation strategies to combat the stressors to conservation targets. The strategies include land-use planning, public planning, land-use policy, public advocacy and education, scientific investigation, and land management (The Nature Conservancy 2008).

Watershed Coalition of Ventura County 2014 Integrated Regional Water Management Plan

The Integrated Regional Water Management (IRWM) Plan was established with the passage of Proposition 50 in 2002 and Proposition 84 in 2006. The IRWM Plan addresses water resources management such as water supply, water quality, flood management, ecosystem health, and recreation through enhanced collaboration across geographic and political boundaries with diverse stakeholder groups. As an outcome of Proposition 50, IRWM Plans are required to include climate change adaptation strategies with respect to water resources. Strategies to adapt to climate change that are being implemented throughout the county include increased water use efficiency, water recycling, integrated flood management, and ecosystem management.

Key Terms

The following key terms used in this chapter are defined as follows:

Climate Adaptation. Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities (CNRA 2014).

Climate Change. Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer (EPA 2016).

Greenhouse Gas (GHG). Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) (CNRA 2014).

Hazard Mitigation. Hazard Mitigation is sustained action taken to reduce or eliminate long-term risk to people and their property from hazards and their effects (CNRA 2014).

Resilience. The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change (CNRA 2014).

Vulnerability. The extent to which a natural or social system is susceptible to sustaining damage from climate change, and is a function of the magnitude of climate change, the sensitivity of the system to changes in climate and the ability to adapt the system to changes in climate (CNRA 2014).

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CCC. *See California Coastal Commission.*

CDFA. *See California Department of Agriculture.*

CEC. *See California Energy Commission.*

CO-CAT. *See Coastal and Ocean Working Group of the California Climate Action Team.*

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CNRA. *See California Natural Resources Agency.*

DWR. *See California Department of Water Resources.*

EPA. *See U.S. Environmental Protection Agency.*

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WCVC. See Watersheds Coalition of Ventura County.

Appendix C

Air Quality Modeling

Land Use Assumptions

2040 Development Adjustment

Factor	2015-2040	
Net New Population	4,099	
Net New Households	1,281	
Net New Employment	2,986	
New Buildable Sq Ft	2,598,661	Source: Adjusted from Table 2-39 of Background Report

2016 Master Parcel Data

Residential	DU/Acre Land Use Designations	Total Existing Parcels	Percent of Total
Single Family Land Uses	0.2-6	18,771	87.8%
Mid-Rise Apartments	6.1-13	2,178	10.2%
High Rise Apartments	13.1-Max	419	2.0%

Commercial/Industrial	Land Use Designations	Total Existing Parcels	Percent of Total
Light Industrial	IND, M2, CM	288	33.6%
Heavy Industrial	M3	142	16.6%
Strip Mall	CPD	298	34.7%
Convenience Store	C1	27	3.1%
General Office	TC, CC	88	10.3%
Industrial Park	M1	15	1.7%

Project Buildout - Inputs for CalEEMod

Land Use	Amount	Units
Single-Family Housing	1,125	DU
Condo/Townhome	131	DU
Mid Rise Apartments	25	DU
Light Industrial	423,661	SF
Heavy Industrial	394,643	SF
Strip Mall	284,821	SF
General Office	535,714	SF
Schools	570,982	SF
Medical Office Building	388,839	SF

Annual Construction Development - Inputs for CalEEMod

Land Use	Amount	Units	Notes
Single-Family Housing	56	DU	
Condo/Townhome	7	DU	
Mid Rise Apartments	25	DU	<-- assuming one building with all units
Light Industrial	21,183	SF	
Heavy Industrial	19,732	SF	
Strip Mall	14,241	SF	<-- represents all retail/mixed commercial
General Office	26,786	SF	
Schools	28,549	SF	
Medical Office Building	19,442	SF	

Economic Sector	2012-2040 Growth	UA 2015 Share	UA Job Growth 2015-2040	Assumed Floor-Area Ratio	SQ/Emp	Building SF
Agriculture, Forestry, Fishing and Hunting[2]	2,500	51.60%	1,151	n/a	500	575,446
Mining and Quarrying[3]	240	15.90%	34	n/a	500	16,964
Utilities	200	32.20%	57	0.2	500	28,571
Construction	5,680	13.30%	676	0.2	500	337,946
Manufacturing	3,800	23.30%	789	0.2	500	394,643
Wholesale Trade	1,330	5.50%	65	0.2	500	32,589
Retail Trade	8,390	0.60%	94	0.4	500	46,875
Transportation and Warehousing	680	8.10%	49	0.2	500	24,554
Information	890	1.80%	14	0.4	300	4,286
Finance and Insurance	-2,330	1.10%	-22	0.4	300	-6,696
Professional, Scientific, and Technical Services	10,920	6.30%	615	0.4	300	184,554
Educational Services[4]	19,810	6.50%	1142	0.4	500	570,982
Health Care and Social Assistance	30,286	2.90%	778	0.4	500	388,839
Arts, Entertainment, and Recreation	1,965	15.80%	278	0.4	500	138,839
Accommodation and Food Services	8,285	2.70%	198	0.4	500	99,107
Other Services (excluding Public Admin)	5,830	7.70%	399	0.4	500	199,554
Public Administration	4,000	8.60%	308	0.4	500	154,018
Total	**102,476**	**5.60%**	**6,625**			**2,598,661**

Manual adjustments
Remove from count

	Unincorporated			Countywide		
	Pop	HH	Emp	Pop	HH	Emp
GHG Inventory - 2015	97733	32191	32889	850491	273286	319588
2016	98068	32191	31838	853,893	273437	359,380
2020	99755	32446	32988	894,000	283000	371,841
2025	100335	32702	33772	911,008	291625	382,940
2030	100918	32959	34556	928,339	300,250	394,040
2035	101504	33345	34842	946,000	311000	406,068
2040	101832	33472	35875	961,867	317500	416,239
2045	102161	33598	36908	978,000	324000	426,409
Nominal Increase Per Year	104	51	157	3360	1725	2220
Percentage Increase (2020-2040)	2.1%	3.2%	8.8%	7.6%	12.2%	11.9%

Sources:

Department of Finance

Ventura County Background Report (p. 2-37)

VCGPU Alternatives Report, Table-A3

SCAG Data Map Book - Socioeconomic estimates and projections for the jurisdictions in Ventura County November 2017

Interpolated from available 2020-2045 data points

Construction Emissions Summary

Construction Schedule

Phase	CalEEMod Default (days)	Adjusted CalEEMod (days)
Site Preparation	10	6
Grading	35	20
Building Construction	370	213
Paving	20	12
Architectural Coating	20	12
Total	455	262
Total Working Days	262	
Start Date	1/1/2020	
End Date	12/31/2020	

			Unmitigated		Mitigated	
Architectural Coating Adjustment	Adjusted CalEEMod (days)	Adjusted Arch Coating (days)	Total ROG CalEEMod Default (lb)	Adjusted ROG (lb/day)	Total ROG CalEEMod Default (lb)	Adjusted ROG (lb/day)
2/3 building construction + paving + arch coating	12	165	3,030	18	2,452	15

Maximum Daily Emissions - Unmitigated

Phase	ROG (lb/day)	NOX (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Site Prep					
Unmitigated On-Site	4.08	42.42	21.51	20.26	11.95
Unmitigated Off-Site	0.07	0.04	0.50	0.15	0.04
Total	4.14	42.46	22.01	20.41	11.99
Grading					
Unmitigated On-Site	4.45	50.20	31.96	12.84	5.81
Unmitigated Off-Site	0.07	0.04	0.55	0.17	0.04
Total	4.52	50.24	32.51	13.00	5.86
Building					
Unmitigated On-Site	2.12	19.19	16.85	1.12	1.05
Unmitigated Off-Site	0.44	3.52	3.39	0.99	0.28
Total	2.56	22.71	20.24	2.11	1.34
Paving					
Unmitigated On-Site	1.36	14.07	14.65	0.75	0.69
Unmitigated Off-Site	0.05	0.03	0.41	0.12	0.03
Total	1.41	14.10	15.07	0.88	0.73
Arch Coating					
Unmitigated On-Site	263.09	1.68	1.83	0.11	0.11
Unmitigated Off-Site	0.07	0.04	0.50	0.15	0.04
Adjusted	18.35				
Total	18.42	1.72	2.33	0.26	0.15
Construction Daily Maximum	**18.4**	**50.2**	**32.5**	**20.4**	**12.0**

Maximum Daily Emissions - Mitigated

Phase	ROG (lb/day)	NOX (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Site Prep					
Unmitigated On-Site	0.47	2.02	20.87	18.13	9.99
Unmitigated Off-Site	0.07	0.04	0.50	0.15	0.04
Total	0.53	2.06	21.37	18.28	10.03
Grading					
Unmitigated On-Site	0.76	3.30	33.00	10.76	3.91
Unmitigated Off-Site	0.07	0.04	0.55	0.17	0.04
Total	0.83	3.34	33.55	10.93	3.96
Building					
Unmitigated On-Site	0.33	2.23	17.46	0.04	0.04
Unmitigated Off-Site	0.44	3.52	3.39	0.99	0.28
Total	0.77	5.76	20.85	1.03	0.33
Paving					
Unmitigated On-Site	0.28	1.22	17.30	0.04	0.04
Unmitigated Off-Site	0.05	0.03	0.41	0.12	0.03
Total	0.34	1.25	17.71	0.16	0.07
Arch Coating					
Unmitigated On-Site	212.90	0.13	1.83	3.96E-03	3.96E-03
Unmitigated Off-Site	0.07	0.04	0.50	0.15	0.04
Adjusted	14.85				
Total	14.92	0.16	2.33	0.15	0.04
Construction Daily Maximum	**14.9**	**5.8**	**33.6**	**18.3**	**10.0**

Operational Emissions Summary

Maximum Daily Emissions

Source	ROG (lb/day)	NOX (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Area	118.1315	1.2169	105.4835	0.587	0.587
Energy	1.6259	14.2989	8.8813	1.1234	1.1234
Mobile	16.8281	70.769	387.2252	319.1554	85.8189
Total	136.5855	86.2848	501.59	320.8658	87.5293

CalEEMod VMT Calculator - Default CalEEMod

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculates the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Miles			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-O	H-w or C-W	H-S or C-C	H-O or C-O	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.500	32.9%	18.0%	49.1%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			
	weekday	Saturday	Sunday	Total Trips (weekly)
Single Family Housing	9.52	9.91	8.62	66.13

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use								
Single Family Housing	link % primary	primary	link % diverted	Constant (0.25)	primary	link % passby	constant	Trip Length
H-W or c-w	86.0%	10.80	11.0%	0.25	10.80	3.0%	0.1	9.6
h-s or c-c	86.0%	7.30	11.0%	0.25	7.30	3.0%	0.1	6.5
h-o or c-o	86.0%	7.50	11.0%	0.25	7.50	3.0%	0.1	6.7

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Single Family Housing				
H-W or c-w	22	9.6	209	
h-s or c-c	12	6.5	77	
h-o or c-o	32	6.7	216	
Total VMT			502	26,103

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT	501.98
Weeks per Year CalEEMod Uses for Annual VMT	52.00
Calculated Annual VMT	**26,103**

CalEEMod VMT Calculator - Default CalEEMod

This calculator was created based on the default trip inputs for the unmitigated CalEEMod run. The calculator calculates the annual VMT from the proposed project using the same methodology from CalEEMod, described in Appendix A, for the UNMITIGATED SCENARIO. This calculator can be used to adjust land use trip rates for the MITIGATED PROJECT scenario which is based on the traffic study conducted for the project

	2015 (Interpolated)	2040	Net Change
Annual VMT	1,807,658,790	1,958,059,926	**150,401,136**

Trip Type

CalEEMod defaults based on land uses inputted

Land Use	Miles			Trip %			Trip Purpose		
	H-w or C-W	H-S or C-C	H-O or C-O	H-w or C-W	H-S or C-C	H-O or C-O	Primary	Diverted	Pass-by
Single Family Housing	50.00	44.49	45.000	32.9%	18.0%	49.1%	86.0%	11.0%	3.0%

Total Trips

Total Trips = (TripRate weekday x 5 +Trip Sat + Trip Sun)

Average Daily Trips Based on CalEEMod Trip Gen Defaults per land use unit. Total trips Calculated

Land Use	Average Daily Trip Rate			
	weekday	Saturday	Sunday	Total Trips (weekly)
Single Family Housing	10000	10000	10000	70000

Trip Length Calc

AVG Trip Length = Link % primary x trip length primary+link % divertedx0.25x length trip primary+link % passbyx0.1

Trip length calculated for each trip type based on trip purpose % and length defaults from CalEEMod

Land Use								
Single Family Housing	link % primary	primary	link % diverted	Constant (0.25)	primary	link % passby	constant	Trip Length
H-W or c-w	86.0%	50.00	11.0%	0.25	50.00	3.0%	0.1	44.4
h-s or c-c	86.0%	44.49	11.0%	0.25	44.49	3.0%	0.1	39.5
h-o or c-o	86.0%	45.00	11.0%	0.25	45.00	3.0%	0.1	39.9

VMT Calc Per Land Use Type (Weekly)

VMT = #Trips x AVG Trip Length per land use and trip type

Trip number for each trip type are derived by multiplying the total trips for each land use calculated above in the Total Trip Calcs by the trip % shown in the Trip Type table for each land use

Single Family Housing				
H-W or c-w	23,030	44.4	1,022,025	
h-s or c-c	12,600	39.5	497,547	
h-o or c-o	34,370	39.9	1,372,755	
Total VMT			2,892,328	150,401,033

Annual VMT Calc

the calculated weekly VMT for each land use is summed. This value is multiplied by 50 weeks/year to equal the annual VMT number calculated by CalEEMod

Summed Weekly VMT	2,892,327.55
Weeks per Year CalEEMod Uses for Annual VMT	52.00
Calculated Annual VMT	**150,401,033**

Ventura GPU Construction

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	26.79	1000sqft	0.61	26,786.00	0
Medical Office Building	19.44	1000sqft	0.45	19,442.00	0
Elementary School	28.55	1000sqft	0.66	28,549.00	0
General Heavy Industry	19.73	1000sqft	0.45	19,732.00	0
General Light Industry	21.18	1000sqft	0.49	21,183.00	0
Apartments Mid Rise	25.00	Dwelling Unit	0.66	25,000.00	77
Condo/Townhouse	7.00	Dwelling Unit	0.44	7,000.00	21
Single Family Housing	56.00	Dwelling Unit	18.18	100,800.00	171
Strip Mall	14.24	1000sqft	0.33	14,241.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Assumed all land uses built out over 20 year planning horizon at steady rate.

Construction Phase - Default construction schedule adjusted proportionally to fit into one year. Assumed no demolition.

Architectural Coating - VCAPCD limits flat coatings to 100 g/L

Vehicle Trips - Construction only

Consumer Products - Construction only

Area Coating - Construction only

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation - All Tier 4 engines

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_Nonresidential_Exterior	64967	0
tblAreaCoating	Area_Nonresidential_Interior	194900	0
tblAreaCoating	Area_Residential_Exterior	89640	0
tblAreaCoating	Area_Residential_Interior	268920	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	12.00
tblConstructionPhase	NumDays	370.00	213.00
tblConstructionPhase	NumDays	35.00	20.00
tblConstructionPhase	NumDays	20.00	12.00
tblConstructionPhase	NumDays	10.00	6.00
tblEnergyUse	LightingElect	741.44	0.00
tblEnergyUse	LightingElect	1,001.10	0.00
tblEnergyUse	LightingElect	2.68	0.00

tblEnergyUse	LightingElect	2.99	0.00
tblEnergyUse	LightingElect	2.99	0.00
tblEnergyUse	LightingElect	4.34	0.00
tblEnergyUse	LightingElect	4.34	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	LightingElect	5.71	0.00
tblEnergyUse	NT24E	3,054.10	0.00
tblEnergyUse	NT24E	3,795.01	0.00
tblEnergyUse	NT24E	1.51	0.00
tblEnergyUse	NT24E	3.83	0.00
tblEnergyUse	NT24E	3.83	0.00
tblEnergyUse	NT24E	4.94	0.00
tblEnergyUse	NT24E	4.94	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24E	2.80	0.00
tblEnergyUse	NT24NG	5,516.00	0.00
tblEnergyUse	NT24NG	5,516.00	0.00
tblEnergyUse	NT24NG	1.03	0.00
tblEnergyUse	NT24NG	6.86	0.00
tblEnergyUse	NT24NG	6.86	0.00
tblEnergyUse	NT24NG	0.55	0.00
tblEnergyUse	NT24NG	0.55	0.00
tblEnergyUse	NT24NG	5,516.00	0.00
tblEnergyUse	NT24NG	1.05	0.00
tblEnergyUse	T24E	179.76	0.00
tblEnergyUse	T24E	172.41	0.00
tblEnergyUse	T24E	1.89	0.00

tblEnergyUse	T24E	1.63	0.00
tblEnergyUse	T24E	1.63	0.00
tblEnergyUse	T24E	4.71	0.00
tblEnergyUse	T24E	4.71	0.00
tblEnergyUse	T24E	253.73	0.00
tblEnergyUse	T24E	2.93	0.00
tblEnergyUse	T24NG	5,911.46	0.00
tblEnergyUse	T24NG	12,129.63	0.00
tblEnergyUse	T24NG	10.81	0.00
tblEnergyUse	T24NG	14.04	0.00
tblEnergyUse	T24NG	14.04	0.00
tblEnergyUse	T24NG	8.59	0.00
tblEnergyUse	T24NG	8.59	0.00
tblEnergyUse	T24NG	20,288.91	0.00
tblEnergyUse	T24NG	0.95	0.00
tblGrading	AcresOfGrading	50.00	87.50
tblLandUse	LandUseSquareFeet	26,790.00	26,786.00
tblLandUse	LandUseSquareFeet	19,440.00	19,442.00
tblLandUse	LandUseSquareFeet	28,550.00	28,549.00
tblLandUse	LandUseSquareFeet	19,730.00	19,732.00
tblLandUse	LandUseSquareFeet	21,180.00	21,183.00
tblLandUse	LandUseSquareFeet	14,240.00	14,241.00
tblLandUse	LotAcreage	0.62	0.61
tblSolidWaste	SolidWasteGenerationRate	11.50	0.00
tblSolidWaste	SolidWasteGenerationRate	3.22	0.00
tblSolidWaste	SolidWasteGenerationRate	37.12	0.00
tblSolidWaste	SolidWasteGenerationRate	24.47	0.00

tblSolidWaste	SolidWasteGenerationRate	26.26	0.00
tblSolidWaste	SolidWasteGenerationRate	24.91	0.00
tblSolidWaste	SolidWasteGenerationRate	209.95	0.00
tblSolidWaste	SolidWasteGenerationRate	70.11	0.00
tblSolidWaste	SolidWasteGenerationRate	14.95	0.00
tblVehicleTrips	ST_TR	6.39	0.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.96	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	5.86	0.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.55	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	6.65	0.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	15.43	0.00
tblVehicleTrips	WD_TR	1.50	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	11.03	0.00

tblVehicleTrips	WD_TR	36.13	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblWater	IndoorWaterUseRate	1,628,850.64	0.00
tblWater	IndoorWaterUseRate	456,078.18	0.00
tblWater	IndoorWaterUseRate	827,861.99	0.00
tblWater	IndoorWaterUseRate	4,562,562.50	0.00
tblWater	IndoorWaterUseRate	4,897,875.00	0.00
tblWater	IndoorWaterUseRate	4,761,487.11	0.00
tblWater	IndoorWaterUseRate	2,439,341.65	0.00
tblWater	IndoorWaterUseRate	3,648,625.43	0.00
tblWater	IndoorWaterUseRate	1,054,792.71	0.00
tblWater	OutdoorWaterUseRate	1,026,884.10	0.00
tblWater	OutdoorWaterUseRate	287,527.55	0.00
tblWater	OutdoorWaterUseRate	2,128,787.96	0.00
tblWater	OutdoorWaterUseRate	2,918,330.81	0.00
tblWater	OutdoorWaterUseRate	464,636.50	0.00
tblWater	OutdoorWaterUseRate	2,300,220.38	0.00
tblWater	OutdoorWaterUseRate	646,485.85	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	213.2078	50.2414	32.5110	0.0636	18.2141	2.1985	20.4126	9.9699	2.0226	11.9925	0.0000	6,164.6284	6,164.6284	1.9467	0.0000	6,213.2948
2021	213.1804	1.5624	2.2773	4.3600e-003	0.1479	0.0951	0.2430	0.0392	0.0950	0.1343	0.0000	420.0461	420.0461	0.0228	0.0000	420.6159
Maximum	**213.2078**	**50.2414**	**32.5110**	**0.0636**	**18.2141**	**2.1985**	**20.4126**	**9.9699**	**2.0226**	**11.9925**	**0.0000**	**6,164.6284**	**6,164.6284**	**1.9467**	**0.0000**	**6,213.2948**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	212.9953	5.7585	33.5518	0.0636	18.2141	0.1027	18.2773	9.9699	0.1026	10.0329	0.0000	6,164.6284	6,164.6284	1.9467	0.0000	6,213.2948
2021	212.9912	0.1644	2.2921	4.3600e-003	0.1479	4.9900e-003	0.1529	0.0392	4.9100e-003	0.0441	0.0000	420.0461	420.0461	0.0228	0.0000	420.6159
Maximum	**212.9953**	**5.7585**	**33.5518**	**0.0636**	**18.2141**	**0.1027**	**18.2773**	**9.9699**	**0.1026**	**10.0329**	**0.0000**	**6,164.6284**	**6,164.6284**	**1.9467**	**0.0000**	**6,213.2948**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.09**	**88.57**	**-3.03**	**0.00**	**0.00**	**95.30**	**10.77**	**0.00**	**94.92**	**16.90**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8442	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402	0.0000	13.1010	13.1010	0.0127	0.0000	13.4196
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**5.8442**	**0.0841**	**7.2892**	**3.8000e-004**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**13.1010**	**13.1010**	**0.0127**	**0.0000**	**13.4196**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8442	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402	0.0000	13.1010	13.1010	0.0127	0.0000	13.4196
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**5.8442**	**0.0841**	**7.2892**	**3.8000e-004**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**13.1010**	**13.1010**	**0.0127**	**0.0000**	**13.4196**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/8/2020	5	6	
2	Grading	Grading	1/9/2020	2/5/2020	5	20	
3	Building Construction	Building Construction	2/6/2020	11/30/2020	5	213	
4	Paving	Paving	12/1/2020	12/16/2020	5	12	
5	Architectural Coating	Architectural Coating	12/17/2020	1/1/2021	5	12	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 268,920; Residential Outdoor: 89,640; Non-Residential Indoor: 194,900; Non-Residential Outdoor: 64,967; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ventura GPU Construction - Ventura County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	92.00	31.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0395	0.4974	1.4300e-003	0.1479	1.0400e-003	0.1489	0.0392	9.6000e-004	0.0402		142.8868	142.8868	3.8100e-003		142.9822
Total	**0.0658**	**0.0395**	**0.4974**	**1.4300e-003**	**0.1479**	**1.0400e-003**	**0.1489**	**0.0392**	**9.6000e-004**	**0.0402**		**142.8868**	**142.8868**	**3.8100e-003**		**142.9822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**18.0663**	**0.0621**	**18.1283**	**9.9307**	**0.0621**	**9.9928**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0395	0.4974	1.4300e-003	0.1479	1.0400e-003	0.1489	0.0392	9.6000e-004	0.0402		142.8868	142.8868	3.8100e-003		142.9822
Total	**0.0658**	**0.0395**	**0.4974**	**1.4300e-003**	**0.1479**	**1.0400e-003**	**0.1489**	**0.0392**	**9.6000e-004**	**0.0402**		**142.8868**	**142.8868**	**3.8100e-003**		**142.9822**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.6618	0.0000	10.6618	3.8112	0.0000	3.8112			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**10.6618**	**2.1739**	**12.8357**	**3.8112**	**2.0000**	**5.8112**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0439	0.5527	1.5900e-003	0.1643	1.1600e-003	0.1655	0.0436	1.0700e-003	0.0447		158.7632	158.7632	4.2400e-003		158.8691
Total	**0.0731**	**0.0439**	**0.5527**	**1.5900e-003**	**0.1643**	**1.1600e-003**	**0.1655**	**0.0436**	**1.0700e-003**	**0.0447**		**158.7632**	**158.7632**	**4.2400e-003**		**158.8691**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.6618	0.0000	10.6618	3.8112	0.0000	3.8112			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**10.6618**	**0.1015**	**10.7633**	**3.8112**	**0.1015**	**3.9128**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0439	0.5527	1.5900e-003	0.1643	1.1600e-003	0.1655	0.0436	1.0700e-003	0.0447		158.7632	158.7632	4.2400e-003		158.8691
Total	**0.0731**	**0.0439**	**0.5527**	**1.5900e-003**	**0.1643**	**1.1600e-003**	**0.1655**	**0.0436**	**1.0700e-003**	**0.0447**		**158.7632**	**158.7632**	**4.2400e-003**		**158.8691**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1038	3.3218	0.8488	8.0000e-003	0.2095	0.0199	0.2294	0.0603	0.0190	0.0793		859.9353	859.9353	0.0682		861.6391
Worker	0.3361	0.2019	2.5424	7.3300e-003	0.7558	5.3400e-003	0.7611	0.2005	4.9200e-003	0.2054		730.3105	730.3105	0.0195		730.7978
Total	**0.4400**	**3.5238**	**3.3912**	**0.0153**	**0.9653**	**0.0252**	**0.9905**	**0.2608**	**0.0240**	**0.2847**		**1,590.2458**	**1,590.2458**	**0.0876**		**1,592.4369**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1038	3.3218	0.8488	8.0000e-003	0.2095	0.0199	0.2294	0.0603	0.0190	0.0793		859.9353	859.9353	0.0682		861.6391
Worker	0.3361	0.2019	2.5424	7.3300e-003	0.7558	5.3400e-003	0.7611	0.2005	4.9200e-003	0.2054		730.3105	730.3105	0.0195		730.7978
Total	**0.4400**	**3.5238**	**3.3912**	**0.0153**	**0.9653**	**0.0252**	**0.9905**	**0.2608**	**0.0240**	**0.2847**		**1,590.2458**	**1,590.2458**	**0.0876**		**1,592.4369**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0329	0.4145	1.2000e-003	0.1232	8.7000e-004	0.1241	0.0327	8.0000e-004	0.0335		119.0724	119.0724	3.1800e-003		119.1518
Total	**0.0548**	**0.0329**	**0.4145**	**1.2000e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**119.0724**	**119.0724**	**3.1800e-003**		**119.1518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0329	0.4145	1.2000e-003	0.1232	8.7000e-004	0.1241	0.0327	8.0000e-004	0.0335		119.0724	119.0724	3.1800e-003		119.1518
Total	**0.0548**	**0.0329**	**0.4145**	**1.2000e-003**	**0.1232**	**8.7000e-004**	**0.1241**	**0.0327**	**8.0000e-004**	**0.0335**		**119.0724**	**119.0724**	**3.1800e-003**		**119.1518**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	212.8998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**213.1420**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.6 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0395	0.4974	1.4300e-003	0.1479	1.0400e-003	0.1489	0.0392	9.6000e-004	0.0402		142.8868	142.8868	3.8100e-003		142.9822
Total	**0.0658**	**0.0395**	**0.4974**	**1.4300e-003**	**0.1479**	**1.0400e-003**	**0.1489**	**0.0392**	**9.6000e-004**	**0.0402**		**142.8868**	**142.8868**	**3.8100e-003**		**142.9822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	212.8998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**212.9296**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.6 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0395	0.4974	1.4300e-003	0.1479	1.0400e-003	0.1489	0.0392	9.6000e-004	0.0402		142.8868	142.8868	3.8100e-003		142.9822
Total	**0.0658**	**0.0395**	**0.4974**	**1.4300e-003**	**0.1479**	**1.0400e-003**	**0.1489**	**0.0392**	**9.6000e-004**	**0.0402**		**142.8868**	**142.8868**	**3.8100e-003**		**142.9822**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	212.8998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**213.1187**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0617	0.0356	0.4597	1.3900e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		138.5980	138.5980	3.4800e-003		138.6850
Total	**0.0617**	**0.0356**	**0.4597**	**1.3900e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**138.5980**	**138.5980**	**3.4800e-003**		**138.6850**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	212.8998					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**212.9296**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0617	0.0356	0.4597	1.3900e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		138.5980	138.5980	3.4800e-003		138.6850
Total	**0.0617**	**0.0356**	**0.4597**	**1.3900e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**138.5980**	**138.5980**	**3.4800e-003**		**138.6850**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Condo/Townhouse	0.00	0.00	0.00		
Elementary School	0.00	0.00	0.00		
General Heavy Industry	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Medical Office Building	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Condo/Townhouse	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
Condo/Townhouse	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
Elementary School	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
General Heavy Industry	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
General Light Industry	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
General Office Building	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
Medical Office Building	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
Single Family Housing	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600
Strip Mall	0.583307	0.042169	0.188993	0.113757	0.020157	0.006497	0.019402	0.017654	0.001149	0.000992	0.003948	0.000375	0.001600

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Medical Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Medical Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.8442	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402	0.0000	13.1010	13.1010	0.0127	0.0000	13.4196
Unmitigated	5.8442	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402	0.0000	13.1010	13.1010	0.0127	0.0000	13.4196

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6225					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2217	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402		13.1010	13.1010	0.0127		13.4196
Total	**5.8442**	**0.0841**	**7.2892**	**3.8000e-004**		**0.0402**	**0.0402**		**0.0402**	**0.0402**	**0.0000**	**13.1010**	**13.1010**	**0.0127**	**0.0000**	**13.4196**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.6225					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2217	0.0841	7.2892	3.8000e-004		0.0402	0.0402		0.0402	0.0402		13.1010	13.1010	0.0127		13.4196
Total	**5.8442**	**0.0841**	**7.2892**	**3.8000e-004**		**0.0402**	**0.0402**		**0.0402**	**0.0402**	**0.0000**	**13.1010**	**13.1010**	**0.0127**	**0.0000**	**13.4196**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Ventura GPU 2040 Operation

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	535.71	1000sqft	12.30	535,714.00	0
Medical Office Building	388.84	1000sqft	8.93	388,839.00	0
Elementary School	570.98	1000sqft	13.11	570,982.00	0
General Heavy Industry	394.64	1000sqft	9.06	394,643.00	0
General Light Industry	423.66	1000sqft	9.73	423,661.00	0
Apartments Mid Rise	25.00	Dwelling Unit	0.66	25,000.00	77
Condo/Townhouse	131.00	Dwelling Unit	8.19	131,000.00	401
Single Family Housing	1,125.00	Dwelling Unit	365.26	2,025,000.00	3443
Strip Mall	284.82	1000sqft	6.54	284,821.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Operation only

Off-road Equipment - Operation only

Off-road Equipment - Operation only

Off-road Equipment - Operation only

Off-road Equipment - Operation only

Off-road Equipment - Operation only

Off-road Equipment - Operation only

Trips and VMT - Operation only

Grading -

Architectural Coating - Operation only

Vehicle Trips - Mobile emissions modeled separately

Consumer Products -

Area Coating - VCAPCD Rule 74.2 limits general flat coatings to 100 g/L

Landscape Equipment -

Energy Use - 2019 California Energy Code adjustment. Nonresidential to have 30 percent reduction in energy consumption. Residential to have 7 percent reduction in energy consumption plus solar generation for total of 53 percent reduction of electricity.

Water And Wastewater -

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,299,330.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,897,990.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,472,175.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	4,416,525.00	0.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100

Ventura GPU 2040 Operation - Ventura County, Summer

tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	100
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	775.00	0.00
tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	7,750.00	0.00
tblEnergyUse	T24E	179.76	84.49
tblEnergyUse	T24E	172.41	81.03
tblEnergyUse	T24E	1.89	1.32
tblEnergyUse	T24E	1.63	1.14
tblEnergyUse	T24E	1.63	1.14
tblEnergyUse	T24E	4.71	3.30
tblEnergyUse	T24E	4.71	3.30
tblEnergyUse	T24E	253.73	119.25
tblEnergyUse	T24E	2.93	2.05
tblEnergyUse	T24NG	5,911.46	5,497.66
tblEnergyUse	T24NG	12,129.63	11,280.56
tblEnergyUse	T24NG	10.81	7.57
tblEnergyUse	T24NG	14.04	9.83
tblEnergyUse	T24NG	14.04	9.83
tblEnergyUse	T24NG	8.59	6.01
tblEnergyUse	T24NG	8.59	6.01
tblEnergyUse	T24NG	20,288.91	18,868.69
tblEnergyUse	T24NG	0.95	0.67
tblLandUse	LandUseSquareFeet	535,710.00	535,714.00

tblLandUse	LandUseSquareFeet	388,840.00	388,839.00
tblLandUse	LandUseSquareFeet	570,980.00	570,982.00
tblLandUse	LandUseSquareFeet	394,640.00	394,643.00
tblLandUse	LandUseSquareFeet	423,660.00	423,661.00
tblLandUse	LandUseSquareFeet	284,820.00	284,821.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	563.00	0.00
tblTripsAndVMT	VendorTripNumber	563.00	0.00
tblTripsAndVMT	VendorTripNumber	563.00	0.00

tblTripsAndVMT	WorkerTripNumber	1,488.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,488.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,488.00	0.00
tblTripsAndVMT	WorkerTripNumber	298.00	0.00
tblTripsAndVMT	WorkerTripNumber	298.00	0.00
tblVehicleTrips	ST_TR	6.39	0.00
tblVehicleTrips	ST_TR	5.67	0.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.96	0.00
tblVehicleTrips	ST_TR	9.91	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	5.86	0.00
tblVehicleTrips	SU_TR	4.84	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.55	0.00
tblVehicleTrips	SU_TR	8.62	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	6.65	0.00
tblVehicleTrips	WD_TR	5.81	0.00
tblVehicleTrips	WD_TR	15.43	0.00
tblVehicleTrips	WD_TR	1.50	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	11.03	0.00

tblVehicleTrips	WD_TR	36.13	0.00
tblVehicleTrips	WD_TR	9.52	0.00
tblVehicleTrips	WD_TR	44.32	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2025	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	118.1315	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870	0.0000	190.8642	190.8642	0.1826	0.0000	195.4291
Energy	1.6260	14.2995	8.8817	0.0887		1.1234	1.1234		1.1234	1.1234		17,737.7489	17,737.7489	0.3400	0.3252	17,843.1554
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**119.7575**	**15.5163**	**114.3652**	**0.0943**	**0.0000**	**1.7104**	**1.7104**	**0.0000**	**1.7104**	**1.7104**	**0.0000**	**17,928.6131**	**17,928.6131**	**0.5226**	**0.3252**	**18,038.5845**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	118.1315	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870	0.0000	190.8642	190.8642	0.1826	0.0000	195.4291
Energy	1.6260	14.2995	8.8817	0.0887		1.1234	1.1234		1.1234	1.1234		17,737.7489	17,737.7489	0.3400	0.3252	17,843.1554
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**119.7575**	**15.5163**	**114.3652**	**0.0943**	**0.0000**	**1.7104**	**1.7104**	**0.0000**	**1.7104**	**1.7104**	**0.0000**	**17,928.6131**	**17,928.6131**	**0.5226**	**0.3252**	**18,038.5845**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/26/2019	9/25/2019	5	0	
2	Site Preparation	Site Preparation	8/26/2021	8/25/2021	5	0	
3	Grading	Grading	10/20/2022	10/19/2022	5	0	
4	Paving	Paving	6/24/2025	6/23/2025	5	0	
5	Architectural Coating	Architectural Coating	8/2/2025	8/1/2025	5	0	
6	Building Construction	Building Construction	10/9/2025	10/8/2025	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	0.00	0.00	0.00		
Condo/Townhouse	0.00	0.00	0.00		
Elementary School	0.00	0.00	0.00		
General Heavy Industry	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Medical Office Building	0.00	0.00	0.00		
Single Family Housing	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Condo/Townhouse	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Elementary School	9.50	7.30	7.30	65.00	30.00	5.00	63	25	12
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Single Family Housing	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
Condo/Townhouse	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
Elementary School	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
General Heavy Industry	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
General Light Industry	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
General Office Building	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
Medical Office Building	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
Single Family Housing	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719
Strip Mall	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.6260	14.2995	8.8817	0.0887		1.1234	1.1234		1.1234	1.1234		17,737.7489	17,737.7489	0.3400	0.3252	17,843.1554
NaturalGas Unmitigated	1.6260	14.2995	8.8817	0.0887		1.1234	1.1234		1.1234	1.1234		17,737.7489	17,737.7489	0.3400	0.3252	17,843.1554

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	754.36	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7483	88.7483	1.7000e-003	1.6300e-003	89.2757
Condo/Townhouse	6028.35	0.0650	0.5556	0.2364	3.5500e-003		0.0449	0.0449		0.0449	0.0449		709.2182	709.2182	0.0136	0.0130	713.4327
Elementary School	13453.3	0.1451	1.3190	1.1079	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,582.7382	1,582.7382	0.0303	0.0290	1,592.1436
General Heavy Industry	18045.5	0.1946	1.7692	1.4861	0.0106		0.1345	0.1345		0.1345	0.1345		2,122.9949	2,122.9949	0.0407	0.0389	2,135.6108
General Light Industry	19372.3	0.2089	1.8993	1.5954	0.0114		0.1443	0.1443		0.1443	0.1443		2,279.0982	2,279.0982	0.0437	0.0418	2,292.6417
General Office Building	9628.17	0.1038	0.9439	0.7929	5.6600e-003		0.0717	0.0717		0.0717	0.0717		1,132.7265	1,132.7265	0.0217	0.0208	1,139.4577
Medical Office Building	6988.45	0.0754	0.6851	0.5755	4.1100e-003		0.0521	0.0521		0.0521	0.0521		822.1705	822.1705	0.0158	0.0151	827.0562
Single Family Housing	75158.3	0.8105	6.9264	2.9474	0.0442		0.5600	0.5600		0.5600	0.5600		8,842.1519	8,842.1519	0.1695	0.1621	8,894.6964
Strip Mall	1342.17	0.0145	0.1316	0.1105	7.9000e-004		0.0100	0.0100		0.0100	0.0100		157.9024	157.9024	3.0300e-003	2.8900e-003	158.8407
Total		**1.6260**	**14.2995**	**8.8817**	**0.0887**		**1.1234**	**1.1234**		**1.1234**	**1.1234**		**17,737.7489**	**17,737.7489**	**0.3400**	**0.3252**	**17,843.1554**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0.75436	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7483	88.7483	1.7000e-003	1.6300e-003	89.2757
Condo/Townhouse	6.02835	0.0650	0.5556	0.2364	3.5500e-003		0.0449	0.0449		0.0449	0.0449		709.2182	709.2182	0.0136	0.0130	713.4327
Elementary School	13.4533	0.1451	1.3190	1.1079	7.9100e-003		0.1002	0.1002		0.1002	0.1002		1,582.7382	1,582.7382	0.0303	0.0290	1,592.1436
General Heavy Industry	18.0455	0.1946	1.7692	1.4861	0.0106		0.1345	0.1345		0.1345	0.1345		2,122.9949	2,122.9949	0.0407	0.0389	2,135.6108
General Light Industry	19.3723	0.2089	1.8993	1.5954	0.0114		0.1443	0.1443		0.1443	0.1443		2,279.0982	2,279.0982	0.0437	0.0418	2,292.6417
General Office Building	9.62817	0.1038	0.9439	0.7929	5.6600e-003		0.0717	0.0717		0.0717	0.0717		1,132.7265	1,132.7265	0.0217	0.0208	1,139.4577
Medical Office Building	6.98845	0.0754	0.6851	0.5755	4.1100e-003		0.0521	0.0521		0.0521	0.0521		822.1705	822.1705	0.0158	0.0151	827.0562
Single Family Housing	75.1583	0.8105	6.9264	2.9474	0.0442		0.5600	0.5600		0.5600	0.5600		8,842.1519	8,842.1519	0.1695	0.1621	8,894.6964
Strip Mall	1.34217	0.0145	0.1316	0.1105	7.9000e-004		0.0100	0.0100		0.0100	0.0100		157.9024	157.9024	3.0300e-003	2.8900e-003	158.8407
Total		**1.6260**	**14.2995**	**8.8817**	**0.0887**		**1.1234**	**1.1234**		**1.1234**	**1.1234**		**17,737.7489**	**17,737.7489**	**0.3400**	**0.3252**	**17,843.1554**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	118.1315	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870	0.0000	190.8642	190.8642	0.1826	0.0000	195.4291
Unmitigated	118.1315	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870	0.0000	190.8642	190.8642	0.1826	0.0000	195.4291

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.6756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	102.2847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.1712	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870		190.8642	190.8642	0.1826		195.4291
Total	**118.1315**	**1.2169**	**105.4835**	**5.6000e-003**		**0.5870**	**0.5870**		**0.5870**	**0.5870**	**0.0000**	**190.8642**	**190.8642**	**0.1826**	**0.0000**	**195.4291**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	12.6756					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	102.2847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.1712	1.2169	105.4835	5.6000e-003		0.5870	0.5870		0.5870	0.5870		190.8642	190.8642	0.1826		195.4291
Total	**118.1315**	**1.2169**	**105.4835**	**5.6000e-003**		**0.5870**	**0.5870**		**0.5870**	**0.5870**	**0.0000**	**190.8642**	**190.8642**	**0.1826**	**0.0000**	**195.4291**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Ventura GPU 2040 VMT

Ventura County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	1.00	Dwelling Unit	0.32	1,800.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Mobile source operation only

Off-road Equipment - Mobile source operation only

Off-road Equipment - Mobile source operation only

Off-road Equipment - Mobile source operation only

Off-road Equipment - Mobile source operation only

Off-road Equipment - Mobile source operation only

Off-road Equipment - Mobile source operation only

Trips and VMT -

Grading -

Architectural Coating - Mobile source operation only

Vehicle Trips - Ajdusted trip rates and lengths to match VMT estimates for project

Consumer Products - Mobile source operation only

Area Coating - Mobile source operation only

Landscape Equipment - Mobile source operation only

Energy Use - Mobile source operation only

Water And Wastewater - Mobile source operation only

Solid Waste - Mobile source operation only

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,215.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	3,645.00	0.00
tblAreaCoating	Area_Residential_Exterior	1215	0
tblAreaCoating	Area_Residential_Interior	3645	0
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	0.00

tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	0.00
tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	NT24NG	5,516.00	0.00
tblEnergyUse	T24E	253.73	0.00
tblEnergyUse	T24NG	20,288.91	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblSolidWaste	SolidWasteGenerationRate	1.23	0.00
tblVehicleEF	LDA	0.25	0.26

tblVehicleEF	LDA	0.36	0.37
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	7.0200e-004	7.2095e-004
tblVehicleEF	LDA	1.0040e-003	1.0311e-003
tblVehicleEF	LDA	6.4600e-004	6.6344e-004
tblVehicleEF	LDA	9.2400e-004	9.4895e-004
tblVehicleEF	LDA	3.3750e-003	3.4054e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	9.9840e-003	0.01
tblVehicleEF	LDA	4.9050e-003	4.9491e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.28	0.28
tblVehicleEF	LDA	0.29	0.30
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	7.0200e-004	7.2095e-004
tblVehicleEF	LDA	1.0040e-003	1.0311e-003
tblVehicleEF	LDA	6.4600e-004	6.6344e-004
tblVehicleEF	LDA	9.2400e-004	9.4895e-004
tblVehicleEF	LDA	3.5920e-003	3.6243e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.6840e-003	8.7622e-003
tblVehicleEF	LDA	5.2220e-003	5.2690e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	9.5080e-003	9.5936e-003

tblVehicleEF	LDA	0.25	0.26
tblVehicleEF	LDA	0.39	0.40
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	7.0200e-004	7.2095e-004
tblVehicleEF	LDA	1.0040e-003	1.0311e-003
tblVehicleEF	LDA	6.4600e-004	6.6344e-004
tblVehicleEF	LDA	9.2400e-004	9.4895e-004
tblVehicleEF	LDA	3.3090e-003	3.3388e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	4.8090e-003	4.8523e-003
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDT1	0.34	0.35
tblVehicleEF	LDT1	0.57	0.58
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	8.8900e-004	9.1300e-004
tblVehicleEF	LDT1	1.3260e-003	1.3618e-003
tblVehicleEF	LDT1	8.1800e-004	8.4009e-004
tblVehicleEF	LDT1	1.2190e-003	1.2519e-003
tblVehicleEF	LDT1	4.8930e-003	4.9370e-003
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	7.1370e-003	7.2012e-003
tblVehicleEF	LDT1	0.05	0.05

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.37	0.38
tblVehicleEF	LDT1	0.47	0.48
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	8.8900e-004	9.1300e-004
tblVehicleEF	LDT1	1.3260e-003	1.3618e-003
tblVehicleEF	LDT1	8.1800e-004	8.4009e-004
tblVehicleEF	LDT1	1.2190e-003	1.2519e-003
tblVehicleEF	LDT1	5.2060e-003	5.2529e-003
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	7.5930e-003	7.6613e-003
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.33	0.34
tblVehicleEF	LDT1	0.63	0.65
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	8.8900e-004	9.1300e-004
tblVehicleEF	LDT1	1.3260e-003	1.3618e-003
tblVehicleEF	LDT1	8.1800e-004	8.4009e-004
tblVehicleEF	LDT1	1.2190e-003	1.2519e-003
tblVehicleEF	LDT1	4.7970e-003	4.8402e-003
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	6.9970e-003	7.0600e-003

tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT2	0.37	0.38
tblVehicleEF	LDT2	0.52	0.54
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	8.1300e-004	8.3495e-004
tblVehicleEF	LDT2	1.1550e-003	1.1862e-003
tblVehicleEF	LDT2	7.4800e-004	7.6820e-004
tblVehicleEF	LDT2	1.0620e-003	1.0907e-003
tblVehicleEF	LDT2	4.8810e-003	4.9249e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	7.1100e-003	7.1740e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.41	0.42
tblVehicleEF	LDT2	0.46	0.47
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	8.1300e-004	8.3495e-004
tblVehicleEF	LDT2	1.1550e-003	1.1862e-003
tblVehicleEF	LDT2	7.4800e-004	7.6820e-004
tblVehicleEF	LDT2	1.0620e-003	1.0907e-003
tblVehicleEF	LDT2	5.1930e-003	5.2397e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	7.5660e-003	7.6341e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.37	0.38
tblVehicleEF	LDT2	0.56	0.57
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	8.1300e-004	8.3495e-004
tblVehicleEF	LDT2	1.1550e-003	1.1862e-003
tblVehicleEF	LDT2	7.4800e-004	7.6820e-004
tblVehicleEF	LDT2	1.0620e-003	1.0907e-003
tblVehicleEF	LDT2	4.7850e-003	4.8281e-003
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	6.9710e-003	7.0337e-003
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	MDV	0.46	0.47
tblVehicleEF	MDV	0.81	0.84
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	8.8400e-004	9.0787e-004
tblVehicleEF	MDV	1.2690e-003	1.3033e-003
tblVehicleEF	MDV	8.1400e-004	8.3598e-004
tblVehicleEF	MDV	1.1660e-003	1.1975e-003
tblVehicleEF	MDV	6.9650e-003	7.0277e-003
tblVehicleEF	MDV	0.05	0.05

tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.50	0.51
tblVehicleEF	MDV	0.70	0.72
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	8.8400e-004	9.0787e-004
tblVehicleEF	MDV	1.2690e-003	1.3033e-003
tblVehicleEF	MDV	8.1400e-004	8.3598e-004
tblVehicleEF	MDV	1.1660e-003	1.1975e-003
tblVehicleEF	MDV	7.4000e-003	7.4666e-003
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.45	0.46
tblVehicleEF	MDV	0.89	0.91
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	8.8400e-004	9.0787e-004
tblVehicleEF	MDV	1.2690e-003	1.3033e-003
tblVehicleEF	MDV	8.1400e-004	8.3598e-004
tblVehicleEF	MDV	1.1660e-003	1.1975e-003
tblVehicleEF	MDV	6.8320e-003	6.8935e-003

tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	9.9180e-003	0.01
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.05	0.05
tblVehicleTrips	HO_TL	7.50	45.00
tblVehicleTrips	HS_TL	7.30	44.49
tblVehicleTrips	HW_TL	10.80	50.00
tblVehicleTrips	ST_TR	9.91	10,000.00
tblVehicleTrips	SU_TR	8.62	10,000.00
tblVehicleTrips	WD_TR	9.52	10,000.00
tblWater	IndoorWaterUseRate	65,154.03	0.00
tblWater	OutdoorWaterUseRate	41,075.36	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0410	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1486	0.1486	1.4000e-004	0.0000	0.1521
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	16.8281	70.7690	387.2252	2.3288	318.2347	0.9207	319.1554	84.9634	0.8555	85.8189		237,860.5229	237,860.5229	6.7925		238,030.3363
Total	**16.8690**	**70.7700**	**387.3074**	**2.3288**	**318.2347**	**0.9212**	**319.1559**	**84.9634**	**0.8559**	**85.8194**	**0.0000**	**237,860.6714**	**237,860.6714**	**6.7927**	**0.0000**	**238,030.4884**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0410	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1486	0.1486	1.4000e-004	0.0000	0.1521
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	16.8281	70.7690	387.2252	2.3288	318.2347	0.9207	319.1554	84.9634	0.8555	85.8189		237,860.5229	237,860.5229	6.7925		238,030.3363
Total	**16.8690**	**70.7700**	**387.3074**	**2.3288**	**318.2347**	**0.9212**	**319.1559**	**84.9634**	**0.8559**	**85.8194**	**0.0000**	**237,860.6714**	**237,860.6714**	**6.7927**	**0.0000**	**238,030.4884**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/27/2019	9/26/2019	5	0	
2	Site Preparation	Site Preparation	10/11/2019	10/10/2019	5	0	
3	Grading	Grading	10/12/2019	10/11/2019	5	0	
4	Building Construction	Building Construction	10/16/2019	10/15/2019	5	0	
5	Paving	Paving	3/4/2020	3/3/2020	5	0	
6	Architectural Coating	Architectural Coating	3/11/2020	3/10/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ventura GPU 2040 VMT - Ventura County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	7.00	130	0.42
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.8281	70.7690	387.2252	2.3288	318.2347	0.9207	319.1554	84.9634	0.8555	85.8189		237,860.5229	237,860.5229	6.7925		238,030.3363
Unmitigated	16.8281	70.7690	387.2252	2.3288	318.2347	0.9207	319.1554	84.9634	0.8555	85.8189		237,860.5229	237,860.5229	6.7925		238,030.3363

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	10,000.00	10,000.00	10000.00	150,401,033	150,401,033
Total	10,000.00	10,000.00	10,000.00	150,401,033	150,401,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	50.00	44.49	45.00	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.615846	0.037969	0.187287	0.094639	0.011484	0.005407	0.021248	0.018966	0.001237	0.001151	0.003599	0.000449	0.000719

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0410	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1486	0.1486	1.4000e-004	0.0000	0.1521
Unmitigated	0.0410	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1486	0.1486	1.4000e-004	0.0000	0.1521

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4600e-003	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1486	0.1486	1.4000e-004		0.1521
Total	**0.0410**	**9.5000e-004**	**0.0821**	**0.0000**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**0.1486**	**0.1486**	**1.4000e-004**	**0.0000**	**0.1521**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0385					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4600e-003	9.5000e-004	0.0821	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004		0.1486	0.1486	1.4000e-004		0.1521
Total	**0.0410**	**9.5000e-004**	**0.0821**	**0.0000**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**0.1486**	**0.1486**	**1.4000e-004**	**0.0000**	**0.1521**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D

GHG Calculations

GHG Gap Analysis (MT CO2e / YEAR)		
SECTOR	**2030**	**2040**
Building Energy Total	285,079	225,567
Transportation Total	487,058	446,355
Solid Waste Total	278,381	270,289
Water and Wastewater Total	13,148	13,148
Off Road Equipment Total	52	52
Agriculture Total	248,882	241,541
Stationary Source Total	314,526	343,679
Legislatively Adjusted GHG Emissions Total	1,627,124	1,540,630
Target for Consistency with State Climate Policies	1,113,972	742,648
Reductions Needed to meet GPU Targets	513153	797982
CTM-B	-3454	-5111
CTM-C	-47231	-78405
COS-S	-2019	-3367
COS-8.4	-59972	-20445
COS-W	-5042	-6677
COS-H	-354	-708
AG-H	-33830	-39236
Quantified Reductions	(151,903)	(153,950)
Gap Remaining	361,250	644,032

AG-H

Reduced Inorganic Nitrogen Fertilizer

	2015	2030	2040
Existing N2O Emissions from Nitrogen Fertilizer Use (MTCO2e)	146,983	144,068	142,124
Tons Applied	43,631	42,766	42,189
Percent subsitution w/organic fertilizer from locally sourced organic waste from 2015 levels		25%	30%
Forecasted N2O tons of inorganic nitrogen fertilizer applied after reduction (MTCO2e)		32,723	30,542
N2O Emissions from Inorganic Nitrogen Fertilizer Use (MTCO2e)		110,237	102,888
Net GHG Reduction from AG-4 (MTCO2e)		(33,830)	(39,236)

CCA Enrollment						
Clean Power Alliance City or County	**Default Tier**					
Ventura County	**100% Green Power**					
	Residential			Non-Residential		
Total Eligible Accounts	100%	31,214		100%	7,110	
	%	**Number**		**%**	**Number**	
Opt Up (Ineligible due to default tier)	0.00%	0		0.00%	0	
Opt Mid (Green --> Clean)	0.84%	262		1.34%	95	
Opt Down (Green --> Lean)	4.31%	1,345		3.05%	217	
Opt Out (CPA --> SCE)	10.73%	3,349		17.05%	1,212	
Enrollments	Residential			Non-Residential		
Total Remaining Enrollments	100.00%	27,865		100.00%	5,898	
100% Green Power	94.23%	26,257		94.71%	5,586	
Clean Power	0.94%	262		1.62%	95	
Lean Power	4.83%	1,345		3.68%	217	

COS-8.4

CCA Enrollment

Clean Power Alliance City or County	Default Tier
Ventura County	100% Green Power

	Residential		Non-Residential	
Total Eligible Accounts	100%	31,214	100%	7,110
	%	**Number**	**%**	**Number**
Opt Up (Ineligible due to default tier)	0.00%	0	0.00%	0
Opt Mid (Green --> Clean)	0.84%	262	1.34%	95
Opt Down (Green --> Lean)	4.31%	1,345	3.05%	217
Opt Out (CPA --> SCE)	10.73%	3,349	17.05%	1,212
Enrollments	Residential		Non-Residential	
Total Remaining Enrollments	100.00%	27,865	100.00%	5,898
100% Green Power	94.23%	26,257	94.71%	5,586
Clean Power	0.94%	262	1.62%	95
Lean Power	4.83%	1,345	3.68%	217

	2015	2020	2030	2040
Residential electricity consumption (kWh) - existing buildings	262,750,031	264,831,397	269,018,616	273,205,835
Commercial electricity consumption (kWh) - existing buildings	118,867,785	119,225,592	124,892,675	129,659,819
Number of DU	32,191	32,446	32,959	33,472
kWh/DU	8,162.22	8,162.22	8,162.22	8,162.22

Business Accounts	7,110	7,466	7,839
Residential Units on CPA	28,965	29,422	29,880
Res 100 % Green Power (Current)	27,293	27,725	28,156
Res 100 % Green Power (97 percent target)	32,446	31,311	31,798
*Target Rate for 100% Green enrollment 95% by 2030			
Commercial on CPA	5,898	6,193	6,502
Com 100 % Green Power (Target)	5,586	5,865	6,158
Com 100 % Green Power (Current)		7,092	7,447
kWh from CPA 100% Green Power (Residential)	222,773,843	255,567,685	259,545,543
kWh from CPA 100% Green Power (Commercial)	93,665,944	118,648,041	123,176,828
Total kWh switched	316,439,787	374,215,726	382,722,371
CO2e Reduced under BAU	(67,954.79)	(59,971.68)	(20,444.99)
Target			

COS-H

Urban Forest

	2030	2040
Total trees planted	10000	20000
Default Annual CO2 accumulation per tree for Miscellaneous Trees (MT CO2e/tree/year) (From Appendix A of CalEEMod v2016.3.1)	0.0354	-0.0354
GHG Reduction from Measure (MTCO2e/year)	(354)	(708)

COS-S

Residential Green Building Ordinance		
Mixed-Fuel, Code Compliant Single Family Home	2030	2040
Annual kWh consumption DU - 2019 Title 24	5007	5007
Annual therms demand/DU - 2019 Title 24	381.7	381.7
Annual PV/storage kWh/DU - 2019 Title 24	5007	5007
Net kWh demand/DU - 2019 Title 24	0	0
All-Electric Residential		
Annual kWh demand/DU	7745	7745
Annual therms demand/DU	0	0
Annual PV/storage kWh/DU	7745	7745
Net kWh demand/DU	0	0
Difference in kWh demand/DU	0	0
Difference in therms demand/DU	-381.7	-381.7
Forecasted Housing Units in Ventura County	32959	33472
New Dwelling Units in Ventura County	768	1281
Total kWh reduction	0	0
Total therms reduced	-293146	-488958
MT CO2e Reduced	-2019	-3367

COS-W		
	2030	2040
Residential electricity consumption (kWh) - existing buildings	269,018,616	273,205,835
Residential natural gas consumption (therms)	14,392,361	14,616,375
Commercial electricity consumption (kWh) - existing buildings	124,892,675	129,659,819
Commercial natural gas consumption	10,452,853	10,851,838
Number of Res DU	32,959	33,472
kWh/DU	8,162.22	8,162.22
therms/DU	436.67	436.67
Commercial Accounts	7,466	7,839
Target DU participation in outreach program	20%	25%
Target DU participation in monitoring program	20%	25%
Percent savings per DU from aggressive outreach	1%	1%
Percent savings per DU from in-home monitoring	4%	4%
Energy Savings		
Outreach - Electricity (kWh)	81.62	81.62
Outreach - Natural Gas (therms)	4.37	4.37
Monitoring - Electricity (kWh)	326.49	326.49
Monitoring - Natural Gas (therms)	17.47	17.47
Outreach - Total electricity savings (kWh)	538,037	683,015
Outreach - Total natural gas savings (therms)	28,785	36,541
Monitoring - Total electricity savings (kWh)	107,607	109,282
Monitoring - Total natural gas savings (therms)	23,028	23,028
Total electricity savings (kWh)	645,645	792,297
Total natural gas savings (therms)	51,813	59,569

GHG Reductions from electricity savings (MTCO2e)		(103.47)	(84.65)
GHG Reductions from natural gas savings (MTCO2e)		(356.83)	(410.25)

Total Residential GHG Reductions (MTCO2e)		(460)	(495)

		2030	2040
Commercial electricity consumption (kWh) - existing buildings		124,892,675	129,659,819
Commercial natural gas consumption		10,452,853	10,851,838
Target Reductions		5%	7%
Reduction in energy consumption from behavior mod programs			
	kWh	(6,244,634)	(9,076,187)
	Therms	(522,643)	(759,629)

Total Commercial GHG Reductions (MTCO2e)		(4,582)	(6,182)

CTM-B		
	2030	**2040**
New VMT from 2015 baseline	90,240,682	150,401,136
Light Duty	84,189,124	140,315,481
Heavy Duty	6,045,830	10,076,404
Buses	5,727	9,252
Percent reduction target for VMT in new growth (relative to business as usual in 2030 and 2040)	15%	15%
Post program VMT	76,704,579	127,840,966
Light Duty	71,560,756	119,268,158
Heavy Duty	5,138,956	8,564,943
Buses	4,868	7,864
Pre-Program GHG Emissions (CO2e)	23029	34072
Post-Program GHG Emissions (CO2e)	19575	28962
GHG Savings	**-3454**	**-5111**
gCO2e/mi	2030	2040
Light Duty	235.9523762	209.2510967
Heavy Duty	522.1202114	466.3473808
Buses	1403.489593	1320.060821

CTM-C		
	2030	**2040**
Forecast VMT from light duty vehicles	1,770,625,968	1,826,755,613
Forecast VMT from heavy duty vehicles	127,153,053	131,183,863
Adjustment for new growth VMT analyzed in CTM-B[1]	-4.8%	-7.7%
Adjusted VMT light duty	1,597,900,202	1,503,755,939
Adjusted VMT heavy duty	114,749,187	107,988,453
Pre Program GHG Emissions (CO_2e)	484,173	443,428
Percent VMT Reduction Goal from program implementation (relative to 2030 and 2040)	-5%	-10%
Post program VMT light duty	1,518,005,192	1,428,568,143
Post program VMT heavy duty	109,011,727	102,589,030
Post Program GHG Emissions(CO_2e)	436,941	365,023
GHG reductions from Countywide VMT Reduction Program	-47231	-78405
gCO2e/mi	2030	2040
Light Duty	235.95238	209.25110
Heavy Duty	522.12021	466.34738
Source: Ascent Environmental GHG Forecasting using 2017 EMFAC emissions factors		

Assumptions

Category				Source/Notes		
Conversions						
g/MT	1000000					
g/lb	453.592					
lb/MT	2204.622622					
kg/MT	1000					
MT/ton	1.10231					
g/ton	907185					
lb/kg	2.20462					
kWh/MWh	1000					
MWh/GWh	1000					
Btu/therm	100000					
BTU/gal diesel	139000					
MMBtu/therm	0.1					
MMBtu/MWh	3.41214148					
LPG Gallons/GGE	1.344086022					
LNG Gallons/GGE	1.572327044					
gal/cubic foot	7.480519481					
gal/Liter	3.785411784					
gallon/acrefoot	325851.429					
million gal/acre-feet	0.325851429					
GWP						
Source (Select)	*IPCC Fifth Assessment Report GWP Values 100-year horizon*					
CO2	1					
CH4	28					
N2O	265					
Electricity Emission Factors						
SCE	**2015**	**2020**	**2030**	**2035**	**2040**	
RPS Status	25%	33%	50%	67%	83%	
SCE Power Mix 2015						SCE 2015 Power Content Label (https://www.energy.ca.gov/pcl/labels/2015_index.html)
Natural Gas	26%					
Unspecified Sources	41%					
GHG Free Sources	33%					
SCE 2015 Calculated EFs						
lb CO2/MWh	**529**	**472.67**	**352.74**	**235.16**	**117.58**	2016 SCE Corporate Responsibility Report
lb CH4/GWh	**14.95**	**13.35**	**9.97**	**6.64**	**3.32**	Calculated from eGrid 2016 NG and Other Efs
lb N2O/GWh	**1.66**	**1.48**	**1.11**	**0.74**	**0.37**	Calculated from eGrid 2016 NG and Other Efs
MT CO2e/MWh	**0.240**	**0.215**	**0.160**	**0.107**	**0.053**	Calculated
eGrid 2016 Emission Factors (For Calculation of California Average EFs)				Updated February 2017		
Natural Gas EFs: eGRID2016 Average of California Natural Gas Electricity Plant EFs				https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid		
lb CO2/MWh	867.88			Weighted average based on annual plant net generation		
lb CH4/GWh	16.50			Weighted average based on annual plant net generation		
lb N2O/GWh	1.66			Weighted average based on annual plant net generation		
MT CO2e/MWh	**0.3941**			Calculated		
Coal EFs: eGRID2016 Average of California Coal Electricity Plant EFs				https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid		
lb CO2/MWh	1157.82			Weighted average based on annual plant net generation		
lb CH4/GWh	13.41			Weighted average based on annual plant net generation		
lb N2O/GWh	18.98			Weighted average based on annual plant net generation		
MT CO2e/MWh	**0.5276**			Calculated		
Unspecified EFs: eGRID2016 CAMX Emission Factors				Assumed to represent unspecified power sources		
lb CO2/MWh	452.50			CAMX avg		
lb CH4/GWh	26.00			CAMX avg		

Assumptions

lb N2O/GWh	3.00			CAMX avg		
kg/MWh	205.25			Calculated		
kg/GWh	11.79			Calculated		
kg/GWh	1.36			Calculated		
Utility Natural Gas Emission Factors						
kg CO_2/MMBtu	53.06		Natural Gas - US Weighted Averag	2017 Climate Registry Emission Factors. Table 12.1.		
g CH4/MMBtu	4.7		Natural Gas - Residential/Commer	2017 Climate Registry Emission Factors. Table 12.9.		
g N2O/MMBtu	0.1		Natural Gas - Residential/Commer	2017 Climate Registry Emission Factors. Table 12.9.		
MT CO2/therm	0.005306			Calculated		
MT CH4/therm	0.000047			Calculated		
MT N2O/therm	0.000001			Calculated		
MT CO2e/therm	**0.0069**			Calculated		
The Climate Registry 2017 Default Emission Factors						

print date 12/19/2019

Ventura County 2015 GHG Inventory Update and 2040 Forecast

Updated 12/19/19

Workbook Description

This workbook contains the calculations for Ventura County's 2015 Greenhouse Gas (GHG) inventory and forecast through 2040.

Tab Descriptions and Update Instructions

Tab Name	Description	Category
Inventory and Forecast	This tab consolidates and summarizes the results from all emissions sectors for the business-as-usual (BAU) and Adjusted BAU (ABAU), or legislative adjusted, scenarios. Charts and inventory summaries are located further down on the sheet. This tab also calculates emissions forecasts for some sources (e.g., septic systems).	Summary
Demographics	This tab houses the population, housing, and employment data and forecasts from 2015 through 2040. This tab also calculates the unincorporated County's portion of this data by subtracting out Vandenberg Air Force Base and UC Ventura values.	Demographics
Transportation	This tab calculates on-road transportation based on Vehicle Travelled.	Calculations
Building Energy	This tab calculates the emissions from residential, commercial, industrial, and agricultural energy use.	Calculations
Offroad	This tab calculates the emissions from off-road equipment.	Calculations
Solid Waste	This tab calculates the emissions from waste generation and waste-in-place.	Calculations
Imported Water	This tab calculates emissions from water imported to the unincorporated County.	Calculations
Wastewater	This tab calculates the emissions from wastewater treatment processes from centralized wastewater treatment facilities and septic systems.	Calculations
Agriculture	This tab summarizes the emissions from agricultural sources.	Calculations
Stationary Source	This tab calculates provides the data for major stationary sources in the County.	Calculations
Assumptions	Includes reference material necessary for GHG calculations, including: Conversion factors, mode split, global warming potential (GWP) factors, electricity emission factors (provided by EPA eGRID), electricity emission factors as-calculated for each utility, natural gas emission factors, and more.	Background Data and Calculations
EMFAC	Includes emission factor outputs and calculations for on-road vehicles from CARB's Emissions FACtors model.	Background Data and Calculations

Targets

GHG Reduction Targets				
Milestone Year	Statewide Existing and Target Emissions (MMTCO2e)	Statewide Target Percent Reduction below 1990 levels by Target Years	Adjusted Target Percent Reduction below 2015 levels by Target Years	
1990 (Historical)	431	NA	NA	Source: https://www.arb.ca.gov/cc/inventory/pubs/reports/appendix_a1_inventory_ipcc_sum_1
2015 (Historical)	440	NA	NA	Source: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
2020 (Target)	431	0%	2.1%	AB 32
2030 (Target)*	258.60	40.0%	41.3%	SB 32
2040 (Target)	172.40	60.0%	60.9%	

** State emissions calculated from ARB's scoping plan*

Source: California GHG Inventory. ARB 2014 and 2016

Targets

Ventura County				
Community Inventory	**2015**	**2020**	**2030**	**2040**
Population	97,733	99,755	100,918	101,832
BAU Emissions (MTCO2e)	1,897,112	1,902,823	1,934,846	1,980,736
BAU with Legislative Reductions (MTCO2e)	1,897,112	1,793,971	1,627,124	1,540,630
With Measures (MTCO2e)				
Percent below BAU				

Community Targets	**2020**	**2030**	**2040**
Mass Emissions	1,856,620	1,113,972	742,648
Needed Reductions	62,649	(513,153)	(797,982)

Forecast- Leg Adjusted

DETAIL (MT CO2e / YEAR)	Inventory	Legislative Adjustment Scenario		
SECTOR	2015	2020	2030	2040
Building Energy	322,048	308,629	285,079	225,567
Transportation	692,753	625,263	487,058	446,355
Solid Waste	333,167	302,811	278,381	270,289
Water and Wastewater	13,148	13,148	13,148	13,148
Off Road Equipment	52	52	52	52
Agriculture	260,849	256,223	248,882	241,541
Stationary Source	275,096	287,845	314,526	343,679
TOTAL	1,897,112	1,793,971	1,627,124	1,540,630

Forecast- BAU

DETAIL (MT CO2e / YEAR)	Inventory	Business As Usual Scenario		
SECTOR	2015	2020	2030	2040
Building Energy	322,048	323,803	334,079	343,129
Transportation	692,753	704,364	727,433	750,452.3
Solid Waste	333,167	317,388	296,727	288,735
Water and Wastewater	13,148	13,147.8	13,147.8	13,147.8
Off Road Equipment	51.9	51.9	51.9	51.9
Agriculture	260,849.1	256,223.1	248,882.0	241,540.8
Stationary Source	275,095.6	287,845.0	314,525.6	343,679.2
TOTAL	1,897,112	1,902,823	1,934,846	1,980,736

Demographics				
Ventura County Greenhouse Gas Emissions Inventory - Unincorporated County Population, Empoyment, Housing Forecast				
	Inventory	Forecast		
	2015	**2020**	**2030**	**2040**
Population	97,733	99,755	100,918	101,832
Employment	32,889	32,988	34,556	35,875
Housing Units	32,191	32,446	32,959	33,472

Building Energy

Ventura County Greenhouse Gas Emissions Inventory - 2015

Emissions Summary (MTCO2e)

		Legislatively Adjusted				
	2015	**2020**	**2030**	**2035**	**2040**	**2050**
Residential	159,973	154,449	142,233	129,360	115,258	101,422
Commercial	97,091	94,326	92,004	86,039	81,663	79,041
Industrial	15,198	15,244	15,969	16,101	16,578	17,533
Agricultural	49,786	44,610	34,873	23,441	12,068	-
Total	322,048	308,629	285,079	254,940	225,567	197,996

	BAU				
Residential	**2020**	**2030**	**2035**	**2040**	**2050**
Commercial	161,240	163,789	165,708	166,339	167,594
Industrial	97,383	102,012	102,856	105,905	112,004
Agricultural	15,244	15,969	16,101	16,578	17,533
Total	49,936	52,310	52,743	54,306	57,434
	323,803	334,079	337,407	343,129	354,565

Building Energy Emissions in 2015

				2015	**2020**	**2030**	**2035**	**2040**	**2050**
Energy Type (and Utility)	**Energy Unit**	**Emission Factor per Energy Unit**		**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**
Electricity - SCE	kWh	MT/MWh		0.240	0.215	0.160	0.107	0.053	0.000
Natural Gas - So Cal Gas	Therm	MT/therm		0.006887	0.006887	0.006887	0.006887	0.006887	0.006887
		County Average Electricity EF (g/kWh)		240.39	214.75	160.26	106.84	53.42	0.00

					2015	**2020**	**2030**	**2035**	**2040**	**2050**
Sector	**Customer Type**	**Energy Type**	**Utility/Source**	**Energy Unit**	**Annual Usage**	**Annual Usage**	**Annual Usage**	**Annual Usage**	**Annual Usage**	**Annual Usage**
Residential Energy	Residential	Electricity	SCE	kWh	262,750,031	264,831,397	269,018,616	272,169,233	273,205,835	275,266,796
Commercial Energy	Commercial	Electricity	SCE	kWh	118,867,785	119,225,592	124,892,675	125,926,339	129,659,819	137,126,779
Industrial Energy	Industrial	Electricity	SCE	kWh	-					
Agricultural Energy	Agricultural	Electricity	SCE	kWh	207,106,250	207,729,666	217,603,563	219,404,541	225,909,475	238,919,342
Residential Energy	Residential	Natural Gas	SoCal Gas	Therms	14,056,995	14,168,347	14,392,361	14,560,918	14,616,375	14,726,636
Commercial Energy	Commercial	Natural Gas	SoCal Gas	Therms	9,948,602	9,978,549	10,452,853	10,539,365	10,851,838	11,476,783
Industrial Energy	Industrial	Natural Gas	SoCal Gas	Therms	2,206,808	2,213,451	2,318,661	2,337,852	2,407,165	2,545,790
Total Electricity				**kWh**	588,724,066	591,786,655	611,514,854	617,500,114	628,775,129	651,312,916
Total Natural Gas				**Therms**	26,212,405	26,360,346	27,163,876	27,438,135	27,875,378	28,749,209
				SCE	588,724,066					

					2015	**2020**	**2030**	**2035**	**2040**	**2050**
Sector	**Customer Type**	**Energy Type**	**Utility/Source**	**Energy Unit**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**
Residential Energy	Residential	Electricity	SCE	kWh	63,162	56,872	43,113	29,078	14,595	-
Commercial Energy	Commercial	Electricity	SCE	kWh	28,575	25,603	20,015	13,454	6,926	-
Industrial Energy	Industrial	Electricity	SCE	kWh	-	-	-	-	-	-
Agricultural Energy	Agricultural	Electricity	SCE	kWh	49,786	44,610	34,873	23,441	12,068	-
Residential Energy	Residential	Natural Gas	SoCal Gas	Therms	96,811	97,577	99,120	100,281	100,663	101,422
Commercial Energy	Commercial	Natural Gas	SoCal Gas	Therms	68,516	68,722	71,989	72,585	74,737	79,041
Industrial Energy	Industrial	Natural Gas	SoCal Gas	Therms	15,198	15,244	15,969	16,101	16,578	17,533

Building Energy

Total Electricity				**kWh**	141,523	127,085	98,001	65,974	33,589	0
Total Natural Gas				**Therms**	180,525	181,544	187,078	188,966	191,978	197,996
				TOTAL	322,048	308,629	285,079	254,940	225,567	197,996
						BAU				
						2020	**2030**	**2035**	**2040**	**2050**
Sector	**Customer Type**	**Energy Type**	**Utility/Source**	**Energy Unit**		**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**	**MT CO2e**
Residential Energy	Residential	Electricity	SCE	kWh		63,663	64,669	65,427	65,676	66,171
Commercial Energy	Commercial	Electricity	SCE	kWh		28,661	30,023	30,271	31,169	32,964
Industrial Energy	Industrial	Electricity	SCE	kWh		-	-	-	-	-
Agricultural Energy	Agricultural	Electricity	SCE	kWh		49,936	52,310	52,743	54,306	57,434
Total Electricity				**kWh**		142,259		148,441	151,151	156,569

Note: No propane usage is assumed because the number of Socal Gas residential customers in 2015 (32,717) is more than the number of households in the unincorporated are according to the County's background report (32,191). This means there could be more than one natural gas bill sent to a household considered by the County (See the Demographics tab).

Source: Data requests from SoCal Gas and Southern California Edison for customers in the unincorporated County. Industrial electricity use was not available due to CPUC 15/15 rule that states that any data provided by a utility must have more than 15 customers an no single customer's data accounts for more than 15 percent of total aggregated data.

Transportation

Ventura County Greenhouse Gas Emissions Inventory - 2015

Emissions Summary (MTCO2e)

BAU Forecast	**2015**	**2020**	**2030**	**2040**	**2050**
On-Road Transportation	690,265	701,749	724,717	747,685	770,653
Rail	2,488	2,616	2,716	2,768	2,814
Total	692,753	704,364	727,433	750,452	773,467

Adjusted Forecast	**2015**	**2020**	**2030**	**2040**	**2050**
On-Road Transportation (Leg Adjusted)	690,265	622,647	484,342	443,587	447,418
Rail	2,488	2,616	2,716	2,768	2,814
Total	692,753	625,263	487,058	446,355	450,232

On-Road Transportation Activity in 2015

Unincorporated County VMT

VMT Calculations	Source	2015 Annual VMT	2020 Annual VMT	2030 Annual VMT	2035 Annual VMT	2040 Annual VMT	2050 Annual VMT				
100% Internal, 50% I-E *	Adjusted from County-wide based on unincorporated VMT percentage	1,807,538,340	1,837,618,567	1,897,779,022	1,927,859,249	1,957,939,476	2,018,099,931				
Urban Bus VMT**		120,450	120,450	120,450	120,450	120,450	120,450	Scaling Factor: Unincorporated County Population Growth			
Total Annual VMT		1,807,658,790	1,837,739,017	1,897,899,472	1,927,979,699	1,958,059,926	2,018,220,381				

County-wide VMT

VMT Calculations	Source	2012 Average Daily VMT	2012 Annual VMT	2040 Average Daily VMT	2040 Annual VMT	2015 Annual VMT (Interpolated)	2020 Annual VMT (Interpolated)	2030 Annual VMT (Interpolate	2035 VMT (Interpolated)	2050 VMT
Internal-Internal	VCTC Model	10,746,259	3,922,384,526	11,731,596	4,282,032,422	3,960,918,229	4,025,141,068	4,153,586,745	4,217,809,584	4,410,478,099
Internal-External (unincorporated Ventura to areas south and east of Ventura County)	VCTC Model *	15,537,451	5,671,169,732	17,026,660	6,214,730,729	5,729,408,411	5,826,472,874	6,020,601,802	6,117,666,265	6,408,859,656
Internal-External (unincorporated Ventura to north areas of Ventura County)	Calculated				35,472,890	25,050,315	27,134,830	31,303,860	33,388,375	39,641,920
50% Internal-External	Calculation (RTAC Method)				3,125,101,810	2,877,229,363	2,926,803,852	3,025,952,831	3,075,527,320	3,224,250,788
100% Internal, 50% I-E *	Calculation (RTAC Method)				7,407,134,232	6,838,147,592	6,951,944,920	7,179,539,576	7,293,336,904	7,634,728,888

*Source: Jim Damkowitch 11/7/2018 - Email to Ascent Environmental. Note: This VMT only includes light duty and heavy duty vehicle trips. It is assumed that this VMT does not include bus trips. Bus VMT is added separately.

** There is only one bus route in Ventura County that stops in the unincorporated area: Line 16 of Gold Coast Transit. The distance travelled by that route within the unincorporated area is about 10 miles. It travels along Ventura Ave between Ventura and Ojai, with stops in between. There are 17 northbound trips and 16 southbound trips daily, according to Gold Coast Transit route schedules. This results in an annual VMT of 120,450 VMT per year. This excludes bus VMT not associated with this route.

Note: The Regional Transportation Advisory Committee's recommended approach to calculating VMT is based on CARB's guidance for MPOS (https://www.arb.ca.gov/cc/sb375/staff_report_sb375_targets_update.pdf)

Adjustment for I-X trips north of Ventura*	Source	2010	2012	2020	2040	2015 (Interpolated)	2030	2035	2050
Daily VMT I-X/X-I Santa Barbara County - Entire Ventura County (SB/VC)**	SBCAG	62,920		74,342	97,186	68,631	85,764	91,475	108,608
Daily VMT I-X/X-I South and East Areas - Entire Ventura County (SE/VC)**	VCTC Model		15,537,451	15,962,939	17,026,660	15,697,009	16,494,799	16,760,729	17,558,519.61

Ratio of SB/VC to SE/VC ***	Calculated			0.00466	0.00571	0.00437	0.00520	0.00546	0.00619		
*According to Jim Damkowitch, the VCTC model excludes trips north of Ventura County because the VCTC model is based on SCAG's model which does not include Santa Barbara County.											
** Includes unincorporated areas AND cities											
*** This ratio is applied to SB/VC VMT to estimate the VMT between SB County and Unincorporated Ventura County.											
Unincorporated VMT Adjustment											
VMT Split by Boundary Method According to HPMS data											
Unincorporated County Local Road VMT (Boundary		1,394,030	HPMS								
Unincorporated County VMT SHS VMT Boundary		3,519,851	GHD via Caltrans Volume Report								
Other Unincorporated VMT Boundary		22,950	HPMS								
Total Unincorporated VMT (Boundary)		**4,936,831**									
Total Incorporated Local Road VMT (Boundary)		6,689,160	HPMS								
Total Incorporated SHS VMT (Boundary)		7,037,589	GHD via Caltrans Volume Report								
Other Incorporated VMT		13,080	HPMS								
Total Incorporated VMT (Boundary)		**13,739,829**									
Percent Nonincorporated		**26.4%**									
VMT Background Data											
VMT Distribution in Unincorporated County by vehicle class											
Light Duty	93%										
Heavy Duty	7%										
Buses	0.054%										
Source: SCAG 2016 RTP model. Provided by Annabel Drayton VCREA - Email to Ascent Environmental 11/15/2018											

On-Road Transportation Emissions Calculations											
Annual VMT											
	2015	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty and Heavy Duty VMT	1,807,538,340	1,837,618,567	1,897,779,022	1,927,859,249	1,957,939,476	2,018,099,931					
Bus VMT	120,450	120,450	120,450	120,450	120,450	120,450					
VMT Distribution	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	1,686,431,501	1,714,496,323	1,770,625,968	1,798,690,791	1,826,755,613	1,882,885,258					
Heavy Duty	121,106,839	123,122,244	127,153,053	129,168,458	131,183,863	135,214,672					
Buses	120,450	120,450	120,450	120,450	120,450	120,450					
EMFAC 2017 Weighted Vehicle Emission Factors for Ventura County											
gCO2/mi	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	360	317.047	235.859	217.894	209.180	204.4384					
Heavy Duty	677	637.628	521.578	486.947	465.748	459.3973089					
Buses	1,502	1461.054	1358.058	1305.580	1273.023	1242.449754					
gCH4/mi	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	0.011	0.006	0.003	0.002	0.002	0.002025088					
Heavy Duty	0.019	0.015	0.016	0.017	0.017	0.018022341					
Buses	1.622	1.584	1.563	1.580	1.602	1.620750263					
gN2O/mi	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	0.0001	0.00008	0.000	0.000	0.00004	3.88601E-05					
Heavy Duty	0.0003	0.00029	0.000	0.000	0.00044	0.000474812					
Buses	0.0039	0.00388	0.006	0.007	0.00828	0.010049969					
gCO2e/mi	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	361	317	236	218	209	205					
Heavy Duty	677	638	522	488	466	460					
Buses	1,549	1,506	1,403	1,352	1,320	1,290					
TOTAL On-Road Vehicle Emissions (Legislatively Adjusted)											
MTCO2e	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	608,051	543,897	417,783	392,066	382,251	385,060					
Heavy Duty	82,027	78,569	66,389	62,973	61,177	62,203					
Buses	187	181	169	163	159	155					
	690,265	622,647	484,342	455,201	443,587	447,418					
TOTAL On-Road Vehicle Emissions (BAU)											
MTCO2e	**2015**	**2020**	**2030**	**2035**	**2040**	**2050**					
Light Duty	608,051	618,170	638,408	648,527	658,646	678,884					
Heavy Duty	82,027	83,392	86,122	87,487	88,852	91,582					
Buses	187	187	187	187	187	187					
	690,265	701,749	724,717	736,201	747,685	770,653					
Vehicle Category assignments based on EMFAC 2007 Vehicle Categories used in EMFAC 2017											
SCAG Vehicle Category	**EMFAC 2007 Vehicle Category**										
Light Duty	LDA										
Light Duty	LDT1										
Light Duty	LDT2										
Light Duty	LHDT1										
Light Duty	LHDT2										
Light Duty	MCY										
Heavy Duty	HHDT										
Heavy Duty	MDV										
Heavy Duty	MH										
Heavy Duty	MHDT										
Buses	OBUS										
Buses	SBUS										
Buses	UBUS										

Locomotive Emissions in 2015

					Emissions per BTU of Diesel			Locomotive Emissions			
	Track length through the unincorporated Count (mi)	Number of One Way Trips per year	Annual Locomotive Miles Travelled	2015 BTU per train-mile	g CO2/BTU	g CH4/BTU	g N2O/BTU	MT CO2/BTU	MT CH4/BTU	MT N2O/BTU	MT CO2e
Amtrak Passenger Rail	27.1	3640	98,644	288,375	0.073453237	5.7554E-06	1.8705E-06	2,089	0.164	0.053	2,108
Metrolink Passenger Rail	11.4	1560	17,784	288,375	0.073453237	5.7554E-06	1.8705E-06	377	0.030	0.010	380
Total								2,466	0.193	0.063	2,488
Source	GIS	Amtrak schedule, Metrolink schedule,		Transportation Energy Data Book 2017 (Table 9.10 - passenger rail, Table 9.8 - freight rail)							
Method: U.S. Community Protocol - Equation TR.5.1.											

Off-Road Vehicles and Equipment

Ventura County Greenhouse Gas Emissions Inventory - 2015

Emissions Summary (MTCO2e)

	2015	2020	2030	2035	2040	2050
ConstMin	15	15	14.90	14.90	14.90	14.90
Industrial	8	8	8	8	8	8
Light Commercial	4	4	4	4	4	4
Portable Equipment	4	4	4	4	4	4
Oil Drilling	20	20	20	20	20	20
TRU	1	1	1	1	1	1
Offroad Emissions	**52**	**52**	**52**	**52**	**52**	**52**

Offroad Emissions in 2015 for Unincorporated Ventura County

	MT CO2	MT CH4	MT N2O	MT CO2e	Scaled to unincorporated area by	% total GHG
ConstMin	14.626	0.003	0.001	15	Jobs	28.7%
Industrial	7.929	0.001	0.001	8	Jobs	16.0%
Light Commercial	3.298	0.004	0.001	4	Jobs	6.9%
Oil Drilling	20.212	0.002	0.001	20	All in unincorporated	39.4%
Portable Equipment	3.834	0.001	0.000	4	Population	7.5%
TRU	0.728	0.001	0.000	1	Jobs	1.4%
Total	50.626	0.013	0.003	52		100.0%

Note: Agricultural equipment included under the Agriculture Sector

OFFROAD 2017 outputs for 2015 for Entire Ventura County

	Fuel Type	Fuel Use (gal/year)	Tons CO2/day	Tons CH4/day	Tons N2O/day	MT CO2e	Tons NOx/day (to calculate N2O)
AirGrSupp	Diesel	1,874	0.06	0.00	0.00	0	0.001
AirGrSupp	Gasoline	11,067	0.27	0.00	0.00	0	0.001
AirGrSupp	Nat Gas	1,241	0.02	0.00	0.00	0	0.000
Commercial Harborcraft	Diesel	4,874,984	21.18	0.03	0.00	26	1.951
Cargo Handling Equipment	Diesel	69,035	2.13	0.00	0.00	2	0.008
ConstMin	Diesel	4,022,763	123.93	0.02	0.00	138	1.235
ConstMin	Gasoline	309,600	5.00	0.01	0.00	6	0.042
Industrial	Diesel	463,136	14.27	0.00	0.00	16	0.148
Industrial	Gasoline	1,020,595	22.82	0.01	0.00	27	0.104
Industrial	Nat Gas	1,815,674	32.81	0.00	0.01	38	0.155
Light Commercial	Diesel	249,415	7.42	0.00	0.00	8	0.066
Light Commercial	Gasoline	1,082,860	17.29	0.03	0.01	22	0.137
Light Commercial	Nat Gas	239,429	4.36	0.00	0.00	5	0.014
Locomotive	Diesel	-	0.00	0.00	0.00	0	0.071
Military	Diesel	66,324	2.00	0.00	0.00	2	0.015
Ocean Going Vessels	Diesel	14,249,266	451.29	0.15	0.01	506	13.513
Oil Drilling	Diesel	594,860	18.34	0.00	0.00	20	0.133

Offroad

Portable Equipment	Diesel	981,997	30.27	0.00	0.00	34		0.259	
TRU	Diesel	4,074	6.42	0.01	0.00	7		0.361	
Total		**30,058,194**	**759.87**	**0.27**	**0.04**	**859**		**18.216**	
Source: OFFROAD2017 (https://www.arb.ca.gov/orion/)		25,577,728	677.30	0.22	0.03	761		18	diesel only
OFFROAD 2017 outputs for 2015 for Entire Ventura County									

Demographics Category	**Percent in Unincorporated Area**	**Source**
Population	11%	Department of Finance
New Housing Units	34%	DOF 2017/2018 (http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/)
Households	12%	Background Report
Jobs	10%	Background Report

Solid Waste GHG Emissions

Ventura County Greenhouse Gas Emissions Inventory - 2015

Emissions Summary (MTCO2e)

	2015	2020	2030	2040	2050
Waste Generation	34,568	34,808	35,289	35,769	36,250
Waste in Place	298,599	282,580	261,438	252,966	244,856
Total	333,167	317,388	296,727	288,735	281,106

Scaling & Legislative Adjustment

	2014	2015	2020	2030	2040	2050
Delivered Tonnage from Unincorporated Ventura Co	124,057	116,403	117,212	118,831	120,450	122,069
Emissions MTCO2e		34,568	34,808	35,289	35,769	36,250
AB 341 Commercial Recycling - 75% Diversion for Commercial Solid Waste			(24,368)	(24,705)	(25,041)	(25,378)
SB 1383 Organic Waste Diversion Regs			(24,716)	(37,075)	(37,075)	(37,075)
Tonnage w/legislative adjustments			68,128	57,052	58,334	59,616
GHG Emissions w/Legislative Adjustments			20,232	16,942	17,323	17,704

Source: CalRecycle Annual Solid Waste Disposal Reports https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Statewide/Disposal

Scaling Factor: Population Growth

Solid Waste Emissions in 2015

Source	MT CO2	MT CH4	MT N2O	MT CO2e
Waste Generation	0	1,235	0	34,568
Waste-in-Place	0	10,663	0	298,599
Total	0	11,897	0	333,167

Waste Generation Emissions in 2015

Receiving Landfill	Tonnage Delivered from Unincorporated Ventura County Only	Total ADC	Percent of Total Tonnage	Percent of year under LFG collection or control in 2016 (%)	Generated Methane Emissions with LFG Capture (MT CH4)	MT CO2	MT CH4	MT N2O	MT CO2e	% total
Antelope Valley Public Landfill	47	3	0%	0%	2		2		52	0.1%
Azusa Land Reclamation Co. Landfill	84		0%	0%	3		3		87	0.3%
Bakersfield Metropolitan (Bena) SLF	353		0%	0%	13		13		364	1.1%
Calabasas Landfill	3,160	2,597	3%	100%	53		53		1,483	4.3%
Chiquita Canyon Sanitary Landfill	5,954		5%	100%	55		55		1,534	4.4%
Commerce Refuse-To-Energy Facility			0%	100%	-		-		-	0.0%
El Sobrante Landfill	32		0%	100%	0		0		8	0.0%
Frank R. Bowerman Sanitary LF	23		0%	100%	0		0		6	0.0%
H.M. Holloway Inc.	27		0%	0%	1		1		28	0.1%
Lancaster Landfill and Recycling Center	1	2	0%	0%	0		0		3	0.0%
Olinda Alpha Sanitary Landfill	90		0%	100%	1		1		23	0.1%
Simi Valley Landfill & Recycling Center	27,984	4,463	24%	100%	298		298		8,357	24.2%
Southeast Resource Recovery Facility			0%	0%	-		-		-	0.0%
Tajiguas Sanitary Landfill	94	34	0%	100%	1		1		33	0.1%
Toland Road Landfill	78,554	9,153	67%	100%	807		807		22,591	65.4%
Total Ventura Unincorporated	116,403	16,252			1,235		1,235		34,568	100.0%

Source: CalRecycle, EPA LMOP Database, US Community Protocol Equation SW.4.1

Landfill Gas Collection Start Dates

Solid Waste

Landfill	LFG Project Start date									
Antelope Valley Public Landfill	1/1/2020	<-indicates planned but no current project. No start date indicated								
Azusa Land Reclamation Co. Landfill	1/1/2020	<-indicates planned but no current project. No start date indicated								
Bakersfield Metropolitan (Bena) SLF	6/30/2016									
Calabasas Landfill	10/1/2002									
Chiquita Canyon Sanitary Landfill	11/23/2010									
Commerce Refuse-To-Energy Facility	1/1/1981	Started in 1981. No date provided.								
El Sobrante Landfill	4/1/2004									
Frank R. Bowerman Sanitary LF	12/8/2007									
H.M. Holloway Inc.	1/1/2020	<-supplier of ag gypsum								
Lancaster Landfill and Recycling Center	1/1/2020	<-indicates no current project								
Olinda Alpha Sanitary Landfill	6/28/2012									
Simi Valley Landfill & Recycling Center	4/1/2004									
Southeast Resource Recovery Facility	1/1/2020	project shut down in 1993								
Tajiguas Sanitary Landfill	3/31/2000									
Toland Road Landfill	8/1/2004									
Source: EPA's LMOP database										

Waste-in-Place Emissions at Landfills Located in the Unincorporated County in 2015

Landfill/Disposal Site	Waste-in-Place (Tons) *	Status	Has LFG Capture?	Date Open	Date Closed	Average Tons Disposed Annually	Fugitive Emissions MT CO2	MT CH4	MT N2O	MT CO2e
Alden V Johnson	?	Closed	No	?	1967					
Arnaz Road	?	Closed	No	?	?					
Bailard Landfill	3,150,000	Closed	Yes	1961	1996	90,000		1,848		51,751
Balcom Canyon II	?	Closed/unpermitted	No	?	1986					
Balcom Canyon III	?	Closed/unpermitted	No	?	1997					
BMB Norcom 355	inert debris/engineered	Inactive	No	?	?					
Burns Property DS	400 CY construction/de	Closed	No	?	2008					
Elkins Ranch 1980	?	Closed/unpermitted	No	?	?					
Fishback Illegal Disposal Site (IDS)	?	Closing	No	?	?					
Lagoon Landfill	?	Closed/Naval with r	No	1952	1975					
Ojai County 1964	?	Closed	No	?	1964					
Otto Hopkins	?	Closed	No	?	1996					
Ozena 1967 Converted	?	Closed/unpermitted	No	?	?					
Ozena Modified Sanitary Landfill	3,120	Closed	No	1975	1986	283.64		2		55
Phillip and Alice Lee Property	?	To Be Determined/	No	?	?					
Piru Dump	?	Closed/violation	No	?	1971					
Rockwell International - Old Area I LF	?	Closed (artillery fiel	No	1955	2005					
Rockwell International - Old Area II LF	?	Closed (artillery fiel	No	?	?					
Runway Landfill/Pt Mugu	?	Closed (electroplati	No	?	?					
Saticoy County 1962	?	Closed	Facility currently studying LFG potential	1946	1963					
Somis Dump	?	Closed/unpermitted	No	?	?					
Simi Valley Landfill	19,966,988	Open	Yes	1970	2024	489,107		6,145	0.126	172,093
Toland Road Landfill	7,046,887	Active	Yes	1970	2027	123,630		2,668	0.028	74,701
TOTAL							0	10,663	0	298,599
Total from Closed Landfills	**23,120,108**						**0**	**10,663**	**0**	**298,599**
			Average year of closed LFs	**1969**	**2022**					

* Tonnage data for landfills with "?" were not available. Based on the sparse documentation available for these individual landfills, many of these landfills without tonnage data are small unpermitted sites or military disposal sites. It is assumed that waste-in-place emissions from these landfills are minimal. Thus, calculations exclude landfills without tonnage data.

Source: CalRecycle, EPA LMOP Database, EPA Greenhouse Gas Emissions from Large Facilities, CARB Landfill Emissions Tool model (https://www.arb.ca.gov/cc/landfills/tool.htm)

Note: Excludes composting facilities, transfer stations, inert debris disposal sites, and planned landfills not yet in operation.

Waste In Place Forecast

	2020		2030		2035		2040		2050	
Landfill/Disposal Site	**MT CH4**	**MT CO2e**	**MT CH4**	**MT CO2e**	**MT CH4**	**MT CO2e**	**MT CH4**	**MT CO2e**	**MT CH4**	**MT CO2e**
Bailard Landfill	1598	44731	1308	36623	1183	33137	1071	29984	808	22,611
Ozena Modified Sanitary Landfill	2	49	1.428571429	40	1.285714286	36	1.19047619	33	0.90	25
Toland Road Landfill	2366	66248	1937	54,236	1777	49,756	1618	45,304	1244	34,832
Simi Valley Landfill*	6127	171,552	6091	170,540	6073	170,037	6055	169,535	6019	168,527
		282580		261438		252966		244856		225995

*Scaled from 2015 using 2015-2040 annual decay rate of -0.00059 from LET modeling

Additional Background Data and Assumptions

Method

Equation SW.4.1 Methane Emissions

$$CH_4\ Emissions = GWP_{CH4} * (1- CE) * (1- OX) * M * \sum_i P_i * EF_i$$

Where:

Term	Description	Value
CH_4 emissions	= Community generated waste emissions from waste M ($mtCO_2e$)	Result
GWP_{CH4}	= CH_4 global warming potential	
M	= Total mass of waste entering landfill (wet short ton)	User Input
P_i	= Mass fraction of waste component i	User Input
EF_i	= Emission factor for material i ($mtCH_4$/wet short ton)	Table SW.5
CE	= Default LFG Collection Efficiency	No Collection, 0 Collection, 0.75
OX	= Oxidation rate	0.10

Source: As developed by ICLEI staff and Solid Waste Technical Advisory Committee. Emissions factors from U.S. EPA Municipal Solid Waste Publication (2008) available at http://www.epa.gov/epawaste/nonhaz/municipal/pubs/msw2008data.pdf

Mixed MSW for Unincorporated Ventura County	0.041	CalRecycle Waste Characterization for Unincorporated Ventura County and WARM emission factors.

For Future Forecasting work

Diversion Rate

	2015	2020	2030	2040	2040	Source
Unincorporated Ventura County Disposal rate per resident (lb/person-day)	4.1	2.7	2.7	2.7	2.7	CalRecycle
Percent change from 2015		-34%	-34%	-34%	-34%	

Imported Water

Ventura County Greenhouse Gas Emissions Inventory - 2015

Emissions Summary (MTCO2e)

	2015	2020	2030	2035	2040	2050
Imported Water (BAU)	5,002	5,002	5,002	5,002	5,002	5,002
Imported Water (Leg Adjusted)	5,002	4,468	3,334	2,221	1,114	0

Imported Water Emissions in 2015

Source	MG Supplied/year	Electricity Use (kWh/MG)	Electricity Use (kWh)	EF Source	Percent of MG
Groundwater	73,043	240	17,558,763	SCE	83%
SWP	3,598	236	848,885	CA Avg	4%
Surface Water	7,387	240	1,775,646	SCE	8%
Recycled Water	3,635	240	873,888	SCE	4%
TOTAL	87,663		21,057,182		
TOTAL Local	84,065		20,208,297		96%
TOTAL Imported	3,598		848,885		4%

Note: Private groundwater was not available from the Ventura County Water Agencies

Electricity Emissions Factors (g/kWh)

EF Source	2015	2020	2030	2035	2040	2050
SCE	240.39	214.75	160.26	106.84	53.42	0.00
CA Avg	235.94	210.77	157.29	104.76	52.54	0.00

Electricity Use (kWh)

Source	2015	2020	2030	2035	2040	2050
Groundwater	118,064,545	118,064,545	118,064,545	118,064,545	118,064,545	118,064,545
SWP	21,198,226	21,198,226	21,198,226	21,198,226	21,198,226	21,198,226
Surface Water	8,877,349	8,877,349	8,877,349	8,877,349	8,877,349	8,877,349
Recycled Water	331,407	331,407	331,407	331,407	331,407	331,407
Total	148,471,528	148,471,528	148,471,528	148,471,528	148,471,528	148,471,528

GHG Emissions (MTCO2e) (BAU)

Source	EF Source	2015	2020	2030	2035	2040	2050
Groundwater	SCE	28,381	28,381	28,381	28,381	28,381	28,381
SWP	CA Avg	5,002	5,002	5,002	5,002	5,002	5,002
Surface Water	SCE	2,134	2,134	2,134	2,134	2,134	2,134
Recycled Water	SCE	80	80	80	80	80	80
	TOTAL	35,597	35,597	35,597	35,597	35,597	35,597
	TOTAL Local	30,595	30,595	30,595	30,595	30,595	30,595
	TOTAL Imported	5,002	5,002	5,002	5,002	5,002	5,002

GHG Emissions (MTCO2e) (Legislatively Adjusted)

Source	EF Source	2015	2020	2030	2035	2040	2050
Groundwater	SCE	28,381	25,354	18,921	12,614	6,307	0
SWP	CA Avg	5,002	4,468	3,334	2,221	1,114	0
Surface Water	SCE	2,134	1,906	1,423	948	474	0
Recycled Water	SCE	80	71	53	35	18	0
	TOTAL	35,597	31,800	23,731	15,819	7,913	0
	TOTAL Local	30,595	27,332	20,397	13,598	6,799	0
	TOTAL Imported	5,002	4,468	3,334	2,221	1,114	0

Note: Emissions associated with electricity used to power pumps within the unincorporated County are assumed to be captured in the Building Energy sector.

Imported Water

2015 Water Use

Water User/Agency		2013 Ventura County Water Supply and Demand (Acre-Feet)			2015 Unincorporated County Water Supply and Demand (Acre Feet) (Calculated)			2015 Water-Related Electricity Use and Emissions					
								Electricity Use (MWh)					Emissions (MTCO2e)
		Agriculture	Municipal & Industrial	Total	Agriculture	Municipal & Industrial	Total	Supply	Conveyance	Treatment	Distribution	Total Electricity Use	
Surface Water	Casitas MWD	*8,305*	*9,990*	*18,295*	*8,023*	*997*	*9,020*	*0*	*0*	*32*	*3,527*	*3,559*	*856*
	City of Ventura	*0*	*4,200*	*4,200*	*0*	*582*	*582*	*0*	*0*	*19*	*228*	*247*	*59*
	UWCD	*6,257*	*0*	*6,257*	*6,257*	*0*	*6,257*	*0*	*0*	*0*	*2,447*	*2,447*	*588*
	Private	*7,974*	*0*	*7,974*	*7,974*	*0*	*7,974*	*0*	*0*	*0*	*3,118*	*3,118*	*750*
	Surface Water Total	**22,536**	**14,190**	**36,726**	**22,254**	**414**	**22,668**	**0**	**0**	**14**	**8,864**	**8,877**	**2,134**
Imported Water	UWCD	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Calleguas MWD	*5,537*	*105,747*	*111,283*	*4,349*	*6,693*	*11,041*	*0*	*21542*	*308*	*-651.44*	*21,198*	*5,002*
	Imported SWP Total	**5,537**	**105,747**	**111,283**	**4,349**	**6,693**	**11,041**	**0**	**21,542**	**308**	**-651**	**21,198**	**4,899**
Groundwater	Casitas MWD				*25*	3	*28*	*1*	*0*	*0*	*11*	*12*	*3*
	Ojai GMA	*3401*	*2,037*	*5,438*	*3,401*	*237*	*3,638*	*1,067*	*0*	*8*	*1,422*	*2,497*	*600*
	FCGMA	*105,346*	*44,949*	*150,295*	*105,346*	*5,224*	*110,570*	*13,147*	*0*	*170*	*43,235*	*56,553*	*13,595*
	UWCD	*83,243*	*13,115*	*96,358*	*83,243*	*1,524*	*84,767*	*12,304*	*0*	*50*	*33,146*	*45,499*	*10,938*
	Private (unreported)	*24,591*	*4,868*	*29,459*	*24,591*	*566*	*25,157*	*3,648*	*0*	*18*	*9,837*	*13,503*	*3,246*
	Groundwater Total	**216,581**	**64,969**	**281,550**	**216,606**	**7,554**	**224,160**	**30,167**	**0**	**246**	**87,652**	**118,065**	**28,382**
Recycled Water	Oak Park Water Service	*0*	*790*	*790*	*0*	*92*	*92*	*0*	*0*	*63*		*63*	*15*
	Lake Sherwood CSD	*0*	*484*	*484*	*0*	*56*	*56*	*0*	*0*	*38*		*38*	*9*
	California Water Service Co.	0	*644*	*644*	*0*	*75*	*75*	*0*	*0*	*51*		*51*	*12*
	City of Simi Valley/ County *0* Waterworks No. 8	0	*56*	*56*	*0*	*7*	*7*	*0*	*0*	*4*		*4*	*1*
	Camarillo San. District	*1,840*	*46*	*1,886*	*1,840*	*5*	*1,845*	*0*	*0*	*4*		*4*	*1*
	Camrosa Water District Non-Potable	*4,687*	*1,372*	*6,059*	*4,687*	*159*	*4,846*	*0*	*0*	*109*		*109*	*26*
	Camrosa Water District Non-Potable to PVCWD	*3,241*	*0*	*3,241*	*3,241*	*0*	*3,241*	*0*	*0*	*0*		*0*	*0*
	Camrosa Water District CWRF Recycled (Title 22)	*901*	*268*	*1,170*	*901*	*31*	*932*	*0*	*0*	*21*		*21*	*5*
	Moorpark WWTP/County Waterworks No. 1	*3*	*718*	*721*	*3*	*83*	*86*	*0*	*0*	*57*		*57*	*14*
	City of Ventura/Ventura Water Reclamation Facility	0	*700*	*700*	*0*	*25*	*25*	*0*	*0*	*17*		*17*	*4*
	Recycled Water Total	**10,672**	**5,078**	**15,751**	**10,672**	**484**	**11,156**	**0**	**0**	***331***		**331**	**80**
TOTAL		**255,325**	**189,984**	**445,310**	**255,325**	**22,082**	**277,407**	**30,167**	**21,542**	**96,763**		**148,472**	**35,495**

Source: Table 8 of the County of Ventura. 2013 Water Supply and Demand. Prepared for: Ventura County Watershed Protection District. January 2015. No updates as of July 2018

Note: Assumes municipal and industrial water use is proportional to population. Assumes all agricultural water use takes place in the unincorporated County. Agricultural water

Note: Calleguas purchases water from the Metropolitan Water District of Southern California, which gets its water from surface water, SWP, CRA, and the LA Aqueduct.

Source: Ventura County 2013 Water Supply and Demand Report

Imported Water

Urban Water Energy Intensity Matrix in kWh/MG													
Supply		Conveyance		Treatment		Distribution							
Surface Water	0	SWP-L.A. Basin	8325	EPRI (Avg)	100	EPRI Avg.	1200						
Groundwater	4.45/MG/Foot	SWP-Bay Area	3150			Flat Topography	proposed						
Ocean Desalination	13800	SWP-Central Coast	3150			Moderate Topograph	proposed						
Brackish Water Desal	1,240- 5,220	SWP-San Joaquin Valley	1510			Hilly Topography	proposed						
Recycled Water	0	CRA-L.A. Basin	6140			Recycled Water	1,200-3,000						
		Hetch Hetchy- Bay Area	0										
		Mokelumne Aqueduct	160										
		Local/Intrabasin	120										
in kWh/AF													
Supply		Conveyance		Treatment		Distribution							
Surface Water	-	SWP-L.A. Basin	2,713	EPRI (Avg)	33	EPRI Avg.	391						
Groundwater (AF/MG/Foot)	1.45	SWP-Bay Area	1,026			Flat Topography	proposed						
Ocean Desalination	4,497	SWP-Central Coast	1,026			Moderate Topograph	proposed						
Brackish Water Desal	1,053	SWP-San Joaquin Valley	492			Hilly Topography	proposed						
Recycled Water	-	CRA-L.A. Basin	2,001			Recycled Water	684						
		Hetch Hetchy- Bay Area	-										
		Mokelumne Aqueduct	52										
		Local/Intrabasin	39										
Source: CEC-500-2006-118													
Additional Background Data and Assumptions													
Metropolitan Water District of Southern California Energy Intensity for 2014 (used as a proxy for Calleguas water)													
	kWh/AF												
Conveyance	1,951												
Treatment	46												
Distribution	-59												
Source: Metropolitan 2015 UWMP													
Average Groundwater Depth in Ventura County													
	Well Depth (ft)	Source											
Mira Monte Well	20	Well located in Upper Ventura River Groundwater Basin. This is the average depth of groundwater in that area. CMWD UWMP AND AWMP - 2016 UPDATE											
Ojai GMA	202.3	Appendix B of Ventura's 2013 Groundwater Section											
FCGMA	82	Appendix B of Ventura's 2013 Groundwater SectionAnnual Report											
UWCD	100.1	Appendix B of Ventura's 2013 Groundwater SectionAnnual Report											
Private (unreported)	100	Assumed											

Wastewater

Ventura County Greenhouse Gas Emissions Inventory - 2015

The unincorporated area uses a combination of centralized WWTP treatment at fringe communities near cities and on-site septic tank systems.

Wastewater Emissions in 2015

Source	MT CO2	MTCH4	MTN2O	MT CO2e
Septic Methane Emissions	0	202	0	5,648
WWTP Process Emissions	0	75	1	2,498
Total	0	277	1	8,146

Forecasted Wastewater Emissions (MT CO2e)

2020	2030	2035	2040	2050
5648	5648	5648	5648	5648
2498	2498	2498	2498	2498

Wastewater Emission Calculations

Wastewater Treatment Emissions

Type of Treatment	WWTP Service by Percent of Unincorporated Population	Served Population	MT CH4*	MT N2O	Total CO_2e Emissions (MT CO_2e/yr)
Septic Tank Treatment	53%	51,613	202	0.00	5,648
Centralized Sewer Treatment	47%	46,120	75.08	1.50	2,498
Centralized Aerobic Treatment	*41%*	*40,500*			
Process N2O Emissions from Effluent Discharge (default N load data)				*0.94*	
Centralized Anaerobic Treatment with Cogeneration	*6%*	*5,620*			
Process emissions			*74.83*		
Stationary CH4 from Incomplete Combustion of Digester Gas			*0.25*		
Process N2O Emissions from Effluent Discharge (default N load data)				*0.15*	
Process N2O Emissions from WWTP with Nitrification/Denitrification	*assume this applies to all WWTPs*			*0.40*	
		Total Septic	202	0	5,648
		Total WWTP Process Emissions	75	1	2,498
		Total	277	1	8,146

** See methods below from EPA Inventory of US GHG Emissions and Sinks*

Note: Aerobic treatment does not result in CH4 emissions

Background Data and Assumptions

Demographics Summary	2015	Source
Unincorporated Population	97,733	Background Report
Unincorporated Households	32,191	Background Report
Approximate Number of Private Septic Systems in County	17,000	Email from Ventura County (Shelley Sussman) to Ascent Environmental (Brenda Hom/Erik de Kok) (10/17/2018)
Number of Unincorporated HH's on Septic	17,000	Assumption
Number of Unincorporated HH's on Sewer	15,191	Calculation
Percent of Unincorporated Population on Septic	53%	Calculation

Wastewater Treatment Capacity and Service

Ventura County

From Table 7-3 of the background report

Agency	WWTP Name	Rated Capacity (MGD[1])	Percent of WW treated from Unincorporated County	Unincorporated WW treated in WWTPs (MGD)	Anaerobic Treatment?	Total Number of Connections
County Service Area No. 29	treated by City of Ventura	N/A				317
County Service Area No. 30	treated by City of Oxnard	N/A				510
County Service Area No. 32	countywide individual sewage disposal	N/A				N/A
County Service Area No. 34	treated by City of Oxnard	N/A				N/A
Camarillo Utility Enterprise	treated by Camarillo Sanitary District	N/A	0%			57
Todd Road Jail	On site WWTP	0.085	100%	0.09	No	N/A
Ventura County Waterworks District No. 1	Moorpark Wastewater Treatment Plant	5	15%	0.75	No	10,000 (population)
Ventura County Waterworks District No. 16	On site WWTP	0.5	100%	0.50	No	400 (population)

Wastewater

Camarillo Sanitary District	Camarillo WRP	7.25	40%	2.90	No	70,000 (population, city and unincorporated)				
Ojai Valley Sanitary District	Ojai Valley WWTP	3	63%	1.88	No	20,000 (customers)				
Saticoy Sanitary District	Jose Flores WWTP	0.25	100%	0.25	No	271				
Triunfo Sanitation District	Tapia Water Reclamation Facility	16	21%	3.38	No	12,300				
Camrosa Water District	Camrosa Water Reclamation Facility	1.5	100%	1.50	No	6,900				
City of Oxnard	City of Oxnard WWTP	32.7	1%	0.48	Yes, with cogeneration	40,000				
City of Simi Valley	Water Quality Control Plant	12.5	1%	0.16	No	40,000 (527 unincorporated)				
City of Thousand Oaks	Hill Canyon Wastewater Treatment Plant	14	9%	1.22	Yes, with cogeneration	130,000 (population)				
City of Ventura	Ventura Water reclamation facility	9	9%	0.80	No	N/A				
	Percent of Unincorporated Centralised WW treated aerobically			88%						
	Percent of Unincorporated Centralised WW treated anaerobically			12%						

Residential Wastewater Methods

Data Source: Total unincorporated population. Percentage breakdown of population served by Septic and Sewer systems. Percent breakdown of aerobic and anaerobic

Domestic Wastewater CH4 Emission Estimates from EPA Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2014

Emissions from Septic Systems = A
= US_{POP} × (% onsite) × (EF_{SEPTIC}) × $1/10^9$ × Days

Emissions from Centrally Treated Aerobic Systems = B
= [(% collected) × (total BOD_5 produced) × (% aerobic) × (% aerobic w/out primary) + (% collected) × (total BOD_5 produced) × (% aerobic) × (% aerobic w/primary) × (1-% BOD removed in prim. treat.)] × (% operations not well managed) × (B_o) × (MCF-aerobic_not_well_man)

Emissions from Centrally Treated Anaerobic Systems = C
= [(% collected) × (total BOD_5 produced) × (% anaerobic) × (% anaerobic w/out primary) + (% collected) × (total BOD_5 produced) × (% anaerobic) × (% anaerobic w/primary) × (1-% BOD removed in prim. treat.)] × (B_o) × (MCF-anaerobic)

Emissions from Anaerobic Digesters = D
= [(POTW_flow_AD) × (digester gas)/ (per capita flow)] × conversion to m^3 × (FRAC_CH_4) × (365.25) × (density of CH_4) × (1-DE) × $1/10^9$

Total CH_4 Emissions (kt) = A + B + C + D

where,

US_{POP}	= U.S. population
% onsite	= Flow to septic systems / total flow
% collected	= Flow to POTWs / total flow
% aerobic	= Flow to aerobic systems / total flow to POTWs
% anaerobic	= Flow to anaerobic systems / total flow to POTWs
% aerobic w/out primary	= Percent of aerobic systems that do not employ primary treatment
% aerobic w/primary	= Percent of aerobic systems that employ primary treatment
% BOD removed in prim. treat.	= 32.5%
% operations not well managed	= Percent of aerobic systems that are not well managed and in which some anaerobic degradation occurs
% anaerobic w/out primary	= Percent of anaerobic systems that do not employ primary treatment
% anaerobic w/primary	= Percent of anaerobic systems that employ primary treatment
EF_{SEPTIC}	= Methane emission factor (10.7 g CH_4/capita/day) – septic systems
Days	= days per year (365.25)
Total BOD_5 produced	= kg BOD/capita/day × U.S. population × 365.25 days/yr
B_o	= Maximum CH_4-producing capacity for domestic wastewater (0.60 kg CH_4/kg BOD)
$1/10^6$	= Conversion factor, kg to kt
MCF-aerobic_not_well_man.	= CH_4 correction factor for aerobic systems that are not well managed (0.3)
MCF-anaerobic	= CH_4 correction factor for anaerobic systems (0.8)
DE	= CH_4 destruction efficiency from flaring or burning in engine (0.99 for enclosed flares)
POTW_flow_AD	= Wastewater influent flow to POTWs that have anaerobic digesters (MGD)
digester gas	= Cubic feet of digester gas produced per person per day (1.0 ft^3/person/day)
per capita flow	= Wastewater flow to POTW per person per day (100 gal/person/day)
conversion to m^3	= Conversion factor, ft^3 to m^3 (0.0283)
FRAC_CH_4	= Proportion CH_4 in biogas (0.65)
density of CH_4	= 662 (g CH_4/m^3 CH_4)
$1/10^9$	= Conversion factor, g to kt

Source: EPA Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2014. Waste. Chapter 7. 7-18

Process CH4 Emissions from Anaerobic and facultative treatment lagoons

Equation 10.4 from the LGOP

Equation 10.4	Process CH_4 from Wastewater Treatment Lagoons (default values)
Annual CH_4 emissions (metric tons CO_2e) =	
((P x $F_{ind\text{-}com}$) x BOD_5 load x (1-F_P) x Bo x MCF $_{anaerobic}$ x 365.25 x 10^{-3}) x GWP	

Where:

Term		Description	Value
P	=	population served by lagoons adjusted for industrial discharge, if applicable [person]	user input
$F_{ind-com}$	=	factor for industrial and commercial co-discharge waste into the sewer system	1.25
BOD_5 load	=	amount of BOD_5 produced per person per day [kg BOD_5/person/day]	0.090
F_P	=	fraction of BOD_5 removed in primary treatment, if present	0.325*
Bo	=	maximum CH_4-producing capacity for domestic wastewater [kg CH_4/kg BOD_5 removed]	0.6
$MCF_{anaerobic}$	=	CH_4 correction factor for anaerobic systems	0.8
365.25	=	conversion factor [day/year]	365.25
10^{-3}	=	conversion from kg to metric ton [metric ton/kg]	10^{-3}
GWP	=	Global Warming Potential	21

Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-9 (2009) except: *F_P: Tchobanoglous, G., F.L. Burton, and H.D. Stensel, *Wastewater Engineering: Treatment and Reuse*, p. 396, 4th Edition (2003).

Stationary CH4 from Incomplete Combustion of Digester Gas (default)
Equation 10.2 from the LGOP

Equation 10.2 Stationary CH_4 from Incomplete Combustion of Digester Gas (default)

Annual CH_4 emissions (metric tons CO_2e) =

$(P \times \text{Digester Gas} \times F_{CH4} \times \rho(CH_4) \times (1\text{-}DE) \times 0.0283 \times 365.25 \times 10^{-6}) \times GWP$

Where:

Term		Description	Value
P	=	population served by the WWTP with anaerobic digesters	user input
Digester Gas	=	cubic feet of digester gas produced per person per day [ft^3/person/day]	1.0
F_{CH4}	=	fraction of CH_4 in biogas	0.65
$\rho(CH_4)$	=	density of methane [g/m^3]	662.00
DE	=	CH_4 Destruction Efficiency	.99
0.0283	=	conversion from ft^3 to m^3 [m^3/ft^3]	0.0283
365.25	=	conversion factor [day/year]	365.25
10^{-6}	=	conversion from g to metric ton [metric ton/g]	10^{-6}
GWP	=	Global Warming Potential	21

Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-7 (2009).

Process N2O Emissions from WWTP with Nitrification/Denitrification
Equation 10.7 from the LGOP

Equation 10.7 Process N_2O Emissions from WWTP with Nitrification/Denitrification

Annual N_2O emissions (metric tons CO_2e) =

$((P_{total} \times F_{ind\text{-}com}) \times EF\ nit/denit \times 10^{-6}) \times GWP$

Where:

Term		Description	Value
P_{total}	=	total population that is served by the centralized WWTP adjusted for industrial discharge, if applicable [person]	user input
$F_{ind\text{-}com}$	=	factor for industrial and commercial co-discharge waste into the sewer system	1.25
EF nit/denit	=	emission factor for a WWTP with nitrification/denitrification [g N_2O/person/year]	7
10^{-6}	=	conversion from g to metric ton [metric ton/g]	10^{-6}
GWP	=	N_2O Global Warming Potential	310

Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-13 (2009).

Process N2O Emissions from Effluent Discharge (default N load data)
Equation 10.10 from the LGOP

Equation 10.10 Process N_2O Emissions from Effluent Discharge (default N load data)

Annual N_2O emissions (metric tons CO_2e) =

$((P_{total} \times F_{ind\text{-}com}) \times (\text{Total N Load} - \text{N uptake} \times BOD_5\ load) \times EF\ effluent \times 44/28 \times (1 - F\ plant\ nit/denit) \times 365.25 \times 10^{-3}) \times GWP$

Where:

Term		Description	Value
P_{total}	=	population served [person]	user input
$F_{ind\text{-}com}$	=	factor for industrial and commercial co-discharge waste into the sewer system	1.25
Total N Load[27]	=	total nitrogen load [kg N/person/day]	0.026
N uptake[28]	=	nitrogen uptake for cell growth in aerobic system (kg N/kg BOD_5)	0.05[1]
	=	nitrogen uptake for cell growth in anaerobic system (e.g., lagoon) (kg N/kg BOD_5)	0.005[1]
BOD_5 load	=	amount of BOD_5 produced per person per day [kg BOD_5/person/day]	0.090
EF effluent	=	emission factor [kg N_2O-N/kg sewage-N produced]	0.005
44/28	=	molecular weight ratio of N_2O to N_2	1.57
F plant nit/denit	=	fraction of nitrogen removed for the centralized WWTP with nitrification/denitrification	0.7[1]

	=	fraction of nitrogen removed for the centralized WWTP w/o nitrification/denitrification	0.0[1]
365.25	=	conversion factor [day/year]	365.25
10^{-3}	=	conversion from kg to metric ton [metric ton/kg]	10^{-3}
GWP	=	Global Warming Potential	310

Source: EPA *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2007*, Chapter 8, 8-13 (2009), except:
[1] Grady, C. P. L., Jr., G. T. Daigger, and H. C. Lim, *Biological Wastewater Treatment*, p. 108-109, 644 2nd Edition (1999).

Agriculture

Ventura County Greenhouse Gas Emissions Inventory - 2015

Agricultural Emissions in 2015

	MT CO2	MT CH4	MT N2O	MT CO2e	Scaled MTCO2e	% of total Ag	Year
Residue Burn	7,928	8	1	8,494	8,514	3%	2015
Enteric Fermentation	0	329	0	9,212	8,225	4%	2015
Manure Management	0	16	2	864	869	0%	2015
Farm Equipment	67,410	7	1	67,829	67,834	28%	2015
Agricultural Irrigation Pumps	22,257	0	0	22,257	21,625	9%	2015
Pesticide	0	0	0	0	658	0%	2015
Fertilizer	0	0	495	131,113	146,983	54%	2015
Lime Application	294	0	0	294	291	0%	2015
Urea Fertilization	4,941	0	0	4,941	4,894	2%	2015
Total	**102,830**	**360**	**499**	**245,004**	**259,894**	**54%**	

Agricultural Emissions Forecasting 2020-2040

	2020	2030	2035	2040	2050
Residue Burn	8,298	7,864	7,647	7,430	6,996
Enteric Fermentation	8,171	8,062	8,007	7,953	7,844
Manure Management	864	852	846	841	829
Farm Equipment	66,107	62,651	60,923	59,196	55,740
Agricultural Irrigation Pumps	21,074	19,972	19,422	18,871	17,769
Pesticide	641	608	591	574	541
Fertilizer	146,011	144,068	143,096	142,124	140,181
Lime Application	289	285	283	282	278
Urea Fertilization	4,769	4,520	4,395	4,270	4,021
Total	**256,223**	**248,882**	**245,211**	**241,541**	**234,200**

Stationary Sources

Ventura County Greenhouse Gas Emissions Inventory - 2015

Stationary Source Emissions (Oil and Gas Emissions) in 2015

Emissions Source	Activity	MT CO2 (non-biomass)	MT CH4	MT N2O	MT CO2e			
Fuel combustion	Associated gas	170,161	3	0.26	170,305			
Fuel combustion	Distillate	4,568	0	0.04	4,583			
Fuel combustion	Natural gas	-	-	-	0			
Fuel combustion	Residual fuel oil	-	-	-	0			
Fugitive emissions	Processing	6,931	303	-	14,507			
Fugitive emissions	Production	13,278	2,585	-	77,912			
Fugitive emissions	Storage	-	311	-	7,787			
Fugitive emissions	Wastewater Treatment	-	0	-	1			
Total		194,939	3,203	0	275,096		0.1037	

Source: CARB Mandatory Reporting Rule - 2016 (Latest available as of 11/6/2017)

Estimating Ventura County Stationary Source Emissions from Oil and Gas

Ventura County Emissions

Main Activity	Activity Subset	Ventura County Scaling Factor	County percent of state emissions	Ventura County Emissions (MMT)*	Ventura County Emissions (MT)*	Ventura County Emissions (MTCO2e)*	% of Stat. Source O&G Emissions	GHG
Fuel combustion	Associated gas	Associated Gas (Mcf)	5%	2.61E-07	0	69.23	0.0%	N2O
Fuel combustion	Associated gas	Associated Gas (Mcf)	5%	1.70E-01	170,161	170,161.45	59.8%	CO2
Fuel combustion	Associated gas	Associated Gas (Mcf)	5%	2.61E-06	2.61	73.15	0.0%	CH4
Fuel combustion	Distillate	Oil Produced (bbls)**	4%	1.85E-07	0	5.19	0.0%	CH4
Fuel combustion	Distillate	Oil Produced (bbls)**	4%	4.57E-03	4,567.58	4,567.58	1.6%	CO2
Fuel combustion	Distillate	Oil Produced (bbls)**	4%	3.71E-08	0.04	9.82	0.0%	N2O
Fuel combustion	Natural gas	Non Associated Gas (Mcf)	0%	0.00E+00	-	-	0.0%	CH4
Fuel combustion	Natural gas	Non Associated Gas (Mcf)	0%	0.00E+00	-	-	0.0%	CO2
Fuel combustion	Natural gas	Non Associated Gas (Mcf)	0%	0.00E+00	-	-	0.0%	N2O
Fuel combustion	Residual fuel oil	Oil Produced (bbls)**	0%	0.00E+00	-	-	0.0%	CO2
Fuel combustion	Residual fuel oil	Oil Produced (bbls)**	0%	0.00E+00	-	-	0.0%	N2O
Fuel combustion	Residual fuel oil	Oil Produced (bbls)**	0%	0.00E+00	-	-	0.0%	CH4
Fugitive emissions	NA	Overall production	4%	3.03E-04	303	8,485.31	3.0%	CH4
Fugitive emissions	NA	Overall production	4%	6.93E-03	6,931	6,931.20	2.4%	CO2
Fugitive emissions	NA	Overall production	4%	2.59E-03	2,585	72,389.42	25.4%	CH4
Fugitive emissions	NA	Overall production	4%	1.33E-02	13,278	13,278.42	4.7%	CO2
Fugitive emissions	NA	Overall production	4%	3.11E-04	311	8,721.78	3.1%	CH4
Fugitive emissions	NA	Water Produced (bbls)	2%	2.00E-08	0	0.56	0.0%	CH4
				TOTAL	198,142	**284,693**	**100.0%**	

* Scaled to Ventura County based on county's relative production in the state. Note that non-associated gases are generally natural gas. Associated gases are unwanted byproducts of crude oil production.

Statewide Stationary Source Emissions from Oil and Gas (Output from CARB's Statewide GHG Inventory)

GHG Emission Inventory Summary [2000 - 2016]
Sub Sector Level 1: Oil & Gas Extraction
Inventory Accounting: Included
Measurement: Gas Mass
Unit: million tonnes

Statewide Emissions

Sub Sector Level 1	Sub Sector Level 2	Sub Sector Level 3	Main Activity	Activity Subset	GHG	2015 (Million Metric Tons)	2015 (Metric Tons CO2e)
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Associated gas	N2O	5.1372E-06	1,361
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Associated gas	CO2	3.346208708	3,346,209
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Associated gas	CH4	5.13724E-05	1,438
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Distillate	CH4	4.4397E-06	124
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Distillate	CO2	0.109454292	109,454
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Distillate	N2O	8.879E-07	235
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Natural gas	CH4	0.00025934	7,262
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Natural gas	CO2	13.75020079	13,750,201
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Natural gas	N2O	0.000025934	6,873
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Residual fuel oil	CO2	0	-
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Residual fuel oil	N2O	0	-
Oil & Gas: Production & Processing	Not Specified	None	Fuel combustion	Residual fuel oil	CH4	0	-
Oil & Gas: Production & Processing	Processing	Fugitives	Fugitive emissions	NA	CH4	0.007122541	199,431
Oil & Gas: Production & Processing	Processing	Fugitives	Fugitive emissions	NA	CO2	0.162904835	162,905
Oil & Gas: Production & Processing	Production	Fugitives	Fugitive emissions	NA	CH4	0.060763449	1,701,377
Oil & Gas: Production & Processing	Production	Fugitives	Fugitive emissions	NA	CO2	0.312084267	312,084
Oil & Gas: Production & Processing	Storage	Fugitives	Fugitive emissions	NA	CH4	0.007321038	204,989
Oil & Gas: Production & Processing	Wastewater Treatment	Fugitives	Fugitive emissions	NA	CH4	1.1401E-06	32
Source: CARB's California GHG Emission Inventory Summary [2000 - 2016] (https://www.arb.ca.gov/app/ghg/2000_2016/ghg_sector.php)					TOTAL	18	19,803,975

State Report on Well Count and Production of Oil, Gas, and Water by County - 2015

WELL COUNT AND PRODUCTION OF
OIL, GAS AND WATER BY COUNTY - 2015

County	**Well Count***			**Net Gas Production**			
	Active	Inactive	**Oil Produced (bbls)****	Associated Gas (Mcf)	Non Associated Gas (Mcf)	Total Net Gas (Mcf)	**Water Produced (bbls)**
Alameda	6	2	9687	847	0	847	30156
Butte	26	1	0	0	11,054	11,054	87
Colusa	188	176	0	0	4,157,952	4,157,952	59,722
Contra Costa	38	23	93	0	333,759	333,759	7,418
Fresno	2,113	1,597	7,232,606	477,027	3,381	480,408	81,983,297
Glenn	22,08,00	5,04,00	0,01,00	0,01,00	4,10,48	4,10,48	27,07,23
Humboldt	25	33	0	0	468,543	468,543	8,700
Kern	44,284	16,643	144,472,957	129,102,663	1,842,826	130,945,489	1,991,303,876
Kings	181	207	271,000	219,930	0	219,930	706,767
Lassen	0	5	0	0	0	0	0
Los Angeles	3,885	1,736	23,808,695	17,015,642	225,814	17,241,456	913,784,022
Madera	18	18	0	0	637,923	637,923	1,070
Merced	0	2	0	0	0	0	0
Monterey	729	522	8,100,648	1,022,578	0	1,022,578	125,737,028
Orange	1,030	455	4,667,014	2,530,180	0	2,530,180	105,367,969
Riverside	0	4	0	0	0	0	0

Stationary Sources

Sacramento	92	114	11,805	0	5,558,920	5,558,920	211,853	
San Benito	20	25	14,813	18,791	0	18,791	102,474	
San Bernardino	25	13	8000	695	0	695	7479	
San Joaquin	141	88	0	0	1,829,324	1,829,324	87,139	
San Luis Obispo	231	129	536,845	174,226	0	174,226	11,533,722	
San Mateo	2	11	75	0	0	0	3	
Santa Barbara	1,129	1,028	4,338,695	3,065,153	1,158	3,066,311	113,516,855	
Santa Clara	13	2	26,784	8,363	0	8,363	26,243	
Solano	99	146	4,707	0	2,559,654	2,559,654	66,004	
Stanislaus	1	1	0	0	61,332	61,332	35	
Sutter	237	182	0	0	4,833,949	4,833,949	71,961	
Tehama	99	51	0	0	1,239,748	1,239,748	23,813	
Tulare	75	15	39237	0	0	0	3783973	
Ventura	1,705	1,303	8,428,402	8,231,282	0	8,231,282	59,853,491	
Yolo	25	56	170	0	171,736	171,736	2,476	
Yuba	1	0	0	0	1,131	1,131	0	
TOTAL	56,653	24,684	201,972,233	161,867,377	27,948,252	189,815,629	3,408,359,291	
Ventura County percent of total	3%	5%	4.2%	5.1%	0.0%	4.3%	1.8%	
*Includes Oil & Gas (OG), Dry Gas (DG) and Gas Storage (GS)								
** Includes condensate from Dry Gas (DG) and Gas Storage (GS)								
Source: ftp://ftp.consrv.ca.gov/pub/oil/annual_reports/2015/County_Production_2015.pdf								
Oil and Gas Production Forecast								
	2015	**2020**	**2030**	**2040**	**2050**			
Ventura County Oil Production	8,428,402	8,819,019	8,152,109	9,648,506	9,499,223			
Scaled Emissions	275,096	287,845	314,526	343,679	375,535			

Assumptions

Category				Source/Notes				
Conversions								
g/MT	1000000							
g/lb	453.592							
lb/MT	2204.622622							
kg/MT	1000							
MT/ton	1.10231							
g/ton	907185							
lb/kg	2.20462							
kWh/MWh	1000							
MWh/GWh	1000							
Btu/therm	100000							
BTU/gal diesel	139000							
MMBtu/therm	0.1							
MMBtu/MWh	3.41214148							
LPG Gallons/GGE	1.344086022							
LNG Gallons/GGE	1.572327044							
gal/cubic foot	7.480519481							
gal/Liter	3.785411784							
gallon/acrefoot	325851.429							
million gal/acre-feet	0.325851429							
GWP								
Source (Select)	*IPCC Fifth Assessment Report GWP Values 100-year horizon*	<--drop down selection (note: Agricultural emissions will need to be updated separately.						
CO2	1							
CH4	28							
N2O	265							
	IPCC Fourth Assessment Report (w/o climate carbon feedback)	*IPCC Fourth Assessment Report (Avg)*	*IPCC Second Assessment Report*	*IPCC Fourth Assessment Report (with climate carbon feedback)*	*IPCC Fifth Assessment Report GWP Values 100-year horizon*	*IPCC Fifth Assessment Report GWP Values 20-year horizon*		
CO2	1	1	1	1	1	1		
CH4	25	25	21	34	28	84		
N2O	265	298	310	298	265	264		
Electricity Emission Factors								
SCE	**2015**	**2020**	**2030**	**2035**	**2040**	**2045**		
RPS Status	25%	33%	50%	66.7%	83.3%	100%	SCE 2015 Power Content Label (https://www.energy.ca.gov/pcl/labels/2015_index.html)	
SCE Power Mix 2015								
Natural Gas	26%							
Unspecified Sources	41%							
GHG Free Sources	33%							
SCE 2015 Calculated EFs								
lb CO2/MWh	**529**	**472.67**	**352.74**	**235.16**	**117.58**	**0.00**	2016 SCE Corporate Responsibility Report	
lb CH4/GWh	**14.95**	**13.35**	**9.97**	**6.64**	**3.32**	**0.00**	Calculated from eGrid 2016 NG & Other Efs	
lb N2O/GWh	**1.66**	**1.48**	**1.11**	**0.74**	**0.37**	**0.00**	Calculated from eGrid 2016 NG & Other Efs	
MT CO2e/MWh	**0.240**	**0.215**	**0.160**	**0.107**	**0.053**	**0.000**	Calculated	
California Average	**2015**	**2020**	**2030**	**2035**	**2040**	**2045**		
RPS Status	**25.0%**	**33.0%**	**50%**	**67%**	**83%**	**100%**		
CA Average Power Mix 2015							SCE 2015 Power Content Label (https://www.energy.ca.gov/pcl/labels/2015_index.html)	
Natural Gas	44%							
Unspecified Sources	15%							
Coal	6%							
GHG Free Sources	41%							
CA Average 2015 Calculated EFs								
lb CO2/MWh	**519.21**	**463.8**	**346.1**	**230.5**	**115.6**	**0.0**	Calculated from eGrid 2016 NG & Other Efs	
lb CH4/GWh	**11.96**	**10.7**	**8.0**	**5.3**	**2.7**	**0.0**	Calculated from eGrid 2016 NG & Other Efs	
lb N2O/GWh	**2.32**	**2.1**	**1.5**	**1.0**	**0.5**	**0.0**	Calculated from eGrid 2016 NG & Other Efs	
MT CO2e/MWh	**0.236**	**0.211**	**0.157**	**0.105**	**0.053**	**0.000**	Calculated	

Assumptions

eGrid 2016 Emission Factors (For Calculation of California Average EFs)				Updated February 2017				
Natural Gas EFs: eGRID2016 Average of California Natural Gas Electricity Plant EFs				https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid				
lb CO2/MWh	867.88			Weighted average based on annual plant net generation				
lb CH4/GWh	16.50			Weighted average based on annual plant net generation				
lb N2O/GWh	1.66			Weighted average based on annual plant net generation				
MT CO2e/MWh	**0.3941**			Calculated				
Coal EFs: eGRID2016 Average of California Coal Electricity Plant EFs				https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid				
lb CO2/MWh	1157.82			Weighted average based on annual plant net generation				
lb CH4/GWh	13.41			Weighted average based on annual plant net generation				
lb N2O/GWh	18.98			Weighted average based on annual plant net generation				
MT CO2e/MWh	**0.5276**			Calculated				
Unspecified EFs: eGRID2016 CAMX Emission Factors				unspecified power sources				
lb CO2/MWh	452.50			CAMX avg				
lb CH4/GWh	26.00			CAMX avg				
lb N2O/GWh	3.00			CAMX avg				
kg/MWh	205.25			Calculated				
kg/GWh	11.79			Calculated				
kg/GWh	1.36			Calculated				
Utility Natural Gas Emission Factors								
kg CO_2/MMBtu	53.06		Natural Gas - US Weighted Averag	2017 Climate Registry Emission Factors. Table 12.1.				
g CH4/MMBtu	4.7		Natural Gas - Residential/Commer	2017 Climate Registry Emission Factors. Table 12.9.				
g N2O/MMBtu	0.1		Natural Gas - Residential/Commer	2017 Climate Registry Emission Factors. Table 12.9.				
MT CO2/therm	0.005306			Calculated				
MT CH4/therm	0.000047			Calculated				
MT N2O/therm	0.000001			Calculated				
MT CO2e/therm	**0.0069**			Calculated				
The Climate Registry 2017 Default Emission Factors								
Fuel Type	**Carbon Content (Per Unit Energy)**	**CO2 Emission Factor** (Per Unit Volume)						
Fuels Measured in Gallons	**kg C / MMBtu**	**kg CO2 / gallon**						
Gasoline	19.2	8.78						
Diesel Fuel	20.2	10.21						
Aviation Gasoline	18.9	8.31						
Jet Fuel (Jet A or A-1)	19.7	9.75						
Kerosene	20.5	10.15						

Assumptions

Residual Fuel Oil No. 5	19.9	10.21						
Residual Fuel Oil No. 6	20.5	11.27						
Crude Oil	20.3	10.29						
Biodiesel (B100)	20.1	9.45						
Ethanol (E100)	18.7	5.75						
Methanol	n/a	4.10						
Liquefied Natural Gas (LNG)*	n/a	4.46						
Liquefied Petroleum Gas (LPG)	17.2	5.68						
Propane (Liquid)	16.8	5.72						
Ethane	17.1	4.11						
Isobutane	17.7	6.30						
Butane	17.8	6.54						

Fuels Measured in Standard Cubic Feet	kg C / MMBtu	kg CO2 / Standard cubic foot
Compressed Natural Gas (CNG)*	14.47	0.054
Propane (Gas)	16.76	0.1546

Source: Heat content and default emission factors are from EPA Final Mandatory Reporting of Greenhouse Gases Rule Table C-1.
Carbon content derived using the heat content and default emission factor. Except those marked * are from EPA Climate Leaders, Mobile Combustion Guidance, Tables B-4, B-5, (2008). A fraction oxidized value of 1.00 is from the IPCC, *Guidelines for National Greenhouse Gas Inventories* (2006). Methanol emission factor is calculated from the properties of the pure compounds.
Note: Carbon contents are calculated using the following equation: (Emission Factor / (44/12)) / Heat Content × Conversion Factor. Heat content factors are based on higher heating values (HHV). NA = data not available.

Vehicle Type / Fuel Type	CH4 (g / gallon)	N2O (g / gallon)
Ships and Boats		
Residual Fuel Oil	0.11	0.60
Diesel Fuel	0.74	0.45
Gasoline	0.06	0.22
Locomotives		
Diesel Fuel	0.80	0.26
Agricultural Equipment		
Gasoline	1.26	0.22
Diesel Fuel	1.44	0.26
Construction/Mining Equipment		
Gasoline	0.50	0.22
Diesel Fuel	0.58	0.26
Other Non-Highway		
Snowmobiles (Gasoline)	0.50	0.22
Other Recreational (Gasoline)	0.50	0.22
Other Small Utility (Gasoline)	0.50	0.22
Other Large Utility (Gasoline)	0.50	0.22
Other Large Utility (Diesel)	0.58	0.26
Aircraft		
Jet Fuel	0.00	0.31
Aviation Gasoline	7.05	0.11

Source: US Inventory of Greenhouse Gas Emissions and Sinks 1990-2011 (April 2013) Annex 3, Table A-106. Original factors converted to g/gallon fuel using fuel density defaults from U.S. EPA Climate Leaders, Mobile Combustion Guidance (2008) Table A-6.

Vehicle Type / Fuel Type	CH4 (g / L)	N2O (g / L)
Diesel Passenger Cars		
Advanced	0.0005	0.0010
Moderate	0.0005	0.0010
Uncontrolled	0.0006	0.0012
Diesel Light Trucks		
Advanced	0.0010	0.0015
Moderate	0.0009	0.0014
Uncontrolled	0.0011	0.0017
Diesel Medium and Heavy-Duty Vehicles (Trucks and Busses)		
Aftertreatment	0.0051	0.0048
Advanced	0.0051	0.0048
Moderate	0.0051	0.0048
Uncontrolled	0.0051	0.0048
CNG Medium and Heavy-Duty Vehicles (Trucks and Busses)		
CNG	1.9660	0.1750

Assumptions

Fuel Type	Heat Content	CO2 Emission Factor (Per Unit Energy)	CO2 Emission Factor (Per Unit Mass or Volume)
Natural Gas	**Btu / scf**	**kg CO2 / MMBtu**	**kg CO2 / scf**
US Weighted Average	1026.00	53.06	0.05
Greater than 1,000 Btu*	>1000	53.06	varies
975 to 1,000 Btu*	975 – 1,000	54.01	varies

Fuel Type / End-Use Sector	CH4 (g / MMBtu)	N2O (g / MMBtu)
Coal		
Residential	300.7	1.5
Commercial	10.0	1.5
Petroleum Products		
Residential	10.0	0.6
Commercial	10.0	0.6
Natural Gas		
Residential	4.7	0.1
Commercial	4.7	0.1
Wood		
Residential	253.2	3.4
Commercial	253.2	3.4

Population growth

Population	2013	2015	Growth from 2013	Source
Ventura County	836,154	NA	NA	County of Ventura. 2013 Water Supply and Demand.
Ventura County	840,867	850,491	1%	Department of Finance
Unincorporated County		97,733		Department of Finance
City of Ventura Population		108,037		Department of Finance
Population supplied by City of Ventura		112,412		City of Ventura 2015 UWMP

Land Use Trends

	2015	2020	2030	2035	2040	2015 - 2040 Trend	Annual
Important Farmland	120923	114410	109967	107745	105524	-12.7%	-0.5%
Grazing Land	192742	195394	190882	188626	186370	-3.3%	-0.1%

Source: 2020 - 2040 Projections based on 1984-2016 Land Use Data from California Department of Conservation's Farmland Mapping and Monitoring Program. See Land Use Growth Trends Spreadsheet.

Oil & Gas Production Trends

Year	Oil Production - Ventura (bbl)	Oil Production Statewide (bbl)	VC % of CA Production	VC Gas Total (Mcf)	Gas- Statewide (Mcf)	VC % of State
2008	7,466,152	214,594,985	3.5%	7,626,361	265,444,881	2.9%
2009	7,665,283	207,460,084	3.7%	7,799,236	259,163,379	3.0%
2010	7,944,456	200,821,137	4.0%	7,951,650	262,884,801	3.0%
2011	8,308,059	196,765,874	4.2%	7,676,656	242,708,524	3.2%
2012	8,977,459	197,698,232	4.5%	8,411,316	257,930,507	3.3%
2013	8,973,076	199,772,433	4.5%	8,275,223	208,490,371	4.0%
2014	9,101,060	203,861,896	4.5%	8,558,641	226,194,845	3.8%
2015	8,428,402	201,972,233	4.2%	8,231,282	189,815,629	4.3%
2016	7,729,845	186,660,463	4.1%	4,049,625	156,005,114	2.6%
2017	6,988,161	174,061,822	4.0%	6,503,659	162,701,671	4.0%
Average	8,158,195	198,366,916	4.1%	7,508,365	223,133,972	3.4%

Assumptions

Scaling Factor	0.0093	-0.0076	0.0184	-0.0015	-0.0159	0.0184		
Solid Waste Charactarization								
Commercial Waste (w/o) organics	12,296	0.277195619		2014 Commercial Waste Stream by Material Type				
Residential Waste (w/o) organics	14,387	0.324338338		2014 Residential Waste Stream by Material Type				
Organics - Commercial	7,936							
Organics - Residential	9,739							
Organics - Combined	17,675	0.398468357						
Solid Waste	**44,358**							

EMFAC

EMFAC 2017 Emission Factor Summary by SCAG Vehicle Category

SCAG Vehicle Category	CO2 g/mi	CH4 g/mi	N2O g/mi		VMT Test	
Light Duty	360.2	0.0113	0.0001		15,367,891	81%
Heavy Duty	676.7	0.0190	0.0003		3,498,707	18%
Buses	1502.3	1.6224	0.0039		51,641	0.27%
g per ton	907185					

Output from EMFAC 2017

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: VENTURA
Calendar Year: 2015
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

														Weighted by VMT and SCAG Vehicle Categor		
Region	Calendar Y	Vehicle Cat	SCAG VEH	Model Yea	Speed	Fuel	Population	VMT	Trips	CO2 g/mi	CH4 g/mi	N2O g/mi	CO2 g/mi	CH4 g/mi	N2O g/mi	
VENTURA	2015	HHDT	Heavy Duty	Aggregated	Aggregated	GAS	10.45532	201.3982	209.1899	2785.411	0.881322	0	0.160338	5.07E-05	0	
VENTURA	2015	HHDT	Heavy Duty	Aggregated	Aggregated	DSL	2856.269	284092.6	26805.65	1751.784	0.017333	0.002129	142.2437	0.001407	0.000173	
VENTURA	2015	HHDT	Heavy Duty	Aggregated	Aggregated	NG	56.59271	2269.64	220.7116	3747.758	8.386015	0.051671	2.431202	0.00544	3.35E-05	
VENTURA	2015	LDA	Light Duty	Aggregated	Aggregated	GAS	257764.5	9735877	1202803	316.1007	0.007679	0	200.2563	0.004865	0	
VENTURA	2015	LDA	Light Duty	Aggregated	Aggregated	DSL	2796.395	112916.6	13162.62	235.6607	0.001433	0	1.731533	1.05E-05	0	
VENTURA	2015	LDA	Light Duty	Aggregated	Aggregated	ELEC	1140.434	40720.84	5813.706	0	0	0	0	0	0	
VENTURA	2015	LDT1	Light Duty	Aggregated	Aggregated	GAS	29792.02	997682.6	132083.3	373.7735	0.01987	0	24.26536	0.00129	0	
VENTURA	2015	LDT1	Light Duty	Aggregated	Aggregated	DSL	54.68934	1029.592	191.4097	436.7623	0.013292	0	0.029261	8.91E-07	0	
VENTURA	2015	LDT1	Light Duty	Aggregated	Aggregated	ELEC	32.97446	940.8672	155.8403	0	0	0	0	0	0	
VENTURA	2015	LDT2	Light Duty	Aggregated	Aggregated	GAS	97569.81	3640831	453078.5	416.0682	0.010528	0	98.57137	0.002494	0	
VENTURA	2015	LDT2	Light Duty	Aggregated	Aggregated	DSL	322.5063	14907.64	1592.299	330.01	0.001343	0	0.320127	1.3E-06	0	
VENTURA	2015	LDT2	Light Duty	Aggregated	Aggregated	ELEC	11.25957	370.4754	55.94908	0	0	0	0	0	0	
VENTURA	2015	LHDT1	Light Duty	Aggregated	Aggregated	GAS	9667.95	322240.2	144038	850.1204	0.019494	0.003761	17.82567	0.000409	7.89E-05	
VENTURA	2015	LHDT1	Light Duty	Aggregated	Aggregated	DSL	7012.299	267489	88205.91	518.1401	0.006361	0.000134	9.018595	0.000111	2.33E-06	
VENTURA	2015	LHDT2	Light Duty	Aggregated	Aggregated	GAS	1520.846	55364.76	22658.34	967.5943	0.010591	0.003614	3.48588	3.82E-05	1.3E-05	
VENTURA	2015	LHDT2	Light Duty	Aggregated	Aggregated	DSL	2290.518	91034.81	28811.84	569.3862	0.005418	0.000128	3.372874	3.21E-05	7.6E-07	
VENTURA	2015	MCY	Light Duty	Aggregated	Aggregated	GAS	16078.67	86485.62	32157.33	237.4706	0.364528	0	1.336409	0.002051	0	
VENTURA	2015	MDV	Heavy Duty	Aggregated	Aggregated	GAS	80904.03	2792548	373672.3	495.8916	0.011941	0	395.8037	0.009531	0	
VENTURA	2015	MDV	Heavy Duty	Aggregated	Aggregated	DSL	929.7188	41024.04	4600.713	428.7903	0.000916	0	5.027774	1.07E-05	0	
VENTURA	2015	MDV	Heavy Duty	Aggregated	Aggregated	ELEC	3.21702	65.62526	13.79356	0	0	0	0	0	0	
VENTURA	2015	MH	Heavy Duty	Aggregated	Aggregated	GAS	4449.139	39906.79	445.0918	1749.411	0.037777	0	19.95405	0.000431	0	
VENTURA	2015	MH	Heavy Duty	Aggregated	Aggregated	DSL	1116.306	11871.49	111.6306	991.4394	0.003869	0	3.364061	1.31E-05	0	
VENTURA	2015	MHDT	Heavy Duty	Aggregated	Aggregated	GAS	827.5784	33933.13	16558.19	1791.462	0.054889	0.005401	17.37496	0.000532	5.24E-05	
VENTURA	2015	MHDT	Heavy Duty	Aggregated	Aggregated	DSL	5433.838	292793.9	55084.74	1079.564	0.018522	0.000259	90.34478	0.00155	2.17E-05	
VENTURA	2015	OBUS	Buses	Aggregated	Aggregated	GAS	258.9701	10905.03	5181.474	1775.904	0.028466	0.004441	375.0179	0.006011	0.000938	
VENTURA	2015	OBUS	Buses	Aggregated	Aggregated	DSL	159.1362	8932.726	1405.788	1176.573	0.021539	0.000867	203.5207	0.003726	0.00015	
VENTURA	2015	SBUS	Buses	Aggregated	Aggregated	GAS	63.61691	2522.652	254.4676	1018.277	0.130735	0.05242	49.74267	0.006386	0.002561	
VENTURA	2015	SBUS	Buses	Aggregated	Aggregated	DSL	331.64	10257.16	3827.08	1448.399	0.013532	0.00103	287.6876	0.002688	0.000205	
VENTURA	2015	UBUS	Buses	Aggregated	Aggregated	GAS	56.68692	4226.761	226.7477	1688.447	0.004711	0	138.1977	0.000386	0	
VENTURA	2015	UBUS	Buses	Aggregated	Aggregated	DSL	43.9393	3327.786	175.7572	1690.819	0.091868	0	108.9578	0.00592	0	
VENTURA	2015	UBUS	Buses	Aggregated	Aggregated	ELEC	0.114167	2.640406	0.456668	0	0	0	0	0	0	
VENTURA	2015	UBUS	Buses	Aggregated	Aggregated	NG	107.2596	11466.2	429.0385	1527.621	7.193905	0	339.1884	1.597313	0	

Appendix E

Noise Modeling

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	321	75.0
Threshold 4-7 days	1,014	65.0
Threshold 1-2 weeks	3,206	55.0
Threshold 2-8 weeks	5,701	50.0
Threshold over 8 weeks	10,137	45.0
Center	50	91.1
Staging Area	100	85.1

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Paver	85	1
Roller	85	1
Concrete Mixer Truck	85	1
Front End Loader	80	1
Flat Bed Truck	84	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Paver	85.0
Roller	85.0
Concrete Mixer Truck	85.0
Front End Loader	80.0
Flat Bed Truck	84.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
91.1

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	203	75.0
Threshold 4-7 days	641	65.0
Threshold 1-2 weeks	2,027	55.0
Threshold 2-8 weeks	3,605	50.0
Threshold over 8 weeks	6,411	45.0
Center	50	87.2
Staging Area	100	81.1

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Paver	85	0.4
Roller	85	0.4
Concrete Mixer Truck	85	0.4
Front End Loader	80	0.4
Flat Bed Truck	84	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Paver	81.0
Roller	81.0
Concrete Mixer Truck	81.0
Front End Loader	76.0
Flat Bed Truck	80.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
87.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	357	75.0
Threshold 4-7 days	1,130	65.0
Threshold 1-2 weeks	3,574	55.0
Threshold 2-8 weeks	6,356	50.0
Threshold over 8 weeks	11,303	45.0
Center	50	92.1
Staging Area	100	86.1

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	85	1
Crane	85	1
Flat Bed Truck	84	1
Front End Loader	80	1
Auger Drill Rig	85	1
Excavator	85	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Man Lift	85.0
Crane	85.0
Flat Bed Truck	84.0
Front End Loader	80.0
Auger Drill Rig	85.0
Excavator	85.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
92.1

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	226	75.0
Threshold 4-7 days	715	65.0
Threshold 1-2 weeks	2,261	55.0
Threshold 2-8 weeks	4,020	50.0
Threshold over 8 weeks	7,149	45.0
Center	50	88.1
Staging Area	100	82.1

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Man Lift	85	0.4
Crane	85	0.4
Flat Bed Truck	84	0.4
Front End Loader	80	0.4
Auger Drill Rig	85	0.4
Excavator	85	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Man Lift	81.0
Crane	81.0
Flat Bed Truck	80.0
Front End Loader	76.0
Auger Drill Rig	81.0
Excavator	81.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
88.1

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	333	75.0
Threshold 4-7 days	592	70.0
Threshold 1-2 weeks	1,052	65.0
Threshold 2-8 weeks	1,871	60.0
Threshold over 8 weeks	3,327	55.0
Center	50	91.5
Staging Area	100	85.4

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Dozer	85	1
Grader	85	1
Dump Truck	84	1
Excavator	85	1
Backhoe	80	1
Front End Loader	80	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Dozer	85.0
Grader	85.0
Dump Truck	84.0
Excavator	85.0
Backhoe	80.0
Front End Loader	80.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
91.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	210	75.0
Threshold 4-7 days	374	70.0
Threshold 1-2 weeks	665	65.0
Threshold 2-8 weeks	1,183	60.0
Threshold over 8 weeks	2,104	55.0
Center	50	87.5
Staging Area	100	81.5

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Dozer	85	0.4
Grader	85	0.4
Dump Truck	84	0.4
Excavator	85	0.4
Backhoe	80	0.4
Front End Loader	80	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Dozer	81.0
Grader	81.0
Dump Truck	80.0
Excavator	81.0
Backhoe	76.0
Front End Loader	76.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
87.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	313	75.0
Threshold 4-7 days	557	70.0
Threshold 1-2 weeks	991	65.0
Threshold 2-8 weeks	1,762	60.0
Threshold over 8 weeks	3,134	55.0
Center	50	90.9
Staging Area	100	84.9

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compactor (ground)	80	1
Generator	82	1
Crane	85	1
Dump Truck	84	1
Front End Loader	80	1
Man Lift	85	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Compactor (ground)	80.0
Generator	82.0
Crane	85.0
Dump Truck	84.0
Front End Loader	80.0
Man Lift	85.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
90.9

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	182	75.0
Threshold 4-7 days	324	70.0
Threshold 1-2 weeks	577	65.0
Threshold 2-8 weeks	1,026	60.0
Threshold over 8 weeks	1,824	55.0
Center	50	86.2
Staging Area	100	80.2

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compactor (ground)	80	0.4
Generator	82	0.4
Crane	85	0.16
Dump Truck	84	0.4
Front End Loader	80	0.4
Man Lift	85	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Compactor (ground)	76.0
Generator	78.0
Crane	77.0
Dump Truck	80.0
Front End Loader	76.0
Man Lift	81.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.2

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	299	75.0
Threshold 4-7 days	532	70.0
Threshold 1-2 weeks	947	65.0
Threshold 2-8 weeks	1,683	60.0
Threshold over 8 weeks	2,993	55.0
Center	50	90.5
Staging Area	100	84.5

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compactor (ground)	80	0.4
Generator	82	0.4
Crane	85	0.16
Dump Truck	84	0.4
Compressor (air)	80	0.4
Front End Loader	80	0.4
Backhoe	80	0.4
Man Lift	85	0.4
Impact Pile Driver	95	0.2

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Compactor (ground)	76.0
Generator	78.0
Crane	77.0
Dump Truck	80.0
Compressor (air)	76.0
Front End Loader	76.0
Backhoe	76.0
Man Lift	81.0
Impact Pile Driver	88.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
90.5

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold 0-3 days	603	75.0
Threshold 4-7 days	1,073	70.0
Threshold 1-2 weeks	1,908	65.0
Threshold 2-8 weeks	3,393	60.0
Threshold over 8 weeks	6,033	55.0
Center	50	96.6
Staging Area	100	90.6

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compactor (ground)	80	1
Generator	82	1
Crane	85	1
Dump Truck	84	1
Compressor (air)	80	1
Front End Loader	80	1
Backhoe	80	1
Man Lift	85	1
Impact Pile Driver	95	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Compactor (ground)	80.0
Generator	82.0
Crane	85.0
Dump Truck	84.0
Compressor (air)	80.0
Front End Loader	80.0
Man Lift	85.0
Impact Pile Driver	95.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
96.6

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

Equipment Description	Acoustical Usage Factor (%)	Spec 721.560 Lmax @ 50ft (dBA slow)	Actual Measured Lmax @ 50ft (dBA slow)	No. of Actual Data Samples (count)	Spec 721.560 LmaxCalc	Spec 721.560 Leq	Distance	Actual Measured LmaxCalc	Actual Measured Leq
Auger Drill Rig	20	85	84	36	79.0	72.0	100	78.0	71.0
Backhoe	40	80	78	372	74.0	70.0	100	72.0	68.0
Bar Bender	20	80	na	0	74.0	67.0	100		
Blasting	na	94	na	0	88.0		100		
Boring Jack Power Unit	50	80	83	1	74.0	71.0	100	77.0	74.0
Chain Saw	20	85	84	46	79.0	72.0	100	78.0	71.0
Clam Shovel (dropping)	20	93	87	4	87.0	80.0	100	81.0	74.0
Compactor (ground)	20	80	83	57	74.0	67.0	100	77.0	70.0
Compressor (air)	40	80	78	18	74.0	70.0	100	72.0	68.0
Concrete Batch Plant	15	83	na	0	77.0	68.7	100		
Concrete Mixer Truck	40	85	79	40	79.0	75.0	100	73.0	69.0
Concrete Pump Truck	20	82	81	30	76.0	69.0	100	75.0	68.0
Concrete Saw	20	90	90	55	84.0	77.0	100	84.0	77.0
Crane	16	85	81	405	79.0	71.0	100	75.0	67.0
Dozer	40	85	82	55	79.0	75.0	100	76.0	72.0
Drill Rig Truck	20	84	79	22	78.0	71.0	100	73.0	66.0
Drum Mixer	50	80	80	1	74.0	71.0	100	74.0	71.0
Dump Truck	40	84	76	31	78.0	74.0	100	70.0	66.0
Excavator	40	85	81	170	79.0	75.0	100	75.0	71.0
Flat Bed Truck	40	84	74	4	78.0	74.0	100	68.0	64.0
Front End Loader	40	80	79	96	74.0	70.0	100	73.0	69.0
Generator	50	82	81	19	76.0	73.0	100	75.0	72.0
Generator (<25KVA, VMS s	50	70	73	74	64.0	61.0	100	67.0	64.0
Gradall	40	85	83	70	79.0	75.0	100	77.0	73.0
Grader	40	85	na	0	79.0	75.0	100		
Grapple (on Backhoe)	40	85	87	1	79.0	75.0	100	81.0	77.0
Horizontal Boring Hydr. Jac	25	80	82	6	74.0	68.0	100	76.0	70.0
Hydra Break Ram	10	90	na	0	84.0	74.0	100		
Impact Pile Driver	20	95	101	11	89.0	82.0	100	95.0	88.0
Jackhammer	20	85	89	133	79.0	72.0	100	83.0	76.0
Man Lift	20	85	75	23	79.0	72.0	100	69.0	62.0
Mounted Impact Hammer (	20	90	90	212	84.0	77.0	100	84.0	77.0
Pavement Scarafier	20	85	90	2	79.0	72.0	100	84.0	77.0
Paver	50	85	77	9	79.0	76.0	100	71.0	68.0
Pickup Truck	40	55	75	1	49.0	45.0	100	69.0	65.0
Pneumatic Tools	50	85	85	90	79.0	76.0	100	79.0	76.0
Pumps	50	77	81	17	71.0	68.0	100	75.0	72.0
Refrigerator Unit	100	82	73	3	76.0	76.0	100	67.0	67.0
Rivit Buster/chipping gun	20	85	79	19	79.0	72.0	100	73.0	66.0
Rock Drill	20	85	81	3	79.0	72.0	100	75.0	68.0
Roller	20	85	80	16	79.0	72.0	100	74.0	67.0
Sand Blasting (Single Nozzl	20	85	96	9	79.0	72.0	100	90.0	83.0
Scraper	40	85	84	12	79.0	75.0	100	78.0	74.0
Shears (on backhoe)	40	85	96	5	79.0	75.0	100	90.0	86.0
Slurry Plant	100	78	78	1	72.0	72.0	100	72.0	72.0
Slurry Trenching Machine	50	82	80	75	76.0	73.0	100	74.0	71.0
Soil Mix Drill Rig	50	80	na	0	74.0	71.0	100		
Tractor	40	84	na	0	78.0	74.0	100		
Vacuum Excavator (Vac-tru	40	85	85	149	79.0	75.0	100	79.0	75.0
Vacuum Street Sweeper	10	80	82	19	74.0	64.0	100	76.0	66.0
Ventilation Fan	100	85	79	13	79.0	79.0	100	73.0	73.0
Vibrating Hopper	50	85	87	1	79.0	76.0	100	81.0	78.0
Vibratory Concrete Mixer	20	80	80	1	74.0	67.0	100	74.0	67.0
Vibratory Pile Driver	20	95	101	44	89.0	82.0	100	95.0	88.0
Warning Horn	5	85	83	12	79.0	66.0	100	77.0	64.0
Welder / Torch	40	73	74	5	67.0	63.0	100	68.0	64.0

Source:
FHWA Roadway Construction Noise Model, January 2006. Table 9.1
U.S. Department of Transportation
CA/T Construction Spec. 721.560

Traffic Noise Spreadsheet Calculator

Project: Ventura General Plan Update

Number	Name	Segment Description and Location From	To	Existing Conditions	Existing + Project Conditions	Δ Existing – Existing + Project	Cumulative Conditions	Cumulative +Project Conditions	Δ Cumulative – Cumulative + Project
Summary of Net Changes									
1	AGGEN RD	n/o L.A. Ave (SR118)	x	54.7	55.0	0.4			
2	BALCOM CANYON RD	s/o South Mountain Rd	x	56.4	58.2	1.7	#N/A	#N/A	#N/A
3	BALCOM CANYON RD	n/o L.A. Ave (SR118)	x	56.4	57.1	0.7	#N/A	#N/A	#N/A
4	BARDSDALE AVE	e/o Sespe St	x	56.7	56.7	0.0	#N/A	#N/A	#N/A
5	BEARDSLEY RD	n/o Central Ave	unposted undivided highway	61.2	62.8	1.6	#N/A	#N/A	#N/A
6	BOX CANYON RD	s/o Santa Susana Pass Rd	x	58.4	59.3	1.0	#N/A	#N/A	#N/A
7	BRADLEY RD	n/o L.A. Ave (SR118)	unposted undivided highway	62.2	62.2	0.0	#N/A	#N/A	#N/A
8	BRIGGS RD	s/o Telegraph Rd	unposted undivided highway	62.9	62.9	0.0	#N/A	#N/A	#N/A
9	BRIGGS RD	n/o Telegraph Rd	unposted undivided highway	58.7	58.8	0.0	#N/A	#N/A	#N/A
10	BRISTOL RD	w/o Montgomery Ave	x	65.0	65.9	0.9	#N/A	#N/A	#N/A
11	BROADWAY RD	w/o Grimes Cyn Rd (SR23)	res/rural road	58.3	61.0	2.7	#N/A	#N/A	#N/A
12	BURNHAM RD	s/o Baldwin Rd (SR150)	x	55.8	57.7	2.0	#N/A	#N/A	#N/A
13	BURNHAM RD	e/o Santa Ana Rd	x	54.9	57.3	2.5	#N/A	#N/A	#N/A
14	CALLE YUCCA	n/o Camino Manzanas	x	54.2	54.2	0.0	#N/A	#N/A	#N/A
15	CAMINO DOS RIOS	w/o Lynn Rd	x	56.8	57.2	0.4	#N/A	#N/A	#N/A
16	CANADA LARGA RD	e/o Ventura Ave	x	53.0	54.4	1.4	#N/A	#N/A	#N/A
17	CASITAS VISTA RD	w/o Ojai Fwy (SR33)	x	55.8	58.6	2.8	#N/A	#N/A	#N/A
18	CENTER SCHOOL RD	s/o L.A. Ave (SR118)	x	56.0	56.2	0.2	#N/A	#N/A	#N/A
19	CENTER ST (Piru)	w/o Telegraph Rd (SR126)	x	54.2	54.7	0.5	#N/A	#N/A	#N/A
20	CENTRAL AVE	w/o Ventura Fwy (US101)	x	67.0	67.9	0.9	#N/A	#N/A	#N/A
21	CENTRAL AVE	w/o Santa Clara Ave	unposted undivided highway	66.7	67.9	1.2	#N/A	#N/A	#N/A
22	CENTRAL AVE	e/o Vineyard Ave (SR232)	x	63.5	64.5	1.0	#N/A	#N/A	#N/A
23	CHANNEL ISLANDS BLVD	w/o Rice Ave	unposted undivided highway	67.6	68.4	0.8	#N/A	#N/A	#N/A
24	CREEK RD	e/o Country Club Dr	x	53.1	55.8	2.7	#N/A	#N/A	#N/A
25	CREEK RD	e/o Ventura Ave (SR33)	x	59.9	62.6	2.7	#N/A	#N/A	#N/A
26	DONLON RD	n/o La Cumbre Rd	x	51.1	52.0	0.9	#N/A	#N/A	#N/A
27	DORIS AVE	e/o Victoria Ave	unposted undivided highway	63.7	64.9	1.2	#N/A	#N/A	#N/A

Traffic Noise Spreadsheet Calculator

Project: Ventura County General Plan Update (Existing Conditions)

Noise Level Descriptor: CNEL
Site Conditions: Hard
Traffic Input: ADT
Traffic K-Factor:

				Input											Output			
		Segment Description and Location				Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics						CNEL,	Distance to Contour, (feet)[3]			
Number	Name	Segment	Speed Limit Checked?*	ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night	(dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Existing Conditions																		
				County Operated Roadways														
1	AGGEN RD	n/o L.A. Ave (SR118)	x	550	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.7	3	9	29	92
2	BALCOM CANYON RD	s/o South Mountain Rd	x	3000	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	44	138
3	BALCOM CANYON RD	n/o L.A. Ave (SR118)	x	3000	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	44	138
4	BARDSDALE AVE	e/o Sespe St	x	1600	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.7	5	15	47	149
5	BEARDSLEY RD	n/o Central Ave	unposted undivided highway	2500	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.2	13	42	133	420
6	BOX CANYON RD	s/o Santa Susana Pass Rd	x	4700	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.4	7	22	69	217
7	BRADLEY RD	n/o L.A. Ave (SR118)	unposted undivided highway	3100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.2	16	52	165	521
8	BRIGGS RD	s/o Telegraph Rd	unposted undivided highway	3700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.9	20	62	197	622
9	BRIGGS RD	n/o Telegraph Rd	unposted undivided highway	1400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.7	7	24	74	235
10	BRISTOL RD	w/o Montgomery Ave	x	10800	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.0	32	100	317	1003
11	BROADWAY RD	w/o Grimes Cyn Rd (SR23)	res/rural road	2300	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.3	7	21	68	214
12	BURNHAM RD	s/o Baldwin Rd (SR150)	x	2600	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.8	4	12	38	120
13	BURNHAM RD	e/o Santa Ana Rd	x	2100	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.9	3	10	31	97
14	CALLE YUCCA	n/o Camino Manzanas	x	1800	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.2	3	8	26	83
15	CAMINO DOS RIOS	w/o Lynn Rd	x	3300	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.8	5	15	48	152
16	CANADA LARGA RD	e/o Ventura Ave	x	2000	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	53.0	2	6	20	63
17	CASITAS VISTA RD	w/o Ojai Fwy (SR33)	x	2600	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.8	4	12	38	120
18	CENTER SCHOOL RD	s/o L.A. Ave (SR118)	x	1900	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.0	4	13	40	126
19	CENTER ST (Piru)	w/o Telegraph Rd (SR126)	x	900	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.2	3	8	26	84
20	CENTRAL AVE	w/o Ventura Fwy (US101)	x	17200	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.0	51	160	505	1597
21	CENTRAL AVE	w/o Santa Clara Ave	unposted undivided highway	8800	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.7	47	148	468	1479
22	CENTRAL AVE	e/o Vineyard Ave (SR232)	x	10700	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.5	22	71	224	710
23	CHANNEL ISLANDS BLVD	w/o Rice Ave	unposted undivided highway	10900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.6	58	183	579	1832
24	CREEK RD	e/o Country Club Dr	x	3000	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	53.1	2	6	20	65
25	CREEK RD	e/o Ventura Ave (SR33)	x	3300	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.9	10	31	97	306
26	DONLON RD	n/o La Cumbre Rd	x	1900	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.1	1	4	13	41
27	DORIS AVE	e/o Victoria Ave	unposted undivided highway	4400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.7	23	74	234	740
28	EL ROBLAR DR	w/o Maricopa Hwy (SR33)	x	7800	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.3	5	17	53	168
29	ETTING RD	e/o Dodge Rd	unposted undivided highway	2100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.5	11	35	112	353
30	FAIRVIEW RD	e/o Maricopa Hwy (SR33)	x	900	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.2	1	4	13	42
31	FAIRWAY DR	n/o Valley Vista Dr	x	3100	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.6	5	14	45	143
32	W FIFTH ST	e/o N Harbor Blvd	x	5400	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.0	8	25	79	249
33	FOOTHILL RD	w/o Peck Rd	x	2400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.1	13	40	128	403
34	FOOTHILL RD	w/o Briggs Rd	x	2000	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.2	4	13	42	133
35	FOOTHILL RD	e/o N Wells Rd	unposted undivided highway	2800	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.7	15	47	149	471
36	FOOTHILL RD	e/o Saticoy Ave	x	3900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.2	21	66	207	655
37	GONZALES RD	e/o N Harbor Blvd	x	4000	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	21	67	213	672
38	GRIMES CANYON RD	n/o L.A. Ave (SR118)	x	3500	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.5	14	44	140	443
39	GUIBERSON RD	e/o Chambersburg Rd (SR23)	unposted undivided highway	1000	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.3	5	17	53	168
40	HARBOR BLVD	n/o Gonzales Rd	unposted undivided highway	21700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.6	115	365	1153	3647
41	HARBOR BLVD	s/o Gonzales Rd	unposted undivided highway	20200	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.3	107	340	1074	3395
42	HOWE RD	e/o Torrey Rd	unposted rural residential	800	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	50.7	1	4	12	37
43	HUENEME RD	e/o Las Posas Rd	x	12800	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.1	51	162	512	1619
44	HUENEME RD	e/o Nauman Rd	x	11300	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.6	45	143	452	1429
45	HUENEME RD	e/o Wood Rd	x	10300	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.1	41	130	412	1303
46	HUENEME RD	w/o Olds Rd	x	15500	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	62	196	620	1961
47	KANAN RD	e/o Lindero Canyon Rd	x	13600	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.0	40	126	399	1263
48	KANAN RD	e/o Hollytree Dr / Oak Hills Dr	x	13600	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.0	40	126	399	1263

49	KANAN RD	s/o Tamarind St	x	20100	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.7	59	187	590	1866
50	LA LUNA AVE	s/o Lomita Ave	x	4400	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	44	138
51	LAGUNA RD	e/o Pleasant Valley Rd	unposted undivided highway	1900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.0	10	32	101	319
52	LAS POSAS RD	n/o E Fifth St (SR34)	unposted undivided highway	9600	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.1	51	161	510	1614
53	LAS POSAS RD	s/o E Fifth St (SR34)	unposted undivided highway	10100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.3	54	170	537	1698
54	LAS POSAS RD	s/o Hueneme Rd	unposted undivided highway	6800	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.6	36	114	361	1143
55	LEWIS RD	s/o Pleasant Valley Rd	x	19700	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	79	249	788	2492
56	LEWIS RD	n/o Potrero Rd	unposted undivided highway	11600	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	62	195	617	1950
57	LOCKWOOD VALLEY RD	w/o Kern County Line	unposted undivided highway	900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.8	5	15	48	151
58	LOCKWOOD VALLEY RD	e/o Maricopa Hwy (SR33)	unposted undivided highway	100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	47.3	1	2	5	17
59	LOMITA AVE	e/o Tico Rd	x	4300	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.0	6	20	63	198
60	MAIN ST (Piru)	n/o Telegraph Rd (SR126)	x	3800	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.8	4	12	38	119
61	MOORPARK RD	n/o Santa Rosa Rd	unposted undivided highway	20700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.4	110	348	1100	3479
62	OLD TELEGRAPH RD	w/o Grand Ave	x	4100	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.8	6	19	60	189
63	OLDS RD	n/o Hueneme Rd	unposted undivided highway	1900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.0	10	32	101	319
64	OLIVAS PARK DR	w/o Victoria Ave	unposted undivided highway	12400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.2	66	208	659	2084
65	PASADENA AVE	e/o Sespe St	x	400	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	50.7	1	4	12	37
66	PATTERSON RD	s/o Doris Ave	rural on unmarked road	1050	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.9	2	5	15	48
67	PLEASANT VALLEY RD	s/o E Fifth St (SR34)	x	16200	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.4	86	272	861	2723
68	PLEASANT VALLEY RD	w/o Las Posas Rd	x	1500	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.8	6	19	60	190
69	POTRERO RD	e/o Lake Sherwood Dr (E)	x	8600	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.6	18	57	180	571
70	POTRERO RD	w/o Stafford Rd	x	3500	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.7	7	23	73	232
71	POTRERO RD	w/o Hidden Valley Rd	x	2300	20	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	50.6	1	4	12	37
72	POTRERO RD	Milepost 2.75	unknown	3800	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.4	6	18	55	175
73	POTRERO RD	e/o Lewis Rd	x	4700	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.7	19	59	188	594
74	RICE AVE	s/o E Fifth St (SR34)	x	36700	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.7	147	464	1468	4642
75	RICE AVE	n/o Channel Islands Blvd	x	30000	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.8	120	379	1200	3795
76	RICE AVE	n/o Hueneme Rd	x	2400	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.8	10	30	96	304
77	RICE RD (Meiners Oaks)	s/o Lomita Ave	x	2000	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.0	8	25	80	253
78	ROSE AVE	s/o L.A. Ave (SR118)	x	9100	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.8	19	60	191	604
79	ROSE AVE	s/o Central Ave	x	11100	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.7	23	74	233	736
80	ROSE AVE	n/o Collins St	x	18500	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.9	39	123	388	1227
81	SANTA ANA BLVD	e/o Ventura River	x	2400	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.5	7	22	70	223
82	SANTA ANA RD	s/o Baldwin Rd (SR150)	x	700	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	53.1	2	6	21	65
83	SANTA ANA RD	s/o Santa Ana Blvd	x	2100	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.9	6	19	62	195
84	SANTA CLARA AVE	n/o Friedrich Rd	unposted undivided highway	15100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	80	254	803	2538
85	SANTA CLARA AVE	s/o L.A. Ave (SR118)	unposted undivided highway	18500	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.9	98	311	983	3109
86	SANTA ROSA RD	w/o Moorpark Rd	unposted undivided highway	22100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.7	117	371	1175	3714
87	SANTA ROSA RD	w/o E Las Posas Rd	same as above	14800	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	79	249	787	2488
88	SANTA SUSANA PASS RD	e/o Katherine Rd	curvy road	4500	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.2	7	21	66	208
89	SESPE ST	n/o South Mountain Rd	unposted undivided highway	2700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.6	14	45	144	454
90	SESPE ST	s/o Pasadena Ave	unposted undivided highway	700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.7	4	12	37	118
91	SOUTH MOUNTAIN RD	e/o Balcom Canyon Rd	curvy road	2100	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.9	3	10	31	97
92	SOUTH MOUNTAIN RD	s/o Santa Clara River	curvy road	2800	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.1	4	13	41	129
93	STOCKTON RD	e/o Balcom Canyon Rd	curvy road	1000	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.6	1	5	15	46
94	STURGIS RD	w/o Pleasant Valley Rd	unposted undivided highway	4500	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.8	24	76	239	756
95	TAPO CANYON RD	s/o Bennett Rd	curvy road	1300	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	52.8	2	6	19	60
96	TELEGRAPH RD	w/o Briggs Rd	x	7600	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.8	30	96	304	961
97	TELEGRAPH RD	w/o Olive Rd	unposted undivided highway	7300	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.7	29	92	292	923
98	TICO RD	n/o Ventura Ave (SR150)	x	3000	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	44	138
99	TIERRA REJADA RD	e/o Moorpark Fwy (SR23)	x	24900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.2	132	419	1323	4185
100	TORREY RD	s/o Telegraph Rd (SR126)	unposted undivided highway	750	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.0	4	13	40	126
101	VALLEY VISTA DR	s/o Calle Aurora	x	5500	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.0	8	25	80	254
102	VENTURA AVE	n/o Canada Larga Rd	unposted undivided highway	900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.8	5	15	48	151
103	VENTURA AVE	n/o Shell Rd	x	5500	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.0	8	25	80	254
104	VICTORIA AVE	s/o Olivas Park Dr	x	44900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.8	239	755	2386	7547
105	WALNUT AVE	n/o L.A. Ave (SR118)	unposted undivided highway	400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	53.3	2	7	21	67
106	WENDY DR	n/o Gerald Dr	x	14200	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.2	21	65	207	655
107	WOOD RD	s/o Hueneme Rd	unposted undivided highway	1400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.7	7	24	74	235
108	WOOD RD	s/o E Fifth St (SR34)	unposted undivided highway	10100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.3	54	170	537	1698
109	WOOLEY RD	w/o Rice Ave	unposted undivided highway	10300	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.4	55	173	547	1731
110	YERBA BUENA RD	n/o Pacific Coast Hwy (SR1)	curvy road	600	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	49.4	1	3	9	28
				State Highways within Ventura County														
111	Route 1	CALLEGUAS CREEK	x	9900	70	100	100	93.5%	5.4%	1.1%	80.0%	15.0%	5.0%	70.7	118	373	1179	3727
112	Route 1	SEACLIFF COLONY, JCT. RTE. 101	x	4400	65	100	100	90.7%	5.9%	3.4%	80.0%	15.0%	5.0%	66.9	49	154	488	1542
113	Route 1	LAS CRUCES, JCT. RTE. 101; MOBIL OIL PIER	x	610	65	100	100	85.9%	8.2%	5.9%	80.0%	15.0%	5.0%	59.0	8	25	80	252

114	Route 23	GRIMES CANYON RD	x	6300	55	100	100	80.0%	5.9%	14.1%	80.0%	15.0%	5.0%	68.6	73	229	726	2295
115	Route 23	FILLMORE, JCT. RTE. 126, VENTURA RD	x	9100	45	100	100	86.3%	4.4%	9.3%	80.0%	15.0%	5.0%	67.1	51	161	508	1607
116	Route 33	WEST JCT. RTE. 150, BALDWIN RD	x	21500	40	100	100	96.1%	2.9%	1.0%	80.0%	15.0%	5.0%	66.7	47	147	465	1471
117	Route 33	LOS PADRES NATIONAL FOREST BOUNDARY	x	1350	40	100	100	95.5%	2.3%	2.3%	80.0%	15.0%	5.0%	55.1	3	10	33	103
118	Route 33	SESPE GORGE MAINT. STATION	x	390	35	100	100	91.5%	2.2%	6.3%	80.0%	15.0%	5.0%	50.0	1	3	10	31
119	Route 33	VENTURA/SANTA BARBARA COUNTY LINE	x	330	50	100	100	83.2%	12.4%	4.4%	80.0%	15.0%	5.0%	53.3	2	7	21	67
120	Route 34	SOMIS, JCT. RTE. 118, LOS ANGELES AVE	x	14500	40	100	100	85.8%	6.5%	7.7%	80.0%	15.0%	5.0%	67.7	59	187	590	1867
121	Route 101	VENTURA, VICTORIA AVE	x	132000	65	100	100	96.4%	1.8%	1.8%	80.0%	15.0%	5.0%	80.9	1221	3860	12207	38601
122	Route 101	VENTURA/SANTA BARBARA COUNTY LINE	x	73000	65	100	100	93.0%	3.4%	3.6%	80.0%	15.0%	5.0%	78.9	780	2466	7798	24659
123	Route 118	JCT. RTE. 232, VINEYARD AVE (West)	x	35500	55	100	100	88.2%	5.4%	6.4%	80.0%	15.0%	5.0%	74.6	288	912	2882	9115
124	Route 118	JCT. RTE. 34, SOMIS RD (West)	x	12200	55	100	100	74.3%	10.8%	14.9%	80.0%	15.0%	5.0%	71.8	153	484	1530	4837
125	Route 118	GRIMES CANYON RD	x	19500	55	100	100	88.6%	3.9%	7.5%	80.0%	15.0%	5.0%	72.1	163	516	1632	5161
126	Route 118	MOORPARK, WEST JCT. RTE. 23, MOORPARK AVE	x	29000	45	100	100	86.9%	6.0%	7.0%	80.0%	15.0%	5.0%	71.7	147	466	1475	4663
127	Route 150	SANTA BARBARA/VENTURA COUNTY LINE	x	0	40	100	100	98.0%	1.6%	0.4%	80.0%	15.0%	5.0%					
128	Route 150	JCT. RTE. 33 SOUTH, VENTURA AVE (South)	x	10300	40	100	100	98.1%	1.5%	0.4%	80.0%	15.0%	5.0%	63.0	20	62	197	625
129	Route 150	SANTA PAULA, NORTH CITY LIMIT	x	3650	35	100	100	96.2%	2.2%	1.6%	80.0%	15.0%	5.0%	57.7	6	18	58	185
130	Route 232	JCT. RTE. 118, LOS ANGELES AVE	x	15600	30	100	100	89.1%	5.7%	5.2%	80.0%	15.0%	5.0%	64.8	30	96	303	957

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

** Speed limits from: http://product.itoworld.com/map/124 and google maps street view

Traffic Noise Spreadsheet Calculator

Project: Ventura County General Plan Update (Existing Conditions)

Noise Level Descriptor: CNEL
Site Conditions: Hard
Traffic Input: ADT
Traffic K-Factor:

				Input											Output			
		Segment Description and Location				Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics						CNEL, (dBA)[5,6,7]	Distance to Contour, (feet)[3]			
Number	Name	Segment	Speed Limit Checked?*	ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night		70 dBA	65 dBA	60 dBA	55 dBA
Existing Conditions																		
				County Operated Roadways														
1	AGGEN RD	n/o L.A. Ave (SR118)	x	597	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.0	3	10	32	100
2	BALCOM CANYON RD	s/o South Mountain Rd	x	4482	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.2	7	21	65	207
3	BALCOM CANYON RD	n/o L.A. Ave (SR118)	x	3507	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.1	5	16	51	162
4	BARDSDALE AVE	e/o Sespe St	x	1600	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.7	5	15	47	149
5	BEARDSLEY RD	n/o Central Ave	unposted undivided highway	3578	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.8	19	60	190	601
6	BOX CANYON RD	s/o Santa Susana Pass Rd	x	5872	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.3	9	27	86	271
7	BRADLEY RD	n/o L.A. Ave (SR118)	unposted undivided highway	3121	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.2	17	52	166	525
8	BRIGGS RD	s/o Telegraph Rd	unposted undivided highway	3700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.9	20	62	197	622
9	BRIGGS RD	n/o Telegraph Rd	unposted undivided highway	1413	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.8	8	24	75	237
10	BRISTOL RD	w/o Montgomery Ave	x	13195	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.9	39	123	387	1225
11	BROADWAY RD	w/o Grimes Cyn Rd (SR23)	res/rural road	4273	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.0	13	40	125	397
12	BURNHAM RD	s/o Baldwin Rd (SR150)	x	4074	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.7	6	19	59	188
13	BURNHAM RD	e/o Santa Ana Rd	x	3716	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.3	5	17	54	171
14	CALLE YUCCA	n/o Camino Manzanas	x	1805	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.2	3	8	26	83
15	CAMINO DOS RIOS	w/o Lynn Rd	x	3594	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.2	5	17	52	166
16	CANADA LARGA RD	e/o Ventura Ave	x	2772	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.4	3	9	28	87
17	CASITAS VISTA RD	w/o Ojai Fwy (SR33)	x	4958	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.6	7	23	72	229
18	CENTER SCHOOL RD	s/o L.A. Ave (SR118)	x	1984	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.2	4	13	42	132
19	CENTER ST (Piru)	w/o Telegraph Rd (SR126)	x	1004	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.7	3	9	29	93
20	CENTRAL AVE	w/o Ventura Fwy (US101)	x	21088	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	62	196	619	1958
21	CENTRAL AVE	w/o Santa Clara Ave	unposted undivided highway	11666	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	62	196	620	1961
22	CENTRAL AVE	e/o Vineyard Ave (SR232)	x	13536	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.5	28	90	284	898
23	CHANNEL ISLANDS BLVD	w/o Rice Ave	unposted undivided highway	13047	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.4	69	219	693	2193
24	CREEK RD	e/o Country Club Dr	x	5584	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.8	4	12	38	120
25	CREEK RD	e/o Ventura Ave (SR33)	x	6167	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.6	18	57	181	573
26	DONLON RD	n/o La Cumbre Rd	x	2327	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	52.0	2	5	16	50
27	DORIS AVE	e/o Victoria Ave	unposted undivided highway	5852	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.9	31	98	311	984
28	EL ROBLAR DR	w/o Maricopa Hwy (SR33)	x	8565	25	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.7	6	18	58	184
29	ETTING RD	e/o Dodge Rd	unposted undivided highway	2994	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.0	16	50	159	503
30	FAIRVIEW RD	e/o Maricopa Hwy (SR33)	x	943	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.4	1	4	14	43
31	FAIRWAY DR	n/o Valley Vista Dr	x	3662	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.3	5	17	53	169
32	W FIFTH ST	e/o N Harbor Blvd	x	6305	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.6	9	29	92	291
33	FOOTHILL RD	w/o Peck Rd	x	2400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.1	13	40	128	403
34	FOOTHILL RD	w/o Briggs Rd	x	2000	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.2	4	13	42	133
35	FOOTHILL RD	e/o N Wells Rd	unposted undivided highway	3022	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.1	16	51	161	508
36	FOOTHILL RD	e/o Saticoy Ave	x	3979	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	21	67	211	669
37	GONZALES RD	e/o N Harbor Blvd	x	4000	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	21	67	213	672
38	GRIMES CANYON RD	n/o L.A. Ave (SR118)	x	3556	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.5	14	45	142	450
39	GUIBERSON RD	e/o Chambersburg Rd (SR23)	unposted undivided highway	1099	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.7	6	18	58	185
40	HARBOR BLVD	n/o Gonzales Rd	unposted undivided highway	21700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.6	115	365	1153	3647
41	HARBOR BLVD	s/o Gonzales Rd	unposted undivided highway	20200	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.3	107	340	1074	3395
42	HOWE RD	e/o Torrey Rd	unposted rural residential	980	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	51.6	1	5	14	45
43	HUENEME RD	e/o Las Posas Rd	x	12800	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.1	51	162	512	1619
44	HUENEME RD	e/o Nauman Rd	x	12370	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.9	49	156	495	1565
45	HUENEME RD	e/o Wood Rd	x	10423	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.2	42	132	417	1318
46	HUENEME RD	w/o Olds Rd	x	18644	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.7	75	236	746	2358
47	KANAN RD	e/o Lindero Canyon Rd	x	15651	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.6	46	145	460	1453
48	KANAN RD	e/o Hollytree Dr / Oak Hills Dr	x	15451	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.6	45	143	454	1435

49	KANAN RD	s/o Tamarind St	x	22719	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.2	67	211	667	2110
50	LA LUNA AVE	s/o Lomita Ave	x	4400	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	44	138
51	LAGUNA RD	e/o Pleasant Valley Rd	unposted undivided highway	2042	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.4	11	34	109	343
52	LAS POSAS RD	n/o E Fifth St (SR34)	unposted undivided highway	11049	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.7	59	186	587	1857
53	LAS POSAS RD	s/o E Fifth St (SR34)	unposted undivided highway	11312	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.8	60	190	601	1901
54	LAS POSAS RD	s/o Hueneme Rd	unposted undivided highway	6800	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.6	36	114	361	1143
55	LEWIS RD	s/o Pleasant Valley Rd	x	19700	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	79	249	788	2492
56	LEWIS RD	n/o Potrero Rd	unposted undivided highway	11600	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	62	195	617	1950
57	LOCKWOOD VALLEY RD	w/o Kern County Line	unposted undivided highway	900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.8	5	15	48	151
58	LOCKWOOD VALLEY RD	e/o Maricopa Hwy (SR33)	unposted undivided highway	149	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	49.0	1	3	8	25
59	LOMITA AVE	e/o Tico Rd	x	5596	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.1	8	26	82	258
60	MAIN ST (Piru)	n/o Telegraph Rd (SR126)	x	4668	30	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.7	5	15	46	147
61	MOORPARK RD	n/o Santa Rosa Rd	unposted undivided highway	21969	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.7	117	369	1168	3692
62	OLD TELEGRAPH RD	w/o Grand Ave	x	5650	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.2	8	26	82	261
63	OLDS RD	n/o Hueneme Rd	unposted undivided highway	2573	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.4	14	43	137	432
64	OLIVAS PARK DR	w/o Victoria Ave	unposted undivided highway	14464	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.9	77	243	769	2431
65	PASADENA AVE	e/o Sespe St	x	400	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	50.7	1	4	12	37
66	PATTERSON RD	s/o Doris Ave	rural on unmarked road	1209	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	52.5	2	6	18	56
67	PLEASANT VALLEY RD	s/o E Fifth St (SR34)	x	16200	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.4	86	272	861	2723
68	PLEASANT VALLEY RD	w/o Las Posas Rd	x	16580	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.2	66	210	663	2097
69	POTRERO RD	e/o Lake Sherwood Dr (E)	x	9178	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.8	19	61	193	609
70	POTRERO RD	w/o Stafford Rd	x	4617	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.9	10	31	97	306
71	POTRERO RD	w/o Hidden Valley Rd	x	3474	20	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	52.4	2	6	17	55
72	POTRERO RD	Milepost 2.75	unknown	4974	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.6	7	23	73	229
73	POTRERO RD	e/o Lewis Rd	x	4700	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.7	19	59	188	594
74	RICE AVE	s/o E Fifth St (SR34)	x	48408	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.9	194	612	1936	6123
75	RICE AVE	n/o Channel Islands Blvd	x	38981	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.9	156	493	1559	4931
76	RICE AVE	n/o Hueneme Rd	x	2400	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.8	10	30	96	304
77	RICE RD (Meiners Oaks)	s/o Lomita Ave	x	2403	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.8	10	30	96	304
78	ROSE AVE	s/o L.A. Ave (SR118)	x	12619	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.2	26	84	265	837
79	ROSE AVE	s/o Central Ave	x	13321	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.5	28	88	279	884
80	ROSE AVE	n/o Collins St	x	25724	40	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.3	54	171	540	1707
81	SANTA ANA BLVD	e/o Ventura River	x	2588	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.8	8	24	76	240
82	SANTA ANA RD	s/o Baldwin Rd (SR150)	x	972	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	54.6	3	9	29	90
83	SANTA ANA RD	s/o Santa Ana Blvd	x	4236	45	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.9	12	39	124	393
84	SANTA CLARA AVE	n/o Friedrich Rd	unposted undivided highway	15100	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	80	254	803	2538
85	SANTA CLARA AVE	s/o L.A. Ave (SR118)	unposted undivided highway	18500	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.9	98	311	983	3109
86	SANTA ROSA RD	w/o Moorpark Rd	unposted undivided highway	22635	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.8	120	380	1203	3804
87	SANTA ROSA RD	w/o E Las Posas Rd	same as above	15069	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	80	253	801	2533
88	SANTA SUSANA PASS RD	e/o Katherine Rd	curvy road	4500	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.2	7	21	66	208
89	SESPE ST	n/o South Mountain Rd	unposted undivided highway	2700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.6	14	45	144	454
90	SESPE ST	s/o Pasadena Ave	unposted undivided highway	700	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.7	4	12	37	118
91	SOUTH MOUNTAIN RD	e/o Balcom Canyon Rd	curvy road	2219	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	55.1	3	10	32	102
92	SOUTH MOUNTAIN RD	s/o Santa Clara River	curvy road	4746	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.4	7	22	69	219
93	STOCKTON RD	e/o Balcom Canyon Rd	curvy road	2973	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.4	4	14	43	137
94	STURGIS RD	w/o Pleasant Valley Rd	unposted undivided highway	6584	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.4	35	111	350	1107
95	TAPO CANYON RD	s/o Bennett Rd	curvy road	1300	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	52.8	2	6	19	60
96	TELEGRAPH RD	w/o Briggs Rd	x	8271	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.2	33	105	331	1046
97	TELEGRAPH RD	w/o Olive Rd	unposted undivided highway	7300	50	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.7	29	92	292	923
98	TICO RD	n/o Ventura Ave (SR150)	x	3028	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.5	4	14	44	140
99	TIERRA REJADA RD	e/o Moorpark Fwy (SR23)	x	28719	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.8	153	483	1526	4827
100	TORREY RD	s/o Telegraph Rd (SR126)	unposted undivided highway	930	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.9	5	16	49	156
101	VALLEY VISTA DR	s/o Calle Aurora	x	6059	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.5	9	28	88	279
102	VENTURA AVE	n/o Canada Larga Rd	unposted undivided highway	1064	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	57.5	6	18	57	179
103	VENTURA AVE	n/o Shell Rd	x	7199	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.2	10	33	105	332
104	VICTORIA AVE	s/o Olivas Park Dr	x	44900	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.8	239	755	2386	7547
105	WALNUT AVE	n/o L.A. Ave (SR118)	unposted undivided highway	400	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	53.3	2	7	21	67
106	WENDY DR	n/o Gerald Dr	x	15687	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.6	23	72	229	724
107	WOOD RD	s/o Hueneme Rd	unposted undivided highway	1411	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.8	7	24	75	237
108	WOOD RD	s/o E Fifth St (SR34)	unposted undivided highway	11312	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.8	60	190	601	1901
109	WOOLEY RD	w/o Rice Ave	unposted undivided highway	13058	55	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.4	69	219	694	2195
110	YERBA BUENA RD	n/o Pacific Coast Hwy (SR1)	curvy road	600	35	100	100	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	49.4	1	3	9	28
				State Highways within Ventura County														
111	Route 1	CALLEGUAS CREEK	x	19886	70	100	100	93.5%	5.4%	1.1%	80.0%	15.0%	5.0%	73.7	237	749	2368	7487
112	Route 1	SEACLIFF COLONY, JCT. RTE. 101	x	4400	65	100	100	90.7%	5.9%	3.4%	80.0%	15.0%	5.0%	66.9	49	154	488	1542
113	Route 1	LAS CRUCES, JCT. RTE. 101; MOBIL OIL PIER	x	620	65	100	100	85.9%	8.2%	5.9%	80.0%	15.0%	5.0%	59.1	8	26	81	256

114	Route 23	GRIMES CANYON RD	x	8567	55	100	100	80.0%	5.9%	14.1%	80.0%	15.0%	5.0%	69.9	99	312	987	3120
115	Route 23	FILLMORE, JCT. RTE. 126, VENTURA RD	x	10478	45	100	100	86.3%	4.4%	9.3%	80.0%	15.0%	5.0%	67.7	59	185	585	1850
116	Route 33	WEST JCT. RTE. 150, BALDWIN RD	x	21500	40	100	100	96.1%	2.9%	1.0%	80.0%	15.0%	5.0%	66.7	47	147	465	1471
117	Route 33	LOS PADRES NATIONAL FOREST BOUNDARY	x	1454	40	100	100	95.5%	2.3%	2.3%	80.0%	15.0%	5.0%	55.5	4	11	35	111
118	Route 33	SESPE GORGE MAINT. STATION	x	494	35	100	100	91.5%	2.2%	6.3%	80.0%	15.0%	5.0%	51.0	1	4	13	40
119	Route 33	VENTURA/SANTA BARBARA COUNTY LINE	x	382	50	100	100	83.2%	12.4%	4.4%	80.0%	15.0%	5.0%	53.9	2	8	25	78
120	Route 34	SOMIS, JCT. RTE. 118, LOS ANGELES AVE	x	17002	40	100	100	85.8%	6.5%	7.7%	80.0%	15.0%	5.0%	68.4	69	219	692	2189
121	Route 101	VENTURA, VICTORIA AVE	x	132000	65	100	100	96.4%	1.8%	1.8%	80.0%	15.0%	5.0%	80.9	1221	3860	12207	38601
122	Route 101	VENTURA/SANTA BARBARA COUNTY LINE	x	82519	65	100	100	93.0%	3.4%	3.6%	80.0%	15.0%	5.0%	79.5	881	2787	8815	27874
123	Route 118	JCT. RTE. 232, VINEYARD AVE (West)	x	46326	55	100	100	88.2%	5.4%	6.4%	80.0%	15.0%	5.0%	75.8	376	1189	3761	11895
124	Route 118	JCT. RTE. 34, SOMIS RD (West)	x	14250	55	100	100	74.3%	10.8%	14.9%	80.0%	15.0%	5.0%	72.5	179	565	1787	5650
125	Route 118	GRIMES CANYON RD	x	22928	55	100	100	88.6%	3.9%	7.5%	80.0%	15.0%	5.0%	72.8	192	607	1919	6068
126	Route 118	MOORPARK, WEST JCT. RTE. 23, MOORPARK AVE	x	29000	45	100	100	86.9%	6.0%	7.0%	80.0%	15.0%	5.0%	71.7	147	466	1475	4663
127	Route 150	SANTA BARBARA/VENTURA COUNTY LINE	x	422	40	100	100	98.0%	1.6%	0.4%	80.0%	15.0%	5.0%	49.1	1	3	8	26
128	Route 150	JCT. RTE. 33 SOUTH, VENTURA AVE (South)	x	10300	40	100	100	98.1%	1.5%	0.4%	80.0%	15.0%	5.0%	63.0	20	62	197	625
129	Route 150	SANTA PAULA, NORTH CITY LIMIT	x	5026	35	100	100	96.2%	2.2%	1.6%	80.0%	15.0%	5.0%	59.1	8	25	80	254
130	Route 232	JCT. RTE. 118, LOS ANGELES AVE	x	19624	30	100	100	89.1%	5.7%	5.2%	80.0%	15.0%	5.0%	65.8	38	120	381	1204

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

** Speed limits from: http://product.itoworld.com/map/124 and google maps street view

Traffic Noise Spreadsheet Calculator

Project: Ventura General Plan Update

Noise Level Descriptor:
Site Conditions:
Traffic Input:
Traffic K-Factor:

Segment Description and Location			Input									Output				
Number	Name	From	To	Speed (mph)	Distance to Directional Centerline, (feet)[4] Near	Far	Traffic Distribution Characteristics % Auto	% Medium	% Heavy	% Day	% Eve	% Night	, (dBA)[5,6,7]	Distance to Contour, (feet)[3] 70 dBA	65 dBA	60 dBA	55 dBA
Existing + Project Conditions																	
1																	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Traffic Noise Spreadsheet Calculator

Project: Ventura General Plan Update

Noise Level Descriptor:
Site Conditions:
Traffic Input:
Traffic K-Factor:

Number	Name	Segment Description and Location From	To	Input: Speed (mph)	Distance to Directional Centerline, (feet)[4] Near	Far	Traffic Distribution Characteristics % Auto	% Medium	% Heavy	% Day	% Eve	% Night	Output: , (dBA)[5,6,7]	Distance to Contour, (feet)[3] 70 dBA	65 dBA	60 dBA	55 dBA
Cumulative Conditions																	
1																	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Traffic Noise Spreadsheet Calculator

Project: Ventura General Plan Update

Noise Level Descriptor:
Site Conditions:
Traffic Input:
Traffic K-Factor:

Segment Description and Location				Input									Output				
					Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics						,	Distance to Contour, (feet)[3]			
Number	Name	From	To	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night	(dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Cumulative +Project Conditions																	
1																	

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Citation	Reference	
1	Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17.
2	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17
3	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32.	NOT THE SAME. Does not exist in 2013 document. Consider revising. Original cit
4	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48.	Does not exist in 2013 document.
5	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-5
6	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-5
7	Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53.	Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57.
8	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45.	Does not exist in 2013 document.
9	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45.	Does not exist in 2013 document.
10	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45.	Does not exist in 2013 document.
11	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49.	Does not exist in 2013 document.
12	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49.	Does not exist in 2013 document.
13	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67	
14	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69	
15	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69	

Distance Propagation Calculations for Stationary Sources of Ground Vibration

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (VdB)	@	distance (ft)	vibration level (VdB)	@	distance (ft)
Impact pile driver	112	@	25	65.0	@	925
blasting	109	@	25	65.0	@	730
large bull dozer	87.0	@	25	65.0	@	135

STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (PPV)	@	distance (ft)	vibration level (PPV)	@	distance (ft)
Impact pile driver	1.518	@	25	0.190	@	100
blasting	1.130	@	25	0.197	@	80
large bull dozer	0.089	@	25	0.191	@	15

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 12-11 of FTA 2006. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Sources:

Federal Transit Association (FTA). 2006 (May). Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. Washington, D.C. Available: <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>. Accessed: September 24, 2010.

Appendix F

Vehicle Miles Traveled Estimation

Appendix F: Vehicle Miles Traveled Estimation – 2040 Ventura County General Plan EIR

This memorandum summarizes the regulatory context pertaining to Vehicle Miles Traveled (VMT) analysis requirements under CEQA, and provides more detailed technical information of the technical approach and parameters used to estimate baseline and future VMT reported in the Environmental Impact Report (EIR) for the Ventura County 2040 General Plan.

1. Regulatory Changes under CEQA: VMT

Recent regulatory changes to CEQA requirements under SB 743 now require transportation impacts to be analyzed using VMT as a metric. Passed in 2013, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to develop new CEQA guidelines that address transportation impact metrics under CEQA. Section 15064.3 was added to the State CEQA Guidelines effective December 28, 2018 as part of a comprehensive guidelines update. The guidelines address the determination of significance for transportation impacts under CEQA, requiring transportation impact analysis be based on VMT instead of a congestion metric (such as LOS) and states that a project's effect on automobile delay shall not constitute a significant environmental impact as previously required. While some jurisdictions may choose to retain LOS standards as a project's condition of approval, CEQA impacts or mitigations will no longer be based on LOS changes.

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017 which included proposed updates related to analyzing transportation impacts, pursuant to Senate Bill 743. The updates indicated that VMT be the primary metric used to identify transportation impacts. In December of 2018, OPR published the most recent version of the Technical Advisory on Evaluating Transportation Impacts (December 2018) which provides guidance for VMT analysis. The Office of Administrative Law approved the updated CEQA Guidelines and lead agencies have an opt-in period until July 1, 2020 to implement the updated guidelines.

VMT was chosen as the primary metric to better integrate land use and multimodal transportation choices, to encourage alternative transportation, greater efficiency, and reduced GHG emissions. The most recent technical guidance on analyzing the transportation impacts under CEQA released by OPR in December of 2018 provides technical recommendations regarding assessment of VMT, thresholds of significance and mitigation measures. OPR (2018) offers a generalized recommendation of a 15 percent reduction below existing VMT as a threshold of CEQA significance. Trip- or tour-based based VMT analysis is recommended over boundary-based VMT analysis as the established and most appropriate methodology for analyzing VMT impacts under CEQA. Trip-based assessment of VMT captures the full extent of the vehicle trip length – even the portion that extends beyond the jurisdictional boundary. VMT impacts are assessed by quantifying trips to or from a jurisdiction, which start or end within the jurisdiction. Conversely, a boundary-based assessment of VMT impacts is quantified by the length of the vehicle trips that occur within the boundaries of a jurisdiction.

As noted in the updated guidelines, agencies are directed to choose metrics that are appropriate for their jurisdiction to evaluate the potential impacts of a project in terms of VMT. The guidance provided thus far relative to VMT significance criteria is focused on residential, office, and retail uses. For rural land uses, OPR guidance states that fewer options may be available for reducing VMT for projects in rural areas outside of a metropolitan planning organization and significance thresholds may be best determined on a case-by-case basis. Ventura County plans to adopt formal thresholds of significance under SB 743 prior to the July 1, 2020 deadline. In lieu of formally adopted thresholds of significance, VMT thresholds consistent with OPR's final technical guidance for the

analysis of transportation impacts under CEQA were applied in the analysis presented in the 2040 Ventura County General Plan EIR.

2. VMT Analysis: Methodological Approach

An integral step in the VMT analysis utilized to assess transportation impacts under CEQA is establishing baseline and forecasted VMT estimates for use in comparison against an established threshold to identify a significant impact. This information is presented in the Draft EIR of Ventura County's 2040 General Plan, and is described with more specific technical detail herein.

2.1 Description of Model Scenarios

In order to generate the baseline and future change in VMT per capita and net VMT resulting from the proposed 2040 General Plan, the recently updated Ventura County Transportation Commission (VCTC) countywide Travel Demand Model was used. The VCTC Travel Demand Model (TDM) uses the Caliper Trans Cad model development and operating software environment for all model components.

As part of the 2040 General Plan, the following two model scenarios were developed:

- 2012 Baseline Model – reflects the most recent validated baseline for Ventura County (i.e., existing land use and transportation network); and,
- 2040 Ventura County General Plan Land Use Model – this reflects the land use growth assumptions in the proposed Ventura County 2040 General Plan for the unincorporated areas and the Southern California Association of Government's (SCAG) 2016 Sustainable Communities Strategy (SCS) land use within the incorporated areas. The transportation network reflects all currently programmed transportation improvement infrastructure projects.

The source of the baseline and future 2040 land use of the VCTC model is from SCAG's 2016 Regional Transportation Plan and Sustainable Community Strategy. The land use within the unincorporated areas of Ventura County were reviewed by County staff for accuracy. Given that model traffic analysis zones (TAZs) are not coterminous with local political boundaries, the following steps were taken by VCTC to properly allocate the future land use growth associated with the 2040 General Plan for use within the model scenarios:

1. A reasonableness check was performed on the TAZ data originally provided by SCAG and land use corrections were made to TAZs where appropriate. These corrections were largely made within cities since SCAG worked closely with the County to initially establish their growth projections;
2. The County provided VCTC with unincorporated county population projections for 2020 and 2040 for the 2040 General Plan. These projections were used as a guide to refine the TAZ allocation by attempting to minimize the gap between the County and City numbers and total population by jurisdiction from the model's land Use to socio-economic data model output.
3. TAZ adjustments were performed through an iterative process. On first pass, a 51 percent rule and local knowledge of development patterns (i.e. East Area 1 development to Santa Paula) was used to allocate growth between shared border TAZs. This provided a fair means for allocating the vast majority city-county border TAZs.
4. Based on the information in Step 3, several individual TAZ adjustments were made in edge cases (notably in Oxnard and Camarillo).

2.2 Baseline VMT Estimates

A road inventory was provided in the Background Report based on information sourced from the Highway Performance Monitoring System (HPMS) using 2014 data. For the analysis presented in the Draft EIR, 2016 HPMS data was used to provide the "ground truth" boundary-based VMT estimate sourced from Caltrans Public Road Data. As shown in **Table K-1**, the countywide VMT estimate for Ventura County is 18,676,660. VMT occurring on local roadways in incorporated and unincorporated areas are reported by HPMS as 6,689,160 and 1,394,030, respectively. HPMS data reports state highway system (SHS) VMT separately; however, it does not explicitly distinguish between incorporated versus unincorporated area VMT occurring on the state highway system of the county.

To distinguish between incorporated and unincorporated area VMT occurring on state highways, the 2016 Caltrans Post-Mile based State Highway Volume Report was used to estimate the amount of state highway VMT occurring within unincorporated Ventura County. This was calculated by estimating the segment lengths between post-mile points and multiplying these lengths by the Average Daily Volume (ADT) reported in the Caltrans Volume Report (VMT = segment length x volume). This estimation resulted in an unincorporated state highway baseline VMT estimate of 3,519,851. The latter can then be added to the HPMS VMT estimates for local and other unincorporated roadways to yield the total boundary-based unincorporated Ventura County VMT estimate of 4,936,831. Incorporated and countywide VMT estimates were reported as reasonableness checks on the calculations performed to achieve the results displayed in **Table 2.1.**

Table K-1 2016 Ventura County Boundary-Based VMT Estimates

Total Countywide VMT (HPMS Boundary-based)	18,676,660
Unincorporated County Local Road VMT (HPMS Boundary-based)	1,394,030
Unincorporated County State Highway VMT (Caltrans ADT x SHS Miles)	3,519,851
Other Unincorporated VMT (HPMS Boundary-based)	22,950
Total Unincorporated VMT (HPMS Boundary-based + SHS estimate)	4,936,831
Total Incorporated Local Road VMT (HPMS Boundary-based)	6,689,160
Total Incorporated State Highway VMT (Caltrans ADT x SHS Miles)	7,037,589
Other Incorporated VMT (HPMS Boundary-based)	13,080
Total Incorporated VMT (HPMS Boundary-based + SHS estimate)	13,739,829

Source: 2016 HPMS (Caltrans, 2017), GHD via 2017 Caltrans Volume Report

The VMT estimates reported by HPMS do not reflect the full trip length of trips that cross jurisdictional boundaries (i.e., trip-based VMT). Pursuant to OPR guidance, and as described previously, full trip-length VMT estimates are preferred over boundary-based VMT for estimating greenhouse gas emissions from on-road mobile sources.

To reflect the full trip length of those trips that have one trip end (either beginning or ending) in Ventura County), VCTC and Santa Barbara County Association of Governments (SBCAG) travel demand model outputs were used to augment the amount of internal boundary-based VMT occurring with Ventura County. This entails estimating the amount of VMT that occurs outside Ventura County from interregional trips (i.e., internal-to-external (I-X) trips and external-to-internal (X-I) trips) occurring south and east of Ventura County. Given that the SBCAG regional travel demand model includes Ventura County in its modeling domain, the best approach for quantifying VMT from interregional trips north of Ventura County was to use the SBCAG model. This entailed processing similar output (i.e., trips with only one trip end in Ventura County) from the SBCAG model to compute interregional VMT

between Santa Barbara County and Ventura County. For counties south and east of Ventura County, the VCTC travel demand model was used.

As shown in **Table K-2**, the added VMT that occurs outside Ventura County from interregional trips is 9,697,737 (7,880,729 VMT from areas south and east of Ventura County plus 1,817,008 from areas north of Ventura County). Based on the HPMS data and unincorporated area state highway VMT, approximately 26.4 percent of total boundary-based VMT occurs in the unincorporated areas of Ventura County. This same percentage split was applied to the total added intercountry VMT estimate to yield the unincorporated portion of VMT that occurs outside Ventura County (2,563,418 VMT). Adding this increment of VMT to the total unincorporated boundary-based VMT estimate of 4,936,831 yields the total trip-based (i.e., full trip length) VMT estimate of 7,500,249 associated with unincorporated Ventura County. **Table K-2** displays this information.

Table K-2 2016 Ventura County Trip-Based VMT Estimates (Baseline)

Interregional VMT occurring south and east of Ventura County	7,880,729
Interregional VMT occurring north of Ventura County	1,817,008
% of Unincorporated Boundary-based VMT	26.40%
Total Unincorporated Boundary-based VMT	4,936,831
Total Unincorporated Interregional VMT	2,563,418
Total Unincorporated Trip-Based VMT	**7,500,249**
Total Countywide Trip-Based VMT	28,377,397

Source: VCTC 2012 Baseline Model, SBCAG 2015 Baseline Model

2.3 Forecasted VMT Estimates

A similar methodology was used to forecast future VMT as the approach used to estimate baseline VMT. **Table K-3** displays the 2040 projections of boundary-based VMT within Ventura County. Based on the 2040 VCTC and 2040 SBCAG travel demand model forecasts and the percentage distribution of boundary-based unincorporated VMT, the amount of trip-based VMT associated with the unincorporated Ventura County is 8,173,937 per day.

Table K-3 Ventura County Daily VMT Estimates (2040 Forecast)

Total Unincorporated Boundary-based VMT	5,337,751
Total Incorporated Boundary-based VMT	14,855,640
Interregional VMT occurring south and east of Ventura County	8,700,996
Interregional VMT occurring north of Ventura County	2,042,133
% of Unincorporated Boundary-based VMT	26.40%
Total Unincorporated Interregional VMT	2,836,186
Total Unincorporated Trip-Based VMT	**8,173,937**
Total Countywide Trip-Based VMT	30,936,520

Source: VCTC 2040 Model, SBCAG 2040 Model, 2016 HPMS, GHD via 2017 Caltrans Volume Report